BAR HARBOR OPEN SPACE PLAN

Creating a Shared Vision for Open Space

Town of Bar Harbor, Maine

A document that our citizens will use to celebrate the rich history of open space in our town, to plan for the future, and as a toolkit complete with strategies to assist individuals, community groups and the town meet the goals of a shared vision.

Maine Coastal Program

June 2014

TOWN OF BAR HARBOR
COUNTY OF HANCOCK · STATE OF MAINE · INCORPORATED 1796

Bar Harbor Open Space Plan

June 2014

Prepared by:

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Cover photo: Aerial view of Bar Harbor looking west toward Cadillac Mountain in Acadia National Park, courtesy of Acadia National Park.

The Town of Bar Harbor Conservation Commission consists of seven members appointed by the Town Council. The purpose of the Conservation Commission is to maintain or enhance the conservation of natural or scenic resources, to protect natural streams or water supplies, to promote conservation of swamps, wetlands, beaches or tidal marshes, to enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open areas or open spaces, to effect or enhance public recreation opportunities, to preserve historic sites, to implement the plan of development adopted by the Planning Commission of the municipality, and to promote orderly urban or suburban development.

A clear stream, a long horizon,
a forest wilderness and open sky–
these are man's most ancient possessions.
In a modern society, they are his most priceless.

~ LYNDON B. JOHNSON, Thirty-sixth US President (1963—68), 1908—73

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- Cynthia Ocel — Conservation Commission (Scenic/Cultural)
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- Enoch Albert — Conservation Commission (Water Resources)
- Jill Weber — Conservation Commission (Water Resources)
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- Jane Disney — Mount Desert Biological Laboratory (Water Resources/Working Lands)
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- Misha Mytar — Maine Coast Heritage Trust (Working Lands)
- Stacy Benjamin — Maine Farmland Trust (Working Lands)
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Thank you to the many members of the community who participated in the April 17, 2014 Community Forum, for thoughtful guidance and perspective on open space planning in our town.

Introduction

Development of a Community Open Space Plan

Why Was This Plan Developed?

Bar Harbor is characterized by the interplay of its beautiful natural setting, cultural institutions and vibrant business community, including working farms and marine livelihoods. Ours is a town that has long valued the preservation of its unique character and priceless open spaces, exemplified nowhere more clearly than the development of Acadia National Park–an initiative spearheaded by citizens, and the first and only national park established through land donation, rather than government purchase. Few towns have a resource like Acadia National Park that protects and provides stewardship of important natural and cultural resources. In addition, Bar Harbor established town parks to provide areas for community gathering and enjoyment, and the Village Improvement Society provided money, labor and knowledge to create and maintain additional parks and walking paths. As land use has transformed, our understanding of natural processes has increased, our needs have changed, and a new vision of open spaces uses and needs has emerged.

After receiving input from citizens, town staff and consultants, the residents of Bar Harbor approved the 2007 Comprehensive Plan at town meeting. As an intermediate task within its 10-year life, the comprehensive plan calls for the Bar Harbor Conservation Commission to develop an open space plan for the town, "*To encourage voluntary protection of Bar Harbor's important natural, scenic, and cultural resources as well as establish an open space lease and acquisition program*"[1]. The town council asked the Conservation Commission to complete this task, supported the commission's pursuit of grants to move planning forward, and helped to ensure plan completion by voting to fund the work in the FY2014 budget: a move approved by Bar Harbor's citizens at the June 2013 town meeting.

Open space is undeveloped or minimally developed land and water areas that have special value to the community. These areas may be large or small, publicly or privately owned.

Photo: National Park Service

A scenic view from Cadillac Mountain.

Why Do We Need an Open Space Plan?

Since the implementation of the Comprehensive plan, Bar Harbor's citizens have become aware of new pressures on our open spaces and challenges we face in planning for our town's future. Citizen's concerns about the health of the Northeast Creek watershed have resulted in Town-funded cooperative surveys, the results of which have indicated threats from pollution and development pressure. Pollution, development, and increased tourist visits are affecting our open spaces. The people of Bar Harbor have also expressed an interest in planning for the challenges brought by a changing climate: sea-level rise, establishment of invasive plant and animal species, and storms with greater intensity and altered timing. Open Space Planning is a way to address these concerns and decide how to meet these challenges.

How Do We Define Open Space?

The town of Bar Harbor defines open space as "Undeveloped or minimally developed land and water areas that have special value to the community, in one or more of the following categories:

- Natural Habitats
- Water Resources
- Scenic and Cultural Resources
- Recreational Resources
- Working Lands

Open space may be large or small, publicly or privately owned."

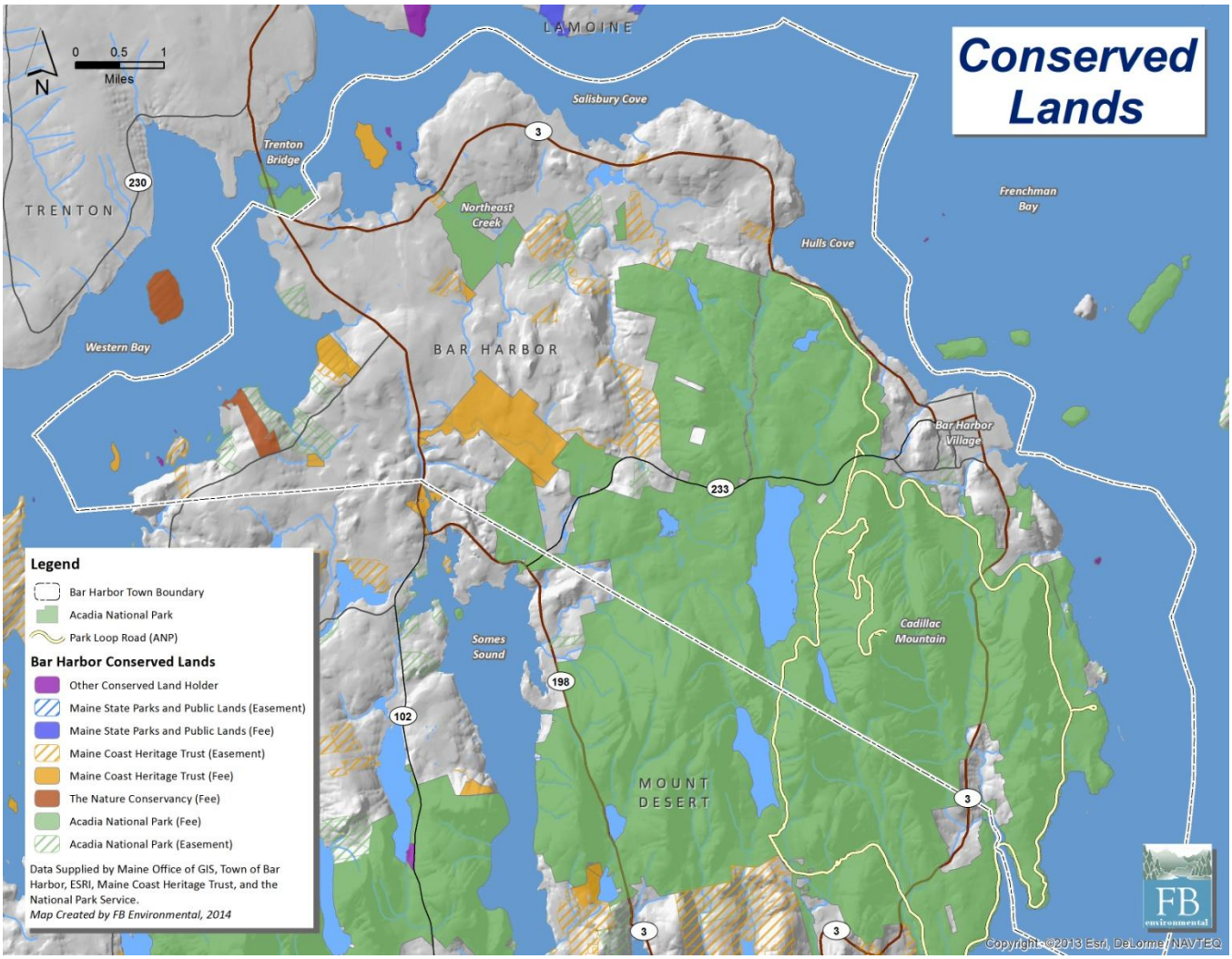


Figure 1. *Conserved lands in Bar Harbor.*

Table 1. *Summary of conserved land by landholder in Bar Harbor.*

Name of Holding	Landowner	Area (ac)
Federal Land		
	Acadia National Park (fee)	12,926
	U.S. Fish & Wildlife Service (fee)	7
State/Regional		
	Maine Coast Heritage Trust (fee)	708
	Maine Department of IF&W (Management Transfer Agreement)	6
	The Nature Conservancy (fee)	102
Privately-Owned Land Under Conservation Easement		
	Acadia National Park (easement)	617
	Maine Coast Heritage Trust (easement)	746
	Maine State Parks & Public Lands (easement)	11
Town/Local		
	Town of Bar Harbor (Town Recreational Land)	33

Source: FB Environmental

A current inventory of conserved lands in Bar Harbor indicates that 15,143 acres of land are currently protected in Bar Harbor, 89% of which are part of Acadia National Park. (Figure 1, Table 1).

What Does This Plan Do?

This plan summarizes the open space lands already protected, open spaces desired by the citizens of Bar Harbor, and strategies for how to meet Bar Harbor's open space needs in each of the above categories.

A section of the open space plan is devoted to each of the open space land types—*natural habitats, water resources, scenic and cultural resources, recreational lands and working lands*—with a lively description of each, both past and present, a list of lands identified by the citizens of Bar Harbor and the Open Space Planning Committee that would fill present gaps, and goals and strategies designed to accomplish that task.

Each chapter includes a vision for the future of Bar Harbor, 20 years from now and beyond- if recommended goals and strategies to protect open space are successfully implemented. Vision statements are specific to each of the open space resources, and provide a standard to help drive the plan, and by which the community can strive.

The Conservation Commission has sought to create a readable document that citizens will use to celebrate the rich history of open space in the town, to plan for the future, and as a toolkit to help individuals, groups and the town meet the goals of that planning.

Not every open space has a special value to the citizens of Bar Harbor, or a special ecological value. Indeed, there are many places that are extremely special to families or individuals that did not emerge as priority areas in our Open Space plan. Sites that were suggested, but which don't appear on our priority list do not make them less special, and the love of place felt by our citizens is part of what makes our town so special.

The Plan Development Process

It soon became clear to the Bar Harbor Conservation Commission, that although we are passionate about helping our town, we had neither sufficient time nor expertise to accomplish the task. We sought the assistance of partners, found willing participants, and established the Open Space Partners, a group comprised of the Conservation Commission members and representatives of the following partner organizations:

Photo: National Park Service

More than fifty Bar Harbor residents participated in the open space planning process.

- *Acadia National Park, John Kelley*
- *Friends of Acadia, Stephanie Clement*
- *Maine Coast Heritage Trust, Misha Mytar*
- *Maine Farmland Trust, Stacy Benjamin*
- *Mount Desert Biological Laboratory, Jane Disney*

However, even with generous contributions of time and expertise from our partners, we found that we needed someone to do the tasks for which we still could not find time, and to pull the multitudinous, disparate pieces of writing and information into the cohesive document we sought to produce. The Conservation Commission worked with the town planning department to hire a consultant with expertise in open space development, and eventually hired FB Environmental Associates (FBE). FBE collected existing information and relevant data regarding Bar Harbor's open spaces, and began analyzing the data to determine what types of land were in shortest supply or most in peril of disappearing.

We used the results of this analysis to identify areas of high-priority for open space protection, and presented the results of the prioritization process to the public on April 17, 2014 to get citizen input (Appendix C). We then refined our protection priorities, sought validation from the citizens, and finalized the priority list.

This open space plan is a culmination of not only the work completed during the development of the plan, but factors in previous citizen feedback from the 2007 Comprehensive Plan, and for some sections, one-on-one interviews with community members. The list of actions described in the plan provide

recommendations for encouraging the citizens of Bar Harbor to consider the future of our important natural, scenic, and cultural resources, and to be proactive in helping to protect these valuable spaces for the posterity of our town.

References

[1] *Town of Bar Harbor (2007). Comprehensive Plan Update: Bar Harbor, Maine. June 2007. Online: http://www.barharbormaine.gov/ArchiveCenter/ViewFile/Item/95.*

The Future of Natural Habitats in Bar Harbor

The Town of Bar Harbor contains a diverse and unique landscape of geology, topography and hydrology that supports an abundance of natural habitats. The largely undeveloped, forested landscape throughout Mount Desert Island (MDI) makes the Acadia National Park region feel and function bigger than its boundaries would suggest. An important characteristic for a natural area is to maintain healthy plant and animal communities that can live harmoniously with humans.

The natural resources present in Acadia National Park have global significance. The geographic location of Mount Desert Island lies at a transition between eastern hardwood forests and boreal-like spruce-fir forests. This blend of ecoregions provides for a diversity of plants and animals as well as natural range limits for some, such as the southern limit of jack pine, and the northern edge of pitch pine and bear oak woodlands.

Conservation of undeveloped lands within Bar Harbor is integral to achieving the primary goal of the 2007 Bar Harbor Comprehensive Plan, which describes the preparation and adoption of an open space plan that *"not only identifies and establishes linkages among land currently in conservation easement and other key open spaces, but also identifies regulatory and other strategies to preserve the Town's most important natural and cultural resources."*

A VISION FOR NATURAL HABITATS

Our vision 20 years from now: The future of Bar Harbor will be marked by impressive landscapes filled with a diverse array of plants and animals. Large tracts of contiguous forests will be the source for clean watersheds that extend from mountains to sea and shellfish flats will remain an uncontaminated source of food for waterfowl and people. Improved connectivity of waterways will allow for the unimpeded movement of diadramous fish, otters and other riparian wildlife to flourish. Reduced impact of roads and development near wetlands will allow for continued health of the exemplary communities that support many flora and fauna that rely on pristine ecosystems. Invasive species will be managed at levels low enough so as not to degrade our native natural communities.

Photo: Brigit Bewsaw (Maine Coast Heritage Trust)

Aerial view of Kittredge Brook.

The Town of Bar Harbor is intimately connected with Acadia National Park and therefore has a responsibility to maintain the rural and wild character beyond park boundaries.

By creating systems and planning that allows for smart development, we can still protect essential habitat needed by plants and animals, protect wetlands, vernal pools, and valuable groundwater- all of which don't adhere to political boundaries.

WHY DO WE NEED TO PROTECT NATURAL HABITATS?

A description of local significance and need

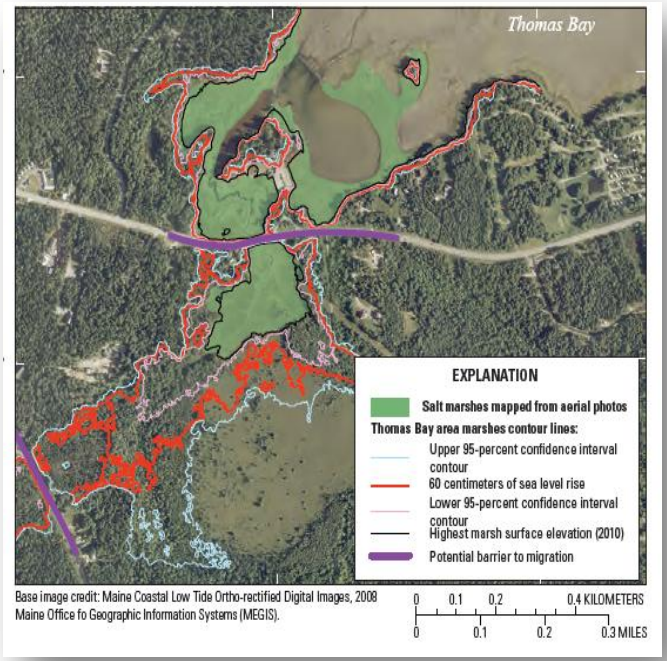
Bar Harbor and Mount Desert Island contain dynamic landscapes and significant wildlife populations. There are several examples on Mount Desert Island of wildlife that have had a substantial influence on the landscape, playing pivotal roles in their ecosystems. For instance, the successful reintroduction of beaver in 1921 - restored a natural disturbance regime to stream and wetland areas, as well as the natural immigration of coyotes to Mount Desert Island in 1981 – filled some of the predatory role for the ecosystem that was left vacant by the extirpation of wolves.

There are regions of Bar Harbor that deserve special attention to their conservation value and have been designated as areas of ecological statewide significance by Maine Natural Areas Program (MNAP). Acadia East and Taunton Bay are focus areas defined by the

MNAP that cover a significant portion of land and water in the Bar Harbor area (Figure 2). Data provided by MNAP and Maine Department of Inland Fish & Wildlife (MDIF&W) provide a useful overview of areas deemed suitable for, or providing likely habitat for, a variety of wildlife species and plant communities.

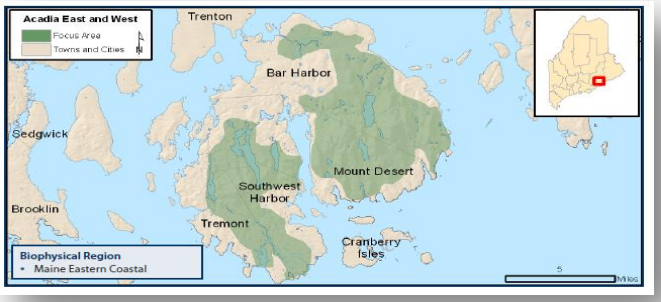
Opportunities for conservation exist in these focus areas with specific consideration toward the coastline - such as shoreline development, eelgrass bed protection and marine worm overharvesting. Maintaining good water quality and preventing the encroachment of invasive plants on freshwater wetlands should also be a priority. MNAP suggests working with willing landowners to permanently protect undeveloped areas and significant features. They also encourage landowners and town officials to maintain enhanced riparian buffers and to maintain natural hydrologic regimes by avoiding drainage or impoundment of wetlands, streams or adjacent water bodies, and to identify and restore tidal restrictions.

In addition to the myriad of potential impacts due to climate change, the current projections of changing climate and warming temperatures, suggest sea-level will rise at least two feet in the next century[1]. Low-lying coastal habitats will begin to migrate inland, potentially altering shoreline areas and often meeting barriers to marsh migration as is noted near Bar Harbor's Oceanarium - extending from Thomas Bay across Rt. 3 (Figure 3), and Rt. 102 as well as upper reaches of the Northeast Creek estuary.



Source: Nielson & Dudley, 2013

Figure 3. *Anticipated sea-level rise for the Thomas Bay area, Bar Harbor, Maine.*



Source: MNAP

Figure 2. *The Acadia East Focus Area includes a significant portion of land in Bar Harbor. These are areas of statewide ecological significance.*

A Case for Habitat Protection:

BEAVER EXPAND OPEN WETLAND HABITAT FOR AMPHIBIANS

"Beaver have not only increased the number of available breeding sites in the landscape for pond-breeding amphibians, but also the resulting mosaic of active and abandoned beaver wetlands is likely to provide suitable breeding habitat for a diversity of species".

Beaver are ecosystem engineers, they impound streams to alter habitat for food and shelter. Extirpated from Mount Desert Island due to trapping, the species was re-introduced in 1921 by George B. Dorr. The populataion remained low until after the fire of 1947 that promoted more desireable tree species to grow, such as aspen and birch.

Beaver have increased quality habitat for pond-breeding amphibian species changing forested wetlands to open, ponded wetlands with increased connectivity. High species richness of amphibians is directly related to beaver activity and connectivity of wetlands.

With a stable population of around 100 beavers in Acadia National Park today, it is important to keep large, forested and non-forested wetlands intact, especially low in the watershed where sites are more suitable for beaver.

Source: Cunningham, J.M., Calhoun, J.K. and Glanz, W.E. 2006. Patterns of Beaver Colonization and Wetland Change in Acadia National Park. Northeastern Naturalist, Vol. 13, No. 4, pp. 583-596.

Conservation of low-lying undeveloped uplands where coastal marshes or other intertidal natural communities can migrate inland with sea level rise should be encouraged. The Northeast Creek watershed has been identified as an important resource to the residents and visitors of Bar Harbor. The targeted protection of this system will ensure the protection of the habitats within.

Human activity can have unintentional impacts to ecologically sensitive areas. Certain types of land use surrounding protected areas may alter ecological processes within their boundaries[2]. Parks surrounded by intense land uses, such as urban or suburban, are more vulnerable than more wild places. Examples of vulnerability may include; 1) Edge Effect - clearing right up to protected area boundaries, increasing disturbance rates and forest mortality in the edge habitat areas and 2) Habitat Fragmentation - a decrease in species diversity and richness following habitat fragmentation, often noticed decades or even centuries into the future. A healthy ecosystem needs a large portion of non-disturbed landscape (at least 50 times larger than the largest human disturbance) to maintain a dynamic steady-state equilibrium.[2] Mount Desert Island is lucky to have large areas of undisturbed land, chiefly Acadia National Park, however continued pressure surrounding these borders will have detrimental effects.

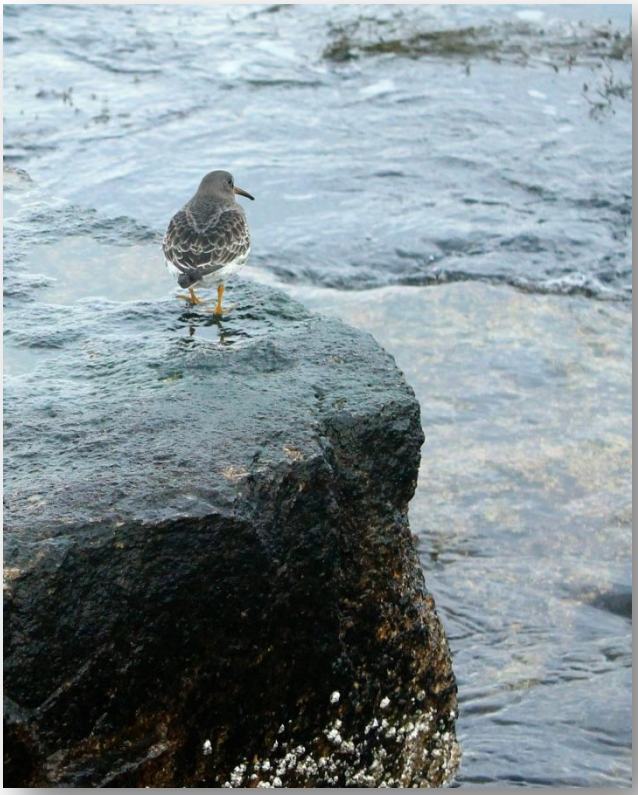


Photo: Jesse Wheeler

Purple sandpipers (Calidris maritima) have the northernmost winter range of any shorebird, and utilize Bar Harbor's rocky shores for their winter habitat.

CELEBRATE WHAT WE HAVE

A Summary of Existing Natural habitats

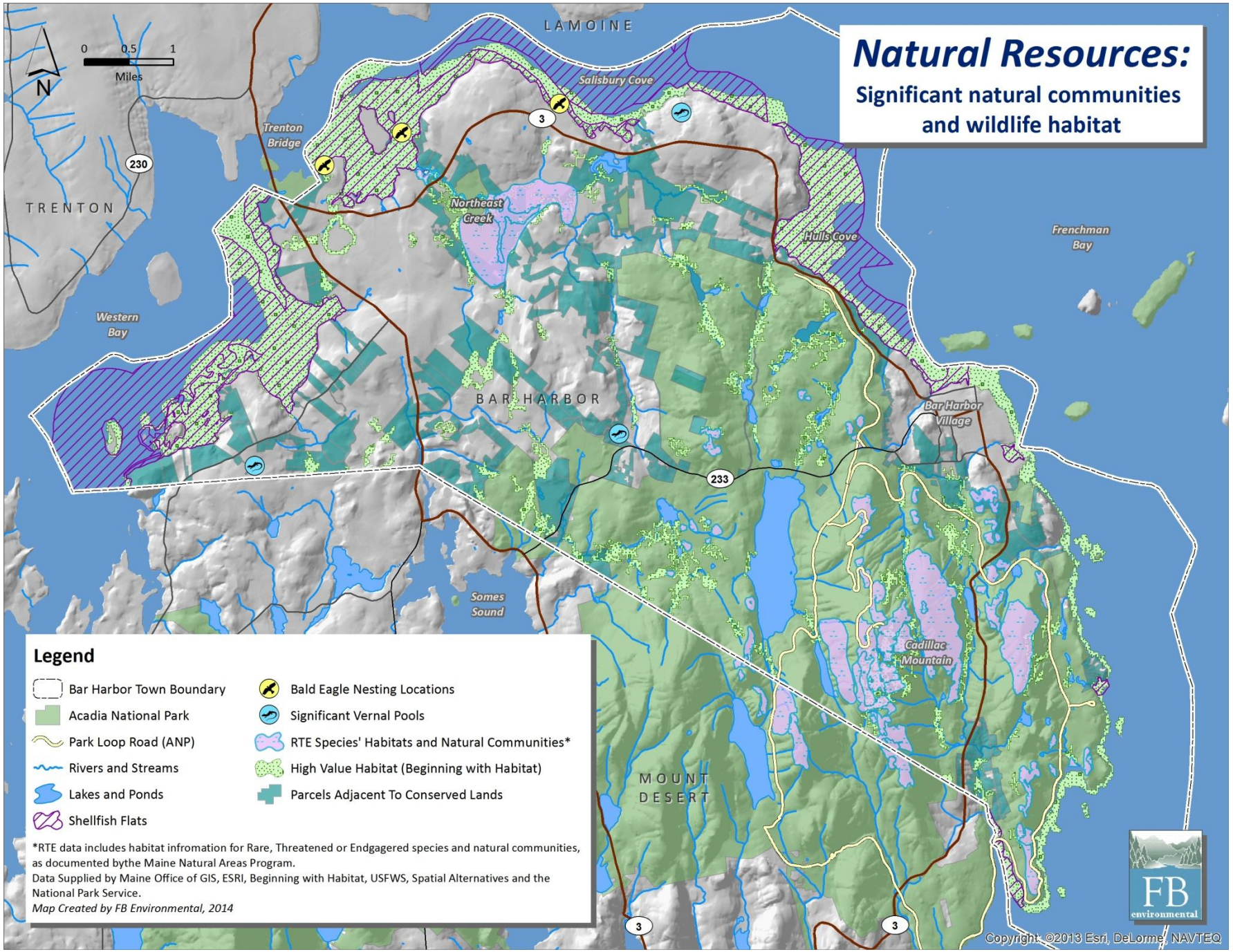
Tidal Waterfowl & Wading Bird Habitat

Tidal waterfowl and wading bird habitat are almost continuous along the shoreline of Bar Harbor and are characterized as breeding, migration and staging, and wintering habitat. Habitats may include seaweed communities, reefs, aquatic beds, emergent wetlands, mudflats, and eelgrass beds. There are certain areas that waterfowl congregate, for food, shelter and migration. Areas surrounding seabird nesting islands (with at least 25 nesting pairs of Common Eiders) and areas documented as wading bird rookeries are also included. Barrow's goldeneye is threatened in the state of Maine and is known to congregate in the narrows between Bar Harbor and Lamoine. Wading bird habitat is primarily located among large wetland areas or ponds, as well as some slow moving streams. This habitat is essential for species in need of breeding, feeding, roosting, loafing, and migration areas. A complete list of seasonal birds in the watershed of Frenchman Bay can be found in the Bar Harbor Comprehensive Plan (Figure V.I.2).

Bald Eagles & Rare Wildlife Habitat

The state has identified three areas in Bar Harbor as bald eagle essential habitat (Figure 4), which means that the areas are within a nesting territory occupied by eagles during at least one of the three most recent years and are either intact for two consecutive years, or the only extant nest in the territory. As of 2013, three nesting site locations are on the northern shores of Bar Harbor, including one on the island of South Twinnie.

The state MNAP has identified twelve plant species and seven animal species as rare, threatened or endangered status in Bar Harbor (Table 2). The state has also identified three areas in Bar Harbor as habitat for other rare animals – the Ebony boghunter, wood turtle, and Peregrine falcon – all at inland sites. Diseases, like the fungus that produces white-nose syndrome in many native bat species, have negative impacts on our local bat populations. Both the Northern long-eared bat and Little brown bat have experienced dramatic population declines due to white-nose syndrome in the state of Maine[3]. More research is needed to fully understand the implications of this disease on local populations, but protection of roosting and pupping sites is undoubtedly needed.



