South Berwick Comprehensive Plan Inventory DRAFT 3.18.23

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Chapter 1 - Community Profile

Purpose

Population demographics comprise one of the most basic elements of a comprehensive plan. To understand the town's current and future needs, a detailed examination of community characteristics will help decision makers understand population impacts on public facilities and services by:

- describing South Berwick's recent population trends;
- discussing how these trends relate to and contrast with those in York County and the State; and
- describing key characteristics of the current South Berwick population.

Key Findings and Issues

- South Berwick has experienced consistent growth since the 1950's, but growth rates have slowed over time.
- South Berwick is younger and has a higher average household size than surrounding communities, the state, and York County overall. However, school enrollment has decreased over time.
- The town also has a higher educational attainment, and higher median income than the state and county overall.

Demographic Conditions

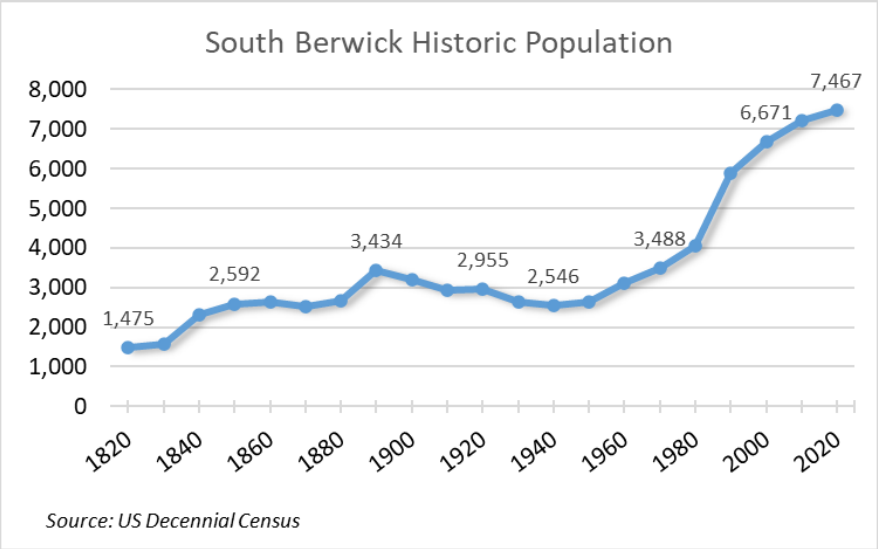
Beginning in the 1700's and through to present day, the U.S. Decennial Census has been collected at the national level every 10 years. Even though that data is only available in 10-year increments, it is generally considered accurate because it surveys the entire population.

Starting in 2005, the Census Bureau began an annual collection of a smaller sample of the national population called the American Community Survey (ASC). Datasets from this survey are combined into 1-, 3- or 5-year compilations to get a large enough sample of the population to publish data. For small communities, only the 5-year compilations are considered accurate enough to use. For South Berwick, most data points have a margin of error of less than 5%. In many cases the ACS is the only source of data for specific topics or demographics, and the data is estimated and published annually, as opposed to every 10 years. For planning purposes, the drawbacks of that margin of error are almost always outweighed by the ability to get data for any particular year and dataset.

Population Change

South Berwick has experienced sustained growth since the 1950's, with the most extreme rate of growth happening in the period between 1980 and 1990. After growth management regulations passed at the state level, growth continued to slow in the decades after.

Compared to surrounding communities, South Berwick had the slowest growth rate in the period between 2010-2020. Berwick and North Berwick both grew at more than twice the pace in the same period. However, growth was on par with the state overall growth.



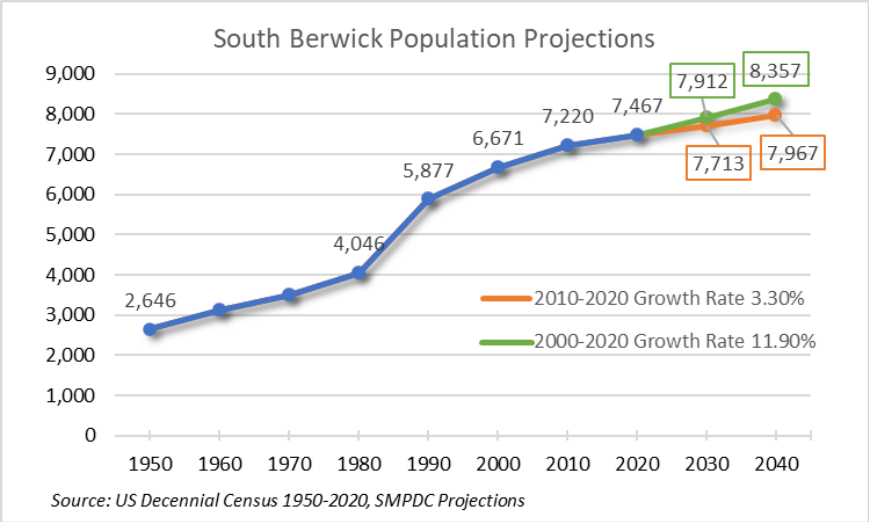
Population Change, 2000-2010					
	2000	**2010**	**2000-2010**	**2020**	**2010-2020**
South Berwick	6,671	7,220	7.6%	7,467	3.3%
Berwick	6,353	7,246	12.3%	7,950	8.9%
Eliot	5,954	6,204	4.0%	6,717	7.6%
North Berwick	4,293	4,576	6.2%	4,978	8.1%
York	12,854	12,529	-2.6%	13,723	8.7%
Rollinsford, NH	2,648	2,527	-4.8%	2,597	2.7%
Maine	1,274,923	1,328,361	4.0%	1,362,359	2.5%
York County	186,742	197,131	5.3%	211,972	7.0%
Source: US Decennial Census					

Population Projections

The Maine State Economist has produced population projections for all Maine towns and cities based on 2008-2018 Census population estimates. These projections estimate that South Berwick's population will continue to increase, resulting in a 14.1% increase by 2028, or a total population of 8,587. So far it appears these projections are quite high. Since the population has only increased by about 200 people between 2010 and 2020, and the projections assume it South Berwick would see another 400 people added to the population before 2023.

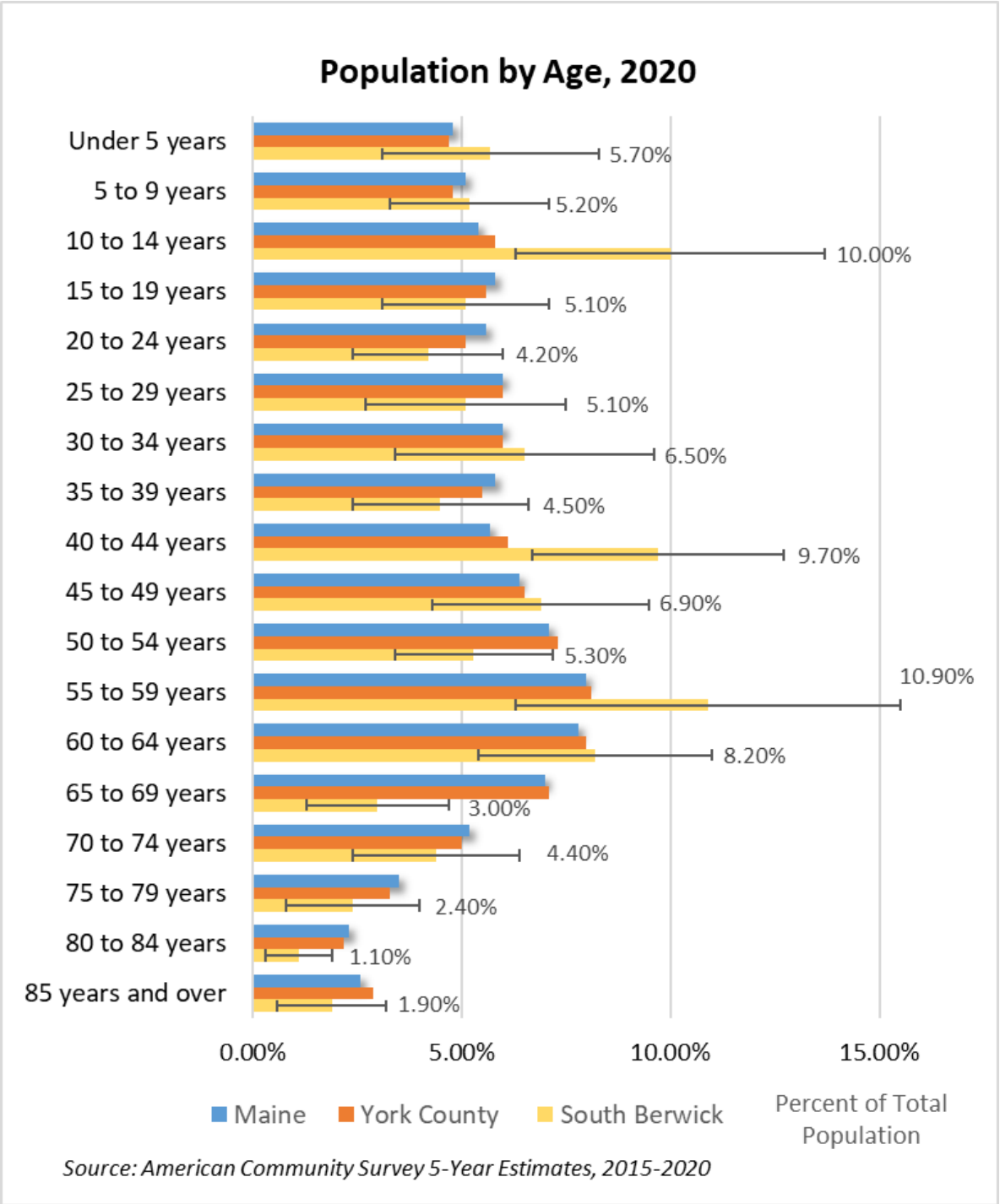
Population Projections, 2023-2038								
		South Berwick	Berwick	Eliot	North Berwick	York	Maine	York County
Population projected	2023	7,876	8,230	7,402	4,852	13,731	1,355,924	215,424
	2028	8,172	8,649	8,068	4,954	14,226	1,368,838	223,396
	2033	8,412	9,014	8,703	5,015	14,620	1,374,023	229,809
	2038	8,587	9,315	9,290	5,034	14,899	1,371,608	234,432
Percent change from previous period	2008-2013	0.6%	3.9%	0.3%	0.9%	-0.3%	-	-
	2013-2018	3.6%	4.5%	8.0%	2.2%	3.7%	-	-
	2018-2023	4.7%	5.6%	9.7%	2.9%	4.4%	1.1%	4.4%
	2023-2028	3.8%	5.1%	9.0%	2.1%	3.6%	1.0%	3.7%
	2028-2033	2.9%	4.2%	7.9%	1.2%	2.8%	0.4%	2.9%
	2033-2038	2.1%	3.3%	6.7%	0.4%	1.9%	-0.2%	2.0%
Total Percent Change	2018-2038	14.1%	19.6%	37.7%	6.8%	13.3%	2.3%	13.6%
Source: Maine State Economist, Based on 2018 US Census Population Estimates								

Alternatively, if it is assumed that the growth rate between 2010 and 2020 would continue over the next decade, a 3.3% increase would mean a population of 7,713 by 2030. If one considers the twenty-year period of 2000-2020, the community saw a percent increase of 11.9%. If it is assumed that growth rate would continue for the next two decades, the community would see a population of 8,357 by 2040. Changes to statewide housing legislation may also impact future populations, with the allowance of more units statewide, we may see an increase in in-migration.

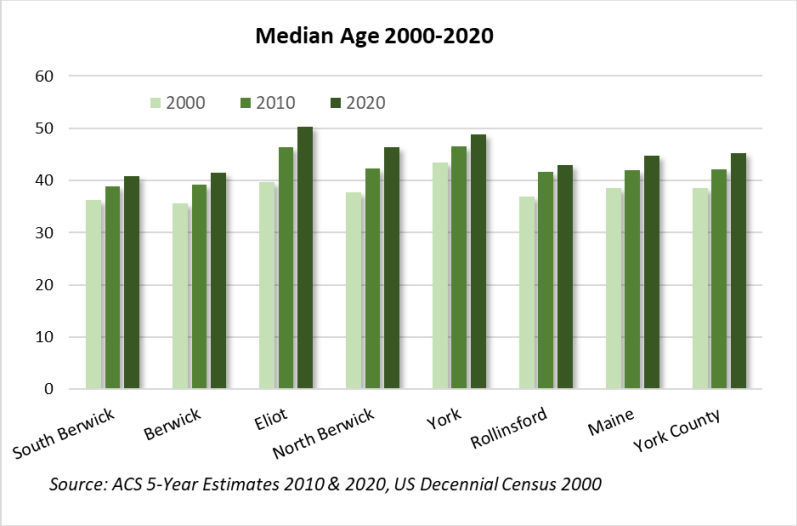


Age

In the period between 2000 and 2020, all communities across the state have experienced aging populations. This is due to several factors, including decreasing birth rates, more non-traditional household types, and the large "Baby Boomer" generation reaching retirement age. This trend is also relevant to South Berwick and its neighboring communities, who all show increased median ages in 2010 and 2020. However, South Berwick has consistently had the lowest median age of communities in the area, and the increase in median age has been slower than the state and county overall. In 2020, South Berwick had a median age of 40.8, compared to 44.8 for the state, and 45.3 for York County.



When broken down into individual age groups, it is estimated that South Berwick has higher proportions of population under age 5 and ages 10-14 than the state and county. The town also has a higher percentage of individuals 30 to 34 years of age. Overall, these trends could indicate a higher population of families with young children, and older individuals still active in the workforce. Large age groups like those in the 55-59 population would be looking at retirement within the next 5-10 years.



Race

Maine is historically one of the least diverse states in the country. However, over the last decade the total percent of the population which identifies as White only has decreased slightly, from 95.2% in 2010 to 90.8% in 2020. The same is true for South Berwick, where the percent of the population identifying as White only has decreased from 97.5% in 2010 to 92.5% in 2020. South Berwick has a higher proportion of its total population that identifies as two races than the state and county overall.

Population by Race, 2020 (Percent of Total Population)			
	Maine	**York County**	**South Berwick**
Total Population	1,362,359	211,972	7,467
Population of one race:	95.3%	95.4%	94.7%
White alone	**90.8%**	**92.1%**	**92.5%**
Black or African American alone	**1.9%**	**1.0%**	**0.4%**
American Indian and Alaska Native alone	**0.6%**	**0.3%**	**0.2%**
Asian alone	**1.2%**	**1.2%**	**0.8%**
Native Hawaiian and Other Pacific Islander alone	**0.03%**	**0.03%**	**0.01%**
Some Other Race alone	**0.7%**	**0.7%**	**0.7%**
Population of two races:	4.5%	4.4%	5.1%
White; Black or African American	0.6%	0.5%	0.6%
White; American Indian and Alaska Native	1.7%	1.6%	1.6%
White; Asian	0.5%	0.6%	0.8%
White; Native Hawaiian and Other Pacific Islander	0.03%	0.03%	0.03%
White; Some Other Race	1.6%	1.6%	2.0%
Population of All Other Two or More Races	0.4%	0.3%	0.3%
Source: US Decennial Census, 2020			

School Enrollment

York County overall has seen a decrease in school enrollment in recent years. South Berwick and all neighboring communities had a 2022 enrollment less than their 10-year average. Although the MSAD 35

district saw an overall decrease in enrollment of about 7% between 2019 and 2022, the total number of homeschooled students tripled in that same period. According to the MSAD 35 Superintendent's Office, there were 48 homeschooled students during the 2018-2019 school year, and that has increased to 141 by the 2021-2022. It is expected that some of these students will return to classrooms as risks from the COVID-19 pandemic diminish. Considering South Berwick has seen continual population growth, decreases in enrollment are more reflective of an aging population, decreased birth rates, and impacts of the COVID-19 pandemic.

School Enrollment, Publicly Funded Students by Residence							
	MSAD 35			Other Communities			
	South Berwick	Eliot	MSAD 35	Berwick	North Berwick	York	York County
2015	1,313	988	2,328	1,310	702	1,800	27,859
2016	1,283	983	2,360	1,323	678	1,760	27,712
2017	1,268	968	2,372	1,330	672	1,768	27,457
2018	1,266	888	2,292	1,394	667	1,741	27,482
2019	1,265	878	2,310	1,397	693	1,691	27,424
2020	1,239	854	2,238	1,345	701	1,642	27,399
2021	1,188	858	2,190	1,299	662	1,635	26,358
2022	1,156	841	2,134	1,331	680	1,586	26,339
10 Year Average	1,265	922	2,278	1,333	684	1,732	27,456
2021-2022 Percent Change	-2.77%	-2.02%	-2.62%	2.40%	2.65%	-3.09%	-0.07%
Source: Maine Department of Education, 2022							

Educational Attainment

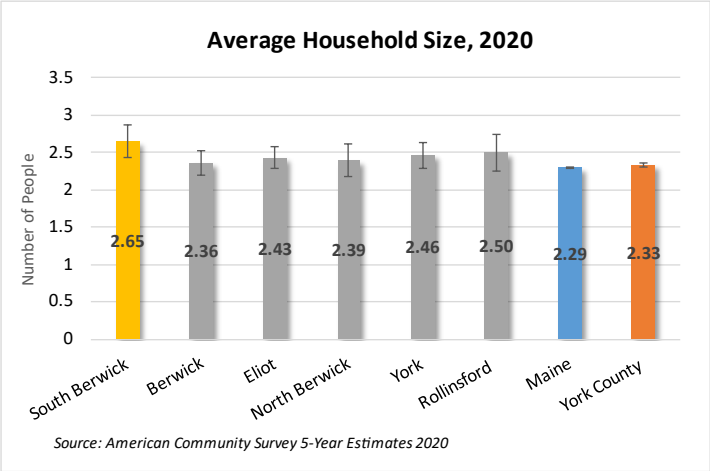
The ACS estimates that South Berwick has a generally higher educational attainment than the state and county overall. A smaller proportion of South Berwick residents have not completed high school, and a higher percentage of the town's population have gone on to complete secondary education. High educational attainment has implications for household incomes, community involvement and awareness, as well as workforce diversity and employment needs.

Educational Attainment, Population 25 years and older			
	Maine	York County	South Berwick
Less than 9th grade	2.3%	1.9%	1.4%
9th to 12th grade, no diploma	4.5%	4.4%	2.8%
High school graduate (includes equivalency)	31.3%	29.5%	20.7%
Some college, no degree	19.2%	20.9%	23.9%
Associate degree	10.2%	11.1%	12.9%
Bachelor's degree	20.3%	20.8%	23.3%
Graduate or professional degree	12.2%	11.3%	14.9%
High school graduate or higher	93.2%	93.8%	95.8%
Bachelor's degree or higher	32.5%	32.2%	38.2%
Source: American Community Survey 5-Year Estimates, 2015-2020			

Household Size

The American Community Survey also estimates that South Berwick has a higher average household size that surrounding communities, the state, and county overall. However, average household size has decreased for all communities over time, which also contributes to the overall trend of aging populations and decreased birth rates. National data also indicates that younger generations are less likely to live with a spouse or family of their own than previous generations at the same age, creating smaller average household sizes.

Average Household Size, 2000-2020			
	2000	2010	2020
South Berwick	2.76	2.72	2.65
Berwick	2.72	2.75	2.36
Eliot	2.58	2.27	2.43
North Berwick	2.67	2.54	2.39
York	2.42	2.37	2.46
Rollinsford	2.56	2.47	2.50
Maine	2.39	2.34	2.29
York County	2.47	2.43	2.33
Source: American Community Survey 5-Year Estimates 2010 & 2020, US Decennial Census 2010			



Household Income

The period between 2010 and 2020 has seen several economic shifts and changes. When comparing the 2010 median household income to 2020 estimates, we have adjusted 2010 figures to be equivalent to 2020 inflation adjusted dollars. Typically, the value of the dollar increases over time, however due to the pandemic, the dollar was actually worth less in 2020 than in 2010. Due to that change, when adjusted for inflation, South Berwick and all surrounding communities are estimated to have higher value median household incomes in 2010. The state and county overall, however, saw increases of about 6.8% and 5.6% respectively. With a median income of over $80,000, South Berwick also has a low poverty rate compared to the state and county.

Median Household Income, 2010-2020		
	2010	2020
South Berwick	89,064	86,074
Berwick	73,018	70,317
Eliot	79,349	78,528
North Berwick	68,618	66,905
York	75,830	97,115
Rollinsford	78,526	71,366
Maine	55,704	59,489
York County	65,289	68,932
Source: ACS 5-Year Estimates, 2010 & 2020 (2010 estimates inflation adjusted to 2020 dollars)		

Percent Below Poverty Level, 2020	
South Berwick	3.70%
Maine	11.10%
York County	7.40%
Source: ACS 5-Year Estimates, 2015-2020	

Summary

Overall, South Berwick appears to be a well-balanced but growing community. The town's make-up is similar to the state overall, but with likely a higher percentage of younger families and working people. In terms of historic population growth, the community grew consistently until 1990. Since then, growth rates have slowed. Population projections estimate that this gentle growth rate will continue. Future population needs will include increasing retirement rates, changes to school enrollment as families age, and birth rates possibly continuing to decrease.

Chapter 2 - Transportation

Purpose

Transportation has direct links to land use and plays a critical role in establishing the town's character. Informed and thoughtful planning of the transportation network will help guide future development to enhance and preserve valued features of the community, while supporting longer term community goals. A safe, accessible, and well-planned transportation network can help ensure the mobility of people and goods, enhance economic prosperity, and preserve the quality of life for the residents of South Berwick.

Traditionally, most commercial, and residential development has occurred within South Berwick's village center, and on the eastern side of town along State Route 236. The Route 236 corridor serves diverse needs, acting as a significant east-west corridor for the region, as well as providing access to South Berwick's downtown commercial district. Route 236 provides access to goods and services that residents and commerce require, as well as connecting communities in western York County to regional employment centers to the north and south.

The Route 236 corridor becomes Main Street heading west through downtown, serving both local and regional needs. Over the last decade, commercial and residential growth has increased significantly in and around the downtown area. Congestion and parking challenges have increased greatly due to the resurgence of this area. Public transit in South Berwick is infrequent and limited to only one stop in town, hence increasing the importance of having adequate parking and traffic facilities.

Over the past 15 years public opinion surveys of South Berwick residents have consistently shown traffic and transportation are at, or near, the top of the list of community concerns. Specifically, major issues include heavy traffic through the downtown and on Route 236; heavy truck traffic, especially through the downtown; traffic safety; speed limits; detouring of traffic onto local roads to circumvent downtown congestion; pedestrian and bicyclist safety; and downtown parking facilities.

This transportation chapter provides the information necessary to develop a plan of action for South Berwick's future transportation system. Sources include local knowledge and surveys, data provided by the Maine Department of Transportation (MDOT), the Southern Maine Regional Planning Commission (SMRPC) and the U.S. Census Bureau.

Community Engagement Results

75% of respondents strongly agree that traffic congestion and safety is a serious issue facing South Berwick in the next 5 years.

65% of respondents include maintenance and upgrading of roads in their top 5 priorities for municipal spending.

71% reported "Bike paths and trails throughout town" are important to have available in the future.

Traffic and congestion were common topics during community focus group sessions. Traffic was noted as **both a negative and a positive for economic activity**, as it brings patrons through downtown, but also discourages residents from walking or visiting downtown due to congestion. Despite a decent

sidewalk network, **participants felt downtown was not walkable due to safety concerns** and traffic. Parking is also a concern, whether real or perceived, participants felt there was **no awareness of where public parking is available**, discouraging downtown visitors.

Transportation Conditions

Roadway Network and Classifications

South Berwick's transportation network consists of approximately 70.6 miles of public roadways, including State Routes 4, 91, 101, and 236. Routes 4 and 236 converge in downtown South Berwick, carrying a significant amount of traffic through the center of town. The majority of South Berwick's roads are local roads, providing access to state highways and service roads for adjacent property owners that accommodate little or no through traffic.

This section provides detailed information on the town's roadway network. It includes a description of the classification systems that determine maintenance and construction responsibilities, as well as funding eligibility.

State Classification

In the early 1980s, the Maine Legislature authorized and directed MaineDOT to classify all public roads throughout the State. The basis of this classification system was that primarily regional or statewide needs should be the State's responsibility and roads serving primarily local needs should be of local responsibility.

The State's classification system includes the following:

- State Highways form a system of connected routes throughout the state that primarily serve intra- and interstate traffic. The State is responsible for all construction/reconstruction and maintenance on the 5.8 miles of arterial highways in South Berwick. Route 236 and Route 4 are State Highways.
- State Aid Highways connect local roads to the State Highway System and generally serve intercounty rather than intrastate traffic movement. State aid roads are usually maintained by MaineDOT in the summer and by the municipalities in the winter pursuant to State Law 23 MRSA 1003 . The State Aid Highway category generally corresponds with the federal 'collector' classification. State Aid Highways comprised of Routes 91 and 101, and Main Street from Berwick Road to the New Hampshire line total 3.2 miles.
- town ways are all other highways not included in the State Highway or State Aid Highway classifications that are maintained by municipalities or counties. These roads are classified as federal 'local' roads. There are approximately 61.6 miles of local roads in South Berwick.

Federal Functional Classification

In addition to the State classification system, there is the Federal Functional Classification system. The federal system complements the State's system and is based on the type of service that is intended to be provided by the roadway. The federal classifications relate to traffic capacity and volume attributed to the roads and are divided into rural and urban systems. While state classification designates maintenance jurisdiction, federal functional classification creates a hierarchy of roads and determines which roads are eligible for Federal highway funds.

There are three functional classes represented in South Berwick as described below:

- Minor Arterials link and support the principal arterial system. Minor arterials are roads that place a greater emphasis on land access than the principal arterial and therefore offer a lower level of mobility. They serve as links between larger and smaller towns or as connections between collectors and the primary arterials. In South Berwick, Route 236 and Route 4 are both Minor Arterials and therefore are eligible for federal aid.
- Major Collectors differ from arterial roadways due to size and general service area. Collectors serve traffic in a specific area, whereas arterials generally serve traffic moving through an area. Thus, average trip lengths on collectors are shorter than trips on arterials. Furthermore, collectors gather traffic from local roads and streets and distribute it to the arterial. Major collectors are eligible for federal aid and include Route 91, Route 101, and part of Main Street in South Berwick
- Local Roads serve primarily to provide access to residential areas. They are designed for low-speed travel and to carry low volumes of traffic relatively short distances. Local roads are generally not eligible for federal aid funding for improvements or maintenance.

A road's functional classification is one factor in planning for possible growth into rural areas and for the future development of the town overall. Local streets are best suited for village/residential or very low-density rural development. While some commercial and other non-residential development might be an appropriate land use along collectors, it is important that such development be designed so that it minimally disrupts traffic flow.

Design choices for highway projects also typically depend upon the roadway's functional classification. For example, arterials—which service primarily through traffic and often carry heavy vehicles – will typically have thicker pavement, wider lanes and shoulders, increased sight distance, minimal horizontal and vertical curves, and limited access points or curb cuts. Local roads tend to be narrower, windier, and more accessible from abutting property.

Bridges

Bridges are a key component of the highway system. Bridges are the most expensive sections of roads, and a lack of adequate bridges can create transportation bottlenecks, which are often difficult to remedy. MaineDOT inspects all bridges and culverts with a clear span of greater than 10 feet on public ways, regardless of ownership, every two years. Inspection reports are available online and include detailed information on all aspects of the structure which can be used to plan for preservation, rehabilitation, and reconstruction.

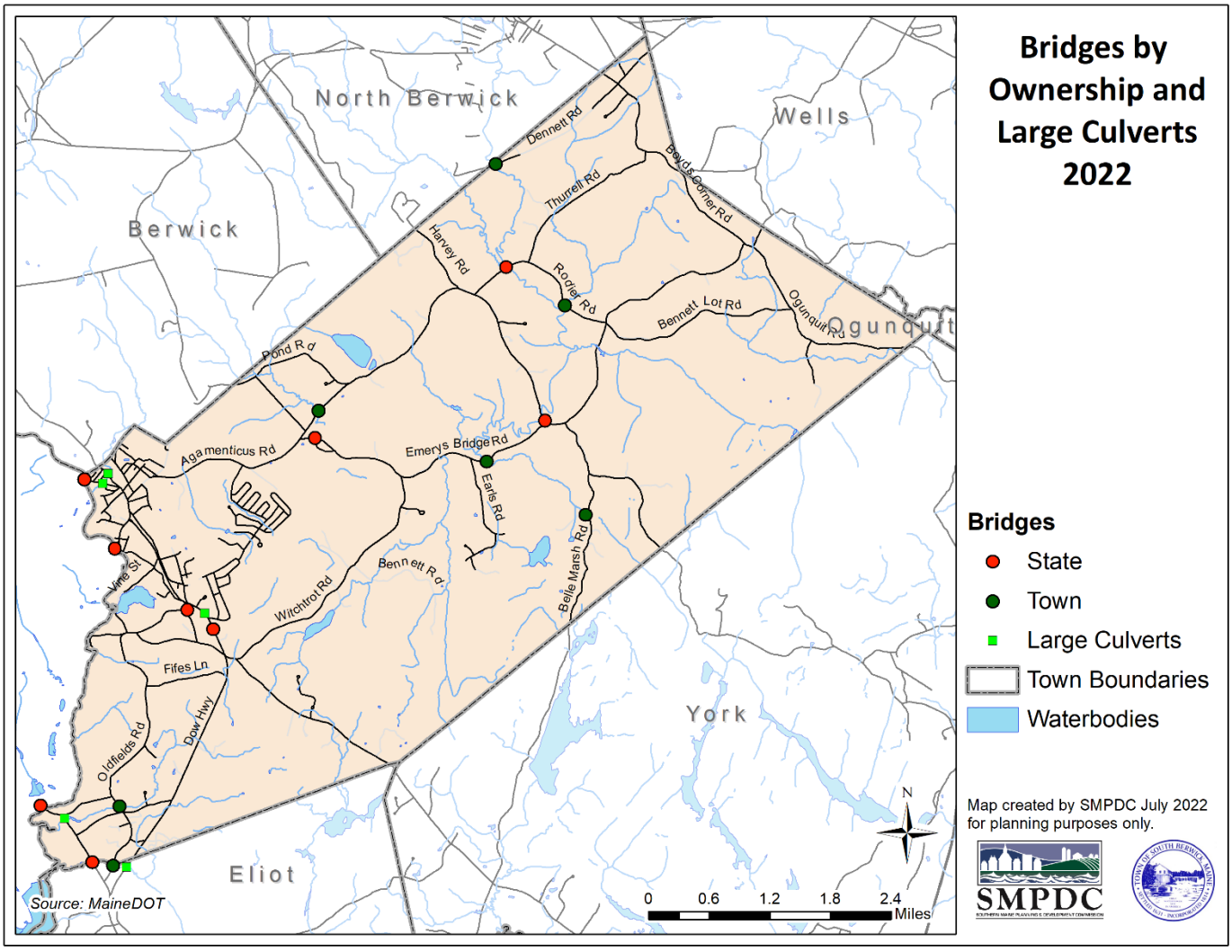
Bridge condition can be measured based on the National Bridge Inventory Federal Sufficiency Rating (SFR). Each FSR has a numeric indicator of the overall value of the sufficiency of the bridge. A rating will be from 0-100 (0 indicates the worst and 100 indicates the best). FSR is computed with a federally supplied formula using an array of condition and inventory data. The formula is used to identify bridges eligible for federal funding. The FSR includes both structural deficiencies as well as functional obsolescence. This rating gives an overall value of the sufficiency of the bridge. Since functional obsolescence (i.e. Too narrow, or low weight capacity) may account for a large portion of the rating, one should not assume that a low sufficiency rating means the bridge could fail. Currently the only bridge programmed for major work is the red listed Bridge carrying Route 4 over the Salmon Falls River. NHDOT and MaineDOT will be sharing the cost of engineering and construction which is expected to be completed in 2026.

MaineDOT also maintains an inventory of all cross culverts along State roadways. This includes a detailed inventory of large culverts defined as a pipe or structure with a total span width greater than 5

feet and less than 10 feet or any multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening, and the total flow area is between 20 and 80 square feet. There are 4 large culverts along State roadways in South Berwick, including two along Route 236, one carrying Route 101 over Quamphegan Brook, and one on Main Street over Driscoll Brook.

