

Blue Hill Comprehensive Plan 2024



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A special thank you to....

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Anne & Bill Rioux, Farmhouse Inn
Hans Carlson, Blue Hill Heritage Trust
Blue Hill Town Office Staff
Blue Hill Public Library
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Founders Hall

...and to all those who attended our visioning sessions and who took the survey!

Cover Photo Credit: Jesse Powell

With Technical Assistance provided by:
the Hancock County Planning Commission
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Executive Summary

The Blue Hill Comprehensive Plan is the result of an 18-month-long process overseen by the Comprehensive Plan Committee and supported by the Hancock County Planning Commission.

The Comprehensive Plan is designed to satisfy the requirements of the Maine Growth Management Act while staying true to the wants and needs of Blue Hill residents. The Plan reflects the views of the hundreds of Town residents who participated in the process through in-person engagement sessions, a public opinion survey, tabling, one-on-one conversations, and more to establish goals, objectives, and strategies to achieve the desired vision of Blue Hill residents.

The Plan includes a **Vision Statement** which articulates the community's desired future character. Each chapter of the Comprehensive Plan includes an inventory and analysis section and ends with a goal (desired outcome) intended to move Blue Hill toward its **Vision**, accompanied by objectives (measurable milestones on the way to those goals) and strategies (defined methods for achieving those objectives), along with associated timelines and responsible parties for each strategy. The **Implementation and Evaluation** chapter further details how strategies will be carried out and progress toward goals will be assessed. This will include the creation of an Implementation Committee to assess yearly progress.

The **Population and Demographics** chapter analyzes population trends such as median age, income, education, and household size, to support the development of other chapters of the Comprehensive Plan. Blue Hill's population increased by over 14% from 2000 to 2020 and is expected to continue increasing.

The **Economy** chapter reviews current and projected economic trends, including economic assets, historic perspectives on the local economy, and major employers, to define economic priorities. There is interest in pursuing downtown revitalization. Among other things, this chapter recommends the creation of an Economic Development Committee.

The **Housing** chapter identifies affordability is a key issue in Blue Hill as it is across the State of Maine. Of the homes sold in Blue Hill in 2022, almost 89% were unattainable to households at or below the Blue Hill median household income. Using the most recently available rental data (2017), 72.3% of Blue Hill households would have been unable to afford units offered at the 2-bedroom median rent. This chapter recommends the formation of a Blue Hill Housing Committee, among other strategies to encourage and promote the development of affordable, decent, year-round housing.

The **Transportation** chapter highlights overwhelming community support for safer pedestrian and bicycle infrastructure as well as interest in public transportation coordinated at the regional level. The

desire to explore options to address parking issues in the village area was also expressed. Significant investments are needed to improve Town roads, particularly drainage issues, which are currently being addressed based on priority. Some strategies include establishing a Transportation Committee and exploring MaineDOT's Village Partnership Initiative program.

The **Public Facilities and Services** chapter highlights protecting the wastewater treatment plan from sea level rise, several road projects, and protecting and maintaining the educational facilities. The need for a new fire station was also expressed.

The **Fiscal Capacity** chapter examines the Town's revenues and expenditures and details a Capital Investment Plan. The Town's local debt is well under the State statutory limit and has the capacity to take on debt for needed projects.

The **Recreation** chapter notes an abundance of recreational opportunities for people of all ages and interests. There has been growing public access to open space and water bodies due largely in part to the Blue Hill Heritage Trust. There is a desire for an increased number of accessible walking trails and a need for improvements for the basketball fields at the Union Street Complex and the Blue Hill Consolidated School Gym.

The **Marine Resources** chapter describes and assesses the adequacy of the Town's marine resource areas, facilities, and water-dependent uses, and the effectiveness of existing measures to protect those resources. There are increasing concerns about water quality, the impacts to the commercial fishing industry of increasing operating costs and declining fish stocks, and large-scale aquaculture projects coming to Blue Hill. It was also expressed that public boating facilities are reaching their capacity to accommodate users.

The **Water Resources** chapter provides an overview of Blue Hill's freshwater resources, considering potential threats to water quality and the effectiveness of existing measures to protect and preserve these resources. Residents, businesses, and institutions rely on private wells as there is no municipal water supply. Concentrations of naturally occurring contaminants have been identified in many private wells. This chapter recommends the Town secure funding to investigate water quality and quantity, with a particular focus on areas of concentrated usage.

The **Natural Resources** chapter provides an overview of the Town's natural resources related to wildlife, fish habitats, and other important ecological systems, assesses the effectiveness of existing efforts to protect these resources, and predicts future impacts of growth and development. There are a number of wildlife and plant habitats in Blue Hill that are Threatened or of Special Concern. Blue Hill Heritage Trust and Maine Coast Heritage Trust have conserved thousands of acres of important habitat in the Town.

The **Agriculture and Forestry Resources** chapter describes the extent of farming and forestry, as well as potential threats by growth and development and the effectiveness of current protective measures. Close to 35% of land in Blue Hill is enrolled in Farmland, Open Space, or Tree Growth tax programs. The chapter recommends a number of strategies to safeguard prime farmland and high-quality forestland and support the Town's heritage trees.

The **Historic and Archaeological Resources** chapter provides a detailed overview of the history of Blue Hill, assesses threats to historical and archaeological resources, and the effectiveness of existing measures to protect them. There are 21 known prehistoric sites in Blue Hill and six places listed on the National Register of Historic Places.

The **Climate Change** chapter assesses the potential impacts of climate change on Blue Hill. The Town is actively assessing the impacts of sea level rise and storm surge on critical infrastructure, including the wastewater treatment plant, the fire department, the Blue Hill Hospital, the Town Wharf, and a number of State and Town owned roads.

The **Existing and Future Land Use** chapter describes the existing patterns of land development in Blue Hill and assesses potential new development. Approximately 43% of parcels in town are undeveloped and 20% are conserved. There is an expressed desire for preventing overdevelopment and ensuring the future growth fits with the character of Blue Hill, while balancing the potential for overregulation of development.

It is required by the Growth Management Act for the Town to identify "growth areas." The intent of growth areas is to ensure that planned growth and development related infrastructure are directed to areas most suitable for development with the intent of preventing sprawl and preserving the State's rural landscape. Growth areas are intended to encourage future development where essential services, businesses, and employment opportunities already exist and avoid encroaching on critical natural resources.

The Blue Hill Comprehensive Plan growth area includes the Blue Hill village and extends to where there is public water and sewer. This includes north on Main Street (Route 172) to Mountain Road.; northwest on Union Street to Hinckley Ridge Road (Route 177); southwest on Tenney Hill Road/Mines Road (Route 176/15) to Grindleville Road; south on South Street (Route 172/175) to the Barncastle Hotel and Restaurant; and southeast on East Blue Hill Road (Route 176) to Steamboat Wharf Road. The growth area also includes the village waterfront.

It is important to note that the designation of a growth area does not have the effect of land use regulations. Development in the growth area will be encouraged with incentives, such as ensuring that 75% of new municipal growth-related capital investments will be directed into the growth area.

Vision Statement

Blue Hill is a beautiful historic coastal village—safe, inclusive, and engaged. As a community center, Blue Hill is committed to creating a user-friendly town with a vibrant year-round economy and ample services allowing those of all ages and income levels to thrive. It is a priority to ensure responsible growth and to preserve the picturesque waterfront and land from environmental impacts, while supporting recreational and commercial uses now and for future generations

Data

The population and demographic data in this chapter come primarily from two sources in the U.S. Census — the 2020 Decennial Census and the 2021 American Community Survey (ACS) 5-Year Estimates.

To calculate ACS estimates, the Census Bureau selects a random sample of addresses to fill out questionnaires. The 5-Year Estimates are calculated using data that is collected over a 60-month period. It should be noted that the 5-Year Estimates often have a large margin of error due to the small size of the sample subset. For example, the margin of error in the 2021 ACS 5-Year Estimates for the 165 males reported in the 5 to 9 years age cohort applicable to Blue Hill is ± 98 . This is a large margin of error, and it means the data presented here from the ACS 5-Year Estimates are not reliable and should be interpreted through the lens of alternative information sources.

It is noted that this Plan presents Census data, however the Census data is not reflective of population trends observed since 2020, especially considering changing trends associated with the Covid-19 pandemic.

Chapter A: Population

1. Purpose

Population is a foundational data set that guides all aspects of a comprehensive plan. The understanding of the town's past, current, and future population trends support many other aspects of the plan, such as housing, land use, and transportation, and will help Blue Hill prepare for future municipal expenditures and investments. This section:

- a. Describes Blue Hill's population trends;
- b. Discusses how these recent trends relate to and contrast with Hancock County, and the State;
- c. Reviews expected future population trends.

2. Key Findings & Issues

The population of Blue Hill increased at an average rate of 14.2% between 2000 and 2020. Over this period, the largest gains were in the 0-4, 65-84, and 85+ age groups. The State Economist's office predicts that the population of Blue Hill will increase over the next 20 years, which stands in line with recent trends and long-term municipal expectations. Since 2020, Blue Hill has experienced a markedly increasing population, an increasing younger demographic, and a stable senior demographic.

Municipal expectations support a continued increase in the population of Blue Hill over the next 15 years.

3. Public Opinion Survey Results

Questions about population and demographics aimed to understand the respondents' residency status, home locations, household size, income, and age. Refer to the survey chapter for full results. In this survey over 35% indicated that they live within one mile of the Town Hall. Almost one quarter live in South Blue Hill with lower amounts in North Blue Hill, East Blue Hill, and within the vicinity of either Ellsworth Road or Mines Road.

Just over half of respondents (51.2%) think that Blue Hill's population has increased somewhat during the last three years, and another 26.3% thinks that the Town population has increased a lot. Town population trends are discussed further in this chapter.

Seventy-seven percent (77.4%) of respondents indicated they were year-round residents, and 16.8% said that they were seasonal residents that either own property or that rent or live with family/others. Sixty-five percent (65.1%) of seasonal respondents said that they reside in Blue Hill for three or more months throughout the year. Forty-three percent of seasonal residents have been visiting or seasonally residing in the Town for 31 or more years, and approximately one quarter of seasonal respondents have been visiting or seasonally residing for 16 to 30 years. When seasonal respondents were asked if they plan on moving to Blue Hill year-round, 53.5% responded that they do not.

Forty-six percent (46.5%) of respondents said that they live in a two-person household, which aligns with the Town's 2021 American Community Survey 5-Year Estimates household size of 2.24 persons. Some survey results did see differences when compared to 2021 ACS data, which can have notable margins of error. One example, 39.4% of survey respondents stated they were 65 years of age or older; this is higher than the 23.9% of the Town's population in this age group according to ACS Estimates. Respondents were asked to predict their residency status over the next five years. Just over 10% stated that they expect to become a year-round resident while 6% expect to move from Blue Hill permanently.

4. Historical Trends

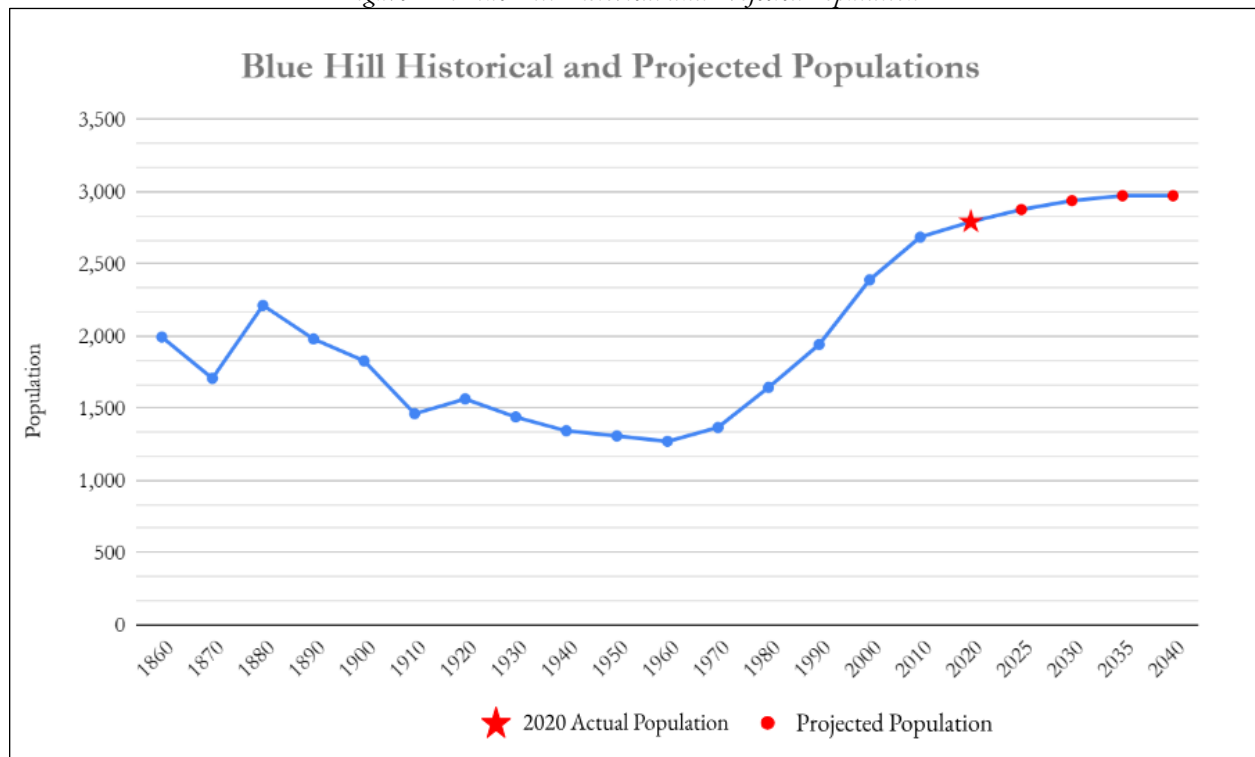
Figure A-1 and Table A-1 show historic and projected population trends for Blue Hill. While Blue Hill lost population in many of the decades following the Civil War, beginning in the 1960s, the number of residents has steadily increased. Population projections from the Maine State Economist's Office are included in Figure A-1 and Table A-1. The Maine State Economist projects that Blue Hill's population will gradually increase over the next two decades. This issue is further discussed later in Section 5.7.

Table A-1: Historical and Projected Population Trends

Year	Blue Hill		Hancock County		Maine	
	Total	% Change	Total	% Change	Total	% Change
1850	1,939	N/A	34,372	N/A	583,169	N/A
1860	1,993	2.8%	37,757	9.8%	628,279	7.7%
1870	1,707	-14.4%	36,495	-3.3%	626,915	-0.2%
1880	2,213	29.6%	38,129	4.5%	648,936	3.5%
1890	1,980	-10.5%	37,312	-2.1%	661,086	1.9%
1900	1,828	-7.7%	37,241	-0.2%	694,466	5.0%
1910	1,462	-20.0%	35,575	-4.5%	742,371	6.9%
1920	1,564	7.0%	30,361	-14.7%	768,014	3.5%
1930	1,439	-8.0%	30,721	1.2%	797,423	3.8%
1940	1,343	-6.7%	32,422	5.5%	847,226	6.2%
1950	1,308	-2.6%	32,105	-1.0%	913,774	7.9%
1960	1,270	-2.9%	32,293	0.6%	969,265	6.1%
1970	1,367	7.6%	34,590	7.1%	992,048	2.4%
1980	1,644	20.3%	41,781	20.8%	1,124,660	13.4%
1990	1,941	18.1%	46,948	12.4%	1,227,928	9.2%
2000	2,390	23.1%	51,791	10.3%	1,274,923	3.8%
2010	2,686	12.4%	54,418	5.1%	1,328,361	4.2%
2020	2,792	3.9%	55,478	1.9%	1,362,359	2.6%
2025	2,877	3.0%	56,140	1.2%	1,374,728	0.9%
2030	2,939	2.2%	56,707	1.0%	1,397,663	1.7%
2035	2,972	1.1%	56,698	0.0%	1,407,396	0.7%
2040	2,973	0.1%	56,092	-1.1%	1,404,176	-0.2%

Sources: US Decennial Census, Maine State Economist Population Projections

Figure A-1: Blue Hill Historical and Projected Population



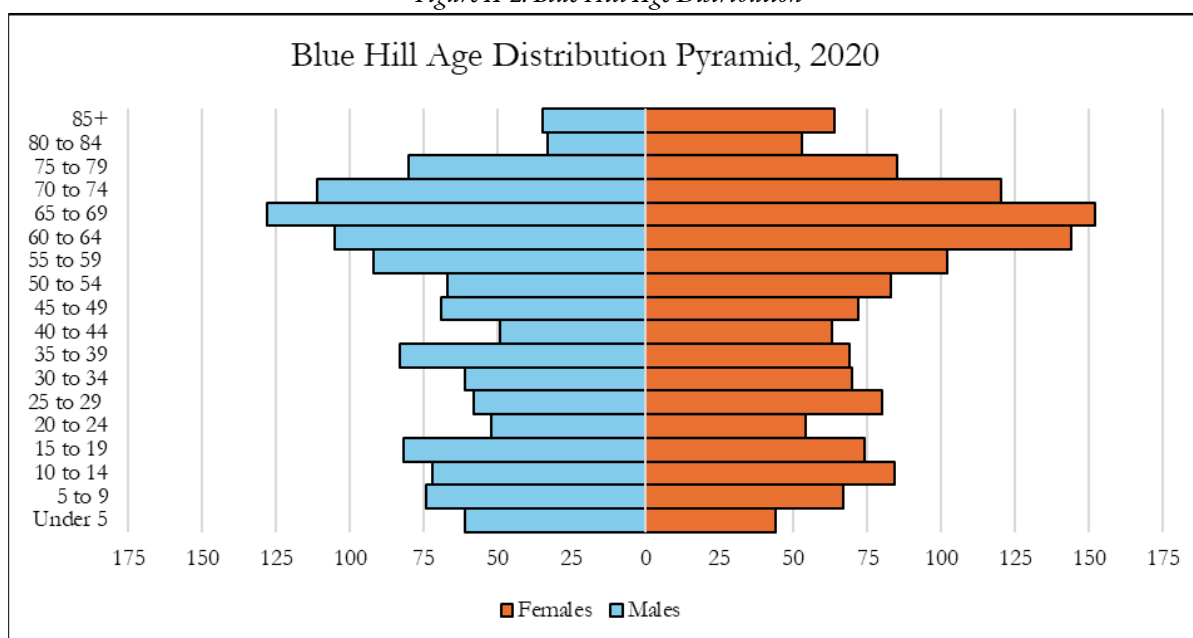
Sources: US Decennial Census, Maine State Economist Population Projections

5. Current Conditions

5.1. Age Characteristics

Looking at the population pyramid in Figure A-2 below, it appears that women outnumber men in most, if not all, age cohorts. There is an especially large group of Blue Hill females, relatively speaking, in the 65-69 age category and a relatively large group of females in the 60-64 cohort and 85+ cohort.

Figure A-2: Blue Hill Age Distribution



Source: 2020 Decennial Census

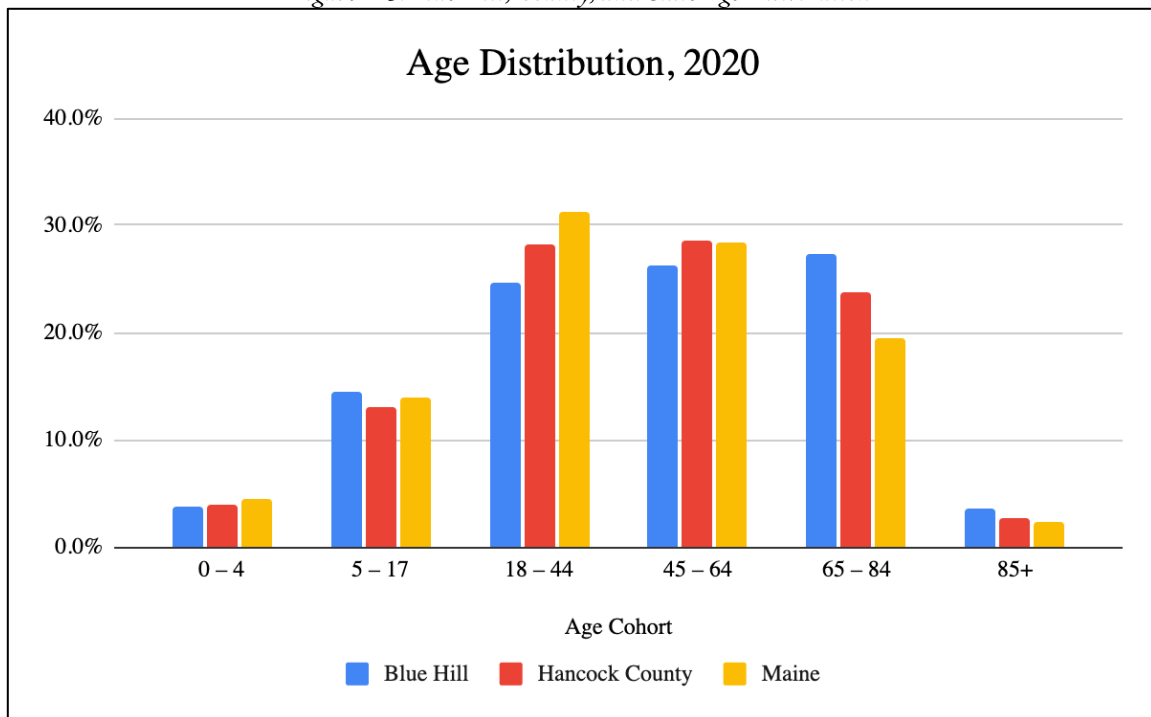
In terms of changes in age distribution, it is apparent from Table A-2 (below) that, like much of the rest of Maine, the population in Blue Hill is skewing towards an older demographic group. School aged individuals in Blue Hill decreased an estimated 10.3% between 2000 and 2020. Despite an overarching aging trend, Blue Hill has a proportionally higher school-aged population compared to both Hancock County and the rest of Maine. However, some of the largest gains during this period were in the 0-4, 65-84 and 85+ age categories.

Table A-2: Age Distribution for Blue Hill

Age Cohort	2000	% of Total	2010	% of Total	2020	% of Total	% Change 2010 – 2020	% Change 2000 – 2020
0 – 4	75	3.1%	96	3.6%	105	3.8%	9.4%	40%
5 – 17	447	18.7%	374	13.9%	401	14.4%	7.2%	-10.3%
18 – 44	709	29.7%	672	25.0%	691	24.7%	2.8%	-2.5%
45 – 64	707	29.6%	987	36.7%	734	26.3%	-25.6%	3.8%
65 – 84	378	15.8%	471	17.5%	762	27.3%	61.8%	101.6%
85+	74	3.1%	86	3.2%	99	3.5%	15.1%	33.8%
Total	2,390		2,686		2,980			

Sources: US Decennial Census

Figure A-3: Blue Hill, County, and State Age Distribution



Source: 2020 Decennial Census

5.2. Educational Attainment

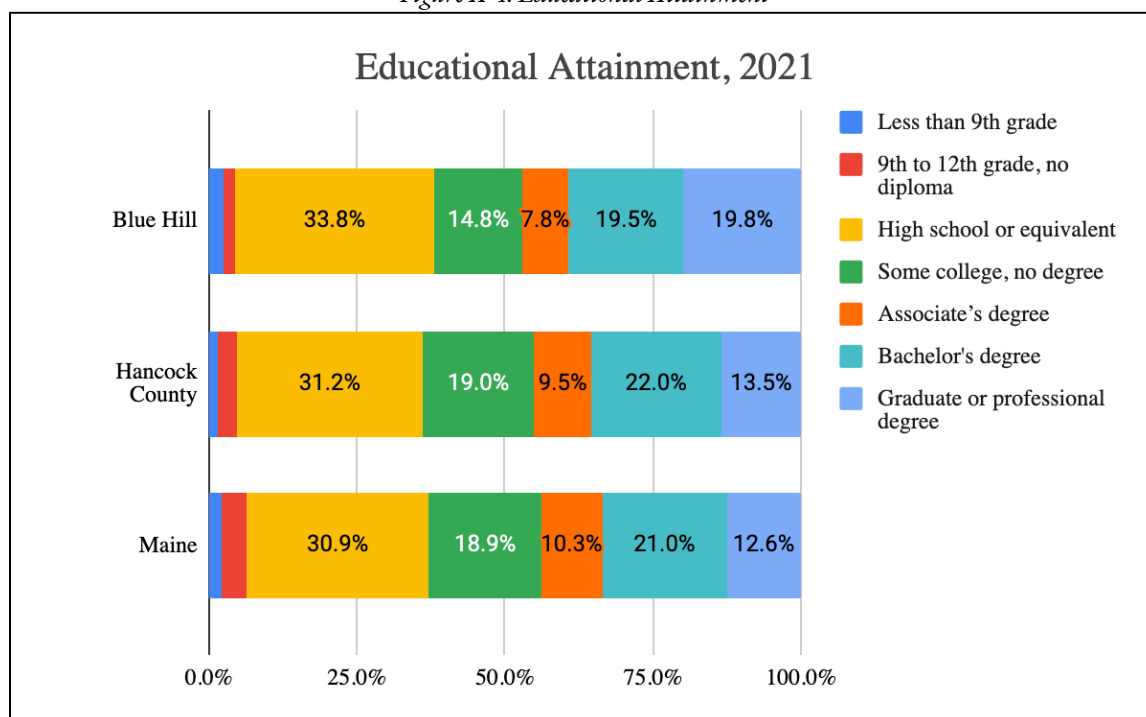
Compared with Hancock County and the rest of the State, Blue Hill has relatively more high school graduates and more individuals who have earned graduate or professional degrees (see Table A-3 and Figure A-4 below).

Table A-3: Educational Attainment: Blue Hill, Region, County, State

	Blue Hill		Hancock County		Maine	
	Total	%	Total	%	Total	%
Less than 9th grade	51	2.6%	605	1.4%	21,259	2.1%
9th to 12th grade, no diploma	33	1.7%	1,420	3.4%	41,358	4.2%
High school or equivalent	663	33.8%	13,222	31.2%	307,382	30.9%
Some college, no degree	291	14.8%	8,067	19.0%	188,263	18.9%
Associate degree	152	7.8%	4,018	9.5%	102,198	10.3%
Bachelor's degree	382	19.5%	9,333	22.0%	209,253	21.0%
Graduate or professional degree	388	19.8%	5,713	13.5%	125,197	12.6%
Population 25 years and over	1,960		42,378		994,900	

Source: 2021 ACS 5-Year Estimates

Figure A-4: Educational Attainment



Source: 2021 ACS 5-Year Estimates

5.3. Household Size

The average number of persons per household in Blue Hill slightly increased from 2.23 in 2000 to an estimated 2.24 in 2021 (see Table A-5). During this same period, household sizes in Hancock County decreased from 2.31 to 2.23. One implication of declining household size is that more housing units are needed for the same number of total populations.

Table A-4: Average Household Size: Blue Hill, Neighboring Towns, County, State

	2000	2010	2021	% Change 2000 - 2021
Blue Hill	2.23	2.19	2.24	0.4%
Brooklin	2.27	2.31	1.98	-12.7%
Brooksville	2.21	1.97	2.06	-6.7%
Castine	2.16	2.59	2.34	8.3%
Sedgwick	2.34	2.58	2.1	-10.3%
Deer Isle	2.32	2.14	2.16	-6.9%
Hancock County	2.31	2.26	2.23	-3.4%
State	2.39	2.37	2.25	-5.8%

Source: US Decennial Census 2000 and 2010; 2021 ACS 5-Year Estimates

5.4. Income

Blue Hill's estimated median household income of \$53,566 in 2021 is at the lower end of many towns on the peninsula and is less than that of the County and State. Despite this, Blue Hill had a significant increase in annual median income between 2000 and 2021 of 70%. At 9.7%, Blue Hill's poverty rate is

lower than that of Hancock County and Maine, and markedly lower than many of the surrounding towns in the area.

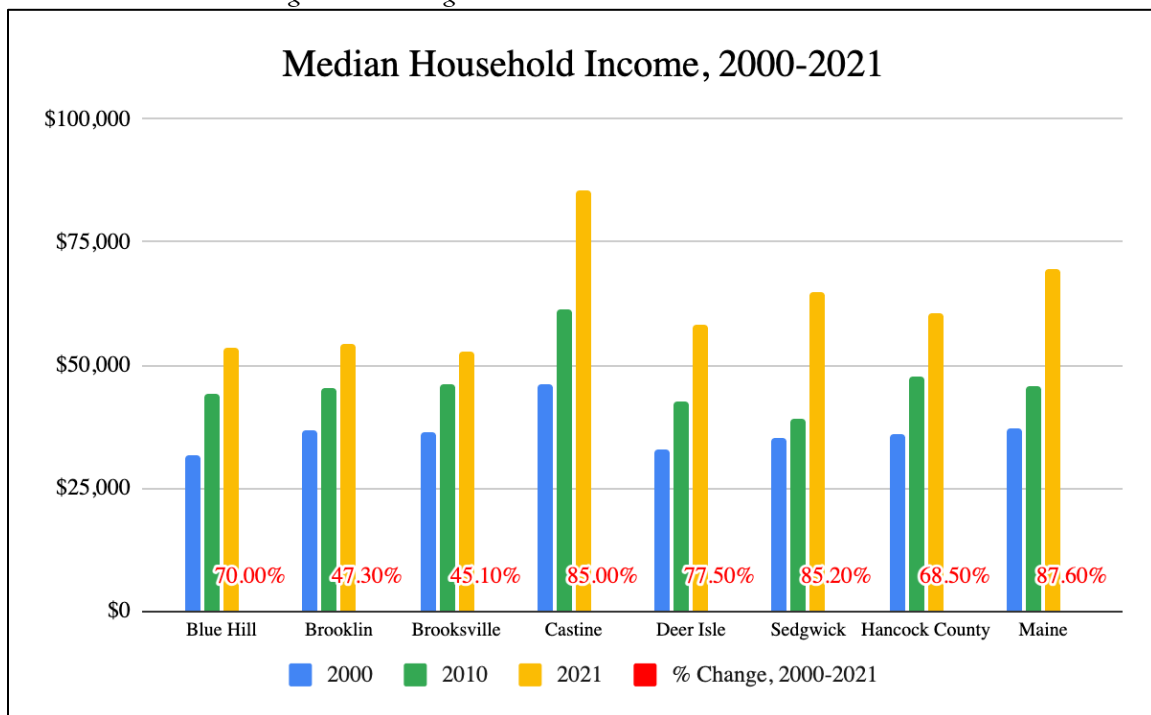
Table A-5: Median Household Income; Poverty Rate

	2000	2010	2021	% Change 2010-2021	% Change 2000-2021	Poverty Rate
Blue Hill	\$31,484	\$44,158	\$53,566	21.3%	70.0%	9.7%
Brooklin	\$36,786	\$45,313	\$54,191	19.6%	47.3%	9.1%
Brooksville	\$36,458	\$46,156	\$52,917	14.6%	45.1%	4.9%
Castine	\$46,250	\$61,250	\$85,556	39.7%	85.0%	13.1%
Deer Isle	\$32,826	\$42,537	\$58,250	36.9%	77.5%	16.7%
Sedgwick	\$35,000	\$39,167	\$64,803	65.5%	85.2%	21.4%
Hancock County	\$35,811	\$47,533	\$60,354	27.0%	68.5%	10.3%
Maine	\$37,072	\$45,815	\$69,543	51.8%	87.6%	11%

Sources: US Decennial Census 2000 and 2010; 2021 ACS 5-Year Estimates

Figure A-5 below shows the change in household median income for Blue Hill and several area towns. It is apparent that Blue Hill and surrounding towns, as well as the County and State have had major increases in median income between 2000 and 2021.

Figure A-5: Change in Median Household Income 2000 - 2021



Sources: US Decennial Census 2000 and 2010, 2021 ACS 5-Year Estimates

5.5. Race

Blue Hill is like many other Maine towns in its very low level of racial diversity. Communities can achieve greater diversity by establishing policies related to attracting new Mainers, creating affordable housing, and encouraging diversity on Town boards and committees.

Table A-6: Race of Blue Hill Residents

Race	Total
White alone	2,598
Black or African American alone	0
American Indian and Alaska Native alone	8
Asian alone	0
Native Hawaiian and Other Pacific Islander alone	0
Some other race alone	19
Two or more races	171
Total	2,796

Source: 2021 ACS 5-Year Estimates

5.6. Seasonal Population

It is difficult to estimate a town's seasonal population. Some of the categories of seasonal population are people residing in seasonal dwellings, those staying in commercial lodging like bed and breakfasts and inns, and day visitors.

According to the 2020 Census, 452 housing units were used for seasonal, recreational, and occasional purposes. As seasonal homes tend to have more visitors or to be used by families, the estimate for seasonal household size was calculated by adding an additional person to the average overall 2021 household size of 2.24 to obtain 3.24. Multiplying 452 seasonal units by the estimated household size of 3.24 yields an estimated seasonal rental population of 1,465. Blue Hill has three hotel-style accommodations, with a combined total of approximately 24 rooms. Multiplying 24 rooms by 3.24 adds an estimated 80 people. Adding this amount to the estimated seasonal rental and 2021 year-round population results in an estimated peak summer population of over 4,300.

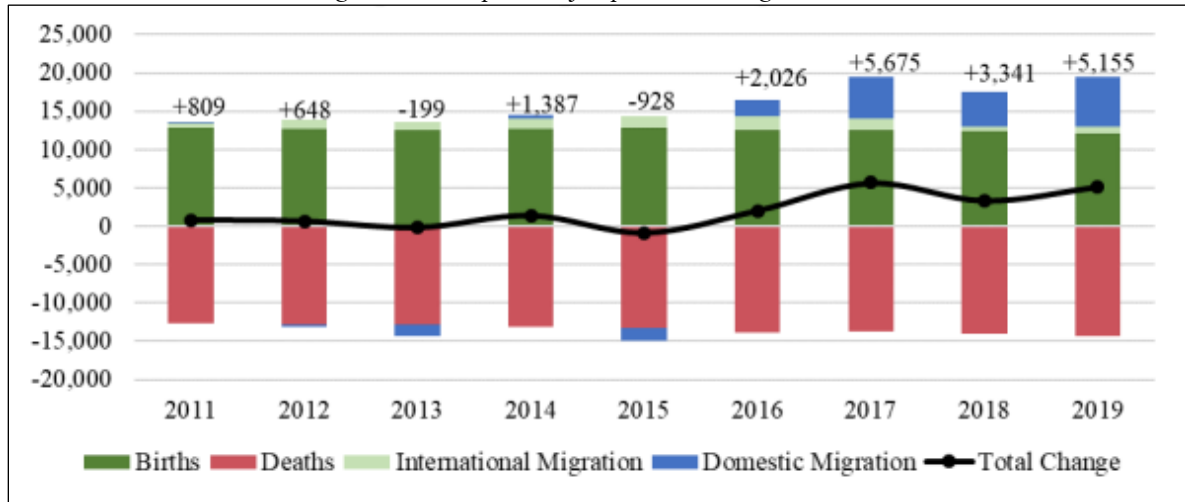
5.7. Projected Population

As discussed above in Historical Trends, the Maine State Economist projects a steady increase in Blue Hill's population over the next twenty years. However, in addition to the birth and death rates, population is also affected by migration — which itself is a net result of often countervailing forces. For a long time, Maine has suffered from many of its young adults moving out of state to seek opportunities elsewhere. Figure A-6 illustrates how net migration to the State had started to increase even before the pandemic.

More recently, there has been evidence of an influx of new residents because of pandemic-related shifts from metropolitan areas, the rise of remote work opportunities, and/or climate impacts in other regions of the United States. National projections forecast a continued migration toward rural places,

like Maine, in the coming years. The State Economist's more recent population projections account for the COVID-19 pandemic, which has resulted in a surge of in-migration to communities on the Blue Hill Peninsula.

Figure A-6: Components of Population Change in Maine



Source: Maine State Economist

6. Demand for Housing and Town Services

Recent real estate turnover and prices indicate that the Town's housing stock is experiencing pressure from in-migration. The number of residential houses sold in Blue Hill increased by almost 79% from 2019 to 2020. When adjusted for inflation, the average housing price on the Blue Hill Peninsula increased by 25% in the same period.¹

In terms of age groups, there was a decrease in school-age persons (ages 5-17) from the year 2000 to 2020, from 447 to an estimated 401, but over the same period, the 0-4 cohort increased by 40% — meaning that an increase in school-aged students can be expected.² The senior population has increased considerably. Accordingly, Blue Hill may find itself responding to an increase in calls for senior services.

6.1. Seasonal Population

As discussed above, Blue Hill's summer population swells by an estimated 1,545 persons, over 50% of the year-round population. This is a significant statistic, but it doesn't appear to be changing very much. According to the Census, vacant housing units estimated in 2020 were 452 as compared with 498 in 2010. In addition, AirDNA indicates that the number of short-term rental units in Blue Hill

¹ Assessing the Carrying Capacity of the Blue Hill Peninsula, rbouvier consulting for the Blue Hill Hertiage Trust

² Union 93 data for Blue Hill Consolidated School (Pre-K through 8) and high school-aged students increased from 424 students in October 2021 to 447 students in October 2022.

fell from around 100 units in the third quarter of Sec.2019 to approximately 80 in Q3 2021 but then rose again to almost 100 units in Q3 2022. As will be fully discussed in the Economy chapter, tourism and seasonal stays are important contributors to Blue Hill's economy, and it seems they will be stable in the foreseeable future.

6.2. Service Center Population Factors

According to the Maine Department of Agriculture, Conservation, and Forestry (DACF), Blue Hill is a service center community, meaning that it is where a variety of regional commercial, health, and other facilities are located that serve residents and businesses in the surrounding area. As such, Blue Hill experiences a daily influx of workers going to their jobs, shoppers visiting stores, students attending schools (Bay School, GSA, Harbor School), people going to medical appointments, and so on. This contributes to some traffic issues and, combined with seasonal traffic, creates a need for greater State and local investments in the road system than would otherwise be the case.

Chapter B: Economy

1. Purpose

An understanding of past, current, and future potential economic trends in the local and regional economy is essential for assessing Blue Hill's future needs. As employment patterns change, such as by increasing numbers of at-home workers and telecommuters, regional changes to major sources of employment, and/or changes in retail and other sectors, transportation, telecommunication, and energy infrastructure will all be impacted and will require adequate planning. This section aims to:

- a. Describe employment trends in Blue Hill;
- b. Describe the local and regional economy; and
- c. Discuss likely future economic activity and market changes that may impact on Blue Hill.

2. Key Findings & Issues

There was a 0.5% decrease in the number of employed people in Blue Hill, from 1,283 in 2000 to 1,276 in 2021. During that period the number of self-employed people in Blue Hill saw an estimated decrease of almost 21%. As a result of the COVID-19 pandemic that began in 2020, this trend in declining self-employment may have begun to shift as people moved away from cities to more rural parts of the country for work. In terms of types of jobs, the two sectors with the greatest percentage of Blue Hill workers between 2020-2021 were education, health, and social services (32.2%) followed by retail trade (25.2%). Blue Hill experiences a lower unemployment rate in the summer months, and the amount of seasonal fluctuation is greater than that for Maine as a whole.

Relative to commuting patterns, the number of people working from home increased from 2010 to 2021, from 4.8% to 6.9%. However, for those who needed to travel to work, the average travel time to work remained the same from 2010 to 2021 at 17.8 to 17.2 minutes. Blue Hill is a destination for workers, but also many residents travel to other towns for employment. There are many employers in Blue Hill, the largest being Northern Light Hospital and George Stevens Academy. Taxable sales in Blue Hill dipped sharply during the Great Recession of 2008-2010 and flattened during the pandemic, but even after adjusting for inflation, taxable sales rose from 2019 to 2022.

In terms of the community's economic development priorities, there is interest in pursuing downtown revitalization. At the same time, this is tempered by questions about the town's capacity for growth given its proximity to Ellsworth, which is the County seat and major service area for the region. On the other hand, there is clear community leadership and support for maintaining and improving the local economy and the town's quality of life by making strategic infrastructure investments in broadband and various public facilities at risk from climate change impacts.

3. Public Opinion Survey Results

Of the respondents, one quarter plan to retire or not work full time in the next five years; 10.6% said they plan to start a business in their residence during this time; and an additional 5.7% said they plan to start a business in Blue Hill outside their residence.

While approximately half of survey respondents would like Blue Hill to stay basically as-is, just over one-third (34.7%) would like the Town to become more developed, which was defined as “more shops, services and people.” Respondents had varying opinions about where development such as restaurants, lodging facilities and commercial business (trades & services) should occur in the future. Forty-five percent (45.8%) felt that restaurants should occur anywhere and 38% felt the same for inns, hotels and B&Bs. Commercial development should occur only in designated areas according to 45.8% of survey respondents. Almost 60% felt that manufacturing should occur in designated areas only.

There is support for future development close to the village center, including commercial businesses, but low support for locating manufacturing there. Worth noting is that 35.7% of respondents said that they live within one mile of the Town Hall.

“In the future, it is most appropriate for the following land uses to occur.”

	Anywhere	In Designated Areas	Close to Village Center	Nowhere	Undecided
Commercial (trade/services)	16.0%	45.8%	32.2%	2.2%	3.9%
Manufacturing	7.6%	58.5%	3.9%	19.4%	10.6%
Inns, Hotels, B&Bs	38.0%	28.2%	24.5%	3.9%	5.5%
Restaurants	45.8%	19.2%	33.1%	0.4%	1.5%

The number of job opportunities in an area also positively impacts the health of a local economy. According to survey respondents, 54.3% marked that local job opportunities need improvement or attention, 18.1% of which said right away. Half of the respondents would like the Town to invest more in local job opportunities, but only if grants or subsidies reduce costs. An additional 28.9% would like the Town to invest more in local job opportunities, including property tax dollars.

4. Conditions and Trends

4.1. Historical Perspective

Prior to its discovery and settlement by Europeans, Native groups inhabited the area now known as the Blue Hill Peninsula and pursued an agricultural and hunting livelihood. The first non-native visitors likely were Northern European fishermen who probably visited the coast as early as the 1400's. Blue Hill was founded in 1762 as one of the townships granted to veterans of the French and Indian War. Early economic activities were farming, fishing, lumbering, and ship building. The latter industry dwindled considerably by the end of the Civil War with the advent of steam-powered vessels with steel hulls. Granite quarrying became a significant contributor to the economy, and for a brief period copper mining had a boom. Cotton and furniture mills also developed along with the lumber mills.

Toward the end of the 1880's summer vacationers began to come to Blue Hill on steamships, and a summer colony was formed on Parker Point. The Blue Hill Inn started the town's lodging industry.

In the 1900's the transportation revolution represented by the automobile made Blue Hill more accessible. As discussed in the following sections, Blue Hill has grown and become a service center community that provides jobs and services for several towns in the Peninsula.

4.2. Local and Regional Economic Development Plans

Blue Hill economic planning has been directly or indirectly addressed in several studies and plans over the last five years. These include:

- *Comprehensive Economic Development Strategy 2021 – 2025*, Eastern Maine Development Corporation.
- *Assessing the Carrying Capacity of the Blue Hill Area*, rbouvier consulting for the Blue Hill Heritage Trust.
- *Blue Hill Harbor Maine Navigation Improvement Project—Appendix B, Economic Assessment*, National Oceanic and Atmospheric Administration.
- *Joint Status Report and Process Review*, Blue Hill, Brooksville, and Penobscot Broadband Committees.
- *Blue Hill Bay Watershed Needs Assessment*, Hancock County Planning Commission.
- *ACOE Dredging Report*, Army Corps of Engineers.
- *Valuing the Economic Benefits of Conservation Lands in Downeast Maine*, University of Maine.
- *Final Report to the Select Board on Sea Level Rise in Blue Hill*, Task Force on Sea Level Rise.

4.3. Employment & Unemployment

The tables below show trends in Blue Hill and Hancock County for labor force, employment, and unemployment. The labor force includes the employed and the unemployed who are actively looking for work. It does not include homemakers, retired people, those in the military, and discouraged workers.

As shown in Figure B-1 below, there was a sharp increase in the unemployment rate in Blue Hill during the Great Recession of 2008-2010. During the recovery that followed, the labor force and employment picked up again until the COVID-19 pandemic in 2020. Overall, there was a 0.5% decrease in the number of employed people in Blue Hill, from 1,283 in 2000 to 1,276 in 2021.

Table B-1: Blue Hill Employment Trends

Blue Hill	2000	2010	2021	% Change 2000 - 2010	% Change 2000 - 2021
Civilian Labor Force	1,322	1,421	1,337	7.5%	1.1%
Employment	1,283	1,310	1,276	2.1%	-0.5%
Unemployment Rate %	3.0%	7.8%	4.6%	160.0%	53.3%

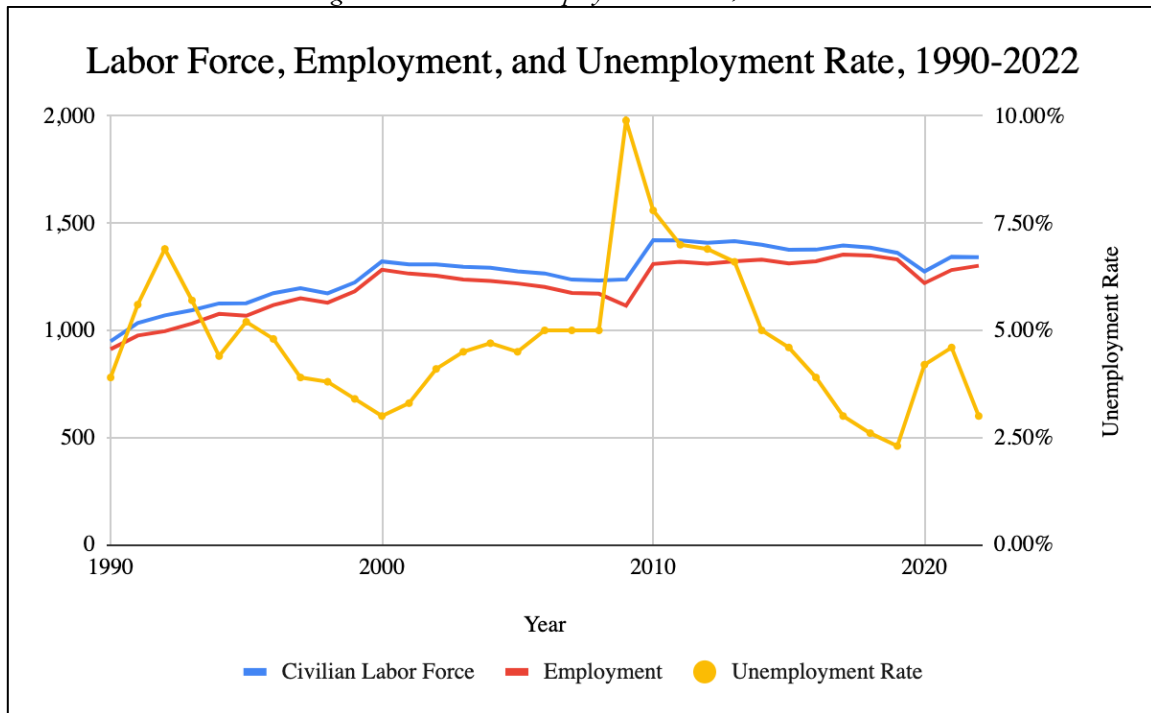
Source: Maine Department of Labor, Center for Workforce, Research, and Information

Table B-2: Hancock County Employment Trends

Hancock County	2000	2010	2021	% Change 2000 - 2010	% Change 2000 - 2021
Civilian Labor Force	28,841	29,941	28,675	3.8%	-0.5%
Employment	27,688	27,201	27,249	-1.8%	-1.6%
Unemployment Rate %	4.0%	9.2%	5.0%	130.0%	25.0%

Source: Maine Department of Labor, Center for Workforce, Research, and Information

Figure B-1: Blue Hill Employment Trends, 1990-2022



Source: Maine Department of Labor, Center for Workforce, Research, and Information

4.4. Class of Workers

Table B-3 and Figure B-2 below compare workers based on whether they are in the private sector, work for one of the levels of government, or are self-employed or unpaid family workers. (Due to differences in who the Census counts as an employed worker, the total number of Blue Hill workers is slightly different than in the Maine Department of Labor data above.) In 2021, an estimated 74.7% of Blue Hill's workers were employed in the private sector, 15% were self-employed or unpaid family workers, and 10.3% worked in local, state, or the federal government. Since the year 2000, there appear

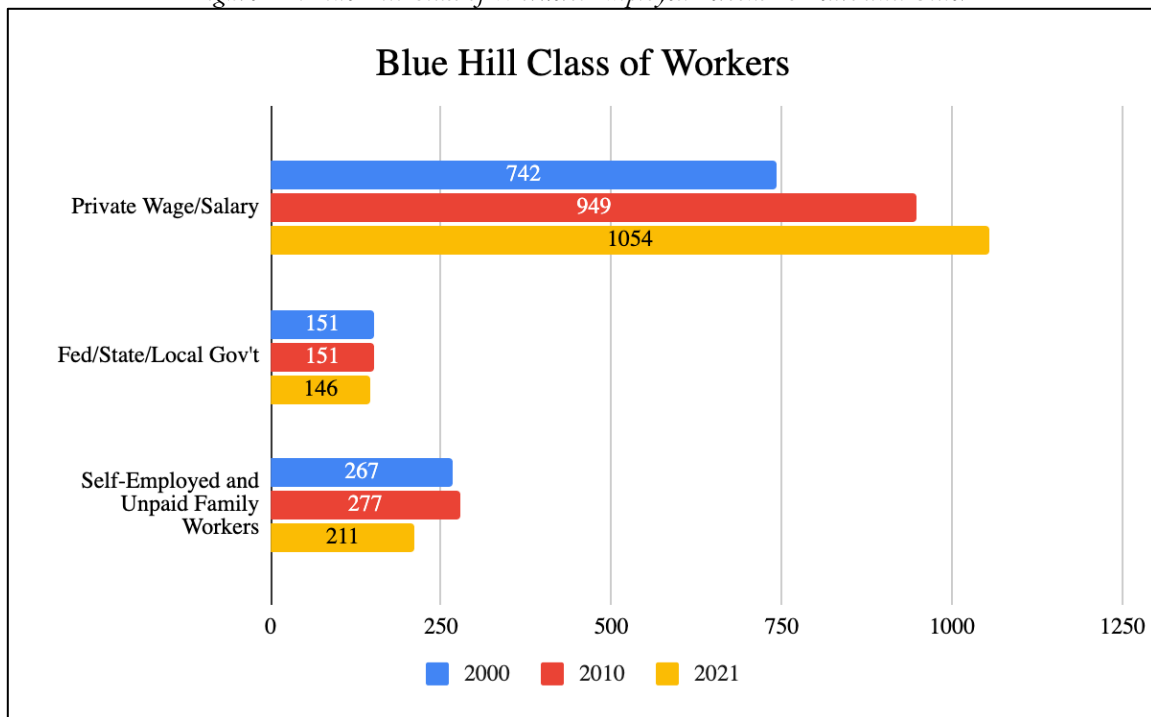
to have been increases in the number of private wage and salary workers, while the numbers of government workers and self-employed have decreased.

Table B-3: Class of Workers, Employed Persons 16 Years and Older

	2000			
	Blue Hill		Hancock County	
	Number	Percent	Number	Percent
Private Wage/Salary	742	64.0%	17,470	69.8%
Fed/State/Local Gov't	151	13.0%	3,511	14.0%
Self-Employed and Unpaid Family Workers	267	23.0%	4,053	16.2%
Total	1,160		25,034	
	2010			
	Blue Hill		Hancock County	
	Number	Percent	Number	Percent
Private Wage/Salary	949	68.9%	20,088	71.8%
Fed/State/Local Gov't	151	11.0%	3,238	11.6%
Self-Employed and Unpaid Family Workers	277	20.1%	4,669	16.7%
Total	1,377		27,995	
	2021			
	Blue Hill		Hancock County	
	Number	Percent	Number	Percent
Private Wage/Salary	1054	74.7%	16,309	62.7%
Fed/State/Local Gov't	146	10.3%	4,173	16.0%
Self-Employed and Unpaid Family Workers	211	15.0%	5,538	21.3%
Total	1,411		26,020	

Sources: US Decennial Census 2000, 2010 and 2021 ACS 5-Year Estimates

Figure B-2: Blue Hill Class of Workers. Employed Persons 16 Years and Older



Sources: US Decennial Census 2000 and 2010; 2021 ACS 5-Year Estimates

4.5. Employment by Sector

An estimated 32.2% of Blue Hill employed civilians 16 years and over work in jobs associated with education, health care, or social services, and almost a quarter are employed in retail trade. Those two sectors account for 57.4% of Blue Hill employment. Agriculture, forestry, and fishing related jobs accounted for 6.2% of employment, which is an increase over the 3.5% reported in 2000. No jobs were attributed to manufacturing or wholesale trade.

Table B-4: Employment by Sector for Blue Hill and Hancock County, 2021

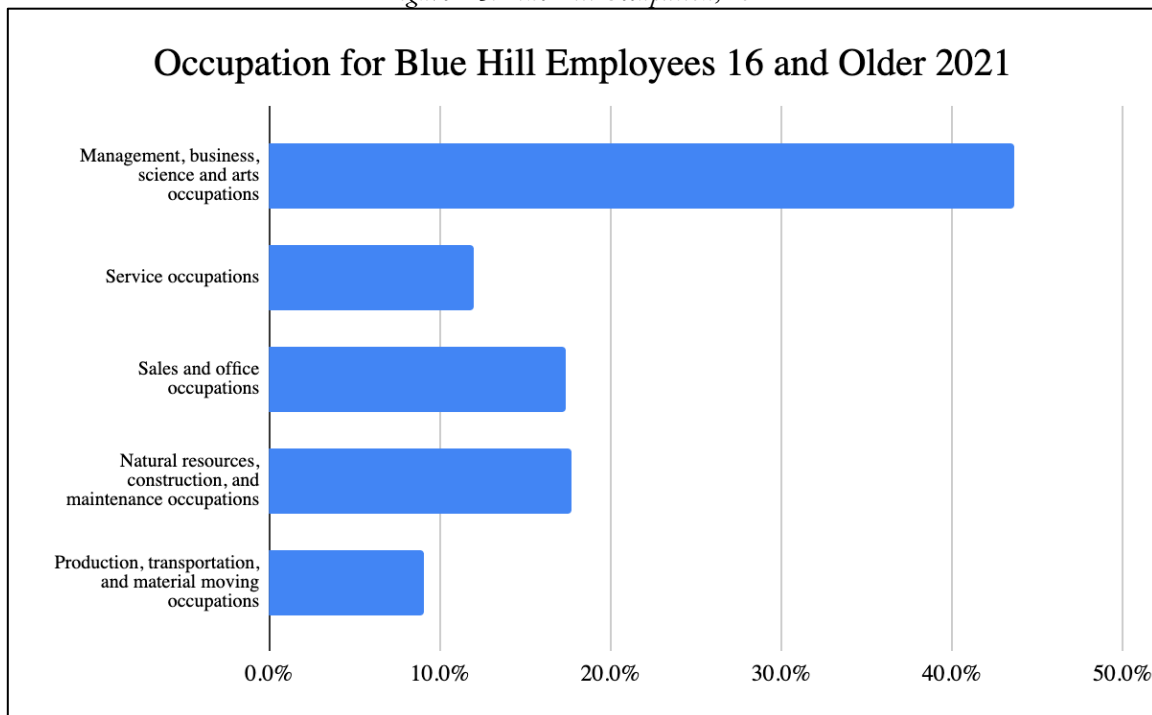
Sector	Blue Hill		Hancock County	
	Number	Percent	Number	Percent
Agriculture, forestry, fishing and hunting, and mining	87	6.2%	1,806	6.5%
Construction	113	8.0%	2,438	8.7%
Manufacturing	0	0.0%	1,554	5.6%
Wholesale trade	0	0.0%	560	2.0%
Retail trade	355	25.2%	3,362	12.0%
Transportation and warehousing, and utilities	71	5.0%	1,152	4.1%
Information	18	1.3%	328	1.2%
Finance and insurance, and real estate and rental and leasing	71	5.0%	1,374	4.9%
Professional, scientific, and management, and administrative and waste management services	59	4.2%	3,734	13.4%
Educational services, and health care and social assistance	455	32.2%	6,952	24.9%
Arts, entertainment, and recreation, and accommodation and food services	72	5.1%	2,171	7.8%

Sector	Blue Hill		Hancock County	
	Number	Percent	Number	Percent
Other services, except public administration	110	7.8%	980	3.5%
Public administration	0	0.0%	1,499	5.4%
Total civilian employed population 16 years and over	1,411		27,910	

Source: 2021 ACS 5-Year Estimates

Figure B-3 below provides an alternative method of categorizing employment by class of worker. This grouping shows that almost half of Blue Hill's working residents are employed in some area of management, business, science, or the arts while almost a fifth of Blue Hill's workers are in occupations associated with natural resources, construction, or maintenance. In addition, as reflected by the absence of Blue Hill residents working in manufacturing or wholesale trade, only a small percentage of Blue Hill workers are in production, transportation, or material moving occupations.

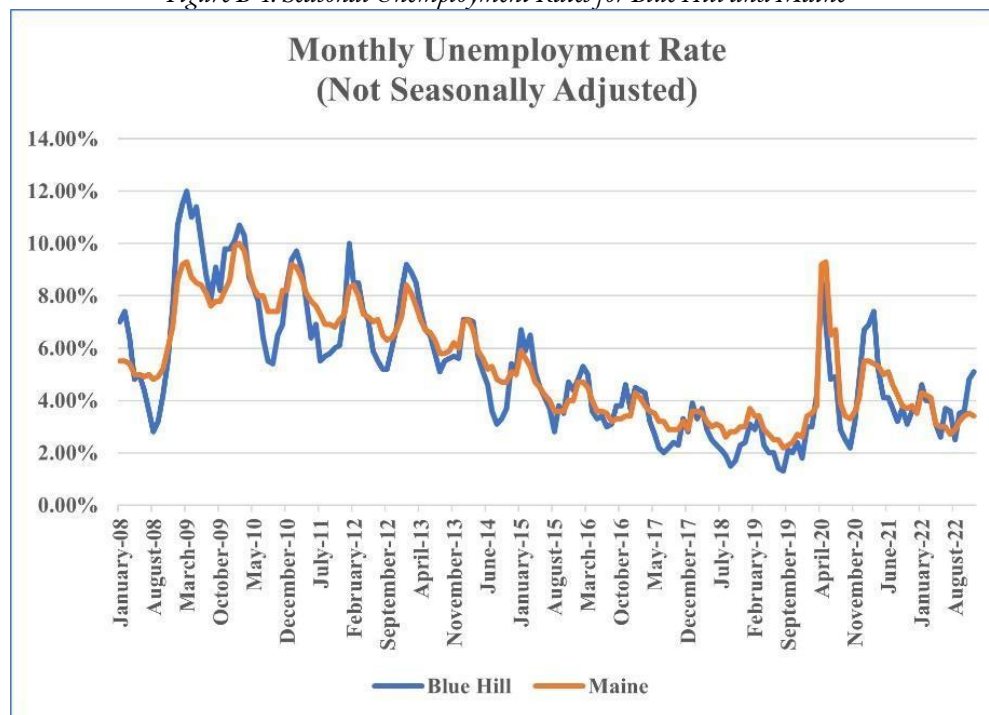
Figure B-3: Blue Hill Occupation, 2021



Source: 2021 ACS 5-Year Estimates

Figure B-4 below shows the seasonal fluctuation in unemployment rates for Blue Hill and for Maine. Blue Hill experiences a lower unemployment rate in the summer months, and the amount of seasonal fluctuation is greater than that for the State as a whole. The graph again depicts the peaks in unemployment corresponding to the Great Recession and the COVID pandemic.

Figure B-4: Seasonal Unemployment Rates for Blue Hill and Maine



Source: Maine Department of Labor, Center for Workforce, Research, and Information

4.6. Commuting Patterns

Where people work, how long it takes to get there, and by what means are important aspects of daily life. Table B-5 below compares a number of these commuting characteristics for 2010 and 2021. A positive trend from a climate change mitigation perspective is the reduction over the decade in the Blue Hill residents driving to work and the small increases in walking and the use of public transportation. The number of people working from home increased from 4.8% to 6.9%, and likely increased even more over the 2020-2022 period. However, for those who needed to travel to work, the average travel time to work remained consistent from 17.8 to 17.2 minutes.

Table B-5: Means of Transportation to Work

	2010	2021
Workers 16 years and over	1,328	1,367
MEANS OF TRANSPORTATION TO WORK		
Car, truck, or van	87.9%	80.0%
Drove alone	77.1%	60.3%
Carpooled	10.8%	19.7%
Public transportation (excluding taxicab)	1.7%	4.9%
Walked or biked	5.0%	8.2%
Taxicab, motorcycle, or other means	0.6%	0.0%
Worked from home	4.8%	6.9%
TRAVEL TIME TO WORK		
Mean travel time to work (minutes)	17.8	17.2

Source: 2020 and 2021 ACS 5-Year Estimates

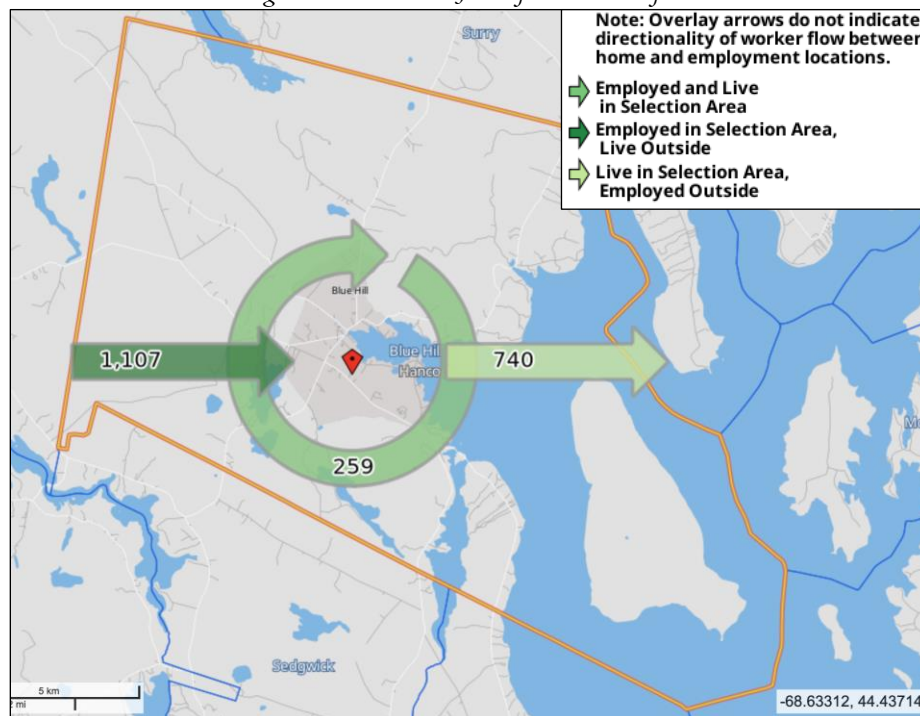
Table B-6 below shows more specifically where people who work in Blue Hill live, as well as where Blue Hill residents go to work. According to 2021 data, 81% of employees in Blue Hill live outside of the Town, and approximately 74% of those living in Blue Hill work elsewhere.

Table B-6: Blue Hill Job Inflow and Outflow

	Count	Share
Employed in Blue Hill	1,366	100%
Employed in Blue Hill but Living Outside	1,107	81.0%
Employed and Living in the Blue Hill	259	19.0%
Living in Blue Hill	999	100%
Living in Blue Hill but Employed Outside	740	74.1%
Living and Employed in Blue Hill	259	25.9%

Source: US Census OnTheMap, 2021

Figure B-5: Blue Hill Job Inflow and Outflow



Source: US Census OnTheMap, 2021

4.7. Major Employers

Blue Hill's geographic and economic role as a service center community is evidenced by its many employers. Most of the largest employers are in the health care and social assistance, educational services, and retail trade industries. It is anticipated that these industries will continue to lead in employment opportunities for Blue Hill and the region. The Town also has many additional employers and small businesses that operate seasonally and year-round.

Table B-7: Major Employers, 2019

Business	Address	Industry	# of Employees
Northern Light Blue Hill Hospital	Water Street	Health Care and Social Assistance	250-499
George Stevens Academy	Union Street	Educational Services	100-249
Blue Hill Food Co-Op	South Street	Retail Trade	50-99
Parker Ridge Retirement Community	Parker Ridge Lane	Health Care and Social Assistance	50-99
Barncastle Hotel and Restaurant	South Street	Accommodation and Food Services	20-49
Bay School	South Street	Educational Services	20-49
Blue Hill Consolidated School	High Street	Educational Services	50-99
Kneisel Hall Ticket Office	Main Street	Administration, Support, Waste Management and Remediation Services	20--49
Marlintoni's Grill	Mines Road	Accommodation and Food Services	20-49
Michael Hewes and Co.	Ellsworth Road	Construction	20-49
Peninsula Ambulance Corps	Water Street	Health Care and Social Assistance	20-49
Walgreens	South Street	Retail Trade	20-49
Way of the Earth School	Jay Carter Road	Educational Services	20-49

Source: Center for Workforce Information and Research Employer Locator

4.8. Taxable Sales

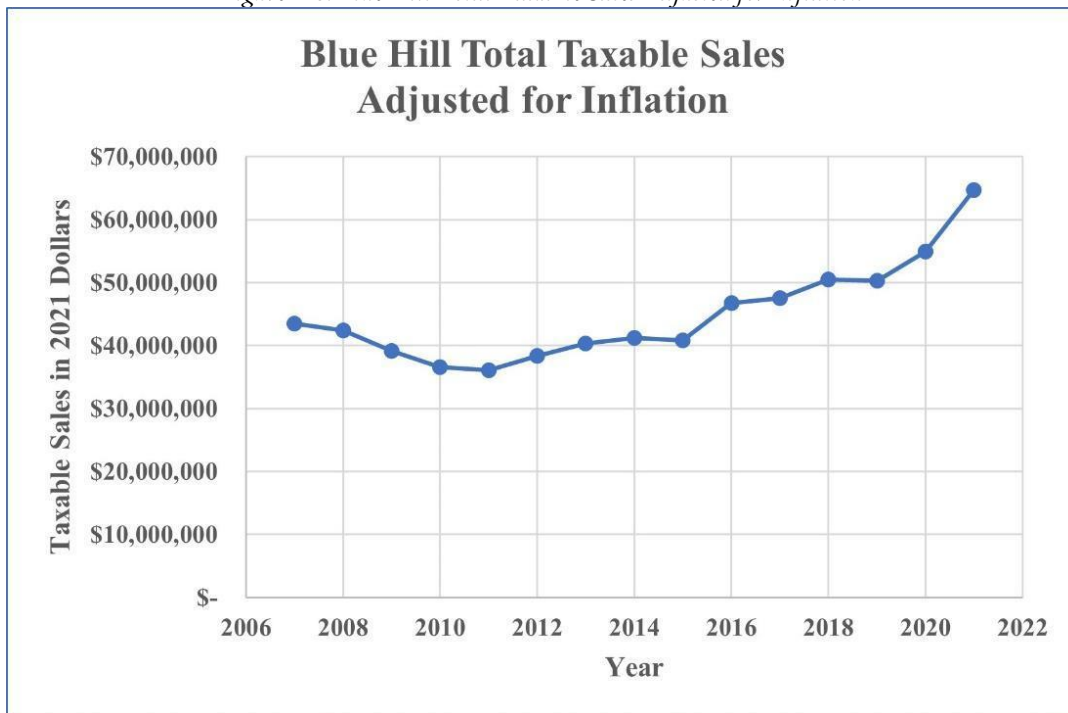
Taxable sales data is another indicator of economic activity. The largest taxable sales category in Blue Hill is building supply, followed by food store sales, restaurant and lodging, and other retail. One can see an overall increase in total taxable sales with a pronounced downturn during the Great Recession and flat stretch at the height of the pandemic.