Map: FB Environmental

Figure 4. *Significant natural communities and wildlife habitat in Bar Harbor.*

Table 2. *Rare, threatened and endangered species in Bar Harbor.*

Common Name	Scientific Name	State Status
Rare, Threatened and Endangered Plants		
Comb-leaved Mermaid-weed	*Proserpinaca pectinata*	E
Dwarf Rattlesnake Root	*Prenanthes nana*	E
New England Northern Reed Grass	*Calamagrostis stricta ssp. inexpansa*	E
Swarthy Sedge	*Carex adusta*	E
Nantucket Shadbush	*Amelanchier nantucketensis*	T
Prototype Quillwort	*Isoetes prototypus*	T
Secund Rush	*Juncus secundus*	T
Smooth Sandwort	*Minuartia glabra*	SC
Northern Bog Sedge	*Carex gynocrates*	SC
Mountain Sandwort	*Minuartia groenlandica*	SC
Alpine Blueberry	*Vaccinium boreale*	SC
Appalachian Fir-clubmoss	*Huperzia appalachiana*	SC
Rare, Threatened and Endangered Animals		
Peregrine Falcon	*Falco peregrinus*	E
Bald Eagle	*Haliaeetus leucocephalus*	SC
Carolina Saddlebags	*Tramea carolina*	SC
Swamp Darner	*Epiaeschna heros*	SC
Tule Bluet	*Enallagma carunculatum*	SC
Wood Turtle	*Glyptemys insculpta*	SC
Purple Sandpiper	*Calidris maritima*	unknown

Source: Maine Natural Areas Program

Rare & Exemplary Natural Communities

There are ten rare and exemplary natural communities in Bar Harbor (Table 3), much of which is represented in Acadia National Park. These broad classes of natural communities are recognized as important for conservation: those that are rare and those that are common but in exemplary condition. Fresh Meadow, in the Northeast Creek watershed, is an example of a raised level bog ecosystem. Other communities such as, pitch pine woodlands, Northern white cedar woodlands, tarn, and maritime spruce-fir forest are all located within the boundaries of the Park. However, community assessment outside of park boundaries is incomplete and more rare and exemplary natural communities and rare, threatened and endangered plants and animals may exist on private lands.

Photo: Anne Wheeler

The northern shores of Bar Harbor host three active bald eagle nests.

Vernal Pools & Freshwater Wetlands

Vernal pools are small temporary bodies of water that form in shallow basins during early spring. They are rain or snow fed and may or may not dry up at the beginning of summer. These pools are free of predatory fish and therefore make wonderful environments for certain organisms to live and breed. Indicator species that may be found in Bar Harbor include amphibians like the wood frog, spotted salamander and fairy shrimp. There are three known significant vernal pools that have been mapped by the state of Maine (Figure 4). It is likely that more significant vernal pools exist in other areas of Bar Harbor.

While only three vernal pools have been determined to be significant under state law, a 2008 study of vernal pools in Bar Harbor indicated that there are another 24 non-significant vernal pools and 297 potentially significant vernal pools ranging in size from 80 square feet to 27,340 square feet (0.63 acres). These pools are scattered throughout the town, located within or part of a mapped wetland, or may be isolated pools that are wetlands themselves but have not been mapped.

While most vernal pools are of natural origin, there are some that are man-made or were historically altered in some way and are located near roads, driveways, buildings or other development. Because the majority of the potential vernal pools have not been field-verified, it is likely that they will not meet the state definition of a Significant Vernal Pool, or will otherwise not be under the jurisdiction of state or federal regulations[4].

Table 3. *Exemplary natural communities in Bar Harbor.*

Community Type	Microhabitat	State Status
Rare and Exemplary Natural Communities		
Dune Grassland	Fore and back dunes associated with sand beaches; beachgrass and patchy shrubs dominant.	S2
White Cedar Woodland	Partial to nearly closed canopy woodlands in an upland setting, on rocky slopes (10-50%). Soils thin (0-30cm) and acidic. Known only from coastal areas.	S2
Birch-Oak Rocky Woodland	Partly forested to sparsely vegetated slopes of loose acidic to circumneutral boulders, occurring as talus from cliff above or, less commonly, as boulder fields on more level terrain. Vegetation patchy.	S3
Brackish Tidal Marsh	Intertidal reaches in coastal impoundments, or between saltmarshes and freshwater marshes in larger tidal rivers. The downstream limit of this community is usually marked by the dominance of Spartina alterniflora along tidal creek riverbanks.	S3
Jack Pine Woodland	Found on rock outcrops or thin sandy soils over till, mostly along the eastern coast or along lakeshores in central-northern Maine. Soils are nutrient-poor, excessively well drained, and often contain evidence of fire.	S3
Pitch Pine Woodland	Open forest of Pinus rigida (with lesser amounts of other conifers and/or oak) on ledges or rock outcrops; elevations up to 300 meters. Soils are nutrient-poor and excessively well drained. Heath shrubs are common in the understory. Mostly coastal.	S3
Red and White Pine Forest	Coniferous forest with red pine and white pine on slopes or low ridges and xeric to dry-mesic soils, often sandy or bouldery and usually with bedrock close to the surface.	S3
Low-elevation Bald	Bedrock, ledges, and summits of igneous and high-grade metamorphic rocks usually at low to moderate elevations fairly near the coast.	S3
Maritime Spruce - Fir Forest	Forests of exposed maritime locations. Soils often have a thick organic mat over a thin mineral layer. Cool temperatures and frequent fogs create comparatively mesic conditions. Variants include patches dominated by fir, heart-leaved paper birch.	S4
Raised Level Bog Ecosystem	Raised (but not concentrically patterned) peatlands in basins with mostly closed drainage. Sphagnum dominates the ground surface and is the main peat constituent. Sometimes treed with Picea mariana and Larix laricina.	S4

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or vulnerable to further decline.

S3 Rare in Maine (20-100 occurrences).

S4 Apparently secure in Maine.

Source: Maine Natural Areas Program

Photo: Anne Wheeler

Protecting vernal pools and the upland habitat around them is a high priority for the Town of Bar Harbor.

Photo: Jill Weber

Mountain sandwort (Minuartia groenlandica), is a state listed species of special concern located in Bar Harbor.

Protecting Thomas Bay's Archipelago

"Due to the incredible generosity of a conservation-minded landowner, Thomas Island will forever provide essential habitat for waterfowl, shorebirds, and other wildlife."

Photo: Maine Coast Heritage Trust

Looking south toward Thomas Bay; North and South Twinnie Islands (left) and Thomas Island (right).

The archipelago of Thomas Island, South Twinnie and North Twinnie islands provide excellent wildlife habitat, and are located between Thomas Bay and Mount Desert Narrows in Bar Harbor. Thomas Island is the largest of the three with neighboring South Twinnie containing a productive bald eagles nest. The shallow waters and swift currents surrounding Thomas island support important winter habitat for migrating black ducks, diving sea ducks, migrating shorebirds, wading birds and wintering peregrine falcons and bald eagles. Thomas Island also provides undisturbed foraging, loafing and roosting habitat, as well as alternate nesting sites for the South Twinnie eagles.

The Story- The successful conservation of these islands and the wildlife habitat they support are due to impressive partnerships and open space planning by the former landowner, Maine Coast Heritage Trust (MCHT), Maine Coastal Islands National Wildlife Refuge (formerly Petit Manan Wildlife Refuge), Gulf of Maine Coastal Program and others. This habitat protection initiative helped to save this ecologically sensitive area from a potential future as a campground or high-end residential development. The Thomas Island story serves as a great example of how conservation partners draw upon collective skills and strengths to accomplish meaningful projects.

South Twinnie Island (3 acres) was sold to MCHT for a "bargain sale" in 2001, and then transferred to the U.S. Fish and Wildlife Service (USFWS) in 2003. South Twinnie's active eagle nesting history would now be protected forever.

In 2005, ***Thomas Island*** was conserved by MCHT with grant help from the USFWS National Coastal Wetlands program and Ducks Unlimited. The incredible generosity of a single conservation-minded landowner, resulted in permanent preservation of land that provides essential habitat for waterfowl, shorebirds, and other wildlife. This allowed the undeveloped, 65-acre island to be protected, along with 57 acres of mudflats and intertidal wetlands that support large concentrations of shorebirds and waterfowl.

The third island of the archipelago, ***North Twinnie Island***, was secured through partnership of MCHT and Petit Manan Wildlife Refuge in 2007. Help for this transfer came from Maine's congressional Delegation and monies from the Land and Water Conservation Fund. The purchase of North and South Twinnie was strongly recommended by the Refuge's comprehensive plan for their seabird-nesting habitat.

Bar Harbor contains a large area of freshwater wetlands that support high diversity of plants and animals. Many nesting, migratory or overwintering species rely on wetlands for food and breeding habitat. More than half of Maine's rare plant species are found in wetlands and at least one rare plant species is found in each of Acadia's wetland types[5].

Freshwater Fisheries

Several freshwater streams in Bar Harbor support high value brook trout habitat (Figure 5). Kebo stream and Cromwell brook have headwaters that start in Acadia National Park, but then flow through developed areas of downtown before running into Cromwell Harbor. Both of these systems have been identified as high priority restoration sites by the National Park Service because of stream barriers present that restrict fish passage, such as perched culverts and crossings blocked by debris[5]. Collaborative initiatives between stakeholders can be an effective way to construct and implement a successful restoration plan.

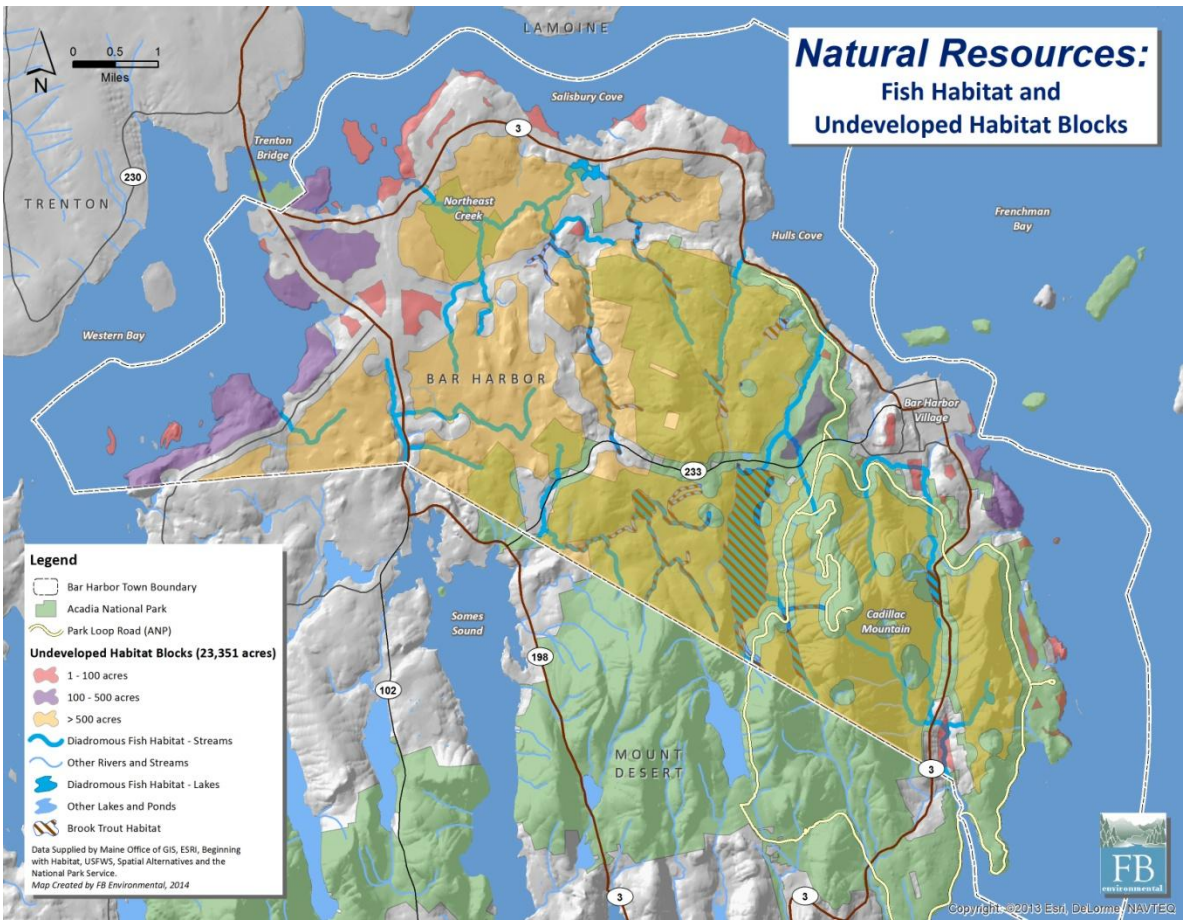
Studies have shown that forested buffers of at least 100 feet upland of stream and riverbanks should be protected for cold-water fisheries, like brook trout. Shade in the summertime is critical for fishery survival.

Photo: Erickson Smith

Brook trout require high levels of dissolved oxygen found in clean, clear and natural streams.

Water temperature increases of only a few degrees can stress fish and lower oxygen levels. Lands surrounding the mouths of streams on Mount Desert Island are the gatekeepers of many aquatic and terrestrial species[6].

The overdevelopment of outlets of streams near the ocean can critically affect wildlife species that rely on these productive estuarine areas for food and cover, including river otters, diadramous fish and wading birds such as herons and American bitterns.



Map: FB Environmental

Figure 5. *Fish habitat and undeveloped habitat blocks in Bar Harbor.*

Unfragmented Blocks of Land

Large blocks of land, relatively unbroken by roads and with little development are important to maintain habitat for animals that have large home ranges (Figure 5). ***Undeveloped habitat blocks are defined as areas of at least 100 acres and at least 500 feet from improved roads and development.*** Larger blocks of undeveloped habitat are described as unfragmented forest (500 acres or more) that are important for area-sensitive wildlife species associated with forested habitats.

The Maine Beginning with Habitat program identified large "unfragmented" blocks based on land use/land cover data from 1991 and 1993 and road data from the 1970's. Blocks between 1 and 19 acres are home to species of urban and suburban landscapes (e.g., raccoons, skunks, and squirrels). Blocks of 50 acres of grassland or 250 acres of forest begin to provide habitat for birds that are uncommon to smaller grasslands and forests. Moose, bald eagles, goshawks and similar species usually require 500 to 2,500 acres, while blocks of greater than 2,500 acres may hold the full complement of species expected to occur in Maine[7]. Many of the species in the smaller acreage ranges also seem to do well in edge habitat or require more modest home ranges.

Wildlife species utilize different landscape types as well as home range sizes. This is evident with the Cape May warbler that doesn't require a large home range, but it does demand coniferous forest cover during the breeding season (Table 4). Forest-interior (at least 100m from forest edge) bird species are more abundant in areas with greater regional forest cover[8]. Forest cover appears to have a greater effect on breeding bird distribution than forest fragmentation, indicating that decreasing overall forest cover may limit distribution of some breeding birds[9].

It will be important to identify wildlife corridors within Bar Harbor, but also between other towns, Mount Desert to the south, and areas of the mainland to the north across Eastern and Western Narrows. There are currently twenty-three undeveloped habitat blocks greater than 100 acres that have a portion of land in Bar Harbor. Eleven of these habitat blocks are greater than 500 acres in size (Figure 5).

There may be landscape restrictions that reduce some wildlife's ability to access unfragmented blocks. Some roads crossing streams/wetlands and areas of high-density development can constrict wildlife travel corridors or cut them off entirely. It is most important to maintain continuity of forested regions around streams for migrating birds and other species needing travel corridors between larger habitat areas. Bar Harbor's unique landscape and position on Mount Desert Island provides significant conduits along waterways and between mountains, which link the area to the southern and western parts of the island. Maintaining these conduits in open space allows for the flow of genetic distribution in both directions for many species, including songbirds, furbearers (mesofauna or small mammals), deer and moose. A few of these areas are found in Bar Harbor with those areas most critical to wildlife highlighted in Figure 6.

Habitat Connectivity

Bar Harbor's unique landscape and position on Mount Desert Island provides significant conduits along waterways and between mountains, which link the area to the southern and western parts of the island as well as migration between the mainland to the north. Maintaining these conduits in open space allows for the flow of genetic distribution of wildlife in both directions for many species, including songbirds, furbearers (mesofauna or small mammals), deer and moose.

It is generally accepted that a minimum of 300-foot buffers are necessary for wildlife habitat surrounding rivers. The larger the buffer zones the more valuable the area is, especially for larger animals and forest interior species that require more room.

IDENTIFYING HIGH PRIORITY AREAS FOR OPEN SPACE PROTECTION

A Subwatershed Approach

The valuable natural habitats in Bar Harbor span across town, both in, and outside of Acadia National Park, in undeveloped forests, freshwater and coastal wetlands, in and adjacent to streams, on ridgetops, and every place in between. Watersheds, and the streams that flow through them provide linkages from one habitat to the next, from one side of Bar Harbor to the other, and provide a cross-island connection for many species of wildlife.

A major task for open space planning is to identify where the most valuable natural habitats occur in the town, and take actions to protect them. Because plants and animals do not abide by municipal boundaries, a clear approach to open space planning is to examine how these natural habitats co-occur and assess the results on a watershed scale. Co-occurrences are areas where two or more natural habitats features overlap.

Higher value can be assigned to areas with a greater the number of occurrences, providing a series of "target areas" for open space protection.

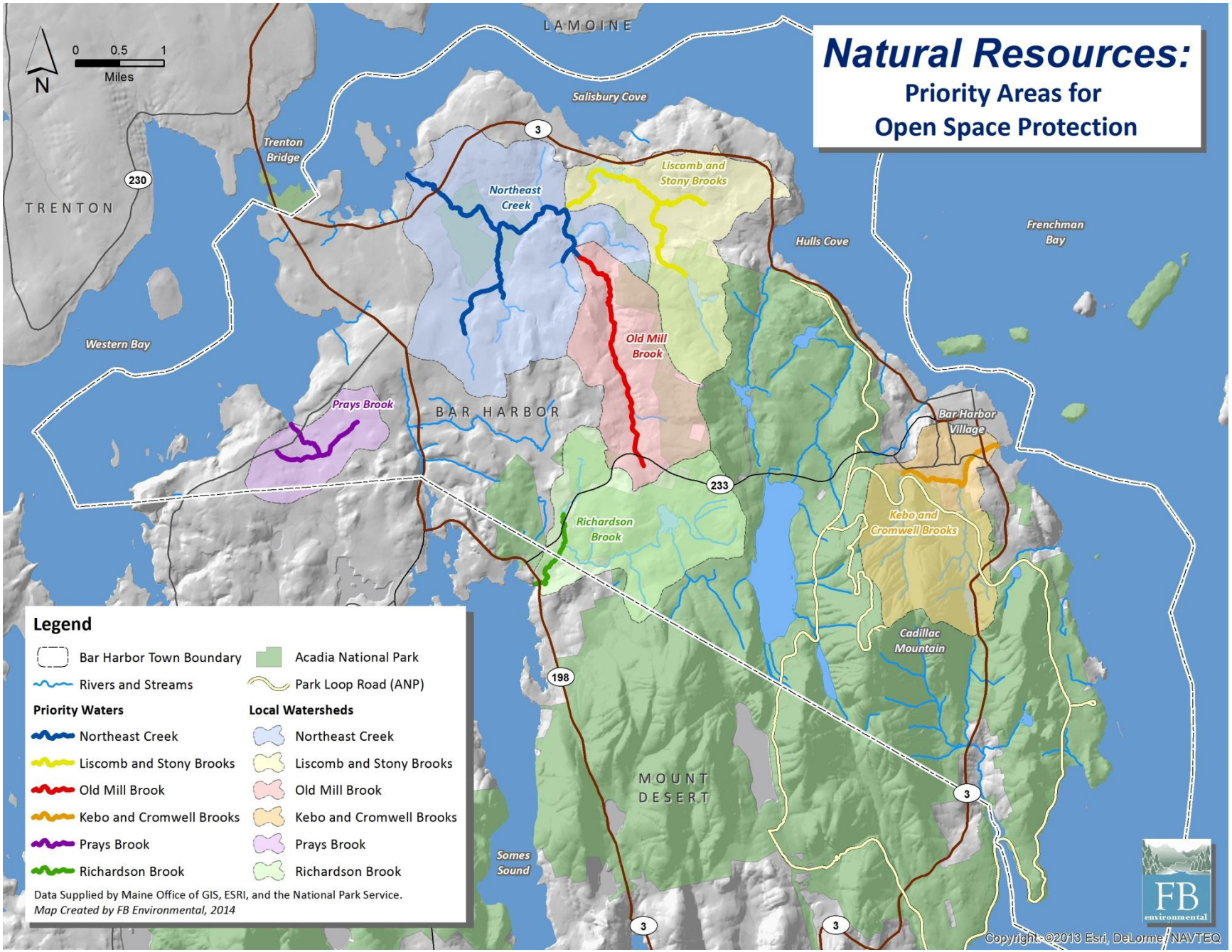
Natural habitats in Bar Harbor were assessed using a co-occurrence model, and then six areas were identified as high priority for open space protection (Figure 6). These include:

1) **Northeast Creek-** Including area downstream of Rt. 3 to the clam-flats, and upstream tributaries crossing Crooked road.
2) **Old Mill Brook-** Starting from the connection with Northeast creek near Crooked Rd and Old Norway Drive upstream to Rt. 233.
3) **Liscomb Brook/Stony Brook-** From their connections with Northeast Creek and Hamilton Pond, upstream to ANP's Lakewood region.
4) **Cromwell Brook/Kebo Brook-** From the outlet at Cromwell Harbor, upstream to Great Meadow and ANP property.
5) **Richardson Brook-** The area between MDI High School, Rt. 233 and Somes Sound in the town of Mt. Desert.
6) **Prays Brook-** From the outlet in Northwest Cove surrounding areas including, Indian Pt. Rd, Arrowhead Ln. and Oak Hill Rd.

Table 4. *Bar Harbor wildlife species home range and utilization.*

	HOME RANGE AREA (ACRES)				HABITAT-BREADTH COMBINATIONS
SPECIES	1-10	10-50	>50	NR/NA	
Black-throated green warbler					Forest only - Deciduous and Coniferous
Cape May warbler					Coniferous Forest only
Golden-crowned kinglet					Deciduous and Coniferous Forest-Krummholz
Beaver					Wetlands in Deciduous and Coniferous Forest-Nonforest-Water
Wood frog					Upland and Wetlands of Deciduous, Coniferous Forest-Krummholz-Nonforest
Wood turtle					Upland and Wetlands in Deciduous and Coniferous Forest-Krummholz-Nonforest-Water
American woodcock					Deciduous, coniferous upland and wetlands of Forest-Krummholz-Nonforest
Ruffed grouse					Upland Deciduous and Coniferous Forest-NonForest
Porcupine					Upland and Wetlands of Deciduous, Coniferous Forest-Krummholz-Nonforest
Spotted salamander					Wetlands within Deciduous and Coniferous Forest-Nonforest
Bald eagle					Deciduous and Coniferous Forest-Water
Peregrine falcon					Upland and Wetlands in Deciduous and Coniferous Forest-Nonforest-Water
Pileated woodpecker					Forest only - Deciduous and Coniferous
Wild turkey					Upland Deciduous and Coniferous Forest-NonForest
Bobcat					Upland and Wetlands of Deciduous, Coniferous Forest-Krummholz-Nonforest
Coyote					Upland and Wetlands in Deciduous and Coniferous Forest-Nonforest
River otter					Wetlands in Deciduous and Coniferous Forest-Nonforest-Water
White-tailed deer					Upland and Wetlands of Deciduous, Coniferous Forest-Nonforest
Northern long-eared bat					Upland and Wetlands in Deciduous and Coniferous Forest-Nonforest-Water

Source: Technical guide to forest wildlife habitat management in New England.[10]



Map: FB Environmental

Figure 6. *Priority subwatersheds for open space protection in Bar Harbor.*

HOW DO WE PROTECT & SUPPORT NATURAL HABITATS?

Goals & Strategies

HABITAT CONNECTIVITY

GOAL 1: PROVIDE CONNECTIVITY FOR WILDLIFE MOVEMENT

STRATEGIES:

a) Increase or maintain connectivity between open spaces, particularly large undeveloped blocks of land *(Strategy 1C2 from Comp Plan).*

i. Explore conservation easements that ensure protection with various levels of use.

ii. Educate public, landowners and town officials about best management practices that reduce upland habitat fragmentation

iii. Encourage landowners to have a conversation with their local conservation groups (e.g. ANP, MCHT).

iv. Current Use program and other tax incentives.

v. Explore options for leasing critical wildlife corridors on private land, for use in those situations where landowners wish to keep the land undeveloped, but do not want to sell the property or grant a conservation easement at the present time.

vi. Work with developers, landowners, and the Town to ensure that the open space set aside in new subdivisions is the central design feature around which roads and buildings are organized. The open space should be contiguous with open space on adjacent properties and be permanently protected from development. Measures should be taken to prevent roads and other forms of development from dividing the open space into smaller fragments in the future.

b) Increase or maintain connectivity along unobstructed stream passages and waterways.

i. Identify priority streams for Brook trout and anadromous fish habitat, particularly portions that may be between already protected watersheds (e.g. ANP, MCHT) and the Atlantic Ocean (e.g. Cromwell brook).

ii. Locate barriers to fish passage at stream crossings of roads and culverts, plan culvert size upgrade or raise roads.

iii. Protection of shoreland beyond the 75 ft. minimum zoning in critical areas, particularly areas that show significant natural resource value. Increasing buffer distances up to 300 feet should be considered.

iv. Restore riparian buffers by planting native plants (removing invasive plants) to increasing shade canopy cover and prevent erosion.

GOAL 2: PRESERVE LARGE, UNDEVELOPED HABITAT BLOCKS AS WELL AS LARGE, CONTIGUOUS FOREST BLOCKS

STRATEGIES:

a) Identify for protection, undeveloped habitat blocks and unfragmented forest blocks.

i. Facilitate the conservation of large, undeveloped habitat blocks of at least 100 acres and un-fragmented forest blocks of at least 500 acres through the use of tax incentives, such as the Tree Growth and Open Space Tax Program, or through leases where a property does not qualify for these tax reduction programs.

ii. Town officials should explore ordinances that require landowners that are involved with Tree Growth or tree harvesting to have a forest management plan written with a consulting forester that incorporates wildlife management practices.

iii. Provide education concerning the value and function of large habitat blocks, both for the community as a whole and for the landowners whose participation in the program is vitally needed.

iv. Focus future development according to the Future Land Use map (*Fig. 111. B.1 from the 2007 Bar Harbor Comprehensive Plan, Policy 2G*), especially Strategy 2G19 that limits virtually all development in Critical Rural Areas.

v. Target protection of undeveloped areas that are adjacent to ANP and other conservation

lands for the purpose of buffering political boundaries.

vi. Encourage cluster development where feasible, ensuring large areas, especially core habitat intact.

b) Manage for area sensitive wildlife species that the community finds important to protect.

i. Identify species with large home ranges (e.g. >500ac. for moose or goshawk) that may normally be associated with interior Maine, but do choose to spend some or all of their lives on a coastal island.

MARINE WILDLIFE HABITAT

GOAL 3: PROTECT MARINE WILDLIFE HABITAT

STRATEGIES:

a) **Protect areas of commercial fisheries habitat** *(as described in Policy 4C of the 2007 Comprehensive Plan)*

i. Identify areas of the watershed upstream of shellfish beds that may need mitigation of pollutants and/or nutrient inputs.

ii. Consult with a restoration ecologist to advise actions for restoring degraded systems/areas within the watershed.

iii. Ensure harvesting practices are sustainable in a particular area (e.g. Hadley point management area) or for a certain species.

iv. The town and state should continue allocate fishing licenses and manage fishing grounds based on healthy population data and desirable intensities (e.g. clamming regulated by municipal ordinance and licensure, whereas worming is regulated by the State of Maine Department of Marine Resources).

b) Protect areas of shorebird and tidal waterfowl habitat.

i. Create an ordinance that reduces the disturbance of wading & shorebird populations during sensitive times of year, particularly high foot traffic or pet use in these areas.