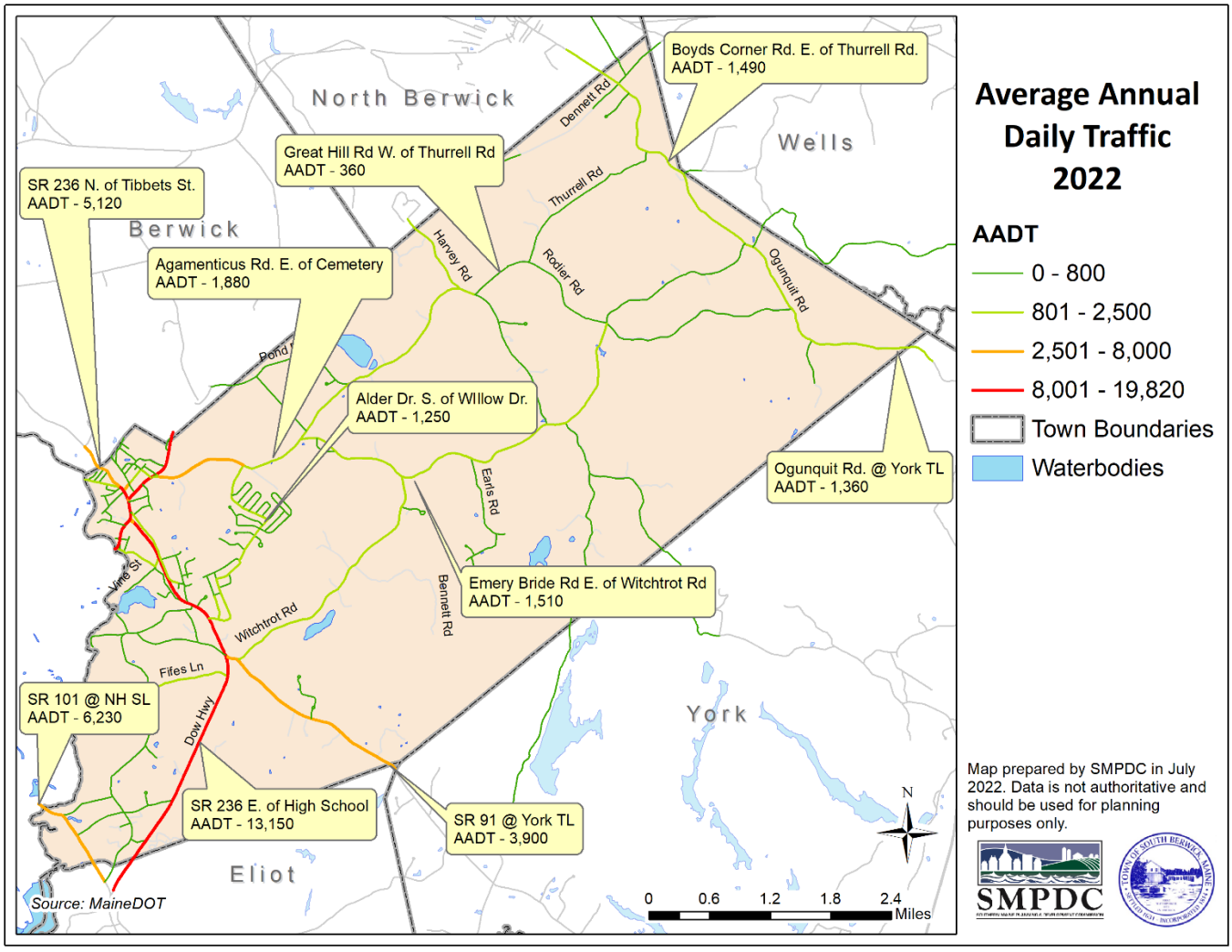
The following table shows the 16 bridges and culverts (spanning more than 10 feet) inspected by MaineDOT in the town of South Berwick, 6 of which are owned and maintained by the municipality.

Location	FSR	Owner	AADT	Year Built/Reconstructed	Span Type
Route 236 over Great Works River	80.8	MaineDOT	13679	2010	Bridge
Route 4 over Salmon Falls River	77	MaineDOT	8763	1971/2012	Bridge
Route 101 over Salmon Falls River	42.6	MaineDOT	5764	1969/1982	Bridge
Route 101 over Shorey's Brook	58	MaineDOT	5038	2014	Culvert
Main St Over Salmon Falls River	46	MaineDOT	1678	1959	Bridge
Emerys Bridge Rd over Great Works River	55.9	MaineDOT	1147	1891/1964	Bridge
Emerys Bridge Rd over Hoopers Brook	52.9	Municipality	1080	1980	Culvert
Agamenticus Rd over Loves Brook	96.9	Municipality	870	2003	Culvert
Brattle St over Great Works River	84.7	MaineDOT	722	1961	Bridge
Old Field Rd over Shorey Brook	42.3	Municipality	540	2015	Culvert
Old Field Rd over Quamphegan Brook	69.9	Municipality	463	1989	Culvert
Hooper Sands Rd over Great Works River	92.9	MaineDOT	461	1983	Bridge
Bell Marsh Rd over Hooper Brook	76.8	Municipality	453	2003	Bridge
Great Hill Rd over Great Works River	80.4	MaineDOT	333	2011	Bridge
Rodier Rd over Gray Brook	96.9	Municipality	277	1999	Culvert
Old North Berwick Rd over Great Works River	91.2	MaineDOT	94	2002	Bridge
Source: Maine DOT, https://www.maine.gov/mdot/bridges/docs/bridgereports/SouthBerwick.pdf					



Traffic Volumes

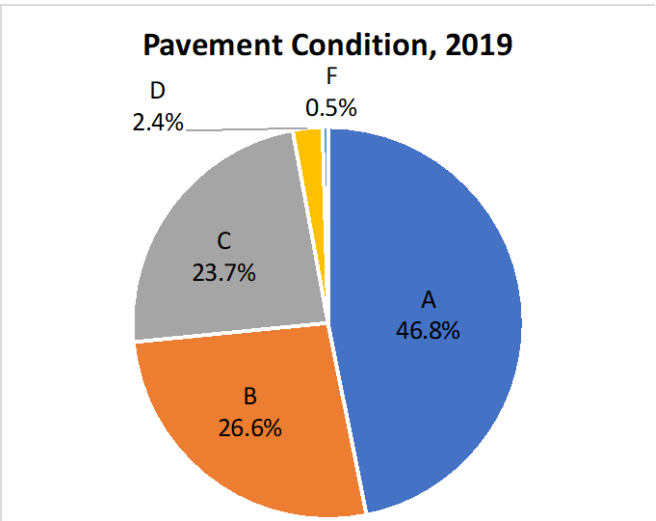
MaineDOT monitors 71 permanent traffic recorder sites across the state. The closest permanent station to South Berwick is located on Route 4 in Berwick, just north of the South Berwick town line, with an average weekday traffic volume of 8,763. Maine DOT also monitors over 50 short duration counts in South Berwick typically collected on a three-year rotating schedule. The data from the short duration counts is adjusted using the states permanent counter data to develop Average Annual Daily Traffic (AADT) volumes. Looking at 27 rotating count locations across town, between 2010 and 2019, average annual traffic growth was just 0.5% per year. Although some roads may have recorded unsubstantial traffic changes, other roads experienced significant changes in traffic. Local roads such as Belle March Road, Boyds Corner Road, Colcord Street, and Ogunquit Road saw significant traffic growth while data shows Brattle Street, Norton Street, and Quarry Drive saw declines in traffic.



Pavement Condition

As part of MaineDOT's asset management methodology, pavement condition data is collected every two years on all State Highways and State Aid Highways. MaineDOT uses the Pavement Condition Rating (PCR), a 0-5 scale that is composed of International Roughness Index, rutting, and two basic types of cracking. The A-F scale (A being great condition) varies by Highway Corridor Priority.

As of 2019, just over 25% of South Berwick's State maintained roads fall into the C, D and F categories. Almost 75% of town roads are in good and great condition (A or B), which is slightly above the statewide percentage. Although this data changes as sections of roads deteriorate and



Source: Maine DOT, 2019

receive new pavement, it gives a general idea of the condition of state roads in South Berwick and provides a benchmark for customer service level. Maine Local Roads Center offers a Road Management Software (RSMS) that can be used to assess and prioritize local roads for improvements, including cost estimates used for developing a local road maintenance plan.

Safety

MaineDOT obtains crash reports from State and local police to develop Critical Rate Factors (CRF) on every road (link) and intersection (node) across the state. The CRF is a comparison of actual crash rate on a link or at a node to the expected accident rate based on road type, vehicle miles of travel, and the average statewide accident rate. A CRF greater than 1 on a link or at a node indicates a crash rate higher than should be expected at that location when based on statewide averages. Crash data is further analyzed to identify High Crash Locations (HCL). Road segments and intersections that have had at least eight crashes in a three-year period with an overall average CRF greater than 1 are considered HCLs. Data from the three-year period between 2018 and 2020 classifies the following four intersections in South Berwick as HCL:

Intersection	CRF	Total Crashes
Route 236 (Dow HWY), Route 91 (York Woods Rd), and Old South Rd	3.8	23
Route 236 (Main Street) and Route 4 (Portland St)	1.83	12
Route 236 (Main St) and Academy St	1.7	11
Route 236 (Main St) and Quarry Rd	1.44	8
Source: Maine DOT 2018 - 2020		

The intersection of Route 236 and Route 91 is programmed for intersection improvements with signalization in 2022. Other HCL's identified have been studied in the past for mobility and safety improvements.

Commuting Patterns

American Community Survey (ACS) data from 2016-2020 indicates a mean travel time to work of 26.1 minutes for workers aged 16 and older from South Berwick. According to the ACS, 81.8% of them drove alone, 2.1% carpooled, 2.4% walked, 3.2% used a taxicab, motorcycle, or other means, and 10.4% worked from home. The Longitudinal Employer-Household Dynamic (LEHD) program (part of the US Census Bureau) produces data on employers and employees. LEHD data shows that over 40% of South Berwick residents work in South Berwick or in Portsmouth, Dover, York, and Kittery. However, the COVID-19 pandemic has increased the number of people working from nationwide. This will likely impact commuting patterns in the 2020s.

Place of Work, 2019 (town/City)	Percentage
Portsmouth (NH)	13.2%
South Berwick	10.6%
Dover (NH)	8.2%
York	7.3%
Kittery	6.2%
Eliot	4.9%
North Berwick	2.7%
Portland	2.6%
Rochester (NH)	2.4%
Somersworth (NH)	2.3%
Other locations	39.6%
Source: U.S. Census LEHD program, 2019	

Public Transportation

The Cooperate Alliance for Seacoast Transportation (COAST) currently operates fixed route transit in South Berwick via COAST's Route 100. The service runs from Somersworth to the Portsmouth Naval Shipyard in Kittery twice per day including a morning southbound and evening northbound trip, primarily supporting workers traveling to and from the Shipyard. There are two stop locations in South Berwick, both of which are served by the southbound and northbound routes. The bus stop locations are located on Main Street at Norton Street, and at the town Hall. Route 100's lack of frequency does not offer a viable means for South Berwick residents looking to make trips entirely using bus transportation. The nearest train station is just 5 miles away in Dover and is serviced by Amtrak's Downeaster train, which connects North Station in Boston to Brunswick, Maine, with many additional stops in Maine, NH, and MA.

York County Community Action Corporation (YCCAC) offers a range of transportation services in York County. In South Berwick, YCCAC offers a demand response service every Thursday for shopping and non-medical trips. Reservations are required and riders are typically picked up at their homes with a return trip an hour or more later.

Non-Motorized Transportation

Non-motorized transportation, including bicycling and walking, is a vital component to South Berwick's transportation system and to the health of the community. The infrastructure, the presence and behavior of motor vehicle traffic, and the surrounding land uses all contribute to how conducive an area is to walking or biking.

South Berwick's pedestrian infrastructure network is made up of 3.19 miles of sidewalks in addition to crosswalks, curb ramps, and pedestrian signage concentrated around the major corridors, schools, and village center. In many places throughout South Berwick, sidewalks may not be feasible, cost effective, or suitable for roads and neighborhoods. In those circumstances, asphalt and dirt shoulders are typically used by pedestrians. Bicycle infrastructure is limited in South Berwick. Along most roads, bicycles share the road with vehicles. In some cases, shoulders are present and offer some separation from vehicular traffic.

In 2019, the town Council appointed an Ad Hoc Committee charged with investigating, researching, and making recommendations on pedestrian safety with a focus along the downtown, Route 236 area. This committee was developed in response to increased vehicular traffic, complaints received, and safety concerns related to near misses, traffic speeds, and crosswalk visibility. The recommendations from that group focused primarily on improving pedestrian crossings and making them compliant with the Manual on Uniform Traffic Control Devices (MUTCD). Constructing bump-outs, moving parking spaces, and adding lighting were also considered potential short-term improvements. Many previous studies have been conducted in the vicinity and offer several roadway and intersection re-alignment alternatives to improve pedestrian safety.

The town's pedestrian and bicycle network also include an extensive recreational trail system. The Eastern Trail, which is envisioned to be a mostly off-road path between South Portland and Kittery has over 20 miles of off-road path already built. New sections of trail are being added in the short-term including over 10 miles of unpaved trail from the current terminus in Kennebunk to Berwick. In South Berwick the route uses on-road options including sections of Agamenticus Road and Knights Pond Road where shoulders have been designated as bicycle and pedestrian lanes. Alternatives to continue the trail

south will require coordination among neighboring towns and the Eastern Trail Alliance to determine the final alignment through South Berwick. Proposed alternatives range from on-road routes to off-road multi use paths, including a combination of both.

Land Use and Transportation Planning

Regional Transportation Planning

The Kittery Area Comprehensive Transportation System (KACTS) is the Metropolitan Planning Organization (MPO) for South Berwick, as well as Berwick, Eliot, Kittery, York, and, as of 2023, Kennebunk, Kennebunkport, and Wells. KACTS is responsible for planning and programming federally funded transportation projects within these municipalities. In addition to project-based planning, the MPO is required by federal law to develop a Long-Range Transportation Plan (LRTP) and a Transportation Improvement Plan (TIP) for the region. The most recent LRTP was developed in 2019 and anticipates transportation needs and investments through 2045. It considers projected growth in population, employment, and residential and commercial development as the basis for new policies and projects to facilitate all modes of transportation, including roads and highways, rail, public transit, and biking and walking. The TIP is a short-term capital improvement program developed every two years in collaboration with the Maine Department of Transportation (MaineDOT). Municipalities can submit candidate projects to be scored, ranked, and prioritized into the list of transportation projects that are submitted for federal, state, and local funding.

The Southern Maine Planning and Development Commission (SMPDC) is the regional planning entity for southern Maine. SMPDC staff support regional transportation committees and groups, including KACTS, as well as assist municipalities in project planning and management.

New Commercial and Residential Development

New development is often phased over years and the impacts of the final development, as well as the initial phase(s), on the transportation system should always be considered. The magnitude of new development determines the traffic impacts, and potential remedies, that the development will have. Depending on existing traffic volumes, distribution patterns, roadway users, safety issues, and road conditions, small scale as well as large scale development can often have significant impacts on the surrounding roadway network. By requiring transportation impact studies for new developments of a certain size or for developments located in areas where significant transportation problems are known to exist, the Planning Board can effectively evaluate the effects associated with any new development. Through this kind of scrutiny, recommendations for project phasing and developer participation in necessary improvements can be implemented and problems of safety, congestion, and expensive upgrades to poorly planned roads can be avoided.

Access Management and Road Design

Access management involves coordination and management of access to land development while simultaneously preserving the flow of traffic on the surrounding roadways in terms of safety, capacity, and mobility. It is the practice of coordinating the location, number, spacing, and design of driveways, medians, median openings, and intersections to minimize conflicts and maximize the capacity for all users of the transportation system.

Opportunities for access management include possible connections between existing and future subdivisions, the consideration of shared driveways when possible, and consistent coordination and

communication between the town and MaineDOT Region 1 when considering driveway access applications on State Highways. The town has minimum distances between access points on higher volume roads and sets sight distances standards as well. Additionally, the town requires that new streets have "proper continuation of streets from adjacent subdivisions and built-up areas and proper projection of streets into adjacent unsubdivided and open land," which helps improve network connectivity.

South Berwick's road design standards vary based on the road's level of service and classification. The standards take into account width, length, grade, angles, and more. Most roads are required to have a minimum five-foot sidewalk to serve pedestrian access; however, no regulations currently require other pedestrian infrastructure nor bike infrastructure. Standards for bicycle and pedestrian infrastructure in the downtown could help coordinate South Berwick's land use and transportation goals in that area specifically.

Traffic Calming

Traffic calming on local roads can be a significant challenge. The primary approach to traffic calming involves reducing traffic speeds by altering the design, configuration, or appearance of the street. Traffic calming can involve road design techniques using active or physical controls (bumps, barriers, curves, rumble strips, etc.) and passive controls, such as signs and traffic regulations, to reduce vehicle speeds. Typically, traffic calming is most appropriate on lower-volume collector or local roadways, as well as minor arterials in downtown and urban environments, rather than on roadways such as principal arterials, whose purpose is to facilitate through traffic flow. Traffic calming measures foster safer and quieter streets that are more accommodating to pedestrians and cyclists and enhance neighborhoods and downtown environments. The potential benefits of traffic calming include reduced traffic speeds, reduced traffic volumes – by discouraging "cut-through" traffic on residential streets – and often improved aesthetic quality of streets.

Electric Vehicle Charging

MaineDOT, Maine Turnpike Authority, Maine Department of Environmental protection, as well as other agencies and organizations across Maine have been preparing a number of initiatives relating to the deployment of all electric and plug-in-hybrid vehicles. State and local governments, as well as public utility companies and private businesses have been working to expand the number of electric vehicle charging stations. According to the U.S. Department of Energy, which tracks public charging stations, the nearest charging stations to South Berwick are located to the West in Dover, the south in Kittery and the east in York and Ogunquit. There are no public stations in South Berwick or in the towns to the north in York County. Efficiency Maine Trust, in partnership with the Maine Department of Transportation, is currently expanding the charging infrastructure in the state to fill in spatial gaps. They have identified and prioritized spatial gaps in southern Maine to be improved in FY2023 and FY 2025. Maine municipalities play a crucial role in encouraging and directing Electric Vehicle (EV) infrastructure through zoning and other ordinances. The town may consider permitting EV infrastructure, and identifying areas best suited for installation to ensure the town is prepared for the modernization of the transportation system.

Downtown Traffic

Over the last few decades many public forums in the community have focused on traffic problems in the downtown area including recommendations for safety improvements, truck traffic concerns, student

transportation for the four downtown schools, and the potential for a bypass route. According to the traffic count data, over 19,000 vehicles travel through downtown South Berwick every day, the highest volume of traffic experienced along any state route in town.

Within all the studies there are many recurring themes for recommended improvements. The 2009 South Berwick Transportation Feasibility Study summarizes existing conditions and lists a menu of suggested improvements. Specific improvements, including a preferred alternative, were analyzed for three different intersections along Route 236. Major components of the overall preferred alternative, including signalization of the Route 4/236 intersection have not been implemented.

Parking

Parking ordinances can strongly impact the look and feel of the built environment. South Berwick requires that parking lots be located to the side or rear of the building, placements which support a more walkable environment. The parking minimums and maximums per use are generally right-sized for the community. However, South Berwick's parking minimums do not change based on the location of the parking lot; this is a strategy that could be implemented to support downtown vibrancy.

Parking for businesses in South Berwick Village is viewed as a key element in supporting downtown business activity. In 2014, a Parking Committee was commissioned by the town Council to inventory parking, review parking conditions, and make recommendations to improve downtown parking. A 2015 report summarized the committee's findings and recommendations. The study led to the funding and construction of the Railroad Ave Lot and arrangements with Peoples United and US Post Office for a formalized arrangement on use of the Main St./Norton St. lot. In addition to commercial activity, the available parking also supports several civic activities including the Post Office that has been preserved along with other institutional presences in the downtown.

Chapter 3 - Housing

Purpose

A comprehensive plan should contain a thorough analysis of a town's housing trends. Critical issues include housing conditions, affordability, and estimated future housing needs. Specifically, this section aims to:

- describe recent trends in South Berwick's housing stock in terms of the types and number of units created;
- discuss housing affordability; and
- present an estimate of future housing needs based on population projections.

Key Findings and Issues

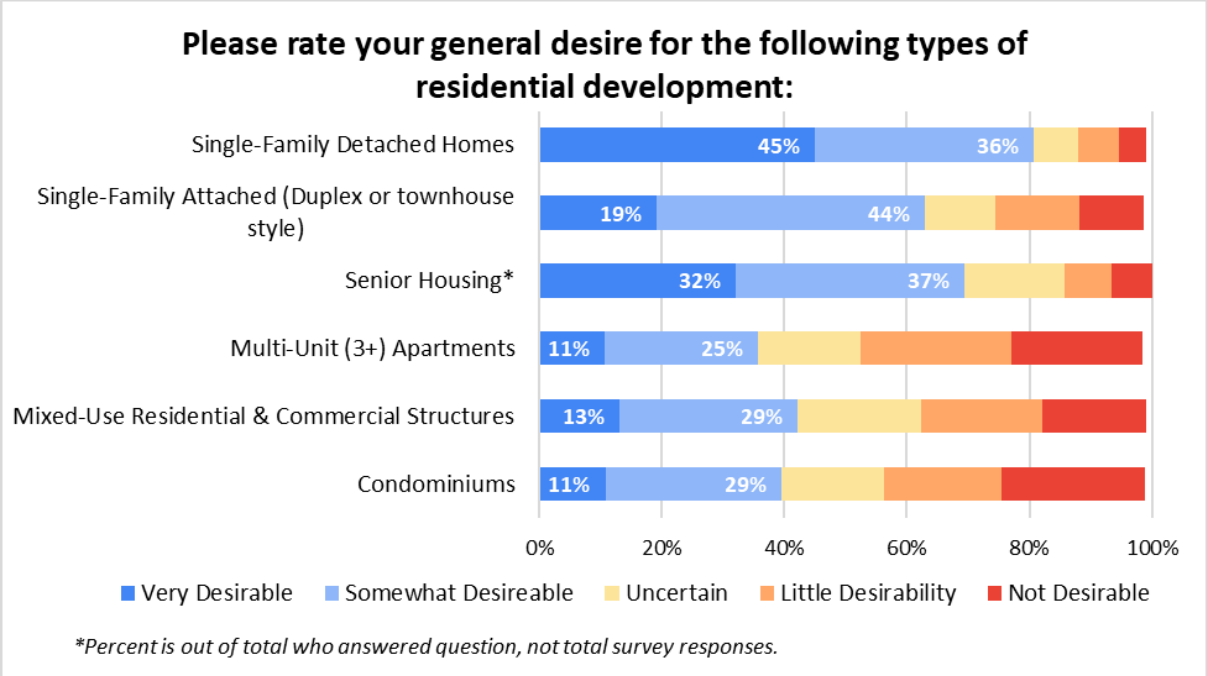
- South Berwick has seen a 30% increase in the median home price from 2019 to 2021.
- South Berwick saw the lowest increase in total housing units from 2010 to 2020 among neighboring Maine communities.
- There is a need for more housing overall, especially for middle- & lower-income families. However, development must be balanced with natural resource protection and conservation.

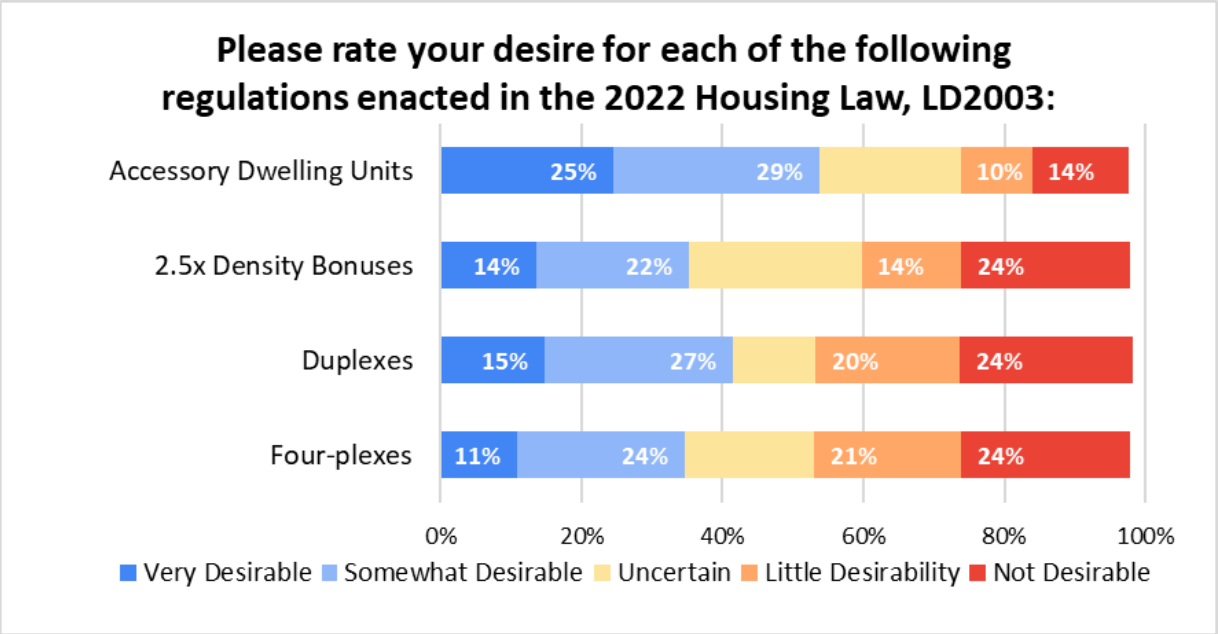
Community Engagement Results

Single-family homes remain the most desirable residential form of development.

33% of respondents thought residential growth in the last 10 years has been too rapid.

There was a mixed response to the new housing regulations under LD2003. Overall, ADU's were the most desirable.





Housing is of top concern in southern Maine, and this was reflected in the focus group sessions. South Berwick residents value open space and natural resources very highly, but participants were concerned about how to **balance conservation with making land available for housing development and keeping homes affordable**. **Lack of affordable housing** was noted as a concern for business owners, as it related to labor retention and business expansion. Participants felt, however, that **South Berwick has more diversity of housing types compared to surrounding communities, including senior housing**. It was also noted that the town's ordinance allows multiple types of housing in each zone, which encourages housing diversity.

Housing Conditions

This section provides an overview of the current housing situation in South Berwick and attempts to place the town's housing issues in a regional context. In developing this housing inventory, data was drawn from the U.S. Census, the American Community Survey (ACS), and the Maine State Housing Authority.

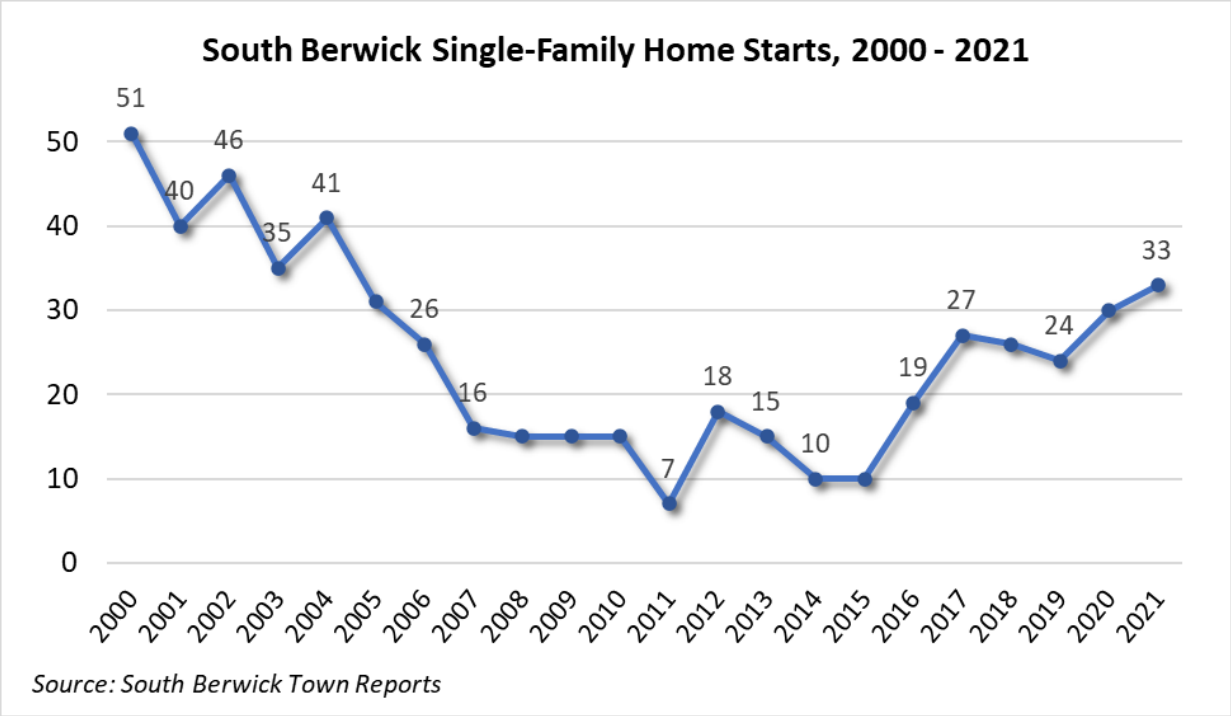
Existing Housing Supply

Between 2010 and 2020, the total number of housing units in South Berwick increased by 2.6%, from 2,911 units in 2010 to 2,987 units in 2020. South Berwick saw less growth in housing supply than surrounding towns and the county. However, South Berwick's growth rate was consistent with the growth of the state overall.

Vacant units are generally considered seasonal or second homes which are not occupied year-round. The chart below shows that most of South Berwick's housing stock consists of occupied residences (96.1%). This number is consistent with most neighboring towns, apart from York which has a high proportion of seasonal residences. The percentage of vacant units in South Berwick is also lower than that of the county and the state.

Occupied vs. Vacant Housing Units, 2010-2020							
	2010			2020			2010-2020 Total Units % Change
	Total Units	Percent Occupied	Percent Vacant	Total Units	Percent Occupied	Percent Vacant	
South Berwick	2,911	93.7%	6.3%	2,987	96.1%	3.9%	2.6%
Berwick	2,934	93.7%	6.3%	3,200	96.3%	3.7%	9.1%
Eliot	2,669	94.0%	6.0%	2,966	94.1%	5.9%	11.1%
North Berwick	1,930	91.9%	8.1%	2,087	93.8%	6.2%	8.1%
York	8,649	62.9%	37.1%	9,049	65.3%	34.7%	4.6%
Rollinsford	1,099	93.9%	6.1%	1,135	94.5%	5.5%	3.3%
Maine	721,830	77.2%	22.8%	739,072	78.8%	21.2%	2.4%
York County	105,773	76.6%	23.4%	112,198	79.3%	20.7%	6.1%
Source: US Decennial Census, 2010 & 2020							

According to the town assessing database, 33 single-family homes were built in South Berwick in 2021. This marked the most new homes built in a single year since 2004, when 41 homes were constructed. 2000 was the highest year of single-family housing development in the last two decades, and from then until 2011, the town saw a continued decline in development. Growth is now on an uptick, which aligns with the county and state overall.



The picture is slightly different when looking at permitting data. Overall, building permits have fluctuated since 2010, with a significant spike in 2021. Still, most units permitted in the last decade have been single-family homes.