Table B-8: Blue Hill Taxable Sales, 2007 – 2022

Year	Business Operating	Building Supply	Food Store	General Merchandise	Other Retail	Auto Transportation	Restaurant & Lodging	Total
2007	\$897,812	\$13,585,93	\$7,316,632	\$834,270	\$5,298,48	\$1,433,084	\$4,431,074	\$33,797,288
2008	\$527,259	\$13,472,17	\$7,598,792	\$820,248	\$5,243,21	\$1,517,617	\$5,071,117	\$34,250,428
2009	\$277,049	\$11,469,57	\$7,457,638	\$798,761	\$5,412,75	\$1,546,284	\$4,686,443	\$31,648,508
2010	\$191,221	\$10,023,58	\$7,673,278	\$766,888	\$5,520,633	\$1,535,975	\$4,433,697	\$30,145,280
2011	\$267,740	\$9,932,782	\$7,873,658	\$867,599	\$5,438,684	\$1,651,464	\$4,650,627	\$30,682,554
2012	\$1,024,971	\$10,278,73	\$8,513,752	\$926,199	\$5,655,178	\$1,663,997	\$5,161,892	\$33,224,720
2013	\$283,343	\$12,135,57	\$8,845,927	\$599,429	\$5,832,077	\$1,770,784	\$5,983,933	\$35,451,068
2014	\$467,821	\$11,906,68	\$9,459,267	\$563,694	\$6,174,568	\$1,895,615	\$6,215,379	\$36,683,032
2015	\$330,601	\$11,052,58	\$9,753,456	\$339,471	\$6,478,351	\$1,881,496	\$6,484,891	\$36,320,852
2016	\$341,944	\$12,775,10	\$13,082,556	\$576,850	\$6,839,505	\$1,913,595	\$6,459,269	\$41,988,828
2017	\$348,427	\$13,762,25	\$13,391,804	\$397,740	\$7,296,881	\$1,850,930	\$6,447,489	\$43,495,524
2018	\$226,489	\$15,947,78	\$13,702,955	\$929,547	\$7,100,086	\$1,835,583	\$7,442,899	\$47,185,340
2019	\$149,498	\$15,958,68	\$14,114,379	\$1,178,351	\$6,773,181	\$1,944,678	\$7,675,078	\$47,793,996
2020	\$290,773	\$19,805,41	-	-	-	\$2,056,833	\$5,878,980	\$52,794,536
2021	\$419,564	\$25,105,34	-	-	-	\$2,168,014	\$8,288,019	\$64,779,300
2022	\$499,764	\$25,508,10	-	-	-	\$2,513,052	\$8,819,694	\$67,070,512

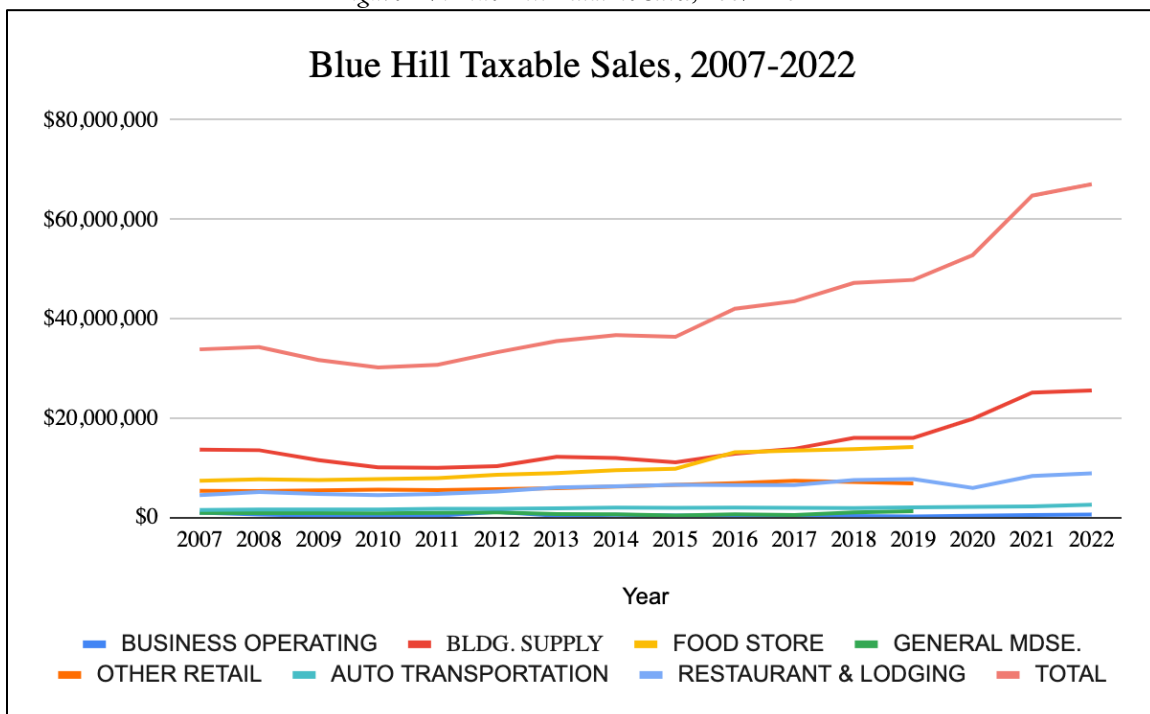
Source: Maine Revenue Services

Figure B-6: Blue Hill Total Taxable Sales Adjusted for Inflation



Source: Maine Revenue Services

Figure B-7: Blue Hill Taxable Sales, 2007 - 2022



Source: Maine Revenue Services

5. Analyses

5.1. Change in the Economy

If the economy is experiencing significant change, it can affect the local population, employment, and the municipal tax base. Blue Hill has experienced the economic downturns felt by the country over recent years - the Great Recession and the pandemic - but the town is not otherwise seeing any dramatic change to the local economy. Improvements in broadband may continue the trend of more people working from home. In the future, internet sales could continue to depress brick and mortar retail. It will continue to be important to support local businesses and rely on local goods and services to provide the peninsula with a sense of autonomy. If natural disasters across the country accelerate due to climate change, there will be impacts to the Blue Hill economy in the areas of fishing and farming. This may cause increased expenses for things such as food, housing, repairs, insurance, and transportation.

5.2. Community Priorities for Economic Development

Over the years Blue Hill has considered whether and to what extent it should be engaged in economic development activities. There is a general desire to revitalize the village downtown, but at times there is debate over how big a role the Town should play versus the responsibility of building owners in terms of lease rates and maintenance. There also is an understanding that while Blue Hill is more than a bedroom community, the principal driver of economic activity in the region is Ellsworth. Nevertheless, Blue Hill has been in touch with the National Main Street Center in considering whether to join that program to help revitalize the downtown.

Partly for economic development purposes, Blue Hill has prioritized improved broadband. In 2021, the Select Board established the Blue Hill Broadband Committee to evaluate alternatives for expanding broadband interest and access throughout the Town and to advise and assist the Select Board in implementing a plan. In February 2022, the National Telecommunications, and Information Administration (NTIA) awarded funding to the ConnectMaine Authority, with Consolidated Communications, Inc. (CCI) as the Internet Service Provider for the Blue Hill Peninsula. When combined with previous awards, no funding from the State of Maine, local municipalities, or subscribers is required. The NTIA award, along with the collaborative efforts of ConnectMaine, CCI, the Federal Communications Commission (FCC), and local groups such as the Peninsula Utility for Broadband, resulted in a fiber-based Broadband Internet system that is a “Future Proof” solution for Blue Hill and the Blue Hill Peninsula.

In addition, the Town agreed to join the communities of Brooksville, Deer Isle, and Penobscot in a multi-year effort to improve broadband internet access on the Blue Hill Peninsula (and Deer Isle/Stonington). The towns have established the following baseline goals for the desired broadband network, which will continue to be worked on in 2023 and beyond:

- **Fiber-based** (accomplished)

- **Ubiquitous**—available to any home or business currently served by the electrical grid or phone lines.
- **Gigabit Capacity**—must provide at least 1,000 megabits per second connectivity.
- **Symmetrical**—must have upload speeds that are as fast as those for downloading.
- **No Data Caps or Throttling**
- **Modest and Fair Installation Costs**
- **Collaboration**—Participating towns work together to make the project more competitive.

Blue Hill’s broadband priority is consistent with the number one economic development goal expressed in the Eastern Maine Development Corporation’s (EMDC) *Comprehensive Economic Development Strategy* (CED)—expand and increase the accessibility and affordability of broadband capacity.³

Another set of infrastructure improvements needed to maintain and improve Blue Hill’s economy are those related to climate change adaptation. The 2020 *Final Report to the Select Board on Sea Level Rise in Blue Hill*, from the Taskforce on Sea Level Rise, identifies several Town facilities that are in danger from the potential impacts of sea level rise, increased storm surges, and increased stormwater runoff from major precipitation events. These include:

Blue Hill Wastewater Treatment Facility—located less than a foot above highest annual tide (HAT) and already experiencing occasional trouble with outflow at high tides.

South Blue Hill Wharf

Blue Hill Fire Department and Town Landing—have already experienced flooding.

Seaside Cemetery—located on easily erodible shoreline bluffs.

Town Park—also subject to erosion.

Town and State Roads and Bridges—seven roads and bridges have been identified as being vulnerable to sea level rise and storm surge events. Roadbeds need to be raised and culvert sizes increased.

This Blue Hill priority is also reflected in the Eastern Maine Development Council (EMDC) regional economic development plan. Goal #3 of the 2021 CED is to foster methods of adaptation and mitigation to strengthen the region’s resilience against climate-related impacts.

5.3. Downtown

Downtown Blue Hill, approximately centered on the intersections of Routes 172 and 177, is a village center that has a diverse collection of municipal, education, retail, non-profit, professional services, dining, lodging, art, and other sectors that provide goods and services to the community year-round, as well as to the many tourists who visit the peninsula during the summer. Using Figure B-7 above as an

³ *Comprehensive Economic Development Strategy 2021 – 2025*, Eastern Maine Development Corporation, p. 24.

indicator, it appears that business in the downtown area has remained steady. There is more occupancy in the downtown area in 2023 than there has been in the past 5-10 years. In general, the Blue Hill Downtown area is somewhat spread out and auto centric. There may be potential for drawing more people to the downtown by encouraging infill development so that there are more places for people to visit on foot after they arrive and park.

As mentioned above, Blue Hill has had discussions with the Maine Development Foundation about the possibility of using the National Main Street Center's approach for creating vibrant, healthy downtowns resulting in job creation, business growth, building rehabilitation, and cultural enhancement.

5.4. Tourism

Tourism is an important part of Blue Hill's economy. To support this industry, and the wider area economy, Blue Hill maintains membership in the Blue Hill Peninsula Chamber of Commerce. Direct and indirect support for tourism is also provided by such nonprofit organizations as Blue Hill Fair, Blue Hill Heritage Trust, the Blue Hill Historical Society, Blue Hill Public Library, East Blue Hill Library Association, East Blue Hill Village Improvement Association, Blue Hill Bach, Bagaduce Music, Native Gardens of Blue Hill, WORD Festival, the Fall Foliage Festival, Friends of Blue Hill Bay, and Healthy Peninsula. Blue Hill's various infrastructure improvement projects (see above section on Community Priorities for Economic Development) also represent a significant effort by Blue Hill to ensure that the town remains easy to access. The Waterfront and the Town Park are maintained by Town funds.

5.5. Home Occupations

In Blue Hill, a home occupation is defined as, "An occupation or profession which is customarily conducted on or in a residential structure or property and which is 1) clearly incidental to and compatible with the residential use of the property and surrounding residential uses; and 2) which employs no more than two (2) persons other than family members."⁴ Home occupations are likely to increase in Blue Hill as improved broadband services make it more feasible to create small businesses outside of city centers. Given their low impacts, these types of businesses generally are positive contributors to the community. According to ACS 5-Year estimates, an estimated 95 people worked from home in 2021.

5.6. Locations for Industrial or Commercial Development

Some communities seek to have a diversified local economy by providing areas within town for commercial and industrial development. (Some communities allow light manufacturing but not heavy industry). Other than Shoreland Zoning, Blue Hill does not have zoning. The only land use specifically prohibited in Blue Hill is any large-scale solar farm. There are areas that would lend themselves to commercial and/or light industrial development, based on their proximity to power and

⁴ Commercial Site Plan Review Ordinance of the Town of Blue Hill, Maine, amended 2021, p. 3.

roads. Currently, Blue Hill has standards in place to control land development, but commercial and industrial development is allowed throughout the Town.

5.7. Public Facilities Necessary to Support Projected Economic Activity

There are several key infrastructure areas that Blue Hill has identified that are important for maintaining and advancing the local economy. These include land and waterside improvements, broadband internet improvements, and climate change adaptations to such public facilities as the wastewater treatment plant, several roads and bridges, and various coastal facilities located close to erodible banks. Blue Hill has been active in addressing these infrastructure needs.

5.8. Performance of Economic Development Incentives

Blue Hill currently does not utilize local economic development incentives to encourage business activity or to steer development toward growth districts. Communities with zoning ordinances can provide incentives for attracting development of desired types to desired locations. Perhaps the most effective tool for achieving preferred development is for a municipality, or a community development corporation, to buy key properties and then offer them for sale at attractive prices to developers who agree to build the type of projects the town has identified in its economic development plan.

5.9. Use of Unique Assets for Economic Growth

In many cases a winning economic development strategy for a community is to use its unique assets, such as recreational opportunities, historic architecture, civic events, etc. to attract new residents and businesses. Blue Hill is successfully using this type of strategy. It is a coastal community that supports a commercial fishing community, a robust organic farming presence, and a recreational boating industry through its public and private waterfront assets, and it attracts thousands of tourists by maintaining the charm and history of a 19th century coastal Maine village. Due in large part to the efforts of area land trusts and other conservation-oriented organizations and individuals, large numbers of people come to Blue Hill to enjoy its trails and scenic vistas. The town also has an active historical society and has historic buildings and archives that are of interest to many visitors. In addition, the annual Blue Hill Fair is an important attraction and contributor to the Blue Hill economy. Blue Hill has built on its positive reputation in Maine as a beautiful town that has preserved many aspects of its rural Maine heritage while at the same time serving as a vibrant cultural center for the region.

6. Goals & Objectives

Goal: Encourage and promote a diverse, year-round, sustainable local economy in Blue Hill			
Objective	Strategy	Responsible Party(ies)	Time Frame
Encourage year-round job growth through the expansion of existing businesses while also attracting new, year-round businesses of scale appropriate for Blue Hill.	Create an Economic Development Committee	Select Board	2025
	Continue efforts to support, retain, and attract businesses that offer quality jobs and above average pay, through Town support for grants, loans, etc. identified and sought by businesses.	Economic Development Committee	2025 - Ongoing

	Obtain an economic development grant and work with an advisor to assist in identifying and implementing strategies for attracting compatible businesses to Blue Hill.	Economic Development Committee	2025 - 2028
Prepare Blue Hill for climate change impacts to current natural resource-dependent industries (fishing, farming, etc.).	Develop an economic vulnerability assessment together with recommendations for addressing any key issues identified.	Climate Resilience Committee	2025
Assure sufficient workforce housing to support a sustainable local economy.	(See Housing chapter)	(See Housing chapter)	n/a
Encourage varied transportation to/from Blue Hill.	(See Transportation chapter)	(See Transportation chapter)	n/a
	(See Transportation chapter)	(See Transportation chapter)	n/a
Increase the supply of skilled labor in Blue Hill.	(See Transportation chapter)	(See Transportation chapter)	n/a
Goal: Make more effective use of available grant and low-cost loan programs.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Coordinate with regional development corporations and surrounding towns to support desired economic	Participate in any regional economic development efforts.	Economic Development Committee	Ongoing
Support private pursuit of grants and subsidized loans.	Provide information to the community about grant/loan opportunities for non-municipal projects.	Economic Development Committee	Ongoing
	Provide municipal support for such grants/loans where appropriate.	Economic Development Committee	Ongoing
Goal: Encourage and promote a diverse, year-round, sustainable local economy in Blue Hill.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Increase the supply of affordable, year-round housing.	Establish a Housing Committee to work in conjunction with similar Peninsula efforts.	Select Board	2025
	Seek to achieve at least 10% of new residential development built or placed during the next decade to be affordable.	Planning Board, Housing Committee	2025 - Ongoing

Chapter C: Housing

1. Purpose

A comprehensive plan needs to address several key housing issues. These include changes in conditions and needs as well as projecting future demand for housing. This section aims to:

- Describe recent trends in Blue Hill's housing stock in terms of types and number of units created.
- Discuss housing affordability (cost to rent or own).
- Project future housing needs.
- Describe the benefits that will accrue to Blue Hill from a supply of available and affordable housing.
- Recommend ways to increase the supply of housing that is safe, energy-efficient, and affordable for a multi-occupational and multi-generational community.

2. Key Findings and Issues

As is true across the country, Blue Hill has an affordable housing problem. Of the homes sold in Blue Hill in 2022, 88.6% were unobtainable to households at or below the Blue Hill median household income. Using the most recently available rental data, 72.3% of Blue Hill households would have been unable to afford units offered at the 2-bedroom median rent. The Town's modest regulation of land use suggests that residents and housing developers could provide more accessory dwelling units (ADUs), one of the more direct ways to increase housing supply and allow seniors to affordably downsize or age in place. To address the housing affordability issue, the Town could consider ways to incentivize development of workforce housing, while joining together with other towns to work on shared goals through a regional affordable housing coalition.

3. Public Opinion Survey Results

Most survey respondents feel that it is appropriate for residential land uses to be developed either anywhere or within designated areas. This includes low-income housing and workforce housing, both of which have notable support for development close to the village center.

"In the future, it is most appropriate for the following land uses to occur."

	Anywhere	In Designated Areas	Close to Village Center	Nowhere	Undecided
Residential	61.7%	27.01%	7.6%	0.7%	3.0%
Low-Income Housing	37.2%	31.1%	23.0%	3.5%	5.2%
Mobile Home Parks	13.5%	41.2%	2.4%	34.0%	8.9%
Seasonal Rental Properties	56.8%	22.8%	3.3%	7.2%	10.0%
Short-Term Rental Properties	47.5%	24.0%	4.8%	12.4%	11.5%
Workforce Housing	43.8%	29.9%	18.5%	1.7%	6.1%

In addition to a willingness to develop low-income and workforce housing, 78.2% believe that affordable housing/housing costs need improvement or attention; over 50% said right away. Relatedly, over 90% of respondents support the Town investing more in this type of housing, either by using grants or subsidies to reduce costs or including property tax dollars.

Most felt that seasonal rental properties and short-term rental properties are appropriate either anywhere in the Town or in designated areas. When asked about planned activities within the next five years, just under twenty percent (18.4%) of respondents to this question indicated that they plan to list a property, or a portion of a property, as a short-term rental within this time period.

4. Condition and Trends

4.1. Change in Dwelling Units

There was a slight increase in the total number of dwelling units in Blue Hill from 2010 (1,486) to 2020 (1,910)—a rise of 28.5%. As seen in Table C-1 below, approximately one quarter of housing units in Blue Hill are seasonal. The 29.1% increase in seasonal units from 2000 to 2020 was slightly larger than the increase in total housing units. The number of vacant units (which includes both seasonal and non-seasonal units) rose 43.2%.

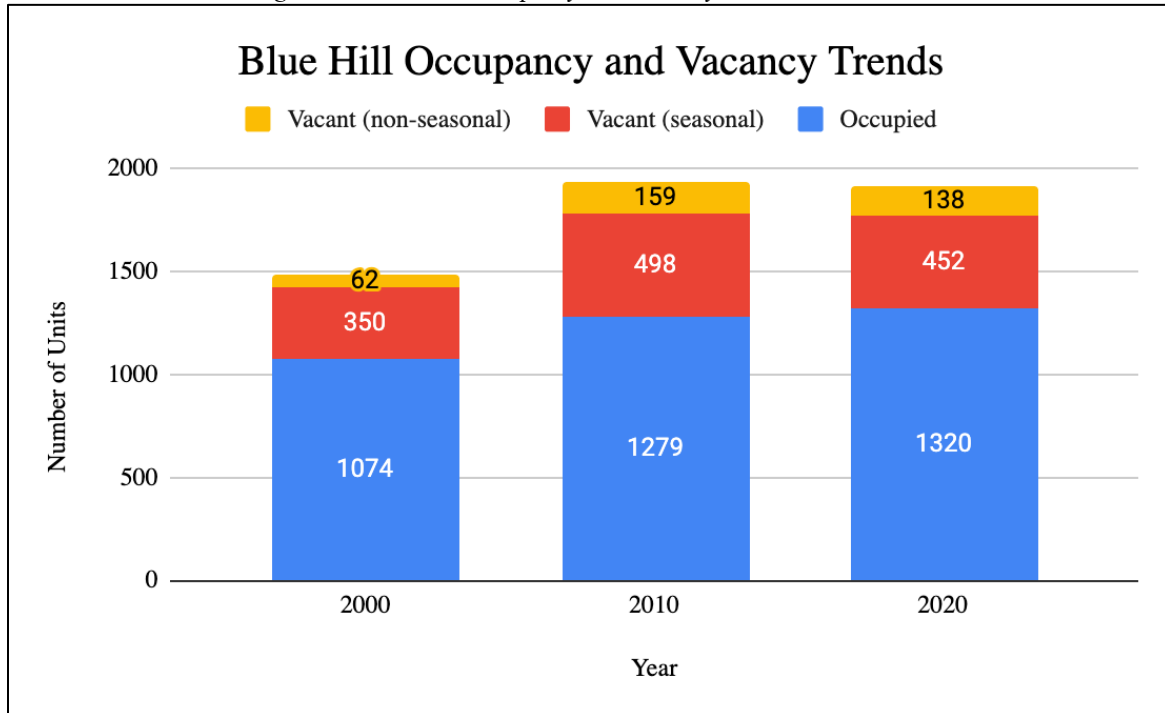
Table C-1: Changes in Blue Hill and Hancock County Dwelling Units (Occupied and Vacant), 2000 – 2020:

	2000	2010	2020	% Change 2000-2020
Blue Hill				
Occupied	1,074	1,279	1,320	22.9%
Vacant	412	657	590	43.2%
Total	1,486	1,936	1,910	28.5%
Vacant (seasonal)	350	498	452	29.1%
% of Total	23.6%	25.7%	23.7%	
Vacant (non-seasonal)	62	159	138	122.6%
% of Total	4.2%	8.2%	7.2%	
Hancock County				
Occupied	21,864	24,221	24,989	14.1%
Vacant	12,081	15,963	15,185	25.7%
Total	33,945	40,184	40,133	18.2%
Vacant (seasonal)	10,672	13,134	12,438	16.5%
% of Total	31.4%	32.7%	31.0%	
Vacant (non-seasonal)	1,409	2,829	2,747	95.0%
% of Total	4.2%	7.0%	6.8%	

Source: US Decennial Census

Table C-1 also shows that there was a greater increase in the total number of housing units between 2000 and 2020 in Blue Hill (28.5%) than in Hancock County (18.2%). Similarly, the increase in seasonal units was greater—29.1% for Blue Hill and 16.5% for Hancock County.

Figure C-1: Blue Hill Occupancy and Vacancy Trends, 2000 - 2020



Source: US Decennial Census

4.2. Housing Unit Type

Most of the housing in Blue Hill consists of single-family dwellings. Single-family homes in 2021 accounted for 73% of the town's residential units.

Table C-2: Dwelling Unit Type

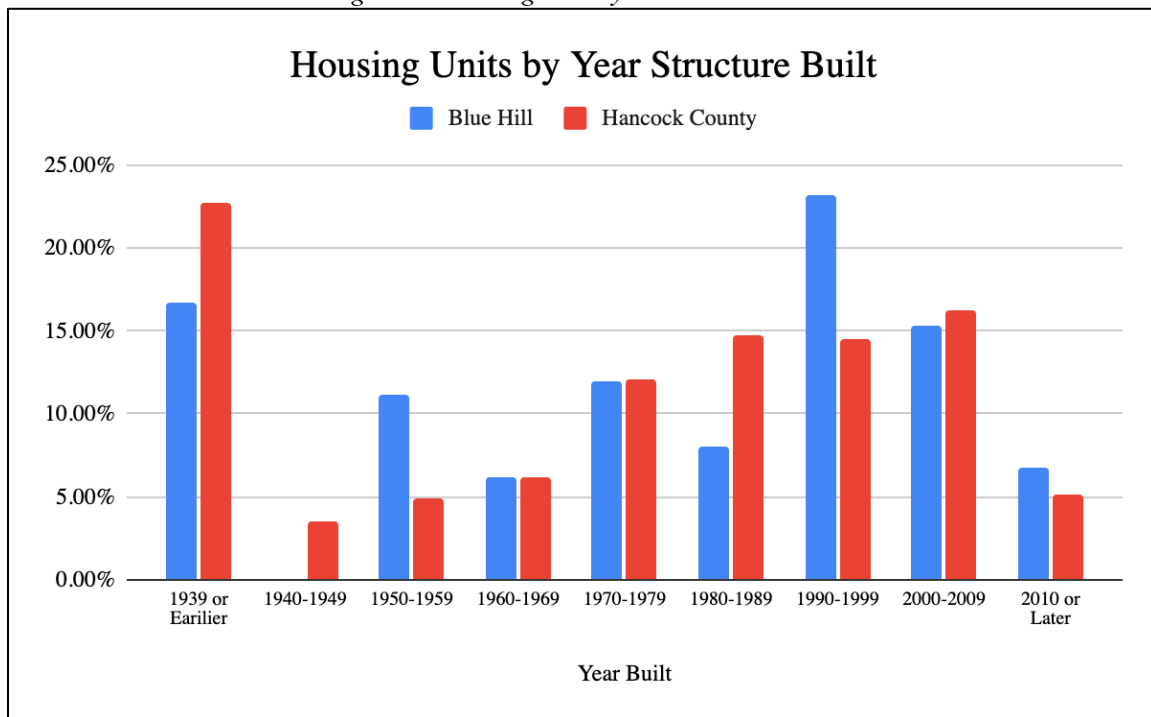
	Number	Percent
Single-Family	1,313	73.0%
Duplex/Multifamily	369	20.5%
Mobile Home	117	6.5%
Boat, RV, Van, etc.	0	0.0%
Total Units	1,799	100%

Source: 2021 ACS 5-Year Estimates

4.3. Housing Stock Age

Approximately 23% of the Town's housing units were built between 1990 and 1999. An estimated 6.8% of the housing stock was constructed between 2010 and 2019. It is also noteworthy that an estimated 16.7% of the units in Blue Hill were built in 1939 or earlier.

Figure C-2: Housing Units by Year Structure Built



Source: 2021 ACS 5-Year Estimates

4.4. Tenure

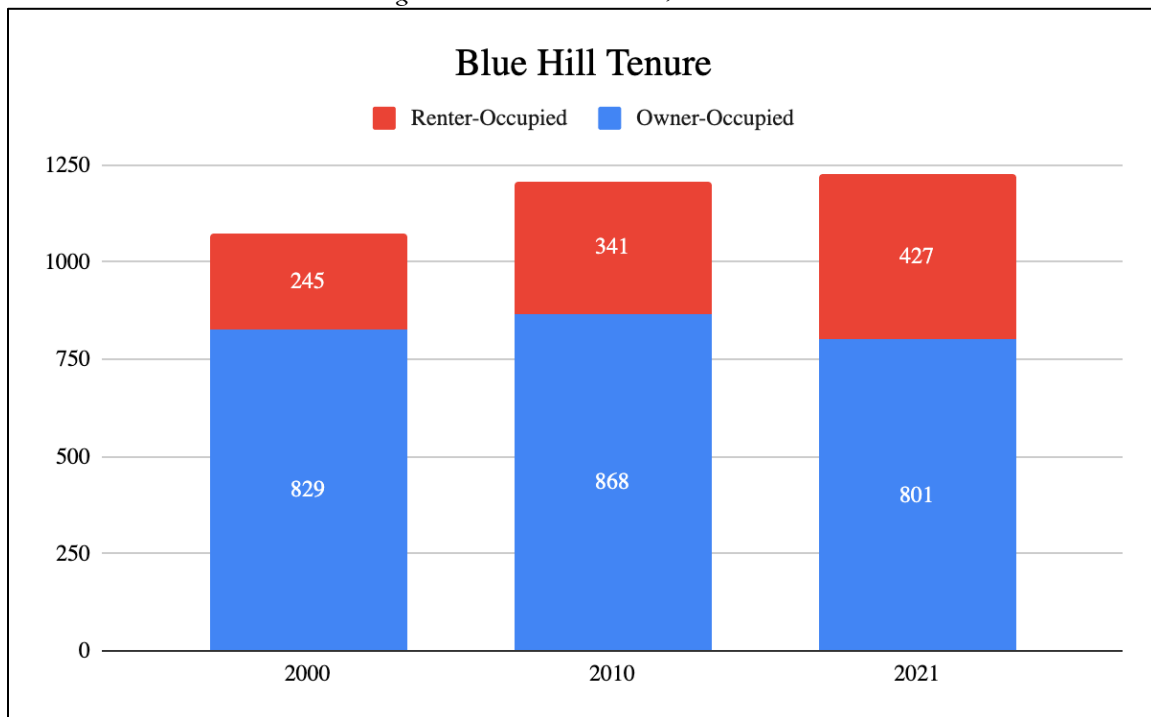
Table C-3 and Figure C-3 below demonstrate a substantial and growing number of renter-occupied dwelling units in Blue Hill. The estimated 427 renter-occupied units in 2021 is 34.8% of the total occupied housing units, compared to 22.8% in 2000. Renter occupied units comprised 17.6% of Hancock County's housing stock in 2021.

Table C-3: Tenure of Occupied Year-Round Housing

	Blue Hill			Hancock County		
	2000	2010	2021	2000	2010	2021
Owner Occupied	829	868	801	16,532	17,704	21,395
% of Total	77.2%	71.8%	65.2%	75.6%	76.0%	82.4%
Renter Occupied	245	341	427	5,332	5,596	4,580
% of Total	22.8%	28.2%	34.8%	24.4%	24.0%	17.6%
Total	1,074	1,209	1,228	21,864	23,300	25,975

Source: US Decennial Census; 2021 ACS 5-Year Estimates

Figure C-3: Blue Hill Tenure, 2000-2021



Source: US Decennial Census 2000 and 2010; 2021 ACS 5-Year Estimates

4.5. Affordability

In terms of affordability, the federal Department of Housing and Urban Development's definition for affordable housing is a dwelling that a family or household can obtain, whether through rent or purchase, that costs 30 percent or less of the household's income.

4.5.1. Renter-Occupied Units

MaineHousing provides an affordability index and related data for Maine communities. The rental affordability calculation is based on the ratio of area median two-bedroom rent to area median renter household incomes. MaineHousing uses Claritas for income data. Median rent is derived from MaineHousing's Rent Survey. A ratio of 1 or above indicates affordability—which is not the case for Blue Hill or Hancock County as a whole.

According to MaineHousing, in 2020, over 67% of renter households in Hancock County are unable to afford the median rent or \$1,388 for a 2-bedroom apartment. The affordability index in 2020 was 0.65, down from 0.72 in 2017. In 2017, the median 2-bedroom rent in Hancock County was \$984.

The most recent rental affordability index for Blue Hill was done in 2017. As seen in the table below, 72.3% of renter households in 2017 were unable to afford the median two-bedroom rent.

Table C-4: Blue Hill Rental Affordability Index

Year	Index	Median 2BR (with utilities)	Renter Household Median Income	Income Needed to Afford Median 2BR Rent - Annual	2BR Rent Affordable to Median Income	Households Unable to Afford Median 2BR Rent (%)	Renter Total Households
2017	0.62	\$981	\$24,441	\$39,232	\$610	72.3%	376
2011	0.73	\$832	\$24,351	\$33,279	\$609	66.0%	241
2010	0.78	\$773	\$23,999	\$30,930	\$600	63.6%	239
2009	0.6	\$962	\$22,916	\$38,483	\$573	76.3%	245
2008	0.65	\$880	\$23,016	\$35,185	\$575	71.5%	253

Source: MaineHousing

4.5.2. Home Ownership

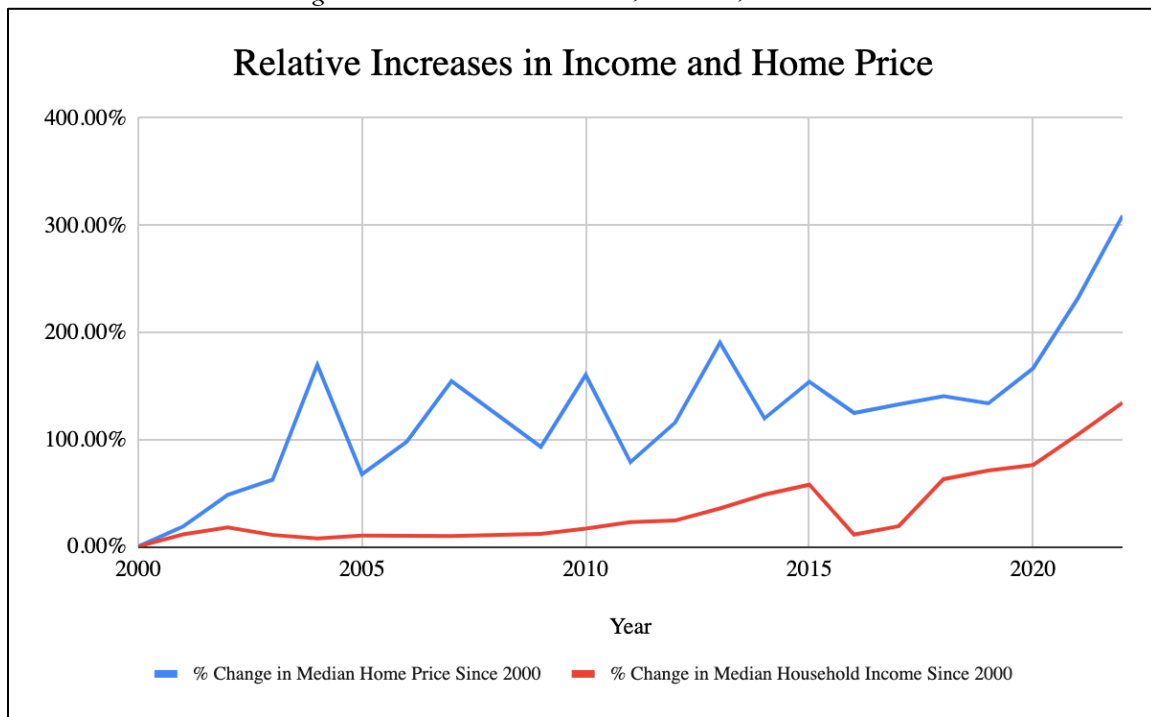
MaineHousing also provides an affordability index and related data for owner-occupied housing in Maine communities. The homeownership affordability calculation is based on the ratio of area median home prices to area median household incomes. A ratio of 1 or above indicates affordability—which is not the case for Blue Hill. As seen in the table below, 88.6% of the homes sold in Blue Hill in 2022 were unobtainable to households at or below the Blue Hill median household income. In addition, Figure C-5 shows that the increases in home prices in Blue Hill have been higher than the increases in household income and that the disparity is getting worse.

Table C-5: Blue Hill Homeownership Affordability Index

Year	Index	Median Home Price	Median Income	Income Needed to Afford Median Home (Annual)	Home Price Affordable to Median Income	Households Unable to Afford Median Home (%)	Unattainable Homes Sold (%)	Affordable Homes Sold	Unattainable Homes Sold
2022	0.54	\$455,000	\$73,780	\$137,787	\$243,636	77.6%	88.6%	4	31
2021	0.70	\$369,000	\$64,343	\$91,351	\$259,904	66.5%	76.3%	14	45
2020	0.74	\$296,250	\$55,419	\$75,048	\$218,766	62.2%	80.3%	12	49
2019	0.76	\$260,000	\$53,823	\$71,008	\$197,076	60.8%	71.7%	15	38
2018	0.68	\$267,500	\$51,291	\$75,627	\$181,421	67.0%	79.5%	8	31
2017	0.53	\$259,000	\$37,500	\$71,231	\$136,352	75.8%	76.6%	11	36
2016	0.52	\$250,000	\$34,983	\$67,287	\$129,976	72.4%	91.7%	3	33
2015	0.68	\$282,500	\$49,679	\$73,336	\$191,370	70.4%	57.5%	17	23
2014	0.74	\$244,500	\$46,752	\$63,311	\$180,551	62.5%	70.6%	10	24
2013	0.49	\$323,000	\$42,688	\$86,365	\$159,651	79.5%	77.8%	6	21
2012	0.60	\$240,000	\$39,123	\$64,772	\$144,962	73.1%	72.4%	8	21
2011	0.70	\$199,000	\$38,638	\$54,831	\$140,231	65.6%	68.0%	8	17
2010	0.40	\$289,500	\$36,774	\$92,681	\$114,868	86.4%	90.0%	2	18
2009	0.51	\$214,750	\$35,212	\$68,834	\$109,856	78.3%	76.5%	4	13
2007	0.38	\$283,000	\$34,581	\$90,578	\$108,045	86.8%	100.0%	0	27
2006	0.49	\$220,000	\$34,656	\$70,341	\$108,390	79.7%	89.3%	3	25
2005	0.58	\$186,250	\$34,696	\$59,472	\$108,659	72.0%	92.6%	2	25
2004	0.35	\$300,000	\$33,886	\$97,900	\$103,839	89.9%	93.9%	6	92
2003	0.60	\$180,500	\$34,880	\$58,443	\$107,726	70.6%	89.5%	4	34
2002	0.67	\$165,000	\$37,064	\$55,214	\$110,761	62.2%	73.3%	8	22
2001	0.75	\$132,000	\$35,061	\$46,482	\$99,567	57.7%	79.1%	9	34
2000	0.80	\$111,250	\$31,484	\$39,146	\$89,474	53.7%	79.2%	5	19

Source: MaineHousing

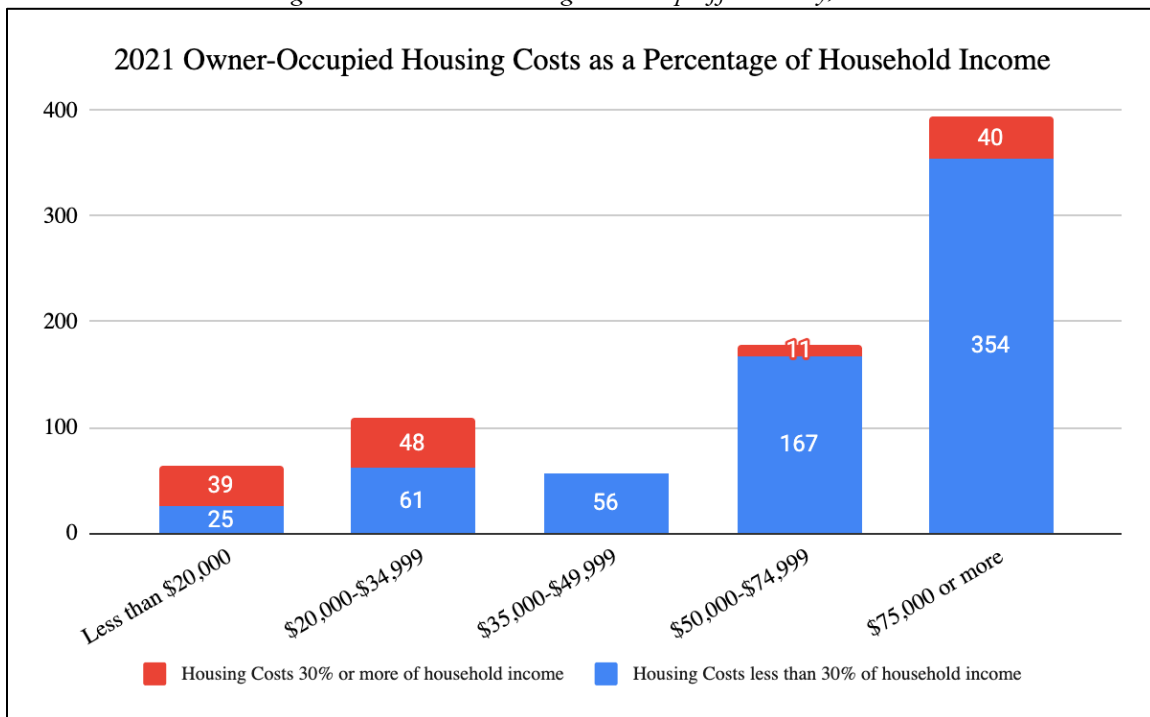
Figure C-4: Income vs. Home Price, Blue Hill, 2000 - 2022



Source: *MaineHousing*

The Census defines housing costs for owner-occupied units as including mortgage payments, real estate taxes, property insurance, homeowner association fees, utility costs, routine maintenance, etc. Based on HUD's definition of housing affordability, housing for families or households that own their units is considered affordable if the housing costs are 30% or less than their household income. As seen in the figure below, owner occupied housing costs in Blue Hill in 2021 were unaffordable for 39 of the 64 households with incomes of less than \$20,000 (60.9%) and for 48 of the 109 households with incomes of \$20,000 to \$34,999 (44%). Otherwise, most of the owner-occupied housing was considered affordable for these households.

Figure C-5: Blue Hill Housing Ownership Affordability, 2021



Source: 2021 ACS 5-Year Estimates

4.6. Seasonal Units

As discussed in the Seasonal Population section of the Population chapter, the Census classifies housing for seasonal, recreational, or occasional use as being in the category of vacant housing units. In 2010, the number of such units in Blue Hill was 498, which was 75.8% of the vacant housing in Blue Hill at that time. There were an estimated 452 seasonal units in Blue Hill in 2020, 76.6% of the vacant housing units in the Town.

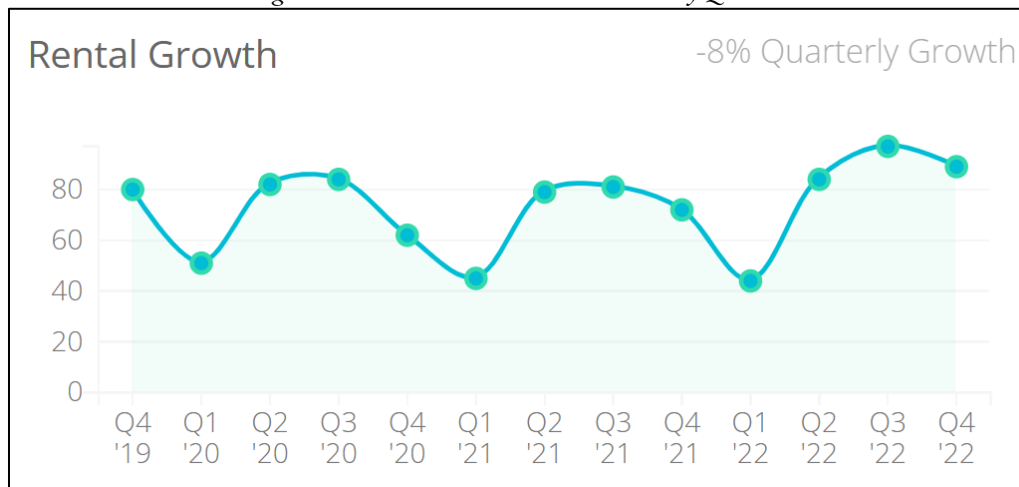
4.7. Short-Term Rentals

Short-term rental (STR) typically describes the rental of a residential home unit or accessory dwelling unit for stays of less than a month. There was a high of 97 active short-term rentals in the third quarter of 2022 (see Figure C-6 below).⁵

Short-term rentals provide unit owners with a source of income and lodgers with an increased number of rental options. However, in some communities there have been issues with STRs decreasing the availability of affordable housing and with reducing neighborhood cohesion. It also can be difficult for municipalities to monitor STRs on their own and enforce such regulations as the fire code. As such, some cities and towns in the U.S. have adopted rules and hired outside firms to better manage STRs, and STRs are a continuing topic of discussion, and potential law-making, by the Maine Legislature.

⁵ AirDNA, <https://www.airdna.co/vacation-rental-data/app/us/maine/blue-hill/overview>, accessed 2/7/2023.

Figure C-6: Blue Hill Short-Term Rentals by Quarter



Source: AirDNA MarketMinder

4.8. Existing Local and Regional Affordable/Workforce Housing Coalitions (or similar efforts)

One regional organization providing various types of housing assistance is Downeast Community Partners. Blue Hill potentially could also find assistance from the Maine Affordable Housing Coalition, which is a statewide coalition of more than 130 private and public sector organizations.

5. Analyses

5.1. Housing Units Necessary to Accommodate Projected Population

As discussed in the Population chapter, the Maine State Economist's Office predicts an increase in Blue Hill's population going forward. If so, that would mean an increase of 181 people over the 2020-2040 period, which, based on the 2021 household size of 2.24, would require 80 additional units of housing. Of these 80 units, an estimated three-quarters would be single-family units and one-quarter multifamily, based on the 2021 numbers. Blue Hill has the buildable undeveloped land necessary to accommodate this amount of growth. (See the Future Land Use chapter.)

5.2. Housing Affordability at the Median Income

As seen in the MaineHousing data, 88.6% of the homes sold in Blue Hill in 2022 were unobtainable for households at or below the Blue Hill median household income. Similarly, 72.3% of Blue Hill households in 2017 were unable to afford units offered at the 2-bedroom median rent. The situation, of course, is even worse for those earning 80% or less of the median Blue Hill income.

5.3. Conversion of Seasonal Homes to Year-Round Use

According to Census estimates, the share of vacant seasonal housing units decreased slightly between 2010 and 2020. Therefore, while it is possible that some amount of conversion of seasonal homes to year-round use is occurring, it does not appear to be significant. Meanwhile, a significant concern is

the conversion of units to short-term rentals and the resulting reduction in the number of affordable rental units.

5.4. Projected Need for Affordable, Senior, or Assisted Living Housing

According to information from MaineHousing, in 2020 there were two multifamily rental communities in Blue Hill that offered approximately 160 units with income-based rent (rent and utilities generally not exceeding 30% of household income). Among the towns nearby, Ellsworth had six such apartment communities, Bar Harbor had three, Bucksport had four, Southwest Harbor had three, and Deer Isle and Sedgwick each had one. In addition, Section 8 housing vouchers—the federal program that enables participants to receive housing subsidies to help with their rental costs—are available on a limited basis via the Maine Centralized Section 8/Housing Choice Voucher (HCV) Waiting List, a partnership between 20 housing authorities in Maine.

Although multifamily dwelling units are available in Blue Hill, it is likely, given the projected aging of the population, that new options for senior citizen housing will be needed. It may be possible to meet some of these needs through social services such as “aging in place” that make the delivery home-based services possible. However, at least some of those needing assisted living or other special housing services will probably have to seek housing out of town.

There are presently no town-sponsored programs for first-time homebuyers and households with limited income. Some towns have created committees to explore options such as housing land trusts that create opportunities for first-time homebuyers to acquire homes at below-market rates. These ventures include restrictions to ensure the units remain affordable when they are resold.

5.5. Other Housing Issues - Substandard Housing

According to ACS 5-Year Estimates, substandard housing is not a major issue in Blue Hill. The chief housing issue is the insufficient supply of housing affordable to working families.

Table C-6: Substandard Housing in Blue Hill, County, & State, 2021

Substandard Housing	Blue Hill	Hancock County	Maine
Lacking complete kitchen facilities	0	145	5,376
Lacking complete plumbing facilities	0	118	3,214

Source: 2021 ACS 5-Year Estimates

5.6. Local Regulations & Affordable Housing Policies

Blue Hill has modest regulation of land use. The Town has the required Shoreland Zoning and Floodplain ordinances, as well as Site Plan Review for commercial projects and a Subdivision Ordinance dating back to 1992. The relative lack of regulation regarding residential density and housing types is positive for enabling the creation of affordable housing. If the community wishes to take a more active role in promoting affordable rental and ownership housing, it may want to explore providing incentives to affordable housing developers as well as collaborating with regional partners.

6. Goals & Objectives

Goal: Encourage and promote affordable, decent, year-round housing			
Objective	Strategy	Responsible Party(ies)	Time Frame
Increase the supply of affordable, year-round housing.	Establish a Housing Committee to work in conjunction with similar Peninsula efforts.	Select Board	2025
	Seek to achieve at least 10% of new residential development built or placed during the next decade to be affordable.	Planning Board, Housing Committee	2025 - Ongoing
	Explore strategies to monitor short-term vacation rentals to understand how many exist, where, what kind, and determine the appropriate balance between year-round and seasonal housing to support a strong year-round economy.	Planning Board, Housing Committee	2025 – Ongoing
Identify opportunities for regional collaboration.	Participate in regional coalition, grants, and projects.	Housing Committee	2025 – Ongoing
Increase the supply of diverse housing types (e.g., singles, families, starter homes, seniors, etc.).	Analyze the current housing stock and develop recommendations and a plan.	Housing Committee	2025 - 2026
	Encourage partnerships between employers, developers, and/or non-profits to develop workforce housing.	Housing Committee	Ongoing
Explore incentives to promote the creation of workforce housing.	Identify precedents and propose recommendations for Blue Hill.	Housing Committee	2025 - 2026
	Review existing ordinances, permitting, and review processes to identify any significant impediments; establish recommendations and a plan for Town consideration.	Housing Committee, Planning Board	2025

Chapter D: Transportation

1. Purpose

Transportation and mobility directly influence a community's economic well-being and the health and cohesion of its population. The term "transportation" describes the act of moving something or someone, whereas the term "mobility" describes the ability of a person to move or be moved. This section will:

- a. Identify and profile Blue Hill's roadway and transportation systems in terms of extent, condition, and use;
- b. Assess the adequacy of those systems in handling current demand;
- c. Consider whether transportation improvements will be needed to adequately accommodate the demands generated by potential future development, and;
- d. Consider areas where sustainable transportation alternatives and long-term cost savings in infrastructure management may exist.

2. Key Findings & Issues

Blue Hill's town roads require investment. Blue Hill has a plan to improve the quality of roadways and reconstruct those that need improvement, but this will take time and resources. There is overwhelming support for additional, safer infrastructure for pedestrians and bicycles. While the Town does not have a local public transportation system, there is growing interest in this service. Parking can be a challenge in the village, particularly during the summer season when demand is highest. On-street parking is often limited due to narrow streets and heavy traffic and, while finding space for additional public parking in high demand areas can be difficult, the Town will want to explore options.

3. Public Opinion Survey Results

Overall, respondents would like to see continued investment and improvement in the Town's transportation infrastructure. Nearly two-thirds of respondents (64%) said that the quality of public transportation in Blue Hill needs improvement. Thirty percent (30%) support including property tax dollars in future public transit investment while roughly 45% would like to see investment, but only if it is subsidized by grants or other funds.

Fifty-eight percent (58%) said that the quality of town sidewalks needs improvement, and almost 65% said bicycle paths/lanes need improvement. There is strong support for improving active transportation infrastructure. Nearly half of respondents would like to see investment, including property tax dollars, in both pedestrian sidewalks and bicycle paths/lanes. Nearly 77% either support

or strongly support “increasing public transit availability and encouraging alternative transportation modes, including biking and walking infrastructure.” Approximately 76% support or strongly support “adopting a Complete Streets policy, which addresses safety and bicycle and pedestrian uses.”

As noted, parking in the village can be a challenge, particularly during the summer, but 41% of respondents responded “no” to the Town investing in parking in the village. Approximately 56% would like to see more investment in town roads, including property tax dollars. An additional 34% said yes to more investment in town road improvements, but only if grants or subsidies reduce costs.

4. Conditions and Trends

4.1. Road Mileage and Classification

There is a total of 67.75 miles of public roadways in Blue Hill, including those that are both state- and town-maintained. There are two primary systems of classifying public roadway infrastructure.

Federal Functional Classification (FFC): FFC describes the functionality and geographical characteristics of public streets and highways based on the character of service they are intended to provide. This classification reflects how the highway provides the ability for transportation. Table D-1 provides characteristics of FFC classes (arterial, collector, and local roads) as well as the number of miles of each class in Blue Hill. There are no arterial roads present in Blue Hill.

State Highway System: The State Highway System describes the type of service that a public street and highway is expected to provide, as well as the responsibility for maintenance. Table D-2 displays State Highway System characteristics and roadway miles under this classification. Private roads are not classified in the FFC or State Highway System.

Table D-1: Federal Functional Classification (FFC) Characteristics and Roadway Miles by Class

FFC	Subclassification	Types of Service	Examples in Blue Hill	Speed	Traffic Volume (vehicles/day)	Miles in Blue Hill	% of Total Miles
Arterial	Principal and Minor Arterial Roads	Connect major trip generators (larger cities, recreational areas, etc.)	N/A	High speed	5,000-30,000	0	0%
Collector	Urban Collectors, Major Rural Collectors, Minor Rural Collectors	Support traffic within a town or group of small towns or disconnected neighborhoods	State Routes 15, 172, 175, 176	35-45 mph	1,000-5,000	41.9	47.2%
Local Roads	All other public roads not included in the State classification system	Provide access to private property or low volume public facilities	Water St, Parker Point Rd, High St	Under 35 mph	Up to 1,000	25.9	29.2%
Private Roads	N/A	Roads that serve three or more dwellings.				21.0	23.6%
Total						88.7	100%

Source: MaineDOT, Town of Blue Hill

Table D-2: State Highway Classification Characteristics and Roadway Miles by Class

State Highway Classification	Description	Examples in Blue Hill	Responsibility	Miles in Blue Hill	% of Total Miles
State Highway	Connected routes through the State that primarily serve intra- and interstate traffic	Pleasant St/Rt. 15; Main St/Rt. 172	MaineDOT is responsible for year-round maintenance	19.06	21.48%
State Aid Highway	Connect local roads to the State Highway System and generally serve intercounty traffic movement	East Blue Hill Rd/Rt. 176; Hinckley Ridge Rd/Rt. 177	State aid roads are usually maintained by MaineDOT in the summer and by municipalities in the winter	22.81	25.71%
Town Ways	All other public roads not included in the State classification system; provide access to adjacent land	Kingdom Rd, Parker Point Rd, Grindville Rd	Municipalities or counties	25.88	29.17%
Private	Roads that serve three or more dwellings. Roads serving two or fewer dwellings are defined as driveways			20.97	23.64%
Total				88.72	100%

Source: MaineDOT, Town of Blue Hill

4.2. Highway Corridor Priority and Customer Service Level

The Maine Department of Transportation (MaineDOT) uses its “Highways Asset Management” framework to prioritize its programmatic and project work. There are two parts—*Highway Corridor Priority (HCP)* and *Customer Service Level (CSL)*. *Highway Corridor Priority* is used to categorize transportation systems into six levels of priorities. These are visualized in Figure D-1 below.

- Priority 1: Key arterials not found in Blue Hill.
- Priority 2: High priority, non-NHS arterials. Route 15/Pleasant Street into Blue Hill falls into this category.
- Priority 3: Remaining arterials and high-volume major collector highways. Route 172 and Route 176 fall into this category.
- Priority 4: Remainder of the major and minor collector highways, and state aid system, in which road responsibilities are shared between the state and municipalities. South Street, Hinckley Ridge Road, and East Blue Hill Road fall into this category.
- Priority 5: Local roads that are the year-round responsibility of Blue Hill.

Figure D-1: Blue Hill Highway Corridor Priority Classifications



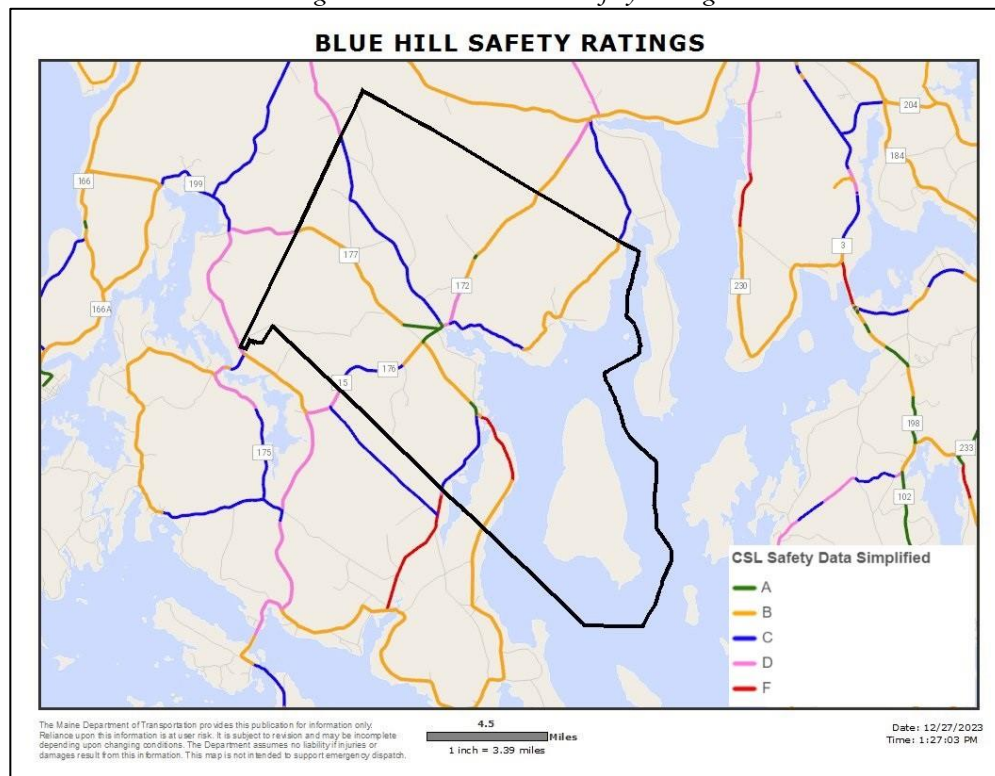
Source: MaineDOT Public Map Viewer

Customer Service Levels (CSL) employ customer-centric engineering metrics to evaluate and grade roadways on three key aspects: (1) Safety, (2) Condition, and (3) Serviceability. The grading system resembles a report card, with scores ranging from A to F.

(1) Safety

The factors that go into the Safety evaluation are crash history, paved roadway width, pavement rutting, and bridge reliability. Falls Bridge Road received a failing score (See Figure D-2) due to bridge reliability and insufficient pavement width; however, current bridge reconstruction efforts are expected to remedy this deficiency. A portion of the Ellsworth Road received a D rating primarily due to crash history and pavement width.

Figure D-2: Blue Hill Road Safety Ratings

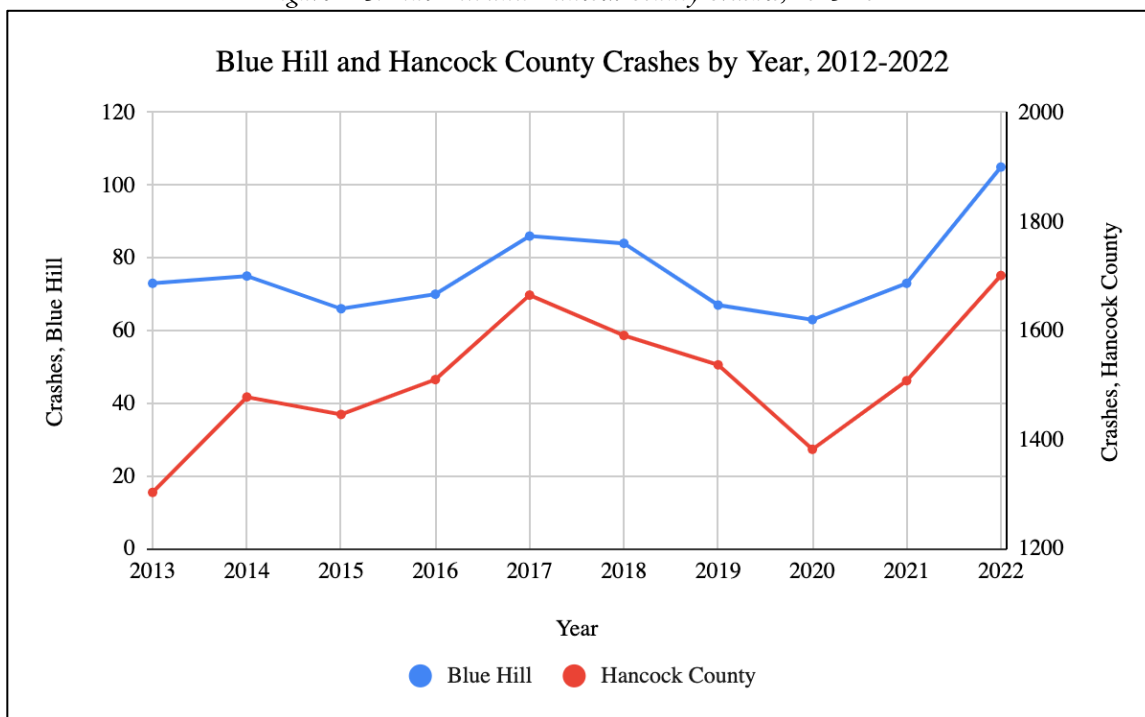


Source: MaineDOT Public Map Viewer

Another way transportation engineers evaluate roadway safety is by looking at *High Crash Locations (HCLs)* and HCL Segments. An HCL is one that has a minimum of eight accidents over a three-year period and a higher-than-average rate of accidents when compared with similar intersections across the state (Critical Rate Factor). In Blue Hill, there were no HCLs in 2022. However, sections of Route 15, Route 175, Route 177, and Mountain Road were HCL segments in the past.

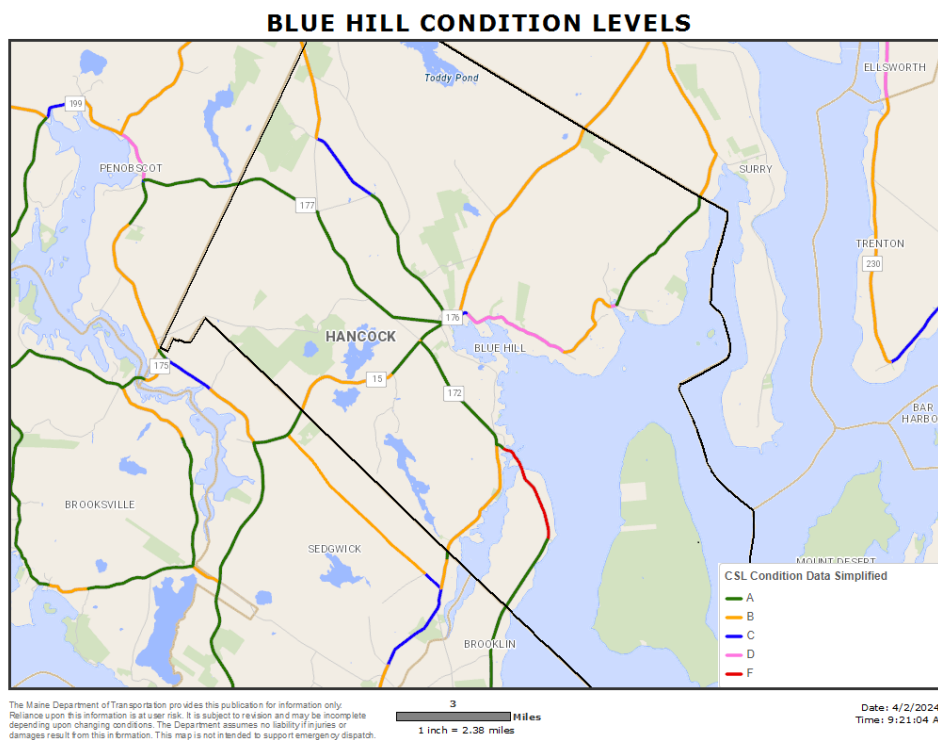
From 2014 to 2023 there were 762 crashes recorded in Blue Hill (See Figure D-3). Over 100 crashes occurred in 2022, which is significantly higher than past years. This is a trend across Hancock County. The highest concentration of crashes over the past decade has been along Main Street/Route 172 through the village area, particularly at key intersections such as Union Street, Water Street, and Parker Point Road. Route 172 coming into Blue Hill from Ellsworth is also notable for crashes.

Figure D-3: Blue Hill and Hancock County Crashes, 2013-2022



Source: MaineDOT Maine Public Crash Query Tool

Figure D-4: Blue Hill Road Condition Levels



Source: MaineDOT Public Map Viewer

(2) Condition

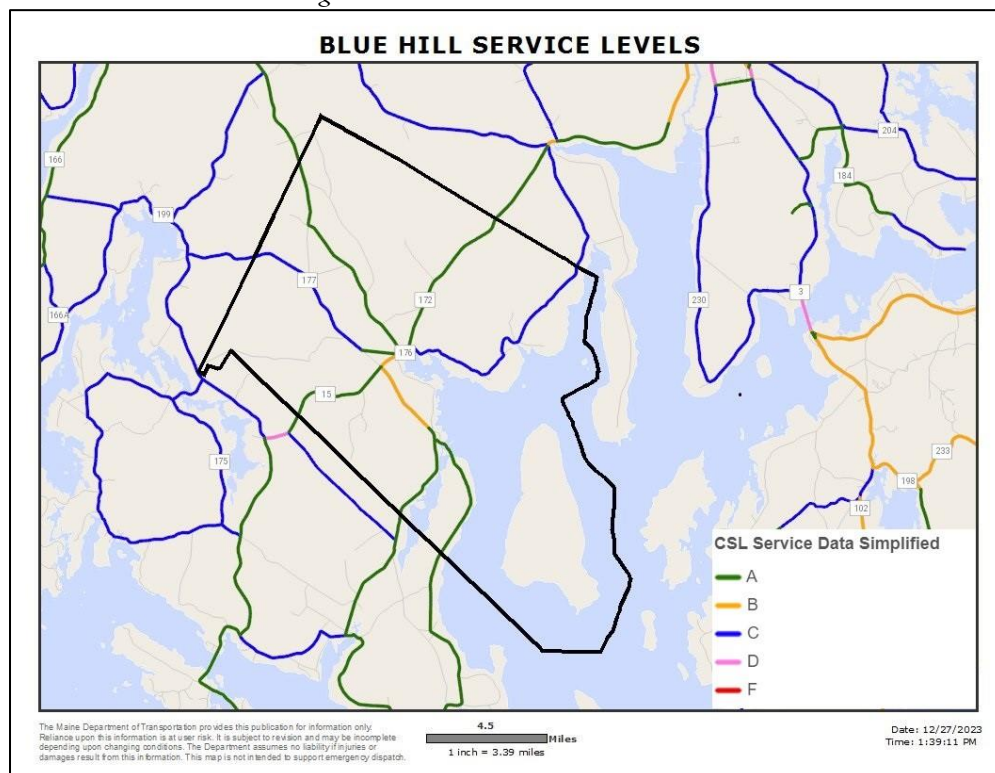
The second part of MaineDOT's CSL evaluation is Condition. This assessment is based on ride quality, pavement condition, roadway strength, and bridge conditions. Figure D-4 shows road condition scores for Blue Hill.

Parts of Tenney Hill Road and Mines Road received failing scores for ride quality and pavement condition. Falls Bridge Road received a failing score for bridge reliability; however, at the time of this Plan, a replacement project for the graded Blue Hill Falls Bridge is nearing completion. Other roads also received low scores due to ride quality and pavement condition.

(3) Service

The Service component of the CSL evaluation includes whether a roadway segment is posted during spring thaw to protect longevity, the weight load restrictions of any bridges, and degree of congestion with specific consideration for peak summer months due to the potential impact on tourism. Route 15 and parts of Route 172 have an overall service level grade of A, shown in Figure D-5.

Figure D-5: Blue Hill Road Service Levels



Source: MaineDOT Public Map Viewer

4.3. Bridges

There are eight publicly owned bridges in Blue Hill. Two of these bridges are owned and maintained by the town: Perkins Bridge and Landry Bridge. Of these bridges, six are owned and maintained by MaineDOT: Village Bridge, Blue Hill Falls Bridge, East Blue Hill Bridge, Mill Stream Bridge, Peter's Brook Bridge, and Carleton Stream.

The bridge inventory and classification system of public bridges in Blue Hill has been established by MaineDOT. The conditions of these bridges range from *poor* to *good*. Table D-3 includes a list of bridges located on state roads, along with the year built, assessed condition, date of inspection and annual average daily traffic count (AADT) for each bridge.

A replacement project for Blue Hill Falls Bridge began in September 2022. According to MaineDOT, the replacement bridge is now open to two-way traffic. The contractor is slated to finish with final paving, stamping and coloring shoulders at the bridge, site clean-up and landscaping in Spring 2024. The contract completion date for the project is June 28, 2024.

Table D-3: Blue Hill Bridge Classification and Inventory

Bridge Name	Owner	Year Built	Crossing	Deck Condition	Superstructure Condition	Substructure Condition	Date of Inspection	AADT
Perkins	Town	2012	Mill Stream	Good	Good	Fair	10/22/22	540
Village	State	1930	Mill Stream	Poor	Poor	Fair	11/17/21	8,199
Blue Hill Falls*	State	1926	Tidal Basin	Poor	Poor	Serious	4/25/22	1,650
East Blue Hill	State	1956	McHeards Cove	Fair	Fair	Serious	9/8/22	670
Mill Stream	State	1956	Mill Stream	Fair	Fair	Good	10/5/22	1,217
Peter's Brook	State	1942	Peters Brook	Satisfactory	Satisfactory	Poor	11/17/21	1,485
Landry	Town	2006	Mill Stream	N/A	N/A	N/A	10/5/20	144
Carleton Stream	State	1968	Carleton Stream	N/A	N/A	N/A	11/17/21	1,485

*Source: MaineDOT; *Blue Hill Falls Bridge replacement project in progress*

MaineDOT defines the Federal Sufficiency Rating of a bridge as “a numeric indicator of the overall value of the sufficiency of the bridge.” A rating will be from 0 (worst) to 100 (best). The Federal Sufficiency Rating is computed with a federally supplied formula using an array of condition and inventory data. The formula is used to identify bridges eligible for federal funding. This rating includes both structural deficiencies as well as functional obsolescence (width or weight capacity are below current design standards) and gives an overall value of the sufficiency of the bridge. Since functional obsolescence may account for a large portion of the rating, low sufficiency ratings (i.e., Village, East Blue Hill, Mill Stream, and Peter's Brook bridges) do not necessarily mean that those bridges are at risk of failure.

Table D-4: Federal Sufficiency Ratings of Blue Hill Bridges

Bridge Name	Year Built	Federal Sufficiency Rating
Perkins	2012	79.6
Village	1930	43.4
Blue Hill Falls*	1926	10.4
East Blue Hill	1956	23.4
Mill Stream	1956	67.4
Peter's Brook	1942	49.5
Landry	2006	95.6
Carleton Stream	1968	96.0

Source: MaineDOT; *Blue Hill Falls Bridge replacement project in progress

4.4. Traffic Flow

MaineDOT maintains traffic volume data for selected roads in Blue Hill (see Table D-5). Typically, AADT counts are done every three years. The higher traffic volume areas are in the village center and onto the South Street roundabout exit. Traffic volumes in Blue Hill did not significantly change between 2011 and 2019.

Table D-5: Annual Average Daily Traffic (AADT) for Selected Locations

Location	2011	2014	2017	2019
IR 448 (BEECH HILL) NW/O SR 15/176 (MINES)	2,100	1,990	2,460	
SR 15 (PLEASANT) NW/O SR 172/176 (MAIN)	2,050	1,880	1,990	1,880
SR 15 @ PENOBSCOT TL	2,450	2,380	2,590	
SR 15/172/176 SW/O SR 15 @ BR# 2893	8,300	7,790	7,950	8,090
SR 15/176 (MINES RD) @ SEDGWICK TL	3,890	3,420	3,910	
SR 172 (ELLSWORTH) NE/O IR 386(MOUNTAIN)			4,300	
SR 172/175 (SOUTH) N/O SR 175 (FALLS BR)	3,040	3,020	3,170	
SR 172/175 SE/O SR 15/176 (MINES RD)	6,860		7,270	
SR 175(FALLS BR) SE/O IR 1458(PARKER PT)	1,720	1,730	1,600	
SR 176 E/O IR 380 (JAY CARTER) @ BR#3668	730	700	650	
SR 177 (UNION ST) W/O IR 1173 (HIGH ST)		1,030	1,000	1,050
SR 177 @ PENOBSCOT TL		780	770	

Source: MaineDOT

4.5. Major Traffic Generators

MaineDOT defines a traffic generator as “any business, government office, or place of employment or destination that generates or attracts traffic.” Serving as the regional hub for the entire Blue Hill Peninsula, Blue Hill is a nexus for various community-orientated activities and services. The Town offers essential amenities like groceries, gasoline, and building supplies, along with medical care services and educational facilities.