FRESHWATER WILDLIFE HABITAT

GOAL 4: PROTECT FRESHWATER AND WETLANDS FOR WILDLIFE HABITAT

STRATEGIES:

a) Continue to identify, monitor and document locations of significant vernal pools.

i. Follow existing town ordinances for Shoreland Standards (125-68) of development setbacks of at least 75 feet from the edge of a significant vernal pool.

ii. Follow National Resources Protection Act (NRPA) regulations – a permit is needed if a landowner wants to make "unreasonable" impacts within 250 feet of the high water mark of the Significant Vernal Pool (*see this fact sheet for more details; http://maine.gov/dep/land/nrpa/vernalpools/fs-vernal_pools_intro.html*).

iii. Education & outreach about the importance of protection Significant Vernal Pools *(recommended link: http://www.umaine.edu/vernalpools/)*

b) Identify and protect wetlands of two acres or more, including adjacent uplands.

i. Follow existing town ordinance to protect areas within 250ft of freshwater and coastal wetlands as well as other wetlands of two contiguous acres or more that may not otherwise be mapped.

ii. Monitor rare wetland flora and significant natural communities.

c) Ensure protection of water quality and wildlife habitat within the Northeast Creek watershed and other high-priority subwatersheds identified in this plan.

i. Create ordinances as needed to address runoff and pollutant/nutrient inputs into Northeast Creek watershed/other high priority watersheds.

ii. Create a plan for monitoring septic systems within the watershed.

iii. Address threats from quarrying and other ground disturbance that have the potential to increase sedimentation into waterways.

d) **Identify and mediate beaver/infrastructure conflicts, particularly frequently flooded roads.**

i. Increase culvert sizes and/or raise road surfaces.

ii. Write and implement Beaver management plan.

iii. Identify riparian areas that may be vulnerable to flooding by beaver disturbance and encourage conservation of these lands.

iv. Work with Maine DEP to properly define the boundaries of riparian areas.

SIGNIFICANT PLANT & ANIMAL SPECIES & NATURAL COMMUNITIES

GOAL 5: PROTECT RARE, THREATENED AND ENDANGERED SPECIES AND EXEMPLARY NATURAL COMMUNITIES

STRATEGIES:

a) **Identify rare and exemplary natural communities of Bar Harbor using Maine Natural Areas Program's Beginning with Habitat** *(refer to Tables 2 & 3).*

i. Identify and protect areas that are not already within conserved lands, conduct a more detailed survey to determine existence and full extent of the natural community.

ii. Manage and remove invasive plants whenever possible.

iii. Work with state and federal agencies to prevent and/or eradicate invasive pests and pathogens that could negatively affect natural communities.

b) **Utilize co-occurrence priority areas to protect rare, threatened and endangered species and exemplary natural communities within high-priority subwatersheds in Bar Harbor.**

i. Identify unprotected parcels within priority subwatersheds and take steps to provide permanent protection in critical habitat zones.

References

[1] *Nielsen, M.G., and Dudley, R.W. (2013). Estimates of future inundation of salt marshes in response to sea-level rise in and around Acadia National Park, Maine: U.S. Geological Scientific Investigations Report 2012-5290, 20p.*

[2]*Hansen, A.J., and R. DeFries (2007). Ecological Mechanisms Linking Protected Areas to Surrounding Lands. Ecological Applications, 17(4):974-988*

[3]*Acadia National Park resource management staff, pers. comm., February 12, 2014.*

[4]*Stantec (2008). Identification of Wetlands and Vernal Pools in Bar Harbor from Aerial Photography. Stantec Consulting, December 2008. http://www.barharbormaine.gov/DocumentCenter/View/261.*

[5]*Vaux, P.D., S.J. Nelson, N. Rajakaruna, G. Mittelhauser, K. Bell, B. Kopp, J. Peckenham, and G. Longsworth (2008). Assessment of natural resource conditions in and adjacent to Acadia National Park, Maine. Natural Resource Report NPS/NRPC/WRD/NRR—2008/069. National Park Service, Fort Collins, Colorado.*

[6]*Bruce Connery-ANP Wildlife Biologist, personal communication, January 29, 2014.*

[7] *Beginning with Habitat (2004). An Approach to Conserving Maine's Natural Landscape for Plants, Animals and People, State of Maine agencies cooperative publication, a guide for Maine towns. Online: http://www.beginningwithhabitat.org/*

[8]*Austen, M.J.W., C.M. Francis, D.M. Burke, M.S.W. and Bradstreet (2001). Landscape Context and Fragmentation Effects on Forest Birds in Southern Ontario. The Condor, 103(4):701-714.*

[9]*Trzcinski, M.K., L. Fahrig and G. Merriam (1999). Independent Effects of Forest Cover and Fragmentation on the Distribution of Forest Breeding Birds. Ecological Applications, 9(2):586-593.*

[10]*Degraaf, R.M., M. Yamasaki, W.B. Leak and A.M. Lester. 2006. Technical guide to forest wildlife habitat management in New England. University of Vermont Press.*

The Future of Water Resources in Bar Harbor

Our ability to protect the quality and quantity of our water resources is intricately linked to our ability to manage the land around it, including minimizing the amount of impervious surface (roads, rooftops, parking lots), which prevents water from infiltrating into the ground naturally, altering natural drainage patterns, causing soil erosion and delivering excess pollution from uplands to our water bodies. Open space conservation is one way to protect the land that has the greatest impact on water quality, including the upper one-third of our watersheds, ridgetops, areas with shallow soil, areas without access to public sewer, buffer zones around waterbodies, wetlands and vernal pools. Long-term protection of fresh surface water and coastal water resources is important to our town because it drives our economy, gives us access to clean drinking water, allows us all the opportunity to recreate, and supports our very livelihoods.

A VISION FOR WATER RESOURCES

Our vision 20 years from now: Bar Harbor is defined by water. It is located on an island surrounded by the ocean. The town is graced with numerous lakes, ponds, streams, wetlands and vernal pools that provide drinking water to town residents and are home to a variety of wild plants and animals that enrich our everyday lives. It is our good fortune that Bar Harbor's primary drinking water source, Eagle Lake, situated in Acadia National Park, is protected on all sides from impacts of development that could lead to water quality declines.

For those residents who are not connected to town water, groundwater is an essential source of drinking water. Groundwater is intricately connected to surface waters; where ponds, streams, wetlands, and vernal pools are protected, so is our valuable groundwater.

Our water resources will provide countless opportunities for recreation that benefit our citizens and millions of annual visitors; the sight of water thrills us and water features are an integral part of memorable and prized scenic vistas.

Photo: Friends of Acadia

Eagle Lake provides drinking water for residents of Bar Harbor.

Bar Harbor residents share a vision of pristine marine and freshwater resources, which have long been the hallmark of Bar Harbor and will continue to be exemplary water quality.

Acadia National Park serves a key role in permanently protecting the high-quality water we enjoy in Bar Harbor. Including Eagle Lake, the public drinking water supply for the town, Acadia boasts 14 great ponds, 9 smaller ponds, 41 named streams, and five natural springs. While many important and highly sensitive areas have been protected in Bar Harbor through the National Park Service, it was because of the efforts of many opportunities for additional open space protection outside of the park that will go a long way toward protecting our valuable water resources.

WHY DO WE NEED TO PROTECT WATER RESOURCES?

A description of local significance and need

Bar Harbor's water resources are vital to public health, are essential to native wildlife, drive the local economy, and provide valuable ecosystem services. ***Ecosystem services*** are defined as benefits that people derive from ecosystems, including food production, the provision of clean water, climate moderation, nutrient cycling, and recreational opportunities. Bar Harbor residents and visitors are the beneficiaries of a multitude of ecosystem services from water resources (Table 5).

All of our fresh water supply, replenished by rains and snow, is caught within an extraordinary network of streams and waterfalls, ponds, lakes, forests and wetlands, and within unseen and untraceable cracks and fissures in the bedrock in an ever-changing process. It comes as no surprise that the rate of recharge of fresh water into our lakes and our wells and the speed that it flows to the sea is affected by the kinds of soils and plants, by variations of slopes, and the amount of impervious surfaces. However, because groundwater is an unseen and largely unknown resource, it is more difficult to appreciate the vital connections between the quality of land in our town-protected watersheds, forestland, wetlands, farmlands and fields - and the quantity and quality of the water we drink.

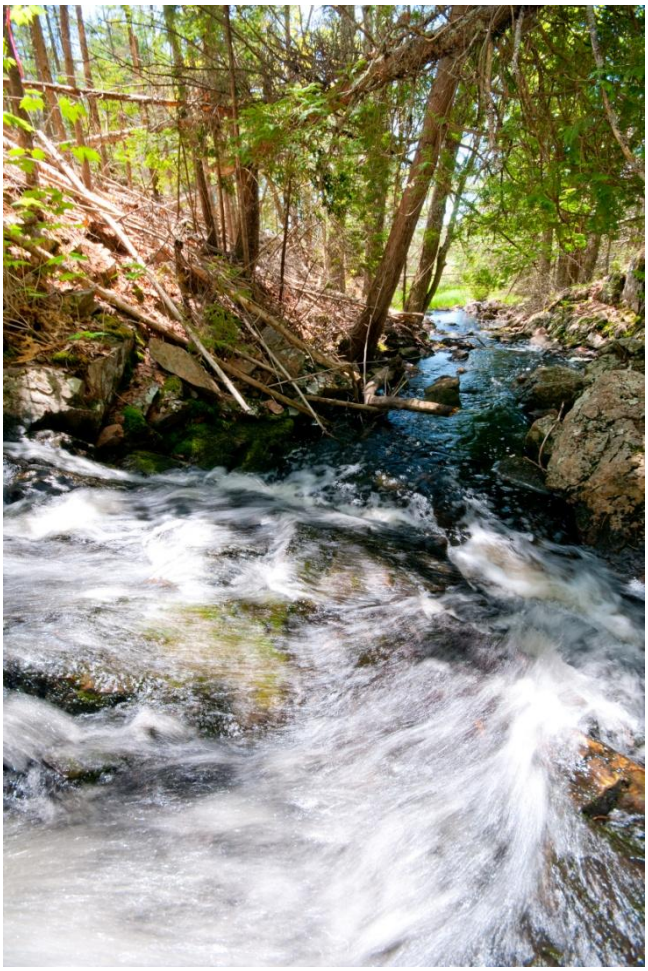


Photo: Brigit Besaw (Maine Coast Heritage Trust)

Kittredge Brook is among the 66.8 miles of creeks and streams in Bar Harbor.

Table 5. *Water resource derived ecosystem services in Bar Harbor.*

Water Resources	Ecosystem Services	Best Examples in Bar Harbor
Terrestrial Wetlands *(Scrub-shrub, forested wetlands, marshes, bogs, fens)*	• Water filtration • Water storage/flood control • Pollutant trapping	• Wetland off Eagle Lake across from the High School • Northeast Creek Cranberry Bog • Rte. 102 on the way into Town Hill from off-island • Jones Marsh and Stony Brook Heath
Terrestrial Wetlands Cont. *(Scrub-shrub, forested wetlands, marshes, bogs, fens)*	• Drinking water quantity: *Conduit for recharge* • Drinking water quality: *Pollutant trapping*	• Town Hill: *Indian Point Road* *Crooked Road* *Knox Road* *Old Norway Drive*
Surface Waters *(Lakes, ponds and streams)*	• Water storage/flood control • Groundwater recharge • Wildlife Habitat • Recreation	• Northeast Creek, Mill Creek • Eagle Lake and others *(see Table 6)*
Coastal Wetlands: *(Salt marshes, brackish marshes freshwater tidal marshes, clamflats)*	• Wildlife Habitat • Flood Control • Erosion Control • Sediment Trapping • Economic Benefit: *- Direct through clam, mussel, and worm resources for local harvesters; indirect through property protection*	• Northeast Creek • Marsh at the Oceanarium on Rte. 3. • Marsh at the head of the Island • Clamflats at Hadley Point

Groundwater

Although a vital contribution to the economy of Bar Harbor, the town's water supply and sewer system serve a very small part of Bar Harbor – only about two square miles of the downtown area and part of Hull's Cove and DeGregoire Park. In recent years, public water, but not sewer lines, has been extended to cottages, campgrounds and other properties along Route 3 in Ireson Hill and Salisbury Cove during the summer season. The rest of Bar Harbor is entirely dependent upon private wells and private septic systems.

State and local guidelines protect the town's water supply, but there are fewer laws to protect private wells. In fact, the State of Maine has no consistent, enforceable, protection strategy for private water supply wells. As growth has expanded into outlying areas, threats to groundwater quality have increased.

Maintaining the quantity and quality of water from existing private wells is critical so that future development does not degrade existing supplies, or result in dry or contaminated wells. When rural areas were sparsely populated, the quantity and quality of groundwater was not a concern. The town recognized the need for better information to protect vulnerable hydrogeologic resources from possible adverse impacts of residential development, and commissioned a study in 2004 to evaluate growth trends, examine the potential impacts on groundwater and recommend ways to protect the quality of the town's drinking water[4].

The report found that the town faces a larger and more difficult problem with respect to water quality, particularly the potential for contamination from septic systems- especially in areas where conditions create a more vulnerable physical setting (e.g. areas with thin soils, areas of exposed bedrock, ground water recharge areas). Land-use changes that increase the risk of groundwater contamination include: 1) insufficient distance between septic systems and wells, 2) increased impervious surfaces that decrease groundwater recharge potential, and 3) the replacement of natural forests and fields with residential lawns and impervious surfaces, which reduces the natural buffering against nutrient and chemical- laden surface water runoff, and groundwater recharge.

A Case for Clean Water

The death of 13 guests at the Bay View House had Bar Harbor's hotel owners worried.

It was the fall of 1873, and news reports of the summer's typhoid outbreak threatened the village's otherwise positive reputation as a summer resort throughout the east coast. The typhoid problem was localized to the single hotel, but visitors at a second hotel, the Rodick House, simultaneously experienced an outbreak of the less dangerous illness, *scarlatina*. The double outbreak was certain to create a perception that it was the village itself that was unhealthy, sending potential summer visitors elsewhere in following years. In the gloomy fall of 1873, it seemed probable that none of Bar Harbor's 15 hotels would reopen and survive the 1874 season.

A doctor on the scene believed that the well at the Bay View House was contaminated with sewage, and published his findings in a Boston medical journal. Because contaminated water was identified as the problem, a solution was to pipe pristine water from outside of town to insure a safe drinking supply. Coupled with an advertising campaign to publicize the new water system in Boston, New York, and Philadelphia, a clean water supply just might allay public fears and save Bar Harbor's fledgling resort industry from impending doom. Thus, the Bar Harbor Water Company was officially born in February 1874.

Source: Peter Morrison, 2008, History of the Bar Harbor Water Company 1873-2004.

The Problem- Bar Harbor's population has continued to grow with ever-increasing water needs. Outlying areas are converting from vacant or agricultural lands to areas of low to medium density residential development. While the need for water quality and quantity has increased, so have the threats from increased runoff and pollutants.

Recommendation- To ensure a clean, plentiful water supply in the future, we need to continue to protect the Eagle Lake watershed and focus efforts to limit impervious surfaces in outlying areas of town.

Open Space Planning- A large portion of the Eagle Lake watershed is within the park boundary. The town should maintain good lines of communication with park staff, make sure that town projects compliment the work already being done to protect water quality, and seize opportunities to work collaboratively with the park service to protect our clean drinking water supply. The town should also require developers to adopt low-impact development techniques for all future development to help offset the effects of impervious surfaces on private wells and other natural resources in the rural areas of town.

Lakes, Ponds & Streams

Bar Harbor is home to seventeen lakes and ponds, covering 691 acres (Table 6). These precious water resources serve as drinking water sources, areas of recreation, and scenic areas, in all seasons, for residents and visitors alike.

We are very fortunate in Bar Harbor that many of our lakes, ponds, and streams are located in Acadia National Park or originate there. This confers a great deal of protection for these water resources. Detailed information concerning lakes and streams can be found in 2008 National Park Service report titled "*Assessment of Natural Resource Conditions in and Adjacent to Acadia National Park, Maine*"[1]. Some lakes and streams have been identified as "special places"[2] these include Northeast Creek, Hamilton Pond, Millbrook, Millbrook Falls, and Kittredge Brook.

Bar Harbor residents might be astounded to learn that although our town is only 45 square miles in size, it hosts 66.8 miles of creeks and streams. Within the 28,880 acres of town, 991 acres are wetlands, or 3.5 percent of the total land area of Bar Harbor. There are three vernal pools in Bar Harbor classified as "significant" by the Maine Department of Environmental Protection (MEDEP), and many other "non-significant" vernal pools known to local residents and schoolchildren that are also considered "special places". In all, Bar Harbor has 41.2 miles of ocean coastline, with multiple points of public waterfront access (Figure 7).

Photo: Enoch Albert

Fawn Pond in Acadia National Park is a small headwater lake in the upper Northeast Creek watershed. The pond is located upstream of Lake Wood, which flows to Hamilton Pond via Stony Brook, and eventually into Northeast Creek near Thomas Bay.

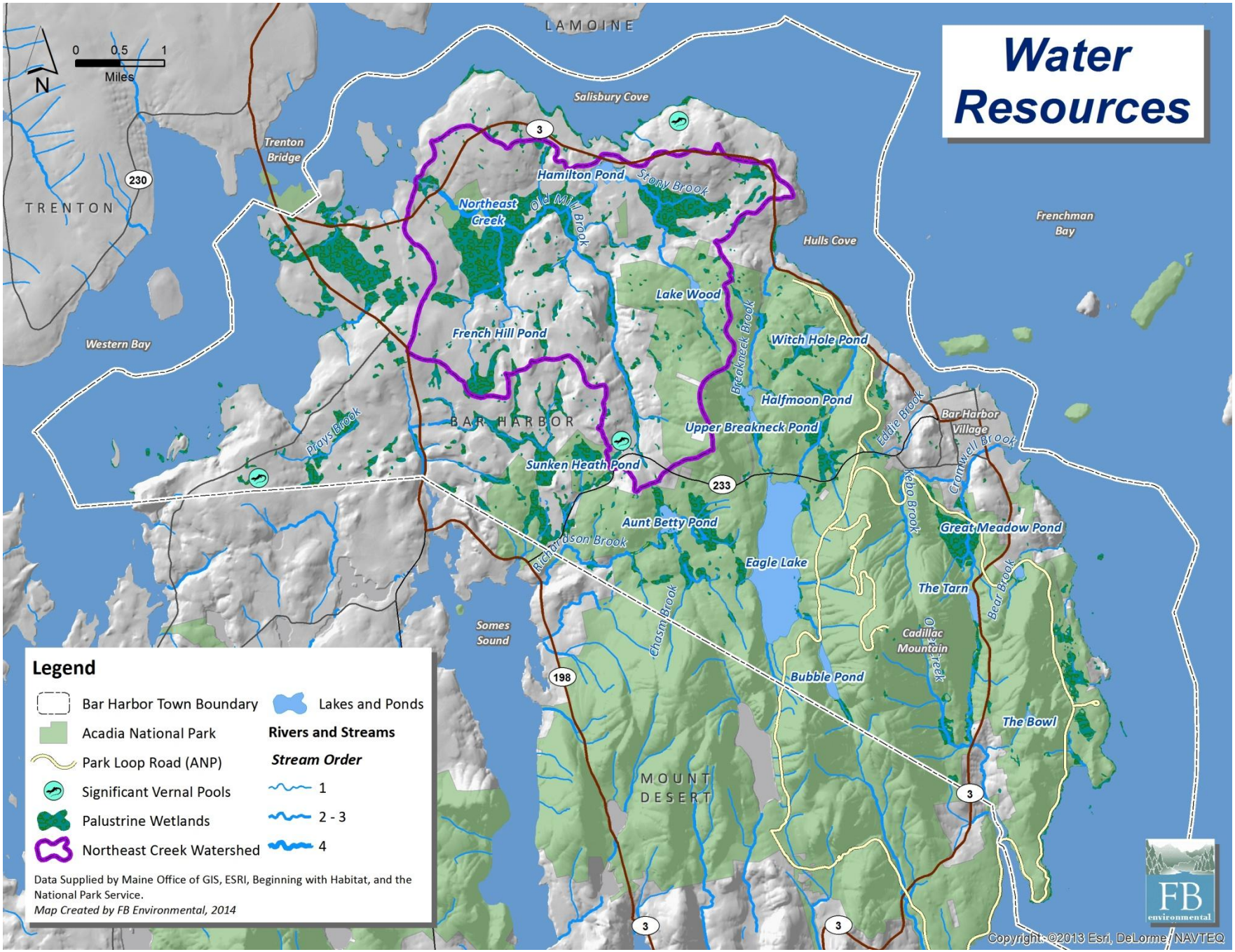
Table 6. *Lakes and ponds in Bar Harbor.*

Waterbody	Area (acres)
Eagle Lake	465.9
Hamilton Pond	40.7
Bubble Pond	33.0
Aunt Betty Pond	31.5
Witch Hole Pond	23.8
Lower Breakneck Pond	20.7
The Tarn	18.9
Lake Wood	16.8
The Bowl	10.4
Upper Breakneck Pond	9.1
Beaver Dam Pond	7.5
Fawn Pond	4.1
New Mills Meadow Pond	3.2
French Hill Pond	3.0
Halfmoon Pond	1.0
Sunken Heath Pond	0.8
Great Meadow Pond	0.2
TOTAL	**691**

Source: FB Environmental

The Land-Water Connection

Our ability to protect water quality is closely linked to our ability to protect open space- undeveloped forests, wetlands, farmlands, and fields- by reducing the amount of impervious surfaces, minimizing the density of housing in areas without access to public sewer, and protecting buffers around the waterbodies and wetlands we depend on for recreation and our livelihoods.



Map: FB Environmental

Figure 7. *Water resources features in Bar Harbor.*

Wetlands & Vernal Pools

Wetlands are areas where water covers the soil, or is present at or near the surface of the soil long enough to result in waterlogged (hydric) soils that favor the growth of specially adapted plants (hydrophytes). There are many different types of wetlands including forested wetlands, such as cedar or red maple swamps, and open wetlands, such as marshes, fens, and bogs. Wetlands comprise 15% of the total land area of Bar Harbor (Table 7). Bar Harbor's ordinances currently protect wetlands that are two acres or greater in size.

Vernal pools are temporary to semi-permanent pools occurring in shallow depressions in forested landscapes. Vernal pools provide the primary breeding habitat for amphibians such as wood frogs, blue-spotted and spotted salamanders and invertebrates such as fairy shrimp, as well as habitat for other wildlife including several of Maine's endangered and threatened species. Water is retained long enough in vernal pools in the spring to allow these species to breed and their young to mature enough to move to adjacent land.

Why are wetlands important and how do they help us?

A 2008 survey of wetlands and vernal pools in Bar Harbor indicated that wetlands are distributed across 4,215 acres throughout the town (15% of the land area), but are more prevalent in the less-mountainous western half of Bar Harbor[3]. Some of these wetlands are large and diverse including several large bog or fen-type wetlands, while forested and shrub dominated wetlands are most common. Table 7 provides a list of wetland types and their extent in Bar Harbor. This section provides a description of some of these ecosystem services.

Flood Control- Wetlands are like sponges. They tend to form in depressions, or low spots in the landscape. Between storm events, water flows through them, evaporates and percolates into the ground, decreasing the water in the wetland. Then, when a storm event occurs, water flows into wetlands, filling them, rather than causing a flood elsewhere. The roadside wetlands near the Mount Desert Island High School perform this valuable service.

Water Storage- Some wetlands function like water bottles, and just hold water, like giant basins. Water in these basins (often lakes and ponds) can be used as is for transport to drinking water facilities (e.g., Eagle Lake), recreation (e.g., Hamilton Pond), or as wildlife habitat.

Photo: Jill Weber

Richardson Brook wetland, located at the outlet of Aunt Betty's Pond, provides valuable functions such as flood control and pollutant trapping.

Table 7. *Types and extent of wetlands in Bar Harbor.*

Wetland Type	Area (acres)
Coastal *Estuarine and marine*	72
Pond/Lake	717
Stream/River	111
Emergent *Marshes and wet fields*	244
Scrub-Shrub	1,448
Forested	1,559
Open Water	64
TOTAL	**4,215**

Source: Stantec (2008)[3]

Other wetlands release their water more slowly, often into brooks, or even into small cracks in the underlying rocks, where it moves to natural underground reservoirs for storage.

Sediment Retention- As water flows downhill, it picks up particles. When water enters a wetland and spreads out, the rate of flow slows and can no longer carry the sediments. The sediments drop out, and the water exiting a wetland is clearer. One of the most important examples of a wetland that performs this service is the

Northeast Creek complex. This wetland is the last area through which fresh water flows before entering the ocean, across vital shellfish beds, nursery habitat for marine animals, and into Frenchman Bay, where lobsters and other commercially valuable species depend on clean water for their survival.

Water Filtration & Pollutant Trapping- Water flows through wetlands. As it does, nutrients contained in sediments are trapped. Nutrients dissolved in the water are taken up by plants that grow there. Water that is not filtered through wetlands, but which flows directly into a larger water body (pond, lake or ocean), is so nutrient-rich, that an algal bloom can occur. When this happens, the algae use up the oxygen and can harm fish and other animals.

Habitat- Wetlands provide habitat for plants and animals. They are often isolated, safe, and quiet places where birds and animals can feed, rest and, in the case of birds, nest. In fact, many of the plants and animals found there provide food for larger animals.

Marine Resources

Bar Harbor's 2007 Comprehensive Plan set forth a specific goal of protecting Bar Harbor's marine resources industry, its coves and harbors. Progress has been made toward this goal; however, it will require continued diligence to assure the sustainability of Bar Harbor's marine resources and the cleanliness and beauty of Bar Harbor's shoreline.

Marine Environment Management

Bar Harbor's comprehensive plan also calls for the management of the marine environment, coastal islands, and their related resources, to preserve and improve the ecological integrity and diversity of marine communities and habitats, to expand understanding of the productivity of the Gulf of Maine, and to enhance the economic value of the town's renewable marine resources.

The comprehensive plan specifically calls for monitoring of marine resources and water quality in the Hadley Point area, as this is an important access area for both commercial and recreational harvesters. There are potential negative impacts of increased use of the town's boat launch, ongoing resource harvesting, and/or aquaculture activities.

In 2007, Bar Harbor received a grant from the Gulf of Maine Council on the Marine Environment to restore eelgrass beds between an aquaculture lease site and the clamflats on the west side of Hadley Point. The Bar Harbor Marine Resources Committee worked with numerous community members to implement the project including MDI Biological Laboratory in

CASE STUDY: Eddie Brook

An interesting assessment of what can happen to a stream if left to general inattention is described in the Eddie Brook Watershed Survey report[4]. The brook originates in Acadia National Park, and then runs through a residential section of Bar Harbor.

Residents who remember the brook when they were young describe a "wonderful small waterway alive with brook trout, frogs…a pathway to self-discovery".

The survey found evidence of various pollutant types including toxic substances, bacteria, nutrients and sediments. Residential development likely led to the release of these pollutants into Eddie Brook, which decreased the stream's water quality. This in turn affected the fish and other organisms that live in the stream. The polluted water eventually flowed into the Frenchman's Bay across the clam flats around The Bar.

- ***Nutrients*** such as phosphorous and nitrogen can promote algae blooms and deplete oxygen, killing fish and other animals. Sediment increases turbidity (cloudiness), which in turn reduces plant growth and alters food supplies for aquatic organisms.
- ***Sediments*** can damage fish gills and affect clams and mussels.
- ***Bacteria*** in the water can result in illness, shellfish bed closures, swimming restrictions, and contaminated drinking water.
- ***Toxic substances*** may be carcinogenic, and can contaminate ground and surface drinking water supplies.

The watershed survey educated citizens through community meetings, brochures, press coverage, and by involving citizen volunteers. The plan moving forward was to encourage landowners to plant vegetative buffers, to limit the use of fertilizers, to eliminate toxic substances from their properties, to support the watershed management plan, and ultimately to improve water quality and restore Eddie Brook to the well-loved stream known in days gone by.

Salisbury Cove; MDI Biological Laboratory has continued to raise funds and implement restoration projects within the Hadley Point area, while monitoring water quality at Hadley Point. The water quality is good, transparency remains high, dissolved oxygen is sufficient to support marine invertebrates and fishes. As a result of six summers of eelgrass restoration, eelgrass coverage within the 14 acre restoration area expanded from <1% in 2007 to over 20% by 2012. Unfortunately, all eelgrass in upper Frenchman Bay was lost in 2013. Since eelgrass is important for stabilizing sediments, preventing shoreline erosion, absorbing excess nutrients, and functioning as habitat for numerous marine species, the future of marine resources and water quality at Hadley Point, and along the entire northeastern shoreline of Bar Harbor, is uncertain and monitoring should be continued.