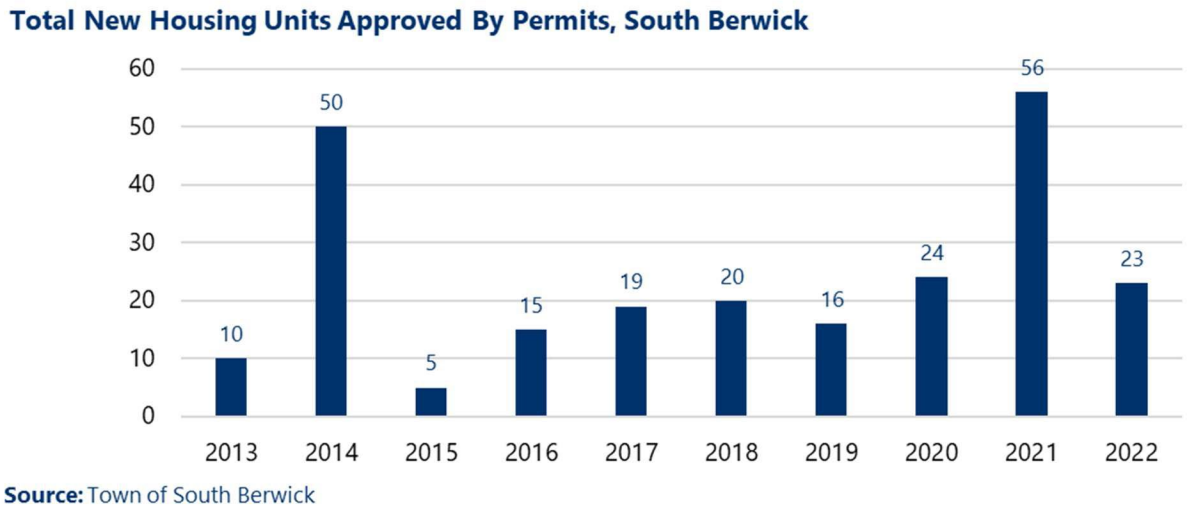


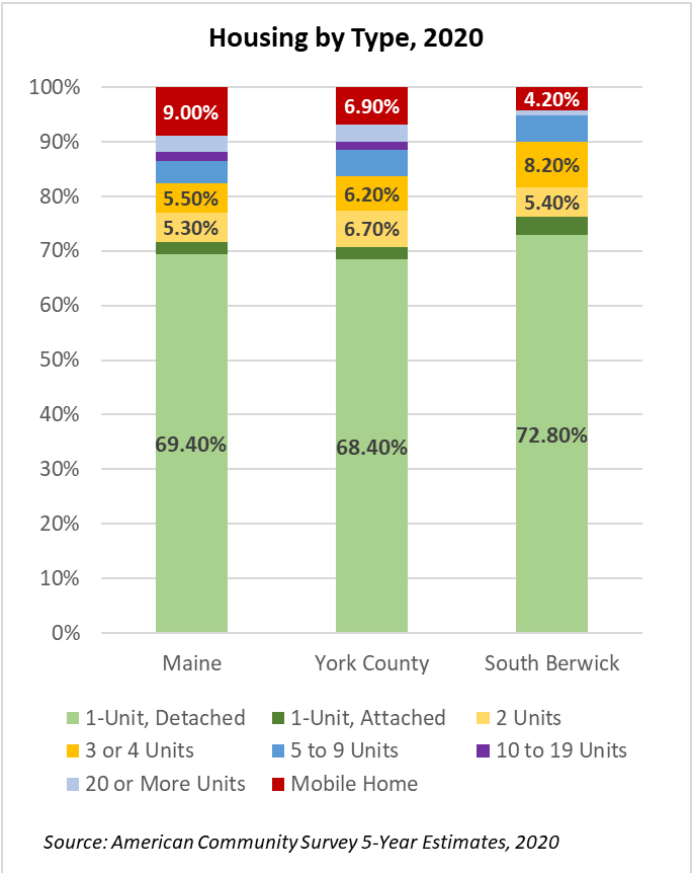
Image from Camoin Associates – Economic Development Market Analysis Report, 2023

Housing Unit Type

According to the 2020 ACS, 76.2% of all housing units in South Berwick are single-family homes, with the second most popular unit type being three to four unit structures. South Berwick has a slightly greater percentage of its housing supply in single-family homes than York County or the state overall. This means that mobile homes and multi-family units comprise a smaller percentage of the housing stock than the county and state. Housing by Tenure

The 2020 ACS indicates that about 82.6% of all occupied housing units in South Berwick are owner occupied while the remaining 17.4% are renter occupied. The proportion of owner-occupied units in South Berwick is similar to neighboring Maine towns, all of which are higher than the county and state.

The number of owner-occupied units increased by 3% from 2010-2020. In comparison, most of the surrounding communities, as well as the county and the state, experienced a decrease in owner occupied units.



Change in Housing Tenure, 2010-2020					
	2010		2020		% Change Owner - Occupied
	Owner-occupied	Renter-occupied	Owner-occupied	Renter-occupied	
South Berwick	79.6%	20.4%	82.6%	17.4%	3.0%
Berwick	83.4%	16.6%	84.3%	15.7%	0.9%
Eliot	88.0%	12.0%	87.6%	12.4%	-0.4%
North Berwick	85.7%	14.3%	83.8%	16.2%	-1.9%
York	83.1%	16.9%	80.6%	19.4%	-2.5%
Rollinsford	73.1%	26.9%	79.3%	20.7%	6.2%
Maine	73.1%	26.9%	72.9%	27.1%	-0.2%
York County	75.2%	24.8%	74.4%	25.6%	-0.8%
Source: American Community Survey 5-Year Estimates, 2010 & 2020					

Housing Conditions

A standard home is one that is in good condition with basic amenities such as adequate heating, complete plumbing, and kitchen facilities. A substandard house usually either requires repairs beyond normal maintenance or lacks some basic amenities. While there is no data on the number of homes that are substandard due to overall condition, there is limited data about select amenities.

According to the South Berwick Water District, approximately 1463 units are serviced by public water. This represents 48.9% of the total 2,987 housing units in the town and assumes the other 51% of units rely on private onsite water sources. In 2000, the US Census reported 60.5% of households relied on a public water system or private company.

Currently, there are approximately 1670 residential and commercial units on public sewer. It is estimated that the sewer plant is currently operating at 52 percent of its capacity. The current capacity is sufficient to handle an average growth of 30 households per year for the next 20 to 25 years.

A home would also be considered substandard if it is overcrowded, having an average of more than 1 person per room. The 2020 ACS estimates that 10 housing units in South Berwick (less than 1 percent of all occupied housing units) had more than one person per room. Overcrowding does not appear to be a significant problem in South Berwick. The 2020 ACS also estimates that all housing units in South Berwick have full plumbing and kitchen facilities.

Housing Analysis

Affordability

Affordable housing is a concern for all towns in the region. While even middle-income households are affected by the high cost of housing, it is a particular problem for low-income households. Regional conversations about housing have occurred through SMPDC, and with enough regional interest may evolve into a more defined collaborative to address planning for affordable housing.

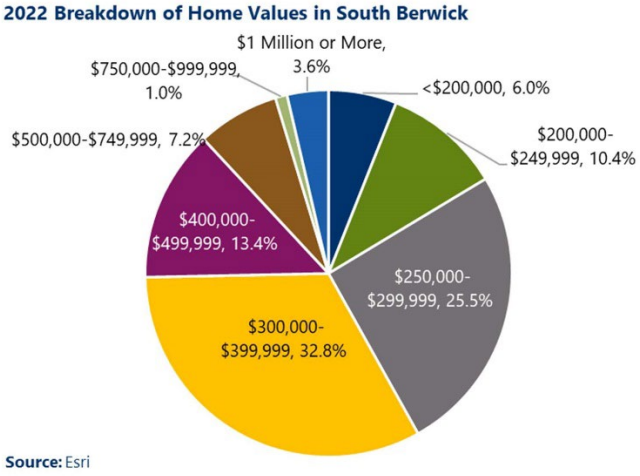
The ACS estimates that the median price of rental housing in South Berwick has remained steady from 2010 to 2020, decreasing slightly from $975 in 2010 to $972 in 2020. However, a monthly rent of $975

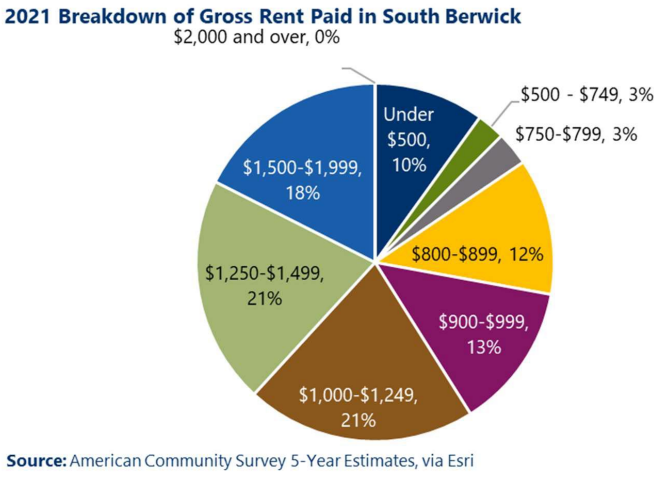
was fairly expensive for a predominantly rural community in southern Maine in 2010. Since then, average rent in surrounding towns, the county, and the state, have all increased significantly.

In contrast, the median value of owner-occupied units in South Berwick increased by $34,500 from 2010 to 2020. This median home value is higher than that of most surrounding towns, the county, and the state. As shown below, Eliot and York are the only nearby towns with significantly higher median home values than South Berwick.

Comparison of Housing Costs, 2010 - 2020				
	Median Value Owner Occupied Units		Median Gross Rent	
	2010	2020	2010	2020
South Berwick	$245,500	$280,100	$975	$972
Berwick	$228,600	$243,300	$767	$896
Eliot	$261,900	$368,400	$542	$930
North Berwick	$227,500	$272,200	$634	$775
York	$366,300	$429,800	$1,053	$1,248
Rollinsford	$250,400	$263,100	$840	$1,061
Maine	$176,200	$198,000	$707	$873
York County	$233,300	$260,800	$814	$1,022
Source: American Community Survey 5-Year Estimates, 2020				

According to ESRI in 2022, the largest share of housing stock has values between $300,000-$399,000, and about 12% are valued at over $500,000. The largest share of rented units in 2021 had rent between $1,000 and $1,499 per month, representing about 42% of all rented units.



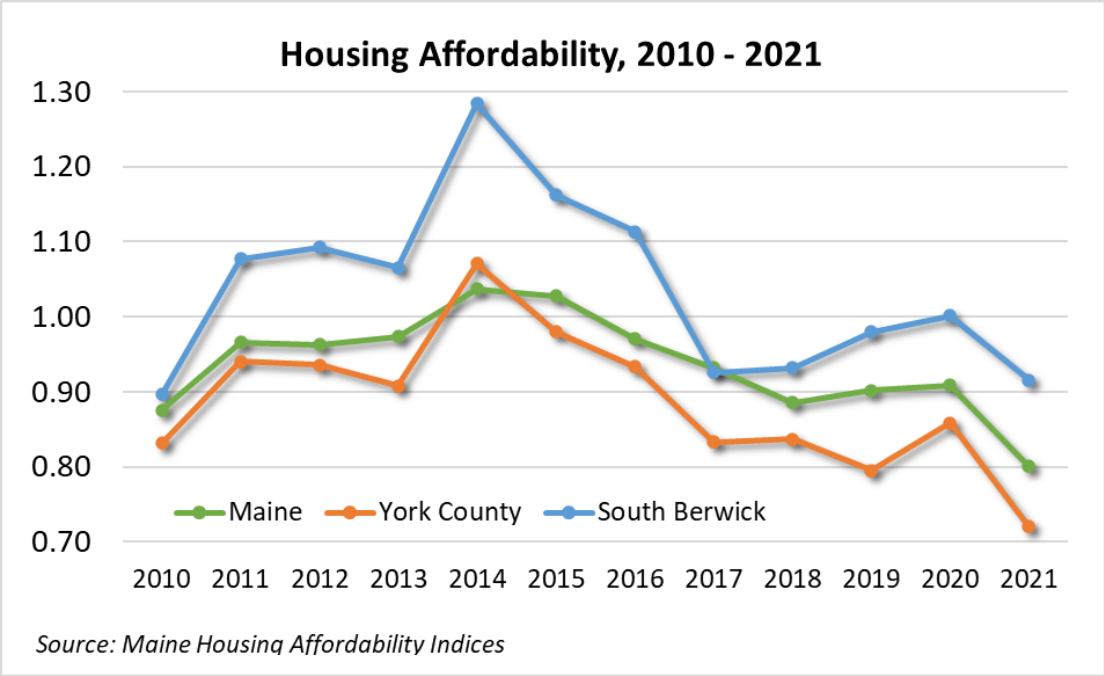


Images from Camoin Associates – Economic Development Market Analysis Report, 2023

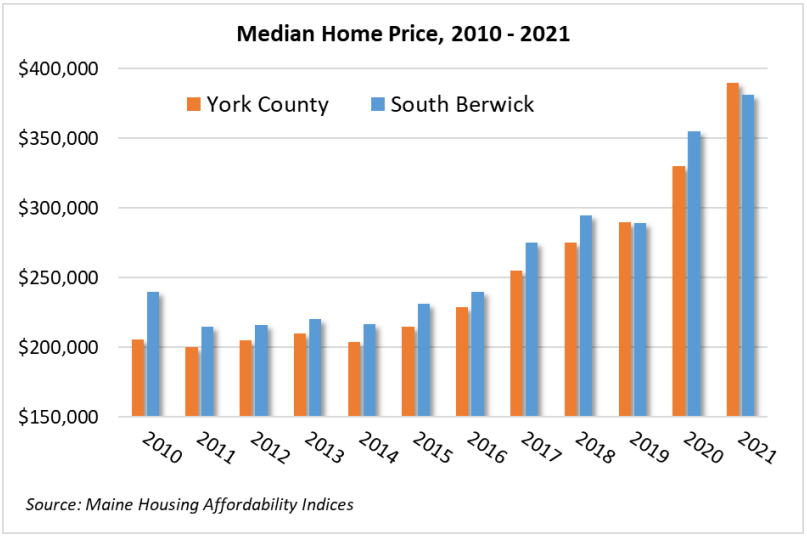
The Affordability Index is a Maine Housing statistic that is produced annually. It is the ratio of *Median Home Price* to the *Home Price Affordable to the Median Income*. The affordable home price is one where

a household making the median income could cover a 30-year mortgage, taxes, and insurance with no more than 28% of their gross income.

- An index of 1 indicates that the home price is affordable to the median income.
- An index of less than 1 indicates that the home price is generally unaffordable.
- An index of greater than 1 indicates that the home price is generally affordable.



As shown in the chart above, South Berwick has generally been more affordable than the state and county averages in the past 10 years. The town saw a period of increasing affordability between 2017 and 2020, which has since dropped as the housing market has seen unprecedented levels of costs in the last year.



Although the Maine Housing Affordability Index is relatively high for South Berwick, the community has seen extreme changes in housing costs over the past two years. At the time this chapter was written, inflation is at an all-time high, and housing costs remain impacted by the economic impacts of the COVID-19 pandemic and global conflict. Between 2019 and 2021, the South Berwick median home price increased by 31.9%, while the overall York County median home price increased by 34.4% over the same period.

South Berwick Housing Affordability Over Time: 2000, 2010, 2015, 2016-2021				
Year	**Index**	**Households Unable to Afford Median Home (%)**	**Median Home Price**	**Yearly Percent Change in Median Home Price**
2000	0.96	59%	$147,450	-
2010	0.90	57%	$240,000	62.8%
2015	1.16	43%	$231,236	-3.7%
2016	1.11	45%	$239,950	3.8%
2017	0.93	54%	$275,000	14.6%
2018	0.93	53%	$295,000	7.3%
2019	0.98	51%	$289,000	-2.0%
2020	1.00	49%	$355,000	22.8%
2021	0.92	52%	$381,250	7.4%
Source: Maine Housing Affordability Indices				

According to the affordability index, South Berwick is more affordable than most of its neighbors, the county, and the state despite its index value of 0.92. The only nearby town which is classified as affordable in 2021 is Berwick, with an index of 1.06 and the lowest median home price in the area.

Comparison of Affordability, 2010 - 2021				
	2010		**2021**	
	Affordability Index	**Median Home Price**	**Affordability Index**	**Median Home Price**
South Berwick	0.90	$240,000	0.92	$381,250
Berwick	0.81	$204,000	1.06	$330,800
Eliot	0.76	$292,500	0.75	$459,500
North Berwick	0.93	$194,500	0.90	$359,900
York	0.70	$330,000	0.59	$625,000
Maine	0.88	$165,000	0.80	$295,000
York County	0.83	$205,900	0.72	$389,900
Source: Maine Housing Affordability Indices				

The US Department of Housing and Urban Development (HUD) recommends viewing housing affordability as what would be affordable to moderate income, low income, and very low-income families in the housing market region that the community is within. These are defined below.

- Very low-income households are those earning less than 50% of the area median income.
- Low-income households are those earning between 50% and 80% of the area median income
- Moderate income households are those earning between 80% and 120% of the area median income.

HUD defines housing market areas based on population and relationship to services. South Berwick is a part of the *"York-Kittery-South Berwick ME HUS Metro FMR Area",* which includes those communities,

plus Berwick and Eliot. Dividing communities in this way gives a more accurate "area" median income, since the communities are more comparable than the whole county, for example.

South Berwick Area Median Income (AMI), 2021				
AMI for a 4-person household	**20% of AMI**	**50% of AMI**	**80% of AMI**	**120% of AMI**
$105,300	$21,060	$52,650	$84,240	$126,360
Source: US Department of Housing and Urban Development, 2021				

The community can use these metrics to consider and formulate affordable housing policy. Affordable housing is not always aimed at the lowest income groups, and in many cases, towns in Maine are lacking housing for middle incomes as well. For South Berwick, that would look like housing for the household income range of $84,000 to $125,000.

Affordability Gap Analysis

To understand housing affordability, the actual availability of units at affordable prices must be considered in addition to comparing a household's income to their expenses. An affordability gap analysis for South Berwick renters in 2021 is shown below.

There is a deficit of units affordable to renters in three brackets: under 30 percent AMI, 30 to 50 percent AMI, and over 125 percent AMI. At least 206 new units for households under 50 and over 125 percent AMI are needed to overcome the unit deficit and meet housing needs. While some households in the 125+ bracket may be able to move into home ownership, the most likely repercussion for this deficit is that these renters rent below their means and take up units affordable to lower income brackets. Of concern is the combined deficit of 49 units for the two lowest income brackets. When these households cannot find rental units affordable with their incomes, they must spend more than 30 percent of their income on housing. These households are at risk of being unable to make rent and/or sacrificing other needs like food and healthcare.

Maine: Rental Affordability Gap Analysis, 2021

Income Range	Maximum Affordable Monthly Rent	# Households	# Rental Units Available at that Price	Surplus/Deficit of Units Available
Less than 30% AMHI	$415	98	59	(39)
30-50% AMHI	$691	25	15	(10)
50-80% AMHI	$1,106	69	145	76
80-100% AMHI	$1,382	66	127	61
100-125% AMHI	$1,728	29	99	70
>125% AMHI	> $ 1728	182	25	(157)

Source: Actual numbers from US Census (Tables: B25118, B25119, B25056) ACS 2021 5-year data, calculations by SMPDC

Housing Demand Projections

As the population of the community changes, there is a need for continued residential housing development to house new residents. Although population growth in South Berwick has slowed over time, SMPDC produced two conservative population projections based on the growth rate between 2010 and 2020 (3.3%), and the average growth rate between 2000-2020 (11.9%). Trends in household size have also fluctuated over time, but given national trends, it is likely that the average household size will either stay the same or continue to decrease gradually over time.

With these assumptions, SMPDC calculated a housing demand projection, which estimates how many additional housing units will be developed over the coming decades. The table below outlines four scenarios which include two population projections and two different assumptions about the household size over time.

Housing Demand Projections, 2010 through 2040					
	2010 (Actual)	**2020 (Actual)**	**2030 (Projected)**	**2040 (Projected)**	**Change 2020-2040**
Population Change					*Additional Population*
3.3% Population Change	7,220	7,467	7,713	7,967	500
11.9% Population Change	7,220	7,467	7,912	8,357	890
Total Occupied Housing Units if Household Size Stays the Same					*Additional Units*
Average Household Size (Calculated)	*2.64*	*2.60*	*2.6*	*2.6*	-
3.3% Population Change	2,729	2,871	2,967	3,064	193
11.9% Population Change	2,729	2,871	3,043	3,214	343
Total Occupied Housing Units if Household Size Decreases at the Same Rate Overtime					*Additional Units*
Average Household Size (Calculated)	*2.64*	*2.60*	*2.56*	*2.52*	-
3.3% Population Change	2,729	2,871	3,012	3,159	288
11.9% Population Change	2,729	2,871	3,090	3,314	443
Source: Actual numbers from US Census 2020, projections by SMPDC					

South Berwick is estimated to need approximately 200-280 additional housing units under the 3.3% growth scenarios and 340-440 additional housing units under the 11.9% growth scenarios. The community saw an increase of 142 occupied housing units between 2010 and 2020.

Overview of Town Land Use Regulations

South Berwick has traditionally been a village-based community with a higher density in the village center, surrounded by more rural outlying areas. The availability of public water and sewer service in and around the village center has allowed, and continues to allow, higher densities in this part of the town. Since the 2000's, development patterns have shifted and large subdivisions in outlying areas have become increasingly common.

The town's Zoning Ordinance addresses housing affordability by providing opportunity for a diverse housing stock on a range of lot sizes, including multi-family apartments, duplexes, mobile homes (on individual lots as well as in parks), accessory apartments, and cluster-type developments.

In 2022, the State of Maine legislature passed several pieces of legislation aimed at increasing housing stock in Maine, primarily through zoning regulations. The most significant law *H.P. 1489 - L.D. 2003 "An Act to Increase Housing Affordability through Zoning and Land Use*" enacted a set of zoning requirements that require municipalities to allow higher density housing in various ways throughout the community. Higher density allowances are required in areas that are identified growth areas or are equipped with public sewer and water infrastructure. There are three major components to the law:

- Developments in identified growth areas or areas serviced by public water or sewer must be allowed density 2 ½ times the base zone density if most of the housing units meet defined standard affordability requirements for a minimum of 30 years.

- Anywhere housing is allowed, municipalities must allow at least 2 units per lot on vacant lots. In areas of identified growth areas or areas serviced by public water or sewer, up to 4 units must be allowed on vacant lots. On lots with an existing single-family dwelling, municipalities must allow the addition of up to two units.
- On any lot with an existing single-family dwelling, municipalities must allow the addition of at least one accessory dwelling unit.

These requirements take effect in July 2023. Before then, the community should consider how each requirement will impact the zoning ordinance, as well as what pieces of the requirements will be applicable to South Berwick and in what areas of the community. Lastly, the town may consider reviewing other aspects of the ordinance to ensure these requirements act in the way they are intended and encourage housing development in such a way that is suitable to the community and protects natural resources.

The town does set aside a minimum of two of its 26 annual growth permits for affordable housing. However, the town also requires each dwelling unit in a multifamily dwelling to submit a separate growth permit, which may slow multifamily construction.

Implications and Summary

Housing development and affordability have long been issues for the southern region of the state. In recent years, primarily resulting from the COVID-19 pandemic, housing prices in Maine have increased significantly in a short period of time. Construction prices have limited housing production while changing work and migration patterns contributed to an influx of people moving to the area.

South Berwick is also affected by these trends, having seen an over 30% increase in the median home price from 2019 to 2021. However, the community continues to be generally more affordable than the state and county and has a 2021 median home price less than the York County average for the first time since 2010. South Berwick also saw the smallest increase in total housing units from 2010 to 2020 among neighboring Maine communities, a similar pattern to overall population growth. Housing types are predominantly single family, even slightly more so than the state and county average overall.

Chapter 4 – Economy

Purpose

The Comprehensive Plan helps develop a community's policies and priorities regarding future economic development while aiming to preserve the community's character, its environmental features, and workforce depth. The town has also undertaken a Market Analysis study alongside the comprehensive plan, which will provide an in-depth review of the local and regional economy; identifies strategies, programs and projects to improve the economy; and establishes policy direction for economic growth. The various elements of the Comprehensive Plan support and complement the Market Analysis as the town will rely on supporting land uses, transportation, and infrastructure to sustain existing companies and industries and to further economic development programs and initiatives.

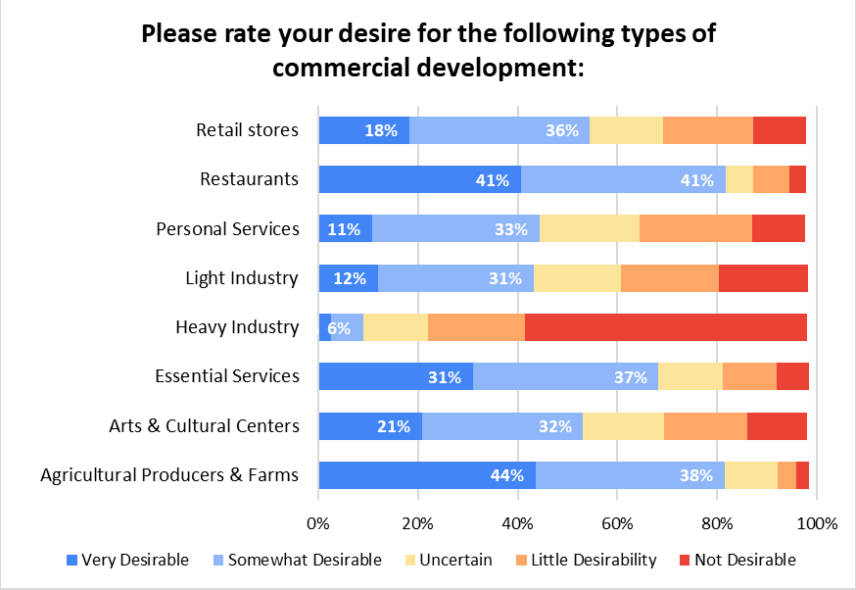
Key Findings and Issues

- As of 2020, approximately 72.4% of South Berwick's eligible population is in the labor force. Overall, unemployment rates in South Berwick are slightly higher than the average rates for both York County and the State of Maine.
- The largest percent of South Berwick's labor force are employed in Education, Health, and Social Services (21.8%) or Manufacturing (17.9%).
- Many South Berwick residents commute to jobs out of town, with a mean commuting time of 26.1 minutes. Residents from other towns also commute to work in South Berwick.

Community Engagement Results

20% of survey respondents thought commercial growth over the past 10 years wasn't fast enough.

Over 50% of respondents thought restaurants, retail stores, arts & cultural centers and essential serves were all desirable commercial development.



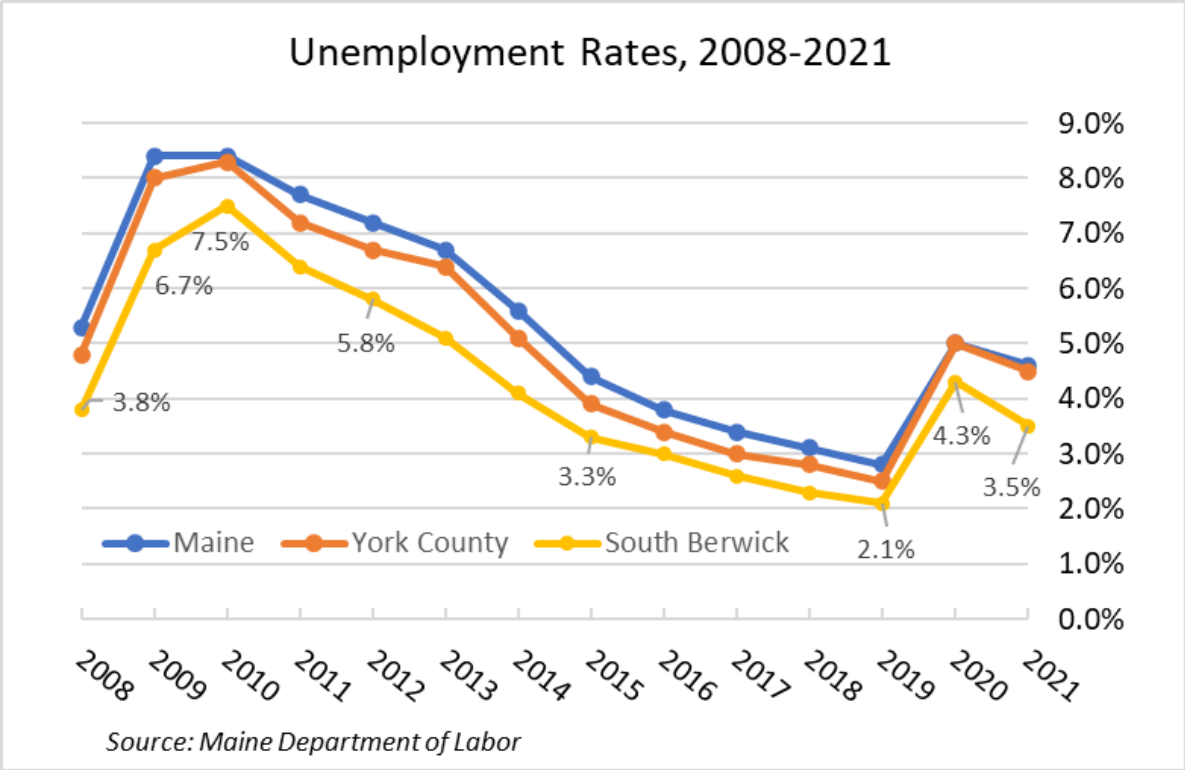
The focus group sessions summarized many different strengths and weaknesses of South Berwick's economy. Participants noted that the **population is generally affluent** and willing to spend money, however the **small population creates a sense of "maxing out" total potential customers**. It was noted that the municipalities **new focus of economic development**, including hiring new staff, brings good potential for suitable growth. Business owners mentioned **challenges such as location, being located on the border, traffic congestion, and available workforce.** Overall, better awareness and marketing of the community was recommended by participants.

Economic Conditions

Unemployment Rates

Overall, South Berwick has generally had a lower unemployment rate than the county and state overall. 2009-2010 brought dramatic spikes to unemployment rates across the nation because of the Great Recession, however while the state experienced an average annual rate 8.5%, South Berwick reached its peak at 7.5% in 2010. Over the last decade, unemployment rates steadily decreased. However, the COVID-19 pandemic lockdown caused another spike in 2020. Rates have recovered somewhat since then but remain higher than pre-pandemic levels.

The nation is now experiencing a social phenomenon coined the "Great Resignation". While job markets have returned and jobs are now available, the societal shift caused by the pandemic has resulted in more people choosing to opt out of the traditional workforce. Work from home opportunities, self-employment, the gig economy, and other alternatives have become popular.



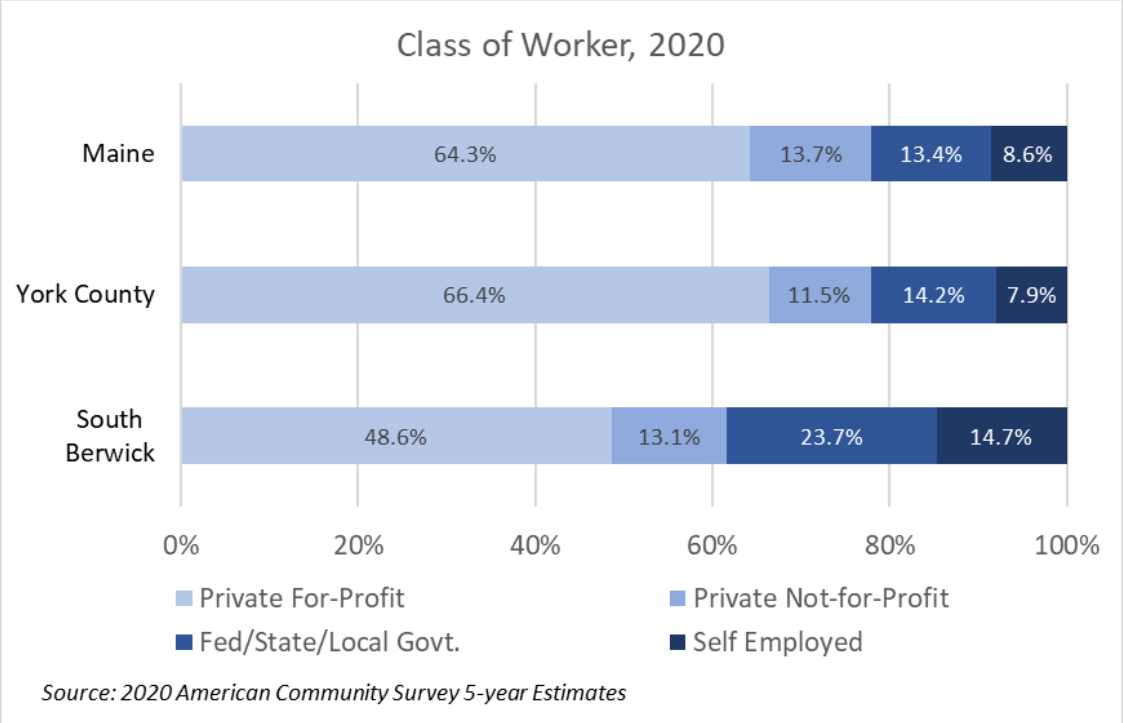
Source: Maine Department of Labor

Employment by Sector

The table below compares employment by industry sector for South Berwick and York County as reported by the 2020 American Community Survey. The industry sector refers to the type of industry the employer operates, not the actual jobs performed by workers. This table refers to all South Berwick residents who are employed, whether they worked in South Berwick or commuted elsewhere.

The largest percent of South Berwick's labor force, about 21.8%, is employed in Education, Health, and Social Services. This is also the highest percentage of York County's labor force at 24.1%. The next largest employment sector is Manufacturing at 11.9%. This is likely reflective of the number of South Berwick residents employed at the Portsmouth Naval Shipyard. As of 2022, the town had the 4th highest concentration of shipyard workers, approximately 363 total. In 2000, Manufacturing was South Berwick's largest employment sector at 17%, reflecting the consistent importance of this industry sector to the South Berwick economy.