Major traffic generators include:

- Schools: The Blue Hill Consolidated School (Pre-K to 8th grade) on High Street and George Stevens Academy on Union Street.
- Large Businesses: Hannaford and the Blue Hill Co-op on South Street, along with other service-providing businesses on South Street and in the village center.
- Public Gather Areas/Activities: Blue Hill Fairgrounds on Ellsworth Road during the annual Blue Hill Fair and the Town Park on Water Street, particularly during community events like *Flash in the Pans* performances.
- The YMCA on Mines Road
- The Blue Hill Memorial Hospital on Water Street

4.6. Parking

Blue Hill provides various public parking options, including on-street parking and designated parking lots. Town-maintained public parking lots are located at the following downtown locations:

- Adjacent to Mill Stream and Main Street
- Water Street, behind Partridge Place
- Town Office (Municipal Parking only)
- Town Park
- Blue Hill Consolidated School
- Town Wharf

Parking can be a challenge in the village, particularly during the summer season when demand is highest. On-street parking is often limited due to narrow streets and heavy traffic, while finding space for additional public parking in high demand areas can be difficult.

4.7. Pedestrian and Bicycle Facilities

Blue Hill's pedestrian and bicycle infrastructure requires attention to ensure the safety and accessibility of the community for all residents. Much of the current pedestrian network is still characterized by uneven surfaces, inconsistent coverage, and gaps in the sidewalk system. Sidewalks in the village, however, are now handicap accessible as the State removed curbs in the sidewalk system and added ramps.

Sidewalks are present along both sides of Main Street through a portion of the village; along the western side of Pleasant Street, from Main Street to High Street; along a portion of Union Street on its northern side; along a portion of Water Street on its western side; and along additional roads throughout the Town.

In terms of bicycle facilities, there are no designated bike lanes or shared lanes on key roadways, forcing cyclists to share the road with motor vehicles. Addressing these issues is crucial to promote active transportation, enhance public health, and reduce traffic congestion.

4.7.1. Key Pedestrian and Bicycle Hazards

Village Route:

- Sidewalks are inconsistent or non-existent on portions of Water St., High St. and Mill St.;
- Crosswalks at several locations require repainting, such as the intersection of Main St., Mill St. and Water St., and across Parker Point Rd. to the library. Crosswalks are not well marked, and paint wears away after a while;
- The transition on the sidewalk from Tenney Hill is steep and abrupt, creating a hazard for mobility-challenged individuals; and
- Lack of signage and wayfinding for pedestrians and cyclists in the village.

South Street Route:

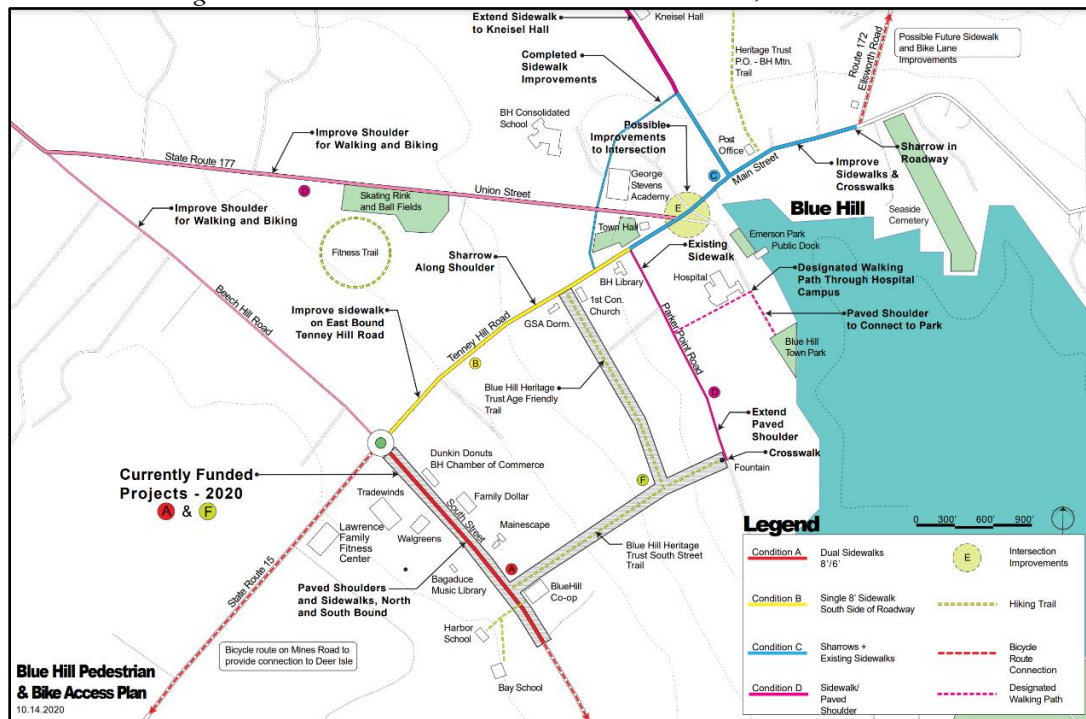
- Sidewalks or painted shoulder lanes are absent on Parker Point Rd. and South St., with some areas having broken or uneven pavement;
- On-street parking on Parker Point Rd. blocks pedestrian access to the sidewalk on Main St.; and
- Limited sight distances and lack of warning signs for motorists at trail crossings, such as the South St. and Mountain Rd. intersection.

4.7.2. Bicycle Facilities

The current bicycle infrastructure lacks designated bike lanes or shared lanes on key roadways, such as Route 172 and Route 175. This forces cyclists to share the road with motor vehicles, which can be dangerous. The Blue Hill Pedestrian & Bike Access Plan (Figure D-6) illustrates planned and suggested active transportation projects. There are a few new projects that should be added, including the:

- South St. Sidewalk (recently completed);
- Assessment of the crosswalks downtown and on South St.

Figure D-6: 2017 Blue Hill Pedestrian & Bike Access Plan, Revised in 2020



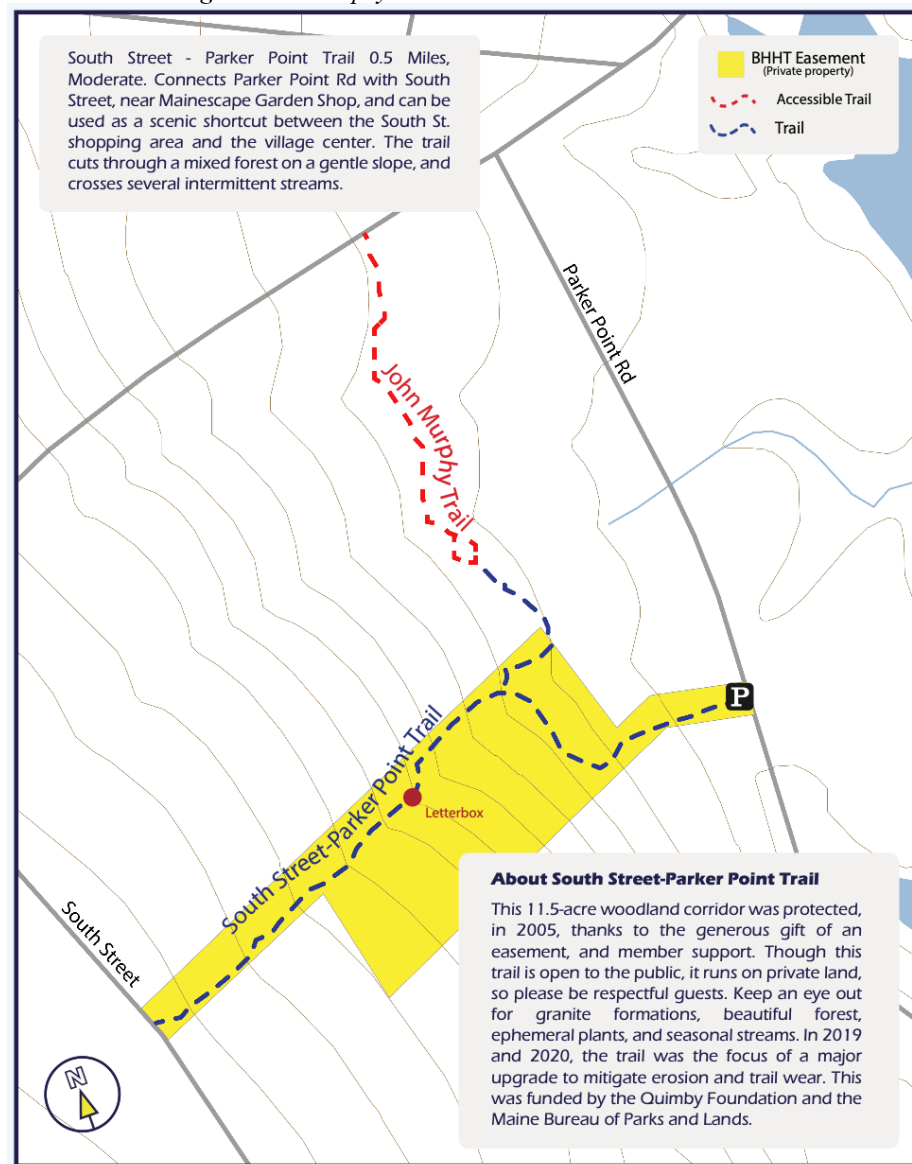
Sources: Haley Ward, Inc and Coplan Associates

4.7.3. Trails

The Murphy, Kaiser, and Parker Point to South St. trails are an additional way to travel on foot and can be used as a scenic shortcut between the South St. shopping area and the village center. From the Blue Hill Heritage Trust:

“The Murphy Trail is a lovely, wooded path with crushed gravel, perfect for a stroll through the woods and suitable for strollers or those with limited mobility. The Kaiser trail connects the Murphy Trail with our Parker Point to South Street Trail and is a typical wooded trail. The Parker Point to South Street Trail has been improved and now includes several new bridges, gravel-covered paths, and a long staircase up the slope coming out in between Mainescape and the Blue Hill Coop.”

Figure D-7: Murphy and South Street-Parker Point Trails



Source: Blue Hill Heritage Trust

4.8. Public Transportation and Mobility Issues

There is limited availability of regular public transportation or mass transit services for Blue Hill residents. Bangor offers year-round bus connections to Portland and Boston via Greyhound Bus lines and Concord Coach lines, but there is no public transportation to connect to either of these carriers. Downeast Transportation is a private company that provides service from Blue Hill to Bucksport, Ellsworth, Bangor, and other locations on the peninsula, but scheduled route times are infrequent. Downeast Community Partners is a nonprofit service provider that offers on-demand, limited services (including transportation) for eligible clients referred to by Maine Department of Health and Human Services. Other organizations such as Friends in Action offer transportation to and from medical

appointments, as well as to other destinations. These services involve pre-arranging rides and in some cases are only available to qualified individuals.

4.8.1. Bus

Buses operating within 40 miles of downtown Blue Hill consist of the following:

- Downeast Transportation provides service from Blue Hill to Bucksport, Ellsworth, and Bangor.
- Concord Coach Lines and Greyhound Lines offer service to several mid-coast communities along Rt. 1.

Via Downeast Transportation's Ellsworth-Blue Hill route, stops are made twice per day at the Town Hall and The Bay School, at 7:00 am and 3:00 pm. This route runs seasonally, Monday-Friday, from September through June.

Table D-6: Downeast Transportation Ellsworth-Blue Hill Route

	Read Down	Read Up
Ellsworth City Hall	7:20am	3:30pm
Surry - Pugnuts	7:30am	3:15pm
Blue Hill Town Hall	7:40am	3:05pm
Bay School	7:50am	3:00pm

Source: Downeast Transportation

Additionally, morning and afternoon stops are made at the same locations via the service's Stonington-Ellsworth route that runs weekly on Fridays.

4.8.2. Passenger Rail and Airports

Blue Hill has never had rail service. The nearest freight rail service is in Bucksport.

Blue Hill is served by the Bangor International Airport, which has regularly scheduled passenger air service to various locations on the east coast. There also is limited passenger service from the Hancock County Airport in Trenton, which is more heavily used during seasonal months.

4.9. Road Maintenance

4.9.1. State Roads

There are eight projects that include work in Blue Hill listed in the MaineDOT Work Plan for 2024-2026.

Table D-7: MaineDOT Work Plan for Blue Hill, 2024-2026

Year	Location Description	Assets	Score Group	Scope of Work	Estimated Funding
2024	Route 15; Beginning at the Sedgwick town line and extending north 2.09 miles.	Rural Highways	Highway Rehabilitation	Highway Construction/Rehabilitation	\$400,000

Year	Location Description	Assets	Score Group	Scope of Work	Estimated Funding
2024	Route 15; Village Bridge (#2893) over Mill Stream. Located 0.04 of a mile northeast of Water Street.	Highway-Minor Spans	Bridge Superstructure Replacement – PE Only	Highway - Minor Spans	\$380,000
2024	Beginning 0.22 of a mile southeast of Parker Point Road and extending southeast 0.08 of a mile.	Rural Highways	Highway Improvement - PE Only	Highway Safety and Spot Improvements	\$105,000
2024	Route 176; East Blue Hill Bridge (#3668) over McHeards Cove. Located 0.05 of a mile east of Jay Carter Road.	Highway - Bridges	Bridge Replacement – PE Only	Highway - Bridges	\$665,000
2024	Route 172; Beginning 0.070 of a mile south of Turkey Farm Road and extending north 11.31 miles to Route 3.	Rural Highways	Light Capital Paving Preservation	Highway Paving	-
2025	Route 15; Beginning 0.37 of a mile north of Route 172 and extending north 0.15 of a mile.	Rural Highways	Drainage Improvements	Highway Safety and Spot Improvements	\$125,000
2025	Route 15; Beginning at the Sedgwick town line and extending north 2.09 miles.	Rural Highways	Highway Rehabilitation	Highway Construction/Rehabilitation	\$8,810,000
2025	Beginning at Route 3 and extending southeast 19.47 miles to Route 172.	Rural Highways	Light Capital Paving	Highway Paving	-

Source: MaineDOT Work Plan, 2024-2026

4.10. Town Roads

In 2019, Blue Hill commissioned Haley Ward, Inc to develop a maintenance priority plan for town-maintained roads. Haley Ward staff found many of Blue Hill's rural roads have drainage issues, with most ditches not showing clear indications of maintenance.

Recommendations were categorized into high, medium, and low priority projects, with high priority recommendations requiring significant improvements within five to ten years, medium priority projects to be addressed after high priority ones, and low priority recommendations focusing on roads in good condition needing only routine maintenance. The Road Maintenance Priority Plan (Figure D-8) is based on these findings, and detailed recommendations, proposed repair strategies, and estimated project costs can be found in the 2020 Road Evaluation Report.

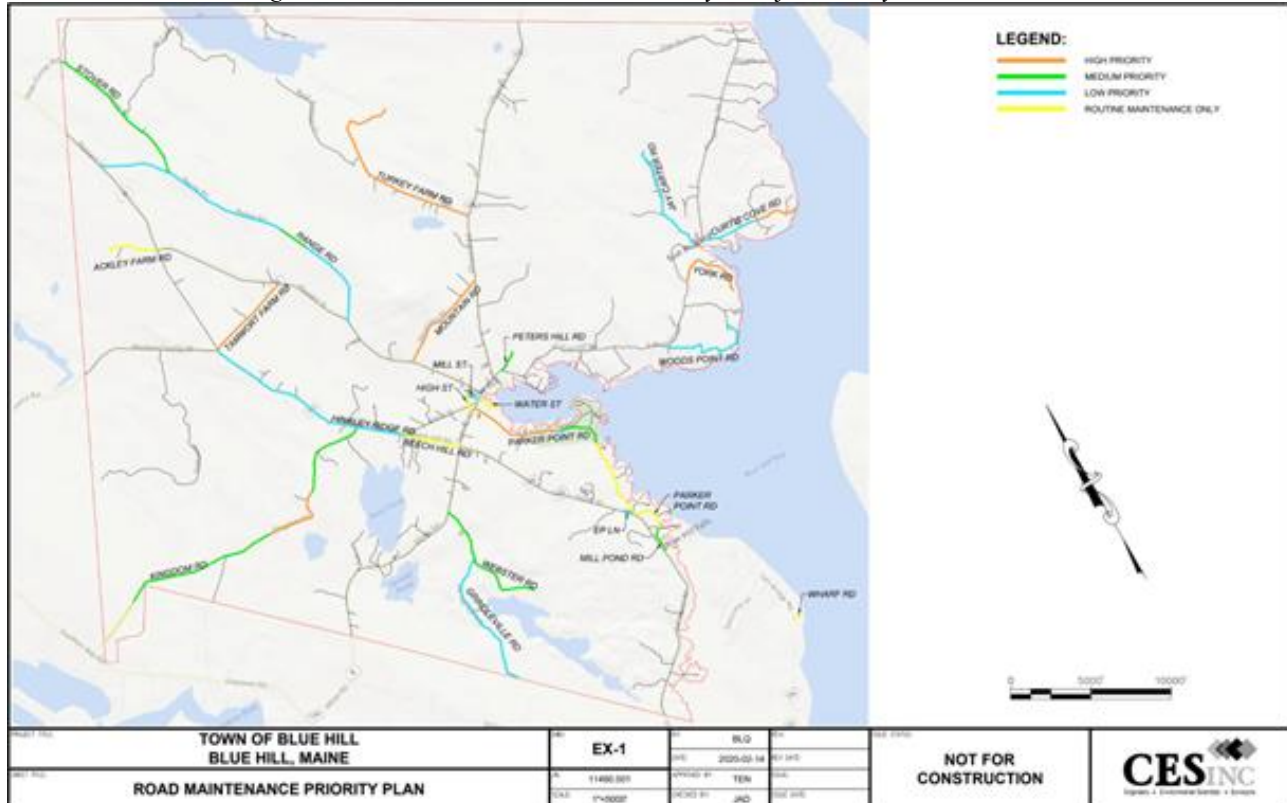
The report found that significant capital investments are needed to improve the Town of Blue Hill's roads, with high, medium, and low priority recommendations estimated to cost \$2,571,000, \$3,136,000, and \$2,179,500, respectively. Additionally, costs may arise if the Town decides to pave existing gravel road segments.

Blue Hill has made a series of investments to address the deficiencies detailed in the Road Maintenance Priority Plan. Road projects from 2020 to 2023 include:

- Began construction of a new sidewalk on South Street
- Falls Bridge – began bridge replacement project
- Complete overhaul of Tamworth Road with new pavement and paint

- Significant improvement to Mountain Road, Stover Road, and Turkey Farm Road
- New culvert on Parker Point Road and Kingdom Road
- Major ditching, tree cuttings, and new asphalt on Grindleville Road

Figure D-8: Town Road Maintenance Priority Plan from Haley Ward, Inc



Source: Haley Ward, Inc

4.11. Regulations & Design Standards

Local road construction standards usually address required width of the right of way, required width of pavement, depths and types of base material, thickness of pavement, minimum and maximum grades and slide slopes. Page 18 of the Town's Shoreland Zoning Ordinance defines standards for the construction of roads and driveways in shoreland areas, including various setback requirements; standards for the banks and grades of roads and driveways; and restrictions to developing these systems in a Resource Protection District.

Additionally, the Town's Commercial Site Plan Review Ordinance establishes minimum standards for traffic movement, congestion, and safety:

Minimum Standards:

- 1) Vehicular circulation: The layout of the site shall provide for the safe movement of passengers, service, and emergency vehicles through the site.

- a) Clear routes of access shall be provided and maintained for emergency vehicles to all portions of the site and shall be posted with appropriate language.
 - b) The layout and design of access ways and parking areas shall provide for safe and convenient circulation of vehicles, including delivery vehicles, and prevent their backing out onto a street.
 - c) All roads shall be designed to harmonize with the topographic and natural features of the site. The road network shall provide for vehicular and pedestrian safety, all season emergency access, snow storage, and delivery and collection services.
- 2) Pedestrian circulation: The project shall provide for a system of pedestrian circulation within the site. This system shall connect with existing sidewalks if they exist in the vicinity of the project.

5. Analyses

5.1. Community and Regional Transportation Concerns

The main concerns in Blue Hill include road maintenance and repair needs, as well as a lack of sidewalks and safe biking routes. The current bicycle infrastructure lacks designated bike lanes or shared lanes on key roadways. This forces cyclists to share the road with motor vehicles, which can be dangerous for inexperienced riders or because of inattentive drivers. Addressing these issues is crucial to promote active transportation, enhance public health, and reduce traffic congestion.

Regionally, a lack of public transportation on the Blue Hill Peninsula is a concern. The region is served minimally by Downeast Transportation and other on-demand services. Additionally, as more and more motorists are switching to fully electric vehicles (EVs) and plug-in hybrid electric vehicles (PHEV), demand will increase for charging opportunities. Towns and regions that are poised to provide this service early may have a competitive advantage over others for tourism revenue and attracting future residents. Along with fiber Internet, EV infrastructure will be an important component for future development in the region.

5.2. Road Conflicts

Sometimes there are conflicts caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well. In Blue Hill, Route 172 passes through the village. Vehicle speeds and pedestrian safety concerns should be consistently reevaluated to maximize overall safety.

5.3. Connectivity

As previously discussed above, portions of the current pedestrian network are characterized by uneven surfaces, inconsistent coverage, and gaps in the sidewalk system. Attempts to address this issue in the future could include conducting an inventory of unmaintained/missing sidewalks and noting where

accessibility could be improved, as well as devising a sidewalk maintenance plan to upgrade current conditions that is integrated into the Town's Road Maintenance Priority Plan.

5.4. Relevance of State and Regional Transportation Plans

The State of Maine has several transportation plans that may have relevance for Blue Hill. The Long-Range Transportation Plan Update 2050 "will convey MaineDOT's vision for a multimodal transportation system that not only provides for safe and efficient travel throughout the state, but also supports a high quality of life and economic opportunity in all of Maine's villages and communities." Also underway is the Maine Strategic Transit Plan 2025. MaineDOT is particularly interested in looking at new models and approaches for providing public transportation more efficiently and effectively in Maine's rural areas like Blue Hill.

A Statewide Active Transportation Plan, created by MaineDOT, includes an assessment of Highway Corridor Priority 3 and 4 roads throughout Maine, such as Routes 172 and 176 in Blue Hill, to highlight shoulder-enhancement opportunities in rural areas. The Town can work with MaineDOT to encourage public participation and prioritization of enhancements.

MaineDOT regularly includes the Town in its multi-year Work Plans. See Table D-7 above. The Route 172 paving project in 2024 also includes the towns of Ellsworth and Surry, and the Route 3 to Route 172 paving project in 2025 also includes the towns of Orland and Surry.

5.5. Budgeting for Road Maintenance and Improvements

As noted previously, MaineDOT has several infrastructure improvement projects planned from 2024-2026 with combined estimated funding of over \$10,000,000. Most of this comes from a Route 15 highway rehabilitation project starting in 2024 and continuing into 2025; estimated funding for this project is nearly \$9 million.

The 2019 Haley Ward maintenance priority report found that significant capital investments are needed to improve the Town's roads, with high, medium, and low priority recommendations estimated to cost \$2,571,000, \$3,136,000, and \$2,179,500, respectively.

Blue Hill has an arrangement with MaineDOT to perform maintenance work on State roads for which the Town is then reimbursed by the State. The municipal appropriation in 2022 for roads and sidewalks, including snow removal, was \$1,393,450.

There are three snowplow routes for the town. At the time of writing, plowing is contracted to RL Cousins & Sons of Blue Hill.

In the 2023 Annual Town Meeting Warrant the Select Board recommended a \$2,000,000 appropriation for Mountain Road repairs with half of the money coming from property taxes and half from a loan. Additionally, the Select Board and Budget Committee recommended \$959,068 for the maintenance and improvements of highways and sidewalks. From the 2023 Town Warrant:

ARTICLE 32. To see if the Town will vote to raise and appropriate \$200,543 from Property Tax, and appropriate \$600,000 from Auto Excise Tax, \$49,950 from Local Road Assistance, the full amount of the Parker Point Road Reserve (approximately \$38,375), and \$70,200 from Unassigned Funds for the maintenance and improvements of highways and sidewalks.

ARTICLE 33. To see if the Town will vote to appropriate \$2,000,000 for major reconstruction of Town roads, and to fund this project, raise \$280,000 from Property Tax, appropriate \$680,000 from Unassigned Funds, and authorize the Select Board of the Town to issue general obligation bonds or notes in the name of the Town of Blue Hill in a principal amount not to exceed \$1,040,000, which bonds or notes may be made callable.

5.6. Parking Issues and Standards

Parking can be a challenge in the village, particularly during the summer season when demand is highest. On-street parking is often limited due to narrow streets and heavy traffic, while finding space for additional public parking in high demand areas can be difficult. Consistent enforcement of parking has also been a challenge.

The Town needs more public parking near saltwater access points. This is currently available in some locations, including the Village Wharf, the Town Park, and South Blue Hill Wharf. A large amount of property along the shoreline is residential, and therefore private, which limits opportunities for additional parking. As illustrated further on the Existing Land Use map in Chapter O, undeveloped parcels are present along the shoreline, opening the possibility for future parking that enhances saltwater access.

The Town's Shoreland Zoning Ordinance defines parking standards in shoreland areas. It establishes minimum setback requirements in the Commercial Fisheries/Maritime Activities District (25 feet), and those for parking areas serving boat launching facilities in districts other than the General Development I District and Commercial Fisheries/Maritime Activities District (50 feet). The appropriate size of proposed parking facilities and other requirements are also stated. Much of the

shoreline in the village falls within the General Development I District, which requires a setback of at least 25 feet for development. These requirements restrict the creation of parking in certain areas of the village for the benefit of the Town's natural resources.

The Town's Commercial Site Plan Review Ordinance establishes minimum parking standards for commercial land uses in the Town, such as commercial recreation facilities and campgrounds:

- All commercial recreation facilities shall have adequate off-street parking for the anticipated maximum attendance at any event.
- A minimum of three hundred (300) square feet of off-street parking plus maneuvering space shall be provided for each recreational vehicle, tent, or shelter site.

5.7. Transit Services

As described previously, Blue Hill is served by two routes of the Downeast Transportation fixed-route bus service; however, the Ellsworth-Blue Hill Route only operates seasonally (September to June), and the Stonington-Ellsworth Route only runs weekly on Fridays. Other agencies and services also provide on-demand transportation assistance for select groups and to additional areas of the county. Blue Hill is served by Bangor International Airport, and there are no ocean, air, or rail terminals in the Town.

5.8. Local Access Management

Access management represents an effort to increase safety and reduce congestion by limiting the number of exits and entrances onto primary roadways. Good access management promotes safe and efficient use of the transportation network and encompasses a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. In Blue Hill, access management would be relevant for Route 172, which runs through the village. This road is controlled by MaineDOT. Efforts to improve the safety and accessibility of this area should be ongoing and in cooperation with MaineDOT.

5.9. Subdivision Roads

Blue Hill has a Subdivision Ordinance, last amended in April 2023, which addresses roads in regard to referencing and displaying any that are existing, and any existing frontage, in a preliminary subdivision application. Additionally, "Names and lines of all existing and proposed streets; lengths of all straight lines; the angle deflection, radius, length, and central angle of all curves; tangent distances; and bearings" are required in the final application.

6. Goals and Objectives

Goal: Safely and efficiently ensure a convenient, well-maintained, economically feasible, transportation system is available to all residents.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Increase options for public transportation, transit, and mobility services to all residents.	Designate a Transportation Committee to assess transportation needs, to review bus, ride share, biking, and other alternative methods of transportation, and to make recommendations to the Town.	Select Board	2024
	Review parking needs in Blue Hill, including at Town wharves, and suggest a plan to provide additional parking.	Transportation Committee	Ongoing
	Integrate road safety, aging-in-place, and climate resilience goals when scoping projects and seeking funding.	Transportation Committee. Climate Resilience Committee,	Ongoing
	Work collaboratively with local municipalities to implement a regional public transportation plan.	Transportation Committee, HCPC	2025 – Ongoing
Improve efficiency of Blue Hill's transportation system	Review ordinances to promote transportation efficiency and consistency with state and federal standards	Planning Board, Transportation Committee	2025 - 2026
	Review ordinance standards for subdivisions and for public and private roads to foster transportation-efficient growth patterns and provide for future street and transit connections, where appropriate	Planning Board, Transportation Committee	2025 – 2026
Continue to maintain and improve existing roadways in Blue Hill.	Systematically review Town-owned roads and bring them up to acceptable standards.	Select Board	Ongoing
	Advocate for Maine Department of Transportation investment in Blue Hill's state-owned roads.	Select Board, Road Commissioner	Ongoing
Goal: Support transportation system for non-drivers in coordination with regional partners.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Investigate options for expanding public transportation	Anticipate and plan for ecofriendly methods of transportation.	Select Board	2024 – Ongoing
Investigate options to improve and make safer pedestrian and bicycle movement	Implement the Town Connectivity Plan for improved non-motorized uses in Blue Hill.	Select Board	2024 - Ongoing
	Increase safety of crosswalk locations.	Select Board	2024 – Ongoing
Promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize vehicle miles traveled	Review ordinances to promote transportation efficiency consistent with State and Federal standards, and to foster transportation-efficient growth patterns and provide for future street and transit connections	Select Board	Ongoing
	Increase access to parking by identifying potential, responsibly located parking opportunities in Blue Hill village; improve parking signage	Transportation Committee	Ongoing
	Explore the MaineDOT Village Partnership Initiative (VPI); identify potential areas of study throughout research the program's ability to maximize the efficiency and safety of vehicular and pedestrian travel	Transportation Committee, HCPC, Select Board	2024 - Ongoing

Chapter E: Public Facilities and Services

1. Purpose

The adequacy of a community's public facilities is important for the quality of life of its residents and for their safety and economic prosperity. This chapter provides an understanding and analysis of current conditions for Blue Hill and potential future needs and issues. Specifically, the chapter aims to:

- a. Identify and describe Blue Hill's public facilities and services; and
- b. Assess the adequacy of these services to handle current and projected demands.

2. Key Findings & Issues

Blue Hill provides many public facilities and services, most of which are conveniently located in the central village area. Potential expensive capital expenditures in the near- and mid-term include protecting the wastewater treatment plant from sea level rise (as well as improving treatment processes), several road projects, and investments to protect/maintain the Town's educational facilities. The Town has closed its landfill and transitioned to a full transfer mode of operation. Fiber-based broadband internet is now available to all who want to subscribe. Going forward, the Town may consider additional investment in public works equipment and services to improve quality and reduce costs, as compared to the current practice of relying largely on contracts with outside firms.

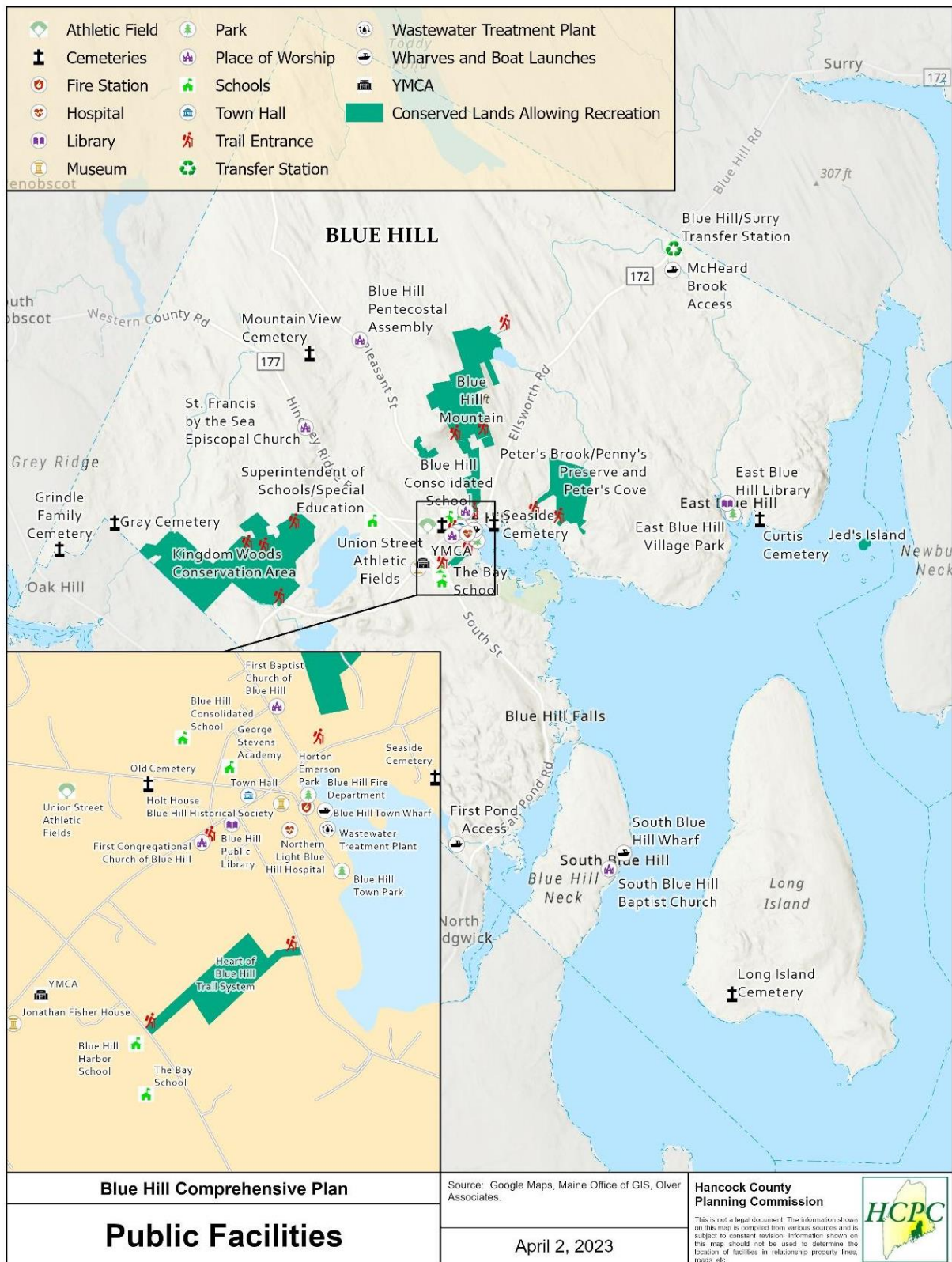
3. Public Opinion Survey Results

The library is the most revered public facility in Blue Hill with over 95% of respondents rating its quality as excellent or good. Other Town facilities and services that received favorable quality ratings were the snow removal and sanding of roads, fire protection services, ambulance services and the Blue Hill/Surry Transfer Station. Among the public facilities and services that generated the most responses of "needs improvement" were the quality of town road maintenance (42.6%), snow removal and sanding of sidewalks (21.8%), sidewalks in a general sense (57.8%) and recreational facilities (25.3%).

4. Condition and Trends

The locations of Blue Hill's public facilities are shown on the map below (Figure E-1). The general physical condition of the facilities and equipment varies. Some, like portions of the sanitary sewer lines, are quite old and will need to be replaced over time. Others, like some road sections and some playground equipment, are newer and in good condition.

Figure E-1: Location of Public Facilities



4.1. Capacity and Anticipated Demand

The capacity of Blue Hill’s public facilities to meet anticipated demand varies and is discussed individually below. Some major facility improvement needs that have been identified include upgrades to the wastewater treatment plant, reconstruction of certain Town roads, and upgrades to educational facilities. Factors that will affect the demand for improvements and expansions of municipal systems, beyond simple aging of equipment, include overall population growth, the aging of the population, and the phenomenon of newcomers frequently expecting service levels to be similar to the more urban locations, in which many previously resided.

4.2. Ownership and Management of Systems

In the case of the sanitary sewer system, the Town of Blue Hill owns the facilities and contracts with an engineering firm, Olver Associates, to operate it. The Town owns and operates its elementary school (PK-8) but does not own the land on which the building stands — this land is used pursuant to a long-term lease with George Stevens Academy, a private institution that also serves as the primary high school for Blue Hill and a number of other peninsula communities. Two other schools — Blue Hill Harbor School and The Bay School — are also private.

4.3. Estimated Costs of Needed Capital Improvements to Public Facilities

One of the sizable projects facing Blue Hill is the replacement of major equipment at its wastewater treatment plant (as well as protection from sea level rise). The Town is undertaking a \$6,000,000+ upgrade to this facility. Additional capital improvement costs are discussed individually below and in the Fiscal Capacity chapter.

Table E-1: Estimated Future Costs and Timeline

Immediate	\$3.5 million
Short-Term	\$1.8 million
10-20 Years	\$5.3 million
20+ Years	\$29.75 million

4.4. Sewerage and Water Supply

Blue Hill’s public sewer infrastructure varies in age, from new to approximately 50 years old, and serves approximately 322 customers. The wastewater treatment plant has been in operation since 1975. It is licensed to discharge a monthly average flow of 100,000 gallons per day (GPD) of secondary treated municipal wastewater to Blue Hill Harbor.⁶ The treatment facility has normal peak flows as high as 300,000 GPD. The actual flow of the plant has averaged around 56,000 GPD with a maximum

⁶ Proposed draft Maine Pollutant Discharge Elimination System (MEPDES) permit contained in a letter from Breanne Blaisdell, MaineDEP Bureau of Water Quality Management to Annaleis Hafford, P.E., Olver Associates, July 28, 2020.

monthly flow of around 99,000 GPD. There are two pump stations that convey wastewater to the facility, the Main Pump Station and the Route 176 Pump Station.

As discussed above, Olver Associates has determined that due to the age of the existing infrastructure, climate change, process deficiencies, and license violations related to the plant hydraulics approximately \$5 million will be needed to make immediate and short-term improvements to the plant. The existing wastewater treatment plant operates quite well; however, over time, flows and loadings have increased, and, with the rising tides, the effluent cannot always flow from the plant by gravity. The condition of the pump stations and other equipment are showing age and upgrades are needed.

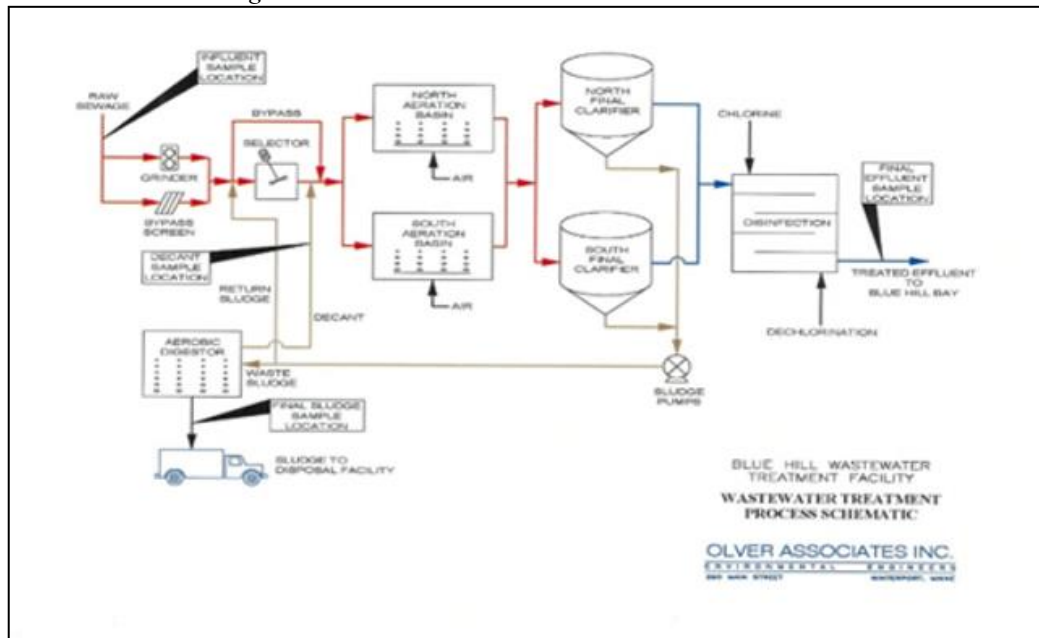
Figure E-2: Existing Wastewater Collection System



Source: Olver Associates

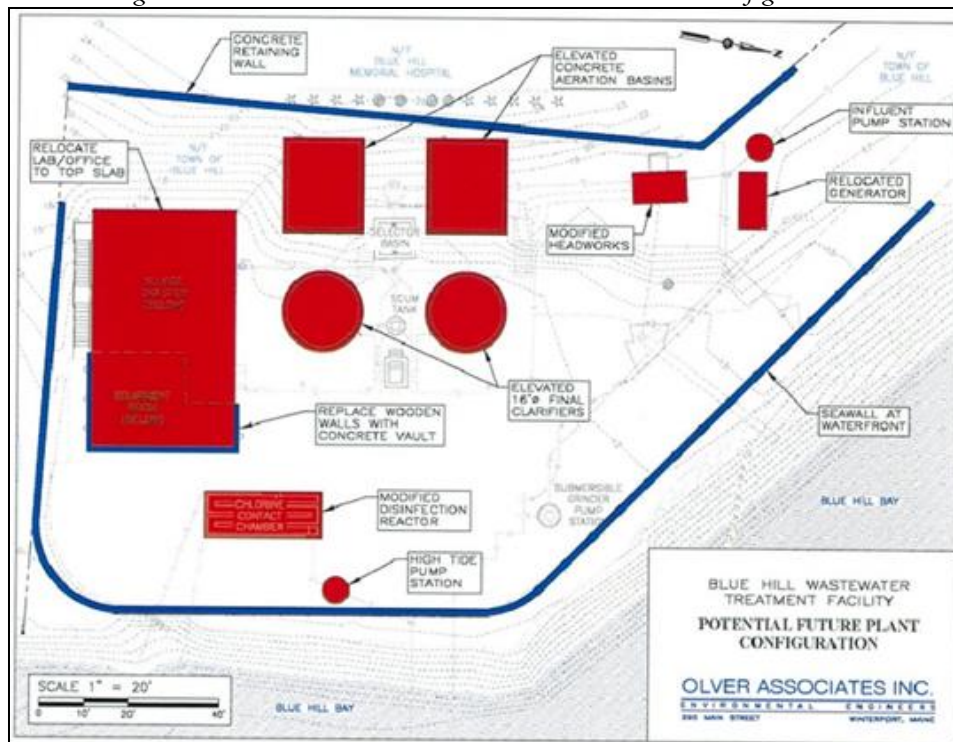
Two plant schematics are shown below. Figure E-3 is a process diagram for the existing plant, and Figure E-4 shows a potential reconfiguration of the facility, in large part intended to address sea level rise due to climate change. The planned upgrades will be phased overtime to minimize the impact on the community. The first phase is already funded and in the early design phase.

Figure E-3: Wastewater Treatment Plant Process Schematic



Source: Olver Associates

Figure E-4: Potential Future Wastewater Treatment Plant Configuration



Source: Olver Associates

The sewer collection system that brings the sanitary sewage to the treatment plant was built in 1975 and went through a major expansion and renovation in 1999. Approximately 11,000 feet of 8-inch pipe and 650 feet of 4-inch pipe were installed at that time. In 1999, an additional 3,000 feet of 8-inch PVC pipe and 1,500 feet of 4-inch PVC pipe were installed. A \$2 million sewer system expansion was completed in 2011. Nearly half of the original collection lines have been upgraded to PVC, with most of the remainder being Asbestos Cement (AC). Major collector sewers are located on West Main St., Union St., Pleasant St., East Main St., and Ellsworth Rd. Wastewater from the east side of the village flows through a force main that passes under the Mill Stream bridge on Main St. Flows from the west side of the village flow by gravity directly to the treatment plant. The sewer lines have the capacity to convey the average and peak system flows.

Of the 322 customers, there are currently 197 residential users, 93 commercial users, and 6 governmental users. There are no industrial users within the sewer system. As the Town has grown, the capacity of the system has needed to increase, which was done with the 1999/2000 upgrade; this increased the daily flow from 74,000 GPD to 100,000 GPD and the peak flow from 240,000 to 300,000 gallons per hour.

4.5. Septage

The Town's wastewater treatment plant does not accept septage due to its size. Outside of the sanitary sewer district, stand-alone treatment facilities are used for the disposal of sanitary waste. Since 1975 there have been 1,325 septic system permits granted to Blue Hill property owners.⁷ The Town subsidizes the cost of pumping/disposal of septic systems in recognition of the fact that the sewerage system does not serve all Blue Hill business and residential locations.

4.6. Solid Waste Disposal and Recycling

The Towns of Blue Hill and Surry jointly operate a transfer station that provides service to residents and property owners of Blue Hill, Brooklin, Brooksville, Sedgwick, and Surry. In 2015, the landfill portion of this facility was closed, thus enabling the facility to become a transfer and recycling facility. Single-sort recycling is provided at the station. Household waste is accepted free of charge to residents and property owners of the five participating towns; there are fees for other waste such as appliances, construction and demolition debris, furniture, universal waste (e.g., TVs and monitors), tires, and waste oil.

⁷ Maine Dept. of Health & Human Services, Septic System Permit Search, <https://apps.web.maine.gov/cgi-bin/online/mecdc/septicplans/index.pl>, accessed March 30, 2023.

The Blue Hill/Surry Solid Waste Committee (which manages the joint transfer station) is a member of the Municipal Review Committee (MRC), a regional non-profit organized to assist member municipalities in disposing of their solid waste in an economical, environmentally friendly manner. Under its agreements with the MRC, the transfer station has committed to sending essentially all of its municipal solid waste (other than certain recyclables, demolition debris, etc.) to a facility identified by the MRC.

At present, most of this waste is delivered to Juniper Ridge landfill in Orono, Maine; the longer-term plan is for the waste to be sent to a new facility in Hampden, Maine for sorting, processing, and waste-to-energy generation. For other solid waste, the transfer station sells some recyclables where market prices justify the cost; other single-sort recyclables are sent to Eco-Maine, a recycling company in southern Maine. In 2018, the Blue Hill/Surry Transfer Station shipped out 4,248 tons of municipal solid waste and approximately 786 tons of construction and demolition debris, as well as additional recycled tonnage of single stream/single sort materials, appliances, other scrap metal and electronics.

4.7. Stormwater Management

Stormwater on Blue Hill's roads is mostly allowed to sheet flow onto adjacent lands or managed with ditches and culverts, but some of the village streets have subsurface storm lines (e.g., see photo below). The current system adequately handles overflows, and culverts are being replaced on Town roads as needed.

Figure E-5: Pleasant Street Catch Basin



Source: Google Maps Street View

4.8. Power and Communications

Electric power to Blue Hill is provided by Versant Power, an investor-owned utility, formerly known as Emera Maine. As of 2023, Versant's total rate (delivery plus standard offer) was 23.0¢/kWh. This compares with 20.6¢/kWh from Central Maine Power, 16.7¢/kWh from Eastern Maine Electric Cooperative, and 11.6¢/kWh for the Houlton municipal utility.

In 2020 Versant Power built a new substation on the Ellsworth Road near Turkey Farm Road to replace an aging 50-year-old facility at the bottom of Greene's Hill. The distribution circuit that it split up was one of the top five in Versant's system for length of the line and number of customers served. Splitting up the circuit reduces the number of customers affected if there is an outage on the line.

In terms of communications, the primary concern in Blue Hill, as in many other Maine communities, has been how to obtain affordable and reliable broadband services for all Blue Hill properties. The Town has a Broadband Committee that has been working in concert with similar groups in Brooksville, Deer Isle, and Penobscot toward this goal (see Broadband chapter). The towns have established the following baseline goals for the desired broadband network:

- **Fiber-based**
- **Ubiquitous**—available to any home or business currently served by the electrical grid or phone lines.
- **Gigabit Capacity**—must provide at least 1,000 megabits/second connectivity.
- **Symmetrical**—must have upload speeds that are as fast as those for downloading.
- **No Data Caps or Throttling**
- **Modest and Fair Installation Costs**
- **Collaboration**—Participating towns work together to make the project more competitive.

As further discussed below, a subsidiary of Consolidated Communications — Fidium Fiber — began stringing fiber with federal funding assistance throughout Blue Hill in 2022. As a result, it is anticipated that high-speed internet service is available to any property in Blue Hill that wants it, thus meeting many of the community's broadband internet goals.

4.9. Fire Protection

Blue Hill has its own fire department. The average response time to a fire is 7-9 minutes. The response time to the most remote part of town is 11-13 minutes. Additional coverage is available through automatic mutual aid arrangements with the Sedgwick fire department and as-requested mutual aid with 31 other towns and government agencies.

The present fire station is a 7,084-square-foot structure on Water Street, which was built in 1967 and also houses the Peninsula Ambulance Corps. It contains a 1,089-square-foot training room, four heated bays (3,411 square feet) for the storage of vehicles, and ambulance facilities of 2,584 square feet.

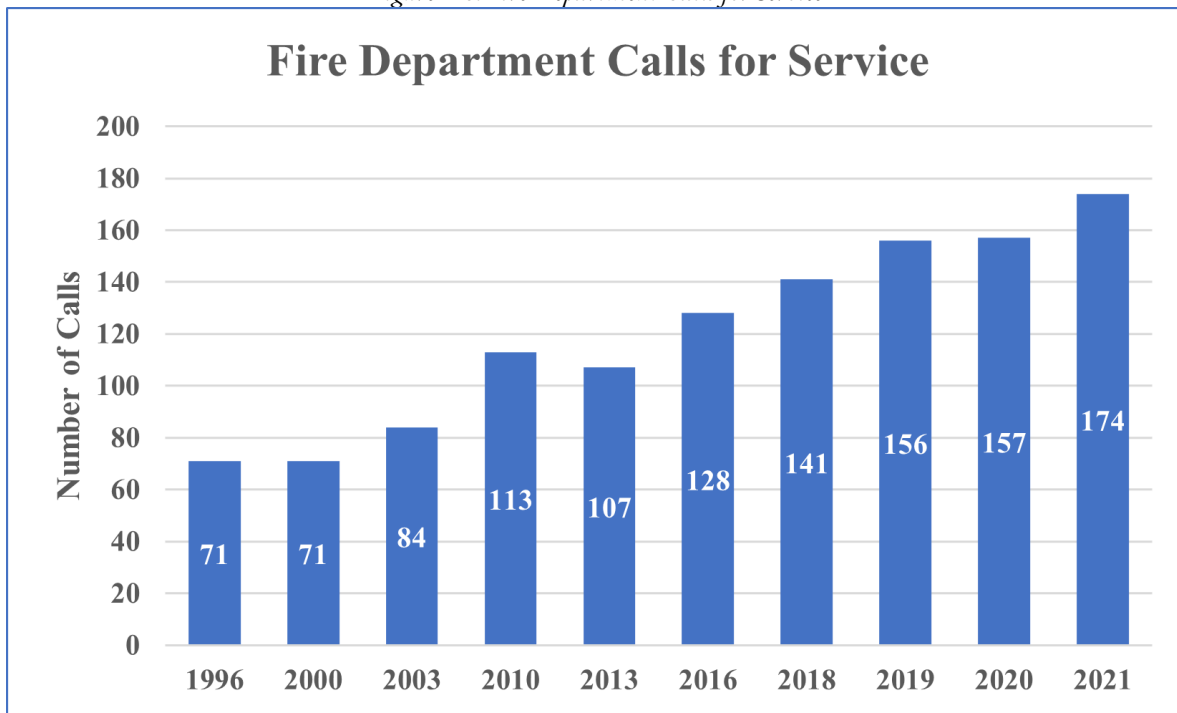
The Blue Hill Fire Department is staffed by volunteers — the Blue Hill Fire Company — who respond when dispatched by the Hancock County Regional Communications Center (HCRCC) in Ellsworth. The Blue Hill Fire Company is a non-profit organization and raises funds for training and

equipment. There are additional funds to supplement the Town's annual budget. The Blue Hill Fire Company Auxiliary also raises funds, primarily for local charities, through such events as yard sales and an annual Thanksgiving Pie sale.

Fire prevention is an important goal of the Blue Hill Fire Department. The Department offers community education programs including:

- School Visits: firefighter awareness and fire prevention
- Retirement Community visits and drill participation
- Field Trips: firefighter awareness, fire prevention, and touch-a-truck
- Workplace Education: fire extinguisher training

Figure E-6: Fire Department Calls for Service



Source: Blue Hill Fire Department

Table E-2: Fire Department Vehicles, 2023

	Year	Condition	Years of Service Remaining
Central States Medium Rescue/Light/Air	1995	Used	2-3
Metal Fab Tanker/Pumper	2002	Good	10
Classic Fire/E-One	2008	Good	18
Spartan/4-Guys Custom Pumper	2018	Like New	25
Spartan/4-Guys Custom Heavy Rescue	2025	Future Purchase	

Source: Blue Hill Fire Department

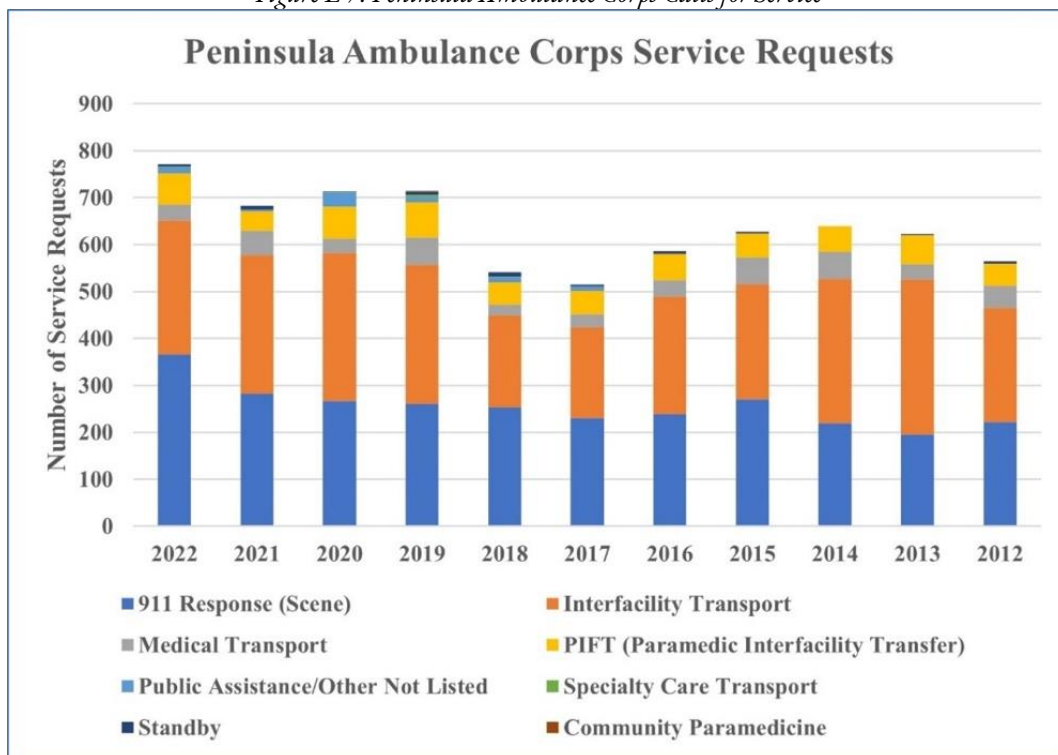
4.10. Emergency Medical Response

Ambulance coverage is provided by Peninsula Ambulance Corps, Inc. (PAC), a non-profit organization partially funded by donations requested from the towns served. The Corps is housed in the Blue Hill Fire House. There are eight full-time and thirteen part-time and per-diem staff (paramedics and EMTs). The fleet consists of two ambulances on duty with a third as a spare when one of the others needs service.

The PAC responds to more than 1,600 calls per year with approximately half coming from Blue Hill. The average response time is about 12 minutes. The PAC is independent financially and structurally from the hospital although the two organizations maintain supportive and cooperative ties.

The main challenge to PAC, as with many other ambulance services, is that government and private insurers do not fully cover the costs of service runs, such that, in 2022, even when including all payors, PAC was only paid \$0.48 for every \$1 billed. Staffing shortages are also a significant problem.

Figure E-7: Peninsula Ambulance Corps Calls for Service



Source: Peninsula Ambulance Corps

4.11. Law Enforcement

Other than including a Constable as one of the town officers, Blue Hill does not have its own police force; it works with the Hancock County Sheriff, Maine State Police, and other state offices. Blue Hill contracts with the County for the provision of emergency dispatch services.

4.12. Education

Blue Hill provides its K-8 students with public education at the Blue Hill Consolidated School (BHCS). A Pre-K program was added in 2014. BHCS is a member of School Union 93, whose other members are Brooksville, Castine, Penobscot, and Surry. The Blue Hill Consolidated School has 24 classrooms. Other facilities include a gymnasium, library, and cafeteria. There is also a complete kitchen and computer lab. The facility was built in 1939 and was renovated in 1991 and more recently in 2020. Blue Hill is also home to The Bay School, an independent Waldorf School, serving students in grades K-8 (currently approximately 1/3 of Bay School families are Blue Hill residents).

Secondary education for the majority of Blue Hill students is provided at George Stevens Academy, a semi-private facility in Blue Hill (Blue Hill students have the option of attending any accredited secondary school, other than religious ones, using local tax dollars). George Stevens Academy has 29 classrooms serving grades 9-12 and an enrollment (2021-2022) of 310. Other facilities include a gymnasium (9,950 square feet), library (2,550 square feet), cafeteria (3,560 square feet) and weight room (548 square feet). The building was expanded in 1994. A private high school, The Liberty School, operated in Blue Hill for nearly ten years, but it closed in 2007. However, the Blue Hill Harbor School continues to provide another high school option for area residents. Enrollment figures are shown in Table E-3 below. As mentioned in Chapter A, the age 0-4 cohort has increased by 40% between 2000 to 2020. A rise in infants and young children could mean that an increase in school-aged students is expected in the near future. Any additional changes in birthrates or migration to or from Blue Hill will also affect future enrollment.

Table E-3: Blue Hill School Enrollment

	BHCS Grades Pre-K – 8	GSA (Total), Grades 9-12	GSA (Blue Hill Students), Grades 9-12
2014	239	284	117
2015	257	296	106
2016	262	270	114
2017	259	252	115
2018	270	270	119
2019	258	290	116
2020	259	298	116
2021	253	293	95
2022	244	296	97
2023	243	278	98

Source: Maine Department of Education School Enrollment Data

Blue Hill Consolidated School uses several data points during the school year to measure student proficiency toward the Maine Learning Results. Currently, Blue Hill uses AimsWeb Plus in Grades K-2 as the assessment tool to measure student growth, and to determine which students are in need of Tier II and Tier III interventions. Previous to the school year 2020-21, Aimsweb Plus was used in grades K-8. In 2020-21, Maine adopted the Northwestern Evaluation Association (NWEA) as its new state assessment. This allowed the use of the State assessment data to determine proficiency levels, and to identify which students are in need of intervention. This data, along with The Wonders Program benchmarking scores in Reading, allows us to use several data points in order to inform instruction.

Table E-4: Percent of Students Meeting Grade Level Benchmarks

Year	Literacy		Mathematics	
	AimsWeb	NWEA	AimsWeb	NWEA
*2019-20	79% (K-2)		74% (K-8)	
2020-21	83% (K-2)		87% (K-8)	
2021-22	62% (K-2)	56% (3-8)	76% (K-2)	58% (3-8)
2022-23	71% (K-2)	67% (3-8)	81% (K-2)	67% (3-8)
*2019-20 data is from Winter 2020 due to COVID-19 closures				

Source: Blue Hill Consolidated School

4.13. Public Works

Blue Hill traditionally has not had a public works department, preferring to contract for plowing and paving services. The Town does have a Road Commissioner position, and in recent years increasing difficulty in securing contractors has led to the hiring of a full-time employee to operate some newly acquired equipment and respond to Town needs.

Blue Hill has an arrangement with MaineDOT to perform maintenance work on State roads for which the Town is then reimbursed by the State. The municipal appropriation in 2022 for roads and sidewalks, including snow removal, was \$1,393,450.

4.14. Town Office

The Blue Hill Town Hall is a building of 3,140 square feet built in 1896. Major rooms include Gordon Emerson Hall with a capacity of 200, the Select Board office, town office, treasurer's office, code enforcement office, sheriff's office, public restrooms, and lobby. The facility is handicapped accessible and complies with ADA guidelines. In 2014 the Select Board completed an assessment of the Town's IT needs as a basis for planning improvements. Thereafter, computers were added, the website was upgraded, and paper documents began to be scanned for digital storage. The latter has enabled over one ton of files to be recycled and the freeing up of needed space.

4.15. Library

The Blue Hill Public Library was originally built in 1939 with major expansion and renovation in 2001. The present facility has approximately 10,200 square-feet of floor space on two levels, plus a basement of about 5,800 square feet. Major rooms include an office (195 square feet), children's room (882 square feet), Wilder Room (768 square feet), Blue Hill Room (768 square feet), Main Reading Room (2,480 square feet), Howard Room (720 square feet), Fiction Room (1,910 square feet), and Technical Services Room (375 square feet). There are public restrooms available and an elevator. The building is handicapped accessible.

As is apparent in the table and chart below, the COVID-19 pandemic of 2020 and 2021 put a significant dent in Library operations and services; however, since then numbers have been increasing in almost all categories. The library loans out a large number of both physical and, increasingly, digital materials and provides digital services.

Table E-5: Blue Hill Library Activities

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Patron Visits	114,023	118,816	119,176	129,885	135,336	131,019	126,442	34,932	66,398	90,953
New Library Cards	661	663	579	643	649	625	801	368	635	N/A
Circulation of Physical and Digital Materials	116,114	111,424	118,536	121,994	118,157	112,414	105,457	67,444	88,618	97,134
Wi-Fi and In-House Computer Sessions	24,352	31,049	30,998	33,542	35,121	32,324	22,937	11,868	13,218	16,845
Technology Help Sessions	N/A	N/A	N/A	645	1,654	2,041	1,391	462	1,243	2,502
Cultural Programs Offered	434	428	405	522	587	646	694	343	486	544
Community Meetings Hosted	365	454	481	580	625	492	487	109	333	312

Source: Annual Town Reports

In terms of impact, the Blue Hill Public Library provides educational and cultural opportunities for people of all ages and backgrounds for six days, 55 hours weekly, year-round. Less obvious is that the library contributes considerably to the local economy. While just 17% of the library's operating budget is borne by taxpayers, for every tax dollar invested, \$23 is saved by Peninsula residents in the form of materials and services provided free of charge. The library also buys locally whenever possible. In 2017, 85% of the operating budget was spent within 50 miles of the library, most of it on the Blue Hill Peninsula in wages paid to employees and goods and services purchased from local businesses.⁸

4.16. Community Center

The Blue Hill YMCA at the Lawrence Family Fitness Center serves as a community center for Blue Hill. It has various types of exercise equipment and machines, a fitness studio for classes, and a 6-lane,

⁸ 2017 Annual Town Report

25-yard swimming pool. It includes such programs as aquatics, fitness, childcare, summer camp, youth sports, and programs for children with disabilities.

4.17. Health Care

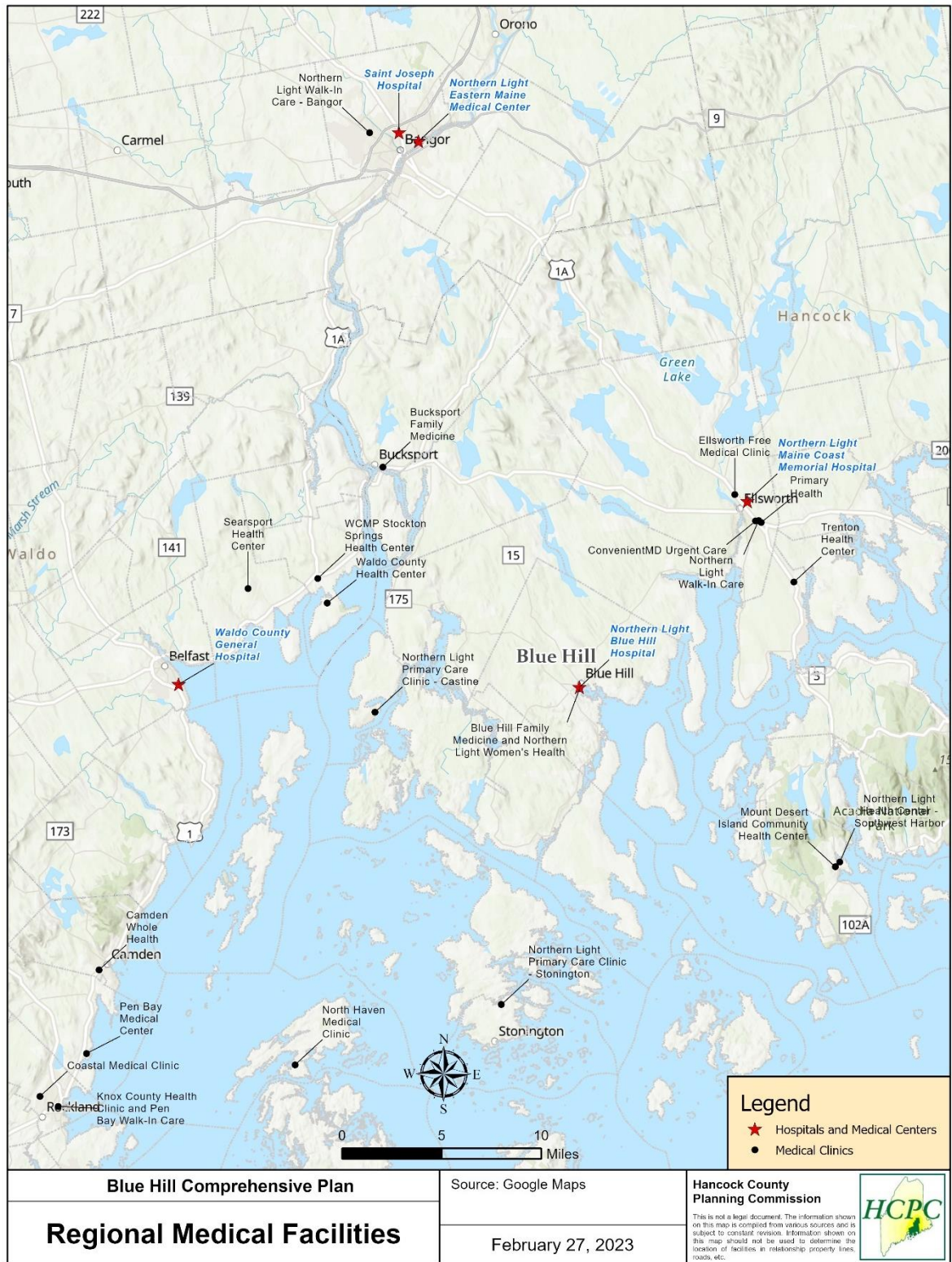
Health facilities in Blue Hill and the region are listed in Table E-6 below and depicted in Figure E-8. In addition to the area clinics, Blue Hill is served locally by the Northern Light Blue Hill Hospital. As such, Blue Hill residents benefit from short response and transport times during medical emergencies. In general, regional efforts are needed to improve ambulance services in the Peninsula area (see the Emergency Medical Response section above and its discussion of the Peninsula Ambulance Corps).

Table E-6: Regional Hospitals

Hospital	Location	Distance From Village Center
Northern Light Blue Hill Hospital	Blue Hill	0 miles
Northern Light Maine Coast Memorial Hospital	Ellsworth	14 miles
Northern Light Eastern Maine Medical Center	Bangor	37 miles
Saint Joseph Hospital	Bangor	37 miles
Waldo County General Hospital	Belfast	38 miles

Source: Google Maps

Figure E-8: Regional Health Facilities



4.18. Municipal Government Facilities and Services

Blue Hill is governed by a five-member elected Select Board. Town staff include a Town Administrator, Town Clerk/Tax Collector, Deputy Clerk/e911 Addressing Officer, Deputy Clerk/Registrar of Voters, Code Enforcement/Facilities Coordinator/Plumbing Inspector, and Treasurer. Other Town officers include Constable/Animal Control Officer/Shellfish Warden; Cemetery Sexton; Fire Chief, Harbormaster; Health Officer, Recreation Director; Road Commissioner; Superintendent of Schools; and Tree Warden.

In addition to the Select Board, Blue Hill's boards and committees at the time of this writing include a School Committee (elected), Planning Board (elected), Board of Appeals, Broadband Committee, Budget Committee, Climate Resilience, Comprehensive Plan Committee, Marine Resources Committee, Solid Waste Committee, Bridge Advisory Committee, Town Park Committee, and Water District Trustees.

4.19. Street Tree Program

The Town does not have a street tree program, but it has a Tree Warden who is active in caring for, pruning, and, when required, removing trees on public lands or along public ways. Blue Hill monitors its elm trees and limits Dutch elm disease by removing affected trees. The appropriation in 2021 for elm tree management was \$4,000.

5. Analyses

5.1. Ability of Municipal Services to Meet Changes in Population and Demographics

Blue Hill has been a growing community. In terms of physical assets, there are upcoming big ticket capital costs for such improvements as various town road repairs, upgrading the wastewater treatment plant, and replacing a fire truck. The Town is working to reduce these costs wherever possible through grants, partnerships, etc., and is doing capital investment planning to prevent the tax impact from being too high in any one year.

Another challenge will be the costs of climate change, with its effects on Blue Hill's waterfront facilities, the treatment plant, stormwater collection system, and potentially other unforeseen needs. In addition, changes in the labor market are making it more difficult for the Town to rely on outside contractors to do road work and other projects, and the economics have begun tilting in the direction of it being less expensive to hire more internal staff.

5.2. Partnerships with Neighboring Communities

There is a tradition of Blue Hill Peninsula towns working together to provide services at reduced costs. This is evident in the regional Blue Hill Peninsula Chamber of Commerce, the Blue Hill-Surry transfer station, the George Stevens Academy High School, the Blue Hill Heritage Trust, the Blue Hill Peninsula Ambulance Corps, the Peninsula Utility for Broadband, and other programs and institutions. Continuing to work with neighboring towns will be important in meeting the many challenges facing Peninsula municipalities in the future.