CELEBRATE WHAT WE HAVE

Groundwater Quality & Quantity

The Stratex study[5] focused on quantity and quality of hydrogeologic resources outside the areas served by the Bar Harbor public water system. Based on a review of well data, published reports, geologic maps, and precipitation data, the study concluded that Bar Harbor is likely to have enough water to supply current dwellings as well as most of the dwellings predicted under the build-out scenario for 2034. We have little to no data on ground water quality in Bar Harbor. Based on a recent nitrogen loading study by the USGS in Northeast Creek, we know that nitrogen levels have been increasing, but how this relates to nitrogen levels in well water has not been documented[6].

Protected Wetlands & Vernal Pools

Bar Harbor citizens recognize that wetlands are valuable town assets and they decided, through town code, to protect all wetlands two acres or more in size, rather than those at least ten acres in size, as mandated by state regulations. Significant vernal pools are protected under state statute and the town maps all documented significant vernal pools and participates in ongoing surveys to document additional significant pools.

While only three vernal pools have been determined to be significant under state law, (another 24 pools were determined to be non-significant) there is potential for many more. A 2008 study of vernal pools in Bar Harbor indicated that there are approximately 297 potential vernal pools. These pools are scattered throughout the town and have not been formally mapped. While small in area, these potential vernal pools are estimated to cover an area of 22 acres[6]. Vernal pools provide

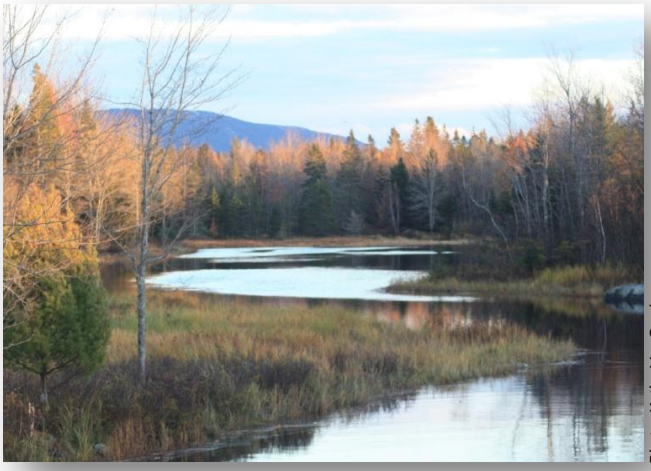


Photo: Kathy VanGorder

The Northeast Creek watershed encompasses 24% of the town's land area (Figure 7).

temporary storage of precipitation, and are often connected to the groundwater table. For these reasons and others, protecting these natural resource features in our town is imperative.

Lakes, Ponds & Streams

Since the publication of the 2004 Eddie Brook Watershed Survey[3], upgrades to the Bar Harbor sewer system, vegetative buffer plantings by students along the brook, and road improvements on West Street extension have all led to improvements in the brook and marine water quality out on the bar. In addition, the town has replaced a culvert on Kebo Street that will improve fish passage and flood control. Public works staff are working with the Conservation Commission to install similar culverts on lower Ledgelawn St. at the confluence of Kebo and Cromwell brooks.

The Frenchman Bay Plan

The comprehensive plan also calls for development and adoption of management plans for Frenchman's Bay, Mount Desert Narrows, Eastern Bay, and Western Bay. A new group has emerged called the Frenchman Bay Partners, which includes representation from eight municipalities around the bay, including Bar Harbor.

The vision of the Frenchman Bay Partners is a healthy and sustainable future for Frenchman Bay, where multiple users can enjoy the inherent beauty and benefit from the ecological and economic viability of the bay. This group is engaged in a process known as conservation action planning for the entire Frenchman Bay watershed, which includes Frenchman Bay, Mount Desert Narrows, and Eastern Bay. This process prioritizes habitats and species of particular concern. For the Frenchman Bay area, these include eelgrass habitat, mudflats, benthic habitats and diadramous fish such as alewives and elvers.

Strategies of the partners include restoring eelgrass habitat, identifying sources of bacterial pollution in order to open polluted clamflats, conducting benthic surveys in order to understand the status of benthic habitats which support lobsters, scallops, sea cucumbers, sea urchins and other commercially important marine resources, and identifying and removing barriers to fish passage in local streams[7]. Although outcomes of this strategic partnership will benefit more than just the town of Bar Harbor, the entire region benefits from the economic stimulus of a healthy bay with intact habitats and vibrant fisheries.

Commercial Species Landings

The habitats identified in the Frenchman Bay planning process support over $10 million of commercially important species, including, in order economic value, lobsters, bloodworms, mussels, and soft-shell clams.

Active Committees Supporting the Marine Environment

The Bar Harbor Marine Resources Committee, the Harbor Committee, the Conservation Commission, and the Cruise Ship Committee all provide for significant input by citizens and involvement in harbor and coastal issues. The ongoing commitment of the town to work with these committees will ensure that the harbor, the Bar Harbor shoreline, marine resources, and public assets related to the marine environment are well maintained for future generations.

The Bar Harbor Marine Resources Committee has made significant progress in managing clam resources at Hadley Point. They are now focusing on getting closed clamflats open at the mouth of Northeast Creek by working with the College of the Atlantic and the Maine Department of Marine Resources to examine land-use practices in the Northeast Creek watershed and identify sources of bacterial pollution.

Photo: Maine Coast Heritage Trust

View from Thomas Island in Upper Frenchman Bay.

HOW DO WE PROTECT & SUPPORT WATER RESOURCES?

Goals & Strategies

FRESHWATER RESOURCES

GOAL 1: PROTECT THE QUALITY AND MANAGE THE QUANTITY OF FRESH WATER RESOURCES IN BAR HARBOR INCLUDING GROUNDWATER, AND SURFACE WATER, LAKES, PONDS, CREEKS, STREAMS, AND THEIR TRIBUTARIES

STRATEGIES:

a) Use public education to encourage voluntary actions by individuals and groups to mitigate the effects of stormwater runoff by:

- Conserving water;
- Optimizing well siting;
- Installing denitrification equipment;
- Regularly monitoring and maintaining septic systems and wells;
- Minimizing site alterations;
- Conserving land, including preservation of large parcels;
- Promoting infill areas served by public sewer and water;
- Managing composting, pet waste, herbicides, pesticides, and other harmful household products;
- Utilizing shared septic systems and wells.

b) Manage future residential and other development so that septic and well systems are constructed, sited, installed and maintained so as to:

- Have "no impact" compared to an established standard;
- Prevent existing wells from becoming contaminated or going dry;
- Protect unspoiled hydrologic resources that are important symbols of the region.

c) Prepare ordinances that require development in sensitive areas to meet established performance standards that require sewer systems, community septic systems, and sufficiently separated well and septic systems to:

- Increase water travel times and mixing of wastewater to reduce concentrations of nitrate-nitrogen to <10 mg/L at the wellhead and prevent salt water intrusion from extensive pumping and/or drought conditions;
- Limit impervious surfaces that decrease groundwater recharge;
- Restrict siting of septic systems in recharge areas, thin soil, exposed bedrock, and the upper 1/3 of watersheds;
- Encourage property owners to limit replacement of natural forested and field areas with residential lawns;
- Avoid disposal of household chemicals and petroleum products in septic systems; and properly store and dispose of household chemicals and petroleum products;
- Minimize disturbance of topsoil during site construction;
- Require low-impact development standards for new residential and commercial development that limits the amount of impervious cover and allows for enhanced infiltration of runoff.
- Utilize shared septic systems and wells.

d) Prepare better maps of low recharge areas to establish boundaries for districts that allow or can support only very low density of development.

WETLANDS

GOAL 2: PROTECT BAR HARBOR'S FRESHWATER AND COASTAL WETLANDS

STRATEGIES:

a) Maintain development setbacks of at least 75 feet from wetlands of two or more contiguous acres, including forested wetlands.

b) Identify the location of and continue to protect rare and exemplary natural communities; amend the LUO to protect them through clustering and buffer provisions.

c) Create incentives to encourage the planting of native species.

d) Discourage the use of herbicides and pesticides in setbacks from significant vernal pools and wetlands.

MARINE RESOURCES

GOAL 3: PROTECT THE MARINE ENVIRONMENT AND ENHANCE THE ECONOMIC VALUE OF RENEWABLE MARINE RESOURCES BY PRESERVING AND IMPROVING THE ECOLOGICAL INTEGRITY OF MARINE COMMUNITIES AND HABITATS

STRATEGIES:

a) Continue financial and political support of the Marine Resources Committee and other groups.

b) Closely monitor water quality and marine resources in the Hadley Point area and take steps to protect marine resources from the negative impacts of increased use of the town's boat launch.

c) Continue efforts to restore clamflats and eelgrass beds near Hadley Point.

d) Support implementation of management plans for Frenchman Bay and Western Bay by working with groups like the Frenchman Bay Partners and Friends of Blue Hill Bay.

e) Discourage use of herbicides and pesticides in the shoreland zone, which could kill clams and marine vegetation such as eelgrass.

References

[1] *Vaux, P.D., S.J. Nelson, N, Rajakaruna,G. Mittlehauser, K. Bell, B. Kopp, J Peckenham, and G. Longsworth, 2008. Assessment of natural resource conditions in and adjacent to Acadia National Park, Maine. Natural Resources Report NPS/NRPC/WRD/NRR—2008/069. National Park Service Fort Collins, Colorado.*

[2] *Bar Harbor Comp Plan visioning sessions and the Hancock County Planning Commission Coastal Scenic Inventory.*

[3] *Stantec (2008). Identification of Wetlands and Vernal Pools in Bar Harbor from Aerial Photography. Stantec Consulting, December 2008. http://www.barharbormaine.gov/DocumentCenter/View/261.*

[4]*MDI Water Quality Coalition (2004). Eddie Brook Watershed Survey.*

[5]*Stratex, LLC (2004. Hydrogeologic Resource Evaluation, Bar Harbor, Maine. November 16, 2004.*

[6]*Nielsen, M.G. (2013). Changes in nitrogen loading to the Northeast Creek Estuary, Bar Harbor, Maine, 2000 to 2010: U.S. Geological Survey Open-File Report 2013–1256, 33 p., Online: http://dx.doi.org/10.3133/ofr20131256.*

[7]*The Frenchman Bay Plan. Online: http://www.frenchmanbaypartners.org/publications/frenchman-bay-plan/*

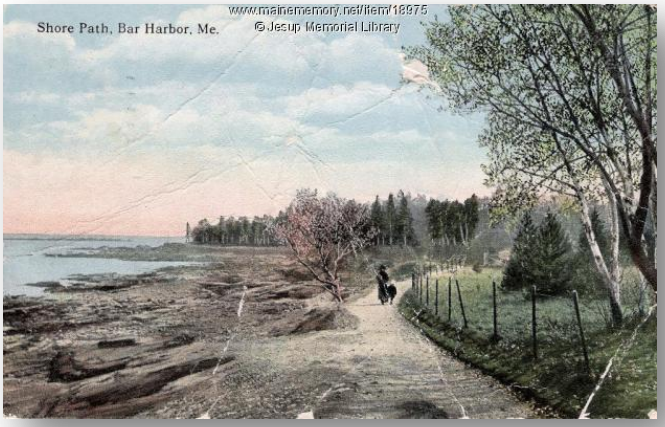
A Continued Appreciation for the Rich Scenic & Cultural Resources in Bar Harbor

A long history of land conservation and historic preservation exists in Bar Harbor. Groups such as the Hancock County Trustees of Public Reservations and Mount Desert Island's Village Improvement Associations were early proponents of protecting the region's scenic resources. Charles Eliot, George Dorr and others who were active in the Trustees negotiated and funded the purchase of privately held scenic lands incorporated as Sieur de Monts National Monument in 1916. The Bar Harbor Village Improvement Association created many of Bar Harbor's trails, including the beloved Shore Path in 1880. Preservation of cultural resources was a driving force behind the original Abbe Museum that opened its doors at Sieur de Monts in 1929, and eventually the year-round museum in downtown Bar Harbor, a unique research and education center for Wabanaki history and culture.

There is a deep, enduring connection to the natural beauty and cultural character found within Bar Harbor's borders. The need for public access to natural beauty and inspirational scenery in our society is growing as more land is lost to accommodate our nation's growing population and its needs. Town residents value unobstructed ocean, forest, mountain and freshwater views for both personal and community health. In addition, they respect traditional uses of this area's diverse natural resources like fishing, foraging (e.g. berry picking and fir tipping), hunting, trading, farming, quarrying, shipping, and recreation.

A VISION FOR SCENIC & CULTURAL RESOURCES

Our vision 20 years from now: Bar Harbor's scenic and cultural resources are appreciated and enjoyed by all. Our outstanding scenic views and small town atmosphere attract people to the area to live, work and play. The natural and cultural sounds and natural darkness of the area part of the special places we protect. We work in partnership with the national park and others to safeguard and maintain the value and character of soundscapes and star-filled skies. Smart development focuses on smaller, selected areas of the town which allows for open space and maintains scenic road corridors.



The Shore Path circa 1921.

Well thought out protective measures preserve Bar Harbor's historic and picturesque character. Furthermore, they protect jobs and economic vitality that rely on heritage-based, ecology minded, and recreational tourism. Residents feel they can make a difference in the protection of these vital resources for future generations.

WHY DO WE NEED TO PROTECT SCENIC AND CULTURAL RESOURCES? A description of local significance and need

Stories are a part of every landscape. Archaeological evidence exists for the seasonal villages and temporary encampment sites of the Wabanaki peoples. Mount Desert Narrows, Northeast Creek, Hadley Point, Salisbury Cove, Hulls Cove, and Bar Island/Sand Bar serve as reminders of the lifeways of the first peoples of Maine. Native peoples' use of local habitats and resources helped maintain MDI's beauty and integrity.

European explorers and missionaries landed on the island in the 1600s; by the 1800s, settlers were arriving in large numbers to engage in fishing, shipbuilding, farming, and lumbering. Beginning in the mid-1800s landscape artists, primarily from New York, came to spend summers on the island. Awed by the scenic beauty of the area, they tried to capture it on canvas. Their eastern city art shows attracted other summer residents who wanted to see for themselves the rocky shores and pristine places displayed in galleries and print.

Over a Century of "the Best Kind of Work"

In the late 1800s the perceived loss of American wilderness led to a greater interest in preserving scenic areas and improving community life. Locally this movement resulted in the formation of the Bar Harbor Village Improvement Association (VIA) in 1881.

The long-standing mission of the Bar Harbor VIA is to *"preserve and develop the natural beauties of the place, and to enhance their attractions, by such artificial arrangements as good taste and science may suggest…"*

Over the years the Bar Harbor VIA has been recognized as providing "the best kind of work of which such an organization is capable," with particular attention given to their work on scenic roads, a bicycle path, and foot-paths "giving access to picturesque localities."

The success of the Bar Harbor VIA led to the incorporation of other village improvement societies and associations on Mount Desert Island at the turn of the century. Unlike most VIAs in the country at the time, these societies worked cooperatively through a joint path committee. Their combined efforts created approximately 250 miles of recreational walking paths across the island.

The Bar Harbor VIA is likely the town's longest running non-profit organization. The VIA's Board of Directors and officers meet annually to prioritize projects and update policies as needed. One of the first functions of the newly formed VIA in 1881 was the care of the Shore Path which it still maintains today! Besides up keeping the historic Shore Path, the VIA was gifted the natural areas of Glen Mary Park in 1894, maintains the How Memorial behind the Wonder View Inn, and owns Bald Rock in Frenchman Bay. Local structures that have benefited from the VIA's recent work include the Village Green clock and Veterans' Memorial, as well as the Hulls Cove Schoolhouse.

Working with private partners, the Bar Harbor VIA continues to do *"the best kind of work"* giving residents and visitors alike access to beautiful, historic, and safe places in the community.

Open Space Planning

Local community organizations have a tradition of working collaboratively with town government, landowners, developers and the public to actively plan for, protect, and manage open space resources in the area. The examples of private landowners voluntarily allowing the Shore Path to cross their land for the good of all, and other citizens donating land parcels for community enjoyment and recreation illustrate the vital role private sector organizations can play in conservation. The long-standing efforts of the VIA continue to benefit all members of the Bar Harbor community.

Source: Personal Communication, Dick Cough, President, Bar Harbor VIA

Through generous land donations, Acadia National Park was created in the early 1900s to preserve significant natural and cultural areas for the enjoyment of all. Generations of seasonal visitors have descended upon Bar Harbor to soak up the scenery ever since.

A large service industry grew out of the need to accommodate the increasing influx of tourists. Seasonal and year round businesses and institutions were established. All these people and their relationship to the environment have helped shape the natural, historic and cultural landscape we know today. Our scenic and cultural resources, including the national park, are significant reasons why Bar Harbor continues to thrive as an international tourist destination. Comprised of mostly donated land, Acadia is barred from acquiring any land outside its boundaries set by Congress in 1986. Therefore, future efforts to protect local scenic and cultural resources not already within the national park borders, that are threatened by development, must be accomplished by other means.

CELEBRATE WHAT WE HAVE

A summary of existing Scenic & Cultural Resources

Scenic Resources

In 2006, the town held public visioning sessions as part of the comprehensive plan development process, which resulted in a list of "favorite places" important to local residents. Some of these places are open spaces valued for their scenic nature or shared human heritage. Agamont Park, the Village Green, Northeast Creek, Hadley Point, Hulls Cove beach, the Bar Island Sand Bar, Town Beach, Kebo Valley Golf Course, the College of Atlantic campus, and Blagden Preserve (Figure 8). People voiced concerns about disappearing farmlands, waterways, tree-lined roads, and the nighttime scenery of starry skies in Bar Harbor.

In addition to the 2006 list of "Favorite Places", in 2009-2010, the Hancock County Planning Commission (HCPC) conducted an inventory of scenic coastal views from public places, such as roads, parks, waterbodies, hiking trails, and scenic roadside turnouts in Bar Harbor and throughout Hancock County[1] (Figure 8).

The definition of scenic resources used by the HCPC is: "Public areas, features, and sites that are recognized, visited, and enjoyed by the general public for their inherent visual qualities." Volunteers traveled the main roads of Bar Harbor and used the state of Maine's Scenic Assessment Handbook[2] to assign points and rank each view based on eight indicators of quality, such as shoreline configuration, water views, vegetation, and landscape composition.

Fourteen views were ranked in the Town of Bar Harbor (Table 8). Scores of 70 or above ranked the scenic view as one of state or national significance. Those with scores of 50-69 were deemed of regional significance, and those from 30-49 are of local significance.

The scenic inventory recommends that further work be done of each of these views to measure visual accessibility (i.e. the area's traffic density) and public recognition (i.e. if the view is identified in a comprehensive plan, scenic byway corridor plan, or other documents).

Table 8. *Ranking of scenic views in Bar Harbor.*

Scenic View	Total Score	
Cadillac Mountain Summit	**95**	*State or National Significance*
Bar Harbor Town Pier	**92**	
Eagle Lake (from 233)	**82**	
Old Soaker	**82**	
MDI Bluffs (Rt. 3)	**79**	
Northeast Creek (Rt. 3)	**77**	
Oak Hill Cliff	**72**	
The Causeway (view west)	**70**	
Salisbury Cove	**58**	*Regional Significance*
Bubble Pond (from parking lot on Park Loop Rd.)	**57**	
Hulls Cove (Rt. 3)	**56**	
The Causeway (view east)	**45**	*Local Significance*
Hamilton Pond (Rt. 3)	**39**	
Jones Marsh	**39**	

Source: HCPC, 2010

Photo: Friends of Acadia

Millions of visitors enjoy the scenic views of Bar Harbor every year from the top of Cadillac Mountain.

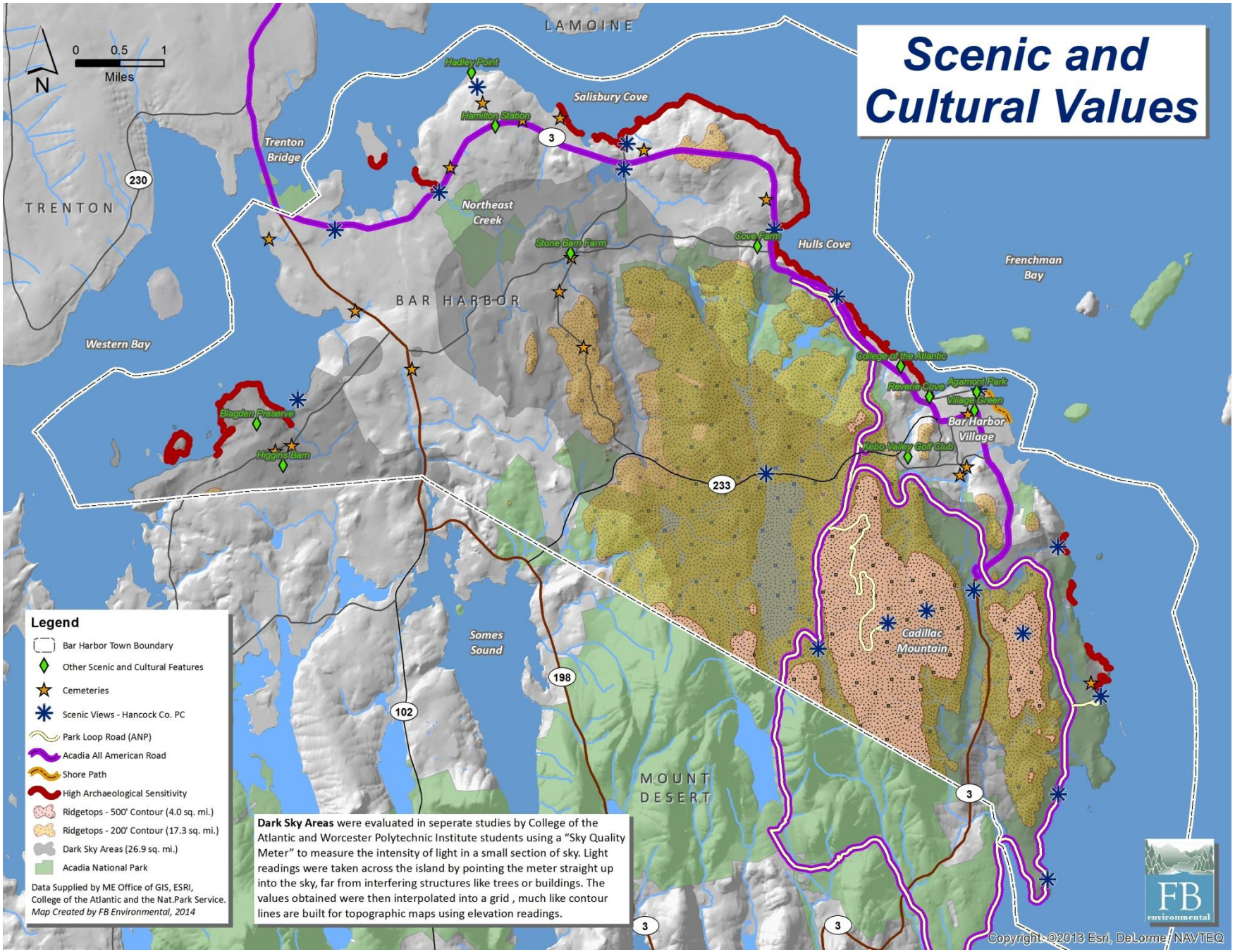


Figure 8. *Scenic and Cultural Resources in Bar Harbor.*

Because the level of traffic along Route 3 is quite high and the road is deemed an All-American Road by the National Scenic Byways program, one could argue that the views in Bar Harbor measured to be of local significance could be ranked higher.

Further work could also be done to identify the areas that are critical to maintaining the scenic qualities of the public views inventoried by the HCPC. Maine Coast Heritage Trust (MCHT) has the ability to perform viewshed analysis on Mount Desert Island. This high-resolution data enables MCHT to factor in elevation, tree composition, etc. to determine what areas can be seen from a viewpoint. This will help identify areas for protection for scenic qualities. MCHT conducted a viewshed analysis from four locations in Bar Harbor as part of the open space plan development process (Figure 9). This analysis could be replicated for other locations in the town, as well as from the waters of Frenchman Bay looking towards the mountains of MDI, to better assess the scenic impacts of proposed developments.

Protecting Bar Harbor's Scenic Hills

While much of Bar Harbor's highly scenic land is protected in Acadia National Park, there are important privately held lands that were identified in the Comprehensive Plan as "Favorite Places." Some of these are protected through conservation easements (e.g. the fields along the Crooked Road at the Stone Barn and the fields along the Cromwell Harbor Road), but others may not have such protections (e.g. Kebo Valley Golf Course, Hamilton Station, etc.).

Properties located on higher elevation lands are particularly important for open space protection, as buildings and other structures stand out on the horizon. The scenic values of hilltops can be protected through a variety of means including conservation easements, building height restrictions, or architectural design.

Photo: John Kelly

Privately held hilltops (greater than 200 ft) in Bar Harbor are vulnerable to development pressures.

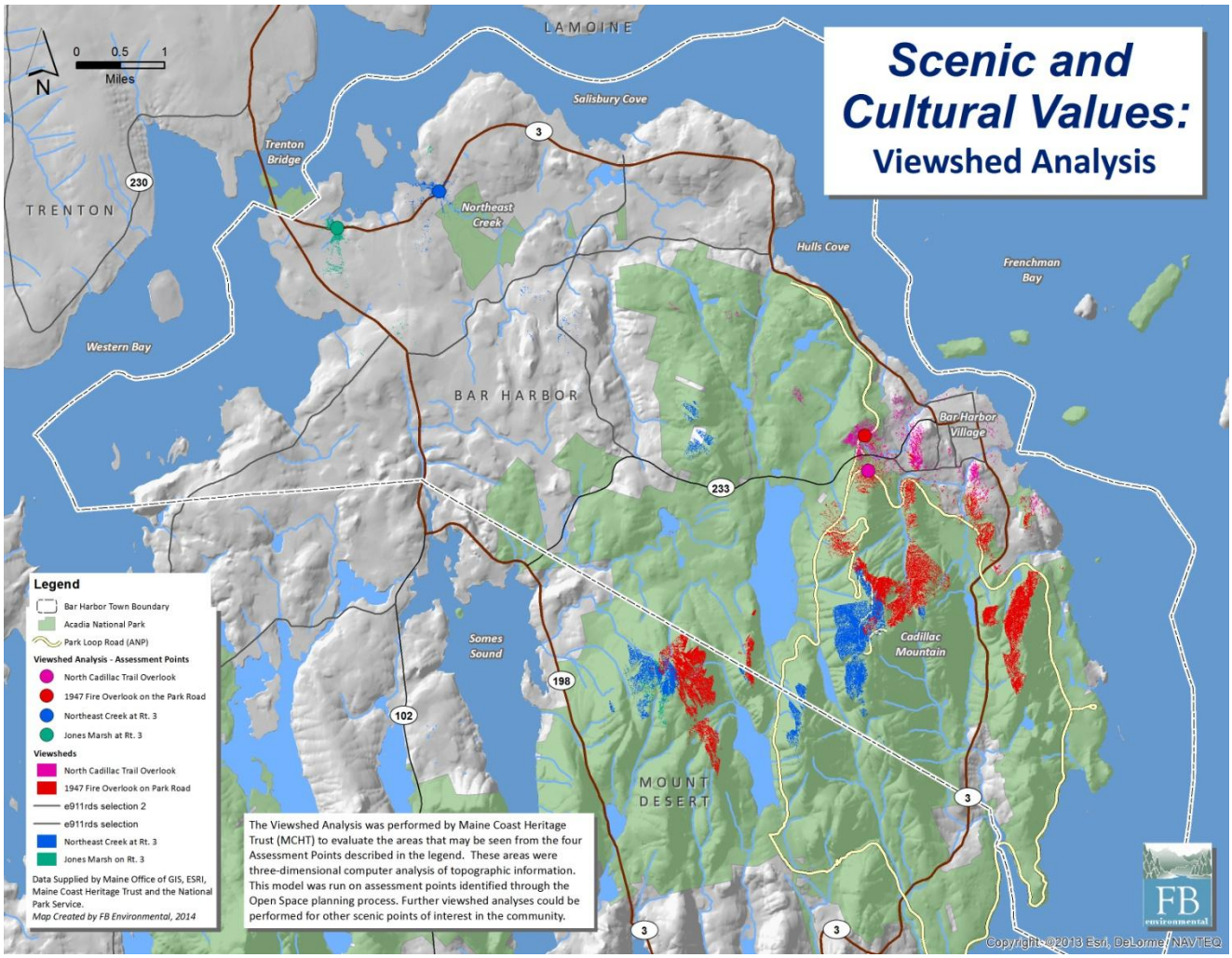
CASE STUDY: Protecting Bar Harbor's Scenic Hills

Many of Bar Harbor's mountain summits, such as Dorr and Champlain Mountain, and Hugenot Head are protected from development because they are inside Acadia National Park. Several smaller summits that are closer to downtown Bar Harbor remain in private ownership. These hill properties are very important to protecting scenic views within Bar Harbor, as well as from Acadia National Park and Frenchman Bay. **The following are examples of tools that have been used to ensure that the scenic qualities of these properties remain.**

1) **A conservation easement** has been used by the Thorndike Family to protect portions of Amory Hill, an 18-acre property bordering Spring Street and the Cromwell Harbor Road in Bar Harbor. The eight acres under easement is an undeveloped field cherished by many as a good location to view deer and wild turkeys. The higher elevation portions of the property contain a main house and guest house and have wonderful water and mountain views to the east, west, and south. Conservation easements are perhaps the best way for landowners to retain their property, while ensuring that important scenic values are protected for the public.