According to the American Community Survey, as of 2020, about 61.7% of South Berwick's labor force was employed by the private sector, which is less than the York County average of 77.9%. The number of individuals working for the private sector has declined in South Berwick since the 2000 Census, dropping from 74% to 62%, while it has stayed consistent at around 78% for the whole of York County. This reflects an increase in the number of individuals who work for the government and who are self-employed in South Berwick. South Berwick has a much higher proportion of government employees (24%) than York County (14.2%). This may be due to the presence of the district high school, which employees approximately 500 people.



Source: 2020 American Community Survey 5-year Estimates

Employment by Industry Sector, 2020		
Category	**South Berwick**	**York County**
Agriculture, forestry, fishing and hunting, and mining	**1.2%**	0.9%
Construction	**11.4%**	7.6%
Manufacturing	**11.9%**	11.8%
Wholesale trade	**1.0%**	2.0%
Retail trade	**9.5%**	14.3%
Transportation and warehousing, and utilities	**2.7%**	3.9%
Information	**0.6%**	1.7%
Finance and insurance, and real estate and rental and leasing	**6.3%**	6.9%
Professional, scientific, and management, and administrative and waste management services	**7.7%**	8.8%
Educational services, and health care and social assistance	**31.1%**	25.7%
Arts, entertainment, and recreation, and accommodation and food services	**6.3%**	8.4%
Other services, except public administration	**4.5%**	4.3%
Public administration	**5.6%**	3.9%
Source: 2020 American Community Survey		

Employers

South Berwick enjoys a wide variety of small to medium-sized businesses. Employment opportunities range from retail to industrial, from food to medical services. In 2021, there was an average of 1,161 people employed in South Berwick. The largest industry by employment present in South Berwick is educational services (on average, 36% of all workers in 2021). This again reflects the area high school's presence in town, as well as Berwick Academy. Other large employers include Health Care (11.1%) and Food Services (13.5%). Professional and Technical Services is the largest industry by number of establishments (42 total), followed by Construction (30). These establishments typically have much smaller staff sizes, with an average of only 80 individuals working in Construction in 2021.

2021 Industries, Employment, and Wage				
	Establishments	**Average Employment**	**Total Wages**	**Average Weekly Wage**
Total, All Industries	209	1,161	$58,909,867	$976
Agriculture, Forestry, Fishing and Hunting	4	4	$218,405	$1,050
Utilities	3	12	$601,815	$938
Construction	30	80	$3,725,700	$900
Manufacturing	4	21	$837,805	$776
Wholesale Trade	17	16	$1,450,627	$1,699
Retail Trade	13	98	$4,049,131	$793
Finance and Insurance	3	8	$662,621	$1,576
Real Estate and Rental and Leasing	5	15	$712,532	$889
Professional and Technical Services	43	67	$6,705,391	$1,917
Management of Companies and Enterprises	7	6	$497,399	$1,713
Administrative and Waste Services	19	37	$1,571,723	$828
Educational Services	6	423	$22,161,132	$1,008
Health Care and Social Assistance	17	129	$8,002,944	$1,192
Accommodation and Food Services	14	157	$3,672,060	$449
Other Services, Except Public Administration	11	15	$664,311	$852
Source: Maine DOL Center for Workplace Research and Information				

Compared to surrounding communities, South Berwick is close to communities that are either large retail hubs, tourist communities, or have large employers. In terms of total number of establishments and total employed, South Berwick is similar to Eliot and Berwick. North Berwick has the fewest total establishments but has a much higher total employment due to large employers like Pratt & Whitney. Both Kittery and York are neighboring communities with two to three times the number of establishments. Both likely serve as alternative service centers and areas of employment for South Berwick residents.

However, in the last decade, South Berwick's total establishments have increased at a higher rate than those already established economic centers. South Berwick's total establishments increased by 55% between 2010 and 2021, second to Berwick's increase of 58%.

Employers Compared to Surrounding Communities, 2021					
Area	**Establishments**	**%Change in Establishments 2010-2021**	**Average Employment**	**Total Wages**	**Weekly Wage**
South Berwick	209	55%	1,161	$ 58,909,867	$ 976
Berwick	166	58%	1,023	$ 47,801,674	$ 898
Eliot	251	36%	1,330	$ 76,298,204	$ 1,103
Kittery	566	41%	11,006	$792,678,716	$ 1,385
North Berwick	128	22%	3,165	$196,954,084	$ 1,197
York	763	25%	5,711	$311,508,810	$ 1,049
Source: Maine Department of Labor, 2021					

South Berwick has issued 46 commercial building permits in the last 20 years, an indication of how many new commercial properties have come into the community. There is a slight decrease in total commercial permits issued over time.

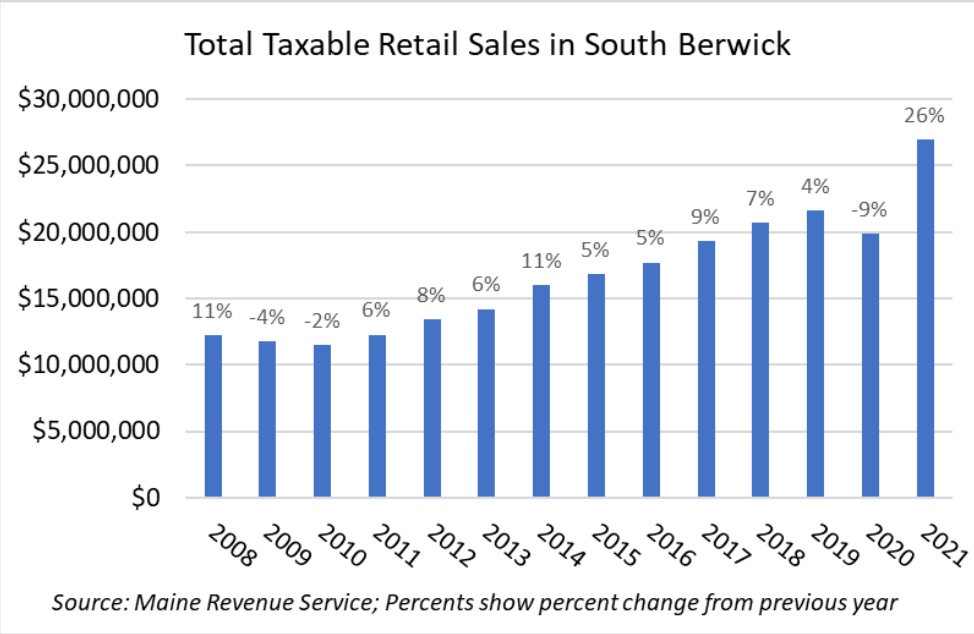
Commercial Building Permits						
Years	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2019**	**2020-2021***	**Total**
Permits	15	13	10	7	2	45
*Source: town Reports; *Only 2 years*						

Retail Sales

Overall taxable retail sales are tracked by the state revenue service by town and economic summary area annually. The total retail sales indicate overall economic activity in a town or region. Breakdowns by economic activity are not available due to confidentiality issues. It is important to note that on a town-wide scale, overall sales can be significantly impacted by a small number of businesses, so the change in retail sales can fluctuate more widely than at a regional or state level.

Retail sales in South Berwick have generally increased over the last decade. In the period from 2019-2020 the impact of the pandemic is evident in the sudden drop in sales. South Berwick saw a significantly smaller impact than the Kittery Economic Summary area, dropped 9% compared to 28%. As of 2021, sales have rebounded to levels higher than pre-pandemic levels. This is likely due in part to inflation and the increasing cost of living.

Percent Change in Taxable Retail Sales, 2008-2021			
Year	**South Berwick**	**Kittery ESA**	**Maine**
2008	11%	-1%	-2%
2009	-4%	-5%	-7%
2010	-2%	5%	3%
2011	6%	2%	4%
2012	8%	6%	3%
2013	6%	3%	4%
2014	11%	4%	4%
2015	5%	4%	5%
2016	5%	6%	7%
2017	9%	4%	5%
2018	7%	3%	6%
2019	4%	1%	6%
2020	-9%	-28%	5%
2021	26%	31%	18%
Source: Maine Revenue Service			



Source: Maine Revenue Service; Percents show percent change from previous year

Commuting Patterns

The employment data cited above refers to the entire civilian labor force in South Berwick, regardless of employment location. Many South Berwick residents commute to jobs out of town while residents from other towns commute to work in South Berwick. The 2020 American Community Survey reported a mean travel time to work of 26.1 minutes for South Berwick residents, slightly lower than the mean travel time of 27.4 minutes for York County. While 85.8% of South Berwick residents commute to work alone, only 80.4% drive alone in York County. About 5.4% of South Berwick residents worked from home as of 2020, but this number is likely even higher due to the COVID-19 pandemic.

Travel Time to Work		
	South Berwick	**York County**
Total workers 16 and over, not working from home	**3,769**	99,895
Less than 10 minutes	**8.0%**	12.3%
10 to 14 minutes	**12.1%**	12.0%
15 to 19 minutes	**9.3%**	12.9%
20 to 24 minutes	**25.5%**	13.7%
25 to 29 minutes	**13.3%**	8.1%
30 to 34 minutes	**13.3%**	13.7%
35 to 44 minutes	**6.7%**	10.5%
45 to 59 minutes	**4.6%**	9.2%
60 or more minutes	**7.2%**	7.7%
Mean travel time to work	**26.1 minutes**	27.4 minutes
Source: 2020 American Community Survey		

Mode of Transportation		
	South Berwick	York County
Total Workers: 16 and over	**3,984**	108,627
Car, Truck, or Van	**89.40%**	88.40%
Drove Alone	**85.80%**	80.40%
Carpooled	**3.60%**	8.00%
Public Transportation	**1.30%**	0.70%
Walked	**2.60%**	2.00%
Cycled	**0.00%**	0.30%
Taxicab, motorcycle, or other means	**1.40%**	0.60%
Worked at Home	**5.40%**	8.00%
Source: 2020 American Community Survey		

Market Analysis

In 2023, South Berwick conducted an extensive regional and local market analysis to better understand the market conditions and potential in the community. The study included current conditions assessments of the local economy, sociodemographic information, and a retail gap analysis. Highlights from the study are included here and throughout the plan, with more detailed data provided in the appendix.

Industry Profile

Employment Growth and Projections

South Berwick's employment grew by 54 jobs, or 3% from 2017-2022, which is more than the region and state in the same period. Construction added the most jobs, which confirms anecdotal evidence about this sector in recent years. The sectors that are projected to grow the most from 2022-2027 are Accommodation and Food Services (+28) and Professional, Scientific, and Technical Services. (+27). Note, the analysis used Lightcast data for overall concentrations of employers and jobs in the town and region, but overall trends were similar to those reported by Maine Department of Labor.

Concentration and Competitiveness of South Berwick Industry

The study included an analysis of location quotients, a measure of industry concentration unique to a specific geography (higher location quotients mean higher concentrations). Educational services is the most concentrated sector in town, due to the presence of private schools. South Berwick also has an above average concentration of government, accommodation and food services, and construction jobs. The average earnings across all sectors reflect those of the region and are higher than that of the state. Although there is not yet a high concentration, the study reports that Professional, Scientific, and Technical Services had competitive growth in South Berwick, contrary to the surrounding region. This could indicate that there is opportunity in this sector for the community.

Town of South Berwick Sector Characteristics

NAICS	Description	2022 Location Quotient	Competitive Effect	Avg. Earnings Per Job	GRP
11	Agriculture, Forestry, Fishing and Hunting	0.68	14	$50,986	$1,869,339
21	Mining, Quarrying, and Oil and Gas Extraction	0.00	0	$0	$0
22	Utilities	0.88	2	Insf. Data	$4,349,834
23	Construction	1.26	36	$65,286	$20,030,477
31	Manufacturing	0.22	4	$57,822	$3,878,043
42	Wholesale Trade	0.13	(13)	$72,424	$8,430,060
44	Retail Trade	0.46	(3)	$41,655	$9,066,029
48	Transportation and Warehousing	0.27	(6)	$73,254	$2,877,305
51	Information	0.08	(5)	Insf. Data	$1,509,632
52	Finance and Insurance	0.15	(1)	$108,705	$4,721,648
53	Real Estate and Rental and Leasing	0.36	0	$73,746	$3,389,714
54	Professional, Scientific, and Technical Services	0.86	31	$76,896	$18,793,344
55	Management of Companies and Enterprises	0.00	0	$0	$0
56	Administrative and Support and Waste Management and Remediation Services	0.52	5	$52,507	$10,214,986
61	Educational Services	3.80	(55)	$63,881	$17,286,344
62	Health Care and Social Assistance	0.50	(25)	$70,931	$13,017,432
71	Arts, Entertainment, and Recreation	1.07	4	$37,639	$3,886,867
72	Accommodation and Food Services	1.58	9	$32,021	$20,389,453
81	Other Services (except Public Administration)	1.17	(4)	$41,892	$8,585,532
90	Government	1.29	21	$69,945	$27,333,361
			134	**$72,801**	**$179,629,401**

Source: Lightcast

Table from Camoin Associates – Economic Development Market Analysis Report, 2023

Drilling down even further, the sub-industries with the highest concentration in South Berwick tell how the town's top industries are changing. Five of the top ten sub-industries grew between 2017-2022, while five declined.

Town of South Berwick, Top 10 Sub-Industries

NAICS	Description	2017 Jobs	2022 Jobs	2017 - 2022 Change	2017 - 2022 % Change	2022 Location Quotient	Competitive Effect	Avg. Earnings Per Job
9036	Education and Hospitals (Local Government)	235	251	16	7%	1.94	21	$68,258
6111	Elementary and Secondary Schools	230	211	(19)	(8%)	10.92	(40)	$66,839
7223	Special Food Services	224	205	(19)	(9%)	16.86	(19)	$30,502
7225	Restaurants and Other Eating Places	100	113	13	13%	0.70	16	$33,938
9039	Local Government, Excluding Education and Hospitals	108	111	3	3%	1.29	5	$73,116
6211	Offices of Physicians	83	72	(11)	(13%)	1.64	(17)	$100,264
2382	Building Equipment Contractors	47	59	12	26%	1.34	8	$63,644
5413	Architectural, Engineering, and Related Services	57	57	(0)	(0%)	2.19	(5)	$103,058
6244	Child Day Care Services	59	53	(6)	(10%)	3.04	(2)	$34,315
2371	Utility System Construction	12	52	40	343%	4.89	39	$70,645

Source: Lightcast
Note: South Berwick's employment numbers have been adjusted to reflect more accurate government jobs figures.

Table from Camoin Associates – Economic Development Market Analysis Report, 2023

Sub-industries with the fastest growing workforces include Utility System Construction and Education and Hospitals, which added the most jobs from 2017-2022. Utility System Construction more than tripled, which may be related to the influx of solar array operations in the region and state.

Town of South Berwick, Top Growing Sub-Industries, 2017-2022

NAICS	Description	2017 Jobs	2022 Jobs	2017 - 2022 Change	2017 - 2022 % Change	2022 Location Quotient	Competitive Effect	Avg. Earnings Per Job
2371	Utility System Construction	12	52	40	343%	4.89	39	$70,645
9036	Education and Hospitals (Local Government)	235	251	16	7%	1.94	21	$68,258
7225	Restaurants and Other Eating Places	100	113	13	13%	0.70	16	$33,938
2382	Building Equipment Contractors	47	59	12	26%	1.34	8	$63,644
5416	Management, Scientific, and Technical Consulting Services	15	24	9	59%	0.76	6	$78,419
8111	Automotive Repair and Maintenance	43	48	5	12%	2.56	4	$56,989
9039	Local Government, Excluding Education and Hospitals	108	111	3	3%	1.29	5	$73,116
8121	Personal Care Services	20	23	3	15%	1.14	3	$32,673
5419	Other Professional, Scientific, and Technical Services	17	20	3	17%	1.29	(0)	$53,491
7115	Independent Artists, Writers, and Performers	11	14	3	23%	2.94	(0)	$33,040

Source: Lightcast

Note: South Berwick's employment numbers have been adjusted to reflect more accurate government jobs figures.

Table from Camoin Associates – Economic Development Market Analysis Report, 2023

Retail Market Gap & Potential

The 2023 Market Analysis reports there has been no new construction of retail space in South Berwick since 2012, and the vacancy rate is very low. There is currently 75,920 sq ft of retail space spread across 27 buildings.

South Berwick Retail Market Snapshot

	Buildings	SF	Vacant SF	Vacancy Rate	Deliveries	Net Absorption	Under Construction
2013	27	75,920	-	-	-	500	-
2014	27	75,920	-	-	-	-	-
2015	27	75,920	-	-	-	-	-
2016	27	75,920	1,025	1.4%	-	(1,025)	-
2017	27	75,920	-	-	-	1,025	-
2018	27	75,920	-	-	-	-	-
2019	27	75,920	-	-	-	-	-
2020	27	75,920	-	-	-	-	-
2021	27	75,920	-	-	-	-	-
2022	27	75,920	-	-	-	-	-
2023 YTD	27	75,920	1,232	1.6%	-	(1,232)	-

Source: CoStar, as of 2Q2023

Table from Camoin Associates – Economic Development Market Analysis Report, 2023

The retail gap and potential analysis assessed the overall demand for specific retail services compared to sales of those services within the community. The study determined that South Berwick could reasonably recapture about $5.1 million in sales, supporting about 15,000 sq ft of new retail space. Grocery and specialty food stores, restaurants, convenience stores, or pharmacies, and other retail that serves a local population have the greatest opportunity in the town, based on the nature of the

community's retail environment and current inventory of retail. More data to reflect this market potential can be found in the appendix to this chapter.

Land Use and Economic Development

As a relatively small town, the future economy of South Berwick will remain dependent on the region for sources of new jobs. That South Berwick's business zones are mostly built-out also contributes to this projection. However, if South Berwick does build more commercial, the sewer and water systems have capacity to support such growth. At the present time, it appears that a good portion of residents are employed in relatively predictable industries throughout the region, such as public sector jobs, education & health services, and large keystone manufacturing facilities such as the Portsmouth Naval Shipyard. Additionally, South Berwick has actively pursued ways to support economic development and local businesses, including adopting plans and creating programs.

Planning Efforts

The town hired an Economic Development Director in 2023 and adopted an Economic Development Market Analysis in June of 2023. The Market Analysis identifies specific barriers and opportunities and suggests strategies to reduce barriers and capitalize on opportunities. South Berwick sits within the federally-designated Southern Maine Economic Development District and is therefore included within the region's Comprehensive Economic Development Strategy (CEDs). The CEDs is updated at least once every five years and was last adopted in 2022. It includes a regional approach to economic and market analyses as well as a framework for implementation.

Tax Increment Financing (TIF)

South Berwick has created two tax increment financing districts (TIF): Punkin town Road and CMP Corridor Omnibus, and South Berwick Transit-Oriented Omnibus. These TIF districts allow the town to fund infrastructure improvements within the district areas by setting aside the tax revenues from property value increases. Together, South Berwick's TIF districts contain just over 1,000 acres and were strategically placed to include growth areas. The new Transit-Oriented TIF district touches the downtown and will help create a business-friendly built environment. The Punkin TIF district is challenged by its lack of public water and sewer access but supported by its willing property owners, developable lands, existing businesses, and relative location.

COVID-19 Pandemic

The COVID-19 pandemic has brought with it local employment shifts and regional workforce concerns. A combination of lockdowns, followed by increasing trends in resignation and alternative work styles resulted in many businesses experiencing staff shortages and hiring difficulties. Increased remote work and home occupation possibilities may benefit South Berwick economically, given local constraints on developable land and new employment centers.

In March of 2020, the nation was put into lockdown in response to the global COVID-19 pandemic. In the short term, businesses were closed, and the public was asked to quarantine. Even after the lockdowns were lifted, social distancing requirements and other necessary safety protocols limited business activity. Businesses reliant on gathering & travel, such as the restaurant and accommodations industry, were especially impacted. The state of Maine, through federal relief funds, distributed millions in pandemic relief funding to businesses in hopes of offsetting some loss of business. Through the Maine

Economic Recovery Grant Program & SMPDC, 10 businesses in South Berwick received an overall total of over $400,000 in relief grants.

Beyond the lockdowns, the pandemic has fueled other shifts in Maine's economic landscape, such as remote work opportunities making rural living more feasible. The impacts of this period will continue to ripple throughout the region, and it is yet to be seen how the pandemic will affect the state in the long term.

Implications and Summary

South Berwick has a small local economy consisting mostly of educational services, health care, and other professional and technical services. A small number of accommodations and food service establishments provide about 150 jobs, mostly centered around the village. The economy has seen some growth over the last decade, and the number of establishments has continued to grow. Surrounding communities, such as Kittery, York and North Berwick have much larger retail economic centers and/or large employers. It is likely that these communities are sources of employment and services for South Berwick residents. The impacts of the COVID-19 pandemic are evident in unemployment and total retail sales figures; however, it appears that the local economy has been able to rebound. Future regional economic concerns also stem from societal changes following the pandemic, such as the great resignation, finding available workforce, and the increased cost of living.

Chapter 5 - Downtown

Purpose

The South Berwick village is a key part of the community's identity. In many ways, it has been well preserved through decades of changing society and increasing population throughout York County. To continue preserving the building style, layout, and overall vitality of the downtown area of town, special attention must be paid to development, land use, transportation, and public activities in the village.

The purpose of this chapter is to identify current conditions and challenges in the downtown area of town, document other South Berwick studies and plans for the downtown and identify areas of focus for continued future downtown revitalization.

Key Findings and Issues

- Challenges from big box retail stores in surrounding communities as well as retail in neighboring New Hampshire, without a sales tax, make the retail climate more difficult.
- Traffic, both through and local, frequently congests the downtown core, limiting accessibility and efficiency. Truck traffic poses additional safety challenges as well as creating a less desirable environment for bicycles and pedestrians. Opportunities exist to enhance the qualities of public space infrastructure to encourage safe and enjoyable non-motorized movements through and around downtown.
- Parking management in most downtowns is often perceived as an issue. South Berwick's Parking study completed in 2015 resulted in additional parking areas at the village scale.
- Key public facilities, such as schools, municipal offices, and the post office are downtown anchors, generating activity in the area.
- Strong interest exists in preserving the building style and layout of downtown, which includes a historic district and several properties listed on the National Register of Historic Places. The aesthetics and building style of the downtown define the village character of South Berwick.
- Downtown is a traditional center of activity and public interaction. Events help to generate this level of activity and engagement of residents and visitors alike.
- Currently, high concentrations of residential uses are within walking distance of the village center. Maintaining and encouraging further residential growth in this area will strengthen the variety of downtown activities.

Community Engagement Results

When asked about the desirability of different growth patterns, "village and downtown growth that is walkable" ranked highest at 77% overall ranking it as desirable.

Over 50% of respondents agreed that "downtown parking needs" is a serious issue facing South Berwick in the next 5 years.

South Berwick residents **highly value the downtown neighborhood**- it was noted as a strength in every focus group session. However, participants felt that the downtown **character is degraded by traffic and congestion**, as well as some façade problems. Overall, participants agreed that **more focus on downtown beautification would have a net benefit on commercial activity, use of public spaces, and**

downtown character. Potential initiatives could include public art, consistent signage, lighting, trash cans or public facilities, walkability, and public transportation.

Downtown Trends and Data

Traffic and Transportation

Balancing different modes of transportation in downtown South Berwick presents several challenges. Issues of concern include traffic volume, including through truck traffic, pedestrian safety and comfort, bicycle access, and parking management.

Congestion caused by through traffic in downtown South Berwick increases travel delays during peak hours. Traffic in the village is not inherently negative, as it is needed to support economic activity downtown. Traffic congestion also pushes some users to identify alternate routes. Alternate routing, while reducing traffic flow along the principal corridors, also reduces exposure of businesses downtown and causes safety concerns on local roads.

Pedestrian safety and comfort are crucial in the downtown, and current traffic volumes and speed also cause pedestrian safety concerns in the village area.

A vibrant village center requires accommodation for all modes of transportation with an emphasis on walkability and access. Encouraging visitors, residents, and downtown workers to use transit, walk, bike, or park on the outskirts of downtown and walk in, can help to alleviate some of the congestion and safety issues currently experienced downtown. Implementing traffic calming measures can reduce the speed of traffic and provide buffers between moving vehicles and pedestrians. Crosswalk safety depends on appropriate placement, proximity to traffic calming devices and high visibility devices to alert passing motorists. Improving sidewalk connections from downtown into neighborhoods and around the village core can expand the distance that users will choose to remain on foot, rather than use their car. Amenities such as benches and trees provide break points for walkers as well as gathering places. Pedestrian activity on the sidewalk enlivens a downtown and encourages others to stop or plan a return visit as well as to consider exploring beyond their intended destination. Alternatively, sidewalk areas that feel exposed, barren, or empty are not as welcoming and encourage shorter visits.

Shorter trips from outlying neighborhoods and subdivisions can be made downtown on bicycle or other non-motorized transportation. However, no bicycle lanes exist currently. There is limited room along Main Street for non-motorized vehicles to travel along a heavily traffic road and parked cars. The absence of separate travel lanes for bicycles leads residents and visitors to rely more on walking and driving. In addition to providing provision for movement of bicycles to and through the downtown, provision of parking facilities, such as bicycle racks, is important.

Truck traffic through the village area generates noise, additional road wear and congestion. Finding alternate routes for through trucks and reducing the incentive for trucks to use Routes 236 and 4 rather than the Maine Turnpike and other through routes may simultaneously generate additional visits while reducing some degree of congestion.

Parking management is a critical issue for all downtowns. As consumers become used to large expanses of parking at out-of-town retail facilities, downtown's smaller lots and on-street parking can be a deterrent. Small satellite parking areas dotted through downtown can support village activities if they have safe, convenient, and comfortable connections to the downtown core and drivers are provided adequate and clear information about the location of such areas as they enter the downtown area.

Limited space makes strategic sharing of parking spaces vital. Commercial facilities that require parking during the day may be able to have parking spaces used in the evenings for residential uses.

Traffic and parking issues have been the topic of multiple studies and forums over the years in South Berwick. A range of concerns and recommended solutions have been brought forward with few being studied for practical implementation. Most recently a 2015 parking study resulted in the funding and construction of a parking lot on Railroad Ave as well as other additional parking arrangements downtown. The 2009 South Berwick Transportation Feasibility Study summarizes decades of existing conditions and concerns around the downtown area with a focus on the major intersections along Route 236. An update to that study is expected to be completed in early 2023 with the intent to identify clear short- and long-term safety and mobility improvements.

Built Environment & Land Use

Downtown South Berwick possesses a distinctive architectural style and scale. The unique character of the village area can be enhanced by reinforcing historic preservation activities, review of building requirements for new structures and developing strategies for revitalization and renovation of existing structures.

The historic nature of downtown South Berwick, containing a Historic District as well as several properties listed on the National Register of Historic Places, provides a template on which future development can be modeled. Further, these structures provide a means to explain the community's history and the role of downtown in that history. Walking tours, plaques and other explanatory methods can also serve to bring more visitors to the downtown and encourage visits of longer duration.

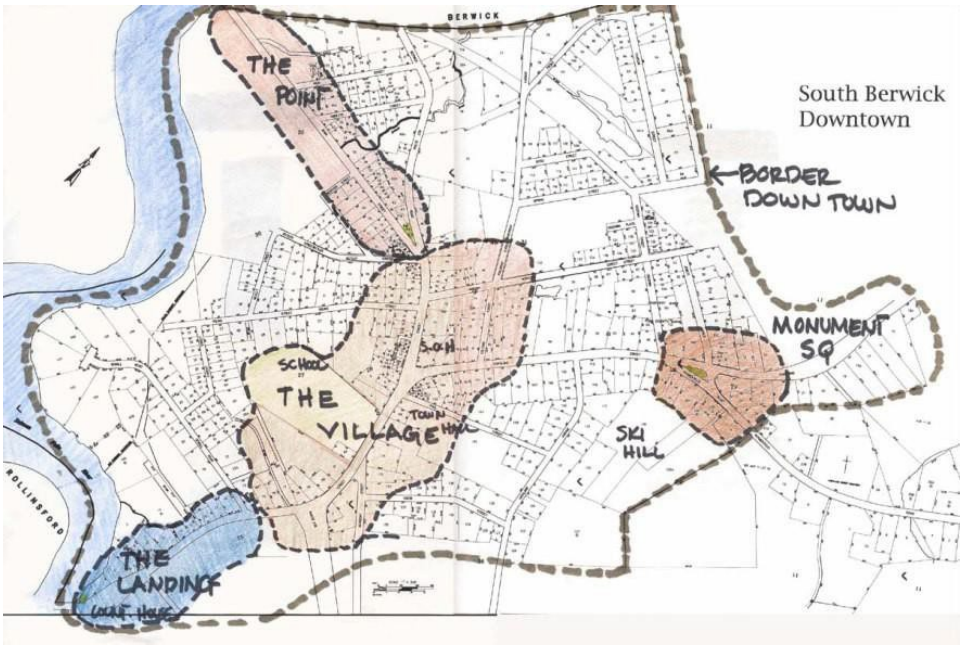
Scaling, massing, setbacks (including zero setbacks) and lot sizes derived from identified historic structures and others in the village area can be a baseline for future building requirements that coordinate with existing structures in the village area. Additionally, finding a balance between preservation of existing structures and using the influence of such structures to guide new construction can create a harmonious blend of structures downtown. Historic development patterns are also naturally built for walking and pedestrians. Uses that include drive-through services or large parking lots are often not implemented in a manner consistent with a walking village. Attention should also be paid to applicable building codes to ensure they do not discourage rehabilitation of existing structures.

Traditionally downtowns contain a blend of civic, residential, and commercial uses in proximity. The actual distribution of these uses changes over time, as some uses become more marginal and transient. Reinforcing traditional patterns of mixed use and retention of civic uses in the village all support downtown revitalization.

Downtown uses are also traditionally mixed, with the classic downtown block consisting of retail on the ground floor, office space above and residential units on the upper stories. This traditional format provides diversity as well as a ready source of activity and consumers throughout the day. Specific targeting of certain segments of downtown for live-work activities can contribute to building revitalization and renewed economic activity.

Civic uses such as town Offices and the Post Office generate regular activity in the downtown, and both uses exist in South Berwick. Berwick Academy has a large presence downtown, and the town is working to build a working relationship with the school. Further civic uses in the downtown, where feasible and appropriate can generate additional regular activity.

The previous plan identified a downtown boundary and several smaller neighborhoods which make up the downtown. Concentrating mixed use activity in the village core as well as adjacent neighborhoods as shown on the map below will maximize opportunities to encourage walking from residential sites to commercial and institutional uses.



Public Activities

Downtown South Berwick is a common community event space, and contains locations for public activities, events, and recreation. Public activities and events downtown generate additional usage of the village center and strengthen the identity of the location. Cultural activities such as concerts and the arts not only can generate additional visits to the village center, but also can provide opportunities for residents to meet. Space for events like festivals and performances, both indoor and outdoor, are key components of supporting the arts.

The proximity of the Salmon Falls River to downtown provides an opportunity for expanded recreational access. Recreational uses of parks and picnic areas bring additional visitors to the downtown area as well as increasing the amenities value for residents and employees in the area. Providing recreational opportunities in close proximity to downtown also strengthens the market for commercial development.

The Counting House Park has open space, picnic areas and a boat launch close to the downtown. The location adjacent to the historic museum and Quamphegan Landing historic site also adds to the identity of the space.

Business Development

The results of the 2023 Market Analysis of the South Berwick trade area can assist in determining what goods and services may be productively and profitably sold in the downtown environment. As consumer tastes and preferences have changed over time, certain retail niches have ceased to be competitive in a downtown environment.

The multiplier effect refers to the proportional amount of total increase in revenues that results from an injection of spending in an economy. According to the National Main Street Center, the multiplier effect of locally based businesses is estimated to be five times that of national chains. This is one of the many benefits to maintaining a viable downtown retail district. Any strategy of recruitment should be complemented with a retention plan. Working closely with existing businesses to ensure their continuing viability can be more cost effective and less time-consuming than an extensive recruitment effort.

Future Considerations

Sustaining and encouraging downtown revitalization is an on-going and incremental task, and there are many existing frameworks and programs to help guide the process. The town may consider enrollment in a program or seek grant opportunities for downtown revitalization. Additionally, the town's two tax increment financing districts, discussed more thoroughly in Chapter 4, support the downtown revitalization efforts.

Some of the most successful models of downtown revitalization have used the National Trust for Historic Preservation's Main Street Approach. The Maine Downtown Center provides training and technical assistance to communities that demonstrate a willingness and ability to revitalize downtowns, promotes and builds awareness about the importance of vital downtowns and serves as a clearinghouse/point of contact for information related to downtown development in Maine. This approach relies on a public-private partnership that moves beyond public improvement projects as a mechanism for downtown revitalization. The downtown development organization focuses on a four-point approach of organization, promotion, design, and economic restructuring.