5.3. Public Sewer System Concerns

As discussed above, Olver Associates has determined, due to major process deficiencies and frequent license violations, that approximately \$5 million will be needed to make immediate and short-term improvements to the Blue Hill Wastewater Treatment Plant. Some of these improvements are necessitated by the anticipated sea level rise. Costs will increase significantly if required to adapt to anything greater than five feet of sea level rise.

5.4. Consistency of the Sanitary Sewer District Extension Policy with the Future Land Use Plan

Article V of Blue Hill's Sewer Use Ordinance⁹ outlines standards for sewer extensions. The language in this ordinance will continue to be followed as future development occurs and will be modified as necessary. Blue Hill village and some of the surrounding area has been identified as a Growth Area in the town's Future Land Use Plan, and any development surrounding sewer extension in this area will remain consistent with the Sewer Use Ordinance.

5.5. Public Water System

Blue Hill has 21 public water systems, detailed further in Chapter I, Water Resources. These consist of three Community (C) Public Water Systems, 11 Non-Community (NC) Public Water Systems, and seven Non-Transient, Non-Community (NTNC) Public Water Systems. Most of the Town's residences, businesses and institutions rely on private wells for drinking water and other domestic uses. There are no anticipated expansions of the public water supply at this time.

Table E-7: Public Water Systems

Water System #	Water System Name	Type
ME0026292	ARBORVINE REST/MOVEABLE FEASTS	NC
ME0094887	BARNCASTLE HOTEL & RESTAURANT	NC
ME0094442	BAY SCHOOL	NTNC
ME0011610	BLAZE BLUE HILL	NC
ME0092678	BLUE HILL CO-OP-SOUTH STREET	NTNC

⁹ <https://bluehillme.gov/wp-content/uploads/2021/07/20030924-Sewer-Use-Ordinance.pdf>

Water System #	Water System Name	Type
ME0092889	BLUE HILL COUNTRY CLUB	NC
ME0094991	BLUE HILL PUBLIC LIBRARY	NC
ME0092110	BLUE HILL TERRACE	C
ME0094959	FISH NET	NC
ME0011183	GEORGE STEVENS ACADEMY	NTNC
ME0092764	GOLDEN SUN CHILD CARE	NTNC
ME0092405	HANNAFORD-BLUE HILL	NTNC
ME0092165	HARBORVIEW I & II	C
ME0092427	HEWINS DRIVE REALTY LLC	NC
ME0092693	HILLS MARKET LLC	NC
ME0092688	LAWRENCE FAMILY COMMUNITY FITNESS CENTER	NC
ME0094914	MARLINTINIS GRILL INC	NC
ME0000099	MSU 93 BLUE HILL CONSOLIDATED SCHOOL	NTNC
ME0093954	NORTHERN LIGHT BLUE HILL	NTNC
ME0092265	PARKER RIDGE RETIREMENT COMMUNITY	C
ME0092692	SIAM SKY THAI CUISINE	NC

Source: Maine Drinking Water Program

5.6. Stormwater Management Facilities Considerations

Culverts are being selectively replaced on Town roads on an as-needed basis. Stormwater management practices will continually be evaluated. Stormwater runoff standards are described in the Town's Shoreland Zoning Ordinance.

5.7. Disposal of Septic Tank Waste

Blue Hill property owners can choose from among several private firms that provide septic tank pumping and related services. There do not appear to be significant issues or concerns regarding septic tank waste in Blue Hill. More generally, there is concern over the presence of PFAS chemicals in municipal sanitary waste sludge, and in 2022 the Blue Hill Consolidated School was found to have high levels of toxic PFAS chemicals in its drinking water.

5.8. School Construction or Expansion

While Blue Hill Consolidated School is an old building that will likely need to be replaced, the Town does not expect to do so within the next decade. The contingency cost of constructing a new building is accounted for in the Town's Capital Investment Plan.

In terms of opportunities to promote new residential development around existing or proposed schools, there does appear to be land available for residential subdivision development within half a mile of the elementary school and George Stevens Academy. Currently, Blue Hill neither promotes nor discourages development around the schools.

5.9. Adequacy of the Emergency Response System

Fire and rescue services, and a hospital, are all centrally located in Blue Hill Village. The distances for emergency response are shorter, therefore, in Blue Hill than in most of the other peninsula towns. As for other Maine communities, however, ongoing concerns are staffing availability and the cost of service. It is difficult for volunteer fire departments to maintain traditional levels of personnel, and ambulance services are finding it difficult to hire EMTs and paramedics. As discussed above, it also is difficult for ambulance companies to meet costs when public and private insurers make only partial reimbursements.

5.10. Degree to Which the Solid Waste Management System is Meeting Current Needs

Blue Hill successfully closed its landfill and transitioned to a full transfer station that it runs jointly with Surry and in which several peninsula towns participate. The system is meeting the needs of these communities, but keeping the costs manageable has been an issue. The towns are continuing to work together to try to keep the transfer station costs as reasonable as possible. Future investment in the current facility will include replacing the roof and adding new safety buildings. Surry and Blue Hill are investigating options for improving the flow of vehicles on site.

5.11. Telecommunications and Energy Infrastructure Improvement Needs

With federal funding assistance, Fidium Fiber, a subsidiary of Consolidated Communications, began stringing fiber throughout Blue Hill in 2022. As a result, high-speed internet service is available to any property in Blue Hill that wants it, thus meeting many of the community's broadband internet goals.

In terms of energy infrastructure, there has been concern in the community over the impacts of large-scale commercial solar projects, and the ability of residents to interconnect local solar power into the grid. This has led to amending the Town's commercial site plan review ordinance to regulate various types of solar energy systems. The Town also regulates wind energy systems.

5.12. Adequacy of Regional Health Care Facilities and Public Health and Social Service Programs

As discussed in the Health Care section above, Blue Hill is fortunate to have the Northern Light Blue Hill Hospital in its village center and to be within driving distance of other hospitals in Ellsworth, Bangor, and Belfast. The Hospital services include emergency care, cardiovascular care, endocrinology and diabetes care, pathology, rehabilitation, transitional care, urology, women's health, orthopedics, primary care, and wound care.

Many of the social service programs available to Blue Hill residents are provided by the Maine Department of Health and Human Services, either online or in person at the Ellsworth District Office.

These include services related to health insurance, financial assistance, food and nutrition, human services, health and prevention services, employment assistance, safety, and education. A number of non-profit organizations, such as Healthy Peninsula, provide a variety of health, nutrition, addiction prevention and other services.

5.13. Ability of Other Public Facilities to Accommodate Projected Growth

Some public facilities in Blue Hill, such as the Town Hall, the Library, and the cemeteries, are historic facilities with limited abilities to expand. However, various improvements, such as replacing the Town Hall front steps and decreasing file storage through digitization, are made from time to time, and it is anticipated that these facilities will be able to accommodate growth over the next decade or so. The library in particular has made extensive efforts over recent years to adapt to the changing needs of the public by expanding its offerings to include many kinds of digital materials.

5.14. Extent to Which Investments in Facility Improvements are Directed to Growth Areas

As Blue Hill has not yet adopted a comprehensive plan consistent with the Growth Management Act, it has not had an official growth area. (One of the reasons for establishing a growth area is to help keep service costs down by directing investments into central regions.) Nevertheless, Blue Hill's central village area has been a de facto growth area given the location there of the town office, fire department, schools, hospital, sewer system and wastewater treatment plant, etc. Going forward, it is anticipated that much of Blue Hill's investments in facility improvements will occur in the newly established official growth area(s).

5.15. Blue Hill's Street Tree Program

As discussed above, Blue Hill appropriates funds to manage its elm trees, and the Tree Warden has been an official town position for many years. Blue Hill cares about its public trees and devotes a significant amount of attention to them.

6. Goals & Objectives

Goal: Blue Hill schools will provide facilities and/or staffing, as appropriate, to prepare students for citizenship, higher education, and future careers regionally, and public facility use			
Objective	Strategy	Responsible Party(ies)	Time Frame
Facilities will be improved and maintained in accordance with the current assessment and School Capital Investment Plan.	Maintain an up-to-date capital investment plan aligned with the most current engineering study.	School Board	Ongoing
	Fund an ongoing maintenance plan.	School Board	Ongoing
Schools will have adequate staffing to meet student needs.	Collaborate with other organizations to recruit and house staff.	School Board	Ongoing
Support funding to meet facilities, staffing, and curriculum needs.	Schools and the Town will educate the public about funding needs.	Select Board School Board	Ongoing

Support independent, private, and homeschool entities in Blue Hill	Explore ways that the Town can cooperate, in mutually beneficial ways, with private schools and homeschoolers.	Select Board	Ongoing
	Consider the needs of these constituent groups as Town facilities are developed and maintained.	Select Board	Ongoing
Goal: Update Fire Department facilities and maintain adequate staffing			
Objective	Strategy	Responsible Party(ies)	Time Frame
Build a new fire station	Identify a desired facility location and design, with cost estimates.	Select Board, Fire Department	2024 - 2025
	Seek grant funding for a capital campaign.	Select Board	2025 – 2026
	Complete planning and construction	Fire Department	2028
Maintain firefighting capacity	Maintain a detailed Capital Investment Plan.	Fire Department	Ongoing
	Evaluate future staffing needs.	Fire Department	Ongoing
	Acquire equipment to meet emerging needs in collaboration with the Blue Hill Fire Company.	Fire Department	2028
	Ensure adequate supply of firefighting water.	Fire Department	Ongoing
Goal: Provide solid waste and recycling services to meet the needs of residents and businesses.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Collaborate with other towns to expand waste management options.	Participate in household hazardous waste collection events.	Select Board	2026
	Support alternatives to landfills, including materials reduction, composting, recycling, reuse.	Select Board	Ongoing
Goal: Continue to provide broadband services across Blue Hill			
Objective	Strategy	Responsible Party(ies)	Time Frame
Maintain and expand access to Broadband service across Blue Hill.	Continue to maintain and expand Broadband access across Blue Hill.	Broadband Coordinator	Ongoing
Goal: Maintain our wastewater infrastructure			
Objective	Strategy	Responsible Party(ies)	Time Frame
Ensure the continued viability of wastewater infrastructure.	Coordinate any sewer service extensions with expected demand.	Select Board	Ongoing
	Continue to invest in the wastewater treatment plant.	Select Board	Ongoing
Goal: Maintain access to sufficient quantities of potable water in the Blue Hill Water District			
Objective	Strategy	Responsible Party(ies)	Time Frame
Reinvigorate the water district organization, if appropriate, meeting the requirements set out in the legislation	Reinvigorate the water district organization, if appropriate, meeting the requirements set out in the legislation	Select Board, Blue Hill Water District	2024 - 2025
Evaluate whether to expand the role of the trustees to safeguard water quality and quantity within the district	Evaluate whether to expand the role of the trustees to safeguard water quality and quantity within the district	Select Board, Blue Hill Water District	2025

Chapter F: Fiscal Capacity

1. Purpose

This section presents information on Blue Hill's ability to pay for the services it provides for its residents and businesses. It also looks ahead to identify potential future infrastructure projects and the Town's capacity to pay for them. Specifically, this chapter will:

- a. Examine trends in such fiscal areas as valuation, taxes, expenditures, and capital projects funding.
- b. Identify anticipated capital investment needs and anticipated funding mechanisms.
- c. Evaluate the Town's ability to borrow to pay for capital investments.

2. Key Findings & Issues

Blue Hill's tax commitment — the amount to be raised each year from property taxes — rose over the last decade while the total property valuation decreased. Education generally accounts for a significant amount of the Town's expenses, and the two expense categories with the largest inflation-adjusted increases since 1999 are education and Town roads and bridges. The Town uses reserve accounts to offset the tax impacts of larger capital expenses. Blue Hill has approximately \$50.6M of valuation that is exempt from real estate taxation. In terms of debt, Blue Hill's debt load is approximately 5.7% of the statutory limit.

3. Public Opinion Survey Results

Survey respondents are largely in favor of the Town investing more in public facilities and services, be it through including property tax dollars or by use of grants or subsidies to reduce costs. Respondents showed the most support for spending property tax dollars on education (64%), road improvements (56%), bicycle and pedestrian infrastructure (49%), and housing (47%). Respondents most supported investment using grants and/or subsidies in marine/wharf facilities (54%), municipal recreation opportunities (54%), senior citizen services (52%), and local job opportunities (50%).

Respondents had the greatest opposition to more Town investment in increasing lighting in the village (65%), parking in the village (41%), and police/traffic enforcement (40%).

4. Conditions and Trends

4.1. Valuation and Tax Assessment

Blue Hill raises money to fund the budget through various mechanisms, including the assessment of property taxes. The tax rate is determined each year by considering the total valuation of all property in the community (excluding exempt property such as educational institutions, the hospital, and charitable and religious organizations) and the amount of money needed to fund the budget.

Local Valuation: Town assessors establish property values for tax commitment purposes by adjusting for construction or removal activities that are expected to alter a property's value. There are no year-to-year adjustments made to account for changes in the real estate market. Adjustments based on real estate market fluctuations only occur roughly every 10 years through a town-wide revaluation.

State Valuation: The State of Maine does adjust for year-to-year changes in the real estate market. The State Valuation process takes roughly 18 months to complete and therefore lags actual market values and municipal assessments by about two years. For example, the 2023 State Valuation estimates the value of property in 2021.

Both valuations are relevant. The Town uses the non-market-adjusted Tax Valuation values to assess property taxes each year; the State valuations identify when a revaluation to market is necessary and are useful for comparing property taxes across Maine towns.

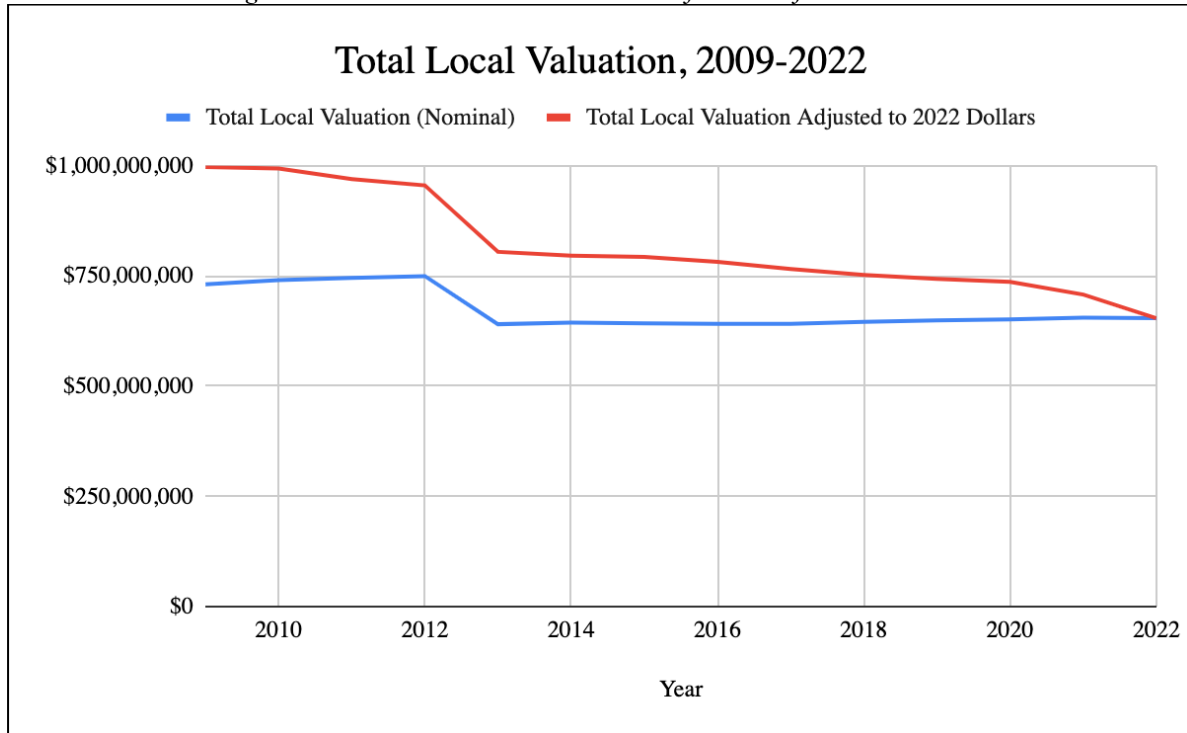
Table F-1: Blue Hill State and Local Valuation, Tax Commitment, and Tax Rate, 2009-2022

Year	State Valuation	Total Local Valuation (Total Real & Personal)	Tax Commitment	Tax Rate	Total Local Valuation Adjusted to 2022 Dollars	Tax Commitment Adjusted to 2022 Dollars
2009	\$777,350,000	\$730,840,600	\$4,860,090	0.00665	\$996,956,962	\$6,629,764
2010	\$782,150,000	\$740,105,200	\$5,039,515	0.00680	\$993,302,121	\$6,763,580
2011	\$768,700,000	\$745,161,300	\$5,141,613	0.00690	\$969,485,862	\$6,689,452
2012	\$776,400,000	\$749,330,200	\$5,245,311	0.00700	\$955,143,556	\$6,686,004
2013	\$722,200,000	\$640,274,400	\$5,378,304	0.00840	\$804,352,325	\$6,756,558
2014	\$713,900,000	\$643,679,800	\$5,664,382	0.00880	\$795,722,289	\$7,002,356
2015	\$695,050,000	\$642,179,400	\$6,421,794	0.01000	\$792,926,298	\$7,929,263
2016	\$674,850,000	\$640,886,100	\$6,216,595	0.00970	\$781,471,047	\$7,580,269
2017	\$681,650,000	\$640,943,700	\$6,409,437	0.01000	\$765,238,979	\$7,652,390
2018	\$680,800,000	\$645,433,800	\$6,454,338	0.01000	\$752,226,854	\$7,522,269
2019	\$698,450,000	\$648,924,820	\$7,014,877	0.01081	\$742,835,491	\$8,030,051
2020	\$775,050,000	\$651,352,220	\$7,523,118	0.01155	\$736,527,752	\$8,506,895
2021	\$798,500,000	\$655,051,360	\$7,893,369	0.01205	\$707,473,358	\$8,525,054
2022	\$773,900,000	\$653,837,440	\$8,235,351	0.01260	\$653,837,440	\$8,235,351

Source: Maine Revenue Services

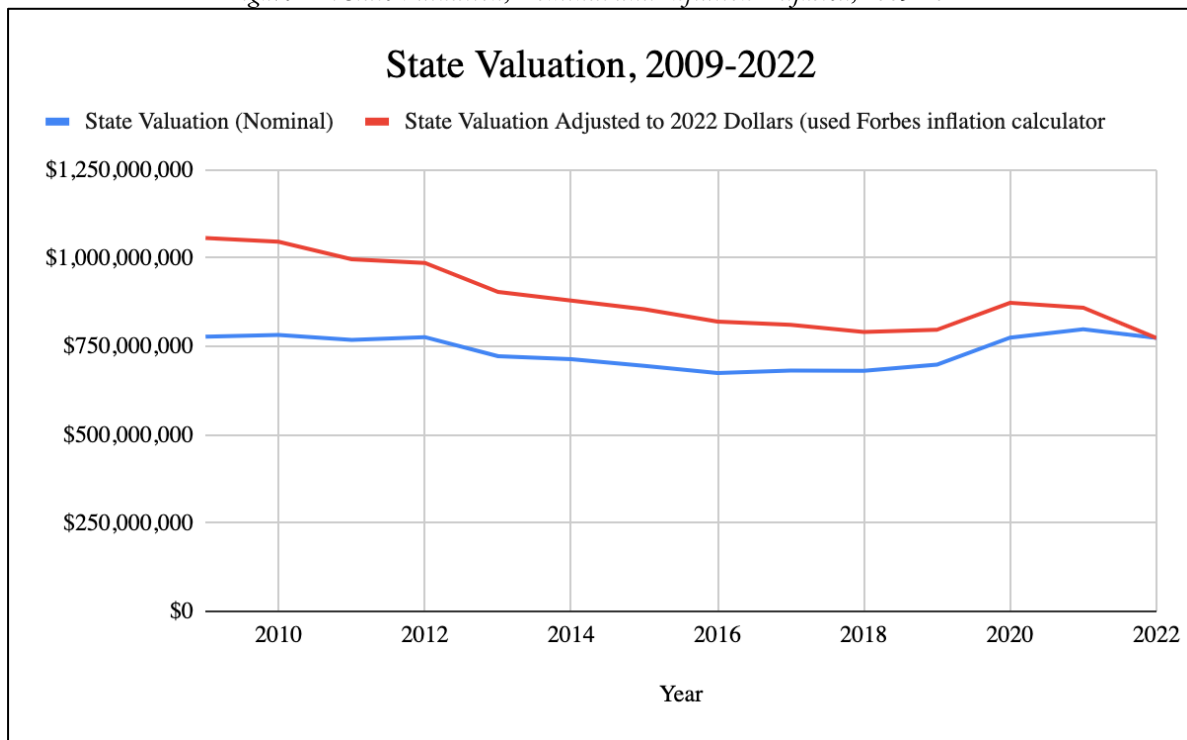
Figures F-1 and F-2 show the trend in both the “Tax Valuation” (which doesn’t reflect market changes and does not include the value of exempt property) and the “Market Valuation”, which is the State’s reported figure for Blue Hill (including exempt property), moved back two years. The figures are shown on both a nominal and inflation-adjusted (to 2022 dollars) basis.

Figure F-1: Local Valuation, Nominal and Inflation-Adjusted, 2009-2022



Source: Maine Revenue Services

Figure F-2: State Valuation, Nominal and Inflation-Adjusted, 2009-2022



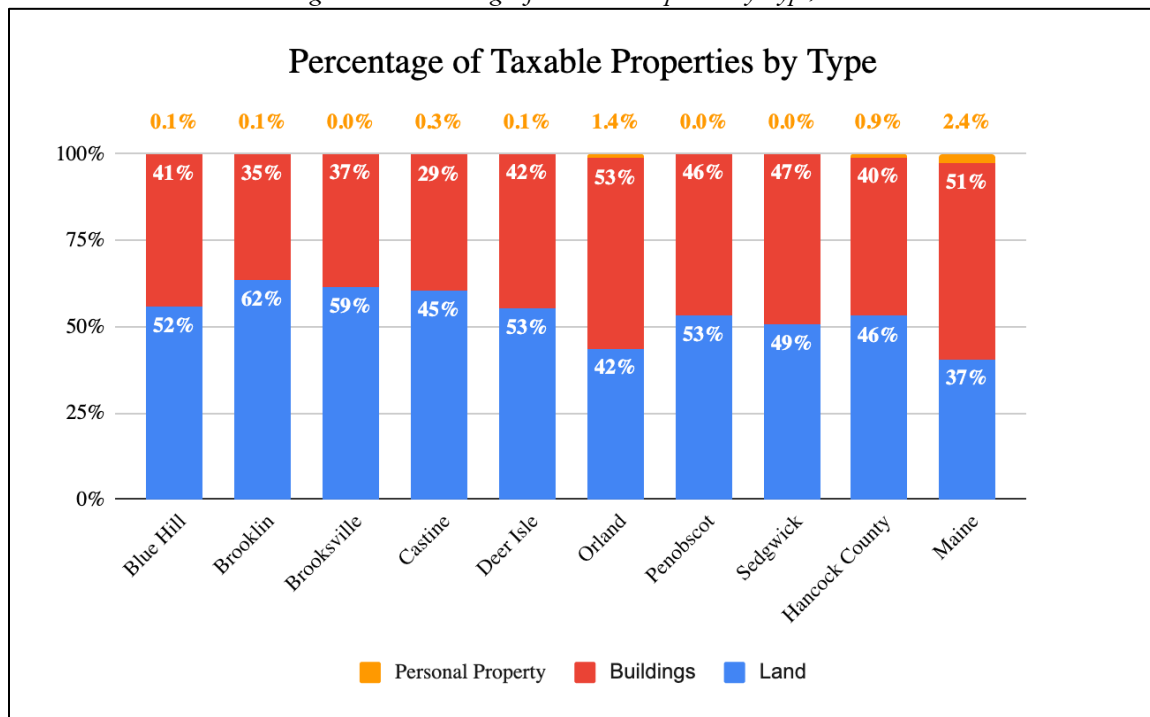
Source: Maine Revenue Services

As might be expected, the nominal tax valuation doesn't show material change, other than in 2012 to 2013, when the Town underwent a partial revaluation of its properties to reflect estimated market values. From 2009 to 2022, net construction activity in the Town has added an annual average of \$2.7 million in value to the Town's tax base.

4.2. Tax Base and Revenue Sources

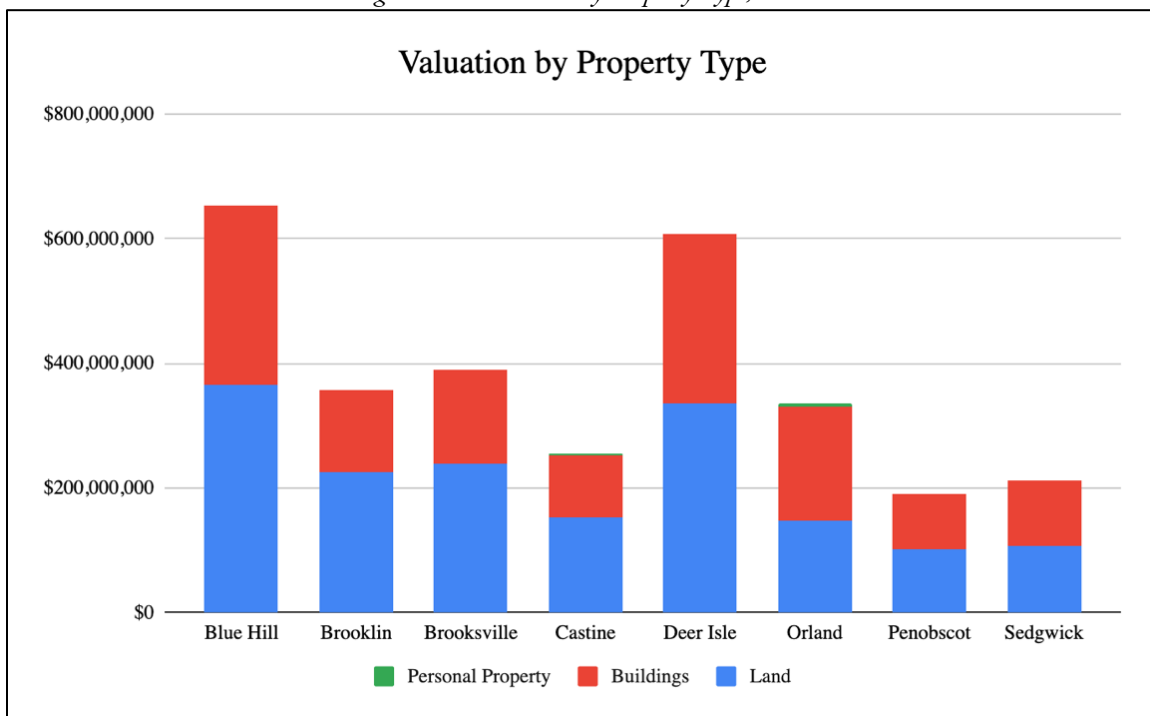
As shown in Figures F-3 and F-4 below, land and buildings represent virtually all Blue Hill's property tax base and valuation; taxable personal property is only 0.1% of the Town's total local valuation. This is true for most of the neighboring towns as well.

Figure F-3: Percentage of Taxable Properties by Type, 2022



Source: Maine Revenue Services

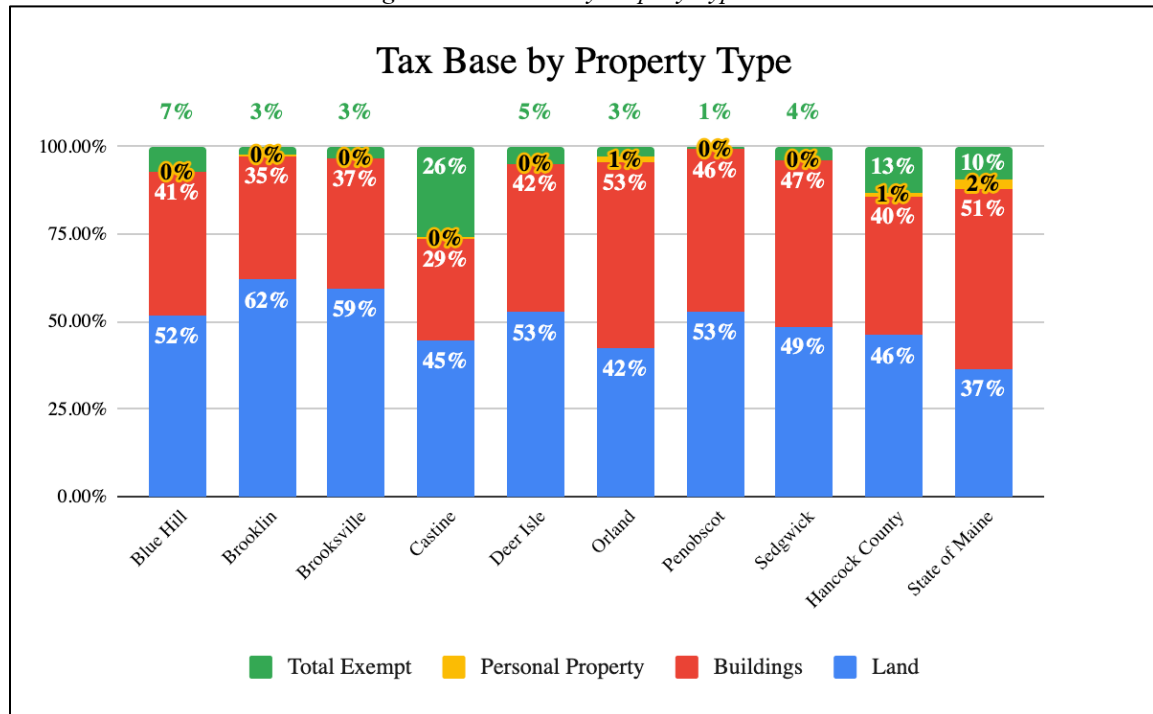
Figure F-4: Valuation by Property Type, 2022



Source: Maine Revenue Services

Blue Hill is second to Castine in the proportion of total property value that is tax exempt. Maine Maritime Academy is the most significant exempt entity for Castine; Northern Light Blue Hill Hospital and George Stevens Academy represent the largest exempt properties in Blue Hill.

Figure F-5: Tax Base by Property Type, 2022



Source: Maine Revenue Services

4.3. Municipal Revenues and Expenditures

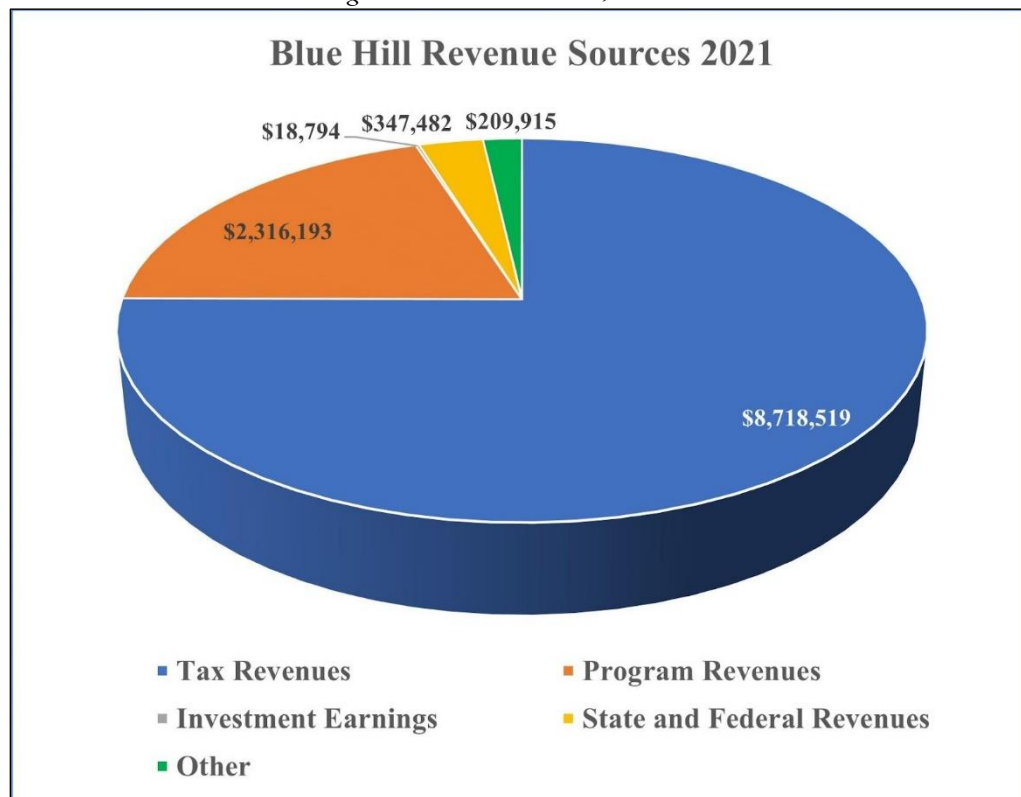
As seen in Table F-2 and Figure F-6 below, most of Blue Hill's revenue comes from property and excise taxes (75.1%), followed by program revenues (19.9%), revenue sharing (3.0%), investment income (0.2%), and other local sources (1.8%). Grants (\$37,955) was one of the types of revenues in the "Other" category recorded by the Town in FY 2021.

Table F-2: Revenue Sources, 2021

Source	Revenues
Tax Revenues	\$8,718,519
Program Revenues	\$2,316,193
Investment Earnings	\$18,794
State and Federal Revenues	\$347,482
Other	\$209,915
Total	\$11,610,903

Source: Financial Statements with Independent Auditor's Reports for the Year ended December 31, 2021

Figure F-6: Revenue Sources, 2021



Source: Financial Statements with Independent Auditor's Reports for the Year ended December 31, 2021

Table F-3 and Figures F-7 and F-8 below provide information on Blue Hill's revenues and expenses from 2012 to 2021. As discussed above, taxes and program revenues make up the bulk of the Town's revenues. Program revenues refers to income generated from specific services or programs. In 2021, Program revenues were mostly sewer fees, education grants and charges, and state "on-behalf" contributions. In terms of expenses, education accounts for 67.3% of the total municipal expenditures followed by spending on roads and bridges (9.4%).

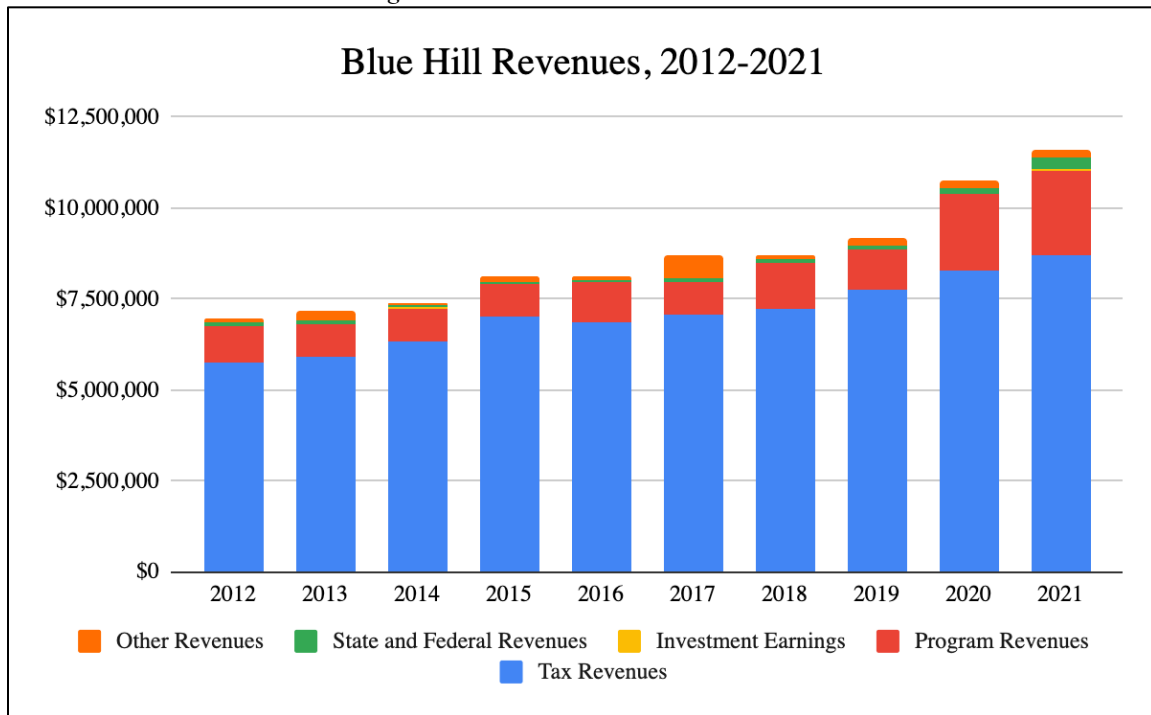
Table F-3: Blue Hill Revenues and Expenses, 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenues:										
Tax Revenues	\$5,772,754	\$5,921,909	\$6,320,333	\$7,019,029	\$6,853,359	\$7,091,117	\$7,210,162	\$7,771,183	\$8,301,454	\$8,718,519
Program Revenues	\$984,589	\$884,725	\$921,636	\$868,380	\$1,092,314	\$865,314	\$1,255,808	\$1,069,109	\$2,071,868	\$2,316,193
Investment Earnings	\$16,655	\$14,751	\$14,192	\$13,394	\$13,495	\$11,401	\$17,268	\$24,050	\$20,501	\$18,794
State and Federal Revenues	\$77,534	\$85,767	\$70,734	\$80,105	\$80,750	\$88,018	\$96,461	\$114,868	\$144,641	\$347,482
Other Revenues	\$88,687	\$286,962	\$78,642	\$142,942	\$70,049	\$626,872	\$96,134	\$186,578	\$212,910	\$209,915
Total	\$6,940,217	\$7,194,114	\$7,405,537	\$8,123,850	\$8,110,088	\$8,682,721	\$8,675,833	\$9,155,788	\$10,751,374	\$11,610,903
Expenses:										
Administration	\$381,597	\$385,471	\$418,140	\$441,059	\$472,970	\$477,161	\$475,439	\$492,912	\$533,069	\$563,134
Protection	\$128,720	\$155,737	\$155,063	\$158,692	\$150,915	\$161,234	\$196,375	\$219,044	\$215,037	\$222,787
Health Sanitation	\$579,737	\$586,807	\$588,411	\$624,412	\$623,705	\$628,939	\$620,200	\$523,558	\$580,337	\$530,740
Highways/Bridges	\$651,643	\$672,288	\$657,075	\$734,248	\$701,210	\$739,409	\$728,695	\$952,195	\$823,902	\$93,979
Education	\$4,471,547	\$4,706,786	\$5,069,831	\$5,546,851	\$5,374,283	\$5,496,669	\$6,048,223	\$5,936,110	\$7,039,247	\$6,702,877

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Unclassified	\$219,640	\$207,206	\$205,930	\$221,985	\$217,972	\$240,125	\$279,763	\$246,024	\$210,206	\$230,438
Debt Service	\$106,529	\$90,630	\$98,406	\$93,016	\$78,510	\$76,044	\$79,462	\$81,471	\$68,717	\$68,349
Assessments	\$301,982	\$293,981	\$290,418	\$283,022	\$283,022	\$292,577	\$301,520	\$314,273	\$355,963	\$373,514
State On-Behalf Contributions	\$277,040	\$284,075	\$245,687	\$249,360	\$246,552	\$215,377	\$243,588	\$254,650	\$327,035	\$331,385
Total	\$7,118,434	\$7,382,981	\$7,728,962	\$8,358,767	\$8,149,138	\$8,327,536	\$8,973,264	\$9,020,237	\$10,144,513	\$9,957,203

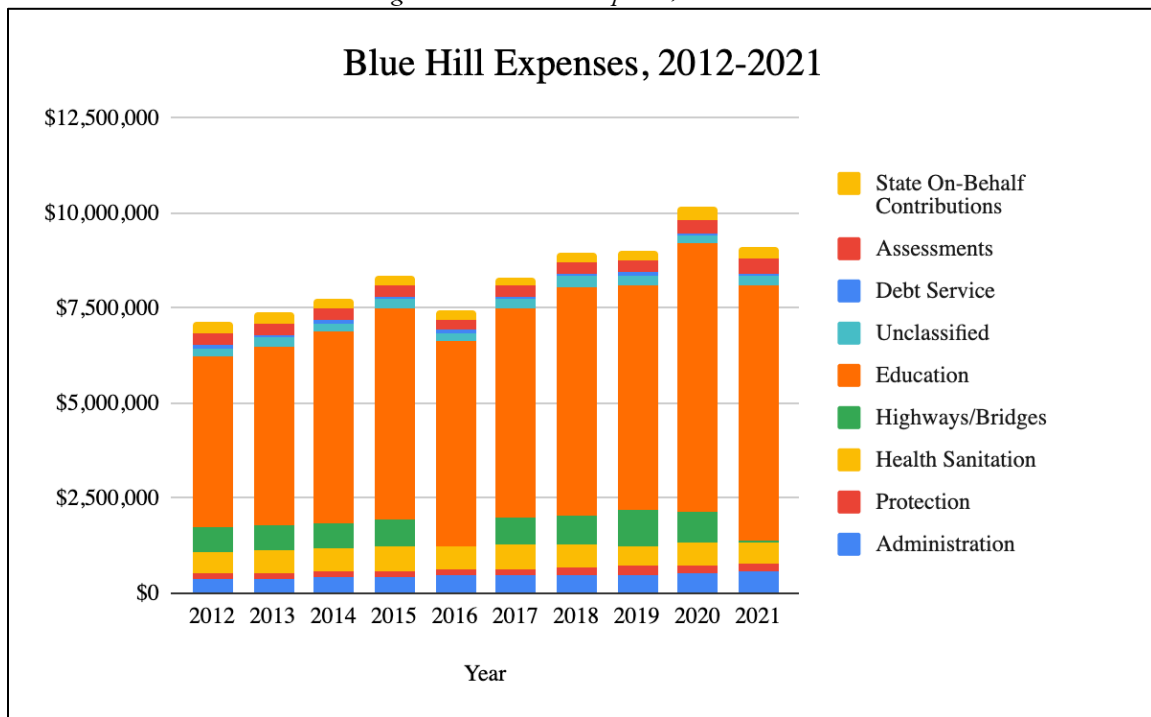
Source: Financial Statements with Independent Auditor's Reports, Town of Blue Hill

Figure F-7: Blue Hill Revenues, 2012-2021



Source: Financial Statements with Independent Auditor's Reports, Town of Blue Hill

Figure F-8: Blue Hill Expenses, 2012-2021



Source: Financial Statements with Independent Auditor's Reports, Town of Blue Hill

As seen in Table F-4 below, when adjusting for inflation, the Town's expenditures increased substantially over the last two decades in the areas of Education and Roads/Bridges. Administration also shows an upward trend. The County Tax is has remained relatively flat, and Fire Department spending declined over this period on an inflation-adjusted basis.

Table F-4: Inflation Adjusted Changes in Selected Expenditure Categories

Item	1994	2003	1994 (Adjusted to 2021 Dollars)	2003 (Adjusted to 2021 Dollars)	2021
Administration	\$88,000	\$192,294	\$160,900	\$283,184	\$500,274
Town Roads/Bridges	\$99,000	\$238,000	\$181,012	\$350,494	\$1,097,569
Solid Waste*	\$79,488	\$132,500	\$145,336	\$195,128	\$204,140
Fire Department	\$48,771	\$74,900	\$89,173	\$110,302	\$82,172
County Tax	\$120,061	\$248,911	\$219,520	\$366,562	\$373,514
Education	\$1,928,723	\$3,220,227	\$3,526,492	\$4,742,309	\$7,097,810
Blue Hill Memorial Library	\$22,000	\$35,000	\$40,225	\$51,543	\$85,300

*Transfer Station Operation in 2021

Source: Town Financial Statement; CPI for All Urban Consumers, base period 1982-84 = 100, CPI 1994-98 = 148.2, CPI 2003 = 184, CPI 2021 = 270.97, <https://data.bls.gov/cgi-bin/surveymost>

In addition to the revenues discussed earlier in this chapter, there are State school subsidies that provide a small amount of help with the education budget. As indicated in Table F-5 below, the

subsidy was 10.4% of the education appropriation in 2023, which is substantially more than the amount a decade ago but a bit less than that of the previous two years.

Table F-5: State School Subsidies for Blue Hill, 2015–2023

Year	Adjusted State Contribution	Total Blue Hill Education Appropriation	State % of Total
FY16	\$163,417.23	\$3,401,466.46	4.8%
FY17	\$176,417.47	\$3,643,404.48	4.8%
FY18	\$214,336.29	\$3,805,700.54	5.6%
FY19	\$319,169.96	\$4,252,110.83	7.5%
FY20	\$347,866.62	\$4,334,996.50	8.0%
FY21	\$401,307.36	\$4,539,224.71	8.8%
FY22	\$461,404.40	\$4,495,890.93	10.3%
FY23	\$474,777.67	\$4,549,235.68	10.4%

Source: Town Reports and Maine Dept. Of Education ED 279 Report

Spending limitations are required by P.L. 2005, Chapter 2 (effective June 29, 2005) known as LD 1. These statutory limitations are shown in Table F-6 below. Since its enactment, the Town has voted to exceed the LD 1 spending limitations to meet service levels desired by the residents and businesses and to be able to make necessary capital investments and infrastructure improvements.

Table F-6: Summary of LD 1 Spending Limits

	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Town Budget LD Limit	\$3,389,824	\$3,537,861	\$4,180,342	\$4,295,153	\$4,539,225	\$4,593,804	\$4,549,236
Approved Amount	\$5,518,644	\$5,734,893	\$5,903,996	\$6,073,365	\$6,424,195	\$6,035,633	\$6,258,795

Source: Annual Town Reports

4.4. Service Levels

Table F-7 below shows how Blue Hill’s municipal budget compares with that of other towns in the area.

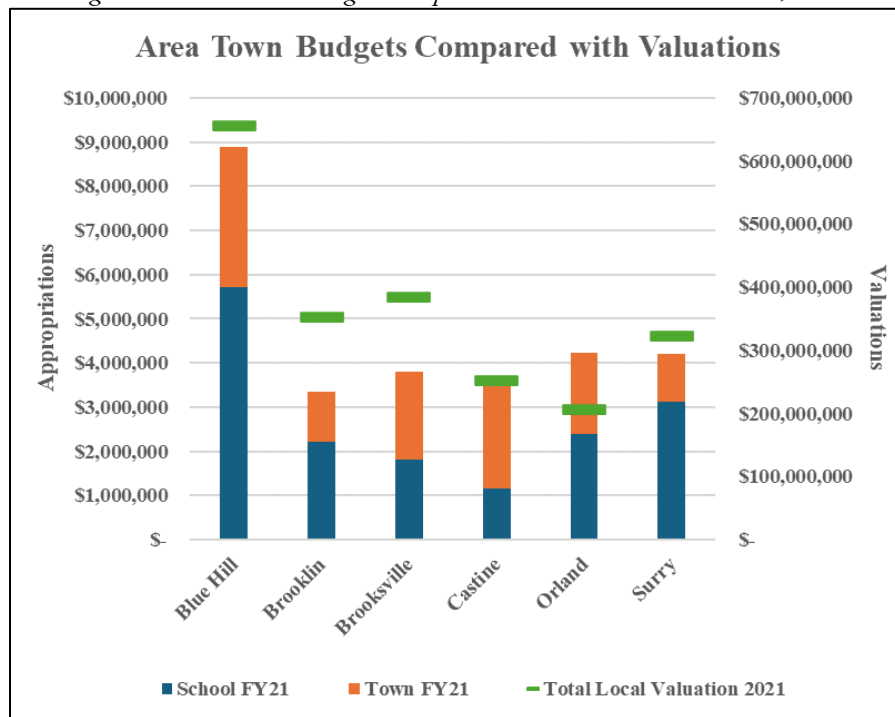
Table F-7: Summary of Area Town’s Municipal and School Budgets

	School FY21	Town FY21	Total Town Budget FY21
Blue Hill	\$5,706,338	\$3,185,601	\$8,891,939
Brooklin	\$2,223,885	\$1,135,914	\$3,359,799
Brooksville	\$1,807,574	\$2,003,758	\$3,811,332
Castine	\$1,149,705	\$2,441,785	\$3,591,490
Orland	\$2,399,284	\$1,833,823	\$4,233,107
Surry	\$3,129,283	\$1,067,721	\$4,197,004

Source: Audits in Town Reports

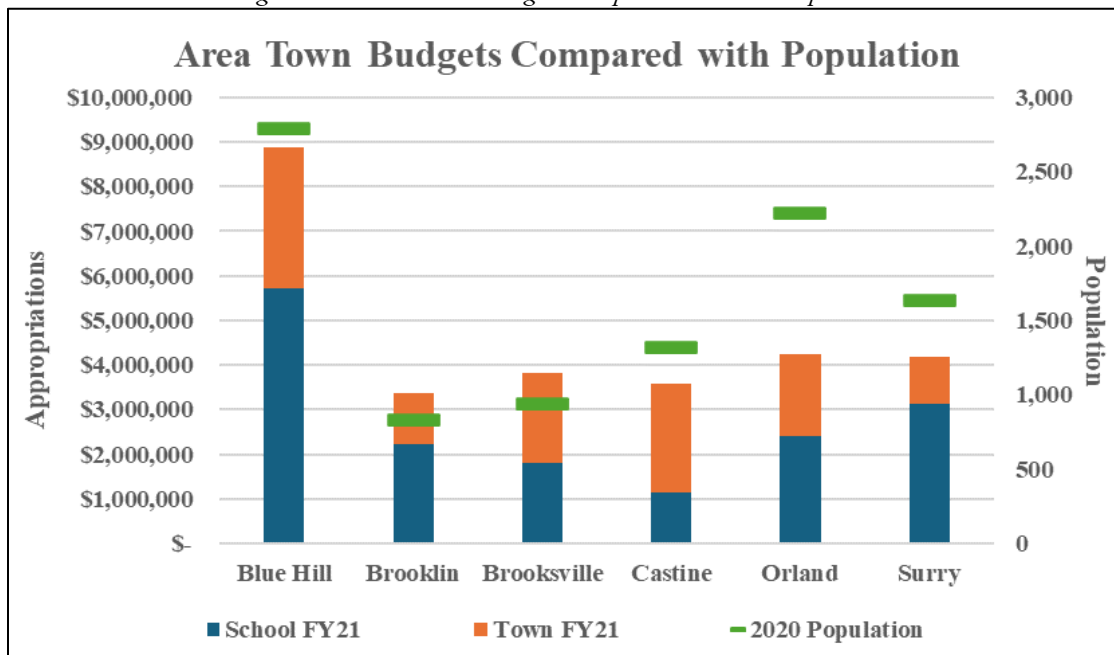
When relating budgets with valuation and population, as in Figures F-9 and F-10 below, it appears that Blue Hill’s budget level is commensurate with its valuation and population.

Figure F-9: Area Town Budgets Compared with Total Local Valuations, 2021



Source: Audits in Town Reports and 2021 Municipal Valuation Return Statistical Summary Report

Figure F-10: Area Town Budgets Compared with 2020 Population



Source: Audits in Town Reports and US Decennial Census

4.5. Funding for Capital Items

The means by which Blue Hill funds capital items is through a combination of reserve funds, bonding, and other methods. Table F-8 shows the reserve accounts and accounts with fund balances that Blue Hill has maintained in recent years to fund various capital projects and programs. Reserve accounts are a sensible tool for reducing the fiscal impact of paying for big ticket items by saving over years.

Table F-8: Selected Accounts with Fund Balances, FY17 – FY22

	FY17	FY18	FY19	FY20	FY21	FY22
Non-spendable	\$74,450	\$78,650	\$80,150	\$82,650	\$83,350	\$133,674
Restricted	\$536,861	\$429,117	\$308,589	\$361,038	\$1,014,095	\$661,283
Committed	\$934,352	\$803,684	\$617,145	\$749,383	\$838,821	\$931,663
Assigned	\$962,506	\$748,035	\$532,448	\$691,300	\$681,069	\$458,891
Unassigned	\$2,905,800	\$2,508,591	\$2,178,892	\$2,946,073	\$3,739,602	\$5,318,069
Total Fund Balances	\$5,413,967	\$4,568,075	\$3,717,222	\$4,830,443	\$6,356,935	\$7,503,580
<i>Non-spendable</i> - includes fund balance amount that cannot be spent either because it is not in spendable form or because of legal or contractual constraints.						
<i>Restricted</i> - includes fund balance amounts that are constrained for specific purposes which are externally imposed by providers, such as creditors, or amounts constrained due to constitutional provisions or enabling legislation.						
<i>Committed</i> - includes fund balance amounts that are constrained for specific purposes that are internally imposed by the government through town meeting voting and does not lapse at year-end.						
<i>Assigned</i> - includes fund balance amounts that are intended to be used for specific purposes that are neither considered restricted nor committed. Fund balances may be assigned by the Board of Selectmen.						

Source: Annual Town Financial Statements

4.6. Debt Limit

Blue Hill's total local debt load is well under the statutory limit of 7.5%, even without removing debt associated with school, storm, and sanitary purposes as Maine law allows. It also is well below the Maine Bond Bank's overall suggested limit of 15% of State valuation. In terms of County debt, based on valuation Blue Hill's share (5.7%) of Hancock County's 2021 total current and noncurrent long-term liability (\$3,037,627¹⁰) was approximately \$173,145. Adding this additional debt to Blue Hill's total has a negligible impact on the 2021 debt to valuation percentage.

Table F-9: Blue Hill's Debt Compared with the Statutory Debt Limit, 2017 – 2021

	2017	2018	2019	2020	2021
Total Local Debt	\$2,759,430	\$2,872,162	\$3,532,352	\$3,239,805	\$2,944,335
State Valuation	\$681,650,000	\$680,800,000	\$698,450,000	\$ 775,050,000	\$798,500,000
Percent Debt of Valuation	0.4%	0.4%	0.5%	0.4%	0.4%
Statutory Debt Limit	7.5%	7.5%	7.5%	7.5%	7.5%
Note: The statutory debt limit is exclusive of debt incurred for school purposes, storm or sanitary sewer purposes, energy facility purposes, or municipal airport purposes.					

Source: Annual Town Reports and M.R.S.A. Title 30-A, Ch. 223, Sec. 5702.

¹⁰ County of Hancock, Maine – Financial Statements for the Year Ended December 31, 2021.

5. Capital Investment Plan

Blue Hill generally funds operations from taxes, and capital projects from a combination of unexpended surplus funds and long-term debt issuance. The Select Board has adopted the following long-term capital investment plan, detailed in Table F-10, which is focused on future projects that, if implemented, would have a substantial financial impact on the Town's finances or property tax rate.

Table F-10: Town Projects Anticipated in the next Ten Years

	Item	Cost Estimate	Estimated Timing
Approved and In Process	Wastewater Treatment Plant Upgrade	\$6 million	2024-2025
	Mountain Rd. Reconstruction	\$2 million	2024
	Fire Truck Replacement	\$1 million	2025
Total		\$9 million	
Likely Over the Next 10 Years	Additional Highway Reconstruction	\$12 million	2025-2034
	Relocation of Fire Station	\$10 million	2026
	Climate Resilience (highways/wharves)	\$8 million	2024-2030
	Wastewater Treatment Plant (additional work)	\$8 million	2030
	Ped/Cycle Connectivity (sidewalks/intersections)	\$4 million	2025-2030
	Additional Public Works Facilities/Equipment	\$2 million	2024-2026
	Additional Fire Department Equipment	\$1 million	2030
Total		\$45 million	
Possible	Buried Utilities	\$5 million	Unknown
	Electrical Grid Upgrade Support	\$2 million	Unknown
Total		\$7 million	
Contingencies (unlikely, but large if necessary)	Secondary School Construction (Blue Hill Share)	\$30 million	Unknown
	Consolidated School Rehab/Relocation	\$30 million	Unknown
	Municipal Water System (Village)	\$50 million	Unknown
Total		\$110 million	

5.1. Capital Investment Priorities

While the Select Board maintains flexibility in terms of the capital investments it recommends for Town approval each year, the Board's general philosophy is to prioritize capital investment projects as follows:

- 1) Investments required to maintain the quality of the Town's existing critical infrastructure (beyond ordinary year-to-year maintenance). The current reconstruction of the Mountain Rd. and the first stage of the Wastewater Treatment Plant upgrade project are current examples of investments in this category; the relocation of the Fire Station, investments to protect the Town's roads and marine infrastructure from climate change, and additional work to reconstruct certain highways are examples of future investments in this category.
- 2) Investments which will reduce the annual cost of providing Town services. Expansion of the Town's Public Works infrastructure, which is replacing services purchased from outside contractors at lower cost to the Town is an example of this category.

- 3) Investments which will enhance or expand the Town’s services to its citizens. Investments in sidewalks, bicycle lanes, and walking paths in the Town or, prospectively, subsidizing the burial of overhead utilities in the Village area are examples of this category.

5.2. Funding Capital Investments

In general, the Select Board has recommended to the Town that, for sizeable investments (typically over \$1 million), the funding come from a combination of property tax, long-term debt proceeds and, if available, grant or other government or private support funds. The specific mix of property tax revenues, debt proceeds and grant funds depend on the project and the nature of the investment. As a general guideline, the Select Board plans to recommend the following funding strategies:

Table F-11: Methods of Funding Capital Investments

Investment Type	Funding Plan	Examples
One-time, or very long-lived investments to protect core Town assets	Substantially all debt and grant funded	<ul style="list-style-type: none"> • Wastewater Treatment Plant upgrade • Fire Department relocation
Recurring or shorter-lived investments	Blend of debt, grant, and property tax funded	<ul style="list-style-type: none"> • Fire Department equipment • Reconstruction/re-paving of Town roads
Investments expanding Town services	Substantial property tax funding component, with the specific mix depending on useful life of underlying assets	<ul style="list-style-type: none"> • Pedestrian/Bicycle Connectivity plan • Buried utilities (in Village)

The Town has substantial debt capacity available to it. However, if all the “In Process” and “Likely” capital investments were to be fully debt-financed, the Town would use up essentially all of its approximately \$60 million statutory debt limit.

The Select Board’s objective is to leave at least 50% (approximately \$30 million) of its debt capacity available in the event one or more of the investments identified as “Contingencies” becomes necessary.

6. Analyses and Policies

6.1. Identification of Funding for Future Capital Investments

As indicated in Table F-11 above, funding for Blue Hill’s future capital projects primarily will come from surplus, although in one or two cases the Town may seek to go out to bond.

6.2. Borrowing Capacity Sufficiency

In order to continue addressing its infrastructure improvement needs, such as for school improvements, Blue Hill may need to take on new debt as it gradually pays off its older long-term obligations. Fortunately, as discussed in the Debt Limit section above, Blue Hill is well below the

statutory limit for debt compared with the Town's state valuation. In effect, the limit to Blue Hill's borrowing is tax tolerance relative to annual debt service and not the statutory debt limit.

6.3. Participating/Exploring Sharing Capital Investments with Neighboring Communities

As one example of sharing capital costs with neighboring communities, Blue Hill uses the Blue Hill/Surry Transfer Station for all municipal solid waste disposal and recycling. Sharing the capital and operating costs has been beneficial for both Surry and Blue Hill.

7. Goals & Objectives

Goal: Advance the health, safety, and welfare of Blue Hill by ensuring the provision of government services in a fiscally responsible manner.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Establish and maintain a Capital Investment Plan	Update Plan annually to reflect changing objectives and costs.	Select Board	Ongoing
Maintain and fund capital reserve accounts for anticipated major expenditures referenced in the Comprehensive Plan	Annually review reserve account balances and adjust as appropriate.	Select Board	Ongoing
	Explore grant and bond funding options for projects.	Select Board	Ongoing
Seek grant funding whenever available for local projects and land acquisition	Identify local projects for which match funding may be appropriate.	Select Board	Ongoing
	Set aside reserves as matching funds.	Select Board	Ongoing
Reduce residents' property tax burden	Remain within LD1 revenue limitations unless Town voters specifically approve otherwise.	Select Board	Ongoing
Explore establishing Tax Increment Financing Districts for economic development and housing	Investigate viability for anticipated projects, such as affordable and workforce housing.	Select Board	Ongoing
Explore further sharing of services with nearby towns	Remain active in regional municipal organizations	Select Board	Ongoing

Chapter G: Recreation

1. Purpose

A community's quality of life is an important factor for most people deciding on a place to live and is often related to the growth and development of a town or area. This section contains an inventory of current recreation and health facilities and an analysis of how these may be affected by future change and growth. Specifically, this section will:

- Describe current recreational and health resources in Blue Hill;
- Assess the current and future adequacy of these resources; and
- Predict whether the availability of open spaces for public access and recreation will be threatened by future growth and development.

2. Key Findings & Issues

Blue Hill is home to several recreational facilities, owned by the Town and also privately owned with public access. Among these are public playing fields, parks, playgrounds, several public boat launch facilities, a salt-water swimming beach, a rifle range, the Blue Hill YMCA at the Lawrence Family Fitness Center, a gymnasium in the Consolidated School, and conservation land. These facilities serve all age groups, as well as multiple towns on the Blue Hill Peninsula.

The Town has growing public access to salt and fresh water, as well as open space thanks to the efforts of the Blue Hill Heritage Trust.

The Blue Hill Parks & Recreation Department and other providers have shown an ability to provide activities and programs for people of all ages and with many different interests. It appears that the Department will be able to adapt to whatever population changes may occur in the coming years.

3. Public Opinion Survey Results

Respondents voiced mixed opinions on the Town's recreational facilities and programs. Nearly equal amounts said the quality of these services are either good, adequate, or need improvement.

"Please provide your opinion of the quality of these Town services and facilities."

	Excellent	Good	Adequate	Needs Improvement	Don't Know/ Unsure
Recreational Facilities	12.2%	27.3%	24.9%	25.3%	10.3%
Recreational Programs	8.0%	21.2%	24.6%	22.9%	23.3%

Similarly, there were varied results when asked about public access to streams and ponds and public access to saltwater. At least 40% of respondents said access was either excellent or good to both sources of water; 27.1% said that public access to streams & ponds needs improvement and 36.8% said public access to saltwater needs improvement.

“Please provide your opinion of the quality of public access to saltwater and streams/ponds.”

	Excellent	Good	Adequate	Needs Improvement	Don't Know/ Unsure
Public Access to Streams & Ponds	15.60%	29.91%	19.44%	27.14%	7.91%
Public Access to Saltwater	14.10%	26.07%	18.38%	36.75%	4.70%

The Town’s involvement in protecting various recreational and natural areas received significant support from survey respondents, as over 80% said that it should either be “very” or “somewhat” involved in protecting recreational waterfront access, recreational open space inland, scenic views, coastal land, lakes and ponds, and streams and rivers.

There is also general support for more investment in municipal recreation opportunities, youth services, and senior citizen services. Most survey respondents would like to see this investment and support using property tax dollars or specifically with grants or subsidies. Over half of respondents also believe that these services need improvement or attention, or at least need study.

4. Conditions and Trends

4.1. Recreation Resources & Facilities

Blue Hill’s recreational facilities are summarized in Table G-3 and are displayed in Figure G-1. Among these are public playing fields, parks, playgrounds, several public boat launch facilities (see Marine Resources section), a salt-water swimming beach, a rifle range, the Blue Hill YMCA at the Lawrence Family Fitness Center (including a gymnasium, indoor swimming pool, indoor track, weight room and several exercise studios), a gymnasium in the Consolidated School, and conservation land.

Privately owned, though made open to the public by private landowners, are the George Stevens Academy fields on Ellsworth Road and their tennis facilities located on Union Street. The Fairgrounds are a popular destination for people wishing to jog or walk around the gravel track. Notably, there are numerous walking paths that have proliferated in recent years, including the Heart of Blue Hill trail system (including a wheelchair accessible portion) and a walking path behind the Peninsula Skating Association Skating Rink.

Figure G-1: Blue Hill Recreation Facilities

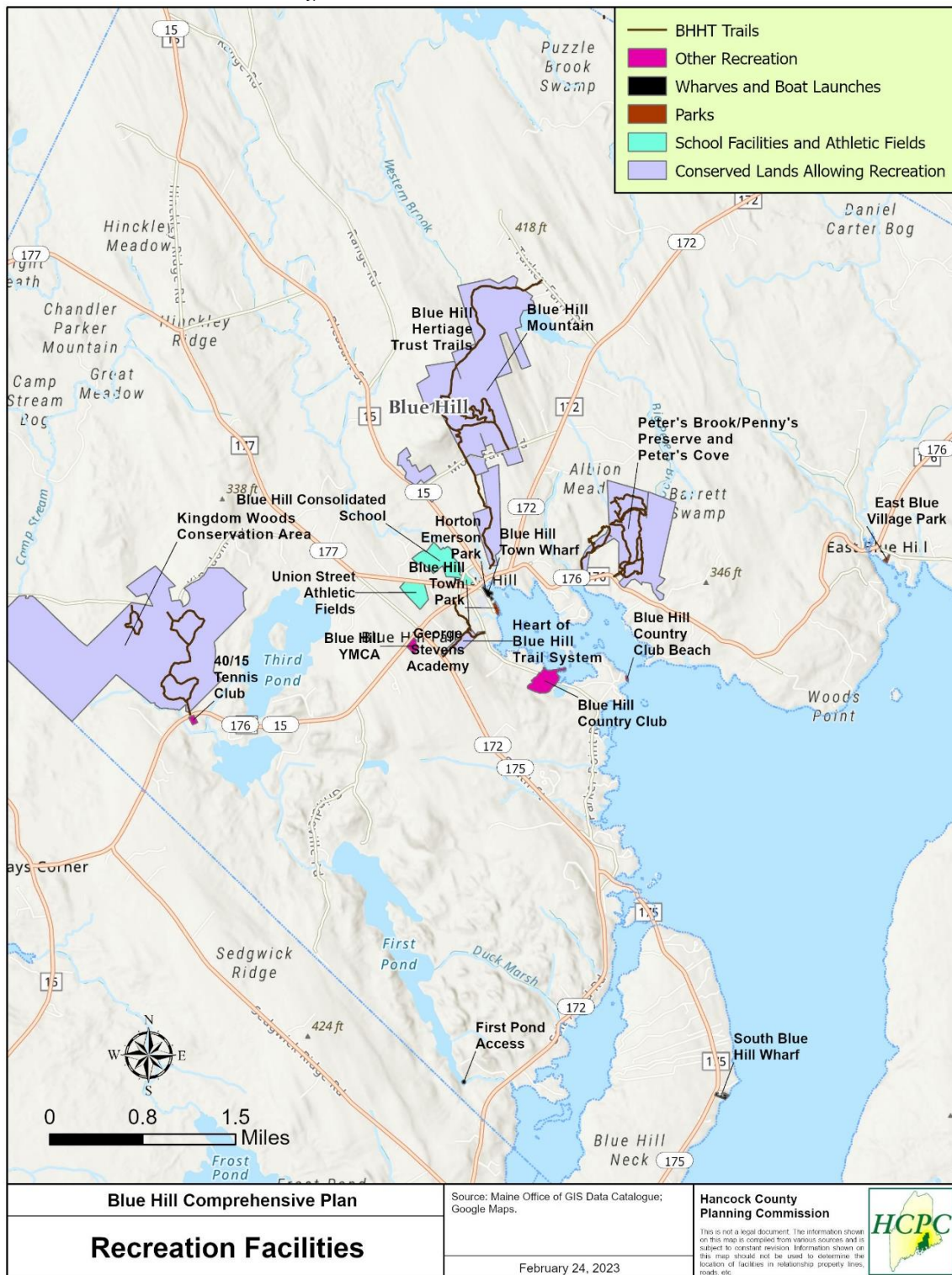


Table G-3: Recreation Resources & Facilities

Facility	Size	Owner	Activities	Condition/ Accessibility
Malcolm Saunders Fields	20 acres	Private	Baseball, soccer, skating	Good
Blue Hill Town Park	6+ acres	Town	Playground, picnicking, beach access	Good
Horton Emerson Park	1+/- acre	Town	Water access	Good
Blue Hill Consolidated School	38.2 acres	Town	Baseball, soccer, playground, gymnasium	Good
George Stevens Academy	5 acres	Private	Youth sports and recreation, gymnasium, sailing, tennis courts	Good
South Blue Hill Wharf	2+/- acres	Town	Launching facility and floats	Fair to Poor
Blue Hill Village Wharf	1+/- acres	Town	Launching facility and floats	Good to Fair
Blue Hill Mountain	400 acres	Town, BHHT	Nature preserve, hiking	Trails vary in accessibility
Peter's Brook/Penny's Preserve Trail System and Peter's Cove	200 acres	BHHT	Nature preserve, hiking, bathing, public water access	Trails vary in accessibility
Heart of Blue Hill Trail System	0.25 miles	BHHT	Nature preserve, walking	Some sections are suitable for those with limited mobility
Kingdom Woods Conservation Area	800+ acres	BHHT	Nature preserve, hiking	Trails vary in accessibility
Jed's Island	15 acres	MCHT, BHHT	Camping, small craft access	Limited access for those with disabilities
East Blue Hill Park	0.5 acres	East Blue Hill Village Improvement Association	Picnicking, playground, gravel boat launch, basketball court	Good
Ice Hockey Rink		Town	Public skating rink	Good
Lawrence Family Fitness Center	4,400 sq. ft.	YMCA	Fitness facilities, swimming, recreation programs	Includes activities for those with disabilities
40/15 Tennis Club	1.9 acres	Private	Indoor Tennis	Good
Blue Hill Country Club	90 acres	BHCC	Golf, tennis, private beach access	Good
McHeard Brook Access	< 1 acre	State	Carry-in boat access	Limited access for those with disabilities
First Pond Access	< 1 acre	State	Carry-in boat access	Limited access for those with disabilities
Kollegewidgwok Sailing Education Association		KYC	Small boat access, sailing instruction	Good
Blue Hill Rifle and Pistol Club		Private	Shooting events and clubs	Good

Sources: Town of Blue Hill, GSA, BHHT, MCHT, MDIFW, Google Maps, Maine DACF

4.2. Public and Private Recreation Programs

The Town of Blue Hill Recreation Department provides youth recreation sports programs as well as a wide variety of seasonal and year-round activities for its residents. The Department coordinates with the athletic programs offered by the Blue Hill Consolidated School and George Stevens Academy.