2) **Landscaping, fully shielded light fixtures, and natural colors** are being used by the developers of a new Hampton Inn hotel on Norman Road to help the structures blend into the environment. As the hotel will sit on a hilltop visible from the Acadia National Park Loop Road, the developers agreed to seek permission from the Hampton Inn chain to use a brown color scheme to lessen the visual impact from park viewpoints. Other hotels in the area could consider using these voluntary scenic protection measures.

3) **Height restrictions** have been secured by the Town of Bar Harbor as a way to prevent future buildings on a Strawberry Hill property from towering above tree line. In 1980, College of the Atlantic granted a conservation easement to the town on this property that among other things limited the height of future buildings on the property to 30 feet if flat-roofed or 36 feet if the roof is angled. Such height restrictions help keep structures close to the tree line, thereby protecting scenic views.



Map: FB Environmental

Figure 9. *A viewshed analysis for four locations in the Bar Harbor.*

Approximately 17.3 square miles of land in Bar Harbor is located on ridgetops above 22 feet in elevation. Of this total area, 17.3 square miles are above 200 feet (Figure 8). While much of this land is located within the Acadia National Park boundary, there are serveral prominent hilltops outside of the park with scenic values that should be preserved.

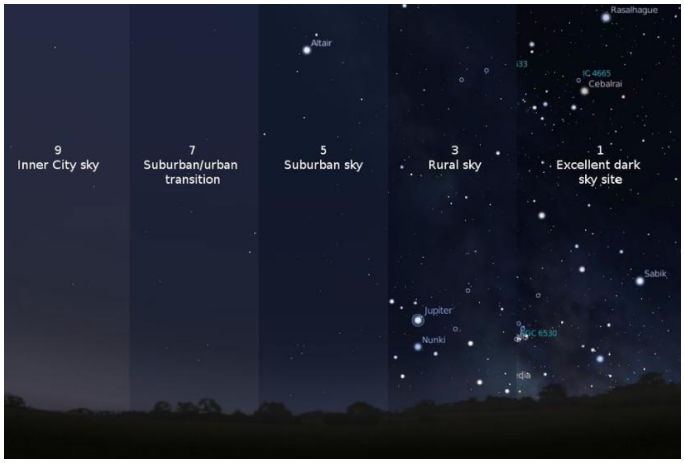


Photo: Stellarium

Example of dark sky scale ranging from 1: "Excellent dark sky site" to 9: "Inner City sky".

Dark Night Sky

Another distinctive feature mentioned in the comprehensive plan as one of Bar Harbor's favorite resources is the dark night sky[3]. As light pollution increases throughout the eastern United States, Bar Harbor and Acadia National Park are becoming a destination for stargazers. The quality of Acadia's night skies was first inventoried by College of the Atlantic students in 2008, and then updated by Worcester Polytechnic Institute in 2013[4]. According to the report, Mount Desert Island area is one of the only places in the eastern United States where a clear, unpolluted sky can be seen, showing a vast number of stars and a clear view of the Milky Way[4].

While Bar Harbor does not have the darkest night skies on Mount Desert Island, it still has very high quality locations (approximately 27 square miles) worthy of protection (Figure 8). The Acadia Night Sky Festival, which is based in Bar Harbor, has grown into a popular autumn tourism event celebrating this resource.

Protecting Bar Harbor's Dark Night Skies

"Presently more than two thirds of the US population cannot view a clear dark sky... The lightscape of Acadia National Park is of great value and significance not only to the park itself, but also to the entire Mount Desert Island area and neighboring communities"[3].

Bar Harbor is fortunate to be one of the darkest places on the East Coast of the United States. Low levels of light pollution enable residents and visitors to see the Milky Way, satellites, and a plentitude of stars and planets. Dark night skies are recognized as important natural resources worthy of protection by the Bar Harbor Comprehensive Plan, as well as the National Park Service's Management Policies. The town passed a lighting ordinance in 2007, that requires new development projects to adhere to dark sky lighting standards by implementing protection measures, such as using fully-shielded outdoor lighting. Bar Harbor, Acadia National Park, and the surrounding communities annually celebrate the region's dark night skies through the Acadia Night Sky Festival (www.acadianightskyfestival.com).

The Problem- Bar Harbor's lighting ordinance requires that new development projects take steps to preserve night skies. It also requires correction of the most egregious sources of light pollution on existing development (such as those causing glare on roadsides or the water), and it recommends that as non-conforming light fixtures are replaced, they are converted to dark sky compliant fixtures. The difficulty lies in monitorning and enforcing the ordinance on existing development.

Photo: Acadia National Park

The photograph on the left demonstrates glare created by an unshielded outdoor light fixture at Acadia National Park's entrance station. Upon renovating the station and using fully shielded outdoor lighting fixtures that direct light downward where it is needed, the National Park Service was able to better illuminate the entrance station and reduce light pollution and glare.

Recommendations- Additional steps should be taken to encourage residents, businesses and Emera Energy to convert outdoor lighting to fully-shielded light fixtures that direct light where it is needed rather than allowing it to bleed upward into the atmosphere. Acadia National Park and The Jackson Laboratory have taken great strides to replace wasteful outdoor lighting fixtures (see photographs above). The town could also work with Emera Energy and funding partners to convert street lights to dark sky compliant fixtures. All of these efforts will help ensure that Bar Harbor's night skies remain dark so that future generations can continue to enjoy the town's scenic celestial resources.

Cultural Resources

Cultural resources are often associated with human activities and may include areas of traditional use in economics, religion, recreation, food, and medicine, as well as historic buildings and cemeteries. For the purposes of the open space plan, historic buildings are not included. The Village Green, Northeast Creek, the Bar Island sand bar, and Kebo Valley, one of the oldest golf courses in the country, are examples of cultural land assets identified by Bar Harbor residents as significant. Northeast Creek and Bar Island have also been recognized by the Maine Historic Preservation Commission (MHPC) as having Native American sites.

The very nature of cultural resources makes them unique and irreplaceable. Because their preservation and maintenance is potentially impacted by changing climates, advance planning is needed. Potential flooding, more frequent and powerful storms, rising seas, and changing vegetation related to climate change will require monitoring, documentation, and adaptability in order to conserve the traditional sense of place and community stewardship.

Historic & Prehistoric Archaeological Sites

Seventeen sites of prehistoric archeological significance (below ground) have been identified in Bar Harbor. These sites date back as far as 6,000 – 7,000 years. All are located on the shoreline, and in general, are threatened by human impacts from development, amateur digging, and natural forces such as sea-level rise and storm erosion.

Seven additional sites within the town boundary have been identified as historic archeological sites by the commission (Table 9), but their exact location has not been mapped to prevent damage. While a number of prehistoric sites have been identified in the past, there is no record of a professional historic archeological survey for Bar Harbor.

Table 9. *Historic archaeological sites in Bar Harbor, Maine.*

Name	Type	Time Period
Winskeag Settlement	Native American Homestead	17th & 18th Cent.
Indian Point House	American Domestic	19th Cent.
Schooner Head Battery	American Gun Battery	19th Cent.
Pray Meadow House #1	American Domestic	19th & 20th Cent.
Pray Meadow House #2	American Domestic	19th Cent.
C.J. Hall Quarry	American Quarry	19th & 20th Cent.
Water Tower or Standpipe	American Water Tower	19th Cent.

Source: MHPC

Source: Maine Memory Network

The Village Green, circa 1908.

Cemeteries

Cemeteries are important to Bar Harbor's open space because presumably, they will never be developed, and they are located all across town (Figure 8). Cemeteries are important open spaces that provide valuable habitat for plants and animals, provide recreational opportunities and scenic views, and provide a historical record of town residents.

According to *Cemeteries of Cranberry Isles and the Towns of Mount Desert Island*[5], there are 22 cemeteries in Bar Harbor, ranging in size from a single stone to more than seven acres.

Bar Harbor cemeteries are managed through a variety of mechanisms. Some are town-owned and maintained; others are owned or maintained by non-profit organizations. The majority, however, are private burying grounds. Ledgelawn, the largest cemetery in Bar Harbor, has also granted easements to the town and to Friends of Acadia for the construction of sidewalks and trails along its perimeters.

Photo: Sarah Ingraham

Ledgelawn cemetery is the largest cemetery in Bar Harbor.

HOW DO WE PROTECT & SUPPORT SCENIC AND CULTURAL RESOURCES?

Goals & Strategies

SCENIC RESOURCES

GOAL 1: INVENTORY, PRIORITIZE, AND PROTECT BAR HARBOR'S SCENIC VIEWSHEDS

STRATEGIES:

a) Use viewshed analysis tools to determine what is visible from key scenic viewpoints such as mountain summits and from the water.

b) Work with Bar Harbor residents and partner organizations to identify highest priorities.

c) Amend Land Use Ordinances to include viewshed preservation standards.

d) Encourage private landowners to protect scenic assets through conservation easements or color choices/architectural enhancements that help development blend with the natural environment.

e) Support regional, state, and national scenic preservation efforts and programs (e.g. Land for Maine's Future, scenic byways program, etc.)

GOAL 2: PROTECT SCENIC ROAD CORRIDORS

STRATEGIES:

a) Update and implement Bar Harbor's scenic byways plan.

b) Develop a vista-clearing plan.

c) Develop a design plan for scenic approaches to villages.

d) Use buffering to preserve scenic roadsides and approaches.

e) Bury power lines.

f) Strengthen town ordinances to encourage development in village centers, keeping rural areas rural.

A Note about Development near Archaeological Sites

Maine statutes (30-A MRSA 4401-4407 and 38 MRSA 435- 449) require that archeological surveys be conducted if a subdivision is proposed within or adjacent to areas deemed to be archeologically sensitive or potentially sensitive or archeological sites that are listed or eligible to be listed in the National Register of Historic Places.

GOAL 3: ENCOURAGE PRESERVATION OF DARK NIGHT SKIES

STRATEGIES:

a) Convert lighting on municipal facilities and streetlights to dark-sky compliant lighting.

b) Review and enforce the 2007 lighting ordinance.

GOAL 4: ENCOURAGE PROTECTION OF THE ACOUSTICAL ENVIRONMENT AND REDUCE NOISE POLLUTION

STRATEGIES:

a) To increase public awareness of the Town of Bar Harbor Noise Code: "The making, creation or maintenance of such loud, unnecessary, unnatural or unusual noises which are prolonged, unusual and unnatural in their time, place and use affects and is a detriment to the public health, comfort, convenience, saftey, welfare and prosperity of the residents of the Town of Bar Harbor."

GOAL 5: ESTABLISH A PRIORITY LIST OF LAND WITH CULTURAL ASSETS TO BE PRESERVED

STRATEGIES:

a) Seek funds to conduct a professional survey of historic archeological sites previously identified by MHPC.

b) Work with Bar Harbor residents and local cultural groups to identify unprotected or under-represented cultural resources, for example, traditional foraging grounds.

GOAL 6: WORK WITH PARTNERS TO PROTECT CULTURALLY IMPORTANT OPEN SPACE

STRATEGY:

a) Invest in and possibly extend the Shore Path.

b) Initiate MHPC review of development mitigation measures as required.

c) Work with the MHPC to safeguard unique cultural and historic resources.

d) Encourage private landowners to conserve their cultural land assets through mechanisims like conservation easements.

e) Support regional, state, and national cultural preservation efforts and programs that will protect open space (e.g. National Foundation of the Arts and Humanities, Federal Highway Administration).

f) Facilitate the formation of a Cultural Resources Commission comprised of resource management professionals, landowners, and interested citizens.

   i. The commission will help implement protection strategies that support preservation of our cultural heritage, and;

   ii. The commission will propose changes to local ordinances and municipal policies that support preservation of our cultural heritage.

References

[1]*Hancock County Planning Commission (2010). Downeast Coastal Scenic Inventory: Hancock and Washington Counties, Maine, February 2010. Online: http://www.maine.gov/dacf/mcp/downloads/scenic/DECoastSceInv2-10-2010.pdf*

[2]*DeWan, Terrance (2008). Scenic Assessment Handbook. State Planning Office, Maine Coastal Program. October 2008. Online: http://www.maine.gov/doc/nrimc/mcp/downloads/scenic/ScenicAssessmentRpt_LowRes.pdf.*

[3]*Town of Bar Harbor (2007). Comprehensive Plan Update: Bar Harbor, Maine. June 2007. Online: http://www.barharbormaine.gov/ArchiveCenter/ViewFile/Item/95*

[4]*Worcester Polytechnic Institute (2013). Dark Sky Project: The study of light pollution and its effects on Mount Desert Island for the Acadia National Park. July 31, 2013. Online: http://www.wpi.edu/Pubs/E-project/Available/E-project-080113-100852/unrestricted/Dark_Sky_Project.pdf*

[5]*Vining, Thomas F. (2000). Cemeteries of Cranberry Isles and the Towns of Mount Desert Island. 583 p.*

The Future of Recreation in Bar Harbor

Outdoor recreation is not a new concept for the residents of Bar Harbor. With 44% of the town's land area within Acadia National Park, the town benefits from easy access to premier recreational opportunities such as hiking, swimming, biking, bird watching, horseback riding, snowmobiling, and cross-country skiing.

Outdoor recreation has many benefits, including:[1]

Good for the mind: Provides psychological benefits including the prevention or reduction of stress, improved self-esteem, confidence and creativity; spiritual growth; and an increased sense of exhilaration, adventure and challenge from life.

Good for the body: Provides physical benefits such as aerobic, cardiovascular and muscular fitness as well as improved functioning of the immune system.

Good for social life: Affords social benefits like bonding with like-minded people who enjoy the outdoors and instills an increased pride in their community.

Good for the economy: Boosts economic growth by creating job opportunities, results in enhanced tourism that supports local business, increases property values by preserving natural resources.

Good for nature: Outdoor recreation provides environmental benefits by raising environmental awareness and appreciation for the natural world, in greater public involvement in environmental issues.

This section will explore our town's ability to provide safe areas for families to play, explore, and enjoy all that this beautiful town can provide.

A VISION FOR RECREATING IN BAR HARBOR

Our vision 20 years from now: Bar Harbor is a recreational destination for residents and visitors alike. Town recreational areas address the needs of the residents including our children. There is improved public access to our more than 25 miles of coastline for boating, swimming and fishing. The town is renowned for pedestrian friendly roads and paths for biking, running and walking, and paths and lanes connect the many family-friendly recreation areas that are interspersed throughout town. Our villages (Salsbury Cove, Bar Harbor, Otter Creek, Hulls Cove and Town Hill) provide access to the diverse natural environments and public open space in our town.

Photo: Billy Helprin (Maine Coast Heritage Trust)

Preserving open space provides outdoor recreation opportunities that benefit our mind, body, spirit and the local economy.

Future generations have access to convenient outdoor recreation in pleasant surroundings. Conservation land in rural areas provides opportunities for traditional outdoor pursuits, while the quality of life in new and older neighborhoods is enhanced by street trees, nearby parks, quiet streets, and pedestrian and bicycle connections to other neighborhoods, parks, ball fields, schools, and nature preserves.

A History of Trail Building in Acadia National Park

The Town of Bar Harbor is intricately connected to the trails at Acadia National Park. This connection began in the late 1800's, a period of extensive planning and trail building, much of which was sponsored by local village improvement societies such as the Bar Harbor Village Improvement Society. By 1915 more than 200 miles of trails existed on Mount Desert Island. Even today, local groups such as Friends of Acadia provide resources to repair 125-miles of trails in the park.

Source: National Park Service[2]

WHY DO WE NEED TO PROTECT RECREATIONAL RESOURCES?

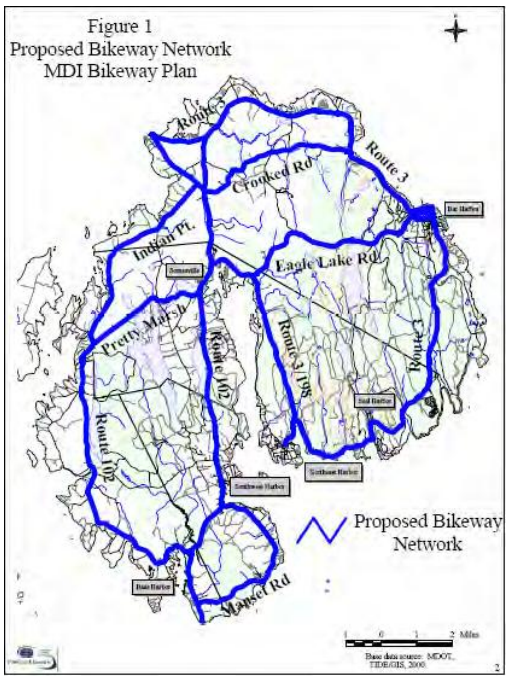
A description of local significance and need

Acadia National Park is a valuable resource, serving as a significant recreational asset to residents of Bar Harbor. Eagle Lake not only serves as the town's public drinking water supply, but also provides year-round recreational opportunities. Yet, public access to town-owned beaches for recreational uses such as public fishing and boating is limited, and the town-owned water access shows signs of high nutrient loading.

Pedestrian & Bicycle Connections

Pedestrian connections throughout the town are strong, but bicycle connections from neighborhoods to our public open spaces including town parks, and to and from different town villages is difficult, for children and adults.

In 2003, MDI Tomorrow commissioned a study to examine bicycle and pedestrian topics on the island. A survey conducted as part of the study found that 18% of respondents used a bike some of the time for transportation purposes. When those who did not use bikes were asked why they had made that choice, more than 20% cited unsafe roads as the reason. Almost 70% felt that encouraging walking and biking should be a high or very high priority for the future of the MDI area. 85% supported the strategy of widening road shoulders and adding sidewalks to encourage walking and biking. In 2002, Maine Department of Transportation (DOT) contracted to develop a Bikeway Plan for Mount Desert Island (MDI)[3]. Primary purposes of the plan were to guide public investment to improve bicycle facilities, increase safety, and stimulate increased use of bicycles for transportation and recreation. Over 70 miles of potential bikeways were presented for further analysis (Figure 1). The plan concluded that bicycling could be best encouraged and promoted by widening road shoulders in appropriate locations and by providing bicycle racks at key destination points and downtown locations to ensure secure and convenient bicycle parking.



Source: MDI Tomorrow

Proposed bikeway network for MDI.

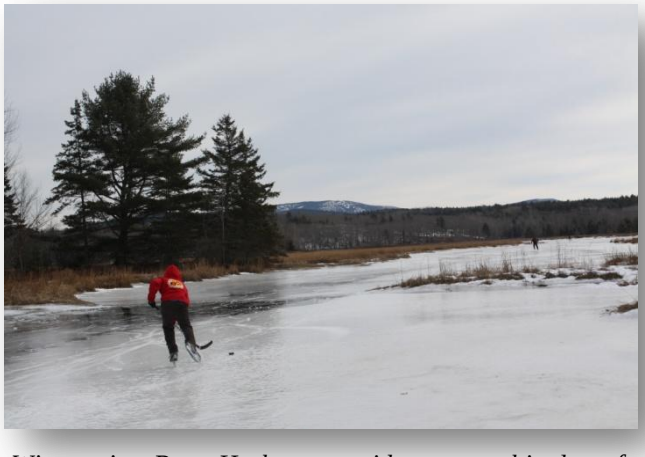


Photo: Kathy Van Gorder

Winter in Bar Harbor provides a multitude of recreational opportunities as seen here at Northeast Creek.

Alternative Hiking Locations

In 2013, the federal government shut down from October 1st through 16th- peak foliage season for the tourists and town residents who benefit from the natural beauty this time of the fall foliage. Aside from obvious economic effects of losing business from leaf-peepers, another outcome of the shutdown, and temporary closure of Acadia National Park, was that residents, who were used to easy access to recreation, turned to recreational opportunities outside of the park.

Recreational Facilities & Amenities

Another perceived need in Bar Harbor is preservation of open space for recreational facilities and amenities to support "active recreation", especially on the western side of town. [3] This includes public playgrounds and ballparks for our youth and families. Town Hill Playground is a popular location for families with small children, and yet, it is located on private land in downtown Bar Harbor that is not permanently protected from development.

Cross-Island Trail

Residents of Bar Harbor have indicated their interest in the establishment of a Cross-Island Trail. The purpose of the trail would be to provide connections from community to community, and access to open space and recreational opportunities. The Comprehensive Plan calls for the town to work with agencies, non-profits and property owners to obtain easements and construct linkages to establish the trail. The Cross-Island Trail idea should be revisited to determine need and feasibility almost a decade later

CELEBRATE WHAT WE HAVE

A summary of existing Recreational Resources

Photo: National Park Service

Bicyclists enjoying use of the Carriage Roads near Eagle Lake in Acadia National Park.

Acadia National Park

The Town of Bar Harbor has an excellent relationship with the park service, and will continue to support the National Park Service's mandate to protect and maintain Acadia National Park. The park occupies 12,482 acres within Bar Harbor, or 44% of the town's land area. The park contains more than 115 miles of trails and 45 miles of carriage roads- providing access to walking, hiking, bicycling and jogging, as well as horseback riding on some of the carriage roads. While ATVs are not allowed anywhere in the park, snowmobiles are allowed on most paved roads, and on some of the carriage roads. Cross-country skiers and snowshoers have access to the carriage roads and trails, and the unplowed portions of the Park Loop Road. In addition, lesser known activities such as skateboarding are allowed on the Park Loop Road when the road is clear of snow, but still closed to vehicle traffic (between December 4-April 15th).

Acadia National Park provides access to many of the most scenic parts of the infamous rocky Acadian shoreline, as well as the town's primary swimming beach (Sand Beach) and Compass Harbor beach. The park also holds conservation easements on lands not generally open to the public.

Town Parks

At the turn of the century, village improvement associations created some of the smaller town parks in town that are treasured to this day. These types of voluntary, community-minded efforts set a precedence for open space protection and access to public recreational opportunities totaling 33 acres of land in Bar Harbor today (Table 1).

Along the Bar Harbor shoreline, the town owns access to the harbor at the town municipal pier, the beach at Agamont Park, as well as the park at Hadley Point. The town owns and maintains the only two boat ramps in the community: a concrete ramp at the town pier that is unusable for most of the winter and periodically throughout the year due to offshore swell/surge and rough water, and a newly constructed ramp at Hadley Point. Other points of public access include: Indian Point Town Landing and Clark Cove (public road), Northeast Creek/Thomas Bay, The Bar (at all tides), Bridge Street, 1 West Street, Grant Park, the Cat Ferry Terminal and Otter Cove. Many of these launch sites are best used with small boats and at high water.

The town owns a number of other recreational facilities including the Ball Field, several public parks, playgrounds and picnic areas (Table 1). These facilities are located relatively close to town and provide opportunities for local residents and their families. The town also holds a conservation easement on the 4½ acre Millbrook Preserve off Old Norway Road.

State and Land-Trust Resources

Additional land in Bar Harbor has been protected by the state and land trusts, which provide public access, recreational opportunities and/or open space protection. The Maine Coast Heritage Trust (MCHT) and Maine State Parks and Public Lands hold easements on land in Bar Harbor (refer to Chapter 1 for holdings). Maine Coast Heritage Trust holds conservation easements on privately-owned land in Bar Harbor, some of which is available for public recreational use such as the Acadia Ridge Trail.

Table 10. *Bar Harbor town parks & facilities.*

Name	Size	Description
Agamont Park	1.52ac	*Located on Main and West St., this park includes a partially shrub and tree shaded lawn overlooking the waterfront, harbor, and Porcupine islands. Located in town and used for events like open-air art shows. The park adjoins the grounds of the Bar Harbor Inn on the east side. Agamont Park received extensive renovations in 2005.*
Athletic Field/Ball Field	13.34 ac	*The Ball Field is located about three-quarters of mile from the center of town on Main and Park St. Facilities include: two Little League fields, three soft ball fields, two tennis courts, one basketball court, one skateboard ramp (across the street), and two large green areas. A year-round skate park is located at the Athletic Field for ice-skating and skate boarding. One of the town's most popular recreational areas, the Ball Field is used constantly for games, events and private pursuits. The Athletic Field's deed restricts use to recreational pursuits only. Three lots, with about 40 spaces, provide parking for the Ball Field. Parking is also available on nearby streets.*
Barker Park	5,500 sf	*Barker Park, at 53 Cottage St., is a small in-town park next to the post office. The park was purchased by the town in 1998. The Park provides bench seating and a granite sculpture.*
Glen Mary Pool	5.9 ac	*Located at Glen Mary and Waldron Rd., this park has a wading pool, restrooms and changing room. The pool is open for swimming in the summer and serves as a skating surface in the winter. The Parks and Recreation Committee have recommended the drainage around the pool be upgraded and the surface of the pool needs to be reconstructed and painted. There is parking for some cars in a lot at the park.*
Grant Park	1.79 ac	*Located on the shore off Albert Meadow, this park is used regularly but not as heavily as Agamont Park and the Village Green. It attracts residents and visitors, has parking for about 45 vehicles, and provides access to the privately owned Shore Path. Grant's Park is one of the last town parks still needing renovations. The first step in developing a master plan for the renovation is a survey, scheduled to take place in FY08.*
Hadley Point Landing/ Picnic Area	5.24 ac	*Hadley Point offers access to the shore for boaters, clammers, picnickers and walkers on Hadley Point Rd. It is the most easily accessible spot for recreational clammers. There is a newly reconstructed boat launch. The park has a small lot for cars.*
Harborview Park	0.27 ac	*Located on West St., this waterfront park, built in 1989, is a deck between the two largest private wharves along West Street. It is an ideal location to watch harbor and Street activities, as well as being a good rendezvous site. Furnishings include benches and a couple of planters. Parking is available in front of the park, along West Street.*
Millbrook Preserve (Falls)	4.5 ac	*This is a 4.5-acre property surrounding two waterfalls on Old Mill Brook. It was created to provide opportunities for day-time, low-impact outdoor recreation, natural observation and study by the public. The land was granted to the town in 1995 with protective conservation easements held by the Coastal Resource Center.*
Park Street Playground	0.59 ac	*Located across from the Athletic Field on Park St., the playground is within easy walking distance of several of the town's largest neighborhoods.*
Town Hill Playground	0.23 ac	*Community built playground a portion of the land is owned by Blackstone Properties, LLC. The playground has equipment and a woodchip base.*
The Village Green	*1.4 ac*	*The Village Green is centrally located in the heart of the downtown on Main and Mount Desert St. The park sees a great deal of use both during the day and at night. Parking for the green exists along the streets and in the nearby municipal lot, which holds about 110 cars. The Village Green was renovated in 2001.*

Additional public recreational opportunities associated with the town include:

The Bar- Located on Bridge St., a traditional walking area at low tide, kayak launching area.

Connors-Emerson Elementary School- A playground for use by students at Lake Rd. and Eden St.

Mount Desert Island High School- Located on Eagle Lake Road. Running track, tennis courts and athletic practice fields.

Route 3, Head of the Island- This pull-out picnic area is maintained by the Chamber of Commerce.