MaineDOT's Village Partnership Initiative (VPI) may be used in partnership with local officials to reinvest and revitalize Village Centers or Downtowns reflecting the community's future vision. The VPI is available to all communities that have or can agree upon a local vision for their village. Village projects can vary from small, spot improvements to large, once-in-a-lifetime investments if other funding sources are also leveraged. Investments must be made in a way that balances the use and safety of all village patrons, whether in automobile, walking or bicycling. To that end, improvements should result in speed limits and actual average speeds of 30 miles per hour or less and provide for vehicles, pedestrians, and bicyclists with a balanced approach.

Chapter 6 – Public Facilities

Purpose

A thorough understanding of a town's public services is necessary to determine any current constraints to growth and identify any growth-related challenges that the town is likely to face in the future. A plan should also identify likely future capital improvements. Specifically, this section will:

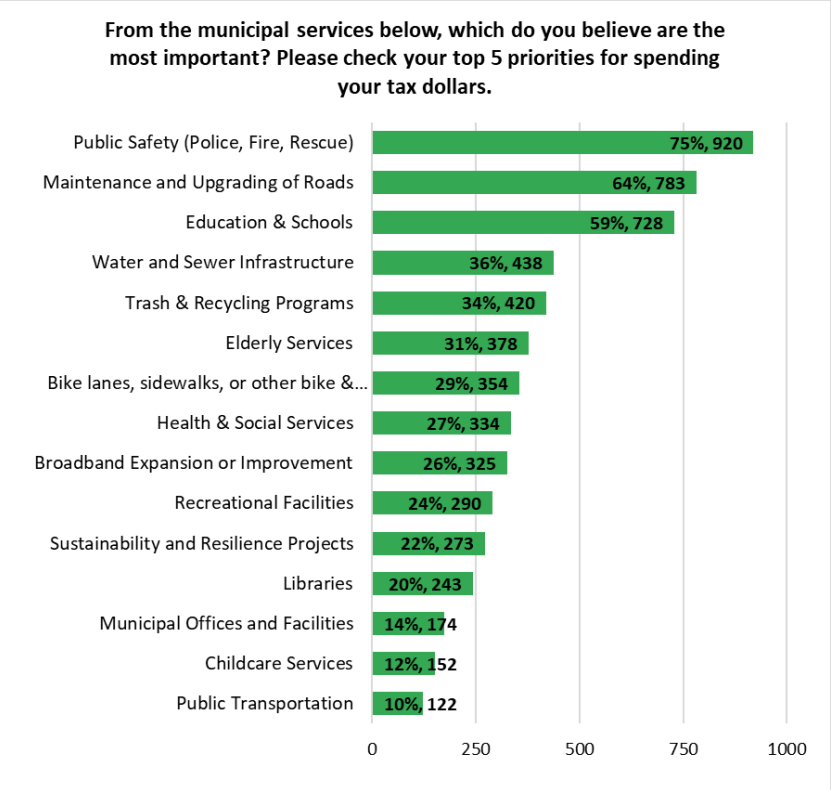
- identify and describe South Berwick's public facilities and services; and
- assess the adequacy of these services to handle current and projected demands.

Town expenditures are discussed in detail in the Fiscal Analysis Chapter.

Key Findings and Issues

- Municipal services have overall been effective, well received, and have expanded as the community has grown.
- Some capacity issues were noted in terms of public buildings and facilities, specifically the Fire Station and Town Hall.

Community Engagement Results



Survey respondents ranked public safety, road maintenance, education, water & sewer, and trash & recycling as their top priorities for municipal services.

Emerging issues such as sustainability, broadband, and public transit ranked lower.

The focus groups highlighted the need for better coordination between active groups of volunteers, local non-profits, and the municipality. Participants felt **the town has a wealth of engaged citizens, but they are uncoordinated, and could use more direction and support from the municipality.** Contrary to

the survey, most participants mentioned bike lanes & sidewalks, recreational facilities, and sustainability & resilience projects as the largest concerns for municipal involvement.

Public Facilities Inventory

Municipal Services

Police

Police services in South Berwick are provided on a 24-hour a day basis, with dispatch services provided by Sanford Regional Communications Center. The Police Department currently employs eleven full-time officers including the Chief of Police. The command structure includes a Lieutenant, Sergeant, Detective Sergeant and seven full time officers. Over the past twenty plus years, the Department has provided one officer of the seven to serve as a liaison with Marshwood High School. This School Resource Officer (SRO) is primarily assigned to the high school while school is in session. The SRO also assists the primary duty officer during emergency situations or when priority calls for service are pending. Each full-time officer is tasked with the responsibility to be the primary investigator in all criminal matters prior to the Detective Sergeant investigating the case. The Department does maintain a part-time staff of six officers and an Animal Control Officer, which is used to augment and assist the full-time staff.

Based on national, state, county, and local standards the South Berwick Police Department has been operating below the minimum recommended staffing levels. The following table depicts the average Police to Citizen ratio. These figures do not include part-time personnel, which comprise a substantial number of the staff hours for the department. These recommended ratios are solely based on police to citizen and do not consider the low crime statistics for this area. The current staffing ratio is 1.46 officers per 1000 people.

Police Staffing Levels vs Population			
	Officers/1000	**2022 Population**	**# Of Officers (Incl Chiefs)**
Nationally	2.4	332,403,650	~665,380
State-wide	2.2	1,372,247	~2,921
South Berwick	1.46	~7500	11

The Department currently has five fully marked patrol cruisers. There are currently three unmarked vehicles which are primarily assigned to the Chief of Police, Lieutenant, and Detective Sergeant. The Detective Sergeant's unmarked vehicle is also used for investigations, surveillance or during special events such as parades or Strawberry Festival. Over the past ten years, with some exceptions, the town has typically purchased one new police vehicle annually.

Since 2002, the Department has utilized IMC Records Management and Dispatch computer software. This equipment allows for more efficient collection of data and the ability to analyze trends and patterns. The integrated software allows Dispatch to transfer valuable data such as complainants' information, times, and responding personnel to the Records Management portion. Therefore, when an officer signs in to complete a written report much of the information can be backfilled and duplicate work is eliminated. A new record-keeping system will have to be purchased in the next few years as the vendor no longer provides support for the IMC record-keeping system.

In 2022, each officer has been assigned a Body Worn Camera to assist in documentation for officers' reports. The Body Worn Camera is also complemented with a patrol vehicle video recording system that records video and audio of vehicular movements and the rear passenger compartment.

In the fall of 2018, the South Berwick Communication Center was closed, and services were moved to Sanford Communication Center. In July 2019, the police department moved to a new 9,832 sq ft facility located at 1 Farmgate Road, after being in the basement of the town Hall for 30 years. The new police department consists of two floors. The top floors houses patrol, booking room, sally ports and offices. The bottom floor is for administration, locker rooms and a gym. The new police department has been a much-needed asset and houses the town Council meetings, State of Maine Probation and Parole and Juvenile Probation. Other agencies are also utilizing the booking room for arrests at times.

Fire and Rescue

The South Berwick Fire Department provides 24 hour per day coverage for the town from one station which is located on Norton Street in the downtown area. There are 36 members who are paid-per-call firefighters. All members are paid an hourly wage for training, meetings, and calls. Pay ranges from $13.50/hr for new firefighters to $26/hr for the Assistant Chief. The Chief is currently a part-time salaried employee, who works 20 hours per week.

In the last ten years, the fire department has gotten busier, both in emergency responses, but also due to the administrative and training requirements of modern fire departments. Increased training requirements lead to increased time commitments for our firefighters. Fire and Rescue call volume has also increased over 40% since 2012 with EMS and rescue calls making up a larger percentage of these calls over time. In that time, the roster of firefighters has remained consistent in the 32-36 member range. In 2021, an average of 12 members responded to every call. The busiest time for calls is between 7am and 9pm, Monday through Friday.

The firefighting fleet consists of the following vehicles:

- Engine 1 1996 Pierce Pumper; it's replacement is on order, expected delivery 2/2024
- Ladder 2 2003 Ferrara 77' Quint, meaning it also has a pump and water tank
- Tank 3 2013 Fouts/Kenworth 3000 gallon tanker
- Engine 4 2013 Spartan/Marion Pumper
- Forestry 5 1997 Ford F250
- Utility 6 2001 Chevrolet Suburban
- Car 1 2017 Ford Interceptor Utility, Chief's Car

The National Fire Protection Association (NFPA) recommends fire apparatus serve 15 years of frontline duty, then five as reserve apparatus. This schedule is cost prohibitive for most communities the size of South Berwick. We have been operating on a 25-year replacement plan for apparatus for quite some time now, which has worked well considering the size of the town and call volume.

The department has made consistent investments in apparatus and equipment over the last decade, with an emphasis on standardizing and modernizing equipment and tools. A few major milestones on the apparatus age and replacement schedule are poised for the next 10 years. First, the ladder truck will reach 25 and 30 years of age in this timeframe and is by far the most expensive piece of fire apparatus to purchase. Second, Engine 4 and Tank 3 are the same age, meaning both will hit their years

of service milestones concurrently. These are capital planning issues that must be addressed early on so that there are no surprises when the time comes.

The Fire Department relies on recruitment of citizens to join the team to provide firefighting services. New firefighters must complete over 120 hours of initial training to become fully functional firefighters. Firefighters are also required to complete more than 60 hours of training per year. An increased demand for training and administrative work, in addition to increased call volume has made the recruiting of new firefighters a challenge. Even though there are healthy staff levels today, it is anticipated that the department will consider transitioning to some level of paid, scheduled coverage within the next ten years.

Rescue and EMS services are contracted out to York Ambulance, a 911 crew staffed with a Paramedic and an EMT 24 hours a day, 7 days a week at stations in York and South Berwick. A third crew also staffed with a Paramedic and an EMT works out of the York Station ready to provide medically necessary inter-facility transfers and provide back-up 911 response if the primary 911 crew is already out on a call.

The fire department's role in providing EMS services in town continues to expand. This mission may continue to evolve and expand in the next decade. It is possible it could transition from a contracted service to a municipal based Fire & EMS agency- a trend that is gaining momentum nationwide as rural and private EMS providers struggle to survive.

Library

The South Berwick Public Library is located at 27 Young St. In March of 2012, the library was moved from the Jewett Eastman House to the building that was formerly Saint Michael's Catholic Church, where it operates today. The Friends of the South Berwick Public Library committed to raising over one million dollars in a capital campaign that was key to finishing the interior renovation and furnishing the library with furniture and equipment. 143 solar panels were added to power the building in 2014.

The new Library is a major addition to downtown South Berwick. Centrally located, easily accessible, and with ample parking, the library is a gathering place for all South Berwick's citizens. More than just a collection of books, a library serves many roles in the education, entertainment and advancement of a community and its citizens.

Parks and Recreation

South Berwick's Recreation Department operates several recreation programs for the youth, adults, and seniors in the community. Active programs include: enrichment programs (such as music, art, science), special events (such as community days with minor league sports teams and at ski mountains, family dances, scavenger hunts, and many seasonal events), exercise programs (such as walking, line dancing, Zumba, yoga), athletic programs (such as soccer, tennis, a road race), daily games (such as cards, cribbage, whist, bridge, bingo), as well as a summer day camp.

Most of the recreation department programming sustains itself. The Department employs a Recreation Director, Senior Center Director, and a Programming Coordinator who work with a Recreation Commission appointed by the town Council.

The town owns 2 tidal boat launch ramps and picnic rest area facilities on the Salmon Falls River, as well as a town Forest, a ski area, sledding hill, and a number of vacant parcels of land. Other

recreational facilities are located at Central School, Marshwood Great Works School, Marshwood Middle School, Marshwood High School, and Berwick Academy.

These, and several other outdoor recreation opportunities throughout the community which are not town owned or maintained, are summarized in the Arts and Recreation chapter.

Public Works

The public works department is mainly responsible for road maintenance, parks maintenance, and municipal facilities. The town recently expanded the town Garage, which improved space needs for equipment and personnel, but capacity issues still exist. Due to recent changes to the DOT Urban Compact area in town, the town's road maintenance jurisdiction has increased from 68 miles to 75 miles of road. Overall calls for service have increased as well. A recent highway bond of $4 million has been essential for making townwide road improvements and bringing town roads to a good baseline manageable state. Bond payments are approximately $270,000 a year.

Planning and Code Enforcement

South Berwick employs an Economic and Community Development Director and a Code Enforcement Officer. The town also contracts with the Southern Maine Planning and Development Commission (SMPDC) for planning assistance, from development review to ordinance writing. SMPDC's planning support helps South Berwick manage its land use regulations. The town's planning board includes five voting members and two alternates.

Solid Waste

The town contracts with Casella Waste Systems for trash pickup and delivery to the transfer station. Waste is compacted and hauled, recycled, or otherwise disposed of by the town. In the 2001-2002 fiscal year, the town hauled, by truck, about 1,980 tons of solid waste to the MERC facility. A Transfer Station fee is charged for a variety of waste items that are not accepted by MERC. The town has a mandatory separation and recycling program for paper, aluminum, plastics, and other metals. Recycling was particularly strong in the early 2000's, but due to market changes it is not always cost effective. The transfer station no longer recycles glass for this reason. Leaves, wood chips and other composting waste are ground and made available, with a delivery fee, as mulch. Items that may need consideration in the next ten years include improved lighting, traffic patterns and volume, increasing population, site modifications that would allow a vehicle capable of hauling larger compacted loads and the limited size of the current site.

Municipal Facilities

Town Hall

The current town Hall, built in the 1920s and formerly the St. Michael's School, was purchased by the town in 1975. The building is located at 180 Main Street and has two stories and a basement. The first floor contains municipal offices, and the second floor contains a meeting hall and additional office space. 1990 improvements to the building included repairs to the roof, windows (including the addition of storm windows) and chimney, as well as the addition of an elevator and renovations to the second-floor auditorium. Interior renovations to the town Offices, including the basement, were made in 1994. The town is currently undertaking an evaluation of staff needs and capacity at the current town hall,

including a potential remodeling of the existing building, or building a new facility somewhere else in town.

South Berwick Community Center

The Community Center, located on Norton Street, was built in 1995. It houses the Fire Department, Rescue Squad, Recreation Department, and Senior Center. It includes a shared training room, bathrooms, showers, a commercial grade kitchen, dining room, activity, and meeting rooms, as well as offices. The Community Center also serves as a meeting place for non-profit community organizations. Community members are also able to rent space for a small fee to hold private events.

The building is configured for shared use, and the single kitchen and bathrooms are shared across all departments sharing the building. Most corridors are unsecure and have multiple points of access from the public community center side of the building and the fire/rescue side of the building. The Fire Department and Rescue Squad moved into the Community Center building in 1996. The Fire Station and Rescue section of the building has been largely untouched since opening, with only minor upgrades and revisions, and no structural improvements or expansion since then.

Over time, the shared kitchen and dining room of the building have been absorbed by the Community Center functions, which regularly host events for the community, limiting availability to Fire and EMS staff. Rescue services have evolved from on-call staffing to 24/7 staffing. The Fire Department is still largely on-call based; however, firefighters spend more time in the station than previous generations due to increased demands in mandatory training, maintenance, and administrative work.

Over the last decade the fire station has become extremely cramped. Fire Apparatus are larger, and carry more equipment now than ever before as the mission has evolved beyond fighting fires, to providing all-hazards response requiring various types of specialized equipment.

Firefighter turnout gear is stored in the apparatus bay, exposed to environmental hazards from the vehicles, and, as a carrier of carcinogens, off gassing toxins into the station. With very little office, administrative, or private space, firefighters congregate in the apparatus bay, prolonging their exposure to all these health hazards. Given the predicted increase in staffing for the Fire Department, and the potential to shift to some level of paid, scheduled coverage within the next ten years, the space available could become an issue.

The current station needs renovation & addition to bring the facility up to modern standards, and to provide adequate space and amenities for firefighters to meet the ever-growing needs of the community. Development in the southern end of town, namely the industrial zone, may require fire protection local to that area by adding a fire station and apparatus. This is the second busiest of the four fire districts in town, with downtown being the busiest.

Town Garage

The town Garage is located on Front Street. The 1989 Capital Improvements resulted in the purchase of adjacent land and the construction of a new town Garage in 1990, and the facility was again expanded in 2021. The facility also has an enclosed salt storage building and houses all Public Works equipment and facilities.

Transfer Station

The 1989 Capital Improvements Plan led to improvements including ash pile removal, transfer station expansion in 1993 and lot redesign and pavement in 1994. The facility is currently servicing the town's waste disposal needs with three days of operation per week. The town has obtained a small adjacent property to facilitate expansion.

The town partnered with the University of Maine to conduct a study to improve traffic flow at the facility. No changes have happened to date, but congestion problems still exist.

Red Barn

Previously the town's Teen Center, the "Red Barn" was a cinder block building located on Agamenticus Road. The building was not used for some time, and the town voted to demolish it in 2023. The current plan is to use the space to provide additional needed parking at the Agamenticus Road recreation area, but other future uses may be explored.

Community Food Pantry

The town owns a 2-bay concrete building at the intersection of Spring, Goodwin and Dawson Streets which was the former rescue building. Today, it houses the community food pantry, operated by SoBo Central. It is open Thursdays from 6 p.m. To 7:30 p.m. and the first and third Fridays of each month from 10 a.m. To 11:30 a.m.

Powder House Ski Hill Buildings

Following the town's purchase of the parcel of land including the Powder House Ski Area in the 1980s, the town took ownership of four small wooden buildings associated with the operation of the Ski Hill. A storage shed and ski lodge are located at the base of the hill. A shed to protect the lift engine and a small building for a lift attendant are located at the top of the hill. Powderhouse Ski Hill operates under the Recreation Department and is run by about a dozen part-time seasonal employees and a large group of community volunteers. Some upgrades to structures at the site, including electrical and drainage improvements, may be needed soon.

Police Station

A new police station was completed in 2019, following a study of police department capacity and space needs. The location on Farmgate Road was chosen with town input, and now provides ample space for the department, as well as additional meeting space for town staff and committees.

Education - MSAD 35

Maine School Administrative District 35 (MSAD 35) is comprised of the towns of South Berwick and Eliot. Total enrollment for the district is currently 2140 students. The District manages five campuses, three properties in South Berwick and two properties in Eliot. These campuses encompass approximately one hundred twenty-four acres, all maintained by the District.

On these five campuses, the District operates six buildings totaling 447,337 square feet. The overall appraised value of these facilities is approximately $80,000,000. The maintenance and operation of these facilities is costly. Each year the District purchases approximately 125,000 gallons of propane, 12,000 Dth of natural gas and 2.6 million kWh of electricity.

The District also leases a bus maintenance facility, where it stores, operates and repairs 29 buses, and 8 vans. These vehicles travel approximately 450,000 miles per year using 55,000 gallons of diesel fuel and 8,000 gallons of gasoline. These vehicles allow the District to transport over 2,100 students to and from school, to athletic contests, and on field trips. The District also operates 5 cafeterias at its schools, which serve approximately 160,000 meals per year to its students.

The School District is the largest employer in both South Berwick and Eliot with over 380 full or part-time employees (exclusive of the District's 100+ substitutes).

Central School is located on Main Street in downtown South Berwick. The school serves pre-k through grade three students from South Berwick. The main building was built in 1925. Later additions include the annex and gymnasium built in 1952 and finally the primary wing built in 1973. The school is situated on 7+ acres of land. Outside there is a large playground for students and a basketball court. A parking lot is located at the rear of the building. Inside, the building has twenty-five classrooms, a cafeteria, gymnasium with a stage, library, staff room, nurse's office, and various small rooms for special education services.

Marshwood Great Works School, located in South Berwick, serves children from Eliot and South Berwick in grades four and five. MGWS has thirty classrooms, cafeteria, library, and gymnasium with a stage, home economics room, computer lab, soccer field and a baseball/softball diamond.

Marshwood Middle School, located in Eliot**,** serves children from South Berwick and Eliot in grade 6 through 8. MMS has 30 classrooms, 2 art rooms, a band room, vocal instruction room, home economics room, library, computer lab, a cafeteria and gymnasium with a shared stage. All students have laptop computers for their use provided in part by MLTI (Maine Learning Technology Initiative) funding and in part by the local budget. The outdoor facilities include a football field, soccer field, baseball diamond, softball diamond and several practice areas. There is a dirt track and a concession stand. MMS also shares its site and parking lot with the Superintendent's office building.

Marshwood High School (MHS), located in South Berwick, provides service to students from Eliot and South Berwick in 9th through 12th grade. All students are provided with a laptop computer. MHS has an auditorium for school and community use with a seating capacity of 605. Although MHS is expected to meet the needs of the district in the future, the building was designed with expansion possible to 1500 students. The athletic facilities include the following:

- Stadium Field (used for Football, Soccer, and Lacrosse) encircled with a surface 400m, six-lane track. Stadium bleachers include a heated press box and PA system. The stadium is lit for night events.
- Secondary Field (used for Soccer and Lacrosse) located behind the stadium. Also, behind/underneath the stadium is a concession stand, with electricity and gas appliances; restrooms; team rooms; a storage room and a grounds storage room.
- Softball and field hockey fields are located next to the stadium area. All fields have electrically powered score boards.
- The practice field area is next to the softball and field hockey fields and includes throwing areas for track and field (discus, javelin, and shot put).
- The baseball field is located on the opposite side of the school campus, with fully enclosed dugouts. The outfield is used as an additional soccer field in the fall season.
- Tennis courts (5) are located next to the baseball field.
- Gymnasium – seating approximately 1000 – 1200, with retractable basketball hoops (6).
- Wrestling room – used for wrestling and small exercise activities.

- Wellness center –Includes weights and cardiovascular equipment.

MSAD 35 Facilities					
School	**Grades**	**Capacity**	**Current Enrollment**	**Current Enrollment % of Capacity**	**10-Year Average Enrollment**
Eliot Elementary School	PreK-3	550	311	57%	313
Central School	PreK-3	550	371	67%	388
Marshwood Great Works School	4 and 5	750	300	40%	304
Marshwood Middle School	6 and 8	825	473	57%	523
Marshwood High School	9 to 12	1100	685	62%	757
Source: MSAD 35 & Maine Department of Education					

The district enrollment has declined since an enrollment of 2389 students in 2010, to the current enrollment of 2140 students. In addition, the local real estate market has escalated over the past 4 years, with an increase in the cost of homes across both communities. The district intends to monitor how this increase in home costs impacts the ability of younger families with children to purchase homes in both Eliot and South Berwick.

One of the biggest changes to operations in the last 10 years was the agreement with the town of Rollinsford to educate their students from grades 7 through high school. The original contract was signed in December of 2013 and the students began to attend in the fall of 2015. Rollinsford is billed monthly on a per student basis and additionally for Special Education Services.

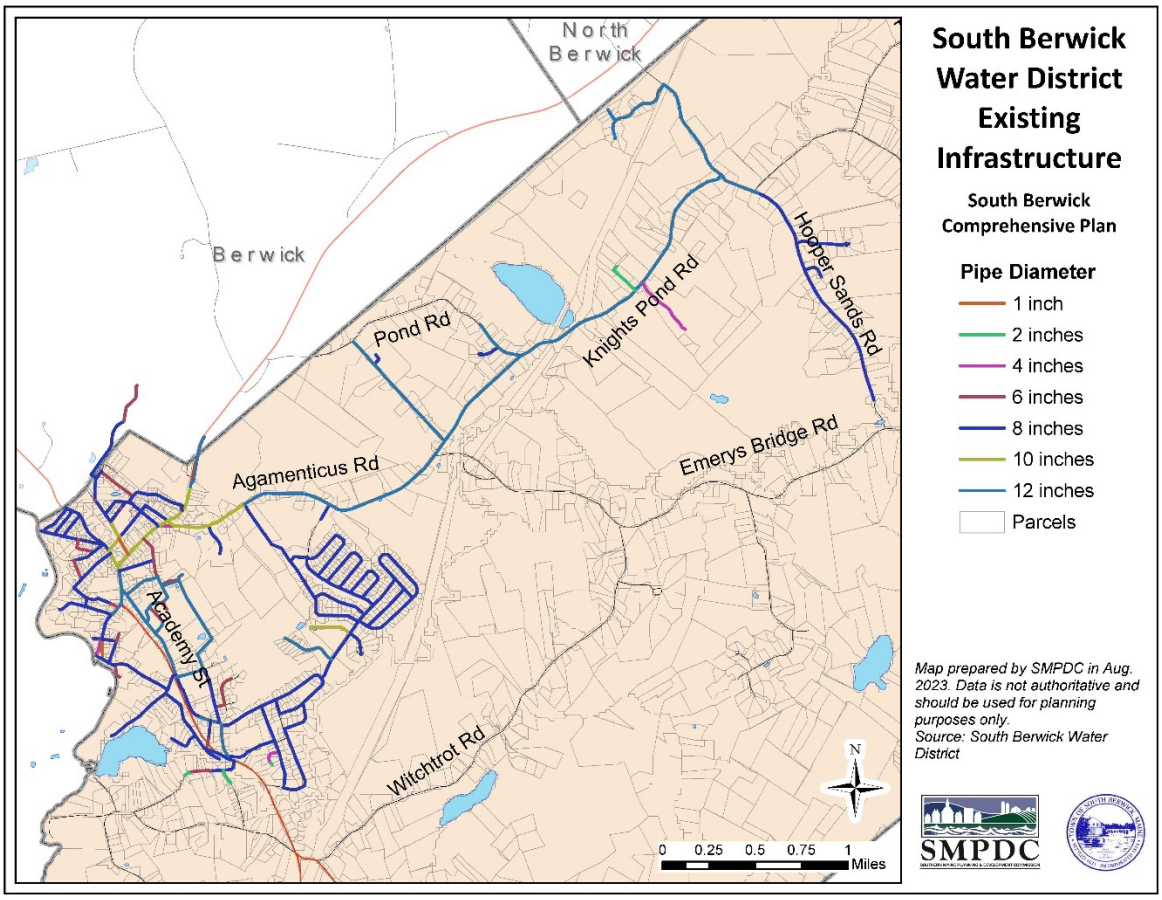
A number of challenges present themselves when looking at the future of MSAD 35 schools. Three of those challenges are:

- Navigating the transition back from the COVID 19 pandemic and addressing the learning needs of all students.
- Finding and retaining professional staff. There are several areas in which we are currently struggling with staffing that can potentially impact the learning experience of our students. Most noticeable are the hiring of Bus Drivers and Educational Technicians to work with our Special Needs population.
- Balancing the needs of our students, the impact of taxes on our community, and the current rate of inflation. For example, we were recently notified the rate we are paying for electricity has increased from $0.06 cents per kilowatt hour to $0.16 cents per kilowatt hour. This is an increase of $100,000.00 to the district budget for the second half of the fiscal year for electricity alone. This same theme carries across many other cost centers including the cost of propane, diesel fuel, and potentially health insurance.

South Berwick Water District

The South Berwick Water District (SBWD) provides drinking water to approximately 1,452 customers, approximately 48% of households, in South Berwick and a small portion of Berwick in York County, Maine. The South Berwick Water District was incorporated in 1959. The primary service area includes

South Berwick Village and the Hooper Sands area as well as a small area in Berwick in the vicinity of the Blackmore well field and the Route 4 area.



The initial operating property of the District was acquired from the South Berwick Water Company in 1960. The original water system has been modified and upgraded over the years to meet modern water works standards and in response to increasing population growth. These improvements have included the development of a new supply, a new storage reservoir and various distribution system improvements.

The demands in the water system have historically been residential with some light commercial water use in the South Berwick Village area. The District currently serves no industrial customers.

Water District Facilities

The SBWD owns and operates the following facilities & staff:

- 4 full time staff people
- 5 member elected Board of Trustees
- 1 office building
- 4 pump stations/well fields
- 1 million gallons of storage at an elevation of 297’ above sea level
- 2 treatment facilities
- 35 miles of pipe

- 167 fire hydrants
- 121 acres of land
- Generally 3 utility vehicles
- 1 back-hoe

The Water District and town have a mutual aid understanding of sharing equipment and personnel and are now beginning to discuss the potential benefits of further jointand separate equipment purchases that would enhance both entities.

Water Supply

The South Berwick system presently has adequate capacity to meet projected demands within the system under current conditions. The SBWD has developed all the cost-effective aquifer sites closest to the water distribution system. However, the population growth pressures in the community and surrounding area will continue to stress the water supply in South Berwick into the future. In anticipation, several potential well sites have been identified for future development which could be incorporated into the water system as growth occurs. In general, a water system is considered to have adequate supply if it can meet the following system standards:

- The safe yield of the source of supply should exceed the average-day demand over the projected planning period.
- The safe pumping capacity of the system, with the largest unit out of service, should be greater than or equal to the maximum daily demand.

The ***safe yield*** of the SBWD well supply meets the current average-day demands in the system. Though the recent droughts and increased demand in the summer continue to stress the water supplies. The District continues to explore for more water to have adequate supply to meet projected demands that may occur.

The ***safe pumping capacity*** is defined as the pumped capacity with the largest pump out of service. In addition, the hydraulic capacity of the well system should not exceed an average pumping rate of 16-18 hours per day. This operating scheme allows for a 6 – 8-hour recovery period every 24 hours.

The total pumping capacity of the South Berwick well supply is about 610 gpm. (828,000 gallons per day (gpd), if pumped for a 24-hour period, in the case of an emergency. This is short term in the event of a fire or other emergency requiring large volumes of water. The safe pumping capacity is summarized in the table below.

Summary of Well Capacity and Performance Data SBWD				
Parameter	**Well Construction**	**Well Depth (feet)**	**Well Diameter (inches)**	**Pumping Capacity (gpm)**
Agamenticus Wells - *Total Agamenticus Supply Capacity – 110 gpm*				
Bedrock Well	Drilled Bedrock	705	6	60
Gravel Well	Gravel – Packed	55	12	20
Vacuum Well field	Vacuum	23 -28	2.5	30

Blackmore Wells - *Total Blackmore Supply Capacity – 80 gpm*				
Blackmore Well #1	Drilled Bedrock	250	6	50
Blackmore Well #2	Drilled Bedrock	250	6	30
Willow Drive Wells - *Total Willow Drive Supply Capacity – 300 gpm*				
Willow Drive #3	Drilled Bedrock	518	12	300
Junction Road Well - *Total Junction Road Supply Capacity – 150 gpm*				
Junction Road Well #1	Drilled Bedrock	537	12	150
Junction Road Well #2	Drilled Bedrock	500	6	70
Total Supply Capacity in South Berwick – 640 gpm (.5 MGD)				

Water Quality and Treatment

SBWD operates two filtration plants. The Willow Dive site is filtered for the removal of iron and manganese to help improve the aesthetics of the water, and the Junction Road source water is filtered to remove arsenic. All four sources are disinfected with chlorine, to ensure the water remains safe throughout the distribution system.

Land acquisition around the wells should continue. This strategy protects well heads while avoiding anticipated changes to disinfection requirements under the Groundwater Rule. SBWD should continue its proactive program of land control around all well supplies and seek to purchase all land within the prescribed well head protection areas.

Distribution Storage

SBWD is projected to have adequate distribution storage volume to meet fire suppression needs in the service area, to provide peak flows and to provide for the emergency needs of the District. The Powder House Hill Reservoir provides adequate storage volume to meet peak-hour and fire flow needs. The need for additional storage in the Hooper Sands Road area has been identified in the most recent system master plan.

System Reliability

SBWD has back-up power at two of its facilities in the event of an emergency. The generators at Willow Drive and Junction Road will provide emergency pumping capabilities of 600,000 GPD, short term. This flow rate will be sufficient to meet projected normal conditions in the event of a power outage.

Fire Protection

Available fire flows meet or exceed all ISO requirements at specific locations in the distribution system, as determined using the computer simulation model developed for this study. Hydrant spacing also meets ISO requirements.

Distribution System Improvements

Various distribution system improvements have been identified to replace aging pipes, to improve pipe looping, to reduce peak-hour velocities and to remove restrictions in the distribution system. Similarly, these piping improvements have been scheduled and prioritized to take maximum advantage of the District's annual capital improvement budget. SBWD's

existing debt structure was considered when scheduling all improvements.

Interconnection Opportunities with Surrounding Water Utilities

An interconnection with the North Berwick Water District is planned for 2023. This interconnection will provide system redundancy for both utility districts in the event of an emergency. The interconnection is the first step toward sharing infrastructure to better serve outlying areas of water systems.

Also, the South Berwick Water District is one of the charter members of the Southern Maine Regional Water Council (SMRWC). The SMRWC was formed in 2005 as a voluntary organization to promote regional cooperation among the water utilities serving this fast-growing region. The member utilities include the Portland Water District, the Biddeford- Saco Water Company, Kennebunk-Kennebunkport-Wells Water District, Sanford Water District, York Water District, the Kittery Water District and the South Berwick Water District.

The Council utilizes cost-sharing initiatives such as shared purchasing programs, bulk chemical agreements and mutual cooperation of human resources and operations staff, to reduce operating costs for participating members. These initial cooperative steps have resulted in cost savings for the region's water customers.