The Blue Hill YMCA at the Lawrence Family Fitness Center is an important provider of aquatics, fitness, and other recreation and health programs for Blue Hill and area residents. Private recreation programs are also provided by such facilities as the 40/15 Tennis Club, the Kollegewidgwok Yacht Club, and the Blue Hill Country Club.

4.3. Unmet Needs

Recreation facilities in the region that appear to be lacking are amenities that do not require large amounts space, such as outdoor pickleball courts, skateboarding parks, and climbing facilities. An increased number of accessible trails would be appreciated by many. In terms of programming, there may be an opportunity to increase the coordination for youth programs between the schools and organizations like the YMCA.

4.4. Public Access to Fresh and Saltwater Bodies

Blue Hill provides several points of coastal access. These include the Town Wharf and Town Park, Horton Emerson Park, South Blue Hill Wharf, and East Blue Hill Village Park. There is a public right-of-way from Main Street. The head of the harbor is located where Blue Hill Garage currently sits. Public access is also allowed on Jed's Island. In terms of freshwater sites, there are small-craft put-ins at First Pond and at McHeard Brook. Access to Toddy Pond, via boat launch, is available in East Orland. The Blue Hill Heritage Trust's (BHHT) Kingdom Woods Conservation Area includes the entire shore of undeveloped Fourth Pond and the upper watershed of Carleton Stream.

The Blue Hill Heritage Trust owns Carleton Island in Salt Pond, and it is publicly accessible by boat only. Access to the Island will improve as the Maine Coast Heritage Trust recently purchased property along Salt Pond, but it will not be available to the public until about 2025. Similarly, the Maine Coast Heritage Trust has also completed the purchase of the "Nub" on Route 175 in Blue Hill Falls, which is approximately 2.6 acres. Town voters must approve the offer, in which case the intent would be to provide more public access to the bay. Public access to water bodies in Blue Hill appears to be adequate.

4.5. Trail Systems and Conservation Organizations

Blue Hill is fortunate to have ample tracts of publicly accessible conserved natural areas with extensive trail systems. The Kingdom Woods Conservation Area, for example, has more than 800 acres and three miles of trails. Blue Hill Mountain also has several different trails. As another example, there are approximately five miles of hiking trails in the Peters Brook & Penny's Nature Preserve Trail System. Each of these examples are located on property or easements held by BHHT and are open to the public.

4.6. Regional Recreation Resources

As is evident from the map in Figure G-2 below, there is a wealth of recreation and fitness opportunities on and around the Blue Hill Peninsula. Some of these include the gym space and recreation programs provided by area schools, the many natural areas and hiking trails provided by BHHT, Maine Coast Heritage Trust (MCHT) and other land trusts, and the several area community centers.

Figure G-2: Regional Recreation Facilities



5. Analyses

5.1. Ability of Recreation Facilities/Programs to Accommodate Growth and Change

The Blue Hill Parks & Recreation Department and other providers have shown an ability to provide activities and programs for people of all ages and with many different interests. It appears that the Department will be able to adapt to whatever population changes may occur in the coming years.

5.2. Need for Facility Upgrades and/or Added Capacity

Maintenance and upkeep of the baseball fields at the Union Street Complex is desired, along with improvements at the Blue Hill Consolidated School gym. Upgrades are needed at the ice rink used by the Peninsula Skating Association, such as a roofed facility with a chiller. Other community recreation needs include more accessible walking paths and expanded partnerships with the Blue Hill YMCA. Blue Hill students have also expressed a desire for a skatepark.

5.3. Open Space Protection

Thanks in large part to the efforts of the Blue Hill Heritage Trust, the Blue Hill Peninsula has extensive areas of open space that are permanently conserved and are publicly accessible for hiking, nature viewing, and other forms of passive recreation. See Figure G-1 and the accompanying discussion above.

5.4. Mechanism for Open Space Acquisition

As one example of an open space partnership, the Town partnered with the BHHT in creating the Blue Hill Mountain conservation area. By acquiring several parcels, resulting from generous land donations, the Trust was able to significantly expand conservation land that had been given to the Town in 1977. This demonstrates that the Town has the experience and relationships that make additional conservation partnerships a potential in the future.

5.5. Access to Significant Waterbodies

As discussed above, Blue Hill provides several points of public coastal access. Public access is also allowed on Jed's Island. In terms of freshwater sites, there are small craft put ins at First Pond and at McHeard Brook. Access to Toddy Pond is available in East Orland. BHHT's Kingdom Woods Conservation Area includes the entire shore of undeveloped Fourth Pond and the upper watershed of Carleton Stream.

5.6. Trail Maintenance and Use

Thanks to the many volunteers who are part of the Blue Hill Heritage Trust and other conservation groups, the trails in Blue Hill are mostly in adequate condition. Some of the trails up Blue Hill Mountain have been degraded by high-level hiker use and heavy rain and now need significant maintenance. There have been minor conflicts associated with dog-walking, and between hikers and mountain bikers, but this hasn't caused major concerns.

5.7. Traditional Access to Private Lands

Unique in the nation, Maine has a tradition of private landowners allowing members of the public to use their property for a wide variety of recreational activities free of charge. In Blue Hill, as in other Maine communities, this tradition is weakening due to abuses by the public and new landowners who are uncomfortable with this tradition. The response in Blue Hill has been the creation of the Blue Hill Heritage Trust and the acquisition by the Trust and other conservation organizations of open space land, whether in fee or by easement, to ensure, and to an extent restore, some of the access to the community's natural areas.

6. Goals & Objectives

Goal: To provide a range of recreation activities for persons of all ages and abilities within the financial means of the Town, and partner where appropriate with other organizations to meet current and future needs.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Maintain and improve access to various recreational facilities and resources for all ages and abilities	Work with local land trusts, conservation groups, and affiliated organizations to improve the incorporation of accessible design standards into trail systems.	Select Board	2024 - Ongoing
	Evaluate and designate certain public roads as exercise loops with signage and accommodations for pedestrians and cyclists.	Select Board	2025 - Ongoing
	Include accommodations for pedestrian and cyclist access as review criteria for roadway improvement projects.	Select Board, Planning Board	2025 - Ongoing
	Continue to identify and partner with other organizations to preserve open space, as appropriate	Select Board	Ongoing
	Continue to maintain public access to waterbodies for recreational use.	Select Board	2024 - Ongoing
	Provide educational materials regarding the benefits and protections for landowners allowing public recreational access on their property.	Select Board	Ongoing
Improve safe winter access for pedestrian use	Continue to maintain sidewalks to promote safe winter pedestrian use.	Select Board	Ongoing
Maintain existing recreational facilities and services	Establish maintenance plans and schedules for recreational facilities.	Select Board, Public Works	2025 – Ongoing
	Maintain and possibly expand recreational facilities and programs.	Select Board, Blue Hill YMCA	Ongoing

Chapter H: Marine Resources

1. Purpose

The comprehensive plan for a coastal community like Blue Hill needs to address marine resources.

This section:

- a. Describes Blue Hill’s coastal marine resource areas, facilities, and water-dependent uses;
- b. Assesses the adequacy of existing facilities and public access points to handle current and projected use demands; and
- c. Assesses the effectiveness of existing measures to protect and preserve coastal marine resource areas and water-dependent uses.

2. Key Findings & Issues

Blue Hill’s tidal waters, inland freshwater ponds and streams, and shorefront define the Town’s character, and protecting these resources is of vital importance to the Town. Water quality is of increased focus and concern. For example, the Town’s wastewater treatment plant discharges treated effluent into Blue Hill Harbor, and limiting nonpoint source runoff is of interest.

Water access is consistently identified as an important issue for both commercial fishery and recreational users. There are also concerns about increasing risks to the commercial fishery, relating to increased costs to operate and declining stocks of harvested species.

The capacity of the Town’s public boating facilities to accommodate all users is also beginning to reach its limits. Although the Town’s Shoreland Zoning Ordinance provides protection for the aesthetic character of the Town’s waterfront, proposed onshore projects have been opposed, partly for aesthetic reasons. Similarly, there is substantial concern about the prospect of large-scale aquaculture projects coming to Blue Hill.

3. Public Opinion Survey Results

Respondents have mixed opinions about existing public access to saltwater. Roughly 40% said this access was either excellent or good, while 36.8% said that access needs improvement.

A majority (88.5%) agree that the Town should be either “very” or “somewhat” involved in protecting coastal land, including for industries such as commercial fishing and aquaculture. Over two-thirds of respondents felt that it is appropriate for aquaculture to be located in designated areas only.

83% of survey respondents said that the town should be “very” or “somewhat” involved in the protection of working waterfronts, and 86% would like the Town to invest more in marine/wharf facilities, either with property tax dollars or through grants and subsidies.

4. Natural Marine Resources

4.1. Overall Environment/Water Quality

4.1.1. Environment

Blue Hill benefits from a mix of marine attributes. These include at least three well-protected harbors, ready access to Blue Hill Bay and its associated fisheries, the distinctive marine environment of the Salt Pond, and the general scenic beauty of the area.

Blue Hill waters include a portion of Blue Hill Bay, a moderately deep-water bay suitable for boating with favorable habitat for lobsters, scallops, sea urchins, and other sea life. For recreational boaters, the bay provides access to adjacent towns, facilities, and points of interest such as Blue Hill’s Long Island, Newberry Neck and Union Bay, Mount Desert Island to the north, and Deer Isle/Stonington and Penobscot Bay to the south.

Blue Hill Harbor is Blue Hill’s largest harbor. It is located at the head of the bay and separated into two parts, the inner harbor and outer harbor. Together they cover 378 acres and 5.47 miles of shoreline. Much of the inner harbor empties to mud flats at low tide and provides suitable habitat for clams and worms. The remainder of the inner harbor and essentially all the outer harbor is of suitable depth for moorings and anchoring, generally 20-30’ of charted depth at Mean Lower Low Water (MLLW).

The Salt Pond is a brackish tidal pond fed by a combination of freshwater streams and tidal flow through a reversing falls. This body of water is generally shallow, well protected, and appears to be productive for shellfish and other aquaculture purposes.

4.1.2. Water Quality/Resource Protection

The Shaw Institute (formerly MERI—the Marine Environmental Research Institute) is a Blue Hill-based marine research organization that has monitored water quality at various points in Blue Hill Bay and several streams flowing into the bay for many years and provides this information to the public and to the Town. The Shaw Institute publishes beach/swimming advisories based on test results for enterococci bacteria in area beaches commonly used for swimming. The associated tests generally recognize these areas as “safe,” with some samples indicating “borderline” or “potentially unsafe” bacteria levels. Since bacteria levels change over time, and tend to increase after rain events, the reports are published weekly during the summer swimming season.

The Shaw Institute's data are also used by the Maine Department of Environmental Protection (DEP) as an indicator of water quality health in the Town's harbors, Blue Hill Bay, the Salt Pond, and the various watersheds associated with those bodies of water. As discussed in the Shellfish section of this chapter, water pollution of certain Town mud flats has caused concern regarding ecological health and limitations on shellfish in those areas.

Blue Hill's marine resources are regulated and protected through the Town's Shoreland Zoning Ordinance, Shellfish Conservation Ordinance, and Harbor Ordinance. These are overseen by the Planning Board, Shellfish Conservation Committee, and Marine Resources Committee, respectively. In addition, the Town has adopted other ordinances with the objective of improving the water quality in Blue Hill Bay and nearby freshwater sources. These include an ordinance prohibiting the use of unencapsulated polystyrene for floatation in Blue Hill waters, and one regulating the use of pesticides and pest management techniques, with the aim of reducing the toxic runoff into Blue Hill Bay.

In addition to Town ordinances and the data collection/analysis activities of the Shaw Institute, the Town benefits from input of local nonprofit organizations such as the Friends of Blue Hill Bay, which also monitors the health of the Bay and the various activities on it.

Although the quality of Blue Hill's waters is generally excellent, some areas of focus have been identified:

- The Blue Hill wastewater treatment facility discharges its treated water through an outfall located in the Inner Blue Hill Harbor. Harvesting clams and other mollusks in Blue Hill Harbor is prohibited, or subject to certain conditions, because of this outfall location. (It should be noted that, when the wastewater treatment plant is operating normally, the coliform counts observed in that harbor are among the lowest in Blue Hill waters.) Given the importance of the wastewater treatment plant to water quality in Blue Hill's largest harbor, continued investment to ensure normal operations of that facility is very important.
- DEP also has outstanding licenses for two overboard discharge pipes, one in the East Blue Hill area and one near the South Blue Hill Wharf. These facilities discharge treated sanitary wastes or wastewater from household activities directly into Blue Hill Bay, without being conveyed to the municipal wastewater treatment plant or an on-site septic system. Over time, we expect that these two systems will ultimately be decommissioned, as a result of Maine's regulations.
- The survey work done in connection with the recent consideration of a dredged channel in the Inner Harbor identified the presence of polycyclic aromatic hydrocarbons (PAHs) in the surficial sediment of the harbor. The tested material was not contaminated to an extent that would require remediation, and no source of the contamination was identified.

- The Shaw Institute’s testing has identified modest amounts of natural and man-made pollutants that have occasionally resulted in swimming advisories in certain locations. These could constrain the opportunity for increasing commercial shellfish activity in Blue Hill Harbor. To the extent that research helps identify sources and types of pollutants affecting water quality, there may be an opportunity to take further action to improve the health of Blue Hill’s marine environment.
- One specific area of potential improvement would be to provide enhanced pump-out facilities to the Blue Hill boating fleet.

4.2. Sea Life

There is a wide variety of sea life in Blue Hill’s fresh- and saltwater resources. The following discussion will focus on species of most interest from a commercial fishery and/or conservation perspective.

4.2.1. *Crustaceans*

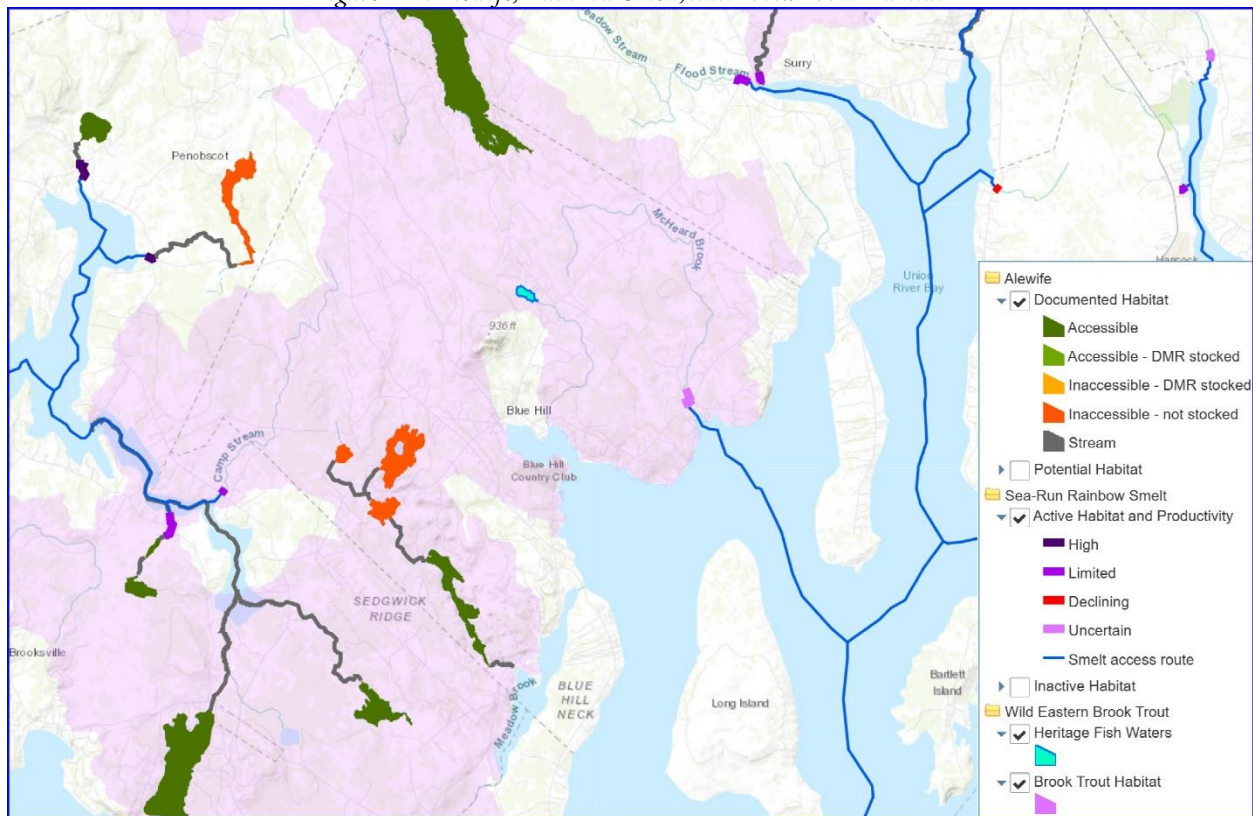
As in many coastal Maine towns, harvesting lobsters is the principal focus of Blue Hill’s commercial fishing fleet, with some boats also fishing for crabs. While the lobster resource is currently viewed as being stable, there are substantial risks on the horizon due to the uncertain effects of warming water temperatures and increased acidification of the water.

4.2.2. *Fish Species of Conservation Focus*

The Maine Department of Marine Resources (DMR) and the Maine Department of Inland Fish and Wildlife (MDIFW) assist towns with inventorying, tracking, and supporting species such as alewives, rainbow smelt, and Eastern brook trout. Alewives and rainbow smelt are listed as Species of Concern by the National Oceanic and Atmospheric Administration. Alewives and rainbow smelt are designated as Species of Greatest Conservation Need (SGCN) in Maine’s 2015 State Wildlife Action Plan.

Figure H-1 shows habitat locations for these three species. Recent discussions with DMR and IF&W considered additional locations where capital investment could increase access to suitable habitat for these and other species (e.g. Bradgon’s Brook culvert flowing under Parker Point Road).

Figure H-1: Alewife, Rainbow Smelt, and Brook Trout Habitat



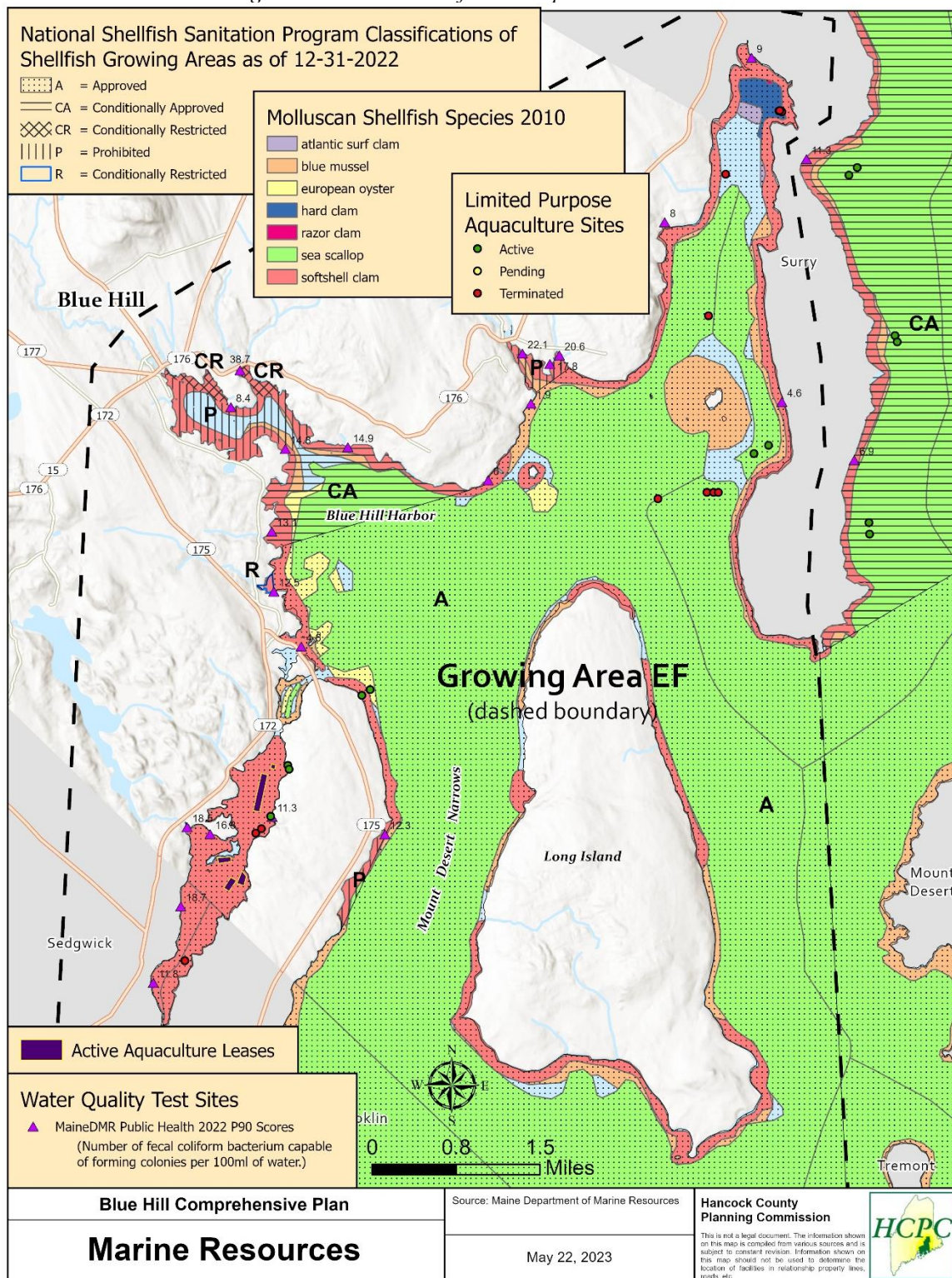
Source: Maine Stream Habitat Viewer

4.2.3. Mollusks

This group includes clams, oysters, mussels, and scallops. There are various places along Blue Hill's waterfront where these shellfish can be found, including several types of clams, blue mussels and sea scallops (see Figure H-2). However, a substantial portion of the most attractive clam habitat is classified as being potentially problematic for harvesting activity. Additionally, predation from non-native green crabs has been affecting mollusk populations to the southeast of Blue Hill Bay and is becoming an increasing problem in Blue Hill's waters as well.

Several of Blue Hill's most productive mud flats are characterized as "Conditionally Approved," "Conditionally Restricted," "Restricted," or "Prohibited" under DMR's Shellfish Growing Area Classification Program. This program is primarily concerned with two types of contamination: 1) disease-causing microorganisms, like bacteria and viruses, associated with sewage pollution; and 2) marine biotoxins associated with harmful algal blooms, like "red tide."

Figure H-2: Blue Hill Shellfish and Aquaculture Areas



The relevant classifications govern whether it is lawful to dig, take or possess (“harvest”) any clams, quahogs, oysters, mussels, or whole or roe-on scallops (from aquaculture leases with an MOU only) from the shores, flats and waters of the indicated area(s):

- **Prohibited:** Because of pollution, it is unlawful to harvest under all circumstances.
- **Restricted:** Because of pollution, it is unlawful to harvest without a special DMR permit.
- **Conditionally Restricted:** It is unlawful to harvest following a malfunction of the Blue Hill Wastewater Treatment Plant (WWTP). Harvest in this area during the open status is allowed only with a special DMR permit.
- **Conditionally Approved:** It is unlawful to harvest following a malfunction event at the Blue Hill WWTP.
- **Approved:** It is lawful to harvest when in the open status (i.e., not subject to closure).

The proximity of the wastewater treatment plant to the substantial mud flats in the inner Blue Hill Harbor (mostly Conditionally Restricted) illustrates the importance of continued investment in the treatment plant’s infrastructure to minimize the likelihood of a malfunction. The other pollutant sources appear to be indirect discharge (stormwater runoff in the watersheds); these have begun to be addressed through Town ordinances.

4.2.4. Other species

In addition to the species and fisheries discussed above, Blue Hill waters host a variety of other fish species that are commercially harvested, fished on a recreational basis, and/or are important contributors to the ecological landscape.

In the recent past, the elver fishery has been a lucrative one, though it has a short season. Offshore species found in the greater Blue Hill area include herring, striped bass, harbor pollack, mackerel, flounder, rock crab, and occasionally bluefish. Dogfish (sand sharks) and American eel are also frequently found.

5. Water-Dependent Uses

5.1. Commercial Fishery

Blue Hill has a moderate-size commercial fishery, consisting of 50 to 75 fishing vessels, a small number of individuals harvesting clams and worms in the intertidal zone, and two aquaculture licensees. Most of the commercial activity is focused on the lobster fishery, but some boats also harvest crabs, finfish, and other species. At present, there is no meaningful commercial seaweed harvesting activity.

The licenses shown in Table H-1 are those sold by DMR to Blue Hill residents. These include residents who may fish out of town but do not include non-residents who fish in Blue Hill. It should also be noted that a single individual may hold more than one license (e.g., both a lobster license and a license

for other fish) and some license categories allow for unlicensed crew aboard. This is why Commercial – Other Fish is presented lower in the table.

Table H-1: DMR-Issued Marine Dealer and Harvester Licenses

License Type	Number of Licenses
Commercial	
Lobster/Crab	70
Scallop/Sea Urchin	8
Shellfish	6
Other Fish	18
Eels/Elvers	9
Other	4
Total Commercial Licenses	115
Non-Commercial/Recreational	
Lobster/Crab	21
Other	23
Total Non-Commercial Licenses	44
Total Licenses to Blue Hill Residents	159

Source: Maine DMR, March 2022

5.1.1. Crustaceans

As illustrated in Table H-1, the lobster fishery is the largest element of Blue Hill’s commercial fishing activity, with over 60% of the nominal commercial licenses, (probably over 90% once an adjustment is made for multiple license holders). Lobster and crab harvesting activity is regulated by DMR and the federal government; the Town does not provide any regulatory oversight or restriction.

In addition to the risk to the lobster stock described earlier in this chapter (from warming waters and acidification), there are other challenges facing the fishery:

- Increased costs of operation for harvesters, including diesel fuel prices, wages, insurance larger boats, and new gear and technology;
- Difficulty sourcing traditional bait, due to reduced baitfish catch, and the lower effectiveness of alternate types of bait; and
- Recent and potential future regulatory changes, such as for the type of line used to reduce the risk of whale entanglement.

Protecting the lobster fishery based in Blue Hill is an important goal. It represents a substantial portion of the Town’s employment base, supports a range of indirect jobs (bait and lobster dealers, fuel suppliers, marine service providers, etc.), and, as previously noted, the lobster fishery is an integral part of the Town’s economy and ambiance.

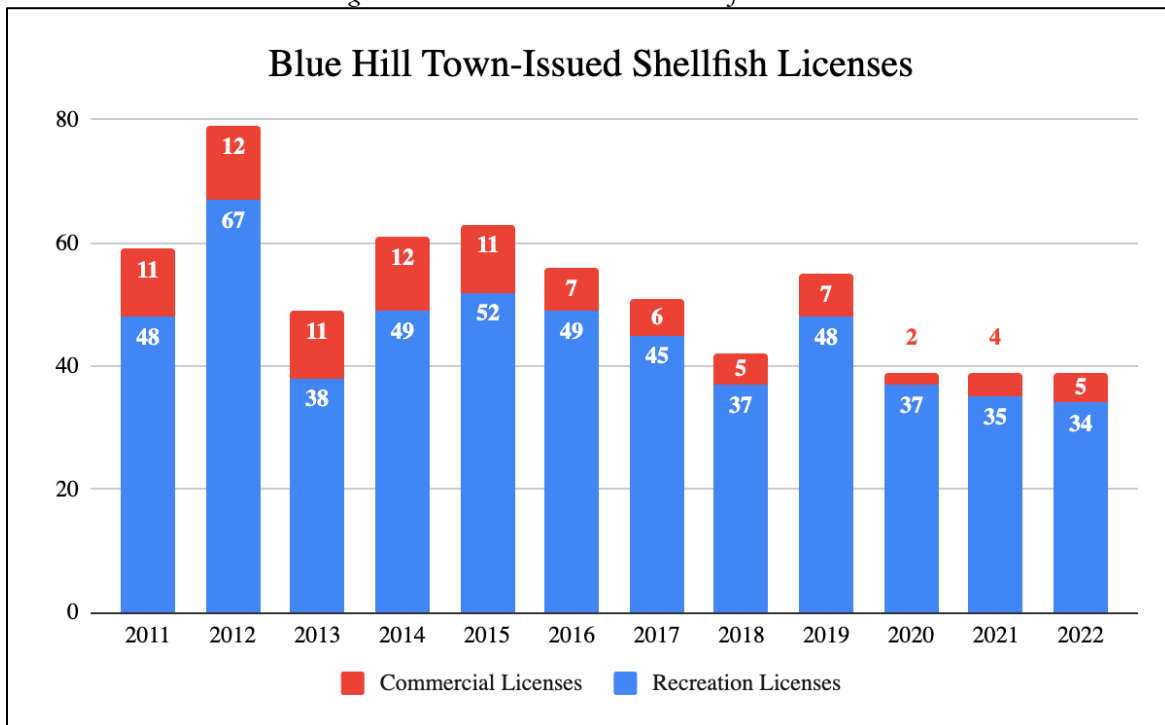
5.1.2. Shellfish

The commercial harvest of clams, mussels and worms is a second fishery of note in Blue Hill. Although the number of participants in this sector is small (Table H-1 indicates only six commercial licensees), this may be a function of the frequent closures of Blue Hill's mud flats because of red tide and pollution risks.

The harvesting of soft-shelled clams is regulated by DMR and most coastal towns through a co-management system. In addition, Blue Hill has a Shellfish Ordinance that establishes a Shellfish Conservation Committee as well as licensing requirements and harvesting limits.

Figure H-3 below shows the number of recreational and commercial shellfish licenses that the Town of Blue Hill issued from 2011 to 2022.

Figure H-3: Blue Hill Town-Issued Shellfish Licenses



Source: Town Reports

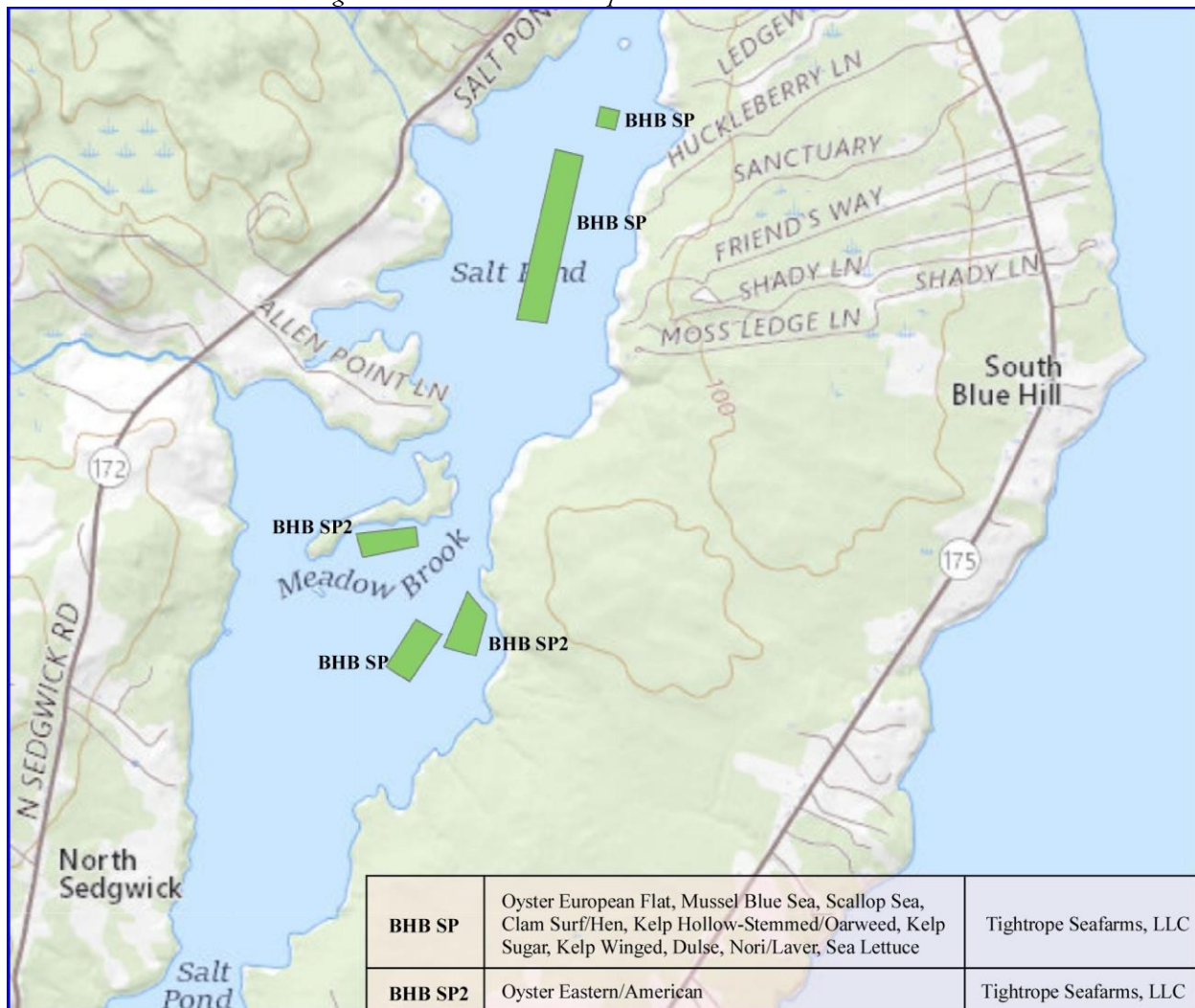
With improvement in the water quality around Blue Hill's mud flats, there may be an opportunity for this sector to experience modest growth.

5.1.3. Aquaculture

Aquaculture is the farming of aquatic organisms such as fish, shellfish, and plants. It can refer to both marine and freshwater species and includes land based as well as ocean production. Regulation of aquaculture in Maine comes under DMR's authority. Aquaculture has been present in Maine waters

since the 1800s, but the first issuance of a DMR lease of state-owned waters to a private interest for aquaculture was in 1973.

Figure H-4: DMR-Licensed Aquaculture Leases in Blue Hill



Source: Maine DMR – Maine Shellfish Closures & Monitoring Data, last edited November 2023

As seen in Figure H-4 above, there are several areas in the Salt Pond used for aquaculture where oysters, mussels, scallops, clams, kelp, and sea lettuce are grown.

There have been growing concerns in the community about aquaculture projects in the region. These have focused on the potential aesthetic and scenic impacts, on navigation, moorings anchorage for recreational boats, and on potentially reduced water quality from intensive cultivation of a small number of species. Most of these concerns appear to have been focused on larger projects than those currently in Blue Hill. There is a perception that large-scale aquaculture activity in Blue Hill waters could damage the essential character of the Town's shoreline, where substantial property taxes provide significant support to the Town's budget.

While the Town appears to have limited ability to regulate aquaculture licensing and activity, Blue Hill should evaluate its options for delineating more clearly what sort of aquaculture the Town wants to encourage or discourage.

5.2. Recreational Boating

Recreational boating is popular in Blue Hill, from oceangoing vessels to kayaks. There are approximately 500 boat moorings in Blue Hill's tidal waters, suggesting that is roughly the number of boats (for commercial and recreational use) trailered and launched, while kayaks or small sailboats may be launched from shore.

There are at least two small businesses that support recreational kayaking in Blue Hill waters: one that rents kayaks (mostly to summer residents and visitors); and another that leads classes and excursions on Blue Hill waters, such as whitewater kayaking available in the Salt Pond reversing falls area.

Access to the water, whether on Blue Hill Bay, in one of the harbors, on the Salt Pond or on one of Blue Hill's inland ponds, is a key attraction for many Blue Hill residents and visitors.

5.3. Marine Services

In addition to the commercial fishery activity at the Town's two public wharves, there is also a general-purpose boatyard in town. Webber's Cove Boatyard has two commercial facilities, one in the inner Blue Hill Harbor and one in East Blue Hill Harbor, each with a boat launch ramp. Webber's Cove offers boat storage, repairs and maintenance, and other marine services. There are also several local businesses providing other marine services, including placing and maintaining moorings, and constructing piers and floats for shorefront properties.

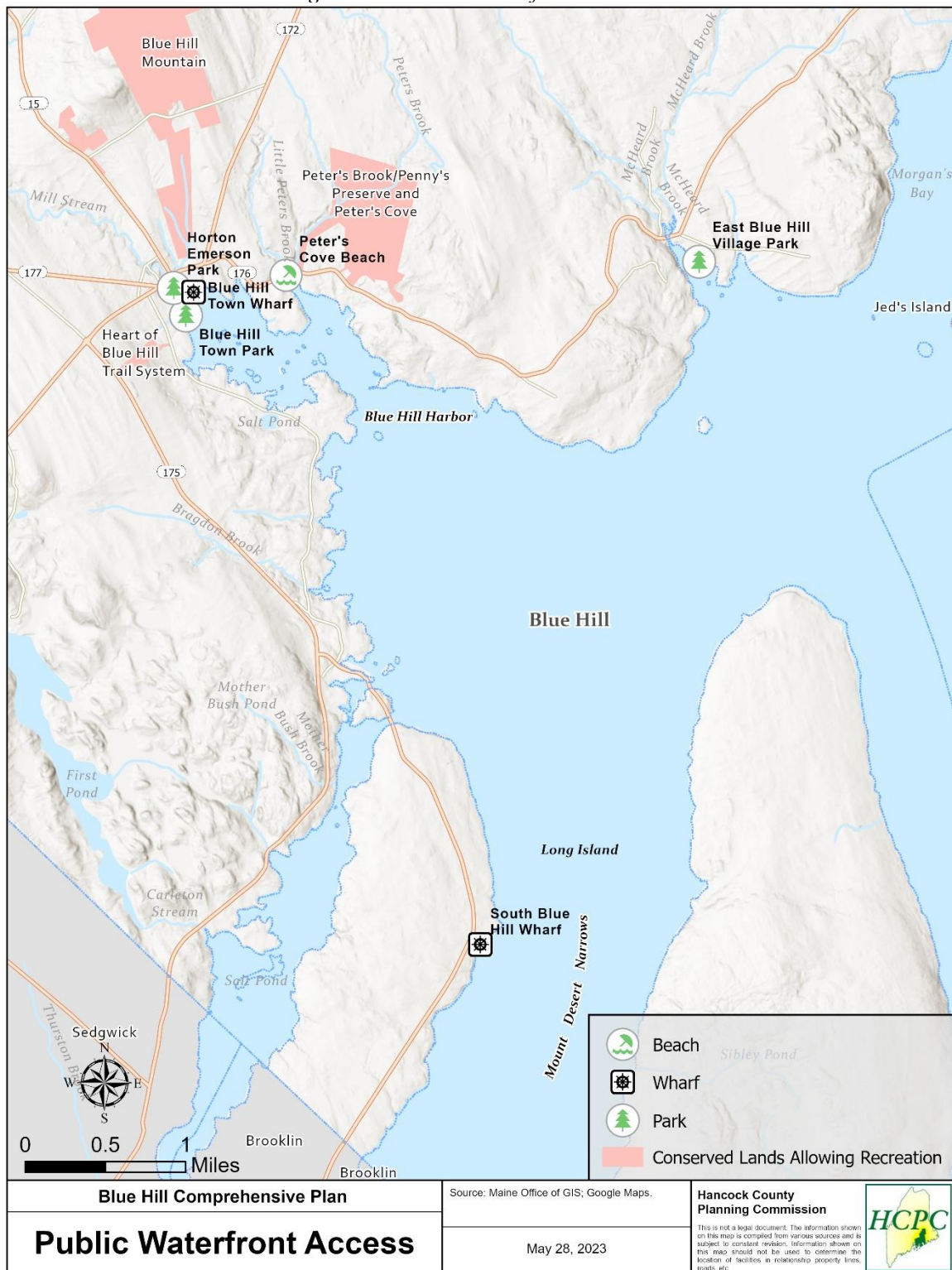
6. Facilities

6.1. Public Access to Blue Hill's Coastal Shore

Most of Blue Hill's shorefront is privately owned, which makes public access to Blue Hill waters and shorefront challenging for boaters, shellfish harvesters, and other residents. Improving public access to Blue Hill waters for both recreational and commercial purposes has been an area of focus for decades, but relatively little progress has been made to date.

Figure H-5 shows several places where people can access the shore. Only three of these sites are public facilities: the two Town wharves and the Town Park beach. The others are only for private access, or by landowner permission.

Figure H-5: Blue Hill Waterfront Access



6.1.1. Public Boater Access

The Town offers only two public boater access sites, both with very limited capacity. There are issues with each of these sites.

The Village Wharf consists of a wharf, boat launch ramp, a small float for dinghy tie-up, and parking for roughly eight vehicles. It is accessible by vessel for about four hours around high water. At all other times it dries out for about 100 yards surrounding the wharf.

There are three issues with access via the Village Wharf:

- Access to the wharf is tidally constrained. If a user misses the tidal window for access, they have to wait a full tide cycle before having another opportunity.
- Parking is very limited. There are approximately eight parking spots at the wharf, but these are often used by visitors to nearby shops, the Fire Department/Ambulance Corps, and others.
- The wharf frequently floods during “king tides” and storms. Projected sea level rise will require reconstruction planning to accommodate higher water levels.

South Blue Hill Wharf consists of a public wharf, boat launch ramp, and associated floats. The wharf is accessible in most tidal conditions, but the facility is always available via the floating docks to seaward of the wharf. The associated boat launch ramp is useable in virtually all tidal conditions. There are finger floats for dinghy tie-up.

Issues here include:

- Parking availability during peak summer months when the substantial number of commercial fishing vessels moored in the area are at sea. This will become more pressing if other privately held water access options in the area become unavailable.
- The wharf is in a location that is exposed to the prevailing wind and waves.

Unless additional water access for boaters can be made available, competition between commercial and recreational boaters for use of the South Blue Hill Wharf will increase.

6.1.2. Privately Owned Access Points Commonly Used by Boaters

In addition to the Town’s public facilities, many Blue Hill boaters access the water via privately owned land. In some cases, free access is granted through the generosity of the landowners; in others, access is limited to club members or is available by other fee arrangements.

- Kollegewidgwok Yacht Club (KYC): a members-only yacht club, used by many recreational boaters. Pump-out station available.
- Steamboat Wharf: the property owner has allowed certain individuals, primarily lobster fishermen, to park and access their dinghies from this private property.

- Conary Cove: the property owner has allowed certain individuals to park and access their dinghies from this private property.

6.1.3. Other Water Access

In addition to the facilities commonly used by boaters, there are a range of other sites for recreational wading, swimming, or launching a small boats. All but one are privately owned:

- Town Park: public access to a small gravel beach for recreational wading or swimming.
- Herrick Memorial Landing: private beach with no dock, small boat (kayak) launching possible; tidally constrained. Currently made available to the public by Blue Hill Heritage Trust.
- East Blue Hill Village Improvement Association: small boat ramp, available to East Blue Hill Village members only.
- Blue Hill Country Club (BHCC): has a beach, with access limited to BHCC members.

6.1.4. Efforts to Expand Public Access

Enhanced public access to Blue Hill waters has been an item of discussion, and some action, for many years.

The concern arises from the constrained Town facilities and the recognition that, if the private landowners currently allowing boaters to access the water via their properties were to withdraw that permission, the limited capacity of the public facilities would be overwhelmed. This concern applies to the commercial fleet, but non-yacht club members must use the South Blue Hill Wharf to launch any craft larger than a kayak, they compete with the very active commercial use of that facility.

In the past, the Town explored acquiring shorefront property to provide additional public access. There have been proposals, for example, to purchase property at the head of the Salt Pond. The Town investigated whether a tax-acquired property on the Salt Pond could be used for recreational boater access, but these efforts have not been successful due to cost, parking, topography, driveway entrance permit issues, and other factors.

Most recently, the Town worked with the Army Corps of Engineers to investigate dredging a channel in Blue Hill Harbor to improve access to the Village Wharf.; however, this initiative, which was originally conceived as providing all-tides/all-seasons access to the wharf for approximately \$1 million, was not approved by the Town when the revised project, providing only seasonal access to a turning basin with a dinghy tie-up area, was put to a vote. Given the outcome of the vote, it seems unlikely that a new dredging proposal will be put forth in the foreseeable future.

Looking forward, the Select Board continues to seek ways to improve access to the water for both commercial and recreational users. It reviews shorefront properties listed for sale to evaluate whether

they are candidates for acquisition by the Town. It also evaluates ways to reduce those constraints on the Town's existing wharves.

6.2. Mooring Facilities

There are approximately 500 moorings in the Town of Blue Hill, and roughly 50 “outhauls” used to provide access to a dinghy from the shore during all tides. Many of these outhauls (and associated dinghies) are used to reach larger boats moored in deeper water.

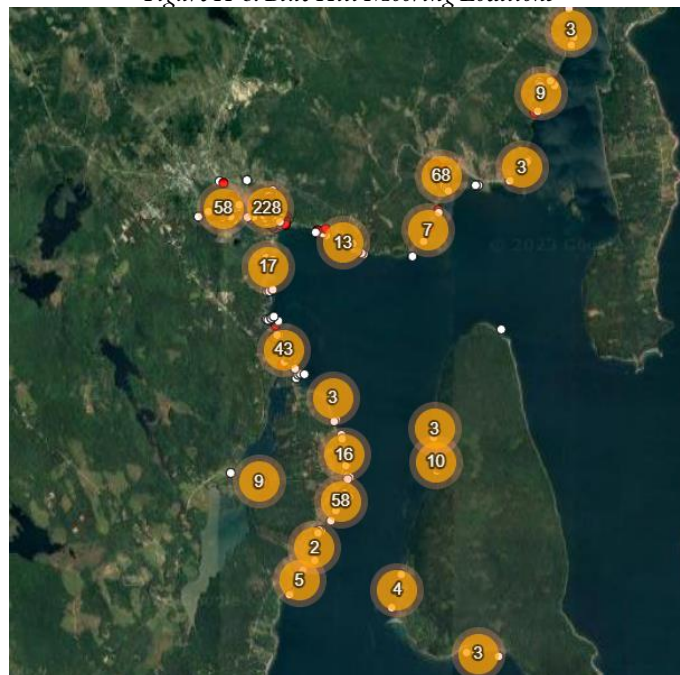
Table H-2: Mooring Count by Location

Location	Number of Moorings
Outer Blue Hill Harbor	228
East Blue Hill Harbor	68
Inner Blue Hill Harbor	58
South Blue Hill (wharf vicinity)	58
Conary Cove (vicinity)	43
Other	109
Total	564

Source: Town of Blue Hill

More than 80% of the mooring locations are in the three protected harbors, Blue Hill, East Blue Hill, and Conary Cove, and in the vicinity of the South Blue Hill Wharf. Most of the moorings characterized as “Other” are Located at private shorefront property.

Figure H-6: Blue Hill Mooring Locations



Source: Town of Blue Hill

Figure H-6 shows the locations of the over 500 mooring locations in Blue Hill's tidal waters. Blue Hill's protected mooring areas are generally at or beyond capacity, based on the spacing between the mooring locations and the swing radii of the moored vessels. To date, all requested mooring installations have been approved by the Harbormaster. However, this has resulted in some overcrowded mooring areas in Blue Hill and East Blue Hill Harbors. The Harbormaster, with the support of the Marine Resource Committee, is embarking on an effort to enforce the Town's Harbor Ordinance on mooring activity more rigorously, but there is substantial room for continued improvement and the relocation process will likely take years. Development of a more formal harbor management plan, which the Town does not currently have, may be helpful in managing this transitional process.

7. Regional Marine Resource Issues

The shoreline passes through the towns of Surry to the east and Brooklin and Sedgwick to the west and south, respectively. It is important that Blue Hill continue to work with these towns, to coordinate their conservation efforts and, potentially, share the cost of any such activity.

8. Goals & Objectives

Goal: Support Blue Hill's commercial fishery activities			
Objective	Strategy	Responsible Party(ies)	Time Frame
Provide facilities suitable for commercial fishery, in keeping with current scale	Invest in South Blue Hill Wharf facilities to maintain this commercial fishing hub	Select Board, Marine Resources Committee	2025 - Ongoing
	Seek additional strategies for improving water access for commercial fishing	Select Board, Marine Resources Committee	Ongoing
	Provide information about the Working Waterfront Access Pilot Program and current use taxation program to owners of waterfront land used to provide access to or support the conduct of commercial fishing activities.	Select Board, Marine Resources Committee	Ongoing
Goal: Improve public access to Blue Hill's tidal waters and ponds			
Objective	Strategy	Responsible Party(ies)	Time Frame
Provide public boaters with straightforward water access without undue competition for facilities between commercial and recreational users	Seek grant and subsidized loan funds to help expand capacity at the two Town wharves.	Select Board, Marine Resources Committee	2024 - 2026
	Research funding sources for additional shorefront land parcels to increase access, by seeking a partnership with non-governmental organizations.	Select Board, Marine Resources Committee	Ongoing
Goal: Maintain/upgrade the Town's physical facilities to accommodate commercial and recreational activities			
Objective	Strategy	Responsible Party(ies)	Time Frame
Develop and implement a plan to address the effects of sea level rise on Town facilities	Investigate subsidy programs to help offset the costs of addressing flooding at the Town wharves	Select Board, Marine Resources Committee, Climate Resilience Committee	2024 – 2025
Evaluate need for additional or improved infrastructure at the	Solicit information about similar facilities' infrastructure.	Select Board, Marine Resources Committee	2024 - 2026

wharves to address current/anticipated uses	Deploy floats that are safe, fit for purpose, and meet the requirements of the polystyrene floatation ordinance ban	Select Board, Marine Resources Committee	2023 – Ongoing
Goal: Protect the scenic vistas on and from Blue Hill’s shorefront			
Objective	Strategy	Responsible Party(ies)	Time Frame
Ensure that future development, both on and off the water, do not unduly adversely affect Blue Hill’s scenic vistas	Review current ordinances to assess whether they provide sufficient protection to the community from adverse land development impacts	Planning Board	2024 - 2025
	Work with local property owners, land trusts, and others to protect major points of physical and visual access to coastal waters, especially along public ways and in public parks	Select Board Planning Board	2024 - Ongoing
	Monitor and keep the town informed of large-scale aquaculture and seaweed harvesting proposals.	Harbor Master Marine Resources Committee	2024 – 2025
Goal: Enhance habitat for fish species that are of Species of Greatest Conservation Need (SGCN).			
Objective	Strategy	Responsible Party(ies)	Time Frame
Build fish passages to allow species such as alewives, rainbow smelt and Eastern brook trout to access relevant Blue Hill streams	Work with Maine Department of Inland Fisheries and Wildlife to evaluate the streams connecting to the bay; develop and implement plans to improve access where feasible.	Select Board Road Commissioner Climate Resilience Committee	2024 – Ongoing
Goal: Protect and improve the quality of Blue Hill’s tidal waters			
Objective	Strategy	Responsible Party(ies)	Time Frame
Reduce, to the extent reasonably possible, contamination of Blue Hill tidal waters	Work with the Shaw Institute and others to identify sources of pollutants and potential mitigation steps.	Select Board	2023 - 2025
	Encourage owners of marine businesses and industries to participate in clean marina/boatyard programs.	Select Board Marine Resources Committee	2024 - 2026
	Investigate and, potentially, pursue improvements to the existing holding tank pump-out arrangements.	Select Board Marine Resources Committee	2024 – 2026
Goal: Improve the Town’s harbor management practices			
Objective	Strategy	Responsible Party(ies)	Time Frame
Address mooring overcrowding and uneven application of the Harbor Ordinance provisions	Develop and implement a harbor management plan.	Marine Resources Committee Harbormaster	2024 - 2026

Chapter I: Water Resources

1. Purpose

With no municipal water supply, essentially all Blue Hill's residences, businesses and institutions rely on private wells for drinking water and other domestic uses. Therefore, managing and protecting this resource is especially critical to the health and welfare of the Town. This chapter presents a review and analysis of Blue Hill's freshwater resources. Specifically, it:

- Describes the characteristics, uses, and quality of Blue Hill's significant freshwater resources;
- Considers potential negative impacts to water quality caused by future growth, development, environmental change, and natural causes; and
- Assesses the effectiveness of existing measures to protect and preserve these resources.

2. Key Findings & Issues

Protecting freshwater resources in Blue Hill's ponds, streams, and aquifers is critical to the Town as a whole. Concentrations of naturally occurring contaminants, such as arsenic, radon, and coliform bacteria exceeding drinking water standards have been identified in many Blue Hill wells, requiring consumer education and, frequently, water treatment. Contamination of ground water from man-made sources, such as PFAS contamination is also a concern for community members and businesses.

With continued development activity in Blue Hill village, there is heightened risk that unsustainable volumes of water may be extracted, leading to dry wells or saltwater intrusion. Climate change, to the extent it results in lower rainfall amounts, could exacerbate this emerging issue.

3. Public Opinion Survey Results

Respondents believe water quality should be a priority for investment and support. 60% of respondents stated the Town should be "very" involved in protecting aquifers for drinking water, even if it affects property rights, while an additional 29.4% said the Town should be "somewhat" involved. 78.6% support or strongly support implementing a source water protection program.

The Town's involvement in protecting freshwater resources is another area of agreement for most respondents. A significant percentage said that they want the town to be "very" or "somewhat" involved in protecting streams and rivers, lakes and ponds, and wetlands.

"How involved should the Town be in protecting the following."

	Very - even if it affects private property rights	Somewhat - good stewardship should be encouraged with incentives	Current protections are appropriate
Lakes & Ponds	51.6%	37.7%	8.7%
Streams & Rivers	54.0%	33.8%	9.8%
Wetlands	56.2%	30.2%	11.1%

Roughly 80% support or strongly support creating or updating a watershed plan to identify flooding and water quality priorities. Over 86% support or strongly support improving and protecting drinking water and wastewater treatment facilities to reduce physical damage and sustain function during extreme weather events. Most respondents (88.5%) would also like to see more town investment in wastewater treatment, either with grants or subsidies or with the inclusion of property tax dollars.

4. Surface Water Resources

4.1. State Water Quality Classification

The Maine Department of Environmental Protection (DEP) classifies the state's surface waters according to assigned water quality goals and sets uses and water quality criteria for each class. If classification standards are not met, the Water Quality Classification program directs the state to improve the quality to meet standards. The classification system includes four classes for freshwater rivers and streams, three classes for marine waters, and one class for lakes and ponds. According to DEP:

A close comparison of the standards will show that there is actually not much difference between the uses or the qualities of the various classes. All attain the minimum fishable-swimmable standards established in the federal Clean Water Act. Most support the same set of designated uses with some modest variations in their description.

- Classes AA, GPA and SA involve little risk since activities such as waste discharge and impoundment are prohibited. The expectation to achieve natural conditions is high and degradation is unlikely.
- Class A waters allow impoundments and very restricted discharges, so the risk of degradation, while quite small, does increase since there is some small human intervention in the maintenance of the ecosystem.
- Classes B and SB have fewer restrictions on activities but still maintain high water quality criteria.
- Classes C and SC have the least restrictions on use and the lowest (but not low) water quality criteria. Classes C and SC waters are still good quality, but the margin for error before significant degradation might occur in these waters in the event of an additional stress being introduced (such as a spill or a drought) is the least.¹

DEP categorizes the streams in Blue Hill as Class B waterbodies, except for Carlton Stream, which is categorized as a Class C waterbody. This means most streams in Blue Hill maintain high water quality.

Impaired streams, rivers, and lakes are those that do not meet the water quality criteria established for their classification. The portion of Carleton Stream located between First Pond and Second Pond is impaired (non-attainment of aquatic life criteria and ambient water quality due to heavy metals). In addition, the watershed associated with Salt Pond is impaired (due to bacteria). There are no other impaired waterbodies or watersheds in Blue Hill.

4.2. Blue Hill Ponds and Streams

Figure I-1: Blue Hill Ponds and Streams



Table I-1: Characteristics of Blue Hill Lakes and Ponds

Name	Area (acres)	Perimeter (miles)	Mean Depth (feet)	Max Depth (feet)	% 500-m Buffer Covered by Impervious Surface	Trophic State: ² (chlorophyll-a)
Toddy Pond	2,410.5 ³	31.3	27	122	1.1%	<=7 ug/L
Second Pond	82.8	2.0	15	23	3.0%	<=7 ug/L
First Pond	213.3	6.1	18	37	0.4%	<=7 ug/L
Sperry Pond	6.7	0.4	unknown	unknown	5.1%	<=7 ug/L
Noyes Pond	28.4	1.0	8	18	1.1%	<=7 ug/L
Sibley Pond	0.4	0.1	unknown	unknown	unknown	unknown
Mother Bush Pond	1.0	0.1	unknown	unknown	unknown	unknown
Fourth Pond	39.0	1.0	6	9	0.1%	<=7 ug/L
Third Pond	238.0	4.8	15	35	0.7%	<=7 ug/L
Subtotal- Freshwater	3,020.9					
Salt Pond 1 (Parker Point Rd)	5.4	unknown	unknown	unknown	unknown	<=7 ug/L
Salt Pond 2	671.6	unknown	unknown	unknown	unknown	<=7 ug/L
Total	3,697.9					

Sources: National Hydrogeographic Dataset, Maine DEP, Lake Stewards of Maine,
Nature Conservancy—Northeast Lakes and Ponds Classification

Table I-1 includes a column with impervious surface information. Stormwater running off buildings, as well as from paved roads, driveways, and parking lots, degrades water quality in surface waters due to pollutants, high water temperatures, and high velocities. Therefore, the more impervious surface there is in the area around a lake or pond, the greater the potential for water quality impairment, and the greater the need for stormwater quality management. The percentages of impervious surface around Blue Hill's lakes and ponds are relatively low.

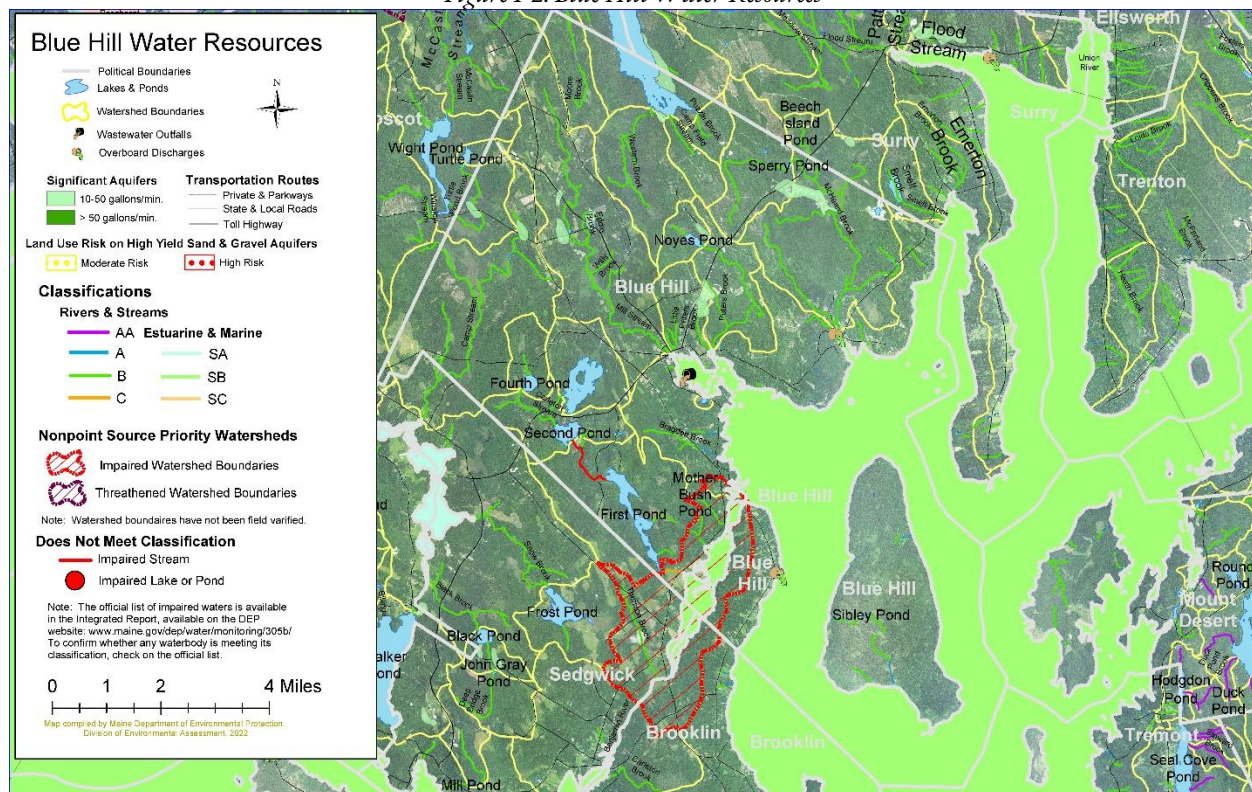
Relative to water quality, one measure to consider is the amount of nourishment in the waterbody (trophic state). More fertile lakes and ponds have more nutrients and therefore more plants and algae. For those that have been measured for this data, the lakes and ponds in Blue Hill are in the category of low to moderate biological productivity and higher transparency or clarity.

Other potential issues for water quality include chloride contamination from road salt runoff, dissolved oxygen levels, and bacteria. In the past, DEP has characterized Blue Hill's lakes and ponds as having moderate-sensitive water quality, defined as being average water quality but with high potential for phosphorous recycling from lake bottom sediments. In addition to its ponds, Blue Hill has quite a few streams, most of which drain directly or indirectly into the tidal waters of Blue Hill Bay, which could present non-point source pollution issues for Blue Hill Bay and tidal flats from upland pollutants carried by runoff.

4.3. Watersheds

Blue Hill's watershed boundaries are depicted in Figure I-2 below (in yellow).

Figure I-2: Blue Hill Water Resources



Source: Maine Department of Environmental Protection

DEP maintains a list of direct watersheds of lakes most at risk from new development and urban impaired streams. Blue Hill, not being urban, does not have any waterbodies that are on these lists.¹¹

DEP also maintains a list to encourage communities to take action to restore or protect waters impaired or threatened primarily by polluted runoff. The list also helps prioritize DEP nonpoint source water pollution control efforts and grant funds. Blue Hill does not have any lakes or streams on the DEP lists of Impaired or Threatened watersheds, but Salt Pond is on the list of Impaired or Threatened marine waters due to bacteria. (The DEP Water Resources map — Figure I-2—shows the watershed as Impaired, but the December 2022 NPS Priority List for Marine Waters puts Salt Pond in the Threatened category).

In the case of Salt Pond, the apparent criteria underlying its categorization as “Threatened” were two indirect indicators of nonpoint source (NPS) pollution:

- Nearshore waters and intertidal clam flats where DEP or partners (e.g., Marine Environmental Research Institute (MERI) have documented water quality indicators with suspected NPS links. Indicators included documented eelgrass loss (only limited availability) or recurring macroalgae blooms, chronically high nitrogen relative to comparable ambient conditions and/or chronically low dissolved oxygen (<5 mg/l).

¹¹ See https://www.maine.gov/dep/land/stormwater/stream_map_1.html

- Marine waters that the Maine Department of Marine Resources (DMR) has identified as having shellfish harvest closures related primarily to NPS threat, and that are protected embayments with limited assimilative capacity. Information available from sanitary surveys, watershed surveys, and local research and knowledge were used to determine if NPS threats were the dominant contributors to documented impairment or anticipated future impairment.

Salt Pond (and Carleton Stream flowing into it) should be a focus of continued efforts to identify the nature of any NPS pollutants and, if identified, to mitigate the flow of these pollutants into these water bodies. As discussed in the Marine Resources chapter, all of the Blue Hill areas licensed for aquaculture are located in Salt Pond.

4.4. Significant Aquifers

As seen in Figure I-2 above (and more clearly in Figure I-4 below), Blue Hill has close to a dozen significant aquifers, all of which have estimated well yields of 10 to 50 gallons per minute. According to DEP, none of these aquifers are at risk from existing surrounding land uses. However, several of the aquifers are in the vicinity of potential sources of contamination as shown in Figure I-4. In addition, except for the aquifer at the top of Green's Hill (off Route 172 just north of the village area), most of these aquifers are in the most rural portions of the town at a meaningful distance from the village area, which is more densely populated higher demand for domestic-use water.

4.5. Invasive Aquatic Plants

According to DEP, invasive aquatic species are introduced exotic flora and fauna that displace native plant and animal communities. Infestations result in habitat disruption, loss of property values, diminished water quality, reduced fishing and water recreation opportunities, and significant expense for mitigating environmental costs. There are eleven invasive aquatic species identified in Maine law as illegal to import, sell, and transport⁵.

According to DEP's data on Invasive Aquatic Plants, Blue Hill does not have any invasive aquatic plants at this time. The nearest infested waterbody on DEP's list is Alamoosook Lake, with variable leaf milfoil, in Orland. Toddy Pond, a major recreational and water resource in northern Blue Hill, is connected to (but upstream of) that body of water. Milfoil is spread typically by "hitchhiking" on boats, motors, trailers, float planes and fishing gear from one water body to another. Careful inspection and sanitation of items being moved from one water body to another is critical for preventing the spread of invasives.

5. Drinking Water

5.1. Groundwater

Groundwater is defined as subsurface water found in the saturated soils and water-bearing bedrock of the earth's surface. Its upper level, which rises and falls seasonally, is called the water table. A bedrock aquifer is a rock formation that contains recoverable volumes of ground water.

5.2. Wells

Blue Hill is highly reliant on wells for water supply; there is no municipal public water supply system. Therefore, Blue Hill's ground water resource is critical to the health and welfare of the town. In particular, the health and water quality of Blue Hill's ponds and aquifers is important—. These resources might be required as primary sources of domestic water in the event the water table recedes, or saltwater infiltration fouls the many wells close to the town's saltwater bodies.

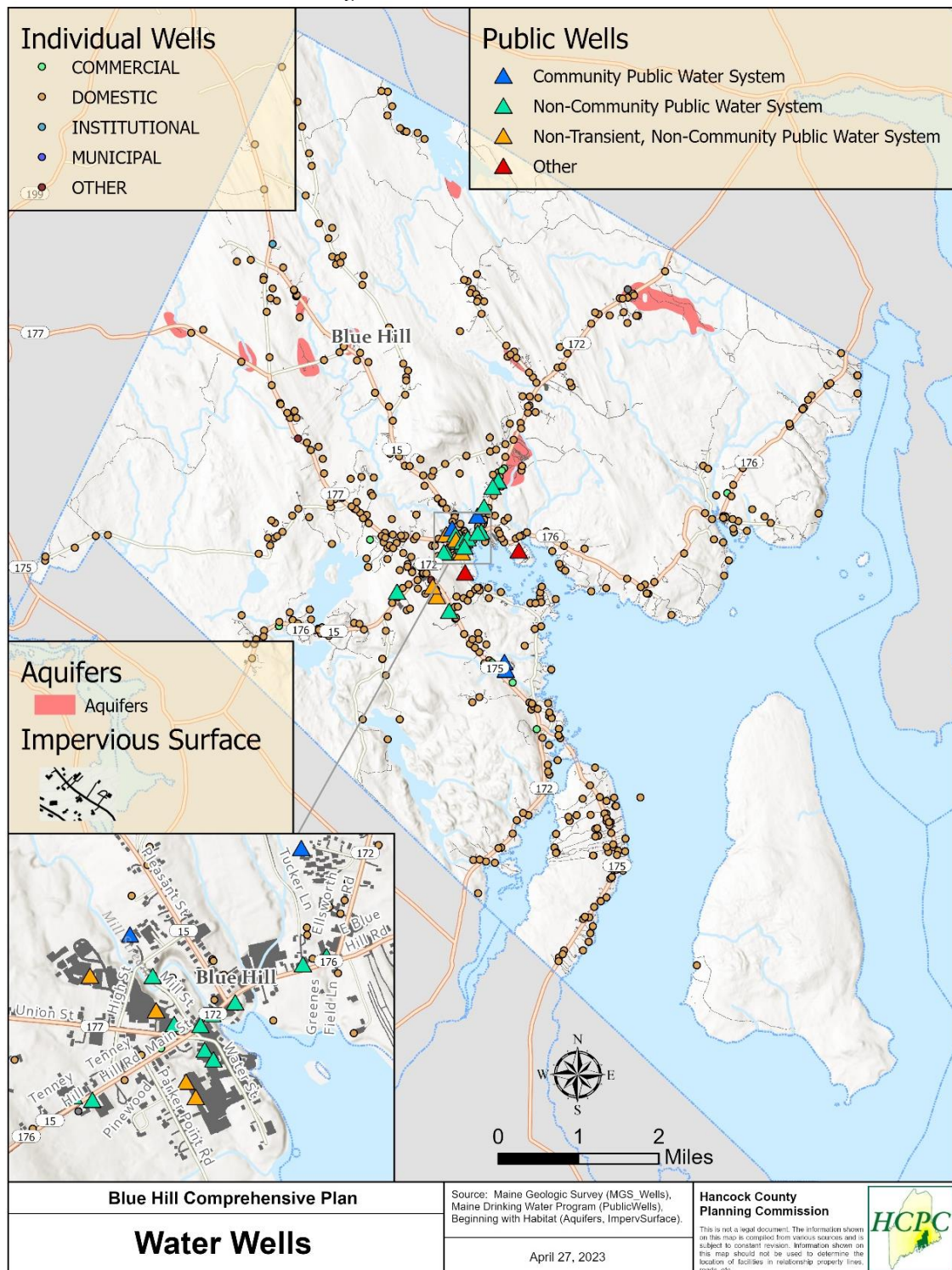
Figure I-3 (below) shows the wells tracked by the State of Maine. It is apparent that many wells are not identified in the state database. We estimate that, since virtually every residence and business has running water, the number of wells roughly corresponds to the number of E911 addresses in Blue Hill, or approximately 1,836 wells.

5.3. Well Water Quality

In the past, DEP rated Blue Hill's groundwater as GW-A. This is the highest classification, and it applies to all groundwater in the state unless specifically noted otherwise. DEP standards mandated that these waters be of such quality that they can be public water supplies and that they be free of radioactive material or any matter that affects their taste or odor.