Private Facilities Open to the Public

The primary private facility that provides open space recreational opportunities in Bar Harbor is the Kebo Valley Golf Club (Table 2). Kebo Valley opened in 1888, providing a new type of recreational opportunity in town. Kebo Valley describes itself as "*a sanctuary, even to those who have never played the game of golf. It preserves hundreds of acres of land in their natural state, providing recreational resources which helps draw thousands of visitors to Mount Desert Island....a haven amidst the hectic pace of a Bar Harbor summer.*"[5]

While privately owned facilities provide public access today, there is no guarantee that they will not be developed in the future. It is not so farfetched that a well-situated private golf course in the center of Bar Harbor could be vulnerable to development pressures in the future.

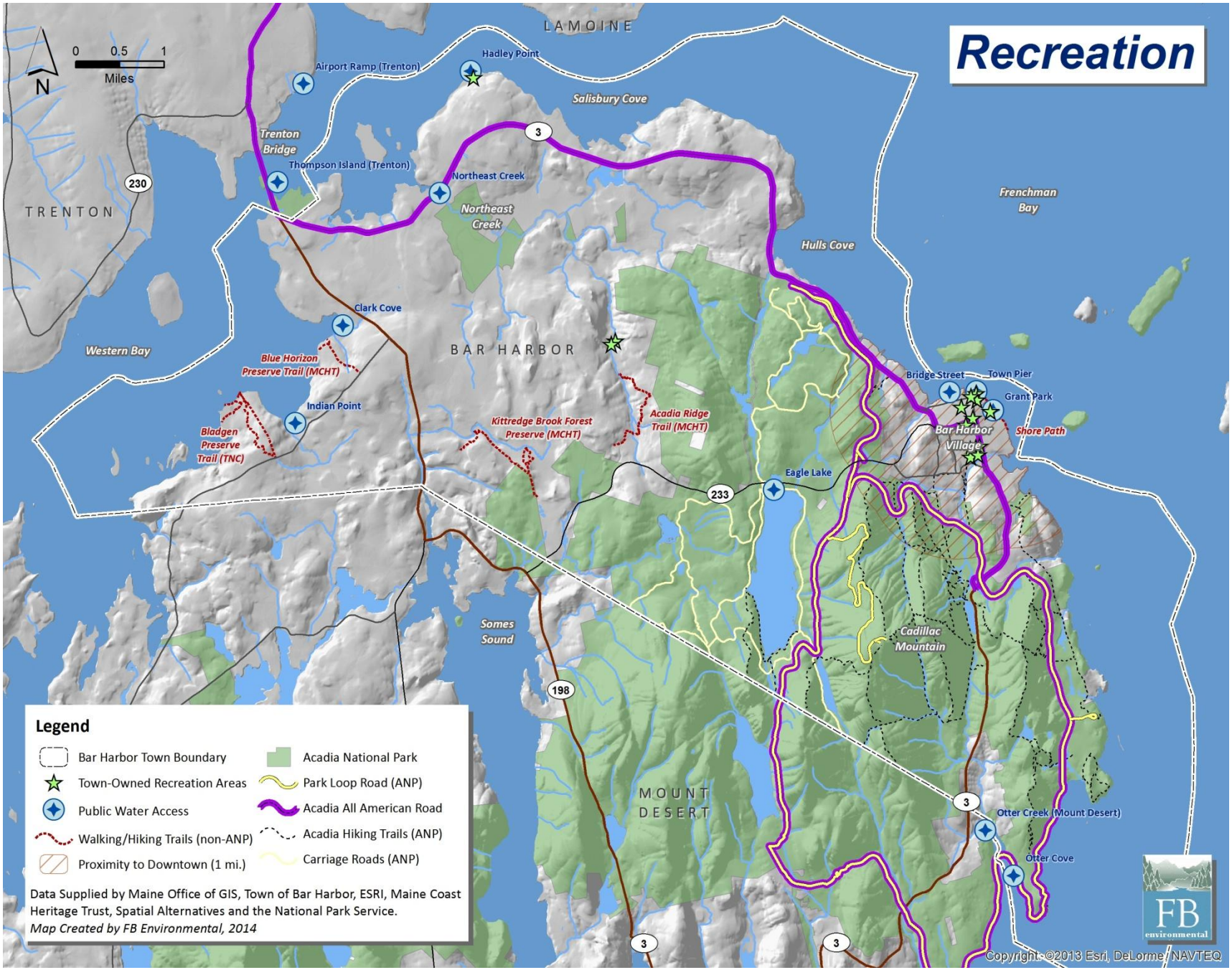
Photo: John Kelly?

The Town Hill Playground provides a safe, in-town recreational experience for families. Permanent protection is needed to prevent this privately-owned land from future development.

As development affects the rural districts and outlying villages, the town should consider further development of public pathways and parks. Residents of outlying villages have a good opportunity to establish such parks before increased development occupies potential sites.

Table 11. *Other recreational land/facilities open to the public.*

Name	Size	Description
Acadia Ridge Trail	2 mi	*This nearly 2-mile public trail meanders across privately-owned land abutting Acadia National Park from Norway Drive to the Acadian Woods Road. It was created through conservation easements donated to Maine Coast Heritage Trust, and is managed and maintained by Friends of Acadia.*
Blue Horizons Preserve	83 ac	*Maine Coast Heritage Trust's Blue Horizons Preserve is located in Town Hill on Indian Point Rd. The preserve protects scenic views along the Western Bay shoreline and offers recreational hiking opportunities for the public.*
Blagden Preserve	110 ac	*The Blagden Preserve is a 110 acre preserve on old estate grounds owned by the Maine Chapter of The Nature Conservancy. It is open to the public year-round and provides access to the shore. There are a series of trails through the woods to Western Bay. The preserve is open for day use year round. Picnicking, boat launching, and swimming are prohibited.*
Kittredge Brook Forest Preserve	516 ac	*Maine Coast Heritage Trust's Kittredge Brook Forest Preserve protects Kittredge Brook, MDI's longest unimpeded stream, and contains a recreational trail system that connects local neighborhoods with the island's high school. The trails provide connections to adjacent conservation lands and Acadia National Park.*
Pray's Brook Marsh	17 ac	*Pray's Brook Marsh Preserve, owned and managed by Maine Coast Heritage Trust, is a small, 17-acre preserve bordering Pray's Brook. Access is via Wetland Way off Oak Hill Rd. The preserve is a good location for watching wildlife.*
Shore Path	1/2 mi	*This nearly ½ mile path begins at the town beach and runs along the shore past inns, summer cottages and the town park. The path was built in the 1870s. It traverses private land for almost all of its length. The path is maintained by the Village Improvement Association and the landowners. Parking for the path is available at the town pier and at Grant Park. There is another access trail near the middle of the path.*
Kebo Valley Golf Club	~ 200 ac	*The Kebo Valley golf course is a private club that allows members of the public to play for a fee. The club facilities include an 18-hole golf course, a pro shop, locker rooms, a restaurant, snack bar, lounge and banquet room for up to 150 people. The course is open for golf from May to October. In the winter, the public is allowed free access to the course for sledding and cross-country skiing. The club has ample parking space.*



Map: FB Environmental

Figure 10. *Recreational resources in Bar Harbor.*

HOW DO WE PROTECT & SUPPORT OUR RECREATIONAL RESOURCES?

Goals & Strategies

FUNDING OPPORTUNITIES

GOAL 1: CREATE PROGRAMS & FUNDS TO PAY FOR RECREATIONAL OPPORTUNITIES

STRATEGIES:

a) Develop an Open Space Lease Program and Favorite Places Fund

   i. Use funds for ongoing maintenance of existing parks;

   ii. Use funds to invest in the Shore Path, the Cross-Island Trail;

   iii. Use funds to invest in new parks in designated villages.

b) Acquire rights of first refusal for waterfront properties to improve recreational resources along the shore including Clark Cove, Northeast Cove, and other locally important locations.

e) Create a Development District (*a quasi-municipal entity that has the ability to raise monies and/or levy assessments from a specific section of a municipality to be used for improvements and services to that section of the community*).

   i. Make improvements to improve recreational experiences, such as underground electrical and communication lines, natural landscaping, streetscapes, pedestrian friendly areas, and parks;

   ii. Services might include taxi funding, walking foot patrols, increased trash disposal, and hiring a restroom attendant, among others.

ACCESS TO BEACHES/WATERFRONT

GOAL 2: ENSURE PUBLIC ACCESS TO TOWN BEACHES

STRATEGIES:

a) Identify potential access points and priority areas for permanent conservation.

b) Maintain and allow kayak and small boat launching.

c) Promote access for the public and encourage appropriate tourist activities.

d) Provide adequate parking and safe access to beaches.

   i. Conduct survey of visitor traffic;

   ii. Provide sidewalks or walking paths between parking and beach;

   iii. Once properties are secured, address existing and/or anticipated parking needs to provide public access without creating nuisances for adjoining property owners.

GOAL 3: ENSURE PUBLIC BEACHES ARE CLEAN AND WATERS SUPPORT DESIGNATED USES SUCH AS BOATING, SWIMMING & FISHING

STRATEGIES:

a) Keep beaches clean and open for recreating.

   i. Monitor beach by participating in Maine Healthy Beaches Program.

b) Prevent stormwater runoff and associated pollutants from polluting beaches.

   i. Implement nonpoint source pollution strategies to prevent nutrient and bacteria from entering beaches in stormwater runoff.

TOWN PARKS

GOAL 4: MAINTAIN, IMPROVE & PROTECT EXISTING TOWN PARKS

STRATEGIES:

a) Secure permanent protection of the Town Hill Playground.

   i. Acquire land in fee by donation.

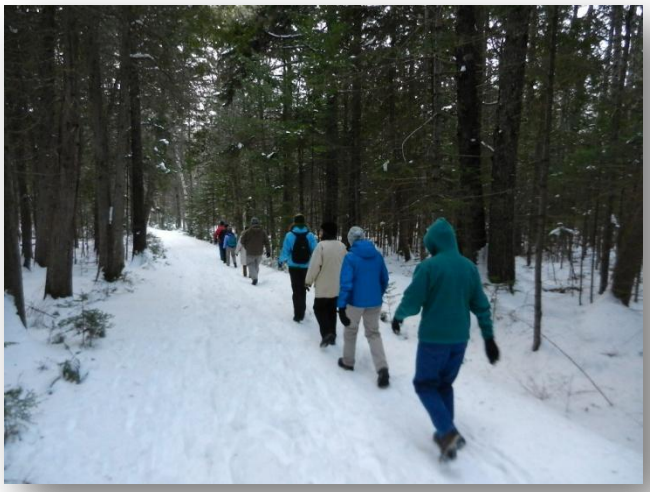


Photo: Billy Helprin (Maine Coast Heritage Trust)

Multi-use trails provide year-round recreational opportunities such as winter hiking.

b) Renovate Grant Park on Albert Meadow while respecting its natural open character and view of Frenchman Bay.

Goal 5: Add New Parks & Athletic Fields

STRATEGIES:

a) Develop an acquisition plan; identify suitable locations and acquire property.

b) Construct new parks and athletic fields in designated villages to sufficiently serve the town.

   i. Improve access to community playgrounds on west side of town;

   ii. Assess the need, and build a new Little League field in town.

c) Plan accordingly for adequate and safe pedestrian and bicycle access from schools and villages to new facilities.

PUBLIC PATHWAYS & TRAILS

Goal 6: Support Preservation of the Shore Path

STRATEGIES:

a) Maintain/establish contacts with new and existing landowners, establish relationships with new landowners.

b) Continue to invest in and extend the shore path as opportunities arise. *(Unless a property owner is blatantly negligent in maintaining his or her property, state law limits owner liability when free public access is allowed for recreational purposes.)*

c) Amend the LUO to exempt land included in the shore path from lot coverage calculations and setbacks if access is protected by a permanent easement.

Goal 7: Establish a Cross-Island Trail

STRATEGIES:

a) Continue to work with groups such as the Conservation Commission, Village Improvement Society, Friends of Acadia, Maine Coast Heritage Trust, and property owners to obtain easements and construct linkages as necessary to establish a cross-island trail.

Goal 8: Provide Linkages for Multi-Use & Nature Trails

STRATEGIES:

a) Identify parcels adjacent to existing conserved lands with trail systems (including Acadia National Park) and develop town-owned nature trails that connect to larger trail networks.

b) Improve incentives in the LUO for footpath and/or bike path construction between developments

Goal 9: Be a Bicycle-Friendly Community

STRATEGIES:

a) Develop a plan for bicycle access in designated villages and institutional campus areas and work toward future development of bicycle trails either on/off roadways in all areas of the community.

   i. Create a bicycle and pedestrian committee in town utilizing programs such as the Community Spokes Toolkit from the Bicycle Coalition of Maine (http://www.bikemaine.org/biking-resources/community-spokes-toolkit) to get started.

ii. Include bicycle lanes in any major road project, when rights-of-way are available or pursue easements.

iii. Acquire off-road easements for bicycle and pedestrian paths.

iv. Continue to maintain current roads and shoulders to minimize hazards to bicyclists.

v. Identify key locations in the community for signage and bicycle racks, considering the location of parks, scenic byways, community facilities and events, and the Downtown Master Plan.

- Install and maintain appropriate signs and racks.
- Encourage businesses to support program and adopt bicycle commuter programs and signage.

b) Expand the mission of the Parks and Recreation Committee to include bicycle awareness and safety for children and adults.

i. Develop a bike safety and education program (like Safe Routes to Schools, http://www.bikemaine.org/what-we-do/safe-routes-to-school)

ii. Offer a Police Department sponsored, one-day bicycle safety course each year at the grade school.

iii. Enforce traffic rules for bicyclists as well rules to increase the safety of bicyclists.

iv. Promote and enforce traffic rules for motorists to respect bicyclists. Provide public information on these rules to both residents and visitors.

v. Participate in and support organizations that coordinate bicycle awareness campaigns and promote non-vehicular ways of commuting such as Bicycle Month (May) and Commute Another Way Day.

c) Improve incentives in the LUO for bike path construction between developments.

i. Exempt bike paths from setbacks and lot coverage requirements.

References

[1]*Kent State University. eInside. Top Five Benefits of Outdoor Recreation. Online: http://einside.kent.edu/?type=art&id=82928*

[2]*National Park Service (2011). Acadia National Park, Historic Hiking Trails. U.S. Department of the Interior, August 2011. Online: http://www.nps.gov/acad/planyourvisit/upload/HkingTrails-2011-NEW.pdf*

[3]*Wilbur Smith Associates. 2002. MDI Bikeway Plan. Final Report. Portland, ME: Wilbur Smith Associates in association with Coplon Associates. 24 pp. plus 2 appendices.*

[4]*Personal communication, member of the Bar Harbor Parks & Rec. Committee, December 12, 2013.*

[5]*Kebo Valley Golf Club, Kebo Valley History. Online: http://www.kebovalleyclub.com/aboutus/*

The Future of Working Lands in Bar Harbor

Bar Harbor's economy and culture has long been dependent on the rich natural resources of our region, both on land and at sea. Our farmlands, working forests, and working waterfronts support a significant percentage of our year-round residents through agricultural, marine, and tourism related industries. At the same time, these lands and waterways are critical for the character of our community, as working areas and as recreational areas. This chapter seeks to outline how our farmlands, working forests, and working waterfronts are used today, and how to ensure such uses continue in conjunction with the town's open space goals.

Photo: Maine Coast Heritage Trust

Working farms like the Smith Family Farm (above) are valuable open spaces in Bar Harbor.

A VISION FOR WORKING LANDS

Working Farms

Our vision 20 years from now: The growing interest in food security and availability of healthy, locally grown food has led to a renaissance of farming in Bar Harbor and the region. Farms are specializing and customizing to meet individual situations and markets. Local farms are creating jobs, providing local fare to residents and visitors, and helping retain a mosaic of landscape types that provide scenic open space and diverse habitats for native plants and animals. Protecting farmland in Bar Harbor has resulted in an increase in the number small-scale local farms that can supply specialty products to local niche markets, community supported agriculture, and "pick your own" operations.

Because local attitudes towards farming have changed, more land is actively farmed and more food staples for Bar Harbor residents are produced and processed locally. The sights, sounds and smells of farming are familiar around town. The farmers market is thriving, and local products are available at town grocery stores. Programs to help those lacking access to fresh, local foods are in place, and residents throughout town are more aware of the benefits of local food. Bar Harbor and MDI schools have incorporated farming and local food programs in to their curricula and food purchasing policies, and are even growing some of their own food. Town officials work in partnership with other organizations to protect important farmland from the pressures of development.

Working Forests

Bar Harbor's forests are healthy. Sustainable forest management is an option for landowners to help defray the cost of owning and managing undeveloped land and is a tool for maintaining the health and habitat values of our forest resource. Forestry operations are being conducted according to best management practices.

Working Waterfront

Bar Harbor's working waterfronts have been protected and preserved. Access points are abundant and well managed to fulfill both working and recreational needs, and enabling the community's water-dependent businesses to thrive. Both residents and visitors, alike, continue to value the town's working waterfront.

CASE STUDY: Young's Beach at Fisherman's Landing

When Ocean Properties purchased Young's Pier, adjacent to the town pier, there was concern among local fishermen that they would no longer have access to the shore for hauling out and cleaning boats. The Harbor Committee worked with Ocean Properties to assure the continued access of fisherman to the shore. Ocean Properties installed a bridge walk to their pier that can be raised up when fishermen plan to bring their boats ashore. Open communication between private and public entities will ensure that historic access points are maintained for future generations.

WHY DO WE NEED TO PROTECT WORKING LANDS? A description of local significance and need

Working Farms

Agriculture has historically had a role in town and continues to have a small but important presence providing locally produced food, a link to our historically agrarian culture, and protection for important natural resources including wildlife habitat, productive soils and scenic resources.

Supporting active farm enterprises locally and regionally is important if Bar Harbor and MDI hope to maintain the presence of farming on the island and the availability of local fare for residents – both for the present and in the future. Because of high land values and limited land area, the greatest opportunities for sustaining existing agricultural resources and increasing agricultural activity in Bar Harbor come from relatively small-scale local farms. These can include farms supplying specialty products to local niche markets, community supported agriculture, organic growers, and farmers who open their farms to the public for activities such as "pick your own" operations.

Addressing municipal barriers to farmers can help foster success for local growers and keep land in production. The Bar Harbor Comprehensive Plan highlights the importance of farming in our community and identifies strategies to support and grow farms. Implementing these strategies, and the new strategies identified below, is critical to ensure that farming continues to be economically viable for Bar Harbor farmers.

Working Forests

Forestland is important for multiple reasons addressed in other sections of this document – for providing habitat, scenery water quality, and recreation opportunities. While forestry is not a particularly large sector in Bar Harbor's economy, income from forest management activities can be important for individual landowners. This income generation along with the potential for property tax reductions through Maine's Tree Growth Current Use Tax program, make forestry an important alternative to development in a community when the cost of owning undeveloped land can be significant.

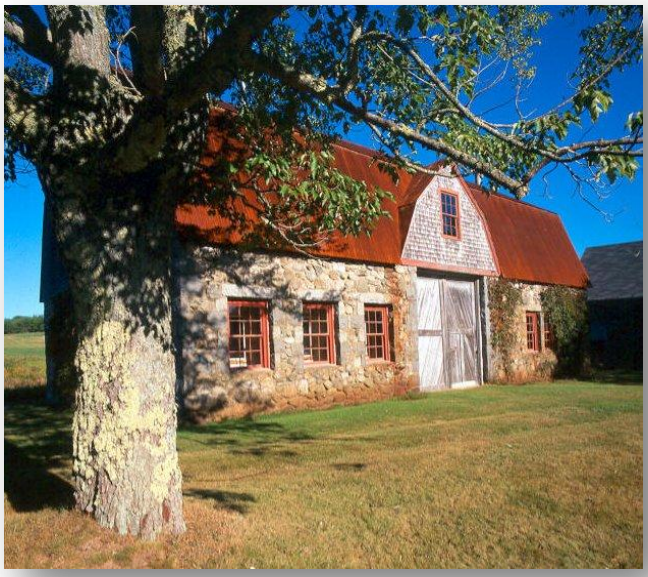


Photo: Maine Coast Heritage Trust

Stone Barn Farm, Bar Harbor, Maine.

Working Waterfront

Bar Harbor's location on the sea is an important part of the community's cultural heritage and economic vitality. Since the earliest days of Europeans and the Wabanaki before them, residents have made a living harvesting marine resources from the waters surrounding Mount Desert Island. In the Civil War era, Frenchman Bay was one of the most prolific cod fishing grounds in the world! Today, lobster are the primary species landed at the Bar Harbor town pier and nearby private wharves, but scallops, shrimp, urchin, clams, worms, cucumbers and other species are all harvested in nearby waters. Today, Hancock County towns as a whole annually vie for first place for number of active commercial fishermen licensed by the state. Bar Harbor's commercial fishermen, long economic and cultural pillars of our community, rely on access to the water to make a living.

Bar Harbor is a diverse waterfront community. In addition to commercial fishing, our working waterfronts cater to multiple and varied water dependent businesses, including shellfish aquaculture operations, ferries and water taxis, sailing and fishing charters, sea kayak outfitters, boat tours, and whale watch vessels, marine labs, and more. Numerous additional businesses, while they might succeed elsewhere than on the waterfront, are highly enhanced by their working waterfront locations, including educational institutions, waterfront seasonal rentals, hotels, and restaurants.

Bar Harbor's vitality is dependent on maintaining public and commercial access to the waterfront, including direct access through ramps, piers, and hand-carries, as well as shore access and open viewsheds. The economy, culture and character of this community are reliant on such access. Because of high land values and limited waterfront land areas, the greatest opportunities for sustaining our waterfront economy and culture is to secure protection for the town's existing waterfront access, both public and private, and seek opportunities to increase the inventory of accessible waterfront lands.

Bar Harbor's 2007 Comprehensive Plan update set a specific goal to promote access to the shore for commercial fishermen and the public. In order to accomplish this goal, specific policies were set and definitive strategies were defined within the comprehensive plan. These policies have guided the implementation of numerous strategies that have indeed promoted waterfront access. Although progress has been made, it will require continued diligence to assure continued access to the Bar Harbor shoreline for commercial fishermen and the public.

CELEBRATE WHAT WE HAVE

A summary of existing working lands

Working Farms

Trends in agriculture in Bar Harbor have changed significantly over the past 70 years, both in terms of the number of active farms and the total acreage. In fact, between 1940 and today, there has been a 83% decline in the total acreage of active farms (Figure 11). In 1940, 79 farms were spread over 4,016 acres, about 14 percent of the town's total acreage[1]. When the Maine Coast Heritage Trust (MCHT) did a farmland survey/inventory for the entire island in 1989-90, they identified 14 active farms spread over 811 acres of farmland. This inventory was updated in 2013 and found a slight increase in the number of active farms from 1990 spread over a smaller area (Figure 11). Although the surveys used slightly different metrics for identifying farms, it is clear that there was a significant decrease in the amount of land used for farming in Bar Harbor between 1940 and 1990 and a more modest decrease in the last decade or so.

Some of this historic farmland remains available for future agricultural use as inactive farmland. In 1990, MCHT identified 1,200 acres of inactive farmland divided among 23 properties. However, since 1990, the number of active and inactive farms has remained relatively the same, and yet, eight farm properties were converted to other uses in ways that made them unlikely to be available for agriculture in the future.

Photo: Jane Disney

Hadley Point is regularly used by commercial fishermen and shellfish farmers who launch trailer-able vessels and land marine resources at the ramp for truck transport.

Much of this farmland coincides with the town's important agricultural soils. While approximately 9% of the land in Bar Harbor is comprised of important farm soils as identified by the USDA (Table 12), many of these areas of soils underlay areas of development and are not available for farming.

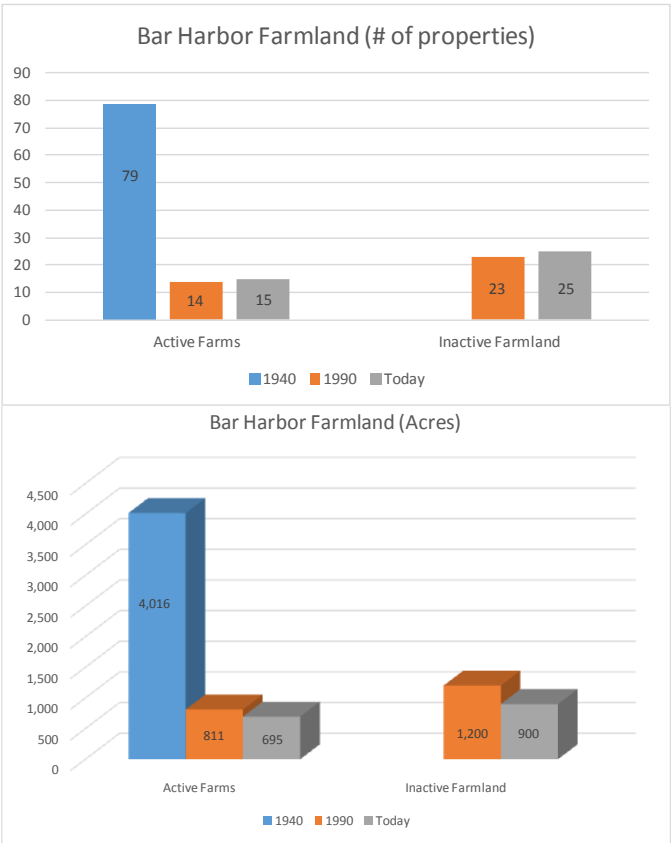


Figure 11. *Bar Harbor farmland (1940-2013).* *Source: MCHT*

Table 12. *Extent of important farm soils (all values approximate).*

Town	Prime Agricultural Soils		Soils of Statewide Importance		Sum of Prime and Statewide Importance		Total Acres
	Acres	*% of Total*	*Acres*	*% of Total*	*Acres*	*% of Total*	*Acres*
Bar Harbor	**973**	**3.6%**	**1,507**	**5.5%**	**2,480**	**9.1%**	**27,239**
Mount Desert Island	**2,258**	**3.2%**	**3,768**	**5.4%**	**6,026**	**8.6%**	**70,077**
Hancock County	**19,573**	**1.3%**	**107,463**	**7.2%**	**127,036**	**8.5%**	**1,485,269**
State of Maine	**830,000**	**4.0%**	**2,135,800**	**11.0%**	**2,965,800**	**15%**	**19,600,000**

Working Forests

An estimated 17,789 acres in Bar Harbor is forested (representing 65% of Bar Harbor's total land area)[2]. However, only a small percentage of Bar Harbor's forested acres are actively managed for forest products.

In 2012, there were 36 parcels totaling 930 acres enrolled in the Maine Tree Growth Program. This represents an increase in total acreage from 611 acres in 2002 and 676 acres in 1991. According to the Maine Forest Service records, between 1991 and 2002 there were twelve reported timber harvest operations conducted in Bar Harbor on 217 acres of forestland. Between 2002 and 2012 there were 48 reported timber harvest operations conducted on 590 acres of forestland. This information indicates an increase in both current use enrolled land and reported timber harvests over the last decade. Whether this increase is a result of development is unknown. What is certain is the area of timber harvests in Bar Harbor has increased almost three-fold compared to the previous decade.