The member utilities recognize that the southern Maine coastal region is limited in available water supplies and that the supplies are not necessarily located where population growth is occurring or projected to occur. This realization has led the council to consider a regional approach to water supply and quality.

The Council is advancing engineering aspects required to develop a potential future regional water system. If proven viable, a regional system is envisioned to occur through interconnections and regional supply balancing with the overall goal of improving service, reliability, and cost of water to the region's customer base.

Regulatory Compliance

The South Berwick Water District is a fully regulated water utility in the State of Maine. As such, the SBWD is required to meet the regulatory requirements of the Departmentof Human Services regarding public health matters and the Maine Public Utilities Commission regarding water rates and other financial and managerial matters. In addition, the District is also required to be in compliance with all regulations administered directly by the U.S. Environmental Protection Agency.

A review of the District's standing indicates that the SBWD complies with all regulatory requirements of these agencies and with other applicable state and federal laws governing water utilities.

Source Water Protection and Well Head Protection

The town of South Berwick, in conjunction with the Water District, has implemented several planning measures to protect the groundwater resources within the community. These measures include land-use zoning for all property around existing public wells and a restrictive site plan review process for planned development around existing wells. The District has also established land management practices which include timber harvesting or selective cutting as determined by State certified foresters within itssource water protection areas. These practices support natural water flows and infiltration rates as well as natural filtration.

SBWD allows controlled public access within these protected areas. This includes public use of land for recreational purposes such as hiking and cross-country skiing. To facilitate public access and use within these protection areas, the access roads to each site are well signed and gated to increase public awareness of the area as a public water supply. Public awareness signs are also posted along all the District's established protection areas. Other security measures have been put in place but cannot be revealed for that reason.

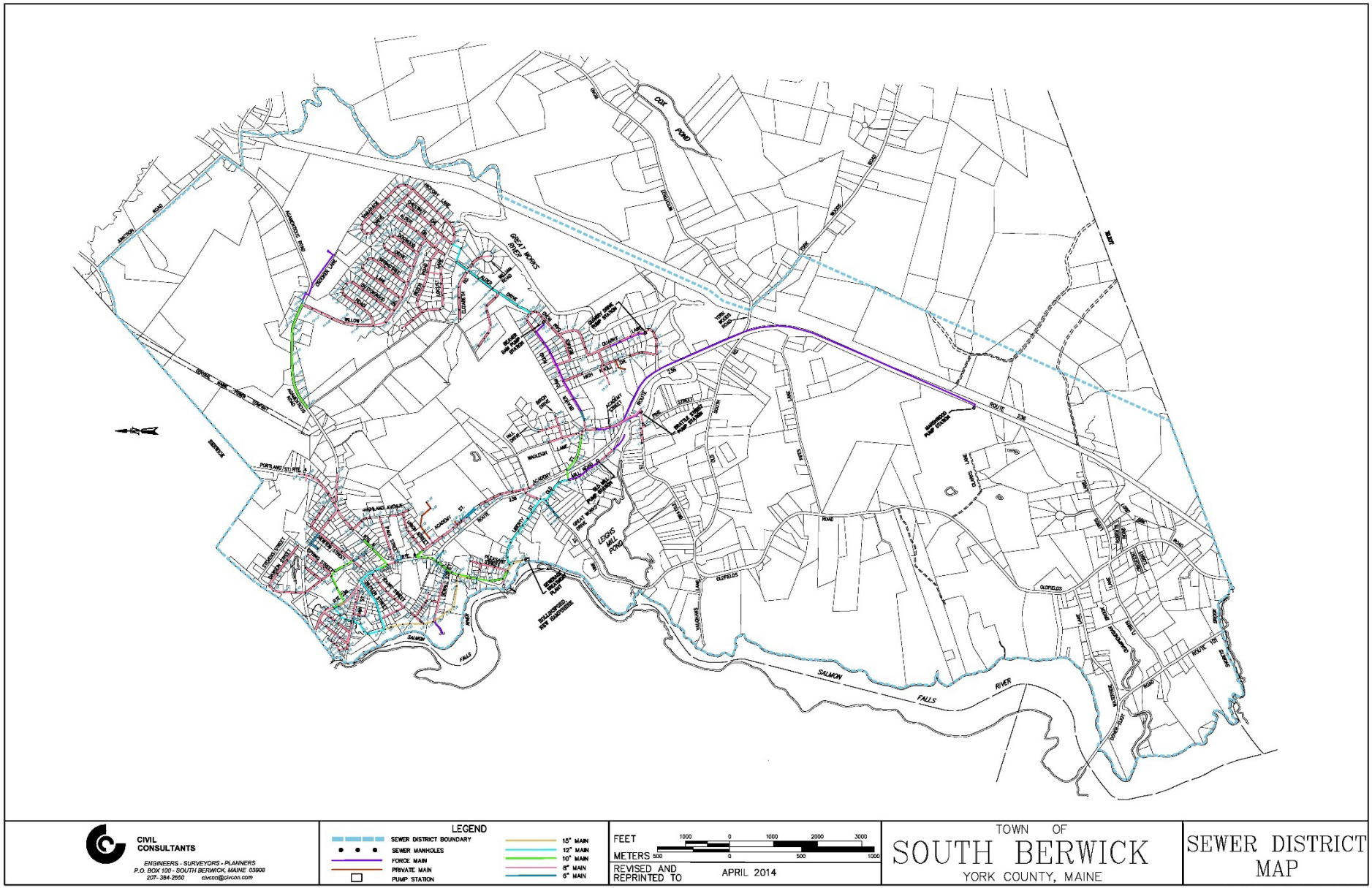
Potential areas of expansion of the water system include, but are not limited to, the Route 236 corridor, the Route 4 corridor, Route 91, Emery's Bridge Road, Brattle and Pine Street areas.

South Berwick Sewer District

South Berwick has a sewage collection and treatment system consisting of gravity sewers and force mains, five pump stations, and a treatment plant constructed as a primary facility in 1965 and upgraded to a tertiary plant in 1995. The system currently serves approximately 50 percent of the population. The collection system runs throughout the urban portion of the community. Through a force main, with a combination of District and private pump stations, service is provided to the regional high school, two commercial centers and one residential development along a two-mile stretch of Route 236, south of the town center. There are presently no plans to expand the service area.

The system is owned, operated, and maintained by the South Berwick Sewer District (SBSD), a quasi-municipal authority formed under the provisions of Chapter 226 of the Private and Special Laws of 1964. A five-member Board of Trustees, elected by District members, manages SBSD. The District has four full-time employees at the treatment plant, a 40-hour per week office manager, and an engineer who acts as a part-time administrative assistant. SBSD maintains an office at 293 Main Street.

Currently, there are approximately 1670 residential and commercial billed units. The District's annual budget for these units was over $1.12 million for 2023 with long-term debt of $345,000 outstanding at the end of 2022. The sewer rate is composed of a debt service rate and a variable service rate (which are both set annually with the variable rate based on water use). The debt service rate is $200 per unit and the variable service rate is $.012 per gallon for 2022.



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LEGEND

- SEWER DISTRICT BOUNDARY
- SEWER MANHOLES
- FORCE MAIN
- PRIVATE MAIN
- PUMP STATION
- 15" MAIN
- 12" MAIN
- 10" MAIN
- 8" MAIN
- 6" MAIN

FEET 1000 0 1000 2000 3000
METERS 500 0 500 1000

REVISED AND REPRINTED TO APRIL 2014

TOWN OF
SOUTH BERWICK
YORK COUNTY, MAINE

SEWER DISTRICT MAP

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SBSD has been accepting and treating septic system waste from septic haulers for the past twenty-five years. The rate for septage treatment has generated significant additional revenue for the District. This revenue has been used to fund a capital reserve account, and allow required system expansions, upgrades, and repairs without significantly impacting annual user rates.

The collection system consists of 18 to 20 miles of pipe ranging in size from 8 to 15 inches in diameter. All pump stations are equipped with an electronic surveillance system that allows remote monitoring of each station from the treatment plant. The District added approximately 165 new connections to the system from 2006 to present. Ground water infiltration has been and continues to be addressed through the upgrading of old sewer lines, and replacement of ancient private common lines.

The South Berwick Sewer District operates a tertiary treatment plant, which discharges treated wastewater to the Salmon Falls River off Liberty Street. The plant, and its operators, have received national recognition and awards for operating efficiency. Increased regulatory requirements, including the U.S. Clean Water Act and its amendments, emphasized biological (secondary) treatment of wastewater. District voters passed a bonding referendum in 1993. The current plant construction started in 1994 and went online in February 1995. The plant now provides tertiary treatment of wastewater through chemical treatment and process controls in response to further regulatory demands. Tertiary treatment removes/reduces certain harmful chemicals and metals from the wastewater before it can be discharged into the environment.

The plant is currently undergoing review by an engineering firm to assess its current operating systems, necessary upgrades, and ability to meet anticipated future regulatory requirements. In addition, with federal funding, the district is currently conducting a study to assess potential flooding impacts from sea level rise and climate change. The plant is designed and licensed to handle an average daily flow of 567,000 gallons per day (gpd) and a peak flow of 2.45 million gpd. The current domestic flow averages 295,000 gpd and it is estimated that the plant is currently operating at 52 percent of its capacity. The current capacity is sufficient to handle an average growth of 30 households per year for the next 20 to 25 years. Once the plant reaches 80 percent of its design capacity, the federal mandate requires the District to upgrade the facility.

Chapter 7 - Arts and Recreation

Purpose

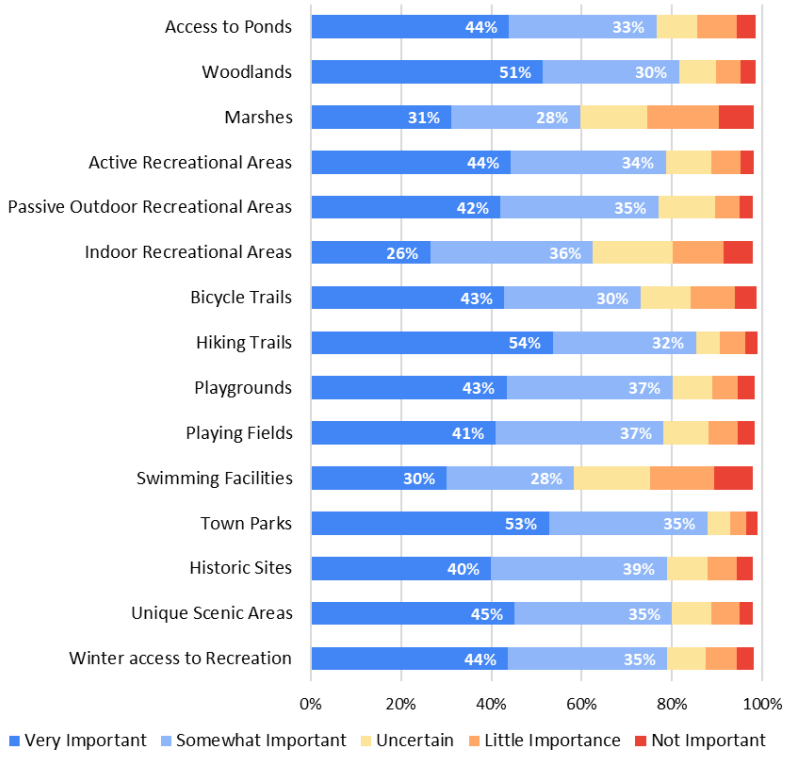
The purpose of this section is to inventory the many outdoor recreation activities and arts and cultural resources available to the community. These assets are key to quality of life, sense of place, and economic development, and understanding their place in the community may allow the town to support and prioritize these organizations and activities into the future.

Key Findings and Issues

- Beyond just locally conserved lands and trails, South Berwick enjoys the benefits of several other conservation organizations which manage preserves and other outdoor recreation opportunities for residents and visitors.
- South Berwick has an active community of volunteers and non-profit organizations which provide ample opportunities for arts and cultural activities, programs, and events.

Community Engagement Results

Overall, the community highly values access to outdoor recreation and open space, with over 50% of respondents calling almost all natural and recreational assets important for local tax dollar allocation.



*The importance of recreation and open space was also reflected by the focus group participants. All groups noted the **availability of recreational assets and abundance of public land as a major strength of the community** that provides benefit for economic activity, and quality of life. It was also noted **that connectivity between assets is lacking, especially with off-road trails or walking paths**, and would help access. Participants agreed that there is a **need for multi-generational activities** co-located in the same areas, so families can be entertained together.*

The groups also focused on community events and public

activities, which were named as community strength. However, most of these **events are run by volunteers and nonprofits disconnected from the municipality**, so participants shared concerns of losing those assets if volunteerism decreases. This led to a discussion of better communication between the municipality and volunteer groups, to **share resources and be transparent about needs.**

Outdoor Recreation Inventory

In addition to municipal parks and recreation programming, South Berwick has a wealth of recreation opportunities in town and in neighboring communities. Outdoor recreation is a hidden asset of many communities in Maine, being a source of economic development, health and wellness, and local quality of life. A recent study of York and Southern Oxford counties estimated that the outdoor recreation industry contributes nearly $105.3 million to the regional economy.

Key Assets

Great Works Regional Land Trust

The Great Works Regional Land Trust is a member-supported organization which provides conservation options and community programs for the Southern Maine communities of Eliot, South Berwick, Berwick, North Berwick, Wells and Ogunquit. Since 1986, the organization has preserved over 7,000 acres of natural, historic, agricultural, scenic, and recreational resources.

South Berwick's partnership with Great Works Regional Land Trust has been critical for supporting conservation and recreation access in the community. The GWRLT has six preserves in South Berwick that cover approximately 700 acres of conserved land. All preserves are open to the public and have trail networks which frequently connect to other conserved properties and towns.

GWRLT Preserves in South Berwick		
Preserve	**Acres**	**Assets**
Savage Wildlife Preserve	26	0.6 mile flat, easy trail network, Salmon Falls River views
Derocher's Memorial Forest	135	Extensive trail network (moderate terrain of about 4 miles) which abuts town Forest property and trails, Great Works River views.
Rocky Hills Preserve	200	3+ miles of trail (difficult terrain) shared with abutting Maine IF&W and town of Eliot properties. Large unfragmented forest alongside York Pond.
Orris Falls Conservation Area	213	3.76 miles of hilly trail network (moderate to difficult terrain) which provide access to diverse landforms such as the Balancing Rock and the Big Bump. Trails also connect to Mt. Agamenticus trail networks.
Kenyon Hill Preserve	108	1.0 mile loop trail (moderate terrain) through wetlands, forest, ledges, and multiple historic foundations.
Kimball Farm North Preserve	37	3+ miles of trail connecting to more extensive trail network in abutting properties. Frontage along Tatnic Brook, connecting to the Ogunquit River.
Source: Great Works Regional Land Trust, GWRLT Preserves		

Vaughn Woods State Park

Vaughn Woods State Park is a 165-acre tract located on the banks of the Salmon Falls River. The park includes an almost 4-mile trail network open to walking, hiking, cross country skiing, and horseback riding Memorial Day to Labor Day for a small fee. Walking or snowshoeing is permitted in the off season as well, with limited parking available outside the gate. The area includes both ecological and historically significant sites along the river, and around the Hamilton House grounds. The land is owned and managed by the Maine Dept of Agriculture and Forestry (DACF) Parks & Lands. Private facilities include 4 historic structures, a Rod and Gun Club, a church-owned gymnasium, and Berwick Academy.

Mt. Agamenticus

The Mount Agamenticus region covers approximately 30,000 acres of conserved land which spans South Berwick, York, and Wells making it one of the largest pieces of conserved and unfragmented forest land in direct proximity to the Atlantic Ocean on the entire East Coast. The conserved area is made up of many different preserves and owners, including the Maine DACF Wilderness Management Areas, York Water District, York Land Trust, Great Works Regional Land Trust, and the towns of York and South Berwick. Management of the resource is supported primarily by the town of York Parks and Recreation Department with support from others as well. Joint management is guided by the Mt Agamenticus Steering Committee. Approximately 2,757 acres of the Mount Agamenticus region fall within South Berwick.

There is an extensive trail network throughout the coastal forest (more than 20 miles), including the Mt. Agamenticus summit itself. Trails are designed for hikers, bikers, and seasonal activities such as snowshoeing. These trails interconnect both towns and recreational resources. Some trails are open to horseback riding and ATVs. The network also offers some ADA routes which are intended to be accessible for all ages and abilities. There is also regular educational programming, including a Tree ID Loop, StoryWalk, and the Summit Learning Lodge.

Eastern Trail

The Eastern Trail consists of 22 miles of off-road trail connecting to another 40 miles of on-road routes which make up a regional active transportation corridor which runs from South Portland to Kittery. The Eastern Trail Alliance is continually campaigning for additions to the off-road portions of the trail, which follows the Eastern Railroad corridor, with the goal of eventually completing an entirely off-road 60+ mile greenway. A portion of the trail in South Berwick is currently on-road, but plans for "Blazing the Trail South" have been in progress for a few years.

Overall, the trail provides a recreation and transportation opportunity, which even in its partially complete state brings over 19 million dollars in tourism revenues for the region. Access to regional trail networks is a benefit to local quality of life, wellbeing, and economic development.

Salmon Falls River

The Salmon Falls River offers almost 4 miles of paddling between dams along the South Berwick town border. Carry in boat launches are available at the Counting House Park and off Route 101 Dover/Eliot Road. The "Salmon Falls River Canoe Trip" guide is available online and appended to this chapter. The river is tidal, and has a varying shoreline of forests, coastal wetlands, and diverse species. The area is also historical, and old granite foundations and historic homes can also be found here. The Counting

House Park neighbors the Counting House Museum, where visitors can learn more about the history of the town and river.

Great Works River

There is one boat launch located on the Great Works River adjacent to the dam over Brattle St. This river can be paddled all the way to a takeout in North Berwick, through mostly calm flat waters. The North Berwick end can become shallow in the summer months, and occasionally downed trees and debris are issues.

Vaughan Fund

Established in 1949 after the passing of Elizabeth R. Vaughan, this trust fund aims to enhance recreation for the youth of South Berwick. The fund particularly focuses on winter recreation. Residents and local organizations with project ideas can apply for funding through the South Berwick website. Applications are due annually on February 28th.

Municipal Facilities & Sites

The town owns and maintains various parks, lands, and rest areas throughout the community. Those located in the downtown area are the main source of recreation in the densely populated area of town. Areas of note include:

Town Forest

The town Forest is an around 80-acre wooded parcel owned by the town. There are several marked trails throughout the parcel, ideal for walking, cross country skiing, or snowshoeing, some of which follow the Great Works River.

Cummings Mill Park & Shoetown Playground

The Cummings Mill Park is located immediately downtown and is a small public parcel of land adjacent to the Cummings Mill and the Community Center. The Shoetown Playground is also located at the site. The park has some courts available for public use but is otherwise an open area for passive use. The community has expressed interest in the past in adding amenities, or a public venue space.

Powderhouse Ski Hill

The town-owned ski area Powderhouse Hill, located on Agamenticus Road, is a unique public amenity. The hill has 3 trails and 175-feet of vertical elevation. There is a small lodge at the base with a snack bar and wood stove.

Community Garden

The town established a community garden in 1995 that has become an important community asset. The town utilized a grant from a non-profit called the Maine Coalition for Food Security to secure 12 boxes. The number of boxes has since expanded. It currently costs 15 dollars per year to utilize a garden box.

Recreation Services

Level of Service

Through the four preserves, one memorial forest, two conservation areas, and one state park, South Berwick offers 3,702 acres of conserved land. Given South Berwick's current population of 7,467, the town provides 2,017 acres of conserved land per 1,000 people (2 acres per person). This recreation service level far exceeds the minimum of 10 acres per 1,000 people recommended by the National Recreation Association. The town's service level will remain high in the future even with the highest population growth scenarios, especially as these estimates do not include agricultural lands or undeveloped forests not formally designated as conserved lands.

Arts & Culture Inventory

South Berwick's cultural assets consist of past and present people, places, and events. The town has many noted artisans, including writers, artists, performers, promoters, and supporters of the arts. The quiet rural setting, proximate to the ocean, lakes and streams, mountains, as well as nearby cities lends itself to creativity.

South Berwick has established three historic districts: Village Center, Liberty Street, and Conway Railroad Turntable. The historic districts host many colonial buildings, including the Sarah Orne Jewett House, the Hamilton House, and the Counting House. Structures within all three historic districts must meet standards for maintenance and obey rules regarding alterations and demolitions. These standards help protect the integrity of the historic districts and the historic buildings within them.

Key Assets

Old Berwick Historical Society

The Old Berwick Historical Society (OBHS) is a local non-profit which, "promotes public awareness of and appreciation for local and regional history through a variety of activities that explore, preserve, interpret and celebrate the past." The OBHS also owns and operates the Counting House Museum and its many exhibits and artifacts, open seasonally.

The Museum hosts many various cultural education programs, lectures, and events. Group tours for classes, family groups, etc. are also available. The OBHS is also responsible for a few exhibits and historic walks around the town, including installations at the South Berwick Library and South Berwick town Hall.

Sobo Central

Sobo Central is a local non-profit organization with the mission of supporting programs that help make South Berwick a vibrant and caring community. The organization's programming ranges from charitable community fundraising and giving, to community wide events that bring local residents and visitors together to enjoy public activities in public space. Community programs range from fund raising for the restoration of the historic Great Works Bridge, to providing help to families in need with school year necessities. Sobo Central is responsible for several popular local events such as Home for the Holidays, Hot Summer Nights, and Lanternfest. They also run the community Food Pantry, located on Ross Street and open periodically throughout the month.

Sobo Arts

Sobo Arts is a local group whose mission is to serve the creative population in South Berwick with shows, sales and programming that inspires a more vibrant arts community. Along with promoting

their list of member artisans, SoBo Arts holds the annual Holiday Arts Show at the Home for the Holidays event, for local artisans to promote and sell their goods. Other programing includes community workshops and mentorships for local students.

South Berwick Public Library

The South Berwick Public Library offers many programs and activities for patrons of all ages. For children and teens, there is regular offerings such as story times, clubs, game groups, and arts and crafts activities. For all ages, librarians offer book bundles of hand selected books for families without time to browse. Adult reading challenges and book clubs offer opportunities to engage with others. Various internet and technology offerings are available, including computers, wi-fi, software, scanners, faxing and printing.

South Berwick Community Garden

The South Berwick Community Garden is located on Willow Drive and offers raised garden beds to local community members for $15.00 a bed per year.

Civic Groups

South Berwick has an active Rotary Club which organizes several charitable activities and events throughout the year. The Rollinsford-South Berwick Lions Club is also active and sponsors similar charitable community activities. There are also local Boy Scouts, Girl Scouts and Cub Scout troops open to kids of varying ages.

Local Events

Strawberry Festival

The Strawberry Festival is perhaps the most well-known South Berwick community event. Held every June for the past 40+ years, the strawberry festival celebrates the beginning of summer harvest season with food vendors, local artisans, rides and games, and music & performances. The event brings thousands of visitors to South Berwick every year.

Home for the Holidays

Home for the Holidays is an annual event which includes holiday celebrations and activities, as well as the SoBo Arts Holiday Arts Show showcasing local artisans and vendors.

Hot Summer Nights

Hot Summer Nights is a seasonal event series hosted by a volunteer group aimed at promoting local musical talent in the region and providing free live music events for residents. Concerts are held on the Central School lawn and are open to the public.

Implications and Summary

This chapter begins to inventory the many other organizations and opportunities in South Berwick which provide health, wellness, and economic benefits through outdoor recreation and arts and cultural activities. The town has a wealth of engaged volunteers and non-profit organizations outside of the municipal facilities which encompass a wide variety of arts and recreation opportunities.

By any standard South Berwick is home to a vibrant arts community and a wide variety of outdoor recreation opportunities. These assets have helped establish the community as a vibrant place to live.

Going forward the town may consider what role the municipality should have in supporting the existing assets, organizations, and programs, or whether the town's current position is sufficient. Overall communications, coordination between, and awareness about existing assets are all places the town may consider taking on more responsibility.

Chapter 8 - Natural Resources

Purpose

The town's natural resources provide wildlife and fisheries habitat, recreational opportunities, drinking water supplies and scenic values. They are an essential part of South Berwick's rural character and established historical land use patterns which are still evident today. Proper land management and development regulations can mitigate the impacts of development on sensitive areas and ensure that these resources are protected into the future.

Specifically, this chapter will:

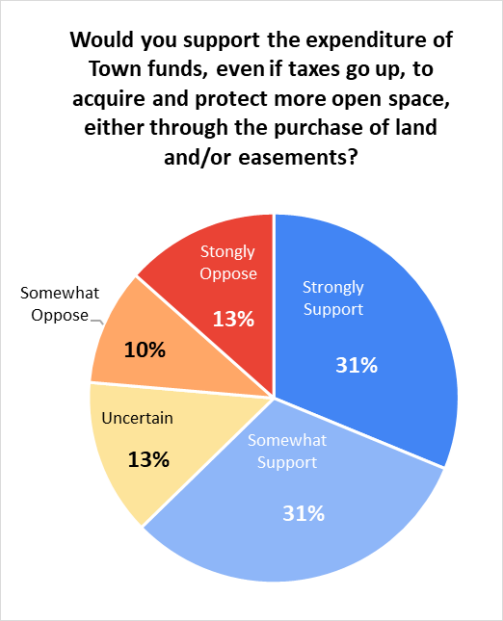
- describe South Berwick's critical natural resources, including water and land;
- assess whether these resources will be threatened by the impacts of future growth and development; and
- assess the effectiveness of existing efforts to protect and preserve these resources.

Community Engagement Results

Over 75% say open space and wildlife areas are important to have available in the future.

69% say Maintaining Open Space will be a serious challenge in the next 5 years.

More than 50% of respondents thought it was important to allocate local tax dollars to the preservation and creation of natural resources & recreation assets in every category.



In a question about what types of commercial development were most desirable, 44% of respondents said agricultural producers were very desirable, with another 33% responding somewhat desirable- making it the second most desirable type overall.

Overwhelmingly, respondents were in support of spending municipal dollars on the preservation and conservation of open space. This was true as well for the creation of more opportunities for access to natural resources and open space.

All four focus groups touched on the importance of valuable natural resources to the character of the town, and well-being of residents. The ***sheer number and diversity of natural resource assets in South Berwick was noted as a huge benefit****. The many organizations focused on environmental health and conservation in the region were noted. However, participants shared concerns* ***about imposing threats on conserved lands and important habitat,*** *including development pressure, water quality, flood risk, and climate change.*

*To better prepare for those threats the group noted **better communication between groups** (i.e. The municipality and the land trust**), considerations of climate change and water quality integrated into zoning** ordinances, and tools that **balance development growth and land conservation**.*

Land Conditions

Topography

Topographical features have a strong influence on the way a town develops. Steep slopes affect the feasibility of development, water drainage, and scenic views.

Like most of New England, the town's topography is a result of events that occurred during the last ice age at a time when ancient oceans extended over parts of Southern Maine and glaciers scraped, scoured, and coated other areas with glacial tills, sands, and clays. The topography in the southwestern part of town is generally flat to gently sloping, except where crossed by streams. The steepest slopes, over 15 percent, occur on formations called glacial drumlins, Powderhouse & Cummings Hills, south of Hamilton Brook on the Salmon Falls River and the western side of Rocky Hills along Route 236.

The north and eastern half of the town consists of glacial till, a mixture of sand, silt, clay, and stones. In the Tatnic Hills, this till also includes large boulders known as glacial erratics. These sections of South Berwick tend to have steeper slopes and contain more streams and pocket wetlands. The steepest slopes occur around Welch, Brown and Spring Hills, around Warren Pond, and are associated with brook drainages from Tatnic. Orris' Falls is a small brook which drops 100 feet in elevation over a 500-foot run. Chick's Brook also has a gorge type feature. Both have been permanently conserved as open space as have the Spring Hill Cliffs and the Balancing Rock, a unique glacial erratic. The overall patterns can be seen in the ***Topography*** map following this section.

Land Cover

South Berwick is a generally forested community, and despite continued growth over the decades, many large areas of contiguous forest remain. Much of the open land is found within one to two miles of the Salmon Falls River and the Great Works River corridors. Other open areas are interspersed along roadways of the town that lie near/within the Mount Agamenticus region, which is heavily forested.

Beginning with Habitat designates Focus Areas of Statewide Ecological Significance, which are determined by overlapping critical habitat, rare plants and species, and land cover that should be considered a top priority for conservation. 10,287 acres, or almost 50% of South Berwick's total land area falls within the Mount Agamenticus Focus Area. This 34,000+ acre region is the largest Focus Area identified in York County and is significant given that it is one of the largest remaining expanses of undeveloped forest in coastal New England. It is also an ecological transition area, meaning that for some species, this is the northernmost reaches of their habitable area. South Berwick makes up the second largest area of the region, second to York. See ***Beginning with Habitat Natural Resources Cooccurrence*** Map in the appendix to this chapter.

Soils

Since soil can have an impact on most land use activities, it is important to understand their characteristics, capacity, and limitations. Many of South Berwick's soils have limitations for development. Often these limitations can be overcome through special planning, design, construction and/or maintenance. In other cases, the soil is entirely unsuitable for particular uses.

Soil Association	Location	Limitations
Adams-Colton Association	Outwash plains, kaneterraces and eskers (ridges). Village area.	Have slight to moderate limitations for on-site sewage disposal; groundwater contamination can be a hazard. Slope is the major limitation for septic systemsand construction.
Naumburg-Croghan Association	Outwash plains, Northwestern andextreme southernportions of town.	Somewhat poorly drained topoorly drained. Croghan soils are moderately well drained. Limitations are wetness due to seasonal high-water tables and droughtiness insummer due to rapid permeability. Naumburg soils are generally not suitable for on-site sewage disposal or construction.
Marlow-Bray ton-Peru Association	Drumlins (low elongatedhill) and glaciated uplands. An area just north of the village and central and southern portions of town.	Slow permeability in substratum and a seasonal perched water table are major limitations for most uses. Slope is the limitation in moderately step areas.
Hermon-Lyman Association	Plains, hills, and ridges. Large portion of centraland eastern South Berwick.	Poorly suited for on-site septic systems and construction. Limitations are bedrock exposures, shallow soil depth of the Lyman soils, and the high-water table and low strength of Sebago soils.
Lyman-Rock Outcrop-Sebago Association	Lyman and rock outcropson hills and ridges; Sebago soils in depressions. Tatnic andRocky Hills section of town.	Poorly suited for on-site septic systems and construction. Limitations are bedrock exposures, shallow soil depth of the Lyman soils, and the high-water table and low strength of Sebago soils.
Scantic-Raynham-Buxton Association	Marine Plains and lake plains. Area surrounding the village and small section in the northernpart of town.	Slope, the high water table in the Scantic and Raynham soils, and slow permeability in the Scantic and Buxton soils are the main limitations for most uses.
Lyman-Rock Outcrop-Scantic Association	Lyman soils and Rock Outcrop on ridges and hills; Scantic on marineplains.	The major soils are not suitable for on-site septic systems or construction. Limitations are bedrock exposures, droughtiness, shallow depth to bedrock in the Lyman soils, and high-water table in Scantic soils. Slope is a limitation in steeper areas.
Source: Soil Survey of York County, USDA		

Soil survey information is useful for town-wide planning. However, higher intensity soil survey is necessary for site specific planning and development. According to the Soil Survey, there are seven soil associations located in South Berwick. Associations are groups of different soil types that usually occur together, and each association has major and minor soils within it. The following table describes each of South Berwick's seven associations.

Soil Suitability

Various soil characteristics, such as depth to water table, depth to bedrock, flooding potential and erosion potential can present serious limitations to development. For example, roads, utilities, and cellar foundations are difficult and expensive to build when bedrock is present.

Perhaps one of the most limiting characteristics is depth to water table. Wet, very poorly drained soils where the water table is at or within nine inches of the surface for some parts of the year are inherently unusable for septic system use and house building. Poorly drained soils (9-18 inches depth to water

table) also place severe limits on the use of the land. Frequent fluctuations in water level as well as frost heaving can be damaging to buildings, roads, and the proper functioning of septic systems. These limitations can sometimes be overcome through special design and maintenance.

Moderately well drained soils (18-30 inches to water table) have less severe limitations on land uses, and deep, well drained soils present few problems. The latter have a depth greater than 30 inches to the water table.