Most drilled wells in the Blue Hill area currently produce water in sufficient quantity. However, there is an area in the vicinity of Parker Lane and Maple Lane that has a history of wells that do not produce enough water. There appear to be scattered groundwater quality issues across town. Despite the favorable DEP groundwater rating, Blue Hill well water is commonly treated by businesses and homeowners—most often, we believe, for arsenic, radon, iron, and coliform bacteria. In addition, there has recently been substantial focus on the potential presence of per- and polyfluoroalkyl substances (PFAS), substances which have been linked to harmful effects in humans and animals. The results of PFAS testing in certain Blue Hill wells are discussed in the Public Water Systems section of this chapter.

Figure I-3: Blue Hill Water Wells



5.4. Public Water Systems

A public water system is defined as

Any publicly or privately-owned system of pipes or other constructed conveyances, structures and facilities through which water is obtained for or sold, furnished, or distributed to the public for human consumption, if such system has at least 15 service connections or serves at least 25 individuals daily at least 60 days out of the year or bottles water for sale. The term "public water system" shall include any collection, treatment, storage or distribution pipes or other constructed conveyances, structures, or facilities under the control of the supplier of water and used primarily in connection with such a system, and any collection or pretreatment storage facilities not under that control that are used primarily in connection with such a system.⁸

There are three types of public water systems, each of which is regulated differently:

- **Community Public Water Systems:** A public water system that serves at least fifteen service connections used by year-round residents or regularly serves at least 25 year-round residents. Examples include water utilities, mobile home parks, apartment buildings, and nursing homes.
- **Non-Transient, Non-Community Public Water Systems:** A public water system that serves at least 25 of the same people for six months or more per year. Examples include schools, office buildings, and factories.
- **Transient Public Water Systems:** Non-community public water systems that serve at least 25 people, but not necessarily the same persons, for at least 60 days per year. Examples include restaurants, camps and campgrounds, motels and hotels, and golf courses.

5.4.1. Public Water Systems in Blue Hill

Although there is no municipal water system, data from the Maine Drinking Water Program indicate that there are 20 "public water systems" in Blue Hill. These systems are identified in Table I-3 below.

Table II-2: Blue Hill Public Water Systems

Community Public Water Systems	<ul style="list-style-type: none"> • Blue Hill Terrace • Harborview I and II • Parker Ridge Retirement Community
Non-Transient, Non-Community Public Water Systems	<ul style="list-style-type: none"> • Bay School • Blue Hill Co-Op • Blue Hill Consolidated School • George Stevens Academy • George Stevens Academy—Tenney Hill Dorm • Golden Sun Childcare • Northern Light Blue Hill Hospital • Tradewinds Marketplace
Transient Public Water Systems	<ul style="list-style-type: none"> • Arborvine Restaurant/Moveable Feasts • Barncastle Hotel & Restaurant

Source: Maine Drinking Water Program

5.4.2. Public Water Supply Risks

In 2003 the Drinking Water Program of the Maine Center for Disease Control and Prevention conducted a Maine Source Water Assessment Program. Although much of the information at this point is old and incomplete, it is included here for its partial value. The main point of the assessment is to emphasize the idea that Public Water Supply wells need to be protected from current and future potential sources of contamination, the need for which is probably even greater now in Blue Hill than it was in 2003.

Table I-3: Risk Assessments for Blue Hill Public Wells, 2003

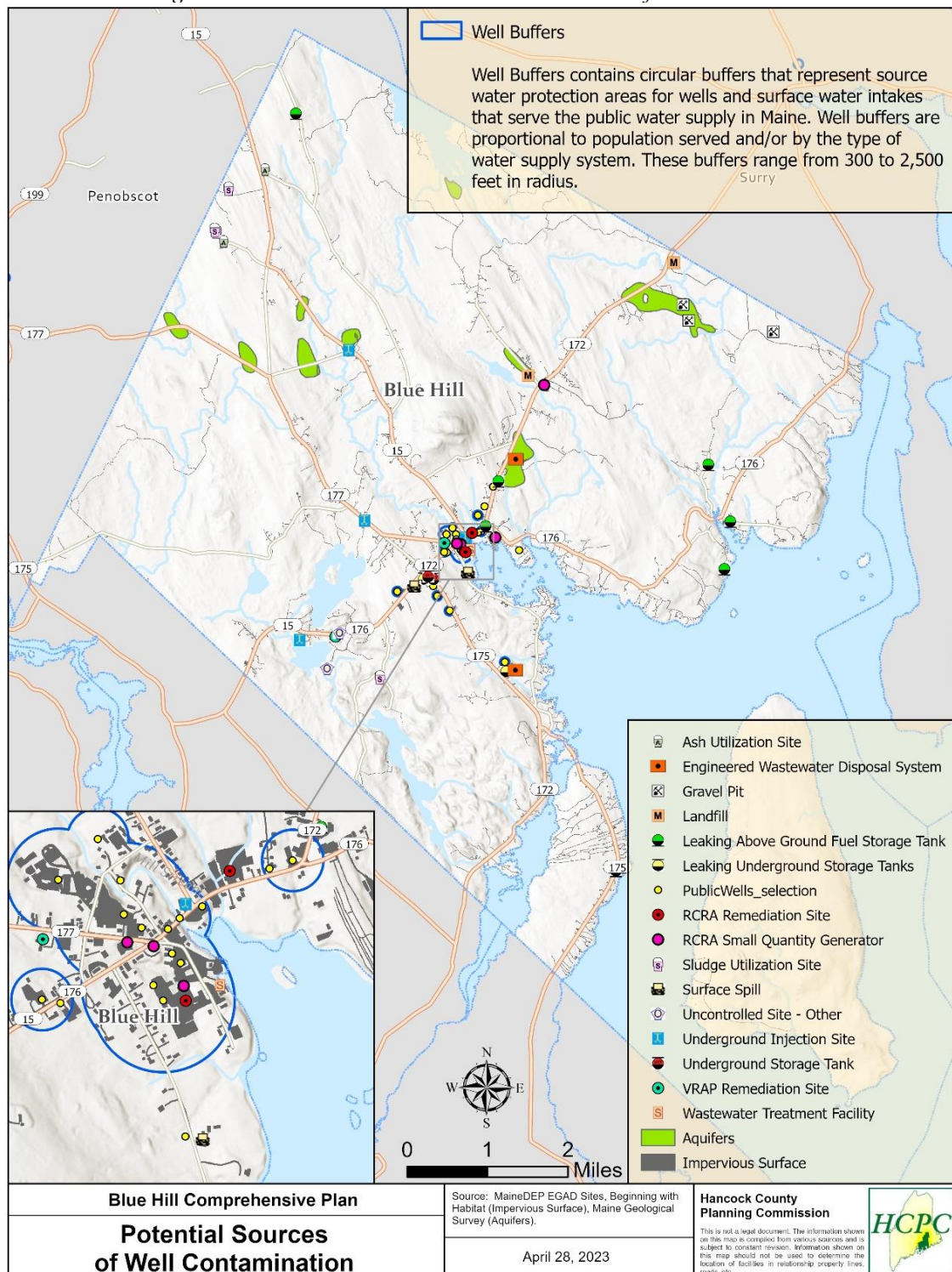
Year	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
Well ID #	99102	11183101	26292101	92110101	92165101	92265101	92265102	93954101	93954102	94442101
Well type	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Well description	Drilled well 185'	Drilled well	Drilled well 238'	Drilled well 360'	Drilled well 360'	Drilled well 305' 9 gpm	Bedrock well, new in 96	Drilled well 400'	Drilled well 100'	Dr well 145', 92' casing, 7 gpm
Overburden thickness (feet)	UNK	10'	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
Wellhead protection radius around well	500'	700'	UNK	300'	300'	300'	300'	300'	300'	300'
Reported distance of land control around well	No data	150'	UNK	20'	No data	No data	No data	No data	No data	No data
Wellhead Protection Ordinance in effect	UNK	UNK	UNK	No	No	No	No	UNK	UNK	UNK
Existing Risk of Contamination based on Well Type and Site Geology	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Positive coliform test	No	No	No	Yes	No	No	No	No	No	Yes
Nitrate test greater than 5 ppm	No	No	No	No	No	No	No	No	No	No
Septic system within 300 feet of well	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Animal feedlot(s)/manure pile(s) within 300' of well	UNK	UNK	No	UNK	UNK	UNK	UNK	UNK	UNK	UNK
Existing Risk of Acute Contamination	Mod	Low	Low	High	Mod	Mod	Mod	Mod	Mod	High
No legal land control or control status is unknown or legal control is less than a 150-foot radius around the well	Yes	No	UNK	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal control of at least a 150-foot radius of property around well	No	Yes	UNK	No	No	No	No	No	No	No
Legal control of at least a 300-foot radius of property around well	No	No	UNK	No	No	No	No	No	No	No
Future Risk of Acute Contamination	High	Mod	Mod	High	High	High	High	High	High	High
Detection of chronic chemical contaminant	No	No	UNK	No	No	No	No	No	No	No
Name(s) of chronic chemical contaminant detected	N/A	N/A	UNK	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total no. of potential sources of contamination within WHPA	3	2	UNK	1	1	2	4	5	6	2

Distance to nearest "Significant Potential Source of Contamination" (feet)	50	33'	UNK	100'	300'	300'	300'	300'	No data	300'
Name of nearest "Significant Potential Source of Contamination"	Sewer lines	Above ground oil storage tank	UNK	Residential home	Sewer lines	Parking lot	Septic system, septic waste disposal	Above ground oil storage tank	No data	Above ground oil storage tank
Existing Risk of Chronic Contamination	Low	Low	UNK	Low	Low	Low	Mod	Mod	Mod	Low
Legal control of Entire Wellhead Protection Area	No	No	UNK	No	No	No	No	No	No	No
Legal control of 2500 Phase II/V Waiver Radius	No	No	UNK	No	No	No	No	No	No	No
Future Risk of Chronic Contamination	High	High	UNK	High	High	High	High	High	High	High

Source: Maine Drinking Water Program

An emerging area of focus is the potential for chronic contamination from PFAS. With the signing of LD 129 on June 21, 2021, all community public water systems and non-transient, non-community schools and daycares were required to sample water for PFAS before December 31, 2022. An interim standard of 20 ppt for six PFAS chemicals (alone or in combination) was put into effect.⁹ As a result of this testing, one public water supply was found to have levels of PFAS chemicals in its drinking water that exceed the interim standard. In addition, another public water supply has been found to have elevated PFAS levels. Mitigation efforts will be needed to make the wells for these facilities safe for drinking. However, given Blue Hill's reliance on well water for virtually all domestic uses, it appears likely that, if tested, many public and private water supplies would require treatment to meet the emerging PFAS standards.

Figure I-4: Blue Hill Public Wells and Potential Sources of Contamination



5.4.3. Protection of Public Water Systems

Public water system wells in Blue Hill are governed and, to some degree protected, by the source water protection regulations of the Maine Drinking Water Program (MDWP). This program's regulations are contained in the *Rules Relating to Drinking Water, 10-144 Code of Maine Regulations*. MDWP defines a Source Water Protection Area as the area that contributes recharge water to a surface water intake or public water supply well (see Well Buffers on the map in Figure I-4). Pursuant to the rules cited above, operators of public water supply systems must be notified of land use applications that could affect any source water protection area associated with their wells. This allows the operators to participate in the municipal decision-making process and helps reduce the risk of contamination to public water supplies. The rules also contain such regulations as where a public well can be sited, wellhead protection area mapping for the assessment of contamination threats, and the reporting of any spills within well protection areas.

The Maine Drinking Water Program also manages the Maine Source Water Assessment Program. This involved completing an assessment of the risk of contamination for each public water supply source and publishing the results for the benefit of the operators of each system and their customers. See Table I-4 above for the risk assessments for Blue Hill's public wells (generated in 2003).

Other potential sources of contamination to Blue Hill's public water supply systems are depicted in the map in Figure I-4 above. In many cases the data are old, in some cases dating back to the 1970s, so it would be worthwhile to investigate the status of these files.

5.4.4. Cyber Security

Given that Blue Hill does not have a municipal public water supply system, and the fact that most well systems are isolated from the Internet, cyber security with respect to Blue Hill's domestic water sources is not currently an area of particular concern in the town.

6. Protection of Fresh Water Resources

6.1. Point Sources (Direct Discharges) of Pollution

As discussed more fully in the Marine Resources chapter, there is a wastewater outfall associated with the wastewater treatment facility in Blue Hill's central village. This outfall and the treatment plant are the subject of ongoing upgrade and improvement efforts. In addition, there are two remaining licensed overboard discharge pipes, one in the East Blue Hill area and the other near the South Blue Hill Wharf.

The Town retains a professional engineering firm to operate and manage its wastewater treatment plant and solicits that firm's input on any recommended repairs or upgrades. In 2023, the Town approved and began a substantial equipment replacement and upgrade plan to address the near-term recommendations. Town government is also planning to implement the longer-term recommendations made by the engineers.

With respect to the licensed overboard discharge facilities, the Town relies on DEP and its licensure process to ensure that overboard discharge is terminated as soon as it is feasible. As noted elsewhere, the specific timing depends on the pace and nature of technology and legislative/rulemaking developments.

6.2. Nonpoint Sources of Pollution

The areas of Blue Hill waters characterized as “impaired” or “threatened” have been classified as such as a result of indeterminate nonpoint sources of pollution. These may include naturally occurring “pollutants” such as animal feces, but may also include runoff of road salt, fertilizer, pesticides, etc. The Town has several ordinances in place that help address some aspects of the nonpoint source pollution risk. It has adopted a Shoreland Zoning Ordinance very similar to the Maine State Model Ordinance; has a site plan review ordinance that, among other things, regulates the amount of impervious surface area and stormwater runoff from commercial developments, and a Healthy Ecosystem Ordinance, which prohibits the application, storage, or sale of certain pesticides (subject to exemptions cited in the ordinance).

In addition, the Town (directly and through contractors) employs best management practices to protect water resources in its public works, road maintenance/upgrade activities, transfer station, and other activities. These include:

- Protecting salt and sand storage from the weather to limit stormwater contamination.
- Cleaning culverts and replacing them with larger culverts or open bottom culverts in certain instances to allow for greater flow and aquatic organism passage.
- Maintaining clean operations at the Town’s Transfer Station facility.

A clearer understanding of the nature of the nonpoint source pollutants affecting Blue Hill’s waters would be helpful in determining the best approach(es) to moderate the effects of nonpoint source pollution.

6.3. Groundwater and Surface Water Supplies and Their Recharge Areas

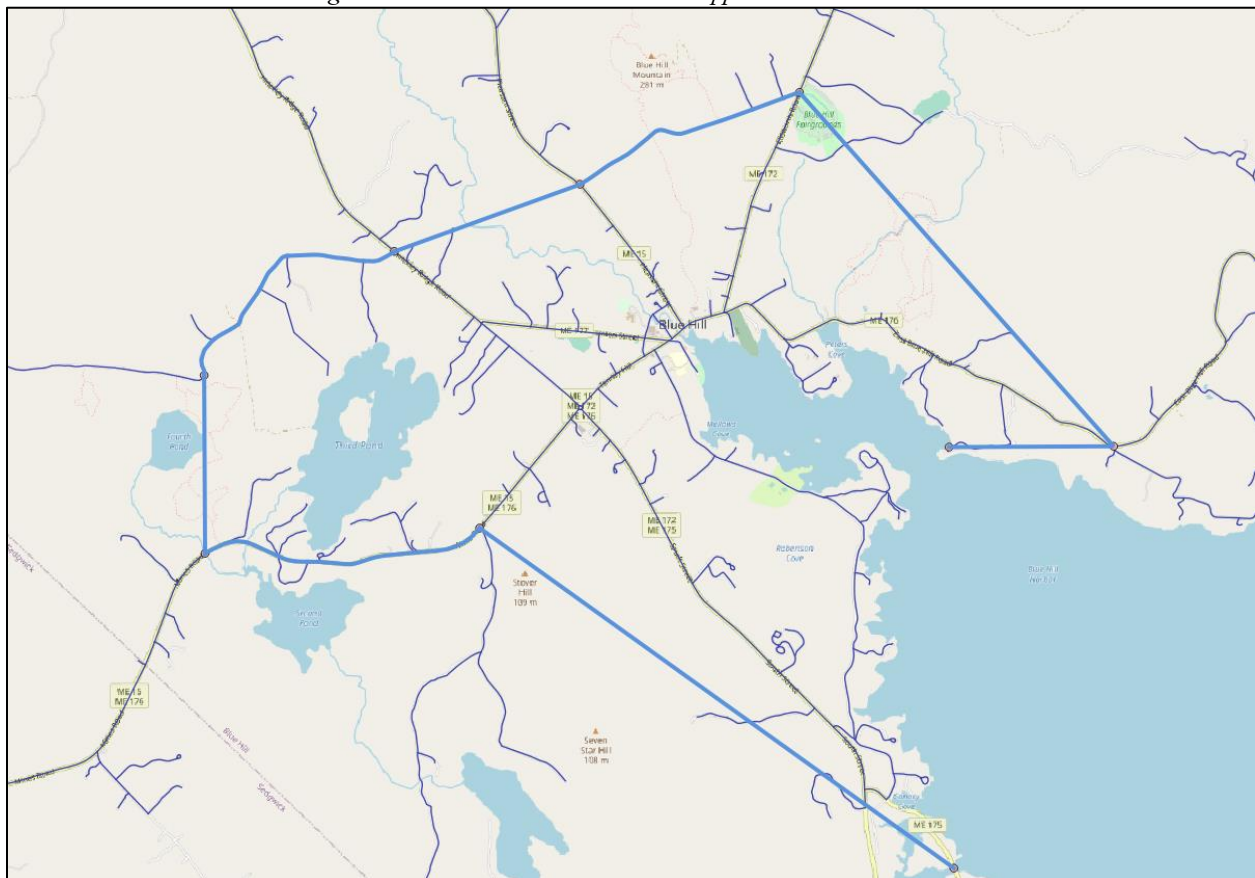
In addition to the steps the Town has taken to protect its water supplies from point and nonpoint sources of pollution, it also has certain protections and plans in place to protect the quantities of domestic water available in the Town. The Town’s Site Plan Review Ordinance is the principal mechanism for this protection, and approving authority must find that, among other things:

- The quantity of water to be taken from groundwater shall not substantially lower the water table, cause saltwater intrusion into any existing well, cause unreasonable changes in groundwater flow, or unreasonable ground subsidence, based upon 10-year drought water levels; and
- The project shall not cause pollution or unreasonable diminution of the aquifer from which it is extracted.

7. The Blue Hill Water District

In the event the protections described above fail to achieve their objectives, or other circumstances create a significant issue with respect to water supply, there is legislation in place establishing the “Blue Hill Water District” authorizing the district’s trustees to supply the inhabitants of the district with “pure water for domestic, sanitary, agricultural, commercial, industrial and all lawful purposes.” To do so, the legislation authorizes the trustees to “take, hold, divert, use and distribute water from any surface or underground lake, pond, stream, brook, spring or vein of water” in Blue Hill and to “locate, construct and maintain dams, cribs, reservoirs, locks, gates, sluices, aqueducts, pipes, conduits, standpipes, hydrants, pumping stations and other necessary structures and equipment therefor.” This 1949 legislation also establishes the boundaries of the Blue Hill Water District, the approximate boundaries of which are shown in Figure I-5, which is the focus for targeted water users. The legislation appears to allow the trustees to obtain water from any source anywhere in Blue Hill, not just within the district, and allows the trustees to supply water to inhabitants outside the district at their discretion.

Figure I-5: Blue Hill Water District—Approximate Boundaries



Source: Town of Blue Hill

It is not clear whether the Blue Hill Water District legislation is still in effect. Given the 70+ years since it was enacted, it may be that the legislation has been amended or repealed, or superseded by other legislation, or that somehow the informal treatment of the district over the years may have invalidated

the trustees' (and the district's) rights. Although there does not appear to be an immediate need to fully activate the Blue Hill Water District, the Town should determine to what degree the legislation is still applicable and take steps to ensure that, if the district's rights are required in the future, they will be available to the Town.

It is hoped that the Town will successfully manage its water supply quantity and quality in such a way that this potentially very expensive alternative does not need to be implemented.

7.1. Opportunities for Partnership with Non-Governmental Groups

The Shaw Institute (formerly the Marine Environmental Research Institute [MERI] has, over the years, conducted active water quality monitoring in Blue Hill's tidal waters and at the mouths of streams and brooks flowing into these waters. These efforts have informed the community about geographic areas of particular focus and the nature of any contaminants or other issues. Shaw Institute data has been used in formulating several of the Town's land use ordinances with a view to protecting and improving water quality.

In addition, the Town has, in the past, worked with the Blue Hill Heritage Trust, which owns or holds easements on a substantial amount of Blue Hill land, including wetlands, and it is hoped that this productive relationship will continue.

There are other organizations focused on specific water bodies (Friends of Blue Hill Bay, Friends of Toddy Pond) that, from time to time, raise issues with Town government that they identify for awareness or action.

8. Goals & Objectives

Goal: Protect current and potential drinking water sources			
Objective	Strategy	Responsible Party(ies)	Time Frame
Assess current drinking water supplies	Secure funding to investigate drinking water quantity, contamination, and quality throughout the Town, with a particular focus on areas of concentrated usage	Shaw Institute, Select Board	2024 - 2026
	Seek funding to assist residents with ongoing water quality testing activity	Code Enforcement Officer	2023 – Ongoing
Ensure the Town's ordinances promote protection of freshwater quality and quantity	Conduct a review of the Town's land use and other ordinances and consider whether additional protections are warranted	Planning Board	2024 - 2025
	Review ordinances to determine if Source Water Protection Areas are being noticed and protected adequately.	Planning Board	2024 - 2025
	Maintain, enact, or amend public wellhead and aquifer recharge area protection mechanisms, as necessary.	Planning Board	2024 – 2025
Promote preparedness for potential changes in water quality and quantity.	Reinvigorate the water district organization, if appropriate, meeting the requirements set out in the legislation	Select Board, Blue Hill Water District	2024 - 2025
	Evaluate whether to expand the role of the trustees to safeguard water quality and quantity within the district	Select Board, Blue Hill Water District	2025

Goal: Protect and improve the quality of Blue Hill's surface waters			
Objective	Strategy	Responsible Party(ies)	Time Frame
Reduce, to the extent reasonably possible, contamination of Blue Hill waters	Work with the Shaw Institute and others to identify sources of pollutants and potential mitigation steps particularly with respect to the Salt Pond and Carleton Stream	Shellfish Warden, Marine Resources Committee	2024 - 2025
	Raise awareness of invasive species threats.	Select Board	2024 - Ongoing
	Adopt water quality protection practices and standards for construction and maintenance of public and private roads and public properties and require their implementation by contractors, owners, and community officials and employees.	Planning Board	2025 - Ongoing
	Encourage landowners to protect water quality. Provide local contact information at the town office for water quality best management practices from resources such as the Natural Resource Conservation Service, University of Maine Cooperative Extension, Soil and Water Conservation District, Maine Forest Service, and Small Woodlot Association of Maine.	Planning Board, Code Enforcement Officer	2025 - Ongoing
	Continue to promote compliance with State stormwater regulations.	Code Enforcement Officer, Planning Board	Ongoing
Ensure the continued viability of the wastewater treatment plant	Continue to invest in the wastewater treatment plant.	Select Board	Ongoing

Chapter J: Natural Resources

1. Purpose

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

- Describe Blue Hill’s critical natural and scenic resources.
- Assess the effectiveness of existing efforts to protect and preserve these resources.
- Predict future impacts to these resources by growth and development.

2. Key Findings & Issues

Blue Hill has a wealth of natural resources that provide a variety of habitats for plants and animals and that perform many vital ecosystem functions. There are a small number of wildlife and plant habitats in Blue Hill that are Threatened or of Special Concern, as well as many areas, primarily wading bird habitat, that provide habitat for species that aren’t necessarily Endangered or Threatened. Blue Hill Heritage Trust (BHHT), Maine Coast Heritage Trust (MCHT), Maine Farmland Trust, private citizens, the federal government, and the Town utilizing its land use regulations, have conserved 7,831 acres of the community’s important habitats.

3. Public Opinion Survey Results

Town involvement in protecting various natural areas and resources received significant support from survey respondents. Over 80% said that it should either be “very” or “somewhat” involved in doing so for all the areas and resources in the table below. Relatedly, 78.8% either support or strongly support setting targets for increasing green space and tree planting to increase shade and carbon sequestration.

“How involved should the Town be in protecting the following.”

Resources	Very - even if it affects private property rights	Somewhat - good stewardship should be encouraged with incentives	Current protections are appropriate
Scenic Views	35.4%	47.5%	14.5%
Coastal Land	46.2%	42.3%	8.7%
Lakes & Ponds	51.6%	37.7%	8.7%
Streams & Rivers	54.0%	33.8%	9.8%
Wetlands	56.2%	30.2%	11.1%
Wildlife Habitats	51.7%	36.0%	10.3%
Forested Land	28.5%	55.2%	11.5%

4. Beginning with Habitat

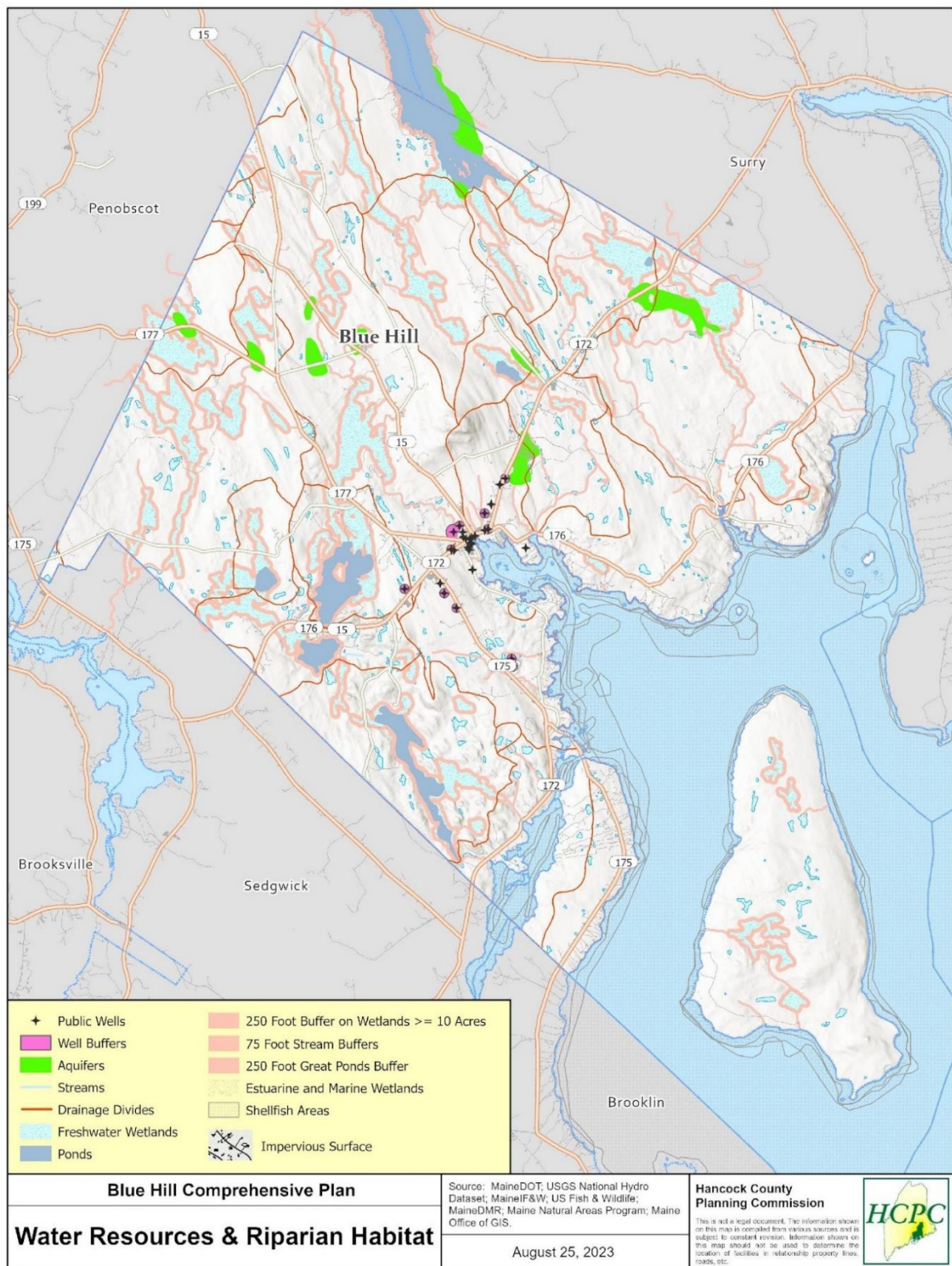
4.1. About the Beginning with Habitat Program

The maps in this chapter were created using data from Maine's *Beginning with Habitat* (BwH) program. This program brings together public agencies and private conservation organizations to consolidate information on wildlife and habitat from all over the state. It also develops tools for communities to incorporate conservation into land use planning. Beginning with Habitat partners include Maine Audubon, Maine Coast Heritage Trust, The Nature Conservancy in Maine, Maine Department of Agriculture, Conservation and Forestry, Maine Department of Inland Fisheries and Wildlife, Maine Department of Transportation, Maine Woodland Owners, and the U.S. Fish and Wildlife Service.

4.2. Water Resources and Riparian Habitats

The Water Resources and Riparian Habitats map (Figure J-1) depicts surface water features and associated shoreline habitats, drainage areas, wells that supply drinking water, and commercially important coastal shellfish beds. Blue Hill has several aquifers and extensive native eastern brook trout habitat areas.

Figure J-1: Water Resources and Riparian Habitats

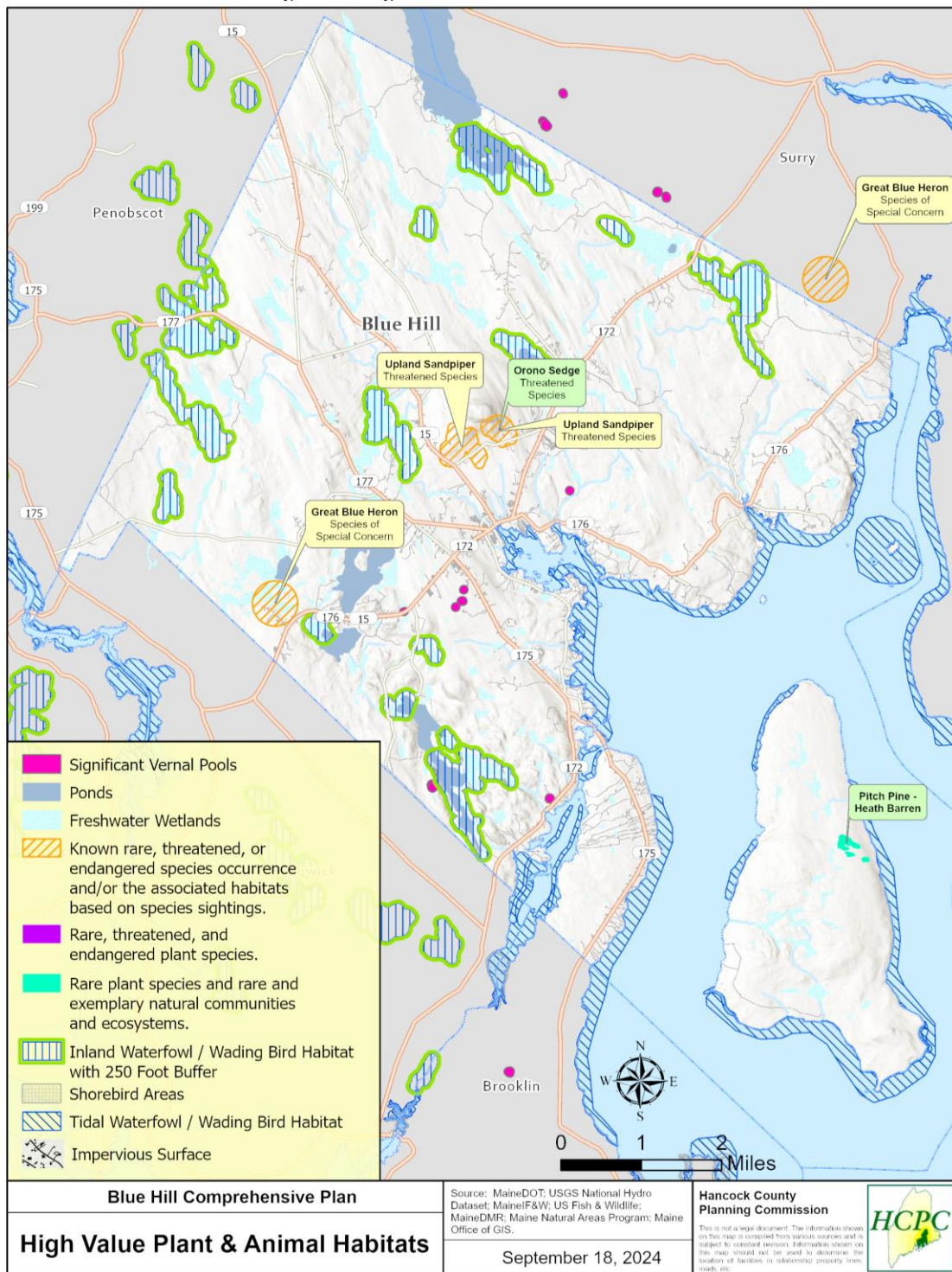


4.3. High Value Plant and Animal Habitats

The High Value Plant and Animal Habitats map (Figure J-2) includes known locations of rare species and habitats as provided by Maine's principal natural resource agencies. These features include Rare, Threatened, Endangered, or Special Concern plant and animal species, significant habitats, and rare and exemplary natural communities. There are a couple of habitat areas for the Upland Sandpiper, a Threatened Species. There also is habitat for the Great Blue Heron, a Species of Special Concern, and other significant wildlife habitat areas. Barrow's Goldeneye, a Threatened Species in Maine, is known to use Salt Pond's habitat.

The Maine Natural Areas Program (MNAP) maintains a list of native plant species in Maine that are highly vulnerable to loss, including species determined to be Endangered, Threatened, and of Special Concern. Species on this list are found in a very small number of sites in the state and may require unique habitat for survival. The one Threatened species located in Blue Hill is Orono Sedge, shown in Figure J-2. The one exemplary natural community or ecosystem found in Blue Hill is the Pitch Pine – Heath Barren, on Long Island.

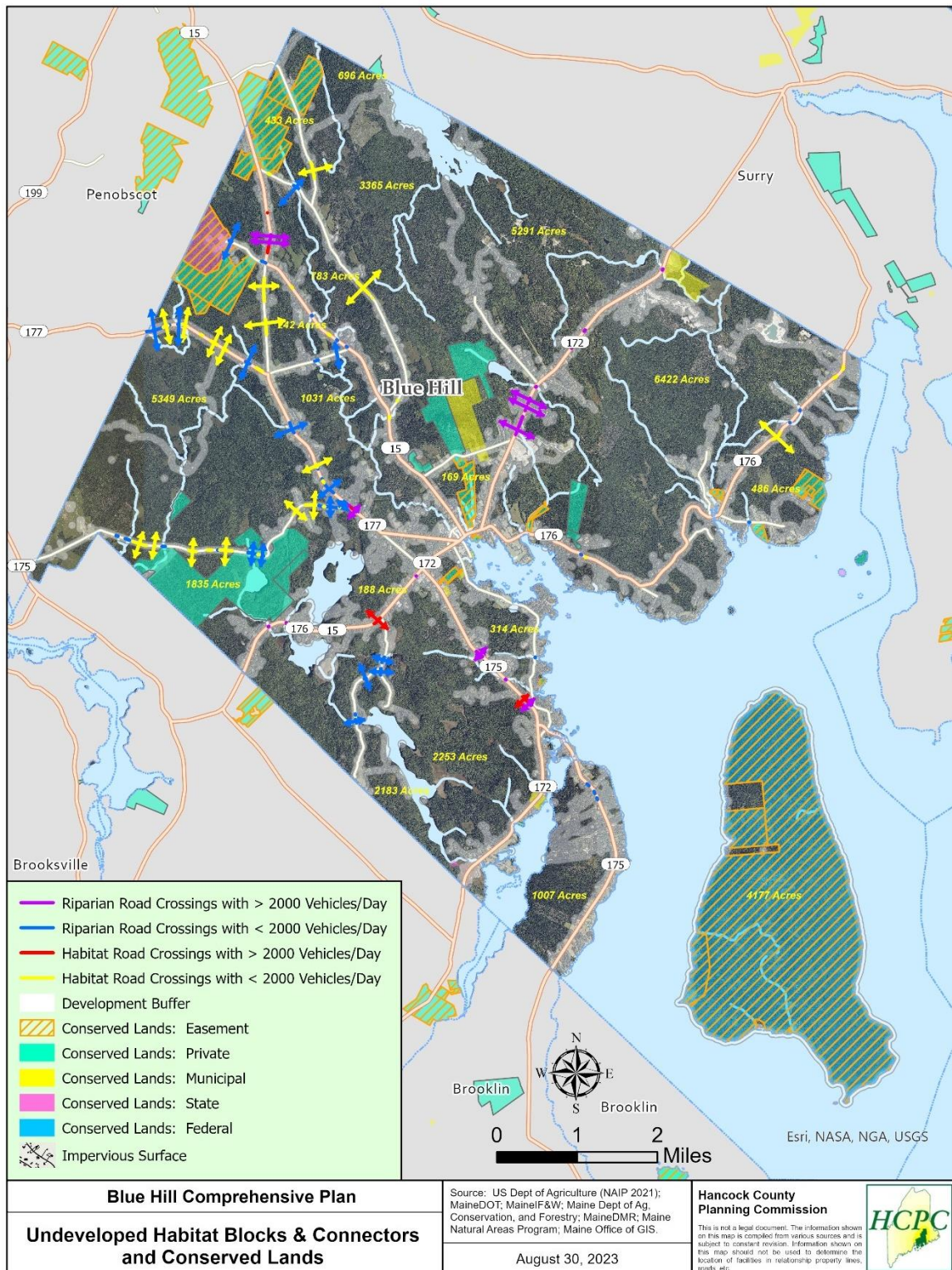
Figure J-2: High Value Plant & Animal Habitats



4.4. Undeveloped Habitat Blocks and Connections

Last updated in 2022, the Undeveloped Habitat Blocks & Connections and Conservation Areas map (Figure J-3) highlights large areas of undeveloped land and marks probable habitat connections. In addition, the boundaries of protected lands are shown. The importance of the map is that it shows the best opportunities to conserve a broad network of intact habitats. Total size is listed for any intact blocks greater than one hundred acres in size.

Figure J-3: Undeveloped Habitat Blocks & Connectors and Conserved Lands

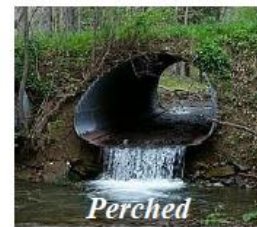


Blue Hill still has quite a few large tracts of undeveloped land. If development pressure increases and/or if state and federal environmental regulations weaken, the Town may want to consider additional efforts to try to preserve large undeveloped holdings, such as appeals for additional conservation. For example, requiring subdivisions to cluster homes on smaller lots to conserve undeveloped open space is one method that can reduce the fragmentation of habitat.

4.5. Stream Barriers

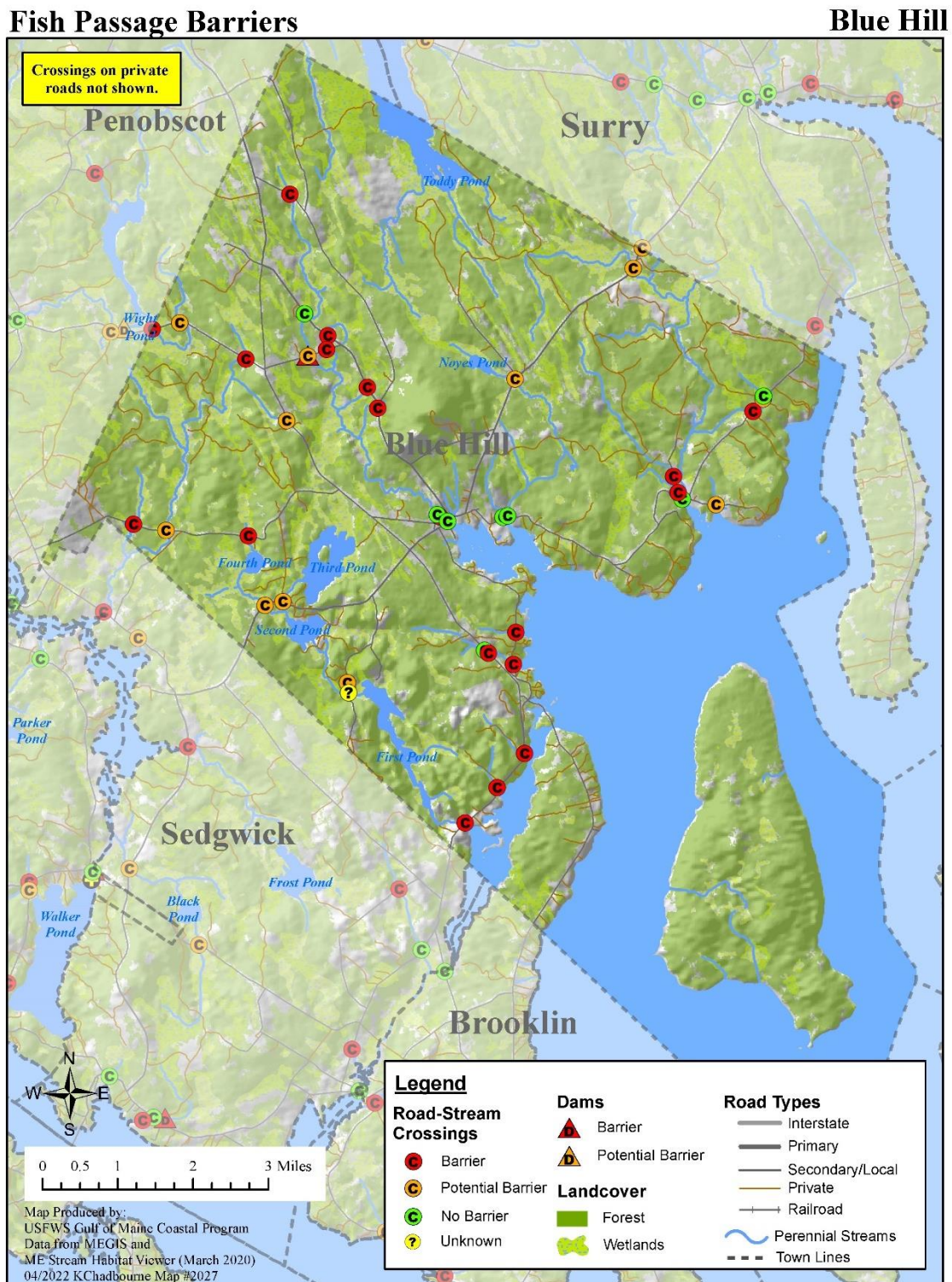
Streams provide important habitat for fish, birds, insects, reptiles, mammals, and amphibians. In instances where a road or parking area crosses a stream and the bridge or culvert is incorrectly sized, constructed, placed, or damaged, it does not enable wildlife to freely pass under them. Open bottom culverts or small bridges are preferred in many cases to maintain a stream bed in a near natural condition thus allowing passage. This type of structure is also more flood-resistant and better able to withstand heavy rainstorms, which are becoming more common, so it improves climate resiliency. Examples of inadequate culverts, which create wildlife barriers and increase flood risk, are shown in Figure J-4 below.

Figure J-4: Stream Barrier Examples



Source: Maine Stream Crossings

Figure J-5: Fish Passage Barriers



Source: USFWS Gulf of Maine Coastal Program

The Fish Passage Barriers map in Figure J-5 indicates that there are many stream barriers in Blue Hill.

Table J-1: Blue Hill Stream Crossings

Site ID	Type	Class	Stream	Road	Condition	Connector	Comment	Material
51719	Bridge	No Barrier	Bragdon Brook	Rt. 172	No data	No data	No data	No data
50542	Multiple Culvert	Barrier	Bragdon Brook	Rt. 172	OK	Yes	No data	Metal
51722	Culvert	Potential Barrier	Unknown	Grindleville Rd	Poor	No data	No data	Metal
51095	Culvert	Barrier	Unknown	Parker Point Rd	OK	Yes	No data	Plastic
50541	Culvert	Barrier	Bragdon Brook	Parker Point Rd	OK	No data	No data	Metal
50226	Culvert	Barrier	Mother Bush Brook	Rt. 172	Poor	No data	No data	Metal
50100	Culvert	Barrier	Unknown	Rt. 172	OK	No data	No data	Metal
50433	Culvert	Barrier	Carleton Brook	Rt. 172	OK	No data	No data	Concrete
50494	Culvert	Potential Barrier	McHeard Brook	Rt. 172	OK	Yes	No data	Metal
51766	Culvert	Potential Barrier	Unknown	Rt. 176	Poor	Yes	No data	Metal
50937	Culvert	Barrier	Unknown	Rt. 176	OK	Yes	No data	Metal
50348	Multiple Culvert	Barrier	Unknown	Jay Carter Rd	OK	No data	No data	Metal
13417	Culvert	Potential Barrier	Peters Brook	Rt. 172	OK	Yes	No data	Metal
50912	Bridge	No Barrier	Little Peters Brook	East Blue Hill	No data	No data	No data	No data
50577	Bridge	No Barrier	Peters Brook	East Blue Hill	No data	No data	No data	No data
51582	Bridge	No Barrier	Unknown	East Blue Hill/Rt. 176	No data	No data	No data	No data
51767	Bridge	No Barrier	Unknown	East Blue Hill/Rt. 176	No data	Yes	No data	No data
51031	Culvert	Barrier	Eddie Brook	Rt. 15	OK	Yes	No data	Metal
50388	Multiple Culvert	Barrier	Mill Stream	Range Ridge Rd	Poor	Yes	No data	Metal
50634	Culvert	Barrier	Camp Stream	Rt.177	Poor	Yes	No data	Metal
51774	Culvert	Potential Barrier	Turtle Pond Brook	Rt.177	Poor	Yes	No data	Concrete
50781	Multiple Culvert	Barrier	Turtle Pond Brook	Rt. 177	OK	Yes	No data	Metal
50196	Bridge	No Barrier	Mill Stream	Rt. 15	No data	Yes	No data	No data
50253	Culvert	Potential Barrier	Carleton Brook	Rt. 15	OK	Yes	No data	Metal
51035	Culvert	Potential Barrier	Unknown	Rt. 15	OK	Yes	No data	Metal
50770	Culvert	Potential Barrier	Unknown	Curtis Cove Rd	Poor	Yes	Fish spotted at outlet but unable to get thru due to culvert condition	Metal
50483	Culvert	Barrier	Unknown	Jay Carter Rd	OK	No data	No data	Metal
50346	Culvert	Barrier	Mill Stream	Mill St	OK	No data	No data	Metal
50051	Culvert	Barrier	Unknown	Kingdom Rd	Poor	Yes	No data	Metal
50867	Culvert	Potential Barrier	Camp Stream	Kingdom Rd	OK	Yes	No data	Metal
50807	Multiple Culvert	Barrier	Unknown	Kingdom Rd	OK	Yes	No data	Metal
50365	Culvert	Potential Barrier	Mill Stream	Tamworth Farm	OK	Yes	No data	Metal
51032	Culvert	Barrier	Eddie Brook	Tamworth Farm	OK	Yes	Outlet blocked 25%	Concrete
50945	Culvert	Barrier	Unknown	Rt.15	OK	No data	Beaver fencing on side of culvert at inlet	Metal
50555	Culvert	Barrier	Wills Brook	Rt. 15	OK	Yes	No data	Metal
50726	Culvert	Potential Barrier	Unknown	Rt. 177	No data	Yes	No data	No data
50345	Bridge	No Barrier	Mill Stream	High St	No data	No data	No data	No data
50344	Bridge	No Barrier	Mill Stream	Rt.15	No data	No data	No data	No data
50598	Unknown	Unknown	Carleton Stream	Grindleville Rd	No data	Yes	No data	No data

Source: Maine IF&W, Beginning with Habitat, Maine Stream Habitat Viewer

It is recommended that the Town review and update the stream crossing data (which is from 2014) and explore grant funding opportunities for removing culvert barriers, particularly where fish passage would be likely after installing a barrier-free structure. Updating this information could make a good “citizen science” project with trained volunteers.

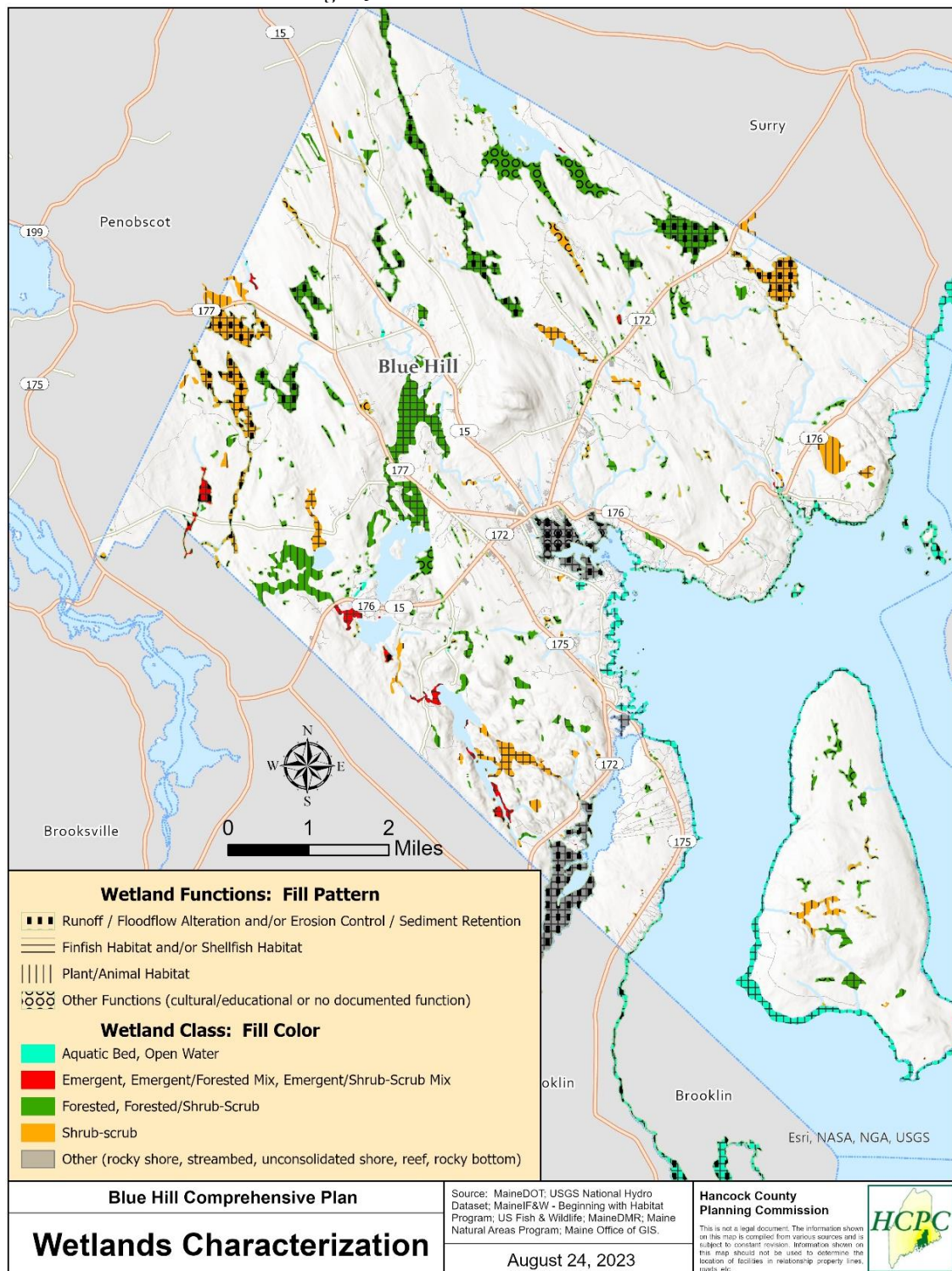
4.6. Wetlands Characterization

The Wetlands Characterization map in Figure J-6 depicts wetlands that have been evaluated and prioritized based on six different ecological functions:

1. Runoff/flood-flow alteration
2. Erosion control/sediment retention
3. Finfish habitat
4. Shellfish habitat
5. Plant and animal habitat
6. Cultural/educational uses

Each wetland on the map is coded by the specific ecological function that it provides. This information can help identify the benefits of conservation or greater local protection.

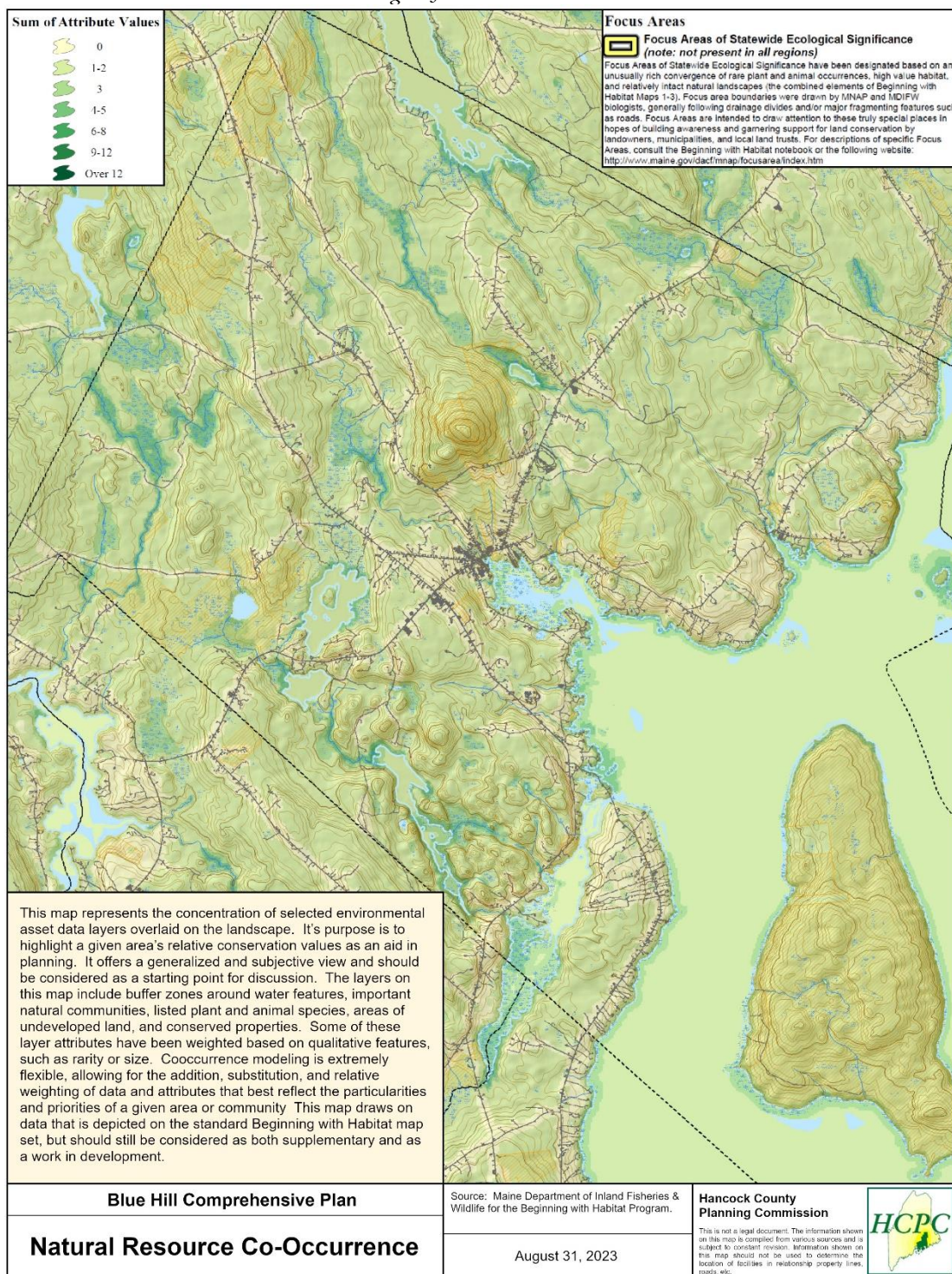
Figure J-6: Wetlands Characterization



4.7. Co-occurrence

The last of the data maps from BwH, Figure J-7, shows an overlay of multiple environmental asset data layers, illustrating relative conservation values across the Blue Hill landscape. It offers a generalized and subjective view and should be considered as a starting point for discussion. The layers include buffer zones around water features, important natural communities, listed plant and animal species, and areas of undeveloped land. Some of the layers were weighted by the environmental agencies participating in Beginning with Habitat based on rarity, size, or other qualitative features. In Figure J-7, the darker green the area is, the higher its score as a valuable natural resource area.

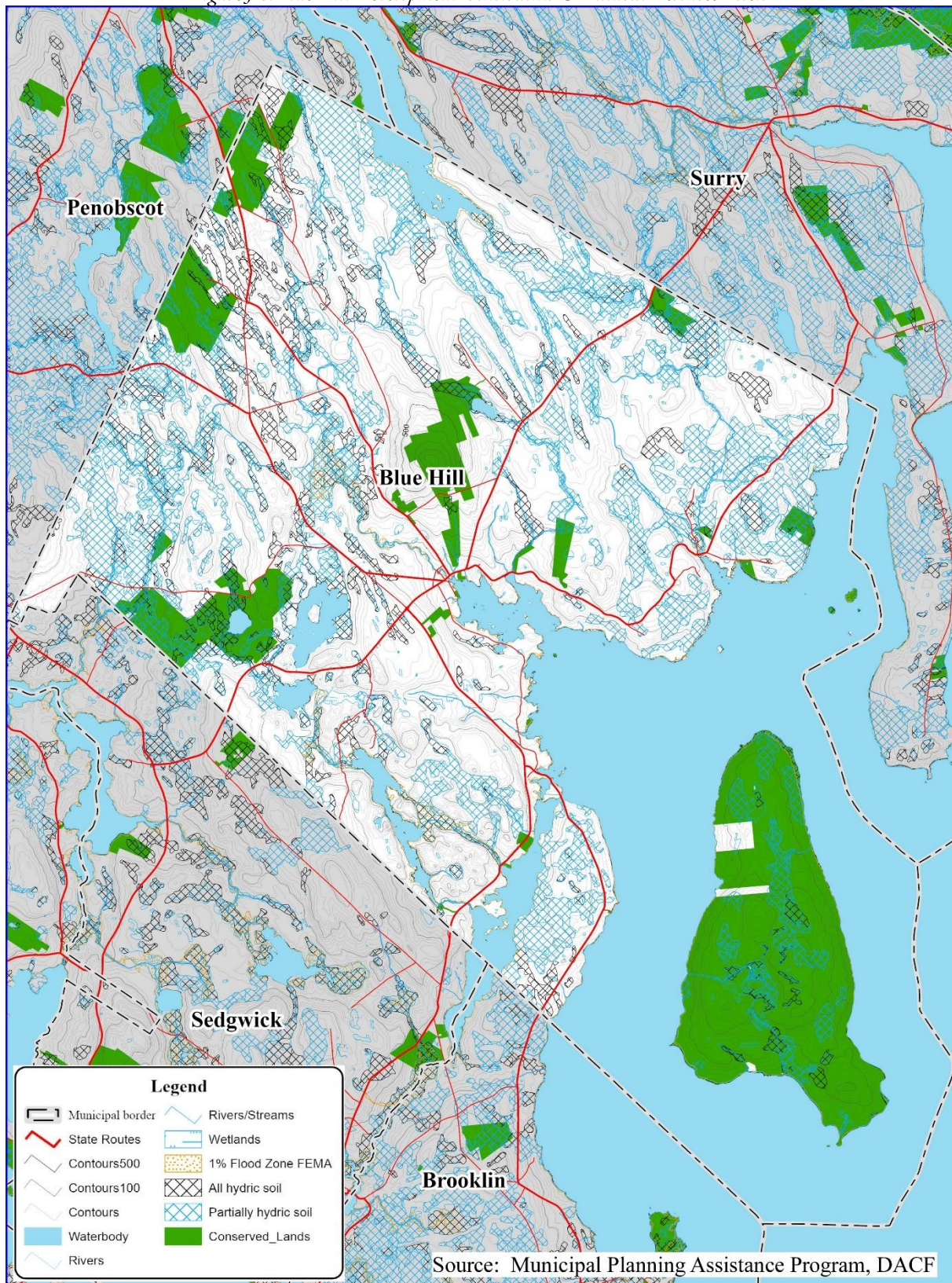
Figure J-7: Co-Occurrence



5. Blue Hill Natural Resources

Blue Hill's major natural resources are further discussed below. Figure J-8 illustrates some of these, which include areas where development would be difficult, or not possible, for various reasons. Note that the natural resources topic overlaps with other chapters in this comprehensive plan. For additional information, see chapters on Marine Resources (Chapter H), Water Resources (Chapter I), and Agriculture & Forest Resources (Chapter K).

Figure J-8: Blue Hill Development Constraints & Natural Resource Assets



Source: Municipal Planning Assistance Program, DACF

5.1. Physiography

The Town's land area covers approximately 39,987 acres. Elevations start at sea level and rise northwestward to the maximum of 955 ft at the summit of Blue Hill Mountain. There are other smaller hills and ridges to the west of the mountain reaching an apex of 363 ft. at Hinckley Corner. To the north are the rich agricultural soils of North Blue Hill, Penobscot, and Orland. These croplands are described in Chapter K, Agriculture and Forest Resources. The land slopes downward to the east surrounding the towns of East Blue Hill and Surry. To the west and south of the town is the "ponds area" consisting of First, Second Third, and Fourth ponds, which are all joined by Carleton Stream which flows eventually into the sea through Salt Pond and Blue Hill Falls. These areas are further explained in Chapter H, Marine Resources and Chapter I, Water Resources. Directly to the south are the Blue Hill Neck area and the South Blue Hill coastline. Offshore there are several islands, the largest being Long Island at 4,544 acres.

5.2. Surficial Geology

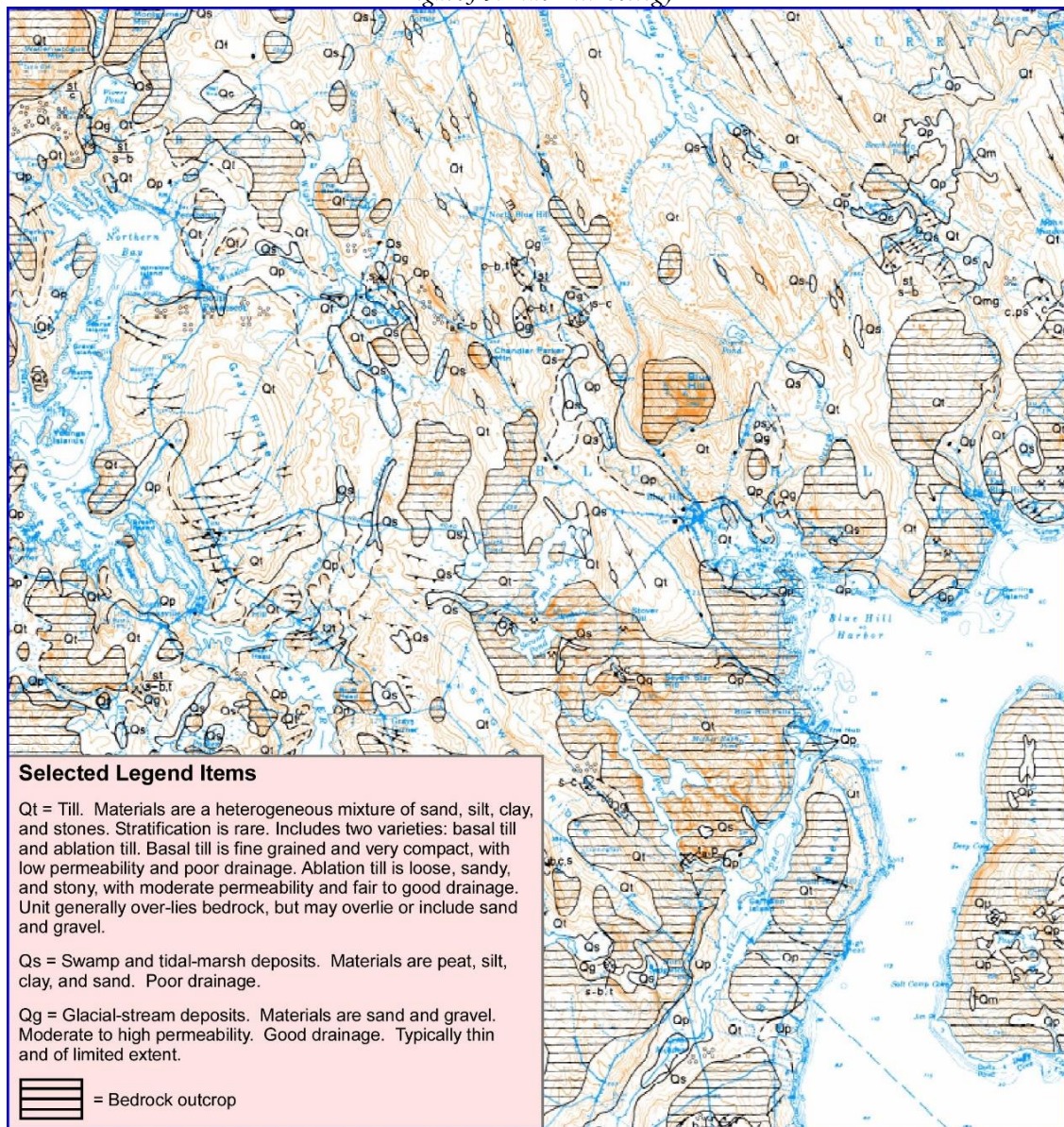
The last Ice Age left surficial deposits, the parent material of soils, on local bedrock (see Figure J-9 below). There are five distinct surficial deposits along this part of the Maine coast: till, ice contact deposits, alluvial deposits, organic accumulations, and marine sediment. Till deposits, composed of boulders, sand, silt and clay are the dominant cover material found in Blue Hill. The deposits in swamps, bogs and salt marshes are a mixture of decayed organic matter and silt. Such areas, unsuitable for agriculture, often serve as important wildlife habitats. Marine sediment is composed of sand, silt, and clay. This sediment, super-imposed on the bedrock and glacial deposits, can be found throughout the region in areas up to 300 feet above sea level. Typically, these areas are poorly drained.

In terms of minerals, copper has been mined in Blue Hill, and there continues to be a copper processing plant in town. Minerals mined in Blue Hill, mostly historically, include:¹²

Copper	Gold	Arsenic
Lead	Iron	Molybdenum
Silver	Zinc	Tungsten

¹² Maine's Mineral Resources, Maine Geological Survey,
<https://www.maine.gov/dacf/mgs/explore/mining/mrds/mrds.htm>, accessed 8/23/2023.

Figure J-9: Blue Hill Geology



Source: Maine Geological Survey

5.2.1. Wetlands

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

As depicted in the Wetlands Characterization map above (Figure J-6), Blue Hill has a variety of inland and coastal wetlands. In terms of inland types, there are approximately 2,295 acres of

Forested and Forested/Shrub-Scrub Mix wetlands, 1,197 acres of Shrub-Scrub wetlands, and a small amount of Emergent (herbaceous vegetation), Emergent/Forested Mix (woody vegetation greater than 20 feet tall), and Emergent/Shrub-Scrub Mix wetlands (woody vegetation less than 20 feet tall). Approximate acreage and percentage of Blue Hill's land area for each wetland class is noted in Table J-2.

Table J-2: Estimated Acreage and Land Area of Blue Hill Wetlands

Wetland Type		Acreage	% of Land Area
Inland Wetlands	Forested and Forested/Shrub-Scrub Mix	2,295	5.7%
	Shrub-Scrub	1,197	2.9%
	Emergent, Emergent/Forested Mix and Emergent/Shrub-Scrub Mix	156	0.4%
Coastal Wetlands	Aquatic Bed and Open Water	2,402	6.0%
	Other	632	1.6%
Total		6,682	16.6%

Source: Calculated from the Wetland Characterization Map

Relative to coastal wetlands, Aquatic Bed (floating or submerged aquatic vegetation) and Open Water wetlands comprise approximately 2,402 acres in Blue Hill while other wetlands (rocky shore, streambed, unconsolidated shore, reef, rocky bottom) account for 632 acres.

In most cases, the wetlands in Blue Hill serve multiple ecosystem functions. These include:¹³

- **Runoff/Floodflow Alteration:** Wetlands provide natural stormwater control capabilities. As natural basins in the landscape, wetlands are able to receive, detain, and slowly release stormwater runoff. Wetland shelves along stream banks naturally regulate flood waters by providing an area for swollen stream flows to expand and slow, thereby protecting downstream properties.
- **Erosion Control/Sediment Retention:** Wetlands act as natural sponges that can hold water, allowing suspended particles such as sediment to settle out. The dense vegetation in most wetlands helps to stabilize soil and slow water flows, thereby reducing scouring and bank erosion.
- **Finfish Habitat:** Wetlands with documented finfish populations, including wetlands adjacent to a river, stream, or lake.
- **Shellfish Habitat:** Inland wetland and streams can directly affect the status of coastal shellfish harvest areas. Fecal coliform bacteria and waterborne nutrients resulting from land use changes away from the coast can travel via surface water to harvestable flats. One failed septic system near a stream could close a mudflat several miles away. Excessive nutrients can reduce water clarity and stimulate epiphytic growth that degrades eelgrass meadows. Conservation of

¹³ Beginning with Habitat

freshwater wetlands and stream buffers in coastal watersheds is a key component in marine resource conservation.