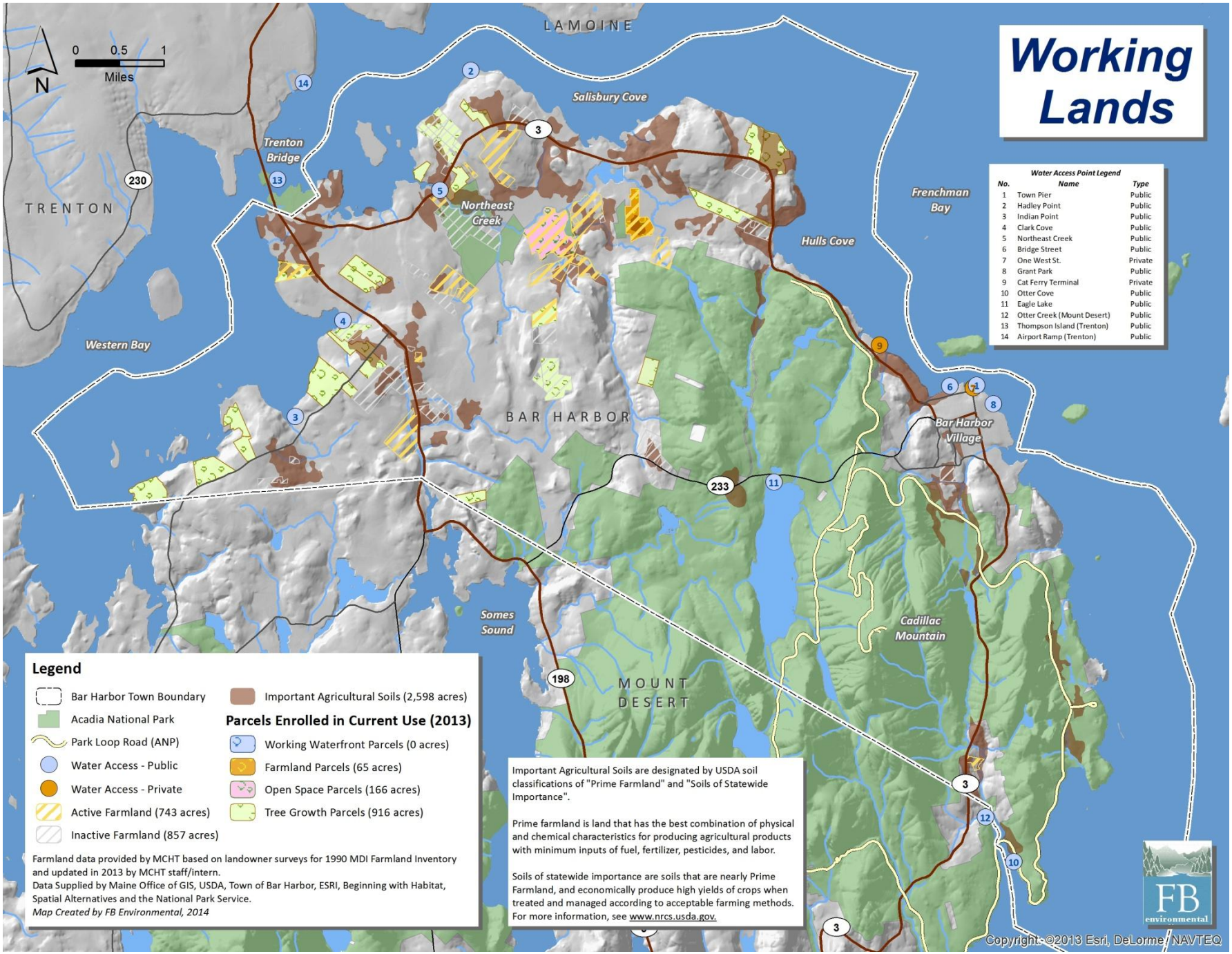
Bar Harbor landowners face a number of challenges to manage their land as working forest. Timber harvesting is not an allowed used in many area of town. Where timber harvesting is allowed, the town requires a forest management and harvest plan prepared by a licensed forester in accordance with the Maine Forest Service guidelines for "Developing a Forest Management Plan"[3]. The land use ordinance requires that harvesting activities do not create single openings greater than 7,500 square feet and limits harvesting to no more than 40% of the volume of trees in a ten-year period. These standards are designed to protect the towns' forests and other natural resources, but they can limit harvesting activities from being economical in certain cases. Additionally, forest management plans can be expensive to develop.

Areas in Bar Harbor Valued by Residents for their Agricultural Character and Activities:

- Crooked Road Corridor
- Norway Drive
- Town Hill area/Gilbert Farm Road
- Head of the Island
- Hadley Point
- Hulls Cove

In many cases, forests in Bar Harbor tend to be former farmland that has grown thick with mature fir, or was part of the 1947 fire which has resulted in mid-successional (mostly hardwood) forestland progressing to a mature spruce/mixed hardwood landscape. In many cases, it would be most profitable to create openings larger than the ordinance allows in order to aggressively remove fir and encourage spruce, a more commercially viable species.

The regulatory environment combines with other challenges in Bar Harbor. Forest landowners can find it difficult to find a logger to harvest their property, despite the fact that there are several good loggers working in the area. Small average lot size and trends towards larger and more expensive equipment contribute to this problem. When you start with a small lot and are then restricted to low harvest volumes, logging becomes less profitable. The trends in the industry have been towards larger and more expensive equipment, which means loggers have more and more financial investment in every project. This equipment investment demands a larger return than is often possible on small lots under regulatory limits.



Map: FB Environmental

Figure 12. *Important features of working lands in Bar Harbor.*

Working Waterfront

Public and Private Access

The town of Bar Harbor has several points of public access to the waterfront on both Frenchman and Western Bay (Figure 12, Table 13). Commercial users of these bays can access these locations for landing of marine resources (both wild harvest and farmed), for tourism related activities and other water-dependent businesses, as well as recreational use. The current inventory of Bar Harbor's public waterfront access includes:

- *Town Pier*- in downtown Bar Harbor provides access to outer Frenchman Bay and can receive passengers from large and small commercial passenger vessels. The ramp at the town pier provides trailer-able boat access, though it is too short to provide all tide access (the ramp drops off by two feet at low tide).
- *Hadley Point*- From Hadley Point Road provides access to 4.5 acres of Bar Harbor-owned land at the Bar Harbor town park in upper Frenchman Bay. The beach at Hadley Point provides recreational water access as well as access to hand-carried commercial operations such as sea kayak tours. The recently installed ramp at Hadley Point is regularly used by commercial fishermen and shellfish farmers who launch trailer-able vessels and land marine resources at the ramp for truck transport.
- *Other Access*- Northeast Creek, Bridge St., 1 West St., Grant Park , the Cat Ferry Terminal, and Otter Cove. Eagle Lake (and Northeast Creek) provides access to freshwater resources.

Table 13. *List of public and private waterfront access points in/near Bar Harbor (refer to Figure 12).*

Water Access Point Legend		
No.	**Name**	**Type**
1	Town Pier	Public
2	Hadley Point	Public
3	Indian Point	Public
4	Clark Cove	Public
5	Northeast Creek	Public
6	Bridge Street	Public
7	One West St.	Private
8	Grant Park	Public
9	Cat Ferry Terminal	Private
10	Otter Cove	Public
11	Eagle Lake	Public
12	Otter Creek (Mount Desert)	Public
13	Thompson Island (Trenton)	Public
14	Airport Ramp (Trenton)	Public

- *Indian Point Town Landing & Clark Cove*- Town Landing Road off Indian Point Road and Clark Point Road, both provide access to Western Bay. In both cases, parking is extremely sparse, thereby limiting the functional use of these access points.
- *Waterfront Access outside of Bar Harbor*- Otter Creek on the Bar Harbor/Mount Desert town line provides access to Otter Cove in Bar Harbor. Thompson Island and Airport Ramp in Trenton provide valuable access to Bar Harbor waters including the Narrows or Frenchman Bay.

CASE STUDY: Access to the Waterfront

"For more than forty years clammers have accessed the mud flats in front of our family's house through our property. I am pretty sure that the access long predates my life, but I cannot say for sure. There is no viable access to the flats other than by water or across private land such as ours, and it only seems appropriate that traditional uses of the shore should continue if they do no harm. The bay is a shared resource to which we should all have access and for which we are all responsible. It shouldn't just be a postcard image or picture window view. When I was young, I remember my mother inviting an older gentleman, who had hurt himself limiting his ability to move about, to use the stairs from our place rather than struggling along the wooded wet path that most clammers use. There were other people too who parked regularly in our drive for any number of reasons; and I have continued to do as my mother. I hope we can all share and care for the bay whether we are on its edge, further upstream, or working and making a living on or by the water. The bay should be there for all of us, and I hope we will all step up to take care of it while we continue to share it in a multitude of ways." ~ *Anonymous*

In addition to the points of access listed above, there are a few points of access to the working waterfront at private commercial sites and across other private land. Some landowners in Bar Harbor have acknowledged and honored historic uses of their property. These generous landowners provide critical access to the shoreline for hauling out boats for cleaning and access to marine resources. Unfortunately, private waterfront access runs the risk of being converted to non-compatible uses. For example, as private lands change hands, traditional handshake agreements can get lost, along with the access.

Given than the majority of Maine's coastal access is privately owned[3], the tenuous nature of much of our waterfront access is at risk and indeed, waterfront access has declined throughout Maine. The state has responded by creating incentives to protect working waterfronts. The "*working waterfront access protection program*" is a state funding mechanism that offers financial support in exchange for a covenant, which limits the future use of the property to working waterfront. Maine also passed a Current Use Taxation for working waterfront modeled after the state's open space, tree growth, and farmlands taxation policies, providing landowner's tax rebates for keeping their lands in working waterfront (see Chapter 7 for details). To date, no Bar Harbor waterfront properties have taken advantage of these tools. However, there is an opportunity for the town to support willing waterfront landowners in securing waterfront access through their lands via either of these two programs.

Managing the Working Waterfront

The Harbor Committee in Bar Harbor, the Bar Harbor Publics Works Division, Planning Board, and Town Council worked together in the development of a new harbormaster office and port safety facility on the town pier in 2012-2013.

The harbormaster is better situated in the new harbormaster office to oversee uses of the harbor, resolve parking and mooring issues, and communicate with marine resource users and visitors to the pier about best practices along the marine waterfront. There is meeting space in this building that provides opportunities for public and private sectors to convene and work out future issues related to accessing the working waterfront.

The Cruise Ship Committee in Bar Harbor has been instrumental in recognizing the need for public facilities near the town pier, developing budgets from cruise ship funds that help to address this need, and making recommendations to the town council for expenditure of funds and implementation of new projects.

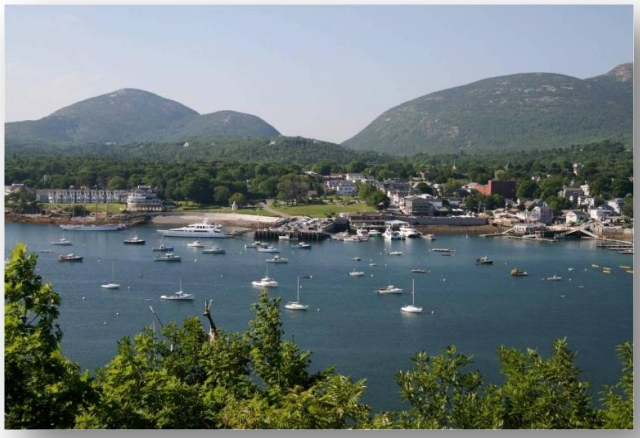


Photo: National Park Service

Planned open space provides public access to Bar Harbor's working waterfront.

Cruise passenger fees have enabled improvements on the town pier and to nearby facilities that make the pier more accessible and safe for visitors. These improvements include upgrades to facilities such as the harbormaster's office, addition of port safety facilities, replacement of floating docks and pier railings, and installation of the Newport Drive Comfort Station.

Accessing Moorings: Critical for Working Waterfronts

Harbor mooring is essentially closed to new vessels in Bar Harbor, though there are moorings in other areas of the community. Bar Harbor will continue to give mooring preferences to local commercial fishermen. Currently, there is no capacity for more moorings at the town pier. Although there is room in the harbor, there is not sufficient dinghy space at the town floats. The number of moorings is dependent on the dinghy space at the floats.

With the installation of a cement boat ramp at Hadley Point, it has become easier for both commercial fishermen and recreational boat users to back boats down on trailers. The harbormaster has granted permits for a handful of new moorings just to the west of the point. Boaters need to use other small boats to get out to their moorings, or wait for a low tide when they can wade out. This area will not grow significantly as a mooring area, as this could prohibit shellfish harvesting and aquaculture operations in this area.

People with waterfront property can obtain a permit for a mooring and keep personal boats off shore of their property. College of the Atlantic has helped to relieve some demand for moorings, as has the Bar Harbor yacht club, which seasonally adjusts the use of moorings and allows for some public use.

HOW DO WE PROTECT & SUPPORT WORKING LANDS?

Goals & Strategies

ALL WORKING LANDS

GOAL 1: FOSTER BROAD COMMUNITY SUPPORT FOR ALL TYPES OF WORKING LANDS THROUGH MUNICIPAL POLICIES AND PRACTICES

STRATEGIES:

1) Continue to support, encourage, and advertise current use taxation programs.

2) Encourage farm, working forest, and working waterfront landowners to adopt and use best management practices to protect the quality of water and natural resources.

3) Require developers of new development projects, including single lot development, to disclose in deeds, plans, and marketing materials that adjacent properties are authorized for agricultural, forestry and working waterfront uses that may generate a variety of impacts, including but not limited to odors, noise, early hours of operation, and use of pesticides and fertilizers; or other uses which a homeowner might view as a nuisance.

FARMLAND

GOAL 2: PROTECT UNDEVELOPED IMPORTANT FARMING SOILS TO ENSURE THE AVAILABILITY OF LOCAL FOOD NOW AND IN THE FUTURE

STRATEGIES:

1) Adopt creative development regulations and acquisition techniques to not only preserve active and inactive farms, but to encourage new farms. Such techniques could include acquiring rights-of-first-refusal for properties on farmland soils as well as purchasing, reselling or leasing active and inactive farmland (Comp Plan Strategy 1D3).

2) Through the Conservation Commission, work with Maine Coast Heritage Trust to secure conservation easements on farm properties with willing landowners.

GOAL 3: SUPPORT LOCAL FARMING THROUGH LOCAL TAX, ECONOMIC DEVELOPMENT, AND ZONING POLICIES

STRATEGIES:

1) Through the planning or economic development office, facilitate the formation of an agricultural commission comprised mostly of farmers and charged with helping to implement strategies from the Comprehensive Plan, as well as propose other changes to local ordinances and municipal policies that would be supportive of farming or make farming easier. In addition to a leadership role on municipal issues, this commission could potentially:

   i. Help address the barriers related to temporary housing for farm workers;

   ii. Informally talk with farmers to find out how their farm operations are faring and what ways in general the community might support them;

   iii. Sponsor workshops on topics of interest to farmers;

   iv. Identify areas of important farm soils that are not developed and informally talk with property owners about their plans for the land;

   v. Evaluate freshwater needs of local farmers and work with municipal officials to address any issues that arise.

Maine has four "current use" programs, which includes Farm Land, Tree Growth, Open Space and Working Waterfront. The program offers property owners a reduction in the assessed value of their land[3].

(See Chapter 7 for a full description of requirements for enrollment in the State's Current Use program).

vi. Help promote locally grown products; and

vii. Work with other MDI communities, MCHT, COA and others to think regionally about farming and the future.

2) Explore adoption of the Voluntary Municipal Farm Support Program that provides additional tax relief to farmers.

3) Adopt standards to encourage purchasing of locally grown or harvested products for municipal programs and events, and encourage local institutions and year-round businesses such as AOS 91, Jackson Laboratory, MDI Hospital, MDI Biological Laboratory, grocery stores, and restaurants to do the same. Develop strategies with appropriate partners to increase the percent of available local and regional products purchased and used.

4) Review the LUO to remove impediments and add supporting regulations for agricultural operations in order to:

i. Allow uses that provide support for agriculture, including but not limited to veterinary, feed milling operations, and greenhouses, in designated rural and rural residential;

ii. Allow equipment sales in commercial districts, excluding the Downtown;

iii. Allow farming everywhere, with appropriate limits on livestock farming in designated villages, institutional campuses, and light industrial areas;

iv. Reduce road setback requirements for farm buildings on private and town roads in the rural and rural residential districts;

v. Designate community gardens and community farms as an allowed use of preserved open space in planned unit developments;

vi. Require new development to be planned and clustered to preserve both farmland soils and active or inactive farms;

vii. Allow farms, farm stands/markets/stores and pick-your-own operations to have off-premise signs if half or more of their gross revenues are from products harvested from Mt. Desert Island or the Bar Harbor-Ellsworth labor market area;

viii. Exempt farms from site plan review for farm-related facilities and activities provided all zoning and building permitting requirements are met; and

ix. Require new development on parcels adjacent to parcels with farmland soils or active or inactive farms to provide vegetated buffers at least the width of the required setback along all farm-adjacent property lines.

WORKING FOREST

GOAL 4: SUPPORT PROGRAMS OR CREATE ORDINANCES THAT SUPPORT FORESTRY AS A VIABLE ALTERNATIVE TO CONVERSION TO DEVELOPMENT WHILE PROTECTING THE HEALTH OF OUR FOREST RESOURCE

STRATEIES:

1) Review current timber harvesting standards to determine if regulatory barriers exist for balancing economic benefits with long-term protection of working forests in Bar Harbor.

2) Develop a list of local foresters that can provide services to small woodlot owners with smaller harvest volumes so that small working forests are viable.

3) Promote the use of the Maine Forest Service Woods Wise program, which provides free advice, and a cost-sharing program, which can help with the cost of developing a forest management plan.

WORKING WATERFRONT

GOAL 5: ACCOMMODATE INCREASED COMMERCIAL AND RECREATIONAL ACTIVITY IN THE HARBOR AT EXISTING PUBLIC ACCESS SITES

STRATEGIES:

1) Through the Harbor Committee, update and continue to implement the existing Harbor Management Plan to help ensure the availability of adequate, safe and environmentally sound waterfront access sites for both commercial and recreational users. The plan should:

i. Ensure that waterfront areas, including the area around town pier in Bar Harbor, continue to

grow in a safe, environmentally sound, and economically prosperous manner (this includes future expansion of Harborview Park and structured and other parking).

ii. Balance potentially competing uses within the harbor to maximize public benefits.

iii. Specify how revenue from moorings and small and large passenger vessel visitation will support the Harbor Management Plan.

iv. Include monitoring of town appropriations, revenues, and fees and adjust them as appropriate to meet the needs for investment in marine infrastructure.

2) Redevelop the Bar Harbor Ferry Terminal to accommodate multiple uses (including commercial fishing) to make the most out of this unique and valuable waterfront property.

3) Seek opportunities to improve access and increase parking at Clark Cove and Indian Point Town Landing access sites.

GOAL 6: ADD PUBLIC ACCESS POINTS TO THE BAR HARBOR WATERFRONT

STRATEGIES:

1) Secure access points for public use when property becomes available, through private-public partnerships or purchase of waterfront properties, or other means.

2) Consider use of cruise passenger fees to expand public access to waterfron in other locations in Bar Harbor.

GOAL 7: INCREASE WORKING WATERFRONT ACCESSIBILITY ACROSS PRIVATE LAND

STRATEGIES:

1) Provide tax incentives for private property owners to permit historical access to working waterfronts to continue in perpetuity.

2) Encourage working waterfront lands to enroll in Maine's current use taxation for working waterfronts.

Photo: Jane Disney

Working waterfronts support multiple uses including commercial fishing, nature-based tourism and recreation.

3) Encourage working waterfront landowners to apply for funds through the working waterfront access protection program to secure their properties as working waterfronts.

References

[1] *Town of Bar Harbor (2007). Bar Harbor Comprehensive Plan Update, June 2007.*

[2] *Forested area in Bar Harbor is based on GIS analysis by FB Environmental Associates from 2004 land use data.*

[3] *Maine Forest Service (2012). Developing a Forest Management Plan. Maine Forest Service, Department of Agriculture, Conservation and Forestry. Information Sheet 3, March 2012. Online: http://www.maine.gov/tools/whatsnew/attach.php?id=392586&an=1*

[4] *The Island Institute (2005). The Last 20 Miles. Online: http://www.islandinstitute.org/publications/Mapping-Maines-Working-Waterfront/12270/.*

[5] *State of Maine (2014). Maine Revenue Services Property Tax - Current Land Use Programs. Online: http://www.maine.gov/revenue/propertytax/propertytaxbenefits/CurrentUseLandPrograms.htm.*

Putting the Plan to Action

The Conservation Commission has sought to create a readable document that citizens can use to celebrate the rich history of open space in the town, and to plan for the future. The plan provides a road map to help the town, land trusts, and regional, statewide or national organizations to begin working with willing landowners on land or easement acquisition that support the intent of the plan.

The information in the previous chapters provides an overview of Bar Harbor's abundant resources, as well as the rationale and specific strategies for protecting these resources through open space conservation in several different categories: 1) natural habitats, 2) water resources, 3) scenic and cultural resources, 4) recreational resources, and 5) working lands.

One thing that is inherently clear, but not explicit in the plan to this point, is that protecting open space for one purpose will more than likely benefit another. For example, protecting scenic hilltops will benefit downstream water quality by protecting the upper watersheds and preventing erosion caused by development on steep slopes. Creating nature trails on land adjacent to existing conservation land will help protect large habitat blocks beneficial to native plants and wildlife. Protecting water quality by preserving open space near the waterfront will reduce the effects of stormwater runoff to town beaches, which in turn will benefit recreational fishing, boating and swimming, and marine wildlife.

Writing a plan is the easy part; implementing the plan will require cooperation among federal, state, and local partners.

On the other hand, there may be some areas in which open space protection in one area conflicts with another. For example, one person may consider farmland a scenic asset, while others may not; and in some cases, recreational use can conflict with protection of sensitive ecological resources.

Finding the balance between types of open space protection will be an important consideration as the plan is implemented. By prioritizing future open space protection efforts, the community will be in a good position to find this balance and successfully implement the plan.

Photo: Enoch Albert

Sunset at Hadley Point Beach.

An implementation plan is only as good as the effort of the people that are using it. It should include not only goals and strategies on how to protect open space, but also who will implement these goals and strategies. The goals and strategies from Chapters 2 through 6 have been compiled in Appendix A. Further work is needed to define who will implement the plan and when.

This plan, and the recommendations and guidance within can be adaptively managed as funding and opportunities arise over the course of the next decade. The Conservation Commission should revisit the action plan on an annual basis to ensure that it is up to date, and reflects the ideals and needs of the community.

Prioritizing Open Space Protection

Open space priorities were developed as a result of a year of work by the Open Space Plan Steering Committee, feedback from key stakeholders, and input from the public (Appendix C).

This plan seeks to identify priority areas for open space protection using a combination of maps that identify important town resources. The maps are a tool that can be used to assist the planning board to incorporate open space in all future development proposals, especially in both critical rural and rural areas identified in the future land-use plan. The plan will allow the town to be proactive when it comes to development decisions rather than reactive.

Funding Open Space

The 2007 Comprehensive Plan calls for an open space plan that will "...encourage voluntary protection of Bar Harbor's important natural, scenic, and cultural resources as well as establish and open space lease and acquisition program."

The following section provides information relevant to help fund and implement open space protection in Bar Harbor, along with a description of some common programs:

Develop an Open Space Acquisition Program- The town could develop a multi-facetted land acquisition program and fund dedicated to the conservation of open space. Similar programs used in other Maine communities (such as Falmouth) use a variety of funding sources to attain funds to purchase land (Table 14). The town should develop an open space acquisition committee to oversee the program.

In addition to grant funding, the town could consider additional revenues to fund open space protection including:

Table 14. *Possible sources of grant funding to support an Open Space Acquisition Program.*

Grant Program	Description
Beginning with Habitat http://www.beginningwithhabitat.org/pdf/Funding_12.27.07_Final.pdf	The Maine Natural Areas Program has developed a comprehensive list of grant opportunities for habitat conservation, improvement and planning projects.
Community Forest Program http://www.fs.fed.us/spf/coop/programs/loa/cfp.shtml	Funds projects that protect forests and open space. Individual applications not to exceed $400,000.
Land for Maine's Future Program http://www.landformainesfuture.org/about-lmf/	Protects working farms and forests, ocean access, trails for snowmobilers, hikers and bikers, pristine lakes, ponds, and rivers.
Federal Highway Bill Funding http://www.landtrustalliance.org/policy/public-funding/federal-highway-bill-funding	Acquisition of scenic or historic easements and sites, provides grants to land trust for acquisition of easements and fee simple title to property for recreational trails or other recreational trail corridors.
Land and Water Conservation Fund http://lwcfcoalition.org/	A federal program to conserve irreplaceable lands and improve outdoor recreation opportunities. Works in partnership with state and local efforts to protect and expand national parks, forests and trails.
L.L. Bean Maine Land Trust Program http://www.mltn.org/resources/llbean-grant-guidelines.php	Supports local land-trust projects that enhance public access to conserved lands. Four to seven grants given annually not to exceed $5,000.
Maine Coast Heritage Trust Revolving Loan Fund http://www.mltn.org/resources/conservation-funding.php	Provides short-term loans to qualified entities acquiring land for permanent conservation. Loans ranging from $5,000 to $400,000.
Maine DOT Transportation Enhancement Program http://www.maine.gov/mdot/pga/qcp/enhancement/	Funds activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation.
Maine DOT Safe Routes to School http://www.maine.gov/mdot/pga/qcp/enhancement/	Provides resources for infrastructure improvements for communities to improve conditions and raise awareness of the benefits of walking and biking to school.
Maine Trails Funding Program http://www.maine.gov/dacf/parks/grants/maine_trails_fund.html	A state matching grant to help maintain, improve and enhance recreational trails in the state.
Maine Outdoor Heritage Fund https://www.maine.gov/ifw/grants/outdoorheritagefund/howtoapply.htm	Available to Natural Resource Agencies- but may be in partnership with other entities. Funding for fisheries, wildlife and habitat conservation projects, acquisition and management of public lands, endangered and threatened species conservation projects and natural resources law enforcement.

Re-allocation of Revenues[1]: Funds from the sale of tax acquired properties, sustainable wood harvest on town lands, and currently owned properties could be allocated to a land acquisition fund to purchase and protect parcels of land.

Dedicated Penalties and Fees[1]- The town could dedicate money from penalties and fees such as wetland violations, and shoreland zoning infractions toward a land acquisition fund.

Open Space Impact Fee Ordinance- An impact fee can help raise funds to protect valuable open space in town through assessment of new residential development. Model ordinance are available to help guide the development of this type of ordinance.[2]

Local Land Bonds and Appropriations[3] - The town may develop local land bonds or appropriations. This demonstrates a strong local commitment to land protection, and usually offers more opportunity to leverage private and other public funds thereby stretching the local dollar.

Strategies for Open Space

The town should work closely with the local land trust, Maine Coast Heritage Trust, and Acadia National Park to encourage voluntary land conservation with willing landowners interested in open space protection. Conservation lease programs and conservation easements are two options for voluntary open space protection.

Establish a Conservation Lease Program- Privately-held, priority open space land can be leased to a land trust or government agency in the interest of open space conservation. This develops a working partnership with the landowner to manage the property with specific goals, such as wildlife habitat or recreation. This type of collaboration has led to permanent land protection in other communities.

Encourage Conservation Easements[4]- There are several areas within town that have significant open space value, but are privately owned. The town should establish relationships with Maine Coast Heritage Trust and Acadia National Park to work with landowners who may be interested in donating or selling development rights of their land in the interest of open space conservation. Conservation easements ensure open space will be conserved for future generations while allowing the land to remain in private property.

Encourage and Promote Current Use Tax Programs[4] *(see inset)*- The Tree Growth Tax Law and Farm and Open Space Tax Law were established in the 1970's to prevent property taxes from forcing productive woodlands, farms and significant open spaces into tax delinquency or conversion to development. More recently, working waterfront land has been added to the laws. These programs make it easier for landowners to achieve a more manageable tax assessment. Current Use Tax programs can be a useful method that gives

STATE OF MAINE CURRENT USE TAX PROGRAMS[6]

Farmland: The property owner is required to have at least 5 contiguous acres in their tract of land. The land must be used for farming, agriculture, horticulture and can include woodland and wasteland. Additionally, the tract must contribute at least $2,000 gross income from farming activities, each year.

Open Space: There is no minimum acreage requirement with this program, but minimum areas and setbacks must be excluded from classification. The tract must be preserved or restricted in use to provide a public benefit. Benefits recognized include public recreation, scenic resources, game management or wildlife habitat.

Tree Growth: The Property must be at least 10 acres of forested land used for commercial harvesting. A Forest Management and Harvest Plan must be prepared and a sworn statement to that effect submitted with the application. Applications include a map of the parcel indicating the forest type breakdown as well as all other areas not classified as tree growth.

Working Waterfront: Land must include a parcel or portion of a parcel of land abutting tidal waters or is located in the intertidal zone (located between the high and low water mark) the use of which is more than 50% related to providing access to or in support of the conduct of commercial fishing (including commercial aquaculture) activities.

landowners monetary incentives to keep their properties undeveloped, providing a temporary level of protection from development sprawl.

As of 2013, only 37 parcels totaling 1,147 acres of land in Bar Harbor are enrolled in the state's current use program.[7] This includes one farmland property, one open space parcel, and 35 tree growth parcels. There are currently no parcels enrolled in working waterfront.