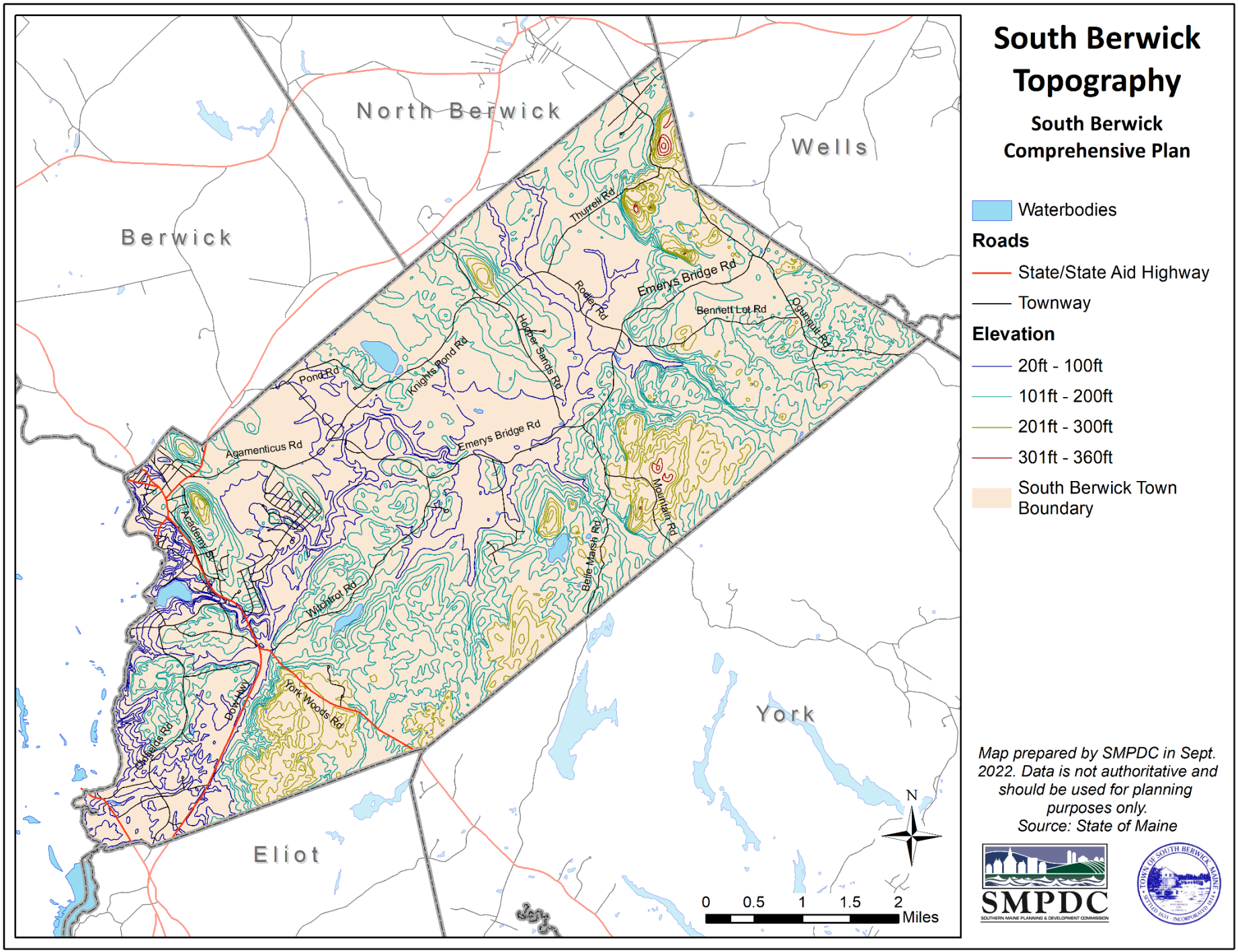
Areas with poorly drained and very poorly drained soil can be found throughout South Berwick. The largest concentration of poorly drained soils in located just northeast of the village area and extends beyond Agamenticus Station. This information is available in the ***Soil Suitability for Low Density Development*** map following this section.

Soil Suitability	Total Acres	Percent of town Area
High	2,783	13.4%
Medium	5,762	27.8%
Low	3,403	16.4%
Very Low	8,400	40.5%
Source: Natural Resources Conservation Service Data		

Implications

South Berwick has uniquely intact natural resources. A wide variety of natural ecosystems exist. The coastal to upland forests host extensive wildlife resources and recreational opportunities for people. The capacity of these systems depends upon their being buffered from the effects of development. This is particularly the case in those areas not protected by shoreland zoning or designated by the state as essential habitat.

South Berwick has utilized Shoreland Zoning to protect scenic and other resources (such as the Balancing Rock, Orris Falls and a scenic outlook near Orris Falls). The Shoreland Zoning guidelines allow for these types of protections. Additionally, South Berwick utilizes a Resource Protection Overlay Zone that encompasses 250 feet from a broad list of environmental resources.



South Berwick Topography

South Berwick Comprehensive Plan

Waterbodies

Roads

State/State Aid Highway

Townway

Elevation

20ft - 100ft

101ft - 200ft

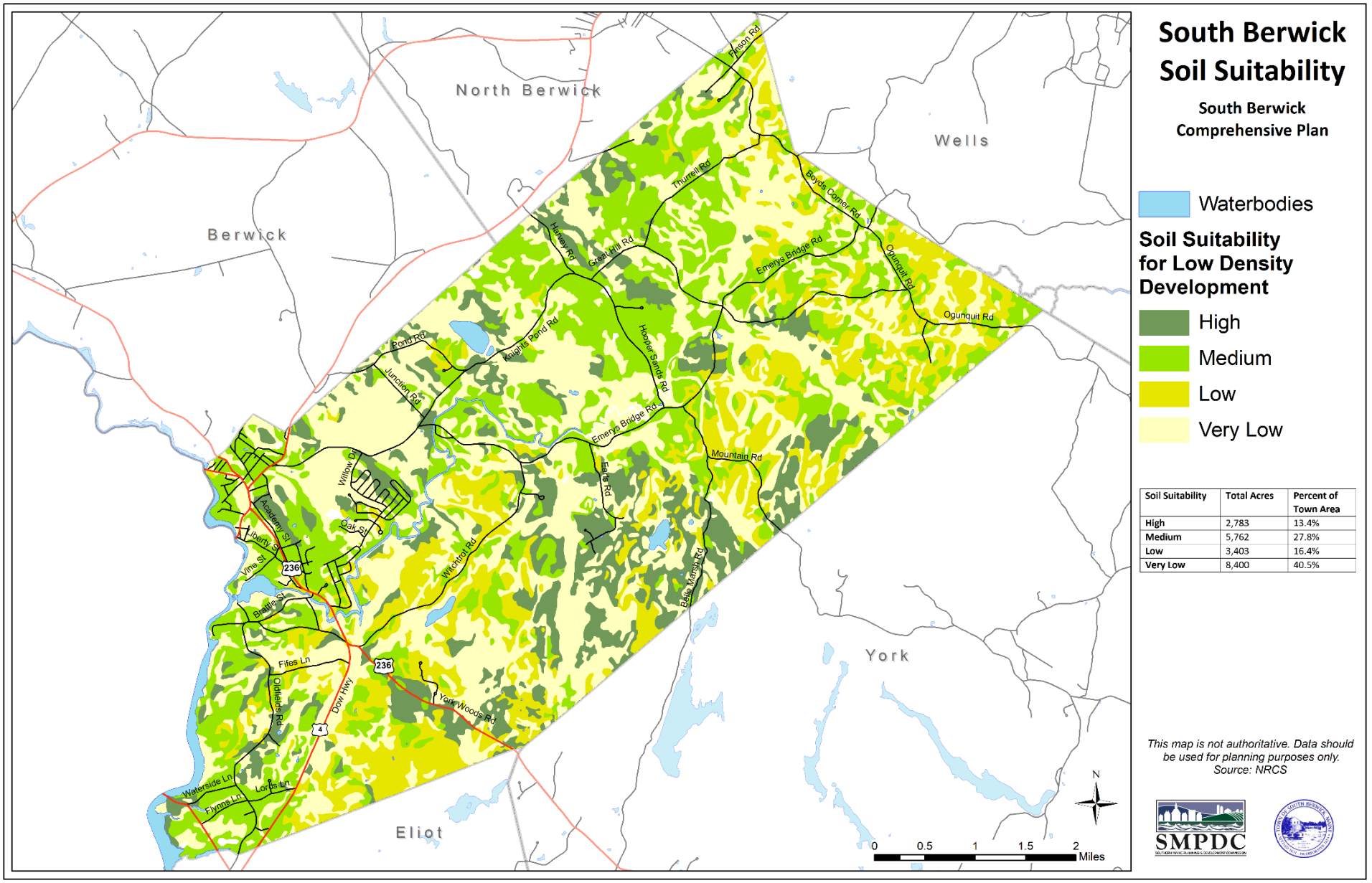
201ft - 300ft

301ft - 360ft

South Berwick Town Boundary

Map prepared by SMPDC in Sept. 2022. Data is not authoritative and should be used for planning purposes only.
Source: State of Maine

SMPDC
SOUTHERN MAINE PLANNING & DEVELOPMENT COMMISSION


South Berwick
Soil Suitability
South Berwick
Comprehensive Plan
North Berwick
Wells
Berwick
York
Eliot
Waterbodies
Soil Suitability
for Low Density
Development
High
Medium
Low
Very Low
Soil Suitability | Total Acres | Percent of Town Area
High | 2,783 | 13.4%
Medium | 5,762 | 27.8%
Low | 3,403 | 16.4%
Very Low | 8,400 | 40.5%
This map is not authoritative. Data should be used for planning purposes only.
Source: NRCS
SMPDC
N
0 0.5 1 1.5 2
Miles
Pierson Rd
Thurrell Rd
Boyds Corner Rd
Halsey Rd
Great Hill Rd
Emerys Bridge Rd
Ogunquit Rd
Knights Pond Rd
Hoopet Sands Rd
Pond Rd
Junction Rd
Willow Dr
Academy St
Liberty St
Oak St
Vine St
Wilchrol Rd
Mountain Rd
Field Rd
Belle Marsh Rd
Bradley St
Fifes Ln
Old Berwick Rd
Dow Hwy
York Woods Rd
Waterside Ln
Flynns Ln
Lords Ln
236
4

Water Resource Conditions

Surface Water

The town's surface water resources include two rivers, five ponds and numerous brooks, streams and wetlands. The ***Water Features*** map following this section shows locations and extents of the significant surface water resources and wetlands of South Berwick.

The Salmon Falls River forms the southwesterly boundary between South Berwick and the State of New Hampshire. It is the town's link environmentally and historically with the Atlantic Ocean. At its confluence with the Cocheco River, it becomes the Piscataqua River, which in turn flows past Portsmouth and into the Atlantic. The water of the Salmon Falls River is tidal up to Route 4 Rollinsford/ South Berwick bridge.

Most of South Berwick lies within the Salmon Falls River watershed. A portion of the northeastern corner of the town lies within the Ogunquit River watershed, and a portion of the easterly side of town lies in the York River watershed through two sub-shed systems, Belle Marsh and York Pond.

The Great Works River, Driscoll Brook, Hamilton Brook, Lord's Brook, Quamphegan Brook and Shorey's Brook all drain directly into the Salmon Falls River. The Great Works River watershed, which is a sub-watershed of the Salmon Falls River, has a total drainage area of 86 square miles, of which about 40 are in South Berwick. Tributaries of the Great Works River in South Berwick are Boyd Brook, Chick's Brook, Hussey Brook, Hooper's Brook, Lover's Brook, White Marsh Brook, Knight's Brook and numerous other unnamed streams. The ***Watersheds*** map following this section shows the divides between drainage areas throughout town.

Rivers & Streams

The state of Maine has had a water classification system since the 1950's, which helps to designate potential uses of waterbodies, and therefore the corresponding water quality that should be maintained for each body based on those uses. An overview of the surface water classifications is below.

Maine DEP Surface Water Classification

> **Class A:** Water at the highest quality potentially acceptable for water supply after filtration.
>
> **Class B**: Water of the second highest quality acceptable for swimming and other recreational uses and is potentially a water supply after treatment.
>
> **Class C:** Water of the third highest quality potentially acceptable for boating or industrial water supply following treatment.

Most rivers and streams in South Berwick are classified as Class B for water quality, including the entire length of the Great Works River. The only body classified as Class A is Chick's Brook, both in South Berwick and York. Some sections of the Salmon Falls River are classified as Class C, including one which extends from the Market Street bridge in Berwick to the Route 4 bridge in South Berwick. This covers only a short section within South Berwick town boundaries alongside the village downtown. From that point south, the river is classified as a marine or estuary waterbody, and falls into class SB, the 2nd highest class for this type. For more information on the classification system, visit the Maine Department of Environmental Protection website.

South Berwick has provided greater protections than required by the Shoreland Zoning Guidelines for the Salmon Falls River and for the Great Works River in the R3 and R4 zones. Setbacks for residential development in these areas is 250 feet.

Lakes and Ponds

South Berwick's five waterbodies are Cox Pond, Knight Pond, Warren Pond, Leigh's Mills Pond, and Round Pond. Cox Pond, Knight Pond, and Warren Pond are all naturally occurring great ponds. A great pond is considered any inland waterbody greater than 10 acres. These waterbodies have stricter protections in terms of development regulation, under the Natural Resources Protection Act. These regulations seek to minimize the activities which pose a risk to the overall health of the waterbody, including runoff, pollution, etc. The Leigh's Mill Pond is a man-made impoundment. Round Pond, although it is very small, is significant given its geologic formation as a kettle pond.

South Berwick's five ponds all lie within the Great Works River watershed. The table below contains information on the physical characteristics of these water bodies.

Name	Area (acres)	Perimeter (miles)	Mean/Max Depth	Fishery Type	% 500-m buffer in developed land cover
Cox Pond	19	0.9	9/16	Warmwater	2%
Knight Pond	49	0.3	9/18	Coldwater & Warmwater	9%
Leigh's Mill (Great Works) Pond	36	1.2	10/23	Coldwater & Warmwater	24%
Round Pond	1	0.2	N/A	N/A	N/A
Warren Pond	25	0.9	13/32	Coldwater	0%
Source: Lakes of Maine, Lake Stewards of Maine					

South Berwick has zoned much of the shoreland around these ponds as Resource Protection, creating a setback from water at 250 feet for residential development.

Threats to Surface Water Resources

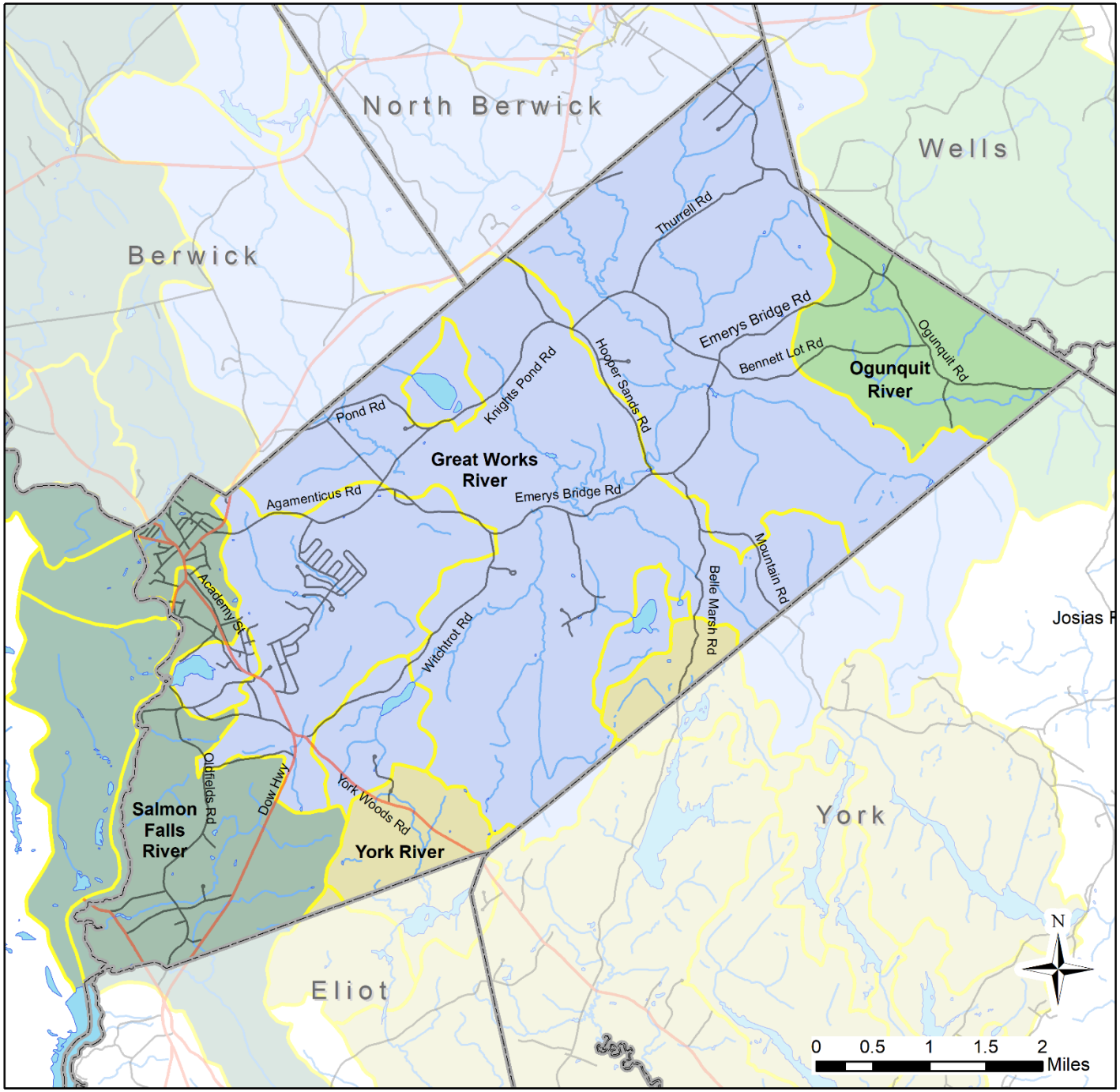
Rivers, streams, lakes, and ponds are not bound by town boundaries, so land use planning along rivers and streams affects downstream communities.

There are two types of pollution that threaten surface water: point and non-point. Point pollution is from a known single source, such as a pipe discharging into a stream. Non-point pollution comes from a general source such as stormwater runoff that carries erosion into a stream. The only regulated source of point pollution in South Berwick is the town wastewater treatment facility which discharges treated wastewater into the Salmon Falls River.

Non-point sources of pollution are difficult to study and monitor. They are likely to occur where there are large areas of impervious surfaces and development, or where land use is being converted from rural or open space to developed areas. These effects could be minimized with good planning of development with use of best management practices (BMP's) before, during and after construction throughout the watershed. South Berwick is required to follow certain policies and enact stormwater regulations because of its status as a Municipal Separate Storm Sewer System (MS4) Community.

The major non-point source threat to water quality for most lakes and ponds is increased nutrient levels, namely phosphorus. Excess nutrient levels can cause eutrophication, or the overgrowth of plants and algae which decreases oxygen, degrading water quality and killing off other wildlife. The per acre phosphorus allocation defines how much phosphorus each acre of land in a lake's watershed is allowed to discharge in stormwater runoff when developed. Phosphorus allocations range from about 0.02 lb/acre/year for very sensitive lakes in high growth areas to 0.15 lb/acre/year for less sensitive lakes in very low growth areas. The total phosphorus exported by a development can be limited by limiting impervious surfaces in areas near lakes and ponds and implementing Low Impact Development (LID) Practices.

Another common threat posed to waterbody health is the spread of invasive species. There are no known invasive species in the five ponds. The Salmon Falls River Reservoir has had a confirmed variable leaf milfoil investigation for several years. It is not clear if there is an organization leading any removal efforts.



South Berwick Watersheds

South Berwick Comprehensive Plan

Roads

- State/State Aid Highway
- Townway

Waterbodies

SECOND_RIV

- Great Works River
- Ogunquit River
- Salmon Falls River
- York River
- South Berwick Town Boundary

Map prepared by SMPDC in Sept. 2022. Data is not authoritative and should be used for planning purposes only.
Source: Beginning with Habitat

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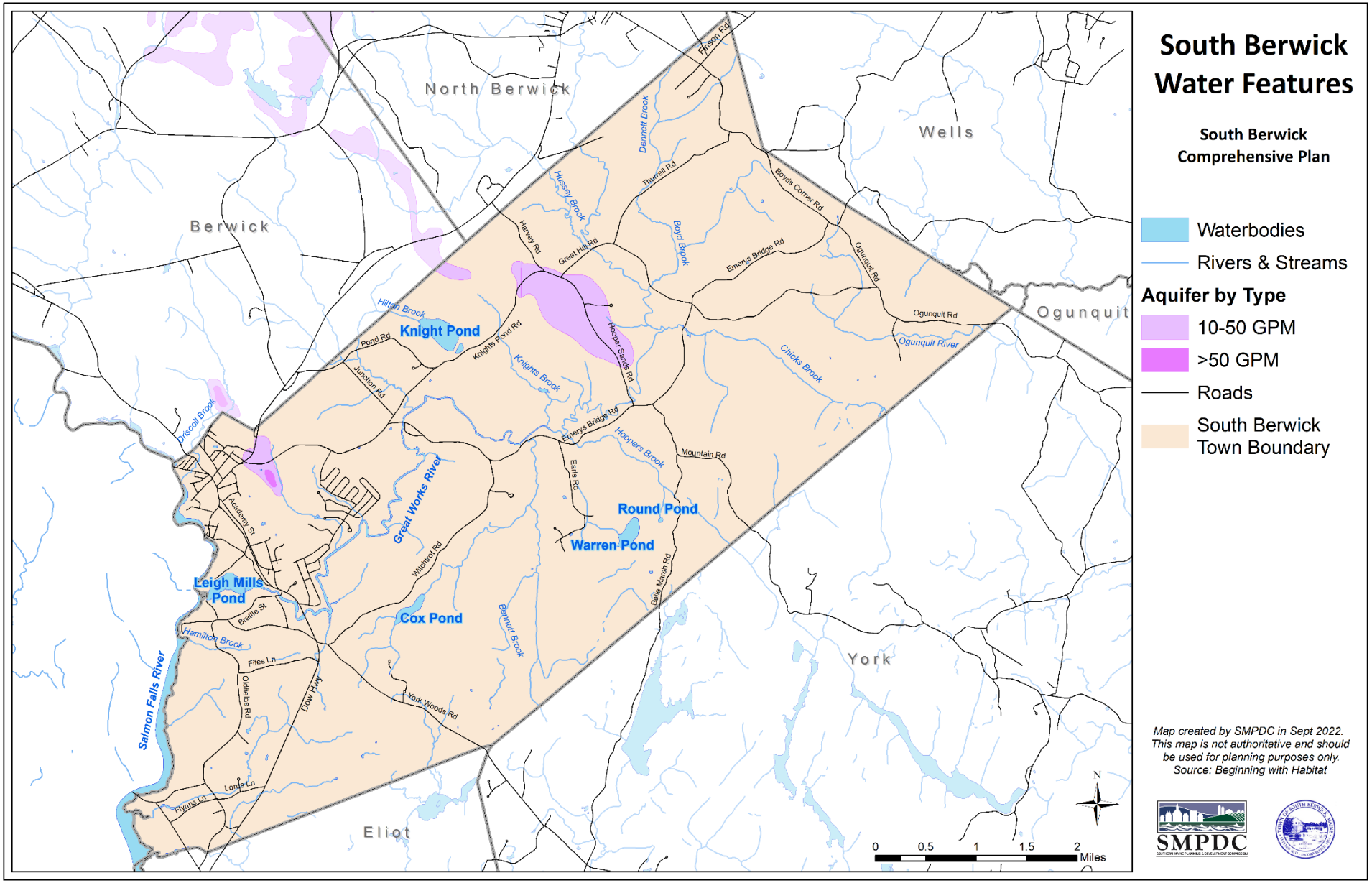
SOUTHERN MAINE PLANNING & DEVELOPMENT COMMISSION


South Berwick
Water Features
South Berwick
Comprehensive Plan
Waterbodies
Rivers & Streams
Aquifer by Type
10-50 GPM
>50 GPM
Roads
South Berwick
Town Boundary
North Berwick
Berwick
Wells
Ogunquit
York
Eliot
Knight Pond
Round Pond
Warren Pond
Cox Pond
Leigh Mills
Pond
Great Works River
Salmon Falls River
Hilton Brook
Driscoll Brook
Hamilton Brook
Knights Brook
Chicks Brook
Hoopers Brook
Bennett Brook
Dennett Brook
Hussey Brook
Boyd Brook
Ogunquit River
Pond Rd
Knights Pond Rd
Junction Rd
Academy St
Bradley St
Fifes Ln
Oldfields Rd
Dow Hwy
York Woods Rd
Lords Ln
Flynns Ln
Witchtrot Rd
Earls Rd
Belle Marsh Rd
Mountain Rd
Emerys Bridge Rd
Hooper Sands Rd
Great Hill Rd
Harvey Rd
Thurrell Rd
Boyds Corner Rd
Ogunquit Rd
Elson Rd
0 0.5 1 1.5 2 Miles
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Map created by SMPDC in Sept 2022.
This map is not authoritative and should
be used for planning purposes only.
Source: Beginning with Habitat
SMPDC

Wetlands/ Wetlands Classification

Wetlands are an important natural resource, often identified by non-permeable soils, water table at or near the surface, and the presence of certain vegetation. Wetlands are very difficult areas to develop, given the need for expensive infill and engineering. At the same time, it is important to keep these areas undisturbed due to their many important environmental functions.

Key Environmental Functions of Wetlands:

- Act as groundwater recharge and cleansing areas
- Provide habitats for rare and endangered plants and animals
- Maintain lake and river quality by controlling runoff of nutrients
- Store and slowly discharge high water, thus reducing the potential for floods
- Sediment retention areas controlling agricultural runoff
- Provide visual and open-space value

Several laws regulate the activities that take place in or around wetlands. On the national level, the Clean Water Act gives authority to the Army Corps of Engineers to regulate the dredging and filling of wetlands. Maine has two laws that provide protection for wetlands. The first is regulated by The Maine Department of Environmental Protection, and monitors the dredging, filling, draining, and construction in or over, or within 100 feet of any wetland. There is also a requirement under the Maine State Subdivision Law that states that all wetlands are to be shown on subdivision plans.

The Maine Beginning with Habitat Program recommends referring to the National Wetlands Inventory, available on the online map view. These maps are not a replacement for individual wetland surveys but can direct resource management efforts to areas of highest probability for occurrences.

The location of wetlands is important to keep in mind when the town considers growth and future development. Zoning and appropriate uses should be considered in areas of high wetland density, or wetlands noted for significant importance. The wetlands located within town can be seen on the ***Wetlands*** map following this section.

Wetlands and Floodplains

The town has identified its floodplains and established floodplain management ordinances in accordance with state and federal standards. Fortunately, South Berwick has zero areas identified as "A" flood zones or special hazard flood areas. Natural wetlands are key to floodplain management. The Nature Conservancy's *Land Conservation Priorities for the Protection of Coastal Water Resources* (2016) identified areas across the watershed with high flood storage capacities that reduce flood risks to downstream infrastructure. South Berwick has a substantial area identified as providing this flood storage function, a portion of which are wetlands, seen in the map below.

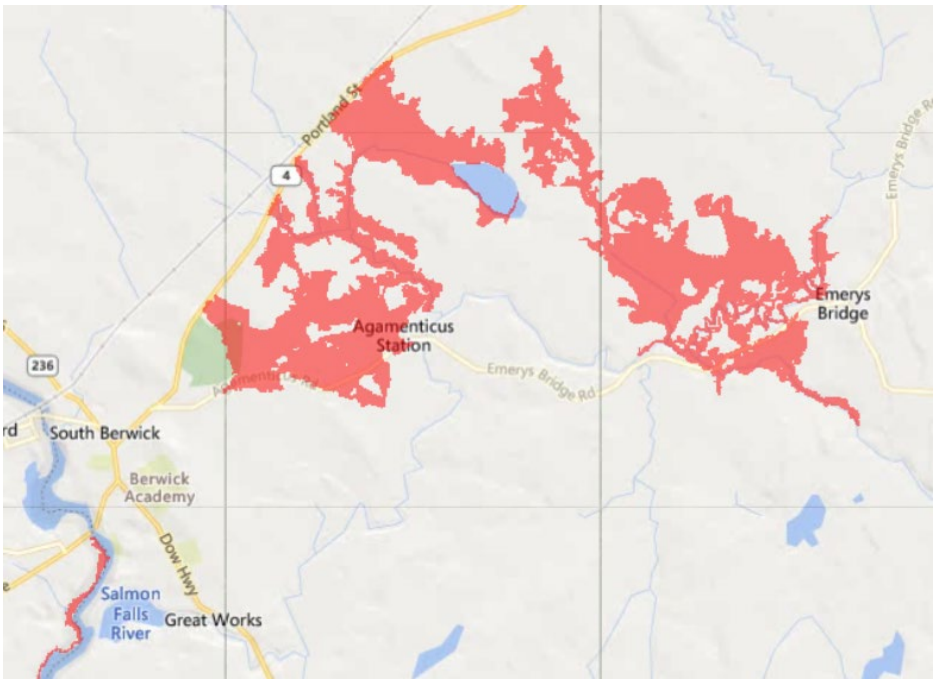
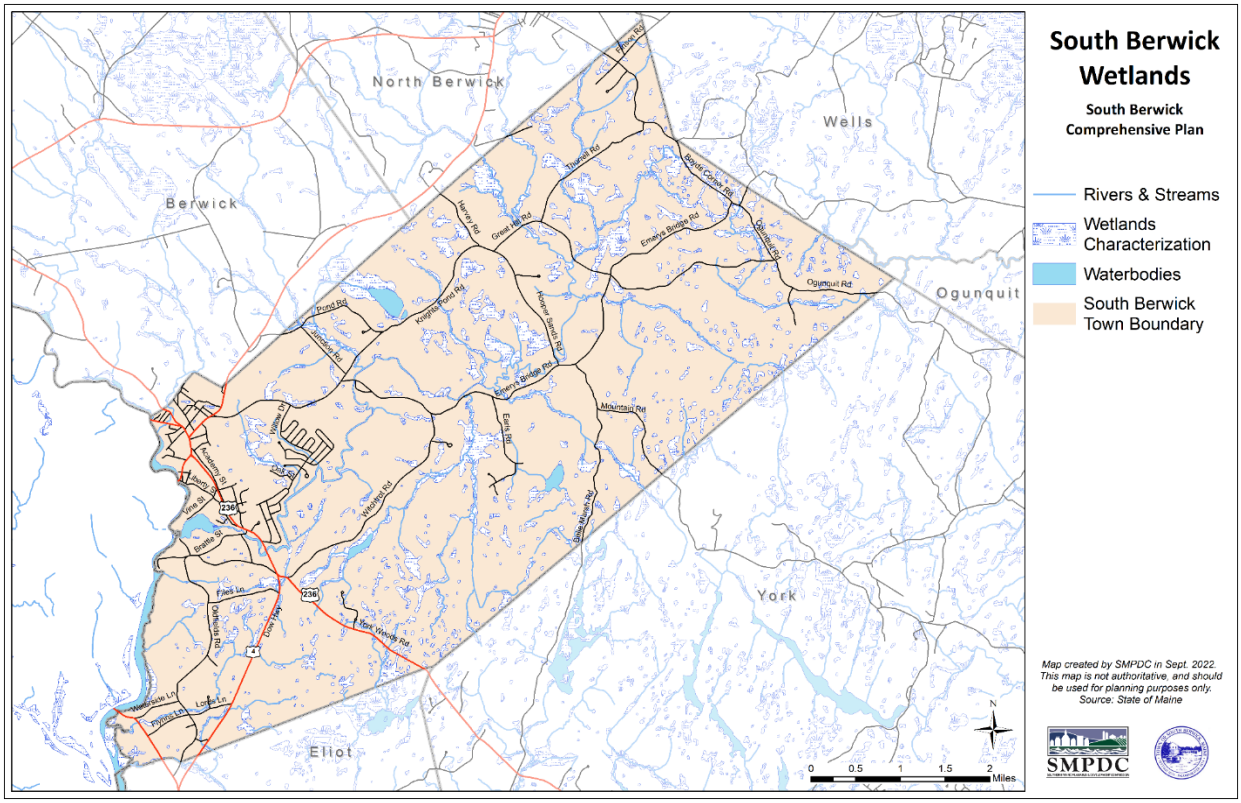


Image from the NH Coastal Viewer, showing areas of flood mitigation and risk management, 2016

Wetland Regulations

The Mandatory Shoreland Act, Title 38 MRSA Sections 435-448, requires that municipalities regulate the area of land around wetlands. Currently, only high value wetlands of 10 or more acres are offered Resource Protection Zoning. This provides a 250-foot setback for dwellings and septic systems. Other land uses such as parking lots and clearing of vegetation are reviewed at time of subdivision within a buffer of 250 feet. Wetlands under two acres are given a 25-foot setback. Currently, the Department of Environmental Protection (DEP) allows up to 10,000 feet to be filled in wetlands with a permit by rule. They do not recognize town data or rules in their permit system. Wetlands of 10 acres or more, which are not part of a great pond or river, are protected by the state's Natural Resource Protection Act, Title 38 MRSA Sections 490-A through 480-S. The town of South Berwick regulates wetlands of 2 acres or more, providing more protection than afforded under state shoreland zoning guidelines.


South Berwick Wetlands
South Berwick Comprehensive Plan
Rivers & Streams
Wetlands Characterization
Waterbodies
South Berwick Town Boundary
North Berwick
Berwick
Wells
Ogunquit
York
Eliot
Map created by SMPDC in Sept. 2022. This map is not authoritative, and should be used for planning purposes only. Source: State of Maine
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Ground Water

The residents of South Berwick rely on ground water for their safe drinking water. Continued assurance of plentiful, clean water is dependent on wise management of the resource. Aquifers (underground geologic formations which contain usable amounts of water) can be contaminated by many types of land uses that discharge pollutants into or onto the ground. The primary sources of ground water contamination in Maine are malfunctioning septic tanks, leaking underground fuel storage tanks, salt leachate from salt/sand stockpiles, and leachate from landfill refuse. Certain land uses such as automobile graveyards/ junkyards, agricultural use of pesticides and herbicides and certain industrial activities also have potential for contaminating ground water.

Two types of aquifers are present in South Berwick: sand and gravel aquifers and bedrock aquifers. At least several of the sand and gravel aquifers extend into Berwick and Eliot. An area of potential bedrock aquifers extends into Berwick and North Berwick. The Maine Geological Survey identified several sand and gravel aquifers. The "Aquifer Protection Study" done March 1989 by R.W. Gillespie & Assoc. (on file in Planning Office) further identified sand and gravel aquifers and located bedrock aquifer zones that appear to have significant water supply potential. This study also identified potentially hazardous waste generators and developed an aquifer protection ordinance.

Four sand and gravel aquifers have been identified in South Berwick. These are aquifers that have the potential to produce significant (greater than 10 gallons per minute) quantities of groundwater. The aquifers located in town are displayed in the ***Water Features*** map.

The aquifer that underlies the village portion of the town supplies the Water District's seven wells off Agamenticus Road and Willow Drive. The Water District has completed a study on Willow Drive well #2 which has examined both quality and quantity for that well water source. The Water District study identified a likely area of groundwater recharge potential which should be considered for protection from impervious surface development to protect the recharge capacity of the well. The Water District is discussed further in the Public Facilities chapter of this plan.

The aquifer located in the most southerly part of town is a source for individuals and Marshwood High School. According to Gillespie & Assoc., the water quality in this area is lower than the village aquifer due to iron and manganese content.

The Hooper Sands Road aquifer is located just southwest of Great Hill. Approximately 9 individual wells along Hooper Sands Rd. and Knight's Pond Rd were contaminated with volatile organic compounds. These wells were believed to be supplied by the sand and gravel aquifer. The Hooper Sands Hydrogeological Study performed by the US EPA and the MEDEP outlined the source, extent, and type of contamination. The South Berwick Water District has run a 12" water main along Knight's Pond Rd to service households in the area. Since a public water supply has now been provided the MEDEP has discontinued the monitoring of the test wells drilled to perform the study. Contamination of the aquifer and movement of the contamination plume still exists and is no longer being monitored. Subsequent ME DEP studies in 2019 lead to issuance of an April 21, 2021 Addendum to the January 12, 1993 prior designation of an Uncontrolled Hazardous Substance Site. Specific recommendations are made in the addendum in included in 2019 Domestic Well Sample Results, Hooper Sands Road Site and are summarized as follows:

Hooper Sands Road Site
ME DEP Addendum
Designation of Uncontrolled Hazardous Substance Site
Delineation of Contaminated Area
April 21, 2021

Based upon further Maine Department of Environmental Protection investigations in 2019, the Commissioner amended (Addendum) the prior underlying Designation dated January 12, 1993 and further delineated the Groundwater Contaminated Area. The amendment is signed by Commissioner Melanie Loyzim.

The Addendum lists the parcels in the delineated area.

Also included is Addendum Attachment 2: November 7, 2019, Memorandum regarding Uncontrolled Sites specifically Hooper Sands Road Site (HSRS) remediation number REM00847. This memo summarizes sampling completed in 2019 and further examines detection of tetrachloroethylene (PCE) in a 2018 water well. Further testing revealed trichloroethane (TCA) withing the source area.

Significant conclusions in the ME DEP memo include:

- There is no technology capable of reducing the concentrations throughout the overburden and underlying bedrock below acceptable levels,
- The risk pathway to humans continues to be the pumping of contaminated water for human consumption.
- Residents and businesses should utilize the South Berwick Water District (SBWD) water supply as a primary source of potable water.
- Wells located on or adjacent to the source area or on/adjacent to the plumes are at-risk of being impacted as water is pumped from the aquifer. Therefore, properties adjacent to or downgradient of the source areas should utilize SBWD waterline for human consumption
- It would be prudent for the town of South Berwick to use this information when issuing permits for new construction in this area.
- Further development in this area may need to consider extending the waterline.

Ground Water Quality

Though overall, the quantity and quality of South Berwick's ground water is good, there are issues with iron and manganese for both private well owners and the South Berwick Water District. A few areas in town experience issues with sulfur in private wells. Notable is the Hooper Sands Road Site with known and documented contamination which is mitigated by public water supply.

Threats to Ground Water

Groundwater can be contaminated by many types of land uses that discharge pollutants into or onto the ground. The primary sources of ground water contamination in Maine are malfunctioning septic tanks, leaking underground fuel storage tanks, salt leachate from salt/sand stockpiles, and leachate from landfill refuse. Certain land uses such as automobile graveyards/ junkyards, agricultural use of pesticides and herbicides and certain industrial activities also have potential for contaminating ground water.

Polluted aquifers in the Hooper Sands area continue to pose a threat as the plumes slowly migrate. This area and others documented should continue to be monitored. It is prudent for the town of South Berwick to consider these factors when issuing permits as part of the review process includes safe sources of drinking water for human consumption. The South Berwick Water District has extended water mains to serve the area and should be extended as necessary.

Future residential, commercial, and industrial development can impact ground water through onsite wastewater treatment, improper storage of hazardous materials and improper ground surface treatments.

In Maine, PFAS is an emerging issue and threat to ground water. “PFAS” refer to a group of man-made chemicals known as Per- and Polyfluoroalkyl Substances. PFAS has been widely used in household products and industrial settings for decades. PFAS have been found in Maine in a number of places including agricultural sites, drinking water supplies, surface waters, landfills, wastewater, sludge and septage spreading sites, and remediation and cleanup sites. In general, PFAS can enter the environment through direct releases from specific PFAS-containing products (e.g., certain firefighting foams), from various waste streams (sludge and septage when land applied, leachate from unlined landfills), and other pathways still being researched. In Maine, sludge and septage that may contain PFAS was applied to various places for nutrient value. This activity was licensed because at the time little was known about PFAS as an emerging contaminant. Research at the state level continues, as several laws have been passed in recent years to investigate the extent of the issue.

The South Berwick Conservation Commission has run a well testing program for over 20 years for town residents. Residents can pick up a well test kit free of charge and send it to the designated lab for testing.

Marine Resources

South Berwick has approximately 4.5 miles of tidal shoreline on the 3.7 miles of Salmon Falls River from head tide at the Route 4 bridge, south to the mouth of Shorey's Brook and the Eliot town line. Rather than a marine ecosystem, this area comprises an estuarine ecosystem. As such, it provides habitat for anadromous fish species such as smelt, blue backed herring and occasional Atlantic sturgeon (listed as a threatened species). The harvesting of these species is regulated by the Maine Department of Marine Resources and is adopted and posted annually by the South Berwick town Council. Other fish species found in the river are menhaden, blue fish, and striped bass. It also provides seasonal habitat for species feeding on these fish from harbor seals to osprey and bald eagles. Migratory waterfowl and wading birds feed along high value marshlands adjacent to the river. This portion of the river is currently classified as Class SB, the second highest for marine and estuary waters.

Tidal water areas are closed to commercial shell fishing, but recreational fishing is a major use of the area fishery. Over the last few decades, there have been efforts by both the municipality and Great Works Regional Land Trust to conserve land and encourage landowner engagement to protect the resource.

These areas may become a concern as the risk of sea level rise and coastal storms becomes more prevalent. The Maine Climate Council has recommended that the State of Maine manage for 1.5 feet of relative sea level rise (SLR) by 2050 and 3.9 feet by 2100. Current predictions by the Maine Geological Survey do not show significant inundation risk in South Berwick for the scenario of 1.6ft of SLR. However, in the 3.9 feet SLR scenario, property around the South Berwick Wastewater Treatment plant

is at risk of flooding. For more information, visit the sea level rise viewer at the Maine Agricultural, Conservation and Forestry website.

Agricultural and Forestry Conditions

Agricultural Values

Maine has a long history of small-scale farming and agriculture. This area of York County has a tradition of part-time subsistence operations who sell their surplus and small-scale commercial farms who sell to local markets. Traditionally, farms occupied most of the area in South Berwick outside the village district. Their barns, stone walls, and old fences are still in evidence today. Active farms can be found scattered along most rural roads. From Old Fields Road in the south to Tatnic Rd in the north, most farms encompass 20 to 40-acre parcels, with a few owning 100 acres or more. They provide scenic value, wildlife habitat and economic benefits. Many provide passive recreational opportunities for area residents.

The most recent USDA Census of Agriculture was performed in 2017, and it shows that through a period of relatively rapid growth, the amount of land in farms and the value of farms stayed relatively consistent for statistics for York County.

York County Agriculture Statistics			
	2002	**2012**	**2017**
Number of Farms	685	779	735
Land in Farms (acres)	57,219	64,512	61,039
Average Size of Farm (acres)	84	83	83
Market Value of Production	18,750,000	27,451,000	28,551,000
Average Value of Production per Farm	27,372	35,239	38,846
Source: USDA Census of Agriculture			

However, this data doesn't reflect the rapidly changing value of land and real estate in York County, especially since the COVID-19 pandemic. As land values increase, farms and farmland throughout the region are more prone to development.

Farmland Soils

Understanding the general soil composition of the town is important for the continued preservation of agricultural uses. Soils recognized as Prime Farmland and Farmland of Statewide Importance by the State of Maine can be mainly found west of the Great Works River and along the Salmon Falls River. According to Beginning with Habitat, approximately 1,300 acres of the town consist of Prime Farmland, while over 4,500 acres are considered Farmland of Statewide Importance. The ***Farmland Soils*** map following this section displays both significant soil types in South Berwick.

Type	**Prime Farmland**	**Farmland of Statewide Importance**
Total Acres	1,363	4,699
Percent of town Area	6.5%	22.6%
Source: Maine Beginning with Habitat Data		

One way to estimate the total agricultural land in use is through the acreage in town held under the Farmland and Open Space Act. This act allows owners of farmland property tax relief for parcels over five contiguous acres if they meet certain conditions such as a minimum farm-derived income. There are currently 11 farmland properties, encompassing 309 acres, and 34 open space properties, encompassing 738 acres, enrolled in the program.

Forest Resources

Most open lands in South Berwick are forested, the peak among them being the extensive forests of the Greater Mount Agamenticus region. While tree growth and forestry are not as public-facing agriculture as local farms, they are valued as a traditional industry statewide. South Berwick has some interspersed areas of Prime Forestry Soils, primarily northwest of the Great Works River. These are mapped by the USDA, and displayed on the ***Forestry Soils*** map following this section.

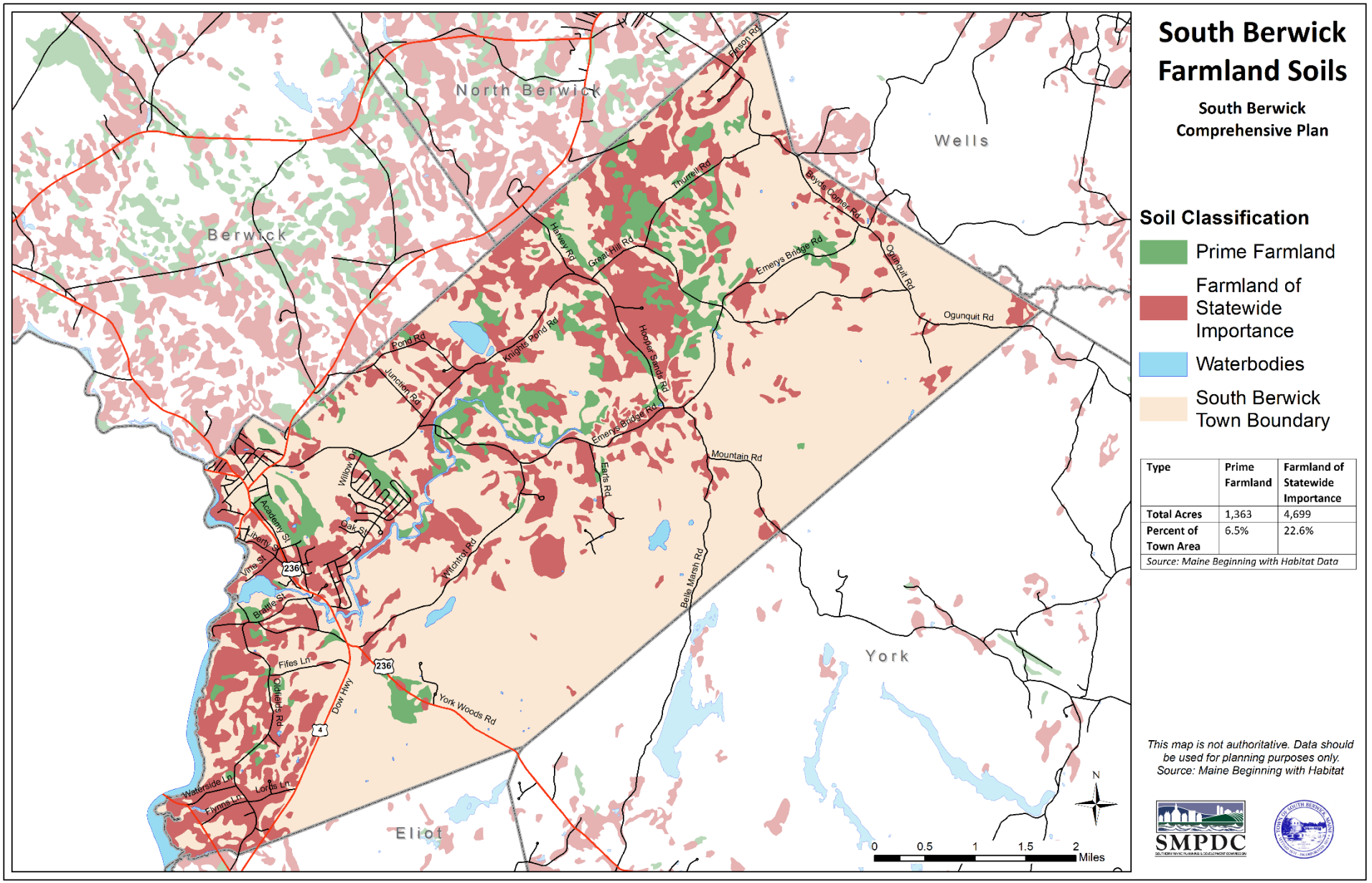
Type	**Prime Forestry Soils**
Total Acres	1,402
Percent of town Area	6.7%
Source: Natural Resources Conservation Service Data	

The Tree Growth Taxation Law has been successfully employed by landowners in town. A total of 59 properties, encompassing 2,432 acres, are enrolled in the Tree Growth program.

Threats to Farm and Forest Land

The primary threat to farm and forest land is extensive development. Both the Farmland and Open Space tax relief and the Tree Growth taxation law create incentives for landowners to protect their land by keeping it in open uses, and the town may consider continued education and awareness of these opportunities.

As mentioned in the groundwater section, the discovery of PFAS is a new and evolving threat to soil and water resources. One of the major sources of PFAS contamination is the spreading of sludge on farmlands for fertilizer, which was unknown at the time to cause contamination. Further study at the state level may determine whether this is a threat for South Berwick farmlands or not.

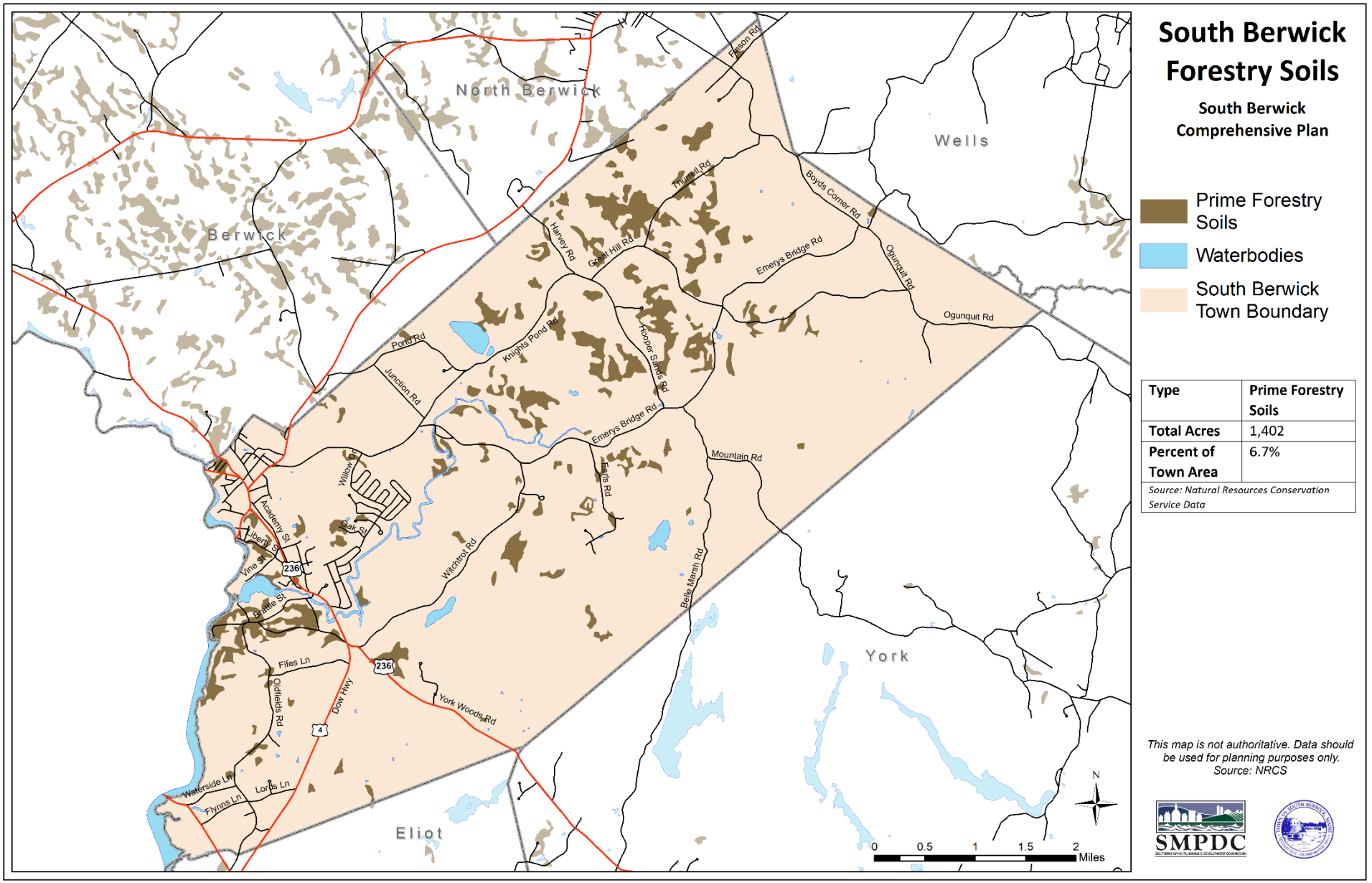


Type	Prime Farmland	Farmland of Statewide Importance
Total Acres	1,363	4,699
Percent of Town Area	6.5%	22.6%

Source: Maine Beginning with Habitat Data

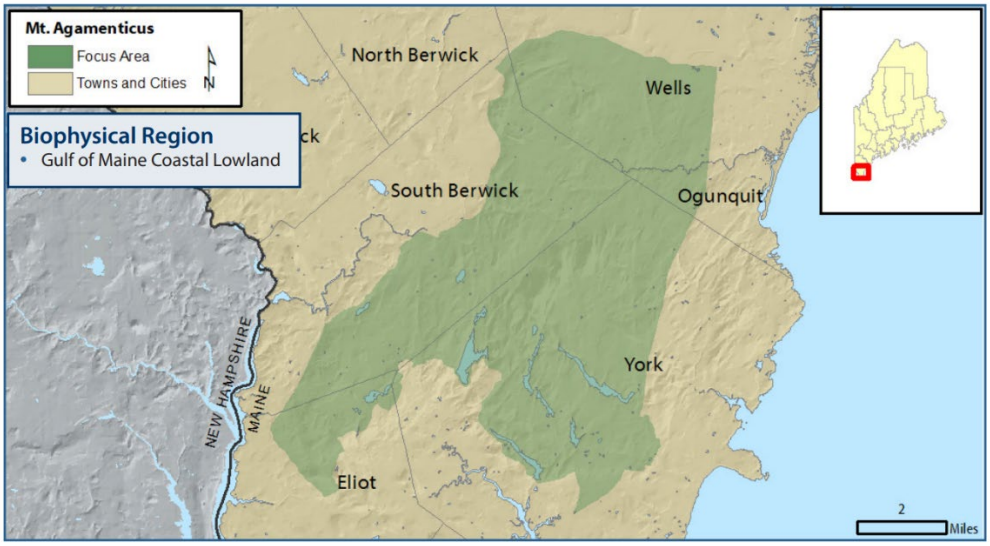
This map is not authoritative. Data should be used for planning purposes only.
Source: Maine Beginning with Habitat

SMPDC


South Berwick
Forestry Soils
South Berwick
Comprehensive Plan
Prime Forestry Soils
Waterbodies
South Berwick Town Boundary
Type
Prime Forestry Soils
Total Acres
1,402
Percent of Town Area
6.7%
Source: Natural Resources Conservation Service Data
This map is not authoritative. Data should be used for planning purposes only.
Source: NRCS
SMPDC
North Berwick
Berwick
Wells
York
Eliot
Ogunquit Rd
Boyds Corner Rd
Emerys Bridge Rd
Harvey Rd
Great Hill Rd
Thurrell Rd
Knights Pond Rd
Hooper Sands Rd
Junction Rd
Portland Rd
Mountain Rd
Wilchrot Rd
Belle Marsh Rd
Earls Rd
Willow St
Academy St
Liberty St
Vine St
Oak St
Granite St
Fifes Ln
Oldfields Rd
Dow Hwy
York Woods Rd
Waterside Ln
Flynns Ln
Lords Ln
236
4
N
0 0.5 1 1.5 2 Miles

Wildlife Conditions

In 1979, a Tri-town coalition of Eliot, York and South Berwick identified lands in their towns which warranted conservation. This region became known as the Greater Mount Agamenticus Region and incorporated 33,000 acres of Eliot, South Berwick, York, Ogunquit and Wells. In South Berwick, this area encompasses the eastern and northern side of town. It is bounded by Rt. 236, Witchtrot Road, Emery's Bridge Road to Rodier Road, and Thurrell Road. These 33,000 acres create the largest block of unfragmented habitat on the coastal plain between Acadia National Park to the north and the New Jersey Pine Barrens to the south giving it a regional, if not nationwide significance. These acres are not only recognized for their vastness, but also for their productivity and diversity for wildlife. Two forest types intermingle here: Northern Boreal (softwoods) and Southern hardwoods. As a result, the animal species depend upon these habitat types, and intermingle here. It is home to endangered plant and animal species as well as broad ranging species (moose, black bear, and bobcat) and contains one of the highest concentrations of productive vernal pools in New England. This area is identified as a Beginning with Habitat Focus Area of Statewide Ecological Significance, as shown in the map below.



Source: Beginning with Habitat

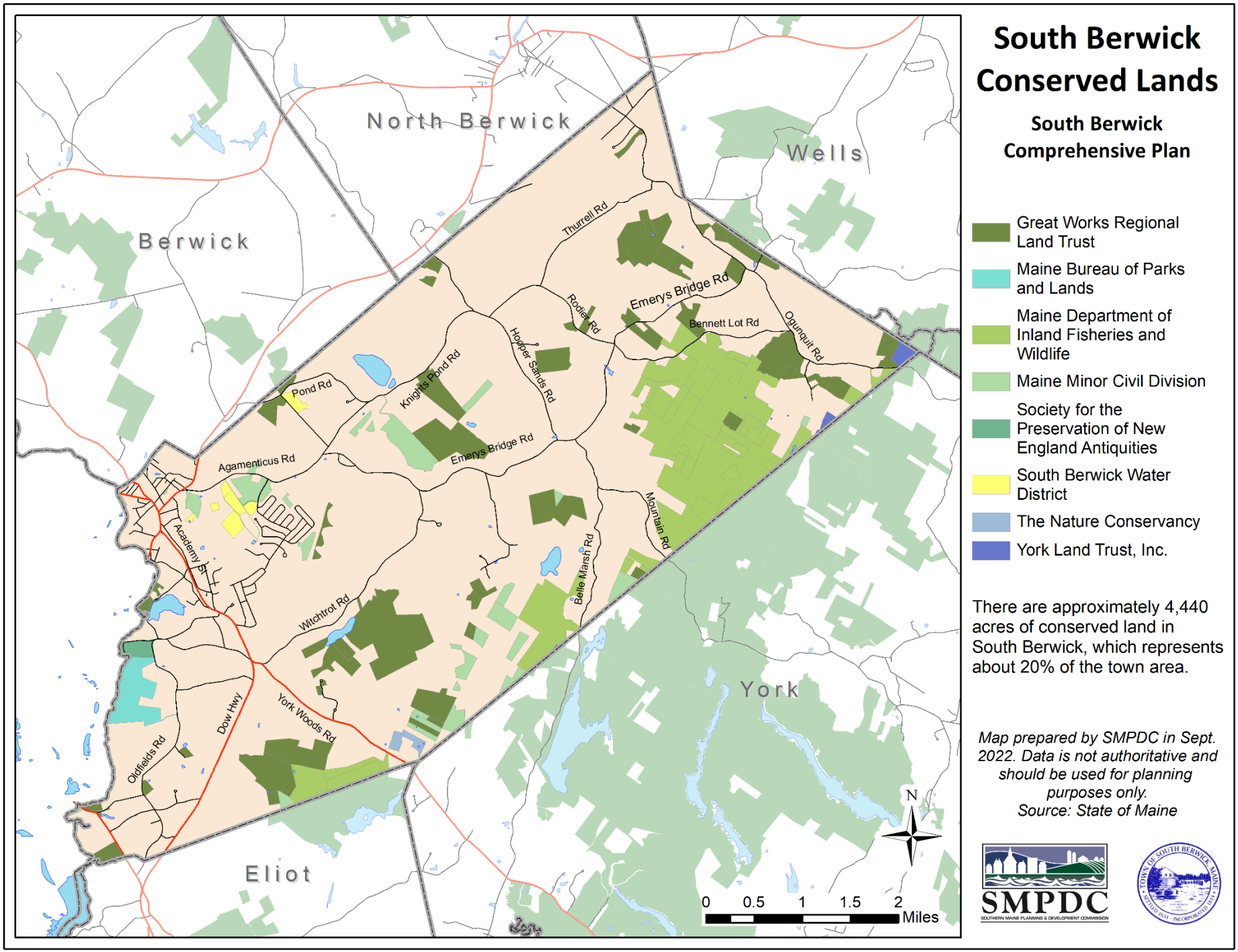
Conservation efforts have been the result of a collaborative approach by many partners and supported by grants from the Land for Maine's Future Program, the Maine Outdoor Heritage Fund, the town of York and Wells and many private donors. The Mount Agamenticus Steering Committee helps manage the public use of these lands and minimize the impacts of recreation on wildlife and water quality.

The other wildlife focal area is the Salmon Falls River Estuary. This area received Resource Protection Zoning in the early 1990's to protect this wildlife corridor and water quality. The estuary is used by anadromous fish species, which access the freshwater above head tide, due to the construction of a fish ladder at the Route 4 dam. It is an essential habitat for waterfowl and wading birds, osprey and over-wintering bald eagles. Endangered Atlantic sturgeon and oysters also inhabit these waters. The Vaughan Woods State Park is a 165-acre parcel of conserved land along the estuary, managed by the Maine Bureau of Parks and Lands. The Salmon Falls River Greenbelt Plan developed in the early 90's laid out a vision for preserving this historic, diverse, and scenic river shed. Many of those concepts have come to

pass with additional conservation lands added on both sides of the river. A vote is to take place in November 2022 to guide a possible future acquisition of conservation land along this corridor.

In addition to Mount Agamenticus and the Salmon Falls River, the Great Works River provides a meandering wildlife corridor through town. Resource Protection extends to the river upstream from Emery's Bridge Road and the river's major tributaries provide connecting corridors for wildlife from one area to the other. The undeveloped nature of the town's great ponds makes them an important habitat for migratory waterfowl as well as broad ranging species such as moose and black bear.

The Beginning with Habitat program also provides maps of habitat blocks and endangered species habitat, as well as identified rare natural communities of plants and animals- of which South Berwick has many.



South Berwick Conserved Lands

South Berwick Comprehensive Plan

- Great Works Regional Land Trust
- Maine Bureau of Parks and Lands
- Maine Department of Inland Fisheries and Wildlife
- Maine Minor Civil Division
- Society for the Preservation of New England Antiquities
- South Berwick Water District
- The Nature Conservancy
- York Land Trust, Inc.

There are approximately 4,440 acres of conserved land in South Berwick, which represents about 20% of the town area.

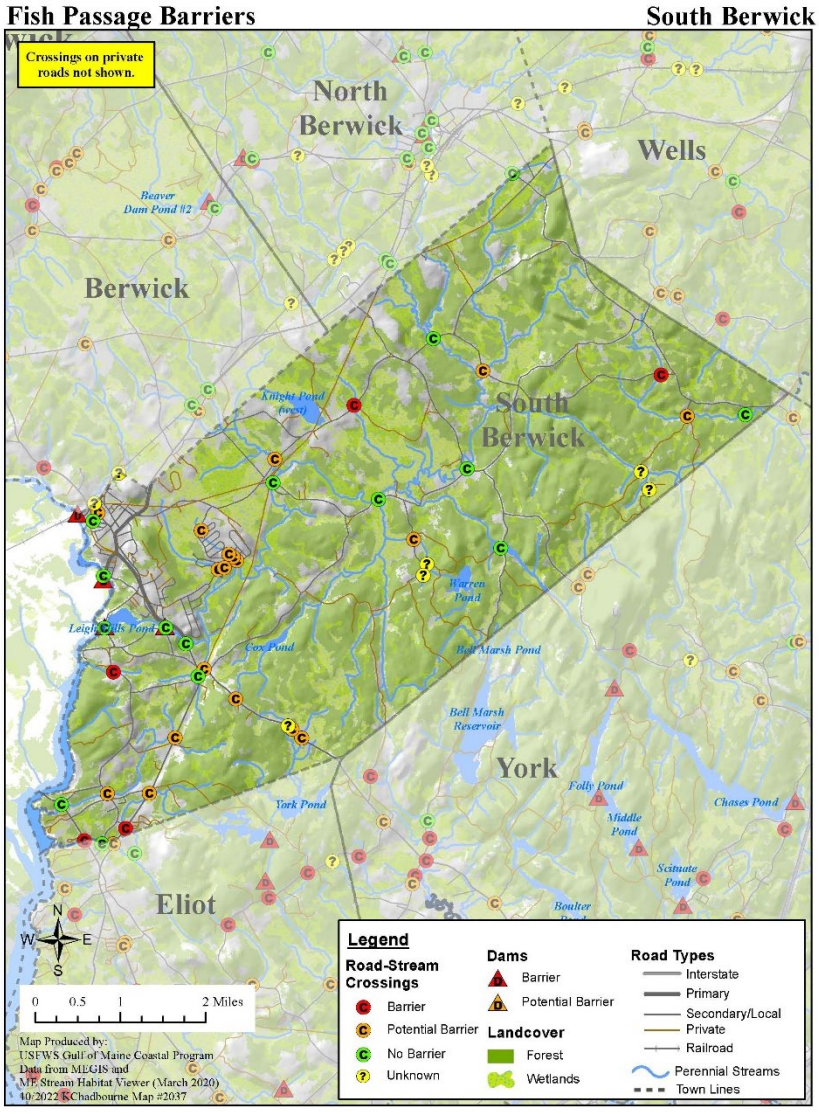
Map prepared by SMPDC in Sept. 2022. Data is not authoritative and should be used for planning purposes only.
Source: State of Maine

SMPDC
SOUTHERN MAINE PLANNING & DEVELOPMENT COMMISSION