- **Plant/Animal Habitat:** Nearly all wildlife species, and many of Maine’s plant species, depend on wetlands during some part of their life cycle.
- **Other Functions**
 - Cultural/Educational: Wetlands within ¼ mile of a boat ramp or school have been assigned this value as these wetlands are likely candidates for use as outdoor classrooms, or similar social benefit.
 - No Documented Function: The basis of this characterization is high altitude aerial photos. Photo quality often limits the information that can be interpreted from small wetland features, or those with dense canopy cover. Although not assigned a function under this study, ground surveys may reveal that these wetlands have multiple functions and values.

5.3. Important Wildlife Habitat

The term habitat refers to the resources in an area that support the survival and reproduction of a species. These include physical factors like soil, moisture, and temperature range as well as the availability of food and the absence of predators. Every species has habitat requirements; some can thrive in a wide variety of environmental conditions while others require a narrow set of conditions to survive. Terrestrial habitat types include, among others, forests, and grasslands; freshwater habitat types include wetlands, streams, and ponds; and marine habitats include salt marsh, shoreland, tidal, and the ocean zones.

The Maine Department of Inland Fisheries & Wildlife (MDIFW) is charged with carrying out the mission of the Maine Endangered Species Act of 1975 to conserve all wildlife populations and ecosystems. “Endangered” species are fish or wildlife that have been determined to be in danger of extinction throughout all or a significant portion of their range. “Threatened” species are fish or wildlife that has been determined as likely to become endangered within the foreseeable future throughout all or a significant portion of their range. According to the map of High Value Plant & Animal Habitats (Figure J-2), there are no habitats for Endangered species in Blue Hill, but there are a couple of habitat areas potentially suitable for the Upland Sandpiper, a Threatened species.

Another MDIFW category is Species of Special Concern. These are defined as “any fish or wildlife species that does not meet the criteria of an endangered or threatened species but is particularly vulnerable, and could easily become, an endangered, threatened, or extirpated species due to restricted distribution, low or declining numbers, specialized habitat needs or limits, or other factors.” Special concern species are established by policy, not by regulation, and are used for planning and

informational purposes; they do not have the legal weight of endangered and threatened species. For example, Figure J-2, shows an area of Great Blue Heron nesting habitat in Blue Hill and Surry. Great Blue Herons use inland as well as tidal wading bird habitat for feeding. They also make use of stands of tall trees (such as poplar and pine) for nesting colonies.

According to MDIFW, Maine's native and wild brook trout lakes, ponds, and flowing waters represent a unique and abundant resource not available elsewhere in the United States. The State supports the country's most extensive distribution and abundance of this species in their native range. MDIFW places a high priority on the management of this resource, with a focus on protection, conservation, enhancement, and restoration of self-sustaining populations. Wild brook trout prefer small spring-fed streams and ponds with cold, highly oxygenated water, and sand or gravel bottoms and vegetation.

Lakes and ponds designated as "State Heritage Fish Waters" contain State Heritage Fish, including Eastern Brook Trout, that have never been stocked or have not been stocked for at least 25 years, according to reliable records. Such waters have become increasingly rare. These sites are important for preserving the population and genetics of Maine's native wild fish species. Noyes Pond in Blue Hill is classified as a Wild Brook Trout Heritage Water. Additionally, most of Blue Hill lies within a large wild brook trout habitat patch stretching down the Blue Hill Peninsula. (Source: Maine Stream Habitat Viewer, <https://webapps2.cgis-solutions.com/MaineStreamViewer/>)

As can be seen in the High Value Plant & Animal Habitats map, Figure J-2, there are several other significant wildlife habitat areas in Blue Hill. These include:

- Nine significant vernal pools (important to amphibians);
- Inland waterfowl and wading bird areas;
- Shorebird areas; and
- Extensive tidal waterfowl and wading bird habitats.

5.4. Important Plant Habitat

As discussed above, MNAP indicates that there is one rare plant species in Blue Hill, the Orono Sedge located on the slopes of Blue Hill Mountain, that is a Threatened species (see Figure J-2).

5.5. Natural Communities

MNAP also has classified 104 different "natural community" types that collectively cover Maine's landscape. These include habitats like floodplain forests, coastal bogs, and alpine summits, among many others. MNAP has ranked each type according to its rarity on a scale of 1 (rare) through 5

(common). The one exemplary natural community or ecosystem found in Blue Hill is the Pitch Pine – Heath Barren, on Long Island, which has a rarity rank of 1. A rarity rank of 1 indicates that this natural community type is critically imperiled in Maine. Since this area is subject to a conservation easement, it is not likely to be under threat. According to the MNAP fact sheet:

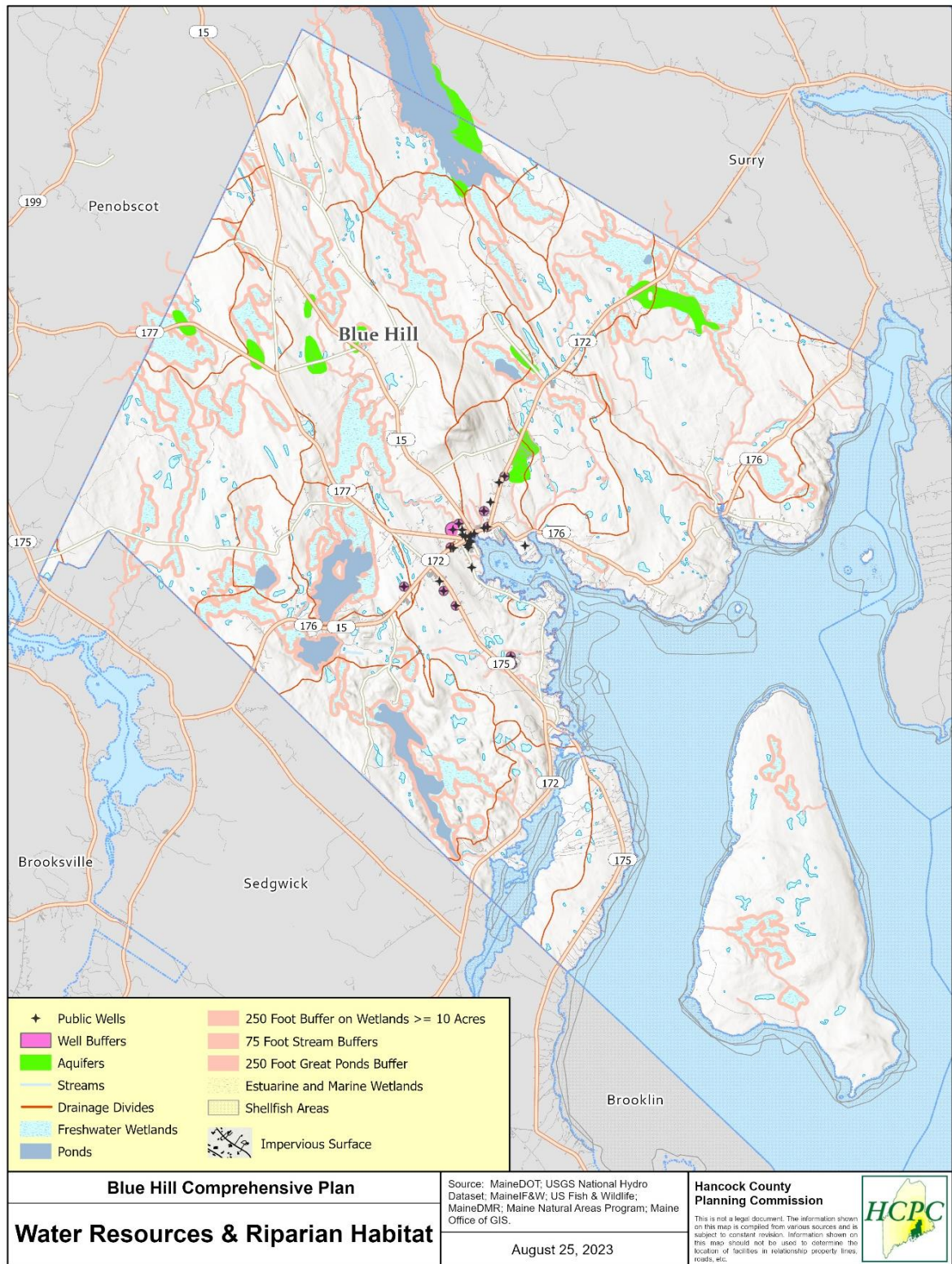
This is an open canopy type in which pitch pine dominates the tree layer, with an understory of dwarf shrubs and herbs, and without an extensive tall shrub layer. Canopy cover is usually <50%, and openings with blueberry and lichens may occur within the barrens. Scrub oak may be present but at only low cover. Sites typically have an herb layer of lowbush blueberry and woodland sedge, with scattered bracken fern and forbs. Sharp-pointed rice grass is characteristic, although it is rarely abundant. The lack of a shrub layer gives these barrens a park-like appearance. Occasionally these may occur as almost closed canopy forests, but the pitch pines with the heath understory and little scrub oak retain the character of the type.¹⁴

5.6. Focus Areas

Building on MNAPs natural community list and mapping of relatively undisturbed areas, the Beginning with Habitat program maintains a list of natural areas that are of statewide ecological significance that contain unusually rich concentrations of at-risk species and habitats. These areas support: rare plants, animals, and natural communities; high quality common natural communities; significant wildlife habitats; and their interactions with large blocks of undeveloped habitat. According to the Beginning with Habitat Program, there are no Focus Areas within Blue Hill.

¹⁴ Maine Natural Area Program fact sheet for Pitch Pine – Heath Barren.

Figure J-10: Water Resources and Riparian Habitats



5.7. Scenic Resources

Blue Hill abounds in scenic views. In 2010, a scenic inventory in Hancock and Washington counties was conducted by the Hancock County Planning Commission and Washington County Council of Governments. Several sites of scenic value in Blue Hill were identified:

- Allen Point viewpoint on the Salt Pond (private property)
- Blue Hill Falls
- Blue Hill Mountain
- Blue Hill Village
- Grindleville Road
- Parker Point Road
- Peter's Cove
- South Blue Hill Wharf

The Comprehensive Planning Committee also believes that Peter's Brook & Falls, Curtis Cove, and the Outer and Inner Harbors of Blue Hill Bay deserve to be added to this list. When this list was originally developed, Peter's Brook and Falls was not publicly accessible and could not be included. Likewise, since the Harbor has multiple viewpoints, and many views are from private property or from the water it was not originally included. Thanks to the Blue Hill Heritage Trust, other land trusts and private citizens, there are a variety of nature preserves open to the public that provide forest and marsh views as well as outstanding ocean views.

6. Analysis of Natural and Scenic Resources

6.1. Potential Threats to Blue Hill's Critical Natural Resources

While there are no immediate threats to Blue Hill's natural and scenic resources, there is the risk of longer-term and cumulative damage through future development. This is particularly true in those areas not protected by Shoreland Zoning, conservation easements, or Significant Wildlife Habitats protected under NRPA. For example, a series of subdivisions or a series of single-lot divisions will result in the fragmentation of large habitat blocks. Areas at greatest risk of development are shoreland (freshwater and coastal). The loss of scenic water views would be reduced if additional coastal areas were protected.

6.2. Consistency of Blue Hill's Shoreland Zoning Standards with State Guidelines

Blue Hill's Shoreland Zoning Ordinance was amended in 2022, and it meets all State requirements. However, the maps provided in this chapter should be reviewed to determine whether additional areas would warrant the Resource Protection designation under Shoreland Zoning.

6.3. Measures to Protect Critical and Important Natural Resources

With respect to land use regulations, Blue Hill has a Shoreland Zoning Ordinance, a Floodplain Ordinance, a Commercial Site Plan Ordinance, and a Subdivision Ordinance. Accompanied by state and federal regulations, these Town ordinances provide a basic framework for protecting critical and natural resources in Blue Hill.

6.4. Regional Cooperation to Protect Shared Critical Natural Resources

Blue Hill is strongly engaged in regional natural resource protection efforts through such organizations as HCPC, BHHT, MCHT, the Maine Coastal Program and other State agencies. These efforts will need to continue as the human and natural threats to the environment pose ongoing challenges.

7. Goals & Objectives

Goal: Protect and improve the quality of Blue Hill's natural resources			
Objective	Strategy	Responsible Party(ies)	Time Frame
Conserve critical natural resources	Review existing land use ordinances and habitat maps to promote awareness and protection of critical natural resources.	Code Enforcement Officer, Planning Board	2024 - Ongoing
	Encourage partners (mainly local land trusts) to work with landowners owning critical resources to pursue conservation options.	Select Board, Planning Board	2024 - Ongoing
	Participate in regional planning and management efforts to conserve important shared natural resources (e.g. Salt Pond).	Selectboard, Planning Board	2025 - Ongoing
	Collaborate with partners to develop and act on a plan to manage threatened and endangered species habitat.	Selectboard	2024 – 2026
	Review existing pertinent Beginning with Habitat maps as a part of the Planning Board's review process.	Planning Board	2025
Improve fish and aquatic organism viability	Re-survey stream crossings to determine barrier status.	Selectboard	2025
	Develop plans to reduce or eliminate stream barriers where most beneficial.	Selectboard	2025 – 2026

Chapter K: Agriculture and Forest Resources

1. Purpose

This section presents an analysis overview of Blue Hill's Agricultural and Forest Resources, particularly land available for natural resource utilization and ecosystem services (the various benefits to humans from the natural environment, such as drinkable water, productive soils and farmlands, timber lands, etc.). Specifically, this section will:

- a. Describe the extent of Blue Hill's farm and forest land;
- b. Predict potential future threats to viability by growth and development;
- c. Assess the effectiveness of current protective measures to preserve important available lands for farming and forestry production.

2. Key Findings & Issues

Agriculture and forestry are important to the economy and culture of Blue Hill. Out of a total land area of 39,987 acres, 70% or 28,038 acres, are forested and approximately 4%, or 1,744 acres, is farmed. The rest are open fields, wetland, or developed. Blueberries, forest products (on farm woodlands), and small amounts of other crops are grown on approximately 1,744 acres, and on average, trees are harvested on 452 acres each year. In 2023 close to 35% of land in Blue Hill was enrolled in one of the Farmland, Open Space, or Tree Growth tax programs. Given increased State emphasis on increasing local food production, Blue Hill has an opportunity to work with regional and State organizations to protect its prime agricultural soils and support its farmers. The Town should regularly evaluate how crop and forest lands are sold to developers. Valuable farmland and forestland might also be protected voluntarily through Conservation Easements or through fee acquisitions.

3. Public Opinion Survey Results

54% of survey respondents felt that it is appropriate for agriculture land uses to occur anywhere in the Town, and approximately 44% felt the same for forestry land uses. A slightly lower percentage of respondents said that both agriculture (40.4%) and forestry (44.1%) are only appropriate in designated areas. The majority think that the Town should be either "very" or "somewhat" involved in protecting such lands; 82.5% feel this way about agricultural land and 83.7% feel this way about forested land.

4. Agricultural Resources

4.1. Agricultural Soils

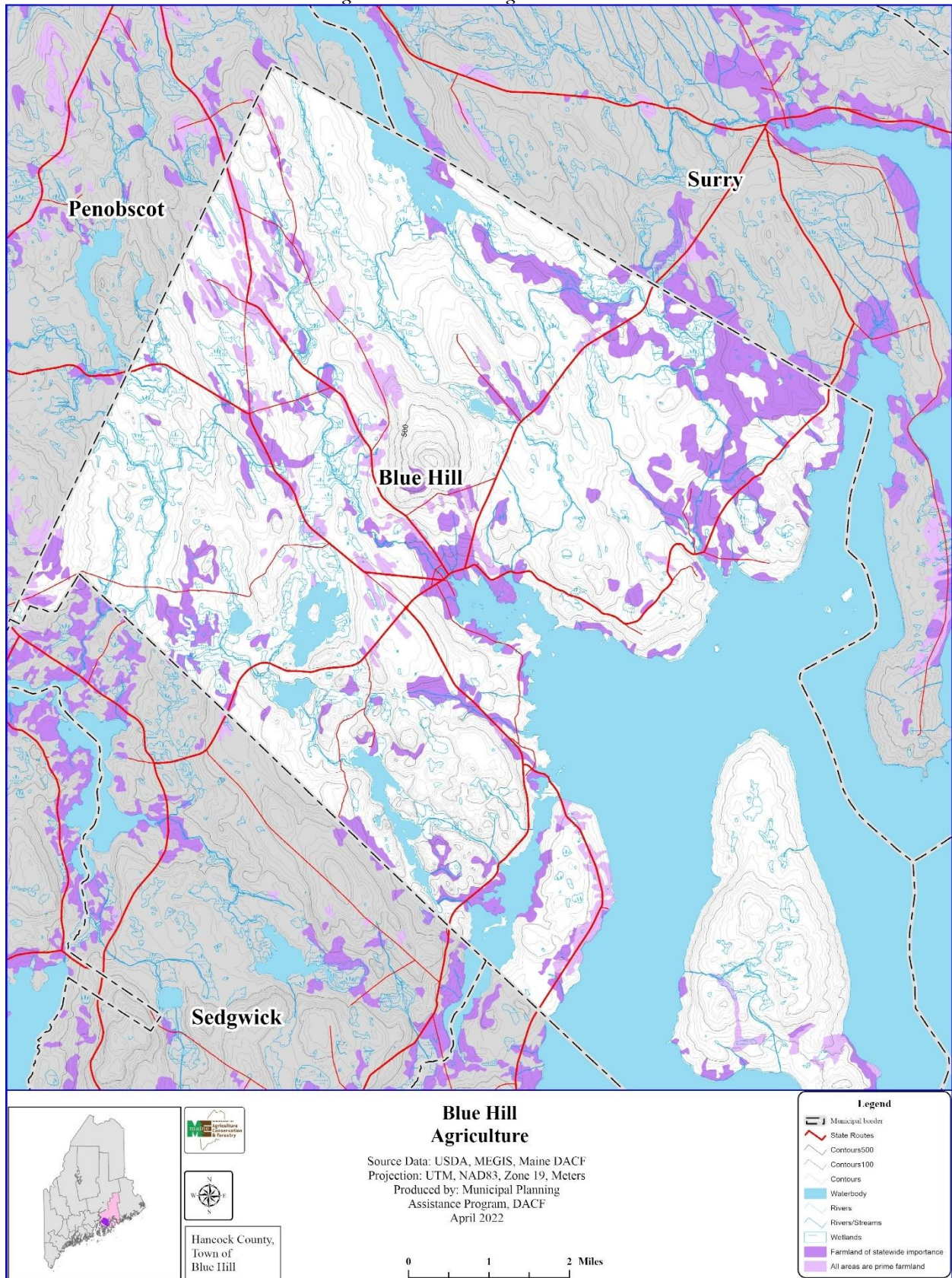
According to data provided in the past from the Natural Resources Conservation Service (NRCS), Blue Hill has 1,371 acres of prime agricultural soils and 5,525 acres of farmland soils of statewide importance (see Figure K-1). The term prime agricultural soils refers to soils that have the potential to have the highest agricultural yields but are not necessarily farmed. The soils of statewide importance category refers to soils that have a more modest yield. There is a concentration of prime agricultural soils northwest of town along Route 15 and Hinckley Ridge Road. This area has the reputation of having some of the most productive farmland in Hancock County. There are also other concentrations of prime agricultural soils elsewhere in East Blue Hill near the Surry border, along the Kingdom Road, and along the southern boundary of town near the Sedgwick town line.

Other than blueberry fields, most farms are diversified with a mixture of animal and vegetable operations. Many properties under the Farmland tax program include wood lots. For the County as a whole, there were 416 farm operations in 2017, involving 65,209 acres.

There are currently about a dozen active or recently active farms in Blue Hill:

- Back Stage
- Beal
- Birdsall (a.k.a. Ken Rose)
- Blue Zee (mostly in Penobscot)
- Blue Hill Blondes
- Bowden
- Clapp Christmas Trees
- Clayfield
- Gravelwood
- Haight
- Homewood
- Long/Greenstory
- Old Akeley

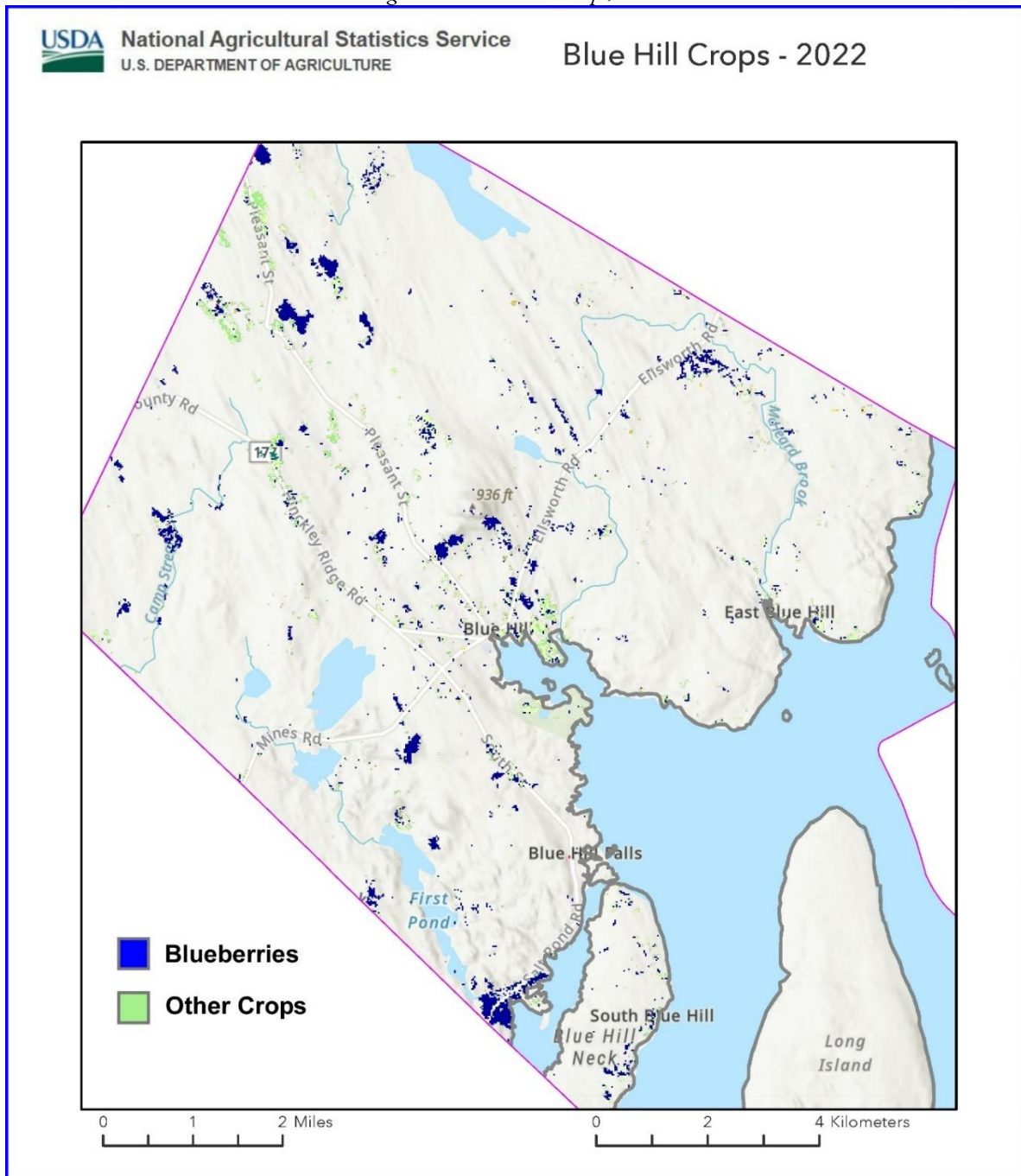
Figure K-1: Blue Hill Agricultural Soils



4.2. Crops

As can be seen in Figure K-2 below, based on acreage covered, blueberries are by far the main crop in Blue Hill followed by pasture and hay fields and small amounts of other crops like mixed vegetables and Christmas Trees. Total cropland area appears to be approximately 1,700 acres.

Figure K-2: Blue Hill Crops, 2022



4.3. Farm and Open Space Enrollment

Another way to estimate amounts of agricultural land is through the acreage of land held under the Farm and Open Space Act. This act allows farmland owners property tax to be assessed based on “farm value” for parcels over five contiguous acres if they meet certain conditions, such as minimum farm-derived income. Normally, qualifying farmers with a long-term commitment to farming would participate in this program. More specifically:

In the Farmland program, property owners are required to have at least five contiguous acres in their parcel of land. The land must be used for farming, agriculture or horticulture and can include woodland and wasteland. Additionally, the parcel must contribute at least \$2,000 gross income from farming activities each year.

The Department of Agriculture prepares a valuation guideline for municipalities, which results from studies based on suggested values using a correlation from income stream and market data attributable to agricultural enterprise.

If the property no longer qualifies as farmland, then a penalty will be assessed. The penalty is equal to the taxes that would have been paid in the last five years if the property had not been in farmland, less the taxes that were paid, plus any interest on that balance.¹⁵

Table K-1 indicates that, as of 2023 there were 30 properties with a total of 1,447 acres in the Farmland program. It should be noted that records show that of the 1,447 acres, 883 are categorized as “farm woodland”, while the non-forested land area being farmed is only 564 acres.

Table K-1: Farm and Open Space Taxation Parcels, 2010 - 2023

Year	Farmland				Open Space	
	# of Parcels	Farmland Acres	Farm Woodland Acres	Total Acres	# of Parcels	Total Acres*
2010	22	378	581	959	17	4,818
2011	22	378	581	959	18	4,830
2012	22	378	581	959	18	4,830
2013	23	466	688	1,154	20	1,277*
2014	25	513	688	1,201	20	1,277*
2015	25	513	688	1,201	21	1,279*
2016	24	513	688	1,201	24	1,329*
2017	24	513	688	1,201	25	1,391*
2018	27	562	757	1,319	18	5,011
2019	29	577	862	1,439	19	5,196
2020	29	578	861	1,439	21	5,213
2021	30	582	884	1,466	22	5,234
2022	30	559	884	1,443	22	5,305
2023	31	564	883	1,447	26	5,581
*Values potentially in error.						

Source: Municipal Valuation Return from Town of Blue Hill

¹⁵ Current Land Use Programs, Maine Revenue Services

In terms of the Open Space program, there were 26 properties enrolled in 2023, amounting to 5,581 acres. The rules are as follows:

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

The municipal assessor is responsible for determining the value placed on open space land. In the determination of that value, the assessor must consider the sale price that a particular open space parcel would command in the open market if it were to remain in the particular category or categories of open space land for which it qualifies.

If an assessor is unable to determine the value of a parcel of open space land based on the valuation method above, the assessor may use the alternative valuation method. Using this method, the assessor reduces the fair market value of an open space land parcel by the cumulative percentage reduction for which the land is eligible according to certain categories. Those categories are as follows:

- Ordinary Open Space - 20% reduction
- Permanently Protected - 30% reduction
- Public Access - 25% reduction
- Forever Wild - 20% (cannot be combined with Managed Forest)
- Managed Forest - 10% reduction (cannot be combined with Forever Wild)

In other words, if the property met all of the first four requirements, the owner would see a cumulative reduction of up to 95% on the classified land. If the land was Managed Forest instead of Forever Wild and met all the other requirements, the reduction would be 85%.

If property no longer qualifies as open space, a penalty will be assessed using the same methodology as is used for removal from the Tree Growth program (see below).¹⁶

5. Forest Resources

Like the State, the land area of Blue Hill is heavily forested. Approximately 28,000 acres are forested, or 70% of the town's land area. USDA's Cropland data estimates that the majority of this acreage is in "Evergreen" or Softwood Forest cover types.

¹⁶ Current Land Use Programs, Maine Revenue Services

Table K-2: Area of Primary Forest Types in Blue Hill

Category	Area (acres)
Evergreen (a.k.a. Softwood)	15,715
Mixed (a.k.a. Mixed wood)	10,524
Deciduous (a.k.a. Hardwood)	1,799
Total	28,038

Source: USDA CroplandCROS

Another source of information on Blue Hill's forest resources is data on land held under the Tree Growth Taxation Act. This classification is similar to the Farm and Open Space Act in that owners of forested parcels meeting certain conditions can have their property assessed as forest land rather than for its potential development value.

This program provides a benefit for people who own at least 10 acres of forested land used for commercial harvesting. A forest management and harvest plan must be prepared every 10 years and a sworn statement to that effect submitted with the application. Applications must include a map of the parcel indicating the forest-type breakdown as well as areas to be excluded from the tree growth program.

Each year, the State Tax Assessor determines the valuation per acre for each forest type by county. For taxes assessed in 2023, values per acre in Hancock County were as follows:

Table K-3: Tree Growth Tax Valuations for Hancock County, 2023

Category	Values per Acre
Softwood	\$109/acre
Mixed Wood	\$134/acre
Hardwood	\$105/acre

Source: Maine Revenue Services

Using the valuation for mixed wood acreage, and Blue Hill's 2023 mil rate of 0.0134, taxes on that acreage would be \$1.80/acre. This is within the range estimated to be feasible to pay with income generated from timber management on a long-term sustainable basis. By contrast, the average value of undeveloped acreage not in Tree Growth is \$1,275/acre with resulting taxes of \$17.09/acre. This helps make the Tree Growth Tax program one of the state's most effective in terms of encouraging continued holding and management of land as forestland.

If forest land no longer meets the criteria of eligibility or the landowner opts to withdraw from the tree growth program, a penalty will be assessed. Depending upon the length of time that the

parcel has been enrolled, the penalty is between 20% and 30% of the difference between the Tree Growth value and the fair market value of the land.¹⁷

As of 2023, there were 99 parcels in Blue Hill totaling 6,874 acres that were enrolled in the Tree Growth program. This represents about 25% of the total forested acreage in the town.

Table K-4: Tree Growth Parcels, 2010-2023

Year	Number of Parcels	Softwood Acres	Mixed Wood Acres	Hardwood Acres	Total Acres*
2010	N/A	2,369	3,065	764	6,198
2011	85	2,851	3,738	627	7,216
2012	86	2,846	3,762	628	7,236
2013	83	2,844	3,409	521	6,774
2014	84	2,916	3,281	530	6,727
2015	85	2,963	3,222	530	6,715
2016	86	2,958	3,219	535	6,712
2017	90	2,324	3,012	522	5,857
2018	89	2,330	2,921	527	5,777
2019	91	2,506	3,116	438	6,060
2020	89	2,417	3,150	437	6,004
2021	93	2,766	3,473	393	6,632
2022	96	2,732	3,727	465	6,924
2023	99	2,742	3,760	371	6,874
* Some reported numbers differ from Maine Revenue Service Property Tax Division records.					

Source: Municipal Valuation Return from Town of Blue Hill

Table K-5 below summarizes the acreage protected by the State's three current use taxation programs. Note that the differential in what would have been paid in taxes without these programs and what has been paid with them is reimbursed to towns at up to 90%, so there is very little negative impact to town budgets.

Table K-5: Summary of Farm, Open Space, and Tree Growth Taxation Parcels

Year	Farmland Acres	Open Space Acres	Tree Growth Acres	Total
2010	955	4,818	6,198	11,971
2011	959	4,830	7,216	13,005
2012	959	4,830	7,236	13,025
2013	1,154	1,277	6,774	9,205
2014	1,201	1,277	6,727	9,205
2015	1,201	1,279	6,715	9,195
2016	1,201	1,329	6,712	9,242
2017	1,201	1,391	5,857	8,449
2018	1,319	5,011	5,777	11,545
2019	1,439	5,196	6,060	12,695

¹⁷ Current Land Use Programs, Maine Revenue Services

Year	Farmland Acres	Open Space Acres	Tree Growth Acres	Total
2020	1,439	5,213	6,004	12,656
2021	1,466	5,234	6,632	13,332
2022	1,443	5,305	6,924	13,672
2023	1,447	5,581	6,874	13,902

Source: Municipal Valuation Return from Town of Blue Hill

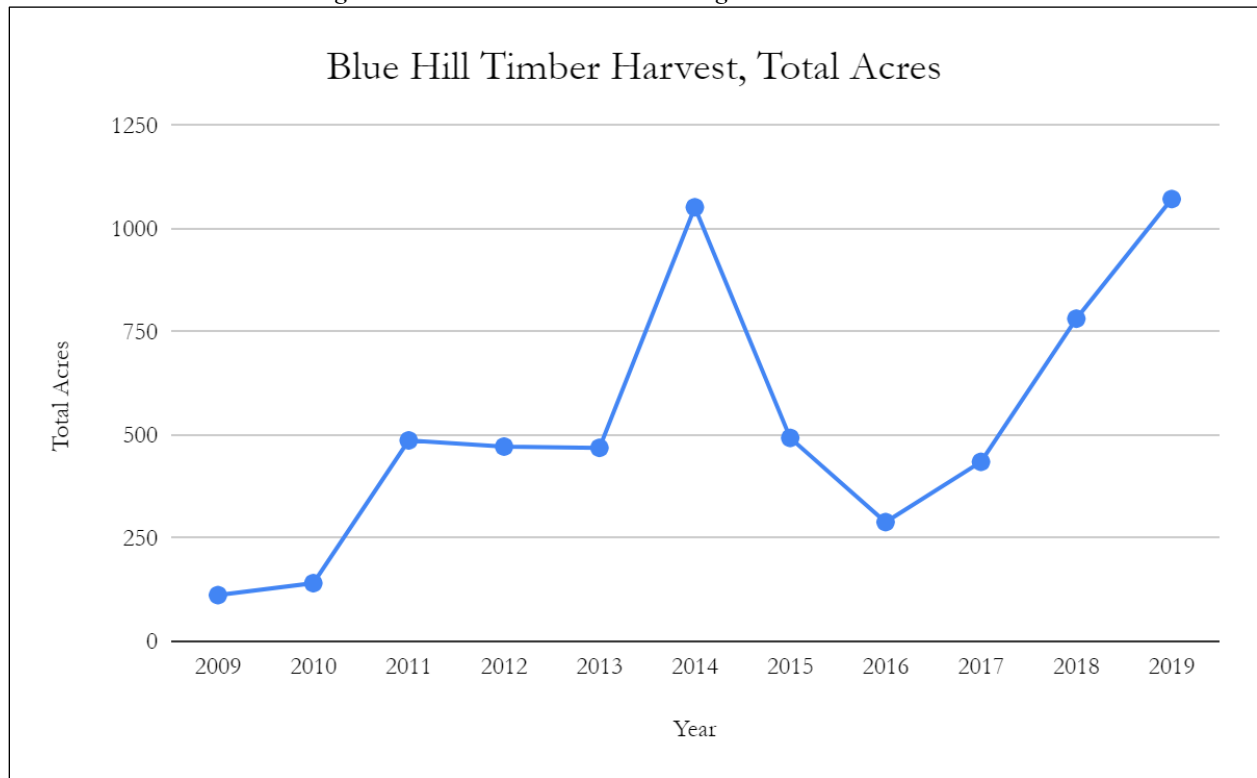
Timber harvesting trends for Blue Hill are shown in Table K-6 below. These data represent timber harvests that are subject to State reporting and occur on timberland under the Tree Growth Tax program as well as on timberland not participating in that program. In 2019, 1,072 acres were harvested, which was quite a bit more than the recent 5-year average of 614 acres. These figures indicate that commercial forestry is an important part of Blue Hill's economy. With the total area of timberland in Blue Hill estimated at 28,000 acres, the reported 5-year harvest rate is 2.2 %, which indicates a 46-year interval between harvests if all forested acres are harvested at some time. Clearly some acres were not harvested and will not be harvested. The rate of harvest indicates that harvesting pressure is moderate, but it has increased recently. The rate of harvest indicates that harvesting pressure is moderate, but it has increased recently. The data also show a spike in the number of "Change of Land Use" notifications in 2019. These notifications typically indicate a change from a use of the land for forest management to some form of development – house lots, subdivision, etc. The data should be updated and followed up on to determine if the trend continues and what the new uses are.

Table K-6: Blue Hill Timber Harvesting Trends in Acres, 2009 – 2019

Year	Selection Harvest	Shelterwood Harvest	Clearcut Harvest	Total Harvest	Change of Land Use	Number of Active Notifications
2009	108	4	0	112	0	20
2010	131	10	0	141	31	30
2011	313	174	0	487	0	21
2012	454	18	0	472	16	34
2013	359	100	10	469	7	31
2014	1,031	21	0	1,052	0	38
2015	355	138	0	493	4	32
2016	284	5	0	289	6	24
2017	413	22	0	435	1	29
2018	553	229	0	782	0	27
2019	1,007	65	0	1,072	35	32
Total	5,008	786	10	5,804	100	318
Average	455	71	1	528	9	29

Source: Data compiled from Confidential Year End Landowner Reports to Maine Forest Service

Figure K-3: Blue Hill Timber Harvesting Trends, 2009 – 2019



Source: Data compiled from Confidential Year End Landowner Reports to Maine Forest Service

Blue Hill also has a remarkable resource in its “Urban Forest” or street trees with many large and old (over 100 years) American elm, White ash, Sugar maple, Northern red oak, and Eastern white pine trees. These mature trees add considerable beauty and character to the town as well as providing beneficial cooling and carbon sequestration.

The elms are currently threatened with Dutch Elm disease (a non-native fungal disease) which can result in many dying and dead trees. The spread of Dutch Elm disease may be mitigated by quick removal of trees or sections of trees once they show signs of infection, which the town is currently doing. The town and individuals have previously planted disease-resistant elms. Injectable (i.e. injected into the tree) fungicide treatment is a possible means of controlling the disease in high value trees and should be considered.

Ash trees in Blue Hill are likely to be threatened by the Emerald Ash Borer (a non-native insect) within a decade. Besides natural spread, it is known to be spread by moving firewood from infested areas to uninfested areas. There is no known resistance among native ash tree species to this insect so when it infests an area, nearly 100% of ash trees are killed. Some white ash are known to tolerate infestations and may survive. Injectable insecticide treatments are available and effective.

In April 2024, the Blue Hill Healthy Ecosystem Ordinance was amended to allow these types of pesticide treatments that can help save important resources like these trees that are threatened by non-native pests.

6. Analysis of Agricultural and Forest Resources in Blue Hill

6.1. Importance of Agriculture and Forestry to the Town

Blue Hill has some 6,896 acres of prime or significant agricultural soils as compared with 1,447 acres enrolled in the Farmland Protection program and approximately 1,700 acres of cropland. In terms of forest resources, over 1,000 acres of timber were harvested in 2019. As such, agriculture and forestry are important economic activities in Blue Hill.

As another indication of the importance of farming to the community, Blue Hill hosts the Blue Hill Fair, which is the premier agricultural event of Hancock County. It has been held for five days annually over Labor Day weekend since 1891. The fair is produced by the Hancock County Agricultural Society under the leadership of the Blue Hill Fair Association and draws approximately 30,000 attendees.

6.2. Blue Hill's Options to Protect Productive Farming and Forestry Lands

Although the Farm, Open Space, and Tree Growth property tax programs offer some protection to Blue Hill's farms and woodlots, there is no guarantee that land will not be withdrawn from these classifications and sold for development. The tax penalties for withdrawing land often do not outweigh the profits realized from land development.

While there are no direct measures in the Town's land use ordinances to safeguard farm and forest land, there are several measures that contribute to their protection. Town ordinances include Shoreland Zoning standards for timber harvesting and standards for the retention of natural beauty and the preservation of open space. There are similar standards in the Commercial Site Plan Review Ordinance and the Subdivision Ordinance. These ordinances are supplemented by land that is protected by conservation land trust ownership or easements.

Landowners may sell/donate land in fee or sell/donate a conservation easement to a land trust in order to retain the property in a natural or semi-natural condition. Conservation easements are customized to the specific resources to be protected and to the goals of the landowner and easement holder. This

can allow for continued management to produce forest products or farm outputs. There are several examples of both in Blue Hill.

A new option for conserving primarily forested parcels has become available to “smallish” landowners (over 10 acres) in recent years: carbon sales. This involves entering a long-term contract to “grow” carbon usually by growing more volume in trees than is harvested or retaining carbon over a period of decades. These contracts usually restrict development, but don’t always remove all options for a minor amount of development.

6.3. Level of Use of Current Use Tax Laws

As discussed above, in 2023 there were 13,902 acres of land in Blue Hill enrolled in one of the three current use tax law programs. This represents approximately 35% of the total land area of Blue Hill (39,987 acres). Therefore, it appears that at least some Blue Hill landowners are familiar with these tax programs.

6.4. Sale of Large Tracts of Agricultural or Forest Lands

Given the large amount of land in Blue Hill that is being farmed or managed for forest products, there does appear to be the potential for substantial impact on the community from the sale of farms or forest land. Many landowners are past retirement age, making it increasingly likely that properties will be sold or passed down to the next generations, which may trigger big changes in the use of the land. Land trusts in Blue Hill and the State can play an important role in conserving farms and forestland by acquiring properties outright or by acquiring conservation easements. The Town of Blue Hill can monitor “Change of Use” notifications associated with timber harvests, “Intent to Build” notices and subdivision or commercial use permit applications to get an understanding of the development trends as they are developing. Although difficult to do in practice and often politically unpopular, one way for Blue Hill to conserve its agricultural lands and other open space would be to divide the town into several sections for planning purposes, and to prepare plans for each section that would identify the acres that the community would most regret seeing developed or that are most important to retain as viable farms or timberland. Efforts could then be made to work with the landowners and conservation groups to achieve the conservation of these lands in such a way that landowners of the identified parcels are compensated fairly.

6.5. Support for Community Agriculture and Forestry

Blue Hill is supportive of agriculture and forestry. In addition to the annual Blue Hill Fair mentioned above, there has been a Blue Hill Farmer’s Market at the fairgrounds for the last 47 years and local organizations such as the Halcyon Grange form a nexus for agricultural activity in North Blue Hill. While the Maine Forest Service actually manages woodlots in the municipality, the community

generally supports forestry activities in Blue Hill—woodlots provide habitat for flora and fauna and recreational opportunities such as hiking and hunting.

6.6. Woodland Under Management

Some communities have a town forest or manage other woodlands. While the Town owns part of the Blue Hill Mountain conservation area, it is not involved in active woodlot management.

7. Goals & Objectives

Goal: Protect and improve the quality of Blue Hill’s agricultural and forest resources			
Objective	Strategy	Responsible Party(ies)	Time Frame
Safeguard lands with prime farmland soils and large parcels with high quality forestland	Include support for agriculture, commercial forestry operations, and land conservation in local or regional economic development plans.	Economic Development Committee	Ongoing
	Encourage landowners to utilize current use taxation programs.	Select Board, Planning Board, Code Enforcement Officer	2024 - Ongoing
	Encourage landowners to utilize Conservation Easements.	Select Board, Planning Board, Code Enforcement Officer	2024 - Ongoing
	Consult with Soil and Water Conservation District staff when developing any land use regulations pertaining to agricultural management practices.	Planning Board	Ongoing
	Educate landowners on carbon sale options.	Select Board, Planning Board, Code Enforcement Officer	2024 - Ongoing
	Consult with the Maine Forest Service District Forester when developing any land use regulations pertaining to forest management practices as required by 12 M.R.S.A. §8869.	Planning Board, Code Enforcement Officer	Ongoing
	Continue to permit land use activities that support productive agriculture and forestry operations.	Planning Board, Code Enforcement Officer	Ongoing
	Monitor development trends through Change of Use notifications, Intent to Build notifications, and subdivision and commercial use applications.	Select Board, Planning Board, Code Enforcement Officer	2024 – Ongoing
Support the health of the Town’s heritage trees	Continue to appoint a tree warden and support efforts to maintain and replace heritage trees.	Select Board, Tree Warden	Ongoing - 2024

Chapter L: Historic and Archaeological Resources

1. Purpose

Historic and archaeological resources are vital elements of a community's identity. A comprehensive plan must identify important historical and archaeological resources not only for the sake of the historical record, but also to preserve their present-day value to the Town's identity. Specifically, this chapter will:

- a. Present a brief history of Blue Hill and the region;
- b. Describe historical and archaeological resources;
- c. Assess threats to these resources; and
- d. Assess the effectiveness of existing measures to protect and preserve these resources.

2. Key Findings and Issues

Blue Hill's unique, valuable historic resources, particularly, the Town's Historic District as recognized in 1980 as part of the National Register of Historic Places, are well worth protecting. The present character of the Town is influenced largely by sites and buildings of historic architectural significance. The only protections for the historic and archaeological resources are those applied by the planning board in accordance with Maine State commercial and shoreland site plan reviews.

There are 21 known prehistoric sites in Blue Hill. 12 are around the shores of the Salt Pond, and 7 are on the shores of the Blue Hill Bay. Approximately half the known sites are eligible for listing in the National Register. A comprehensive survey of buildings and sites to be added to the Historic District would be useful to educate owners and develop recommendations to protect the town's history.

3. Public Opinion Survey Results

According to the Survey, 43% of respondents said the Town should be very involved in protecting historic resources even if it affects property rights, while another 41% supported good stewardship with the use of incentives. Therefore, a total of 84% of respondents support measures to protect historic resources.

4. Town History¹⁸

4.1. Pre-Colonization History

Long before the settlement of the Maine coast by Europeans, various indigenous groups inhabited the area. Archaeological excavations in this region suggest that a non-agricultural tribe, referred to as the Red Paint or the Moorehead People, frequented the region as long as 5,000 years ago. These people

¹⁸ Partially based on Esther Woods' Historical and Archaeological Resources section written for the 1985 Blue Hill Comprehensive Plan.

followed seasonal fluctuations in food supply, hunting seals and porpoise for food and oil, as well as catching fish and shellfish along the coast. It is possible that an even earlier indigenous group inhabited the region shortly after the end of the last Ice Age, some 10,000 years ago.

Since 2000 B.C.E., Algonquins moved in from the south and west, forming the Wabanaki group (translated as "living at the sunrise" or "people of the dawn"). The early Wabanaki pursued a semi-agricultural, semi-hunting and gathering livelihood, wintering on the coast but summering inland. Later Wabanaki, known today as the Penobscot and Passamaquoddy, probably reversed this pattern, wintering inland and summering along the coast. This change may have occurred partly because of European exploration, with the subsequent demand for furs, which necessitated that the indigenous people hunt inland in the wintertime to supply the fur traders. Summers were spent on the coast by these tribes as recently as the late 1800's.

4.2. Post-Contact History

In 1762, Massachusetts colonists began settling in Blue Hill when the townships were granted to veterans of the French and Indian War. The Massachusetts General Court gave an area of each township to the first settled minister and set aside a second for his use. The Court designated a third lot for the support of schools and gave a fourth to Harvard College. The grantees, known as proprietors, had the power to dispose of the unallotted land. The first to arrive in the area were Joseph Wood and John Roundy. All early colonists were Congregationalists and Scottish or English in their ancestry.

Originally settled by people from Andover, Massachusetts, Blue Hill emerged in the 19th century as a thriving community with important maritime ties. With the arrival of its first settled minister, Jonathan Fisher, in 1796, the chartering of Blue Hill Academy, and the founding of the original Blue Hill Library, the community became a cosmopolitan center for the rural area.

The first local settlement was at the tidal falls on what is called Mill Island. This neighborhood housed the first mill and the first schoolhouse. Soon, settlements grew in other localities. A neighborhood in South Blue Hill was called the Neck. Another was located in between the harbor and Blue Hill Mountain called the Head-of-the-Bay. The third settlement, located where McHeard's Stream flows into the bay, became East Blue Hill. The settlement north of the mountain became North Blue Hill. In time, each had a school and a store and a chapel or church. By the close of the nineteenth century each also had a post office.

The Head-of-the-Bay settlement outgrew the others. By the mid-nineteenth century it consisted of mills, forges, stores, inns and two churches. Its library dates to the last decade of the eighteenth century; its academy, to 1804. Some village families prospered; the Holts, Chases, Peters, Stevens, Hinckleys, Osgoods, Dodges, Darlings, Parkers, Cloughs and Faulkners built handsome village homes.

5. Early Commerce and Industry

It was shipbuilding and trading by the sea that gave Blue Hill its first prosperity. The first vessel was built in 1792 at the tidal falls. Between 1792 and 1882, documents show 133 vessels were built in Blue Hill. Some were brigs and ships, most were schooners. Usually, a shipyard grew up beside a sawmill. There was a sawmill near the tidal falls, called the Endeavor. There was one at the shore of the R.G.W. Dodge place in the village. This was most active between 1846 and 1858. There were mills on either side of the Mill Brook in the village. One was owned by the town; the other, by George Stevens. John Peters had his own yard near his mill. Joel Long had his yard at the cove where McHeard's Stream flows into the bay. There was a yard at Webber's Cove. In the last decade of the nineteenth century Frank Cousins built vessels in a salt-water field in East Blue Hill. Now and then farmers built small vessels in a meadow beside the bay. At least one vessel was built behind the mountain and hauled to the Head-of-the-Bay by oxen.

Ships built in Blue Hill took lumber, masts, and shingles south to Atlantic coastal cities. Sometimes they took farm products such as cheeses, apples, and vegetables. Fish, clams and porgy oil, along with kiln wood, were also carried on local vessels. Often the trade involved several stops; vessels took local products to Portland where they were reloaded with more cargo of lumber for Cuba. On the trip home the cargo was sugar and molasses.

In the years of shipping prosperity, those who stayed in Blue Hill became ship's carpenters, caulkers, smiths, and sail makers. Local sailors went to English and French ports. In the 1840s and 1850s they sailed to California, and as far as China. Captains' wives often went to sea with their husbands.

The depression of 1857 and the American Civil War dealt harsh blows to shipbuilding and sea trade. English steamboats made of iron replaced most wooden sailboats. Decline in shipping led to a decline in the town's population. In 1880 the town had 2,213 people. In 1900 it had 1,808.

Other factors accounted for the town's drop in population. Numerous soldiers died in the Civil War, and some of the survivors chose not to return to town. The call of the west's fertile fields, the pull of industrial cities, and the opportunities of extending railroads drew people away.

At the same time, the opening of mines and granite quarries brought new business to town, attracting recent European immigrants. There was some prejudice against the newcomers, some of whom changed their names. The skilled Italian workmen left town when the granite industry declined.

The first quarry began operation as early as 1853, but the golden years for the granite industry were 1875 to 1905.

The Collins Company, the Blue Hill Granite Company, and the Chase Company (later owned by the Slaven family) made Blue Hill granite famous. Local granite was used for curbing city streets and for

the underpinning of bridges and buildings. The Brooklyn Bridge, the Pittsburgh Post Office, and the New York Stock Exchange are but a few of the structures having Blue Hill granite. Usually, granite was shipped on large sailing ships that were not built or owned locally. Local men became quarrymen and cutters, teamsters and engine tenders, stone-boxers and "water boys." By 1907, there were six quarries in operation and the industry declined as the use of cement and sandstone increased.

5.1. Twentieth Century Developments

In 1917, as war led to increased copper prices, the American Smelting and Refining Company began mining in Blue Hill. The semi-processed ore was hauled to the steamboat wharf in heavy carts drawn by horses. In the 1960s, the Black Hawk Mining Company of Canada reopened and developed a mine. In the 1970s, the Kerr-American Company, another Canadian firm, operated the mines and employed 120 men from Blue Hill and nearby towns. The ore was taken by trucks to Bucksport where it was sent by railroad to smelters on Quebec's Gaspé Peninsula. The mine closed in 1977 when the costs made it uneconomical.

In August 1882, Emma Dole of Bangor became known as Blue Hill's first "rusticator", which was the start of a growing tourist boom. Other summer boarders followed, some bought land and built clapboard cottages. A few purchased old houses and "improved" them beyond recognition. The era of the summer people had begun, most coming via the railroad and steamship lines.

The coming of the automobile brought another revolution to Blue Hill as it did to every other town. It also brought disruption to the closely-knit rural neighborhoods. Neighborhood names and friendliness remain but gone are the neighborhood stores and schools.

The late 1960s saw a new migration of young people who valued rural life, once more changing the town's character. Blue Hill was again discovered, leading some summer people to winterize their cottages and stay year-round. Many native-born people who had spent their working years in distant places returned to the town. A similar influx happened during the COVID pandemic of 2020 to 2022, fueling demand for real estate that has exacerbated a housing shortage.

6. Inventory of Archaeological and Historical Resources

6.1. Prehistoric Archaeological Sites

An archaeological site is any place that contains physical remains of human use. In Maine, habitation dates back to the retreat of the last glaciers up to 10,000 years ago. Sites that existed before written records (before the arrival of the first Europeans) are called *Prehistoric Archaeological Sites*. Such sites include evidence of villages, burials, monuments, or sites where indigenous people created stone tools or harvested natural resources. Threats to these sites include construction of buildings and roads and erosion from heavy precipitation, rivers, streams, and the ocean with sea level rising.

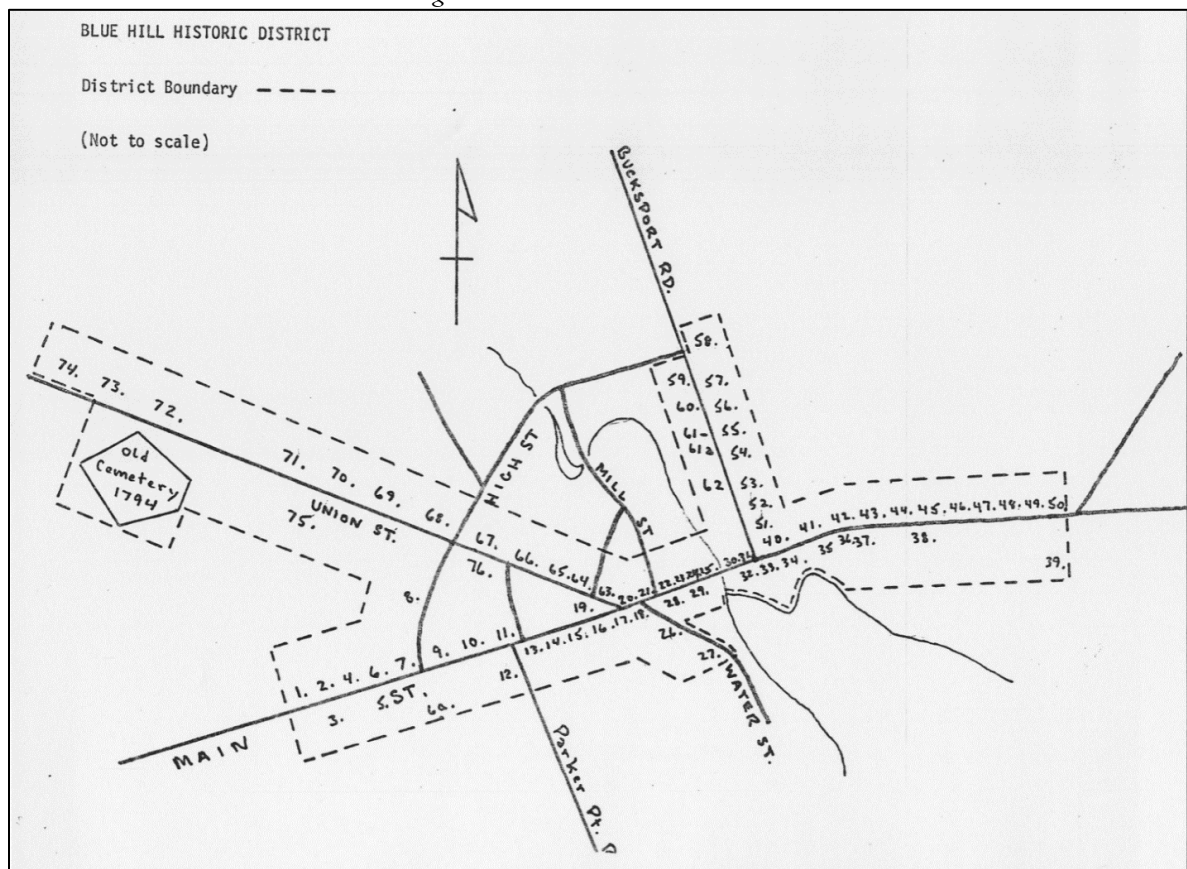
Once sites are identified, they should be reviewed for nomination to both national and municipal inventories to obtain maximum protection. Owners of important sites should also be advised of possible private offers to maintain the integrity of the sites. Public education, public acquisition, tax incentives for maintenance and publicly funded maintenance are other tools that the Town, State, or private groups can use to protect and preserve historic resources. To help protect these sites from disturbance, the Maine Historic Preservation Commission (MHPC) does not release their location.

There are 21 known prehistoric sites in Blue Hill: 12 are around the shores of the Salt Pond, and 7 are on the shore of Blue Hill Bay. Approximately half of the known sites are eligible for listing on the National Register. The shoreline of the Blue Hill Bay and Salt Pond have not been systematically surveyed by professional archaeologists.

6.2. Architectural Resources

The village of Blue Hill is a good example of a 19th century Maine coastal community containing excellent examples of prevailing architectural styles of the period. MHPC delineated a Historic District in 1980. There are, however, no specific State or local regulatory measures to protect the historic resources located in that District. The Historic District is comprised of over seventy historically significant buildings - residential, commercial, and public - located around Blue Hill harbor.

Figure L-1: Blue Hill Historic District



Source: Maine Historic Preservation Commission

Many houses in the village were built by the sea captains, who sailed from this active port. Since the 1880s, Blue Hill has lured large numbers of summer visitors, some of whom built homes along the shore and established cultural institutions that still attract musicians, artists, and authors today.

As a Maine coastal community, Blue Hill conveys a sense of time, place, and balance between building types as it did a century ago. Architecturally, most major 19th and 20th century styles are represented, such as Federal, Greek Revival, Gothic, Italianate, Mansard Style, and Colonial Revival.

In addition to the Blue Hill Historic District, there are several other buildings on the National Register of Historic Places. These are:

- Ward Hinckley House on Parker Lane (privately owned)
- Barncastle Inn on South Street (privately owned)
- John Peters House, Peters Point (privately owned)
- Jonathan Fisher Memorial, Route 15 (non-profit museum)
- East Blue Hill Public Library (non-profit association)

The Jonathan Fisher House and the Holt House serve as museums, archives, and educational resources for the town's history. Three local cemeteries –the Seaside, South Blue Hill, and the “Old” Cemetery—provide valuable links to the past and genealogy. Without ongoing restoration and protective measures, particularly from the sea level threat to the Seaside Cemetery, some of these monuments could be lost.

6.3. Cultural Resources

Blue Hill is well known for its varied cultural endeavors. There is a vibrant community of musicians, artists, and writers. Numerous local galleries display the work of painters, potters, and craftspeople and there are notable sculpture works in town.

Kneisel Hall is a chamber music school that holds an annual festival, dating back to 1902 when violinist Franz Kneisel brought students to his summer home. Bagaduce Music, established in 1983, has grown to become a performing arts center with an international library of printed music with over 150,000 titles. The Blue Hill Concert Association, the Bagaduce Chorale, the Blue Hill Bach festival, and several steel drum organizations provide concert series regularly in the Blue Hill area.

Various other jazz, rock, folk, wind, string, and vocal ensembles originate from Blue Hill and perform at several venues in town. Steel drum festivals are held often in the Town Park, drawing crowds to performances throughout the summer.

The New Surry Theatre stages a year-round series of dramatic works and provides theatrical arts training. The Word Literary Arts Festival brings writers and readers together for lectures and workshops.

Blue Hill's exceptional library is the epicenter of wide-ranging activities for children and adults all year long. The library, George Stevens Academy, Harbor School, and The Bay School offer educational programs. The Shaw Institute for marine environmental research sponsors lectures on their fields of study.

Table L-1: Blue Hill Historic Archaeological Sites

Site Name	Site Number	Site Type	Periods of Significance	National Register Status	Location
Lillian	ME 045-001	wreck, schooner	1-Apr-26	undetermined	Known
Eliza Ellen	ME 045-002	wreck, schooner	2-Nov-08	undetermined	Known
Pallas	ME 045-003	wreck, brigantine	August 14, 1779	undetermined	Unknown
Rosa Blanche	ME 045-004	wreck, gas screw	28-Dec-22	undetermined	Unknown
John Roundy Cabin	ME 045-005	domestic	ca. 1762 to ca. 1775	eligible	Known
Mill Island dam	ME 045-006	dam, tidal mill	ca. 1765 to at least 1879	undetermined	Known
Mill Island mill complex	ME 045-007	mill, sawmill and gristmill	ca. 1765 to at least 1879	undetermined	Known
Sylvester/Will cabin	ME 045-008	cabin	after ca. 1879 to early 1920s	undetermined	Known

Source: Maine Historic Preservation Commission

6.4. Threats to Historic Resources

The immediate threat to these resources is development without consideration for their significance or neglect that leads to disrepair, structural decay, and demolition. Another detrimental factor could be renovations to buildings without respect to their historic character.

The chronic shortage of funds makes the maintenance of historic sites more difficult. Given the high costs, these resources become more vulnerable over time. This is true for both private, non-profit sites and public ones, such as the town's historic cemeteries which may require restoration work.

Taking into consideration the threats related to climate change, historic and archaeological resources may be in danger; not only due to sea-level rise but also flooding and fire risk due to drought.

7. Analyses of Historic & Archeological Resources

7.1. Historic Patterns of Settlement

Blue Hill's settlement followed the typical late-18th to early-19th century pattern of parcels allotted by group decision to single families and for public purposes, including churches, that formed a spatially dispersed but socially cohesive town. Most historic structures spread from the apex of Blue Hill Harbor, and 76 such structures now form the Blue Hill Historic District. These historic properties provide a tangible link to the past and help create a sense of identity and stability. The harbor is a visible daily reminder of the timber, shipbuilding, granite, and mining industries, as well as summer rusticators, that supported the community's economy for much of its history.

7.2. Adequacy of Existing Protective Measures for Historic and Archaeological Resources

Currently there is little protection for Blue Hill's historic resources. The Town needs to assess the adequacy of current measures for protecting these resources, such as municipal ordinances, as well as further discuss possible threats to their protection. Specific recommendations are found in the Goals and Objectives section below.

8. Goals and Objectives

Goal: Protect Blue Hill's historic, archaeological, and cultural resources for future generations.			
Objective	Strategy	Responsible Party(ies)	Time Frame
Promote awareness of and protect key historic structures and archaeological areas.	Review existing land use ordinances (Commercial Site Plan Review, Subdivision) and propose incorporating maps and information provided by the Maine Historic Preservation Commission into review process.	Planning Board	2025 – 2026
	Review existing land use ordinances (Commercial Site Plan Review, Subdivision) to require developers to take appropriate measures to protect known historic archeological sites and areas sensitive to prehistoric archaeology.	Planning Board	2025 – 2026
Protect historic and archaeological sites from climate change, including sea-level rise, extreme heat, wind, fire, and rain.	Identify grant and other funding mechanisms to assist property owners in protecting climate vulnerable sites.	Blue Hill Historical Society, Climate Resilience Committee, Fire Department	2025 - Ongoing
Promote repair and conservation of historic buildings.	Work with local, regional, and state historic commissions to find incentives to help conserve publicly and privately owned buildings in disrepair.	Blue Hill Historical Society, Economic Development Committee	2025 - Ongoing
Label historic structures with identifying plaques.	Encourage property owners to create a program to label historic structures. Provide information to property owners about their historic structures and encourage conservation of historic features.	Blue Hill Historical Society	2025 - Ongoing
Encourage the use of available grants from the federal designation of Downeast Maine as a National Heritage Area (NHA).	Work with local and regional organizations to seek grants for developing a sustainable tourism industry based on local culture.	Blue Hill Historical Society, Economic Development Committee	2025 - Ongoing

Chapter M: Climate Change

1. Purpose

Climate change and its associated impacts will negatively affect Blue Hill in many ways. This chapter assesses projected impacts on the community, including coastal infrastructure, human habitation, coastal habitats, inland habitats, and loss of historical and archeological assets. Climate change is a key cross-cutting theme in all the chapters; highlighted here are findings and strategies given their critical importance. Specifically, this chapter:

- a. Examines data in Maine related to changes in temperature, precipitation, sea level rise and coastal flooding, drought, and wildfire;
- b. Analyzes the potential effects of climate change on transportation, public facilities infrastructure, natural resources, and other systems in Blue Hill; and
- c. Makes recommendations for actions to adapt to and mitigate climate change impacts in Blue Hill.

2. Key Findings & Issues

The Maine Climate Council recommends preparation for substantial sea level rise in the coming years. There should be consideration for the risk tolerance of different kinds of infrastructure, particularly in the case of Blue Hill's wastewater treatment facility. Sea level rise projections are trending towards more severe scenarios. It is in the best interest of the town to stay updated on the latest science and projections around sea level rise in Maine.

3. Public Opinion Survey Results

Respondents favored a number of climate-related initiatives with the knowledge that there are State and Federal grants available for this work. Initiatives viewed favorably include improving and protecting drinking water and wastewater treatment facilities to reduce physical damage and sustain function during extreme weather events (86%) and adopting and executing a plan for energy efficiency improvements to municipal and school buildings, including heat pumps (85%).

4. Current Conditions and Trends

4.1. Sea Level Rise

Sea level rise, like all aspects of climate change, is caused by increasing anthropogenic contributions of atmospheric greenhouse gasses. The greenhouse gasses are causing increasing global temperatures. First, rising temperatures are causing the oceans to increase in volume. Second is the direct effect of the

oceans filling up with melting ice from the poles, Greenland, and mountain glaciers. These two factors have contributed up to 86% of sea level rise in the past several decades (MCC report pg. 72).

The Science and Technical Subcommittee recommends that the Climate Council ask the State of Maine and its municipalities to commit to preparing for sea level rise of 1.5 feet by 2050 and 4.0 feet by 2100. The Climate Resilience Committee of Blue Hill recommends that the town take this approach. Additionally, the committee recommends that the town of Blue Hill prepare for significantly higher sea level rise scenarios including 3 feet by 2070 and 8.8 feet by 2120. The Science and Technical Subcommittee's recommendations and assessment incorporate Maine Geological Survey's sea level rise data as found in their online mapping tool.

4.2. Precipitation

Global warming is also causing Maine to become wetter overall, with statewide annual precipitation (rainfall and snowfall) increasing by 6 inches (152 mm) since 1895. Heavy storms of 2 to 4 inches of precipitation are becoming more frequent, which increases the probability of floods that will erode infrastructure and degrade water quality in ponds, lakes, streams, rivers, and coastal areas. This increasingly variable precipitation, including droughts and extreme weather events, is causing damage to farm livelihoods by impacting farmers, workers, crops, and livestock.

4.3. Coastal Flooding

It is important to consider the effects of storm surges and nuisance flooding when managing the effects of sea level rise on Blue Hill infrastructure. The real risks of storm surges in the context of sea level rise occur when storm surge events coincide with high tides. High tide levels have risen in recent years as a result of sea level rise and are projected to continue to do so. This will increase flood risk in coastal Maine towns such as Blue Hill.

4.4. Wildfire

In addition to a greater number of extreme precipitation events, Maine has been experiencing more short-term dry periods, with extreme drought occurring in 2002, 2016, 2020 and 2022.

As seen in the Natural Resources chapter, there is a significant amount of forested land in Blue Hill, which could present increased risk during dry periods. This danger is exacerbated by the difficulty Blue Hill and many other communities have been having in maintaining their volunteer fire departments (See Chapter E: Public Facilities).

In 2024, the town of Brooksville received a \$250,000 grant from the USDA Forest Service to form a Community Wildfire Protection Plan for the Peninsula. This funding will enable nine towns on the Blue Hill Peninsula to develop a plan to identify wildfire hazards and recommend strategies to reduce

wildfire risk. The nine towns include Blue Hill, Brooklin, Brooksville, Castine, Deer Isle, Penobscot, Sedgwick, Stonington, and Surry.

4.5. Climate Migration

Wildfires in the western United States and increased flooding events due to storms along the Gulf Coast and southern Atlantic coastal regions have contributed significantly to increased climate-induced human migration. Since 2015, Hancock County has seen a steady increase in its percentage of the total state migration from other states from 4.4% of total migration to 5.0% in 2022. Perceptions are important. The Blue Hill Peninsula may not always be seen as a place of climate refuge, but people may still move to a place that has other types of climate impacts from what they are experiencing.

4.6. Pests

As the climate warms globally, there will be a slow increase in human and plant diseases caused by the change in climate that currently resembles the parts of the world to our south. These diseases will include Lyme Disease, Malaria, Dengue Virus, Zika Virus, among others. With forests and food crops, production will be challenged by increasing presence of harmful invasive species, such as the Emerald Ash Borer, the Spotted Lantern Fly, and Asian jumping worm, among others.

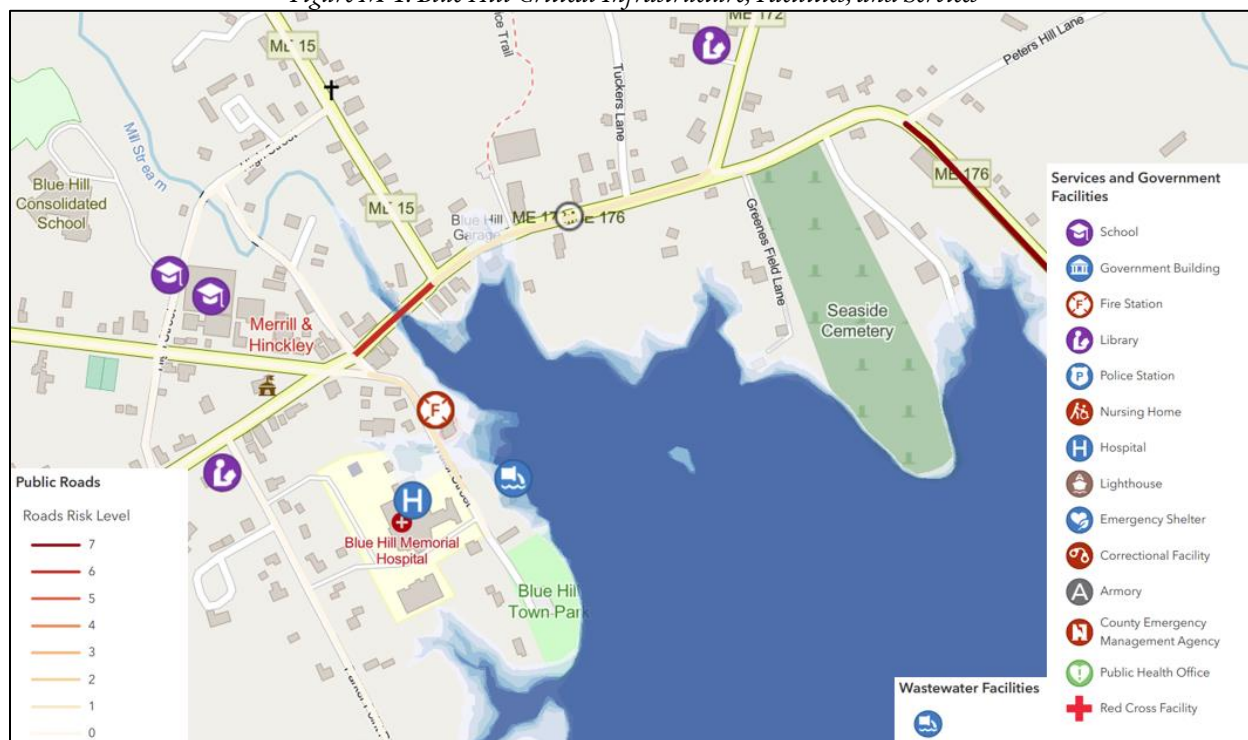
5. Blue Hill Infrastructure and Habitats

5.1. Town Infrastructure

The Town of Blue Hill is actively considering sea level rise and storm surge projections as outlined in this chapter, and their impacts on critical infrastructure. Blue Hill is currently conducting a vulnerability assessment which will recommend the following Town infrastructure be examined:

- Blue Hill Wastewater Treatment Facility
- Blue Hill Fire Department
- The Blue Hill Hospital
- Town Wharf at 42 Water Street
- Cemetery
- Town Park in addition to a variety of state and town owned roads.

Figure M-1: Blue Hill Critical Infrastructure, Facilities, and Services



Source: Maine Climate Impacts Dashboard

Note: The library icon on Route 172 is inaccurate

5.2. Floodplain Management

Blue Hill is a participating community in the National Flood Insurance Program and agrees to comply with the requirements of the National Flood Insurance Act of 1968. It is the intent of the Town to require the recognition and evaluation of flood hazards in all official actions relating to land use in the floodplain areas having special flood hazards.

Between 2006 and 2011, the Hancock County Planning Commission shared updated FEMA floodplain maps for all municipalities and the Unorganized Territories within the county. These maps were based upon data provided by NOAA and the Maine Geological Survey. These maps are still current and provide valuable information to Blue Hill concerning projected coastal flooding associated with sea level rise and extreme tidal flooding events. FEMA floodplain maps can be found at FEMA's National Flood Hazard Layer (NFHL) Viewer.

5.3. Transportation and Stormwater Management Infrastructure

Transportation infrastructure is at risk from such effects of climate change as high precipitation events and sea level rise. This includes marine-related facilities (e.g., piers, docks, wharves, landings) as well as land-side infrastructure (e.g., roads, bridges, culverts). The Town of Blue Hill has identified seven

town and state-owned roads and bridges vulnerable to sea level rise and storm surge events. These are as follows:

- Parker Point Road
- Water Street
- Road and bridge at 2 Mill Stream
- Route 176 at Peter's Cove
- Jay Carter Road
- Bridge over McHeard stream
- Curtis Cove Road

Much of the coastal infrastructure in Hancock County consists of underperforming culverts and stormwater drainage systems. Many coastal culverts throughout Blue Hill face either partial or complete failure during major tidal inundation events and during heavy rainstorms. Whenever possible, traditional culverts that carry stream flows should be replaced with open-bottom culverts or small bridges that accommodate higher flows.

While there are many small culverts at risk due to climate change impacts, there is one large state-owned culvert that will be especially vulnerable as a result of sea level rise. This is the culvert that allows a stream to empty into Peters Cove under Route 176. The Town should work with MaineDOT to determine whether the culvert will need to be upgraded in order to accommodate sea level rise as well the increased stormwater flows from high precipitation events.

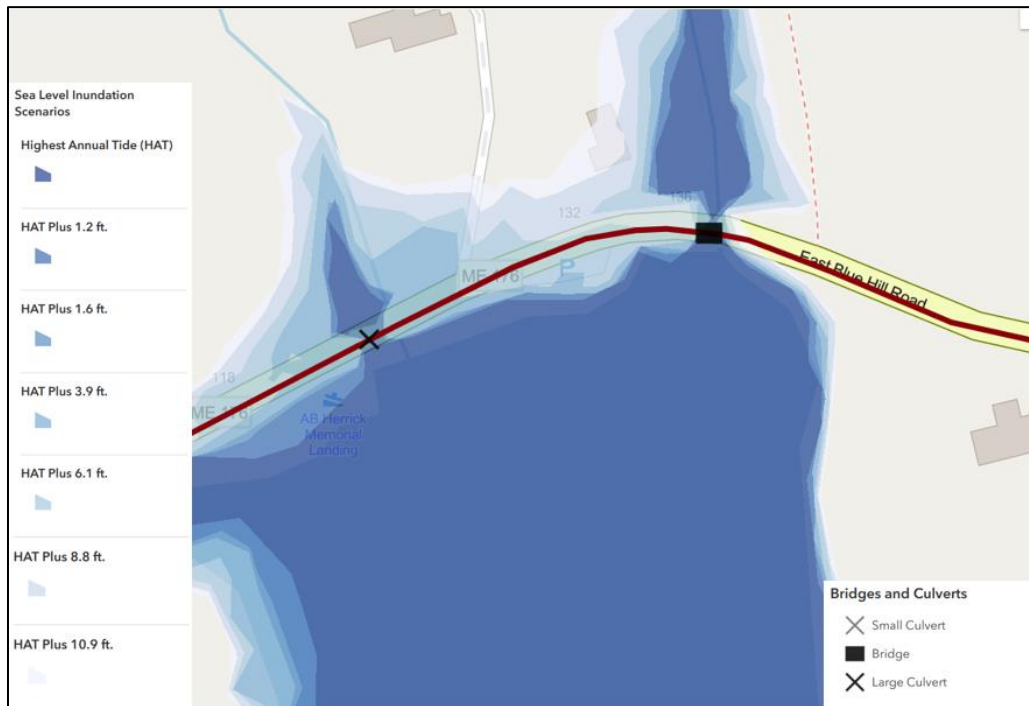
Table M-1: Large Culverts in Blue Hill

Culvert Number	Route	Length (ft)	Width (ft)	Depth (ft)	Type	Condition
LG_CUL-988451	172	87	42	6	Bitum. Coated Corr. Metal Pipe	Good
LG_CUL-47150	176	28	60	2	Dry Stone	Fair
LG_CUL-997733	172	54	72	4	Bitum. Coated Corr. Metal Pipe	Fair
LG_CUL-47148	15	61	72	2	Bitum. Coated Corr. Metal Pipe	Fair
LG_CUL-47149	15	64	72	4	Bitum. Coated Corr. Metal Pipe	Fair
LG_CUL-47147	177	60	48	3	Corr. Metal Pipe	Fair

Source: MaineDOT Public Map Viewer

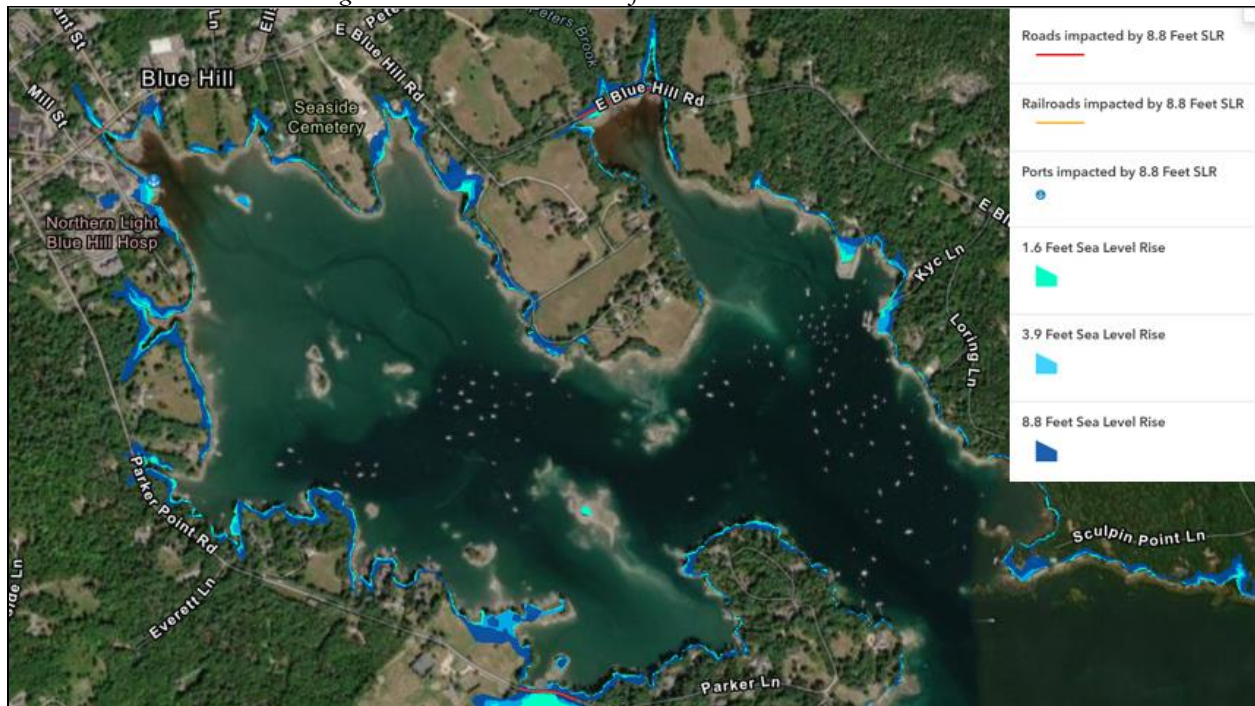
Figure M-2 below visualizes the impact of Highest Annual Tide and various levels of sea level rise on Culvert 47150 on East Blue Hill Rd. Figure M-3 illustrates some of the major roads in Blue Hill that will be impacted by sea level rise in the near future.

Figure M-2: Culvert 47150 at Risk on East Blue Hill Rd.



Source: Maine Critical Infrastructure, Facilities, and Services MapViewer

Figure M-3: Blue Hill Road Infrastructure and Sea Level Rise



Source: Maine Climate Impacts Dashboard

The former Blue Hill Road Commissioner said that he has already seen an increase in flooding of town roads and anticipates greater damage in the coming decades as a result of sea level rise and storm surge events. He noted that all current repairs to Blue Hill town roads have been prioritized according to the Road Evaluation Report for the Town of Blue Hill, conducted by Haley Ward, Inc. in February of 2020, however, the report does not account for vulnerability to sea level rise.

The ongoing vulnerability assessment will examine the risks to and vulnerabilities of town roads and bridges in order to document what infrastructure is most vulnerable to sea level rise, storm surge events, and nuisance flooding.

5.4. Future Development

Blue Hill's subdivision ordinance guides large-scale residential development, the floodplain management program, and shoreland zoning. Other than these ordinances, there are no land-use development controls that would mitigate climate change's impacts upon any future developments either residential, commercial, or industrial. Blue Hill could consider providing guidance or educational materials to developers on climate change. Blue Hill also does not have any stormwater management plans, capital improvement plans, or economic development plans that consider climate change projections.

5.5. Marine Habitat

Climate change will continue to have significant impacts on marine resources. As in many coastal Maine towns, harvesting lobsters is the principal focus of Blue Hill's commercial fishing fleet, with some boats also fishing for crabs and scallops. While the lobster resource is currently viewed as being stable, there are substantial risks on the horizon due to the uncertain effects of warming water temperatures and increased acidification of the water. The warming ocean water has also led to an increase in invasive species, like green crabs, and the colonization of lobster gear and sea scallop habitat by native sea squirts. Northward shifts in mid-Atlantic species are likely to result in established local populations in the future. In the short term, species interactions and/or competition may threaten inshore lobster populations.

5.6. Wastewater and Drinking Water

The Blue Hill wastewater treatment facility, located at 48 Water Street, is Blue Hill's most vulnerable asset. The Wastewater treatment facility is less than one foot above the highest annual tide (HAT) and has already experienced trouble with outflow as pressure builds during high tides, necessitating temporary measures. Rising sea levels and storm surge events have the potential to cause increasing harm. Additionally, the collection system of the wastewater treatment plant could become overloaded

when there is a significant amount of precipitation in a short period of time. Climate change will increase the frequency of heavy rainstorms so it will be important to address the sources of inflow and infiltration in the Town's sewer system.

Blue Hill is entirely dependent on private wells for its drinking water supplies. With continued development activity in Blue Hill village, there is heightened risk that unsustainable volumes of water may be extracted, leading to dry wells or saltwater intrusion. Future climate change, to the extent it results in lower rainfall amounts and drought – even seasonal, could exacerbate this emerging issue.

5.7. Agriculture and Forestry

Increased variability in precipitation as well as temperature will impact Blue Hills farms and woodlots. It is important for the town to have an up to date understanding of how climate change may be impacting the viability of these resources. Blueberry fields and small organic farms are an important part of the town's identity and economy. Blueberry crops especially may be impacted.

5.8. Natural Resources

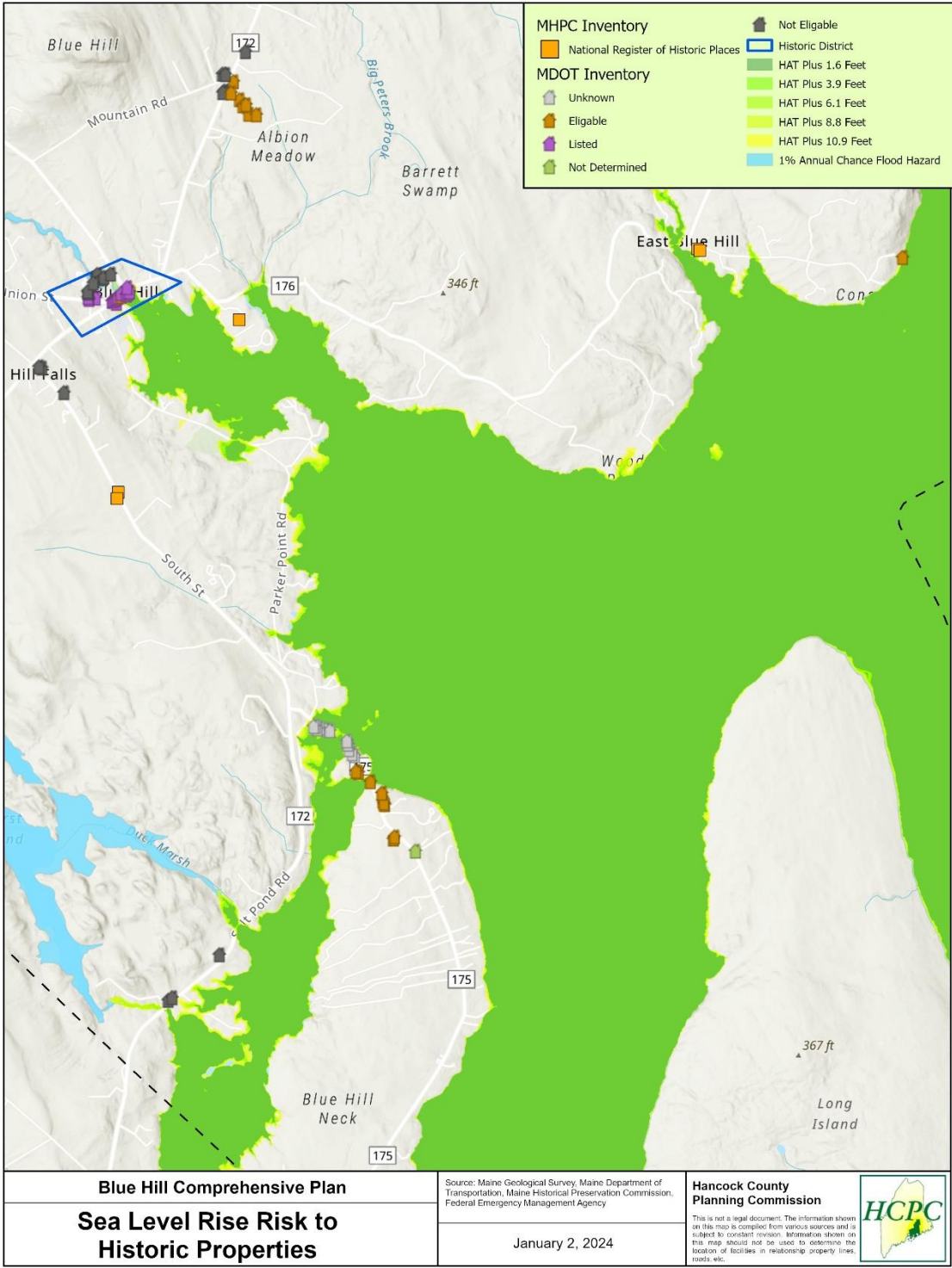
The various impacts of climate change create a need to understand its direct and indirect impacts on existing plant and animal species in Blue Hill. Fortunately, there are regional, State, and nonprofit partners with whom Blue Hill citizens and officials can call on for information relevant to Blue Hill. An evaluation of threats to natural resources in Blue Hill may be included at a high level in the ongoing climate vulnerability assessment.

5.9. Historic Resources

The Seaside Cemetery is owned and maintained by the town of Blue Hill. A concern is that the outer boundary of the cemetery is falling into the bay. The banks of the cemetery are high bluffs of soft gravel and dirt. They are held in place by brush and large trees whose roots help to stabilize the banks. Some of the gravestones are now on the edge and will need to be rearranged. This will be a complex process.

As the mitigation process of bank erosion will be time consuming, costly, legally complicated, and in need of a permanent solution, not just mitigation, it is included here as a high priority for the town. The process should begin soon.

Figure M-4: Sea Level Rise and Historic Properties



5.10. Economy

The repercussions of a changing climate will affect those at the most local level but will have ripple effects statewide and nationwide. Migration will have an impact on housing and rentals. Rising sea levels will have an impact on the working and recreational waterfronts. Pests and warming temperatures will have an impact on agricultural and forest production. Wastewater treatment system health has repercussions for the viability of the commercial center of the village. Invasion of new species and impact on local harvestable species from increasing ocean temperatures and acidity will have an impact on marine industries. The transportation infrastructure will also have a significant impact on the local economy.

6. Goals and Objectives

Goal: Implement adaptation practices in order to counter climate change effects already occurring and those anticipated over the next decade.			
Objective	Strategy	Responsible Party(ies)	Timeframe
Plan for the increased number and magnitude of storms that cause flooding events.	Complete the Maine Flood Resilience Checklist.	Select Board, Climate Resilience Committee	2024
	Regularly update flood maps and risk assessments, with provisions for extra mapping when new information becomes available that will substantially change high risk areas.	Climate Resilience Committee	2025 – Ongoing
Protect our wetlands and shore lands from climate change impacts.	Review land use ordinances including setback requirements for buildings and septic tanks and erosion and runoff prevention.	Code Enforcement Officer, Planning Board	Ongoing
	Include sea level rise projections and impacts in planning and permitting coastal development based on up-to-date models laid out in Maine’s Climate Council recommendations.	Planning Board, Code Enforcement Officer, Climate Resilience Committee	Ongoing
Bolster our community’s health and resilience (including businesses) regarding climate change impacts.	Perform a community vulnerability assessment, including updating local and County hazard mitigation, evacuation, and storm debris management plans.	Climate Resilience Committee, 3-Town Resilience Committee, Hancock County Emergency Management Agency, Fire Department	2024
	Work with regional partners to diversify the regional economy in order to be resilient in the face of climate change impacts.	Economic Development Committee	Ongoing
Protect public and private forested land from wildfires during drought periods.	Develop a plan with local land trusts, private woodlot owners, and the Town for best management practices and education around preventing wildfires.	Blue Hill Heritage Trust, Maine Coast Heritage Trust, Economic Development Committee	2026 – Ongoing
Improve public infrastructure to cope with the effects of climate change.	Conduct a survey to identify critical community infrastructure that may be vulnerable, including buildings, roads, bridges, culverts, wastewater treatment plants, and Town landings.	Climate Resilience Committee	Ongoing

	Determine the amount of capital needed to make improvements going forward. In cooperation with regional partners, explore climate resilience financing mechanisms including grants, catastrophe and resilience bonds, and tax-increment financing.	Economic Development Committee, Climate Resilience Committee	2025 – Ongoing
	Review the at-risk culvert and bridges indicated above in this chapter, and those outlined in the Public Facilities chapter.	Climate Resilience Committee	2025
Protect our community’s drinking water supply from climate change effects including prolonged drought and saltwater intrusion.	Determine alternative water sources for extended low-flow seasons that may render wells dry.	Climate Resilience Committee, Blue Hill Water District	2026 – Ongoing
	Consider collaborating with nearby towns to reduce competing water demands on our watershed’s groundwater during periods of drought.	Blue Hill Water District, Fire Department, Select Board	2024 – Ongoing
	Determine appropriate remedies for possible saltwater intrusion into drinking water wells as sea levels rise.	Shaw Institute, Blue Hill Water District, Select Board, Fire Department	Ongoing

Chapter N: Existing and Future Land Use

1. Purpose

This section discusses current and potential future land use patterns in Blue Hill. An understanding of past and current land use trends is particularly important in determining how and where Blue Hill could potentially grow in the future. Specifically, this section:

- a. Summarizes the breakdown of developed and undeveloped land in terms of estimated acreage and location;
- b. Explores the potential for new development in the next ten years and Blue Hill's capacity to absorb the growth; and
- c. Suggests measures that Blue Hill may want to consider for managing potential residential and non-residential growth.

2. Key Findings & Issues

Blue Hill is a relatively small coastal community with a diverse set of land uses and acts as a service center for the Blue Hill Peninsula. Approximately 43% of the parcels in town are undeveloped (17,182 acres), mostly forested, land; 29% have a residence on them (11,404 acres), and 20% of parcels are conserved land (7,831 acres). There is a wide variety of commercial, service, and other nonresidential businesses and organizations serving the residents of Blue Hill and neighboring communities. Undeveloped land is not a limiting factor in the Town's potential for growth. There is significant potential for undeveloped parcels to be developed and for residential parcels to be split or subdivided. Note that this discussion relates to parcel numbers not total area.

Respondents to the community survey expressed a desire to ensure that future growth fits with concerns for preventing overdevelopment and for preserving Blue Hill's unique character. Participants in community visioning and feedback sessions also expressed concerns regarding potential for overregulation of land development in Blue Hill. The Town may want to evaluate whether the current land use ordinances adequately protect against overdevelopment and provide a suitable basis for preserving Blue Hill's unique character. If the Town moves forward with such an evaluation, it should consider balancing protections with potential for overregulation.

3. Public Opinion Survey Results

In response to an open-ended question asking people what issues they anticipate the Town of Blue Hill will face during the next decade, population growth and overdevelopment were two of the main items mentioned. There were concerns regarding the potential impacts of population growth, increased population/development density, and overdevelopment. There were also concerns that these

circumstances could strain municipal infrastructure and negatively impact the town’s character. Alternatively, there also were concerns about housing shortages, especially affordable and workforce housing, in town.

The following table presents responses to a survey question about where various nonresidential land uses would be well-suited to occur. The results indicate that some respondents prefer certain land uses occur in designated areas, or close to the village center, while some do not.

“Please check where you feel it is most appropriate for the following land uses to occur in the future.”

Non-Residential Uses

Land Use	Anywhere	In Designated Areas	Close to Village Center	Nowhere	Undecided
Commercial (Trade/Services)	16%	46%	32%	2%	4%
Manufacturing	8%	59%	4%	19%	11%
Inns, Hotels, B&Bs	38%	28%	25%	4%	6%
Restaurants	46%	19%	33%	0%	2%

A similar table for residential land use preferences is as follows. These results similarly indicate that some respondents prefer certain residential uses in some areas, while some do not.

“Please check where you feel it is most appropriate for the following land uses to occur in the future.”

Residential Uses

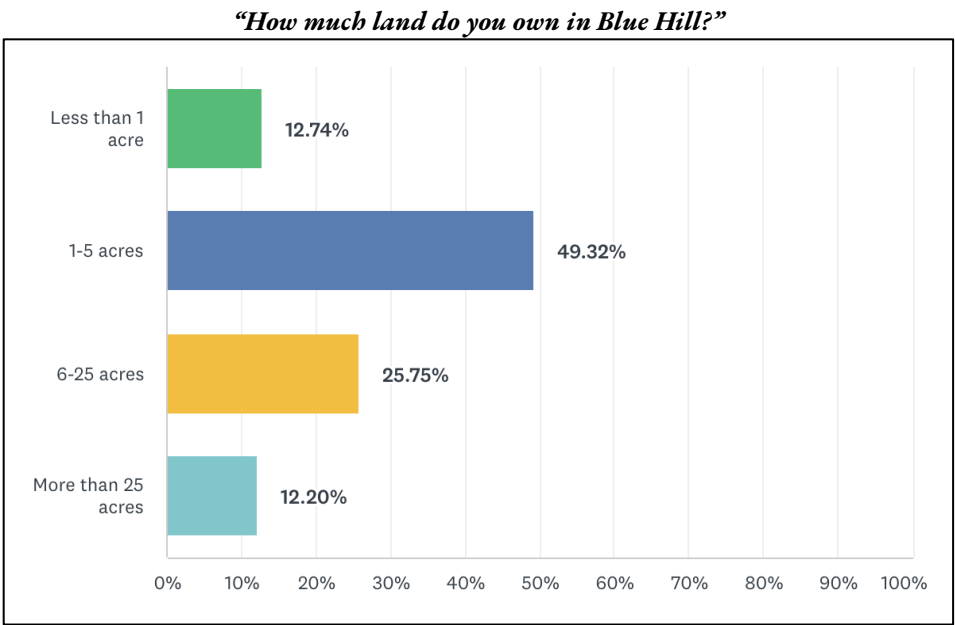
Land Use	Anywhere	In Designated Areas	Close to Village Center	Nowhere	Undecided
Residential	62%	27%	8%	1%	3%
Low-Income Housing	37%	31%	23%	4%	5%
Mobile Home Parks	14%	41%	2%	34%	9%
Seasonal Rental Properties	57%	23%	3%	7%	10%
Short-Term Rental Properties	48%	24%	5%	12%	12%
Workforce Housing	44%	30%	19%	2%	6%

In the case of trade or other service development, there was support that it occurs close to the village center—this includes uses such as restaurants, commercial businesses, and lodging facilities. Worth noting is that 36% of respondents said that they live within one mile of the Town Hall. Most survey respondents felt that residential use is appropriate anywhere. This includes low-income housing and workforce housing, both of which have notable support for development close to the village center. Mobile Home Parks appear to be the exception, with 41% of respondents believing it should be in designated areas only and 34% preferring it to be nowhere.

In addition to a willingness to develop low-income and workforce housing, 78% believed that affordable housing/housing costs need improvement or attention, and over 50% said this needs to happen right away. Relatedly, over 90% of respondents supported the Town investing more in addressing affordable housing needs, either by using grants or subsidies to reduce costs or property tax dollars.

Most felt that seasonal rental properties and short-term rental properties are appropriate either anywhere in the Town or in designated areas. Approximately 12% said that short-term rentals are not appropriate anywhere. When asked about planned activities within the next five years, just under twenty percent (18%) of respondents to this question indicated that they plan to list a property, or a portion of a property, as a short-term rental within this time period.

The following figure shows the amount of land that various survey respondents own in Blue Hill. A strong majority of survey respondents own one to five acres; and the range of one to twenty-five acres includes 75% of respondents.



4. Existing Land Use Conditions and Trends

4.1. Existing Land Uses and Acreages

Figures N-1 and N-2 below show existing land uses town wide and in Blue Hill Village (as of September 2023):

Figure N-1: Blue Hill Existing Land Use Map

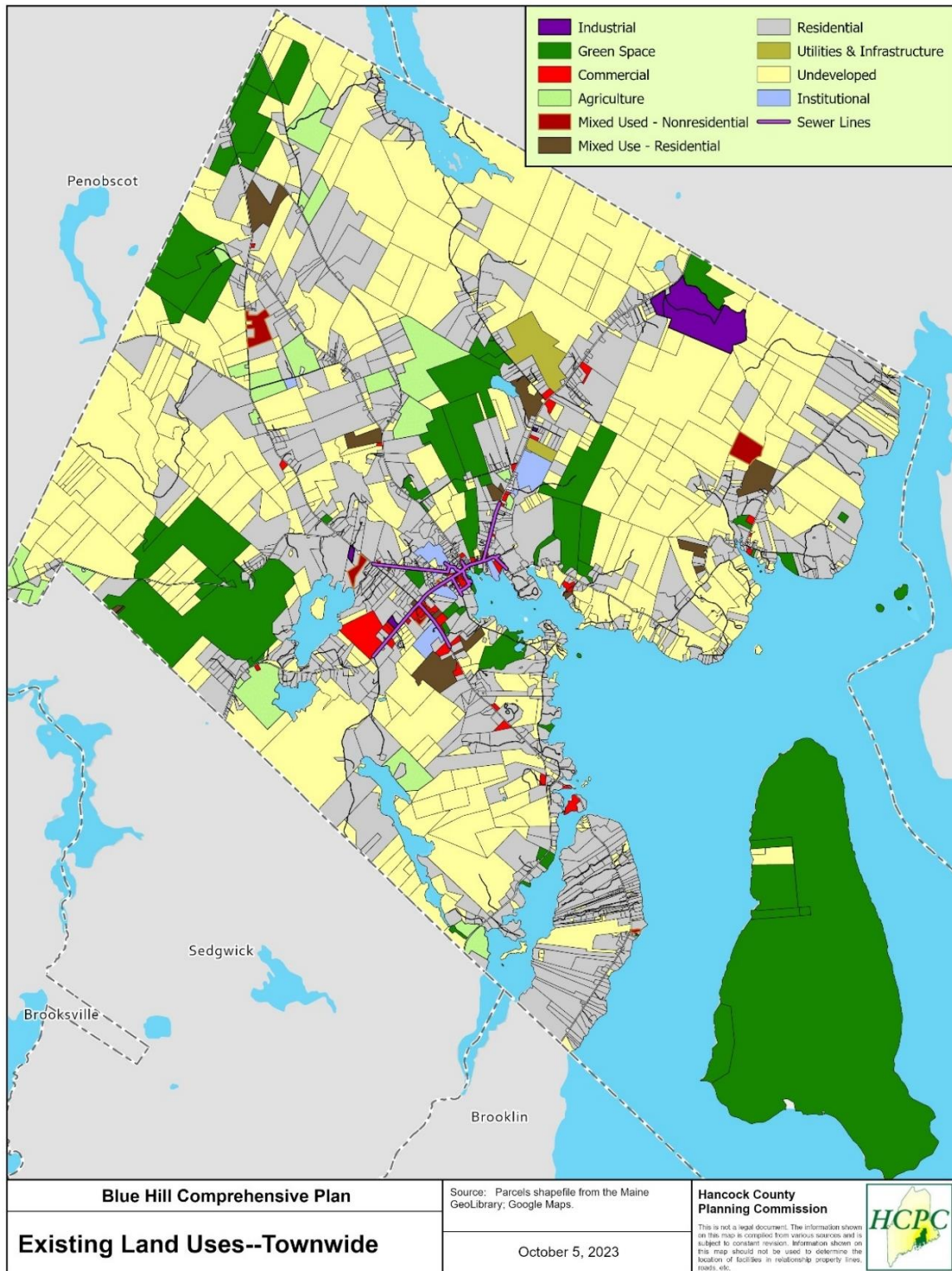


Figure N-2: Blue Hill Village Existing Land Use Map

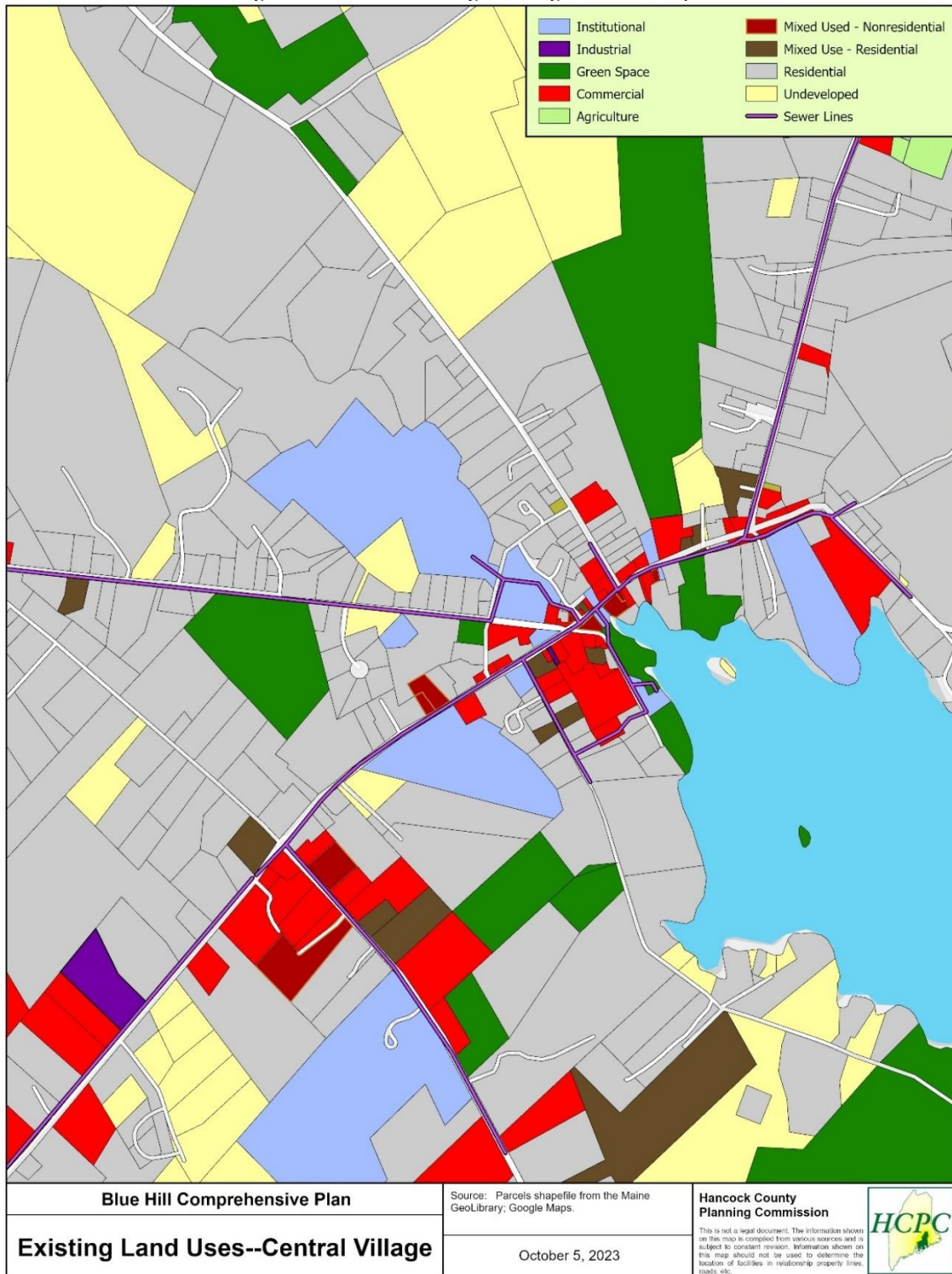
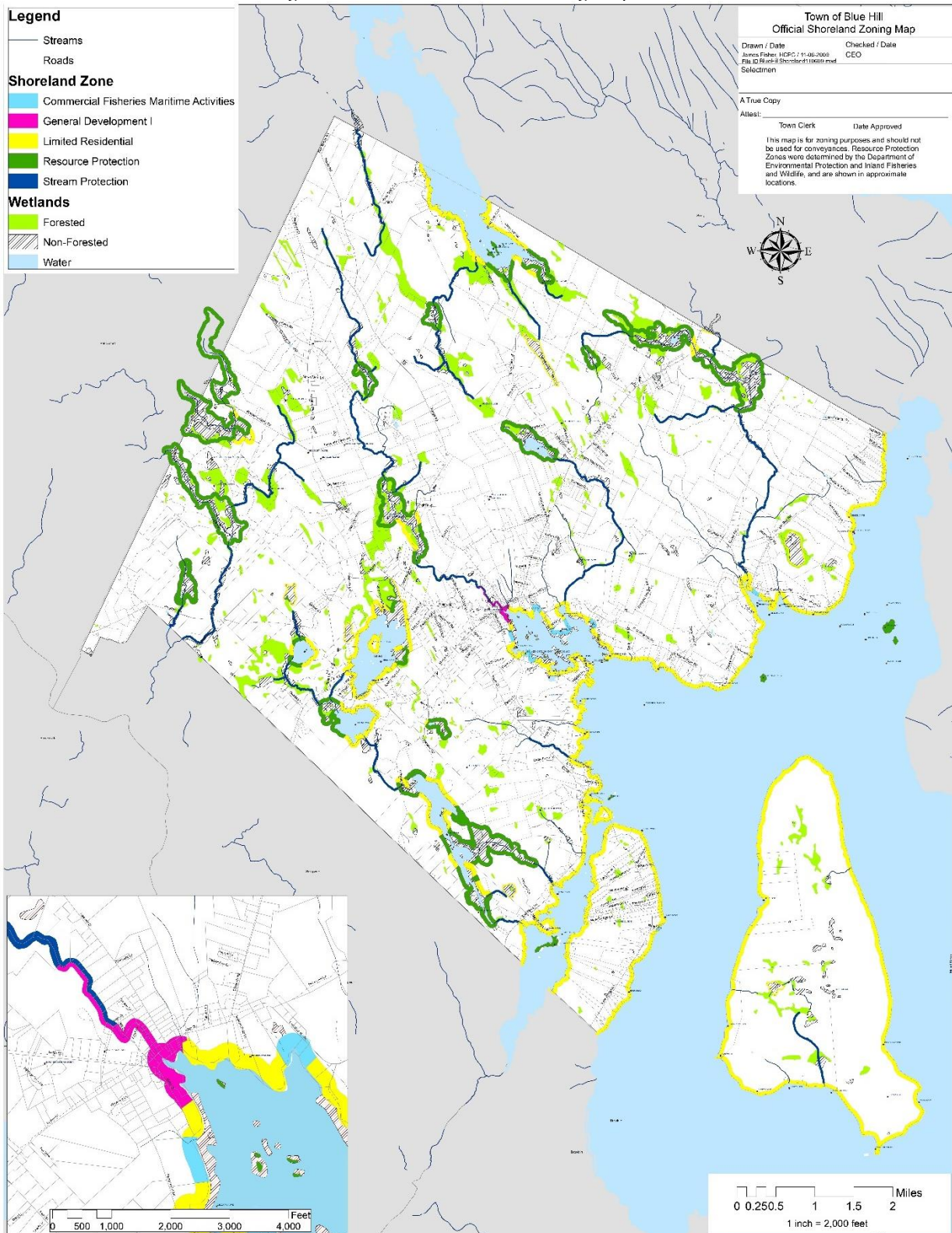


Figure N-3: Blue Hill Shoreland Zoning Map



In the maps above (Figures N-1 and N-2), the parcels are color-coded by general land use categories. In addition, the Shoreland Zoning Map (Figure N-3) is included to aid in evaluating Blue Hill's remaining development potential.

Table N-1, below, shows the total acreage of various land uses (waterbodies are not included in the acreages presented). The land remaining after subtracting parcels and water from the Town's total area is assumed to be the area of roads not within parcels.

Table N-1: Existing Land Use Acreages

Land Use	Acres	Percent
Agriculture	1,183	3.0%
Commercial	272	0.8%
Green Space (Conserved)	8,139	20.6%
Industrial	319	0.8%
Institutional	214	0.6%
Mixed Use - Nonresidential	133	0.3%
Mixed Use - Residential	436	1.1%
Residential	11,404	28.9%
Utilities and Infrastructure	225	0.6%
Undeveloped Parcels (forested, etc.)	17,182	43.5%
Subtotal	39,507	100%
Water Area	15,499	
Blue Hill Total Area	55,513	
Roads Outside of Parcels	506	

Source: Calculated from the Blue Hill Town wide Existing Land Use Map.

4.2. Amount of Land Potentially Useable for Future Development

The amount of land remaining in Blue Hill that is available for future development can be approximated by adding up undeveloped land (except where it is protected for conservation) and "surplus" land in improved residential lots, and then deducting land that is already subject to existing development constraints (e.g., wetlands). In the calculations below, these constraints consist of wetlands and the Shoreland Zoning Resource Protection District. Land in Farmland, Open Space, and Tree Growth current use taxation programs are not deducted as they are not permanently protected.

According to the calculations below, there are approximately 21,348 acres or 53% of land available in Blue Hill that could be developed or further developed. Simply in terms of available land, Blue Hill has a considerable amount of development potential.

It is important to note that there are a variety of other potential development constraints that can only be evaluated on a lot-by-lot basis. These include such factors as sufficiency of street frontage, soil conditions, well water availability and proximity of wells to septic fields, etc. The true amount of land potentially available in Blue Hill for future development is less than the amount shown in Table N-2.

Table N-2: Approximate Blue Hill Development Potential

	# of Parcels	Area (acres)
Undeveloped parcels	563	17,182
Less wetlands		1,973
Less Shoreland Zone Resource Protection District		556
Subtotal		14,653
Residential parcels > 2 Acres	760	10,864
Less 1-acre existing house buffer per parcel		760
Less wetlands		844
Less Shoreland Zone Resource Protection District		100
Subtotal		9,160
Estimated total land developable from parcels where the existing land use is either Undeveloped or Residential		23,813

Source: Calculated from the Existing Land Use Map

4.3. Land Use Patterns

Blue Hill has four established community areas: Blue Hill, East Blue Hill, South Blue Hill, and North Blue Hill. The largest of these communities is Blue Hill village. It features the main stores in town, the library, banks, schools, churches, recreation areas, and hospital. It has a public sewer system (See Figure E-2), many historic buildings, and is considered a service center for both the town and the greater Blue Hill peninsula. The other communities are not as clearly defined, but do carry certain community characteristics, located around a central gathering place: Founders Hall (East Blue Hill), Central Hall (South Blue Hill), and Halcyon Grange (North Blue Hill).

4.4. Current Lot Dimension Standards

Other than the State Plumbing Code, the only regulations governing lot dimensions in Blue Hill are those in the Shoreland Zoning Ordinance. Its standards match the state guidelines and are, in part, as follows:

Table N-3: Shoreland Zoning Standards Related to Lot Dimensions

Minimum Lot Standards		Minimum Lot Area (sq. ft.)	Minimum Shore Frontage (ft.)
Residential per dwelling unit	Within the Shoreland Zone Adjacent to Tidal Areas	37,500	150
	Within the Shoreland Zone Adjacent to Non-Tidal Areas	40,000	200
Governmental, Institutional, Commercial, or Industrial per principal structure	Within the Shoreland Zone Adjacent to Tidal Areas, Exclusive of Those Areas Zoned for Commercial Fisheries and Maritime Activities	40,000	200
	Within the Shoreland Zone Adjacent to Tidal Areas Zoned for Commercial Fisheries and Maritime Activities	None	None
	Within the Shoreland Zone Adjacent to Non-tidal Areas	60,000	300
Public and Private Recreational Facilities	Within the Shoreland Zone Adjacent to Tidal and Non-Tidal Areas	40,000	200

4.5. Development within the Last Ten Years

As discussed in the Housing chapter, the Census indicates that there was a 3.2% increase in the total number of dwelling units in Blue Hill from 2010 to 2020. The COVID-19 pandemic hindered residential development at the tail end of the decade. During the previous decade, the increase was 19%. These increases have occurred in a variety of locations and are not concentrated in any one area. In general, the town has been accommodating a moderate amount of growth and is expected to continue to do so in the coming years.

4.6. Existing Land Use Regulations and Land Use Management Tools

Blue Hill has enacted (and amended) several ordinances over the years to regulate development and manage growth. These include:

- Commercial Site Plan Review Ordinance (amended 4/10/2023)
- Shoreland Zoning Ordinance (amended 4/2/2022)
- Subdivision Ordinance (amended 4/10/2023)
- Floodplain Ordinance (7/20/2016)
- Telecommunications Tower Ordinance (4/1/2011)
- Wind Energy Systems Ordinance (4/1/2011)

Like other communities in the area, Blue Hill does not have a townwide zoning ordinance and instead relies on the combination of Shoreland Zoning, Subdivision, and Commercial Site Plan to regulate development.

4.7. Projected Land Acreage Needed for Development

Given the various competing factors affecting land development, such as urban flight and mortgage rate increases, it is difficult to estimate the amount of new development that could occur in coming years. If one applied the 2000 to 2020 growth rate for total housing units of 28.5% to the 2020 figure of 1,910 total housing units (See Chapter C: Housing), it would result in an increase of an additional 544 units. With approximately 21,000 acres of land developable from parcels where the existing land use is either Undeveloped or Residential (see Table N-2 above), this amount of growth, and more, could be accommodated townwide. What is less clear is how much of it could occur in Blue Hill village where the provision of public sewer favors higher residential density. Very few of the parcels in the central village are undeveloped, but some of the lots, especially on the village periphery, could be split or subdivided. Some development should be expected in Blue Hill village as well as in the other sections of town.

5. Analyses

5.1. Consistency with the Community Vision

Most of the development in Blue Hill has been occurring lot by lot and not in subdivisions or planned developments. In 2023 and 2024 however, several applications for subdivisions or developments of multiple housing units have been submitted and some are under construction. In terms of responses in the comprehensive plan survey, concerns about population growth, increased density, overdevelopment, and preserving the town's character were frequently mentioned. On the other hand, there also were concerns about housing shortages, especially affordable housing. In community visioning sessions, concern regarding the potential for overregulation of land use was frequently mentioned. It appears therefore that survey respondents and visioning session participants are seeking a balance between maintaining the Town's existing character, being responsive to the growing housing crisis, and avoiding overly restrictive land use regulations.

5.2. Measures to Ensure Development Fits with the Community Vision

Some of the measures that could be taken that would bring growth in Blue Hill more in line with the community vision include:

- Encourage focused commercial and residential (workforce housing) development within walking distance of Blue Hill village, where people can easily walk or ride bicycles to get to home, work, school, services, recreation, and other destinations.
- Work with landowners and conservation organizations to encourage strategic conservation.
- Encourage subdividers to provide natural areas as amenities for their residents and to link these areas with any abutting protected areas (see Chapter J: Natural Resources chapter on the importance of undeveloped habitat blocks).

5.3. Land Use Regulation Administrative Capacity

Related to managing its land use regulations, Blue Hill has a Planning Board, a Board of Appeals, and a Climate Resilience Committee. The Code Enforcement Officer also serves as the Local Plumbing Inspector. These resources appear to be sufficient for the foreseeable future. If this turns out not to be the case, the Town maintains a leadership structure that is capable of reevaluating and addressing additional needs.

5.4. Floodplain Regulations

Blue Hill adopted a comprehensive and up-to-date Floodplain Ordinance in 2016 that is consistent with state and federal standards. The Town participates in the National Flood Insurance Program (NFIP); the current effective date of its Flood Insurance Rate Maps is 7/20/2016.

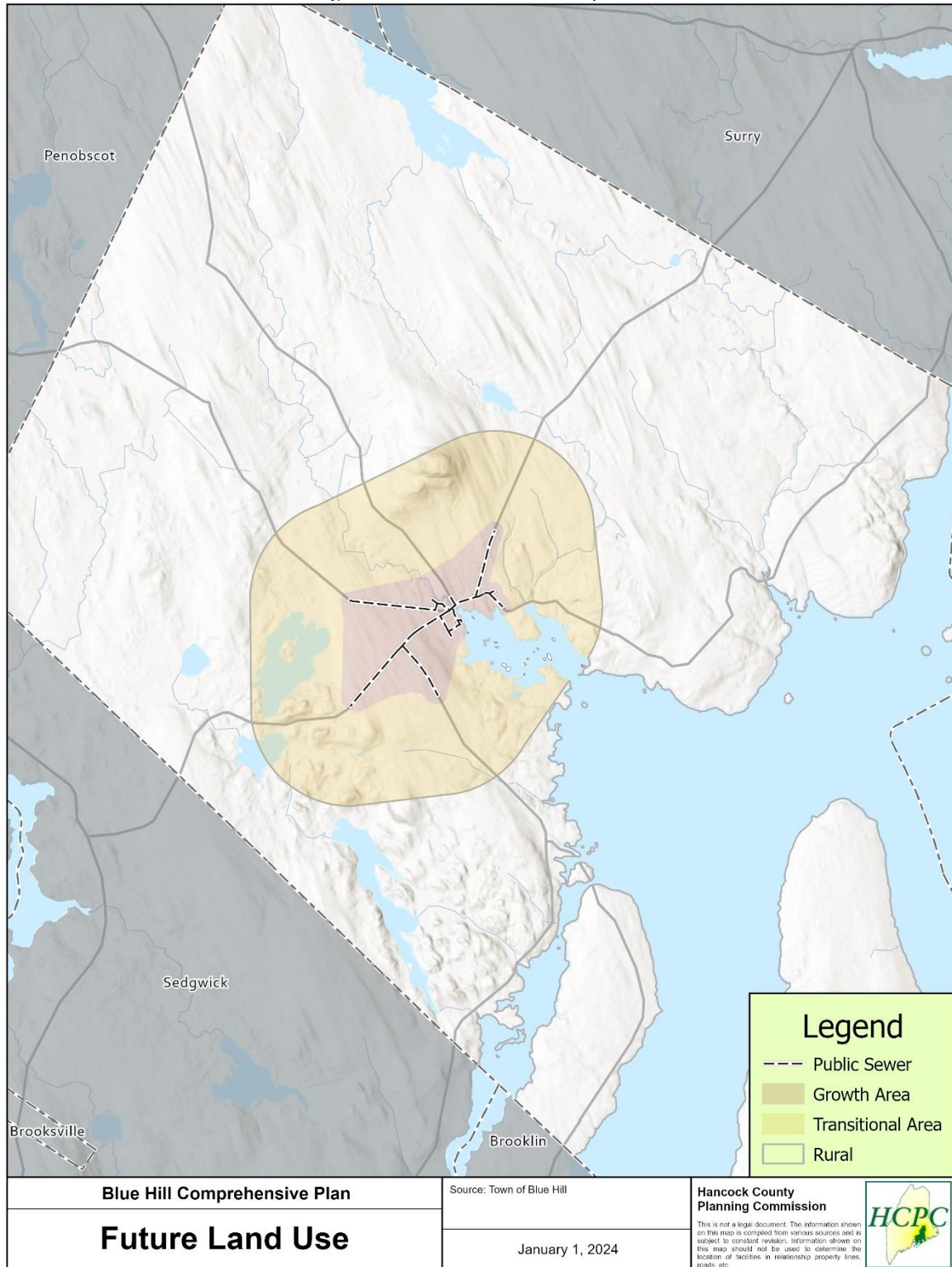
6. Future Land Use Plan

6.1. Most Suitable Area for Growth

The Blue Hill village and its surrounding area has been identified as an area for future development in Blue Hill and as a designated Growth Area. This is where public water and sewer infrastructure is present. A majority of the Town's municipal and commercial buildings, as well as some residential development, are currently located within this area. It features numerous businesses, the library, banks, schools, churches, recreation areas, and a hospital. The area also has many historic buildings and is considered a service center for both the Town and the greater Blue Hill peninsula.

Visualized in Figure N-4 below, the growth area includes the Blue Hill village and extends to where there is public water and sewer. This includes north on Main Street (Route 172) to Mountain Road.; northwest on Union Street to Hinckley Ridge Road (Route 177); southwest on Tenney Hill Road/Mines Road (Route 176/15) to Grindleville Road; south on South Street (Route 172/175) to the Barncastle Hotel and Restaurant; and southeast on East Blue Hill Road (Route 176) to Steamboat Wharf Road. The growth area also includes the village waterfront.

Figure N-4: Future Land Use Map



6.2. Growth Area Consistency

Designating this central portion of Blue Hill as a growth area encourages future development where essential services, businesses and employment opportunities already exist. Distance traveled to these locations can be minimized as new residences are developed here. There is also an opportunity to utilize and build upon existing connections in this area to create a network of pedestrian and bicycle infrastructure that enhances walkability and promotes active transportation.

Focusing growth in this area will allow Blue Hill to encourage responsible development while maintaining its rural, small-town character. Projects included in the town's Capital Investment Plan, such as upgrades to the Wastewater Treatment Plant and pedestrian/bicycle connectivity, are located within this area. Designating growth in and around the village would be responsive to preferences expressed in the Public Opinion Survey that certain types of residential and commercial development be focused in the village center. With future growth centrally focused, other areas of town comprising greater concentrations of natural resources and habitat can remain as such.

6.3. Transitional Area

As previously mentioned, few parcels in the village center are undeveloped. Some lots could be split or subdivided to create additional available land including those on the outskirts of the growth area. While future development is anticipated in the village and within the growth area, additional development is expected in portions of town outside of these boundaries. The designated Transitional Area, visualized in Figure N-4, has been created to serve as an area between the denser development of the Growth Area and the remaining less-developed parts of the town. Currently this area is comprised of scattered residential and commercial structures along with conserved land, wetlands, water bodies and other natural areas. Patterns of development over the next 10 years are expected to remain somewhat similar to those seen currently, but with clusters of denser housing on suitable lots that become available. As acreage and the number of lots within the Growth Area is limited, it is anticipated that single-family homes will continue to be constructed in this area as space is available, that seasonal residences will be converted to year-round and that residences will be converted to commercial use (office spaces for example).

6.4. Balance of the Town

The remaining acreage of the town is rural, defined by larger blocks of habitat, conserved land, and other natural features. Single-family residences are scattered along State and Town roads. Maintaining natural resources and habitat, such as fish passages, forests, wetlands, and the plants and animals native to the area, is valued and may be protected by concentrating development in other areas of the town.

Ultimately though, parcels with high value natural habitats will need to be protected through fee or conservation easement purchases from willing sellers.

6.5. Unsuitable Growth Areas

Much of the acreage present outside the designated Growth Area and Transitional Area is not suitable for development. Figure N-5 below identifies some of the natural features and aspects that constrain development, such as hydric and partially hydric soil that may be indicative of the presence of wetlands. The Co-Occurrence map (Figure N-6) takes a number of factors into account to identify areas most suitable (light brown) to least suitable (dark green) for development. Areas in Blue Hill with the lowest concentration of these natural attributes are in proximity of the existing roadway system while higher concentrations of natural resources are found away from high-use roadways in the more rural portions of the town.

Figure N-5: Blue Hill Development Constraints

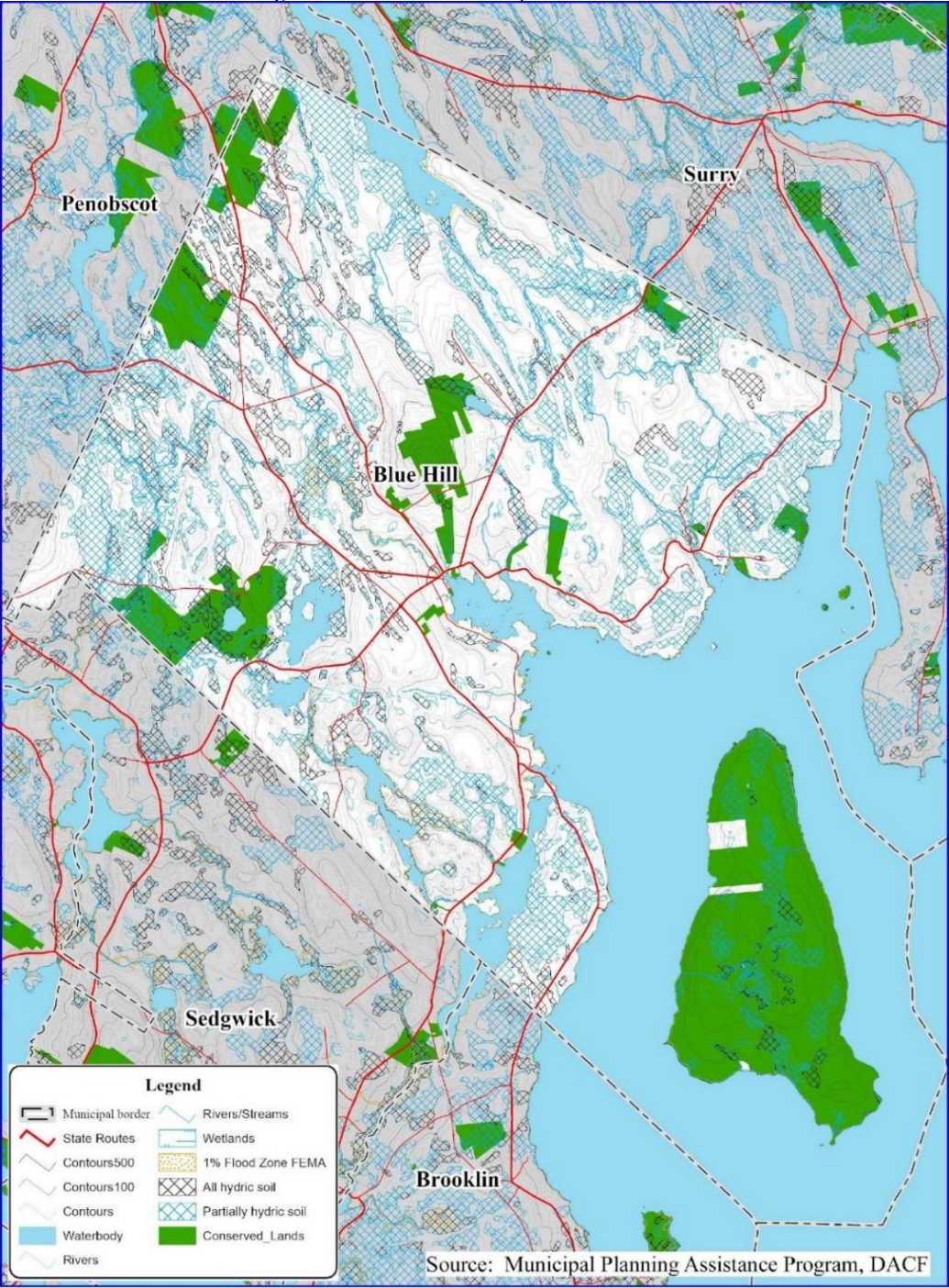
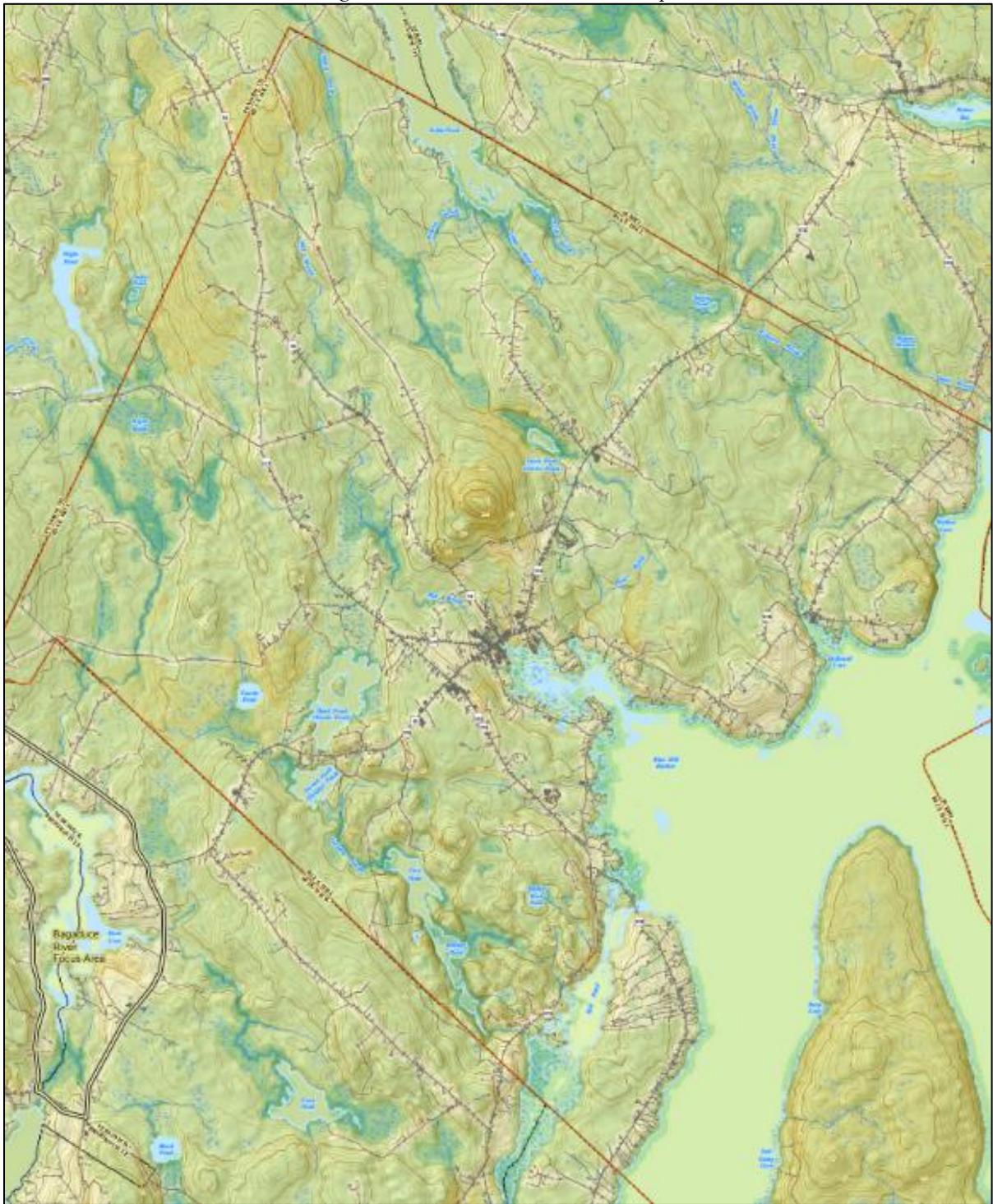


Figure N-6: Blue Hill Co-Occurrence Map



Source: Beginning with Habitat

7. Goals and Objectives

Goal: Encourage appropriate new development while maintaining a rural small-town character without placing an undue burden on taxpayers			
Objective	Strategy	Responsible Party(ies)	Time Frame
Promote awareness of State land development guidelines and best management practices.	Provide educational materials to property owners and developers on best practices in construction and land use.	Planning Board, Code Enforcement Officer	2024 – Ongoing
Promote greater understanding of land use trends, challenges, and opportunities.	Continue to track new development by type and location. Communicate results to Planning Board, Select Board and public.	Code Enforcement Officer	Ongoing
Protect the rural character and historic land use patterns of Blue Hill.	Encourage coordination between conservation groups, conservation easement properties and various landowners via outreach and educational materials.	Select Board, Planning Board	2024 - Ongoing
	Identify values and create voluntary guidelines to provide to property owners and developers.	Select Board, Planning Board	2025 - 2026
	Protect rural and waterfront areas from the impacts of incompatible development.	Select Board, Planning Board	Ongoing
	Periodically evaluate implementation of the land use strategy every 5 years.	Planning Board	Ongoing
	Continue to implement and propose improvements to existing Site Plan, Subdivision, and Shoreland Zoning ordinances.	Planning Board	Ongoing
	Provide the code enforcement officer with the tools, training, and support necessary to enforce land use regulations, and ensure that the Code Enforcement Officer is certified in accordance with 30-A M.R.S.A. §4451.	Select Board	Ongoing
Foster engagement and dialogue to keep the public well informed and develop community consensus on future development and land use directions in Blue Hill.	Organize public open houses and community dialogue sessions to gather public input on development concerns and methods.	Planning Board	2024 – Ongoing
Participate in regional collaboration.	Coordinate community land use strategies with regional land use planning efforts.	Planning Board	2024 - Ongoing
	Meet with neighboring communities to coordinate land use designations and regulatory and non-regulatory strategies.	Planning Board	2024 – Ongoing
Support responsible growth in Blue Hill.	Support the level of financial commitment necessary to provide for infrastructure development in growth areas.	Select Board	Ongoing
	Direct a minimum of 75% of new municipal growth-related capital investments to within the growth area.	Select Board	Ongoing

Chapter O: Regional Coordination Summary

Each chapter in Blue Hill's Comprehensive Plan identifies regional coordination challenges and opportunities pertinent to the chapter topic. These are either located within a subsection labeled Regional Issues or embedded within the Goals and Objectives subsection. This section summarizes the most important areas of ongoing and recommended regional cooperation.

Federal and State Government

Blue Hill interacts with federal and state agencies in a variety of ways in the daily operations of the Town. These include statutory requirements, grants, programs, and services. The Town maintains a relationship with the State on fisheries, coastal and water quality issues, consulting with the Maine Department of Marine Resources (DMR) and the Maine Department of Environmental Protection (DEP). On transportation issues, Blue Hill consults with MDOT. The State Police provide policing and protection to the Town as well. The Department of Economic and Community Development (DECD) is a resource to help Blue Hill advance economic goals set out in this Plan. The Maine Climate Council's Maine Won't Wait and the Governor's Office of Policy Innovation & the Future (GOPIF) provide guidance for climate change planning.

County and Local Government

Hancock County provides essential services through the Sheriff's Office, Hancock County Emergency Management Agency, along with support on certain economic development issues. Blue Hill closely coordinates with neighboring towns including, Sedgwick, Brooklin, Penobscot, Brooksville, Deer Isle, and Stonington on various issues such as mutual aid for Fire and Emergency Response, solid waste management, watershed management, recreational programming, broadband development, and other important economic activities. Other recent programs include the Blue Hill Peninsula coalition of select boards to address important topics including housing and road maintenance. Blue Hill also participates in Peninsula Tomorrow to address climate change at a regional scale. George Stevens Academy and the Harbor School in Blue Hill service all the towns on the peninsula. At Home, also based in Blue Hill, provides services to other seniors and people dealing with mobility issues and chronic illnesses.

Other Coordination with Regional Partners

Blue Hill is a member of the Hancock County Planning Commission (HCPC) and works with HCPC to address issues related to economic development, transportation, climate change resiliency, and more at a regional level. In addition, Blue Hill is currently conducting a vulnerability assessment with neighboring towns Surry and Brooksville to assess shared vulnerabilities and interests. Blue Hill has close relationships with local and regional land trusts, as there are several locations in the Town that are owned by these groups.

Chapter P: Implementation and Evaluation

Each chapter of the Blue Hill Comprehensive Plan contains goals (desired outcomes), specific outcomes (measurable milestones on the way to those goals), strategies (methods for achieving those objectives), a responsible party (who will implement the strategy), and a timeframe (when will it start and when will it be completed). The suggested goals, strategies, objectives, parties, and timeframes serve as a framework for future action and a tool for decision making by elected and municipal officials.

An Implementation Committee will be formed to assess the yearly progress that has been made. To track implementation, an annual meeting will be held that includes, in addition to members from the Comprehensive Plan Committee, the Select Board, the Planning Board, and members from other committees whose responsibilities are pertinent to evaluation and implementation of the Plan. The Select Board will consider forming an Implementation Committee to amalgamate input from the various Town bodies in preparing the annual review of implementation progress. The findings will be published in the annual town report.

The Growth Management Act, Title 30-A, Chapter 187 of the Maine State Statutes, requires that progress on the Plan be evaluated, at a minimum, every five years to determine the following:

- a. The degree of implementation of Future Land Use strategies;
- b. The percent of capital investments dedicated to the growth areas defined in the Future Land Use Plan;
- c. The location of new development relative to the established growth areas; and
- d. The amount of critical natural resources, waterfront and recreation and open spaces protected through the acquisition of property, conservation easements, and other methods available to Blue Hill.

These four mandated requirements will serve as guidance for the annual meeting and metrics to measure implementation.

Appendix A: Summary of Public Engagement

In October of 2022 the Select Board proposed a slate of committee members to guide the Town of Blue Hill through the process of creating a Comprehensive Plan. The committee placed a high priority on outreach. The special subcommittee on Community Engagement meets monthly to plan and execute a wide variety of opportunities for everyone's input.

Community Survey

A survey was created and sent out to residents. To publicize the Survey, 900 pamphlets were printed and distributed, along with posters and sandwich-boards placed around town. During the period between the Town Meeting in April 2023 and the closing of the Survey in August 2023, we received 475 responses – a 25% response rate.

Tabling and 1-on-1 Conversations

To inform people about the survey and to gain direct feedback from conversations, committee members organized a greeting table at the Farmers' Market for four weeks in July. Information was provided through meetings at Parker Ridge Retirement Center, the Halcyon Grange, the Tree of Life Food Pantry, the First Congregational Church, St. Francis Episcopal Church, and the Baptist Church. To reach parents through the school, Committee members spoke to a student assembly at George Stevens Academy and contacted parent-teacher associations.

Committee members also held one-on-one sessions with civic leaders, entrepreneurs, and property owners. We sent out notices of meetings to 335 residents and 60 participated in informal group meetings.

Community Visioning Sessions

Six visioning sessions were held from March through November 2023, with publicity and good press coverage, and total attendance reached over 200 persons.

The first visioning session was Sunday, March 12 in the Blue Hill Public Library, with 40 attending, and the second Thursday, March 16 at the Town Hall with 35 participants.

Visioning sessions focused on various themes of the Chapters and took place as follows:

- May 23 at the Farmhouse Inn: Population, Economy, Housing
- Sept. 7 at the Library: Marine and Water Resources
- Oct. 13 at the Library: Natural Resources, Agriculture, Forests, Recreation
- Nov. 4 at the Bagaduce Music Hall Public Facilities, Broadband, Fiscal Capital Investment

- Nov. 15 at East Blue Hill Founders' Hall: Historic & Archaeological Resources, Land Use.

Outreach via Email and Handwritten Notes

Over the course of the year, 3,026 emails and written notes were sent out inviting feedback and participation in the comprehensive planning process.

Posters, Signage, and Advertising

Sixty-seven posters and signs were placed around town in 2022 and 2023, letting residents know how to participate and provide their ideas and feedback. Six advertisements were placed in the local and regional newspapers about public engagement sessions.

Appendix B: Public Opinion Survey