Next Steps

The town should begin by appointing an open space committee to finalize a list of priority areas based on the inventory of valuable resources presented in this plan. The committee should take immediate steps to identify who will be taking the lead on each of the goals and strategies, and set interim dates for implementing them.

The Open Space Plan provides specific goals and strategies to protect valuable natural, scenic, recreational and working lands through open space conservation. These goals and strategies provide a road map by which the town, residents, partnering agencies, land trusts and other community groups can begin open-space conservation.

References

[1] *Wells National Estuarine Research Reserve (2009). Headwaters: A Collaborative Conservation Plan for the Town of Sanford. Online: http://www.beginningwithhabitat.org/pdf/Sanford%20Conservation%20Plan.pdf.*

[2] *Town of Eliot, Maine (2010). Eliot Open Space Plan. July 2010. Model Ordinances, page 70-79. Online: http://www.mainefarmlandtrust.org/wp-content/uploads/2013/10/EliotOpenSpacePlan.pdf.*

[3] *Beginning with Habitat (2003). Financing Habitat Protection: Local Land Bonds. Online: http://www.beginningwithhabitat.org/toolbox/finance_landbond.html.*

[4] *Maine Coast Heritage Trust (2003). Conservation Options: A Guide for Maine Landowners. Online: http://www.mcht.org/mchtnews/pdf/mchtconsoptions.pdf.*

[5] *Beginning with Habitat. 2003. Financing Habitat Protection: Current Use Tax Programs. Online: http://www.beginningwithhabitat.org/toolbox/finance_currentuse.html.*

[6] *Maine Department of Administrative and Financial Services: Maine Revenue Services (2013). Current Land Use Programs. Online: http://www.maine.gov/revenue/propertytax/propertytaxbenefits/CurrentUseLandPrograms.htm.*

[7] *2013 Current Use MVR data, provided by the Town of Bar Harbor, January 15, 2014.*

APPENDICES

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APPENDIX A. LIST OF OPEN SPACE GOALS BY CHAPTER

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Goal 2: Preserve large, undeveloped habitat blocks as well as large contiguous forest blocks.	16
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Goal 4: Protect freshwater and wetlands for wildlife habitat.	17
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Goal 2: Protect Bar Harbor's freshwater and coastal wetlands.	28
Goal 3: Protect the marine environment and enhance the economic value of renewable marine resources by preserving and improving the ecological integrity of marine communities and habitats.	28
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CHAPTER 5- RECREATIONAL RESOURCES	**46-48**
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Goal 2: Ensure public access to town beaches.	46
Goal 3: Ensure public beaches are clean, and waters support designated uses such as boating, swimming and fishing.	46
Goal 4: Maintain, improve, and protect existing town parks.	46

Open Space Planning Goal	Page #
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Goal 6: Support preservation of the shore path.	47
Goal 7: Establish a cross-island trail.	47
Goal 8: Provide linkages for multi-use and nature trails.	47
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CHAPTER 6- WORKING LANDS	**56-58**
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Goal 2: Protect undeveloped important farming soils to ensure the availability of local food now and in the future.	56
Goal 3: Support local farming through local tax, economic development and zoning policies.	56
Goal 4: Support programs or create ordinances that support forestry as a viable alternative to conversion to development while protecting the health of our forest resource.	57
Goal 5: Accommodate increased commercial and recreational activity in the harbor at existing public access sites.	57
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Goal 7: Increase working waterfront accessibility across private land.	58

APPENDIX B. FARMER INTERVIEWS

Bar Harbor farmers were interviewed during the winter and spring of 2013 to help inform the open-space planning chapter on working lands. These interviews with local farmers identified the following challenges and barriers to farming in Bar Harbor, along with some good ideas (*categorized but in no particular order*):

Land Access and Affordability Issues

- Access to land for tilling and growing vegetables, pasturing livestock, or growing hay
- Affordability of land that may be available for farming uses
- Space constraints on island – farmers cannot grow enough to supply hospitals and schools
- Competition for land with horse farmers
- Farming on non-adjacent parcels creates challenges in terms of equipment, water and power
- Issues relating to leased farmland:
    - short-term view vs. long-term view (nutrient cycling and sustainability)
    - impacts to resident landowner often unanticipated at first
    - competition
    - access to water and power
- Information should be made available to landowners to help them think through a potential lease (including sample lease agreements)

Access to Farm Products and Services

- Lack of processing facilities in town or region – have to travel with livestock or products - 150 miles to a slaughterhouse if want to sell to public
- There is not a farmers' cooperative in the area because there is no money in organizing a coop – need a grant to get one going
- Higher cost of materials and services (such as veterinarians) due to lack of local and regional farming infrastructure
- Large animal vets are far away and species dependent (e.g., goats) so training and availability are an issue – potential animal health issues are not addressed as a result
- Access to good hay is a huge problem – need local source

Ordinance Issues

- Local ordinances prohibiting processing of farm livestock or products, even farm kitchen processing – local resistance to any type of processing
- Local ordinances prohibiting value added commercial activities like farm dinners, weddings, workshop events

- Local ordinance restricting temporary housing for farm workers (provisions geared toward tourism, e.g., commercial campgrounds)
- Town should allow value added components needed to make farming profitable (e.g., tourist opportunities like café, ice cream parlor, farm work, farm tours)
- Setback requirements on private roads are impacting ability to maximize farm potential of some properties
- Few areas with good farm soils in town – should be local ordinance prohibiting removal of such soils and development should be clustered away from good farm soils
- Temporary signs for farmers markets are not allowed
- Having farm animals is not a new use but is a traditional use and part of our heritage – 3-4 chickens are not a problem and should be allowed in most places
- Local regulations need to be clear about what can't happen but flexible about what can happen (no motels)
- It is impossible not to violate avocational agriculture zoning provisions for animals – animal units would be better measure
- Grandfathering of uses allows the continuation of bad practices
- The Emery District has use conflicts
- The Town allowing rezoning to more intensive uses is most serious issue now

Miscellaneous Issues

- There is a lack of a business voice for farmers so those not knowledgeable about farming set policy in Bar Harbor
- Non-profit organizations running farms compete with private farms and can have an unfair advantage (access to grants and private funding not available to for profit farmers)
- Need to foster more collaboration among farmers - A cooperative or community collective could help brand MDI food (MDI growers association)– MDI-grown does resonate with people and a map showing what is available where would be popular – along with decals for businesses and restaurants
- It is nice for farmers to have connections with community through programs like Senior Farmshare – the Town could coordinate such a program (State paid $50 for each share of groceries delivered)
- Town could engage farmers and neighbors to talk about issues – as some farming activities could evoke concern among neighbors – e.g., a slaughterhouse is desperately needed but is controversial though there is demand for local food - need targeted local neighborhood outreach
- A brochure available about farming and hosting open farm days would help build awareness
- Term easements may be a more suitable tool for microfarms because microfarms are portable and not as tied to the land

- The Economic Development Task Force should have an interest in farming
- Affordable insurance and affordable labor are big issues – 20% of payroll at one farm is workers' compensation insurance and cannot insure anyone under 16 years old though lots of kids want to come to work on the farm
- Minimum wage is a problem for farms
- Need stronger rules to protect farmers from liability claims – currently driven by insurance companies and attorneys
- Sales tax on items purchased out of state and special use taxes on farm equipment are a big problem

APPENDIX C. OPEN SPACE FORUM -PUBLIC FEEDBACK

COMBINED BAR HARBOR OSP PUBLIC MEETING NOTES ~ APRIL 17, 2014

WATER RESOURCES

All participants agreed that the most important goal is #1: Protection of groundwater, streams, etc. If the upland water resources are protected then the downstream water resources will reap the benefits of that protection.

During discussion, specific strategies came up. Here are some of them:

The majority of the public comments regarded some aspect of water resources within the Northeast Creek watershed. Because of its size, diversity of habitats and connection to extensive uplands as well as marine environments, this focus is not surprising. They are summarized below in their own section, followed by comments listed as "Other".

Northeast Creek:

1. Address the culvert problem on Crooked Road near the Wild Iris Farm. The culvert is too high; therefore water does not drain expediently off of the farm property after heavy rain. Rainwater backs up onto the field, mixing with horse manure. This could lead to increased nitrogen and bacteria flowing into the watershed as the field eventually drains.
2. Seek grant monies to assist with purchase or construction of manure sheds for local farms.
3. Initiate baseline monitoring in upland streams to determine where nitrogen inputs are originating in the Northeast Creek Watershed.
4. Consider periodic dredging of wetlands on the Stone Barn property, to keep water flowing freely through the watershed and into Northeast Creek.
5. Consider 5-acre build out in areas of the Northeast Creek Watershed most likely to contribute to excessive nitrogen loads to Northeast Creek. Enact ordinances to discourage or reduce the number of "lollipop" subdivisions along Crooked Road and Knox Road, which spread out development in the watershed.
6. Map areas where wells have suffered from insufficient water quantity in the past, in particular, the Crooked Road corridor and the area around the Stone Barn at the intersection of Norway Drive and Crooked Road.
7. Address the causes of bacterial pollution that are responsible for clam flat closures at Northwest Cove off of Indian Point Road and mouth of Northeast Creek. Consider the use of canines that can detect human sewerage. Perhaps watershed surveys in the vicinity of Prays Brook and Northeast Creek are warranted.

Other:

1. Plant vegetation in ditches along Schooner Head Road to prevent flow of sediments and nutrients and pesticides used on lawns into wetlands.
2. Explore ordinances to regulate pesticide and herbicide use on lawns in Bar Harbor. Consider a neighborhood incentive program like the "BayScaper Program" put in place by Friends of Casco Bay in Portland, Maine, where neighbors encourage neighbors to limit pesticide use.

Recommendations for Water Resources Map revisions or ancillary maps:

1. Show the Stone Barn Property and the Wild Iris Property as areas for attention and the streams in this vicinity as priorities for baseline monitoring of nutrients and bacteria.
2. Show the Crooked Road Corridor and area around the Stone Barn as areas of risk for water quantity insufficiencies during times of drought.
3. Indicate on map priority areas for improving water quality, quantity.
4. In order to encourage a limit on the extent of impervious surfaces in the Northeast Creek Watershed—show what a 5-acre build out would look like as compared to the current 1-acre build out that is now permitted.

NATURAL RESOURCES

Public Comments with greatest number of comments/most support:

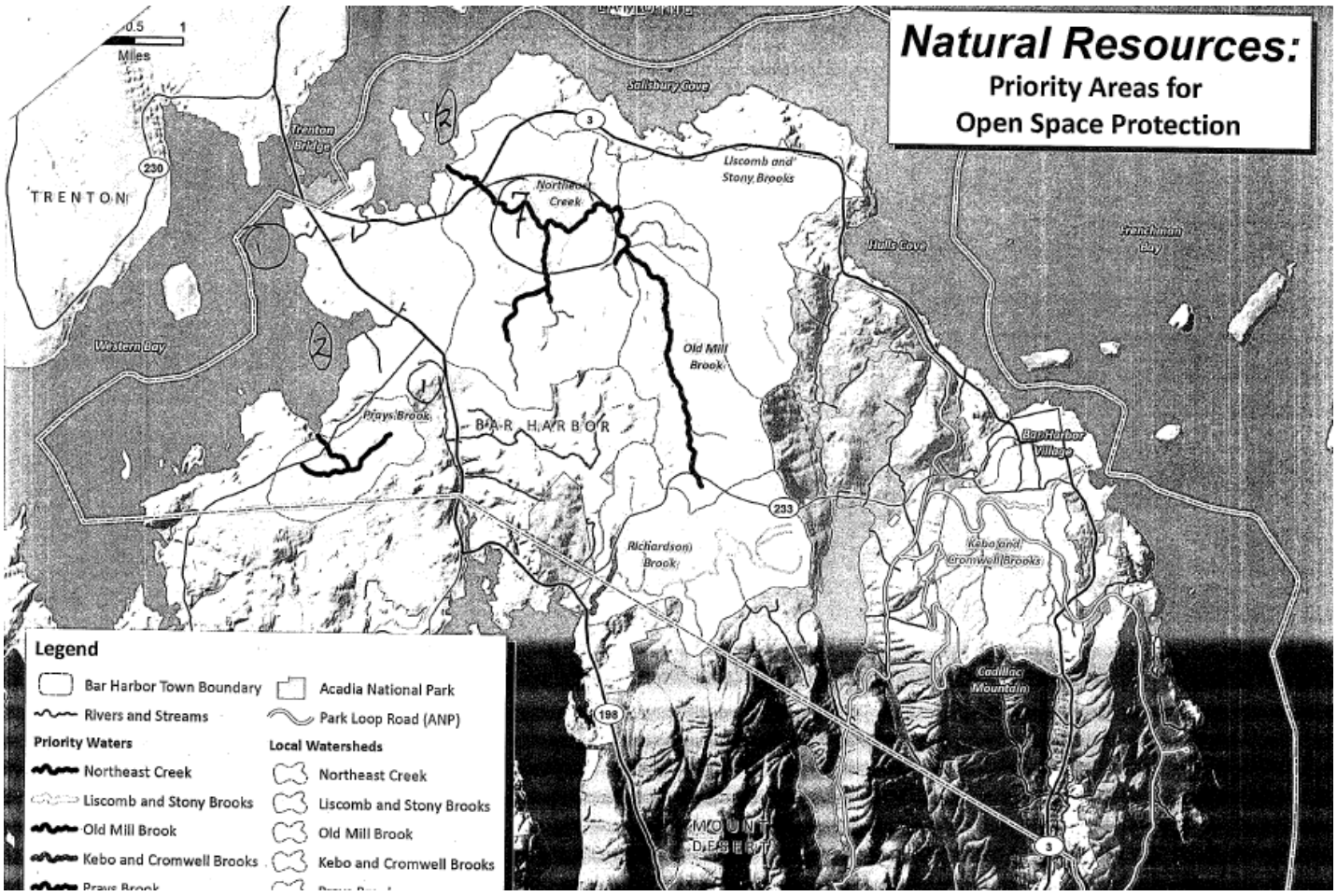
- Fish passage
- Travel corridors
- Connectivity
- Preserve through incentives; several people recommended management through ordinance.

All comments:

- Consider renaming the chapter "Natural Habitats" to avoid things like gravel deposits, which are also natural resources
- Maintain corridors for migration
- Preserve and/or create connections between habitat blocks
- Improve fish passage
- Make sure that the goals for other chapters support habitat goals
- Mention importance of invasive species management
- Try to identify core blocks by combining layers (good suggestion, isn't it?)
- Consider the effect of easements on tax base and try to employ other methods
- There are fewer vectors for invasive species spread if large blocks are maintained
- For Vision: Develop systems and planning to allow development while still protecting habitat
- For vision: ensure healthy, diverse marine habitats
- Question: how many 500-ac undeveloped blocks are there in BH?
- Quarrying threats (sedimentation)
- If we set near-shore marine habitat as the #1 priority, then EVERYTHING uphill has to be protected!
- For Vision: There is unimpeded movement of diadramous fish
- Encourage forestry activities that provide wildlife habitat
- Look at how LUO can enhance habitat
- Citizen Resources: Where can citizens go to get advice and assistance with habitat management?
- Re-emphasize cluster development to protect habitat
- Provide incentives for habitat protection
- Pay attention to NE Creek
- NE Creek: protect the system to protect habitats
- Don't just plan: ACT!
- Coordinate elements of working lands and habitat chapters to maximize benefits
- Wildlife does not recognize town or park boundaries; seek partnerships.
- Maintain connectivity for animal travel from mainland
- Identify important wildlife corridors
- Manage human impacts: less driving, fewer roads, more modes of access (walking, biking)

Each person received three dots to place wherever they wanted. Most of the dots fell on the five goals that we had discussed. These are the results: **Goal 1 = 19, Goal 2 = 18, Goal 3 = 11, Goal 4 = 12, Goal 5 = 8**

The chapter title, Natural Resources, was said to be misleading since we aren't talking about granite quarries, mines, hydro dams, etc. these are natural resources that people could exploit. Suggestion to change back to Wildlife and Habitat.


Natural Resources:
Priority Areas for
Open Space Protection
0.5
1
Miles
TRENTON
Trenton Bridge
Salisbury Cove
Liscomb and Stony Brooks
Northeast Creek
Hulls Cove
Frenchman Bay
Western Bay
Old Mill Brook
Prays Brook
BAR HARBOR
Bar Harbor Village
Richardson Brook
Kebo and Cromwell Brooks
Cadillac Mountain
MOUNT DESERT
230
3
233
198
Legend
Bar Harbor Town Boundary
Acadia National Park
Rivers and Streams
Park Loop Road (ANP)
Priority Waters
Local Watersheds
Northeast Creek
Liscomb and Stony Brooks
Old Mill Brook
Kebo and Cromwell Brooks
Prays Brook

SCENIC & CULTURAL RESOURCES

VISION STATEMENT ADDITIONS

- Mitigating ugly places
- Screening e.g. developed areas
- Viewsheds
- Smaller development
- Open spaces along roads
- No one will come if open space not protected
- Dark nights (2X)
- Views over large expanses of land
- Diversity of landscapes
- Historic Native American routes on island
- Abundant wildlife populations
- Integrated with community
- Thoughtful development
- Small town parks
- Less traffic; less energy; more tranquility
- Flow of transportation
- Other sensory experiences e.g. auditory

OTHER CATEGORIES OF SCENIC & CULTURAL RESOURCES (not on map)

- Wetlands
- Quiet
- Other farms not on the map
- Roads e.g. Crooked, Cromwell Harbor
- Park boundaries / adjacent lands
- Old orchards
- Water facility at Witch Hole
- Views from water
- Views from Crooked Rd. e.g. fresh water marsh
- Long views
- Island-wide planning

GREATEST NEEDS FOR PROTECTION

Top choices:

- Road corridor experience
- Landscape continuity / artificial boundaries, jurisdictions
- NE Creek
- Crooked Rd. and Norway Dr.
- Tighter development with open spaces

Other needs:

- Views from water
- Small farms (2X)
- Wooded roadways / road corridors (3X)
- Views of mountains from Main St., framed by trees
- Berry fields / picking
- Tipping

- Head of MDI
- Roadside edges; invasives
- Private land fencing on Rte. 3 obstructing views
- Views obstructed by cruise ships
- The Bar
- Hadley Pt. (accessible year round)
- Shore Path
- Loss of dark skies / more dark sky enforcement (2X)
- Affordable housing – a balance
- Buffering

PROTECTION STRATEGIES

- Stronger ordinances without reducing tax base
- Burying power lines
- Open Space Fund
- NPCA – gateway communities
- Zoning
- Utility companies & streetlights – giving more control to town

RECREATION

Summary of Major Points:

1. Provide safe bicycle and pedestrian facilities along state and town roads

2. Create bicycle and pedestrian linkages to open space from neighborhoods

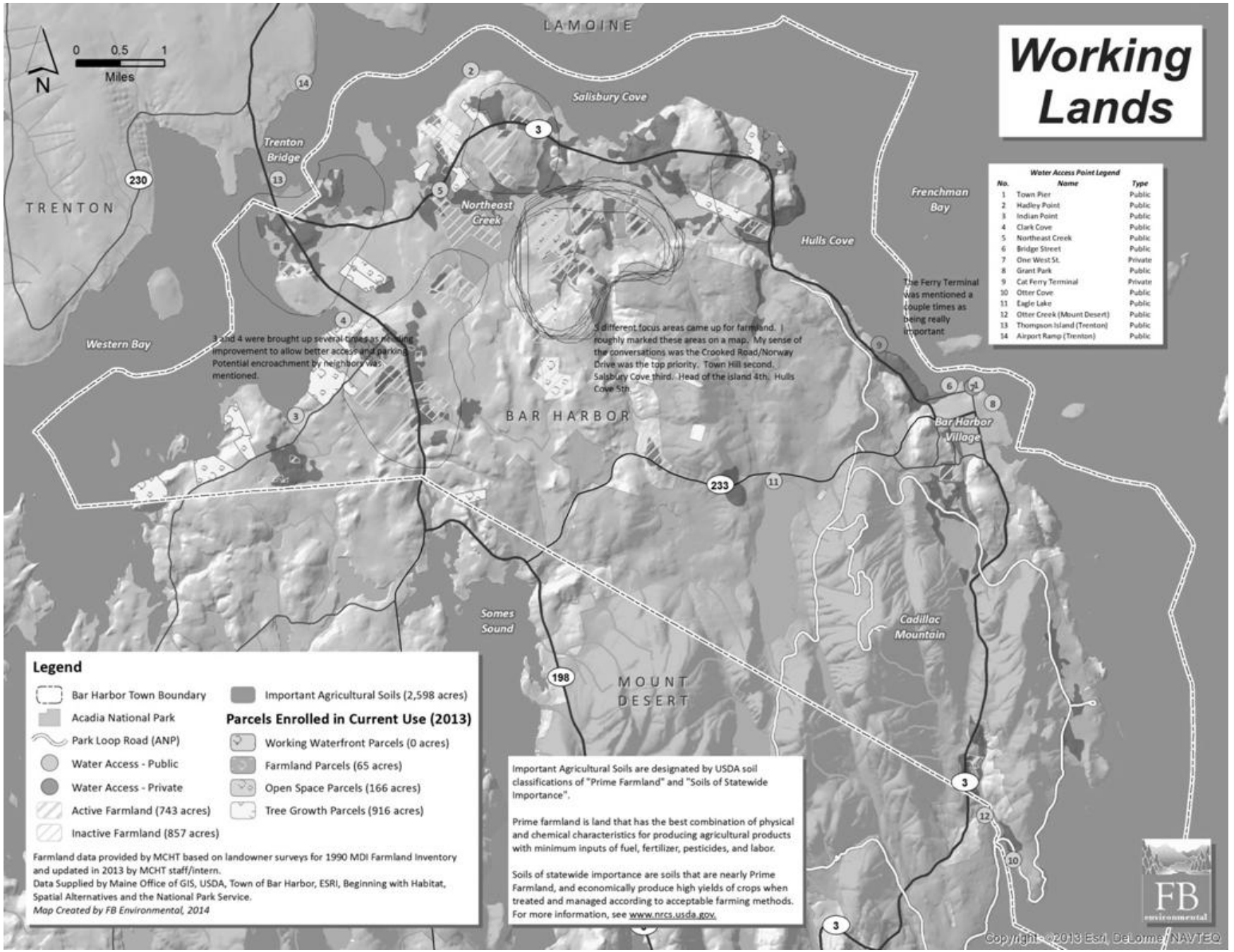
3. Preserve, improve, and promote public access to water for recreational use

- Create car-free access to recreation
- Ensure connectivity of open space with bike paths and hiking trails
- Preserve traditional access to open space
- Improve management of Hadley Point
- Increase awareness of local parks, but do not let them become overused
- Provide guidelines for how public should use local parks
- Create safe, convenient connections to open space
- Work with Maine DOT to construct bike lanes along state roads
- Secure land needed to provide connections between open space
- Support village connector trails from neighborhoods to Acadia National Park
- Create car-free access to open space and recreational areas
- Accommodate bikes of roads through island-wide master plan
- Invest in providing recreational opportunities on the west side of town
- Manage traffic to improve bicycle safety
- Improve boat ramps
- Ensure that the public has legal access to water
- Establish land acquisition fund to establish linkages and protect open space
- Make roads better for walking and biking
- Provide off-road access to high school
- Improve parking for access to Northeast Creek
- Develop playgrounds and ball fields close to growth areas
- Incorporate bike and walking paths in road projects

- Consider the possibility of multiple uses in creating linkages for open space (e.g., wildlife corridor + bike path)
- Investigate the possibility of using private roads for public recreation and access to open space
- Remove encroachments and improve public water access at Town Landing Road and Clark Cove Road
- Add public school athletic facilities and COA to list of public recreation resources
- Improve safety of Crooked Road for biking
- Provide opportunities to enjoy the night sky
- Create an off-road connection between Hulls Cove and Mill Brook Road
- Create a “dog park”

WORKING LANDS

	Group 1	Group 2	Group 3
Vision/ Goals	• Seeing more value-added products • Vision should address livestock – growing and slaughter • Clearing land for farming • Improve access to working waterfront by limiting encroachment • Sustainability of working waterfront • Locating development in a way that maximizes protection of farm soils	• We have adjusted our attitude (toward land in general and for post-oil farming) • More land is producing food (former fallow land) • Balance niche farming and growing staples for year-round residents • Addressed food insecurity in year-round population • Value-added processing is helping farming to be economically viable • Residents are aware of the benefits of local food • Local food is part of the school curriculum	Vision • Encroachment to working waterfront has been addressed (#3 and #4 on map) • Energy production is a secondary use on working lands (e.g., solar) • Allow enhancement of working lands to help meet scenic and cultural goals Goals • Broaden scope of working lands – energy, etc. • Comprehensive • Make public more aware of working lands and their importance • Publicize • Take advantage of town/NGO partnerships
Issues	• Water for farming (brewery in Town Hill using water) • Drainage • Allow innovative offerings by farmers • How working lands interact with wildlife	• Potential for development in Town Hill area • Shared farm equipment program • Cooperative • Keep cohesive blocks of farms • Northeast Creek (water quality conflicts?) • Ask owners of inactive farmland to lease part of their land to farmers • Use working forestland to help meet local needs for firewood	• Is quarrying/mining working land? • Red tide is an issue for mussel farmers • Is golf course working land?
Places	• Crooked Road corridor • Norway Drive • Liscomb Farm – Town Hill • Whole Town Hill area (w/ good farm soils) • Head of the island	• Crooked Road corridor • Town Hill – Gilbert Farm Road • Hadley Point – Hamilton, Sweet Pea, Heart of Eden • Hadley Point as working waterfront • Maintain working forest along shoreline – to protect water quality • Hulls Cove – Route 3 (McQuinn?)	• Water access points • Hulls Cove – Cover Farm • Salisbury Cove – access for harvesting shellfish • Hadley Point • Old Ferry terminal as working waterfront (asset not being used) • Fishermen on town pier • Crooked Road – Gilbert Farm • Bridge Street • Babson Creek – access • Hulls Cove Beach – visitor access


Working Lands
LAMOINE
Salisbury Cove
Trenton Bridge
TRENTON
Northeast Creek
Hulls Cove
Frenchman Bay
Western Bay
BAR HARBOR
Bar Harbor Village
Somes Sound
Cadillac Mountain
MOUNT DESERT
0 0.5 1 Miles
N
Water Access Point Legend
No. Name Type
1 Town Pier Public
2 Hadley Point Public
3 Indian Point Public
4 Clark Cove Public
5 Northeast Creek Public
6 Bridge Street Public
7 One West St. Private
8 Grant Park Public
9 Cat Ferry Terminal Private
10 Otter Cove Public
11 Eagle Lake Public
12 Otter Creek (Mount Desert) Public
13 Thompson Island (Trenton) Public
14 Airport Ramp (Trenton) Public
The Ferry Terminal was mentioned a couple times as being really important
3 and 4 were brought up several times as needing improvement to allow better access and parking. Potential encroachment by neighbors was mentioned.
5 different focus areas came up for farmland. I roughly marked these areas on a map. My sense of the conversations was the Crooked Road/Norway Drive was the top priority. Town Hill second. Salsbury Cove third. Head of the island 4th. Hulls Cove 5th
Legend
Bar Harbor Town Boundary
Acadia National Park
Park Loop Road (ANP)
Water Access - Public
Water Access - Private
Active Farmland (743 acres)
Inactive Farmland (857 acres)
Important Agricultural Soils (2,598 acres)
Parcels Enrolled in Current Use (2013)
Working Waterfront Parcels (0 acres)
Farmland Parcels (65 acres)
Open Space Parcels (166 acres)
Tree Growth Parcels (916 acres)
Farmland data provided by MCHT based on landowner surveys for 1990 MDI Farmland Inventory and updated in 2013 by MCHT staff/intern.
Data Supplied by Maine Office of GIS, USDA, Town of Bar Harbor, ESRI, Beginning with Habitat, Spatial Alternatives and the National Park Service.
Map Created by FB Environmental, 2014
Important Agricultural Soils are designated by USDA soil classifications of "Prime Farmland" and "Soils of Statewide Importance".
Prime farmland is land that has the best combination of physical and chemical characteristics for producing agricultural products with minimum inputs of fuel, fertilizer, pesticides, and labor.
Soils of statewide importance are soils that are nearly Prime Farmland, and economically produce high yields of crops when treated and managed according to acceptable farming methods. For more information, see www.nrcs.usda.gov.
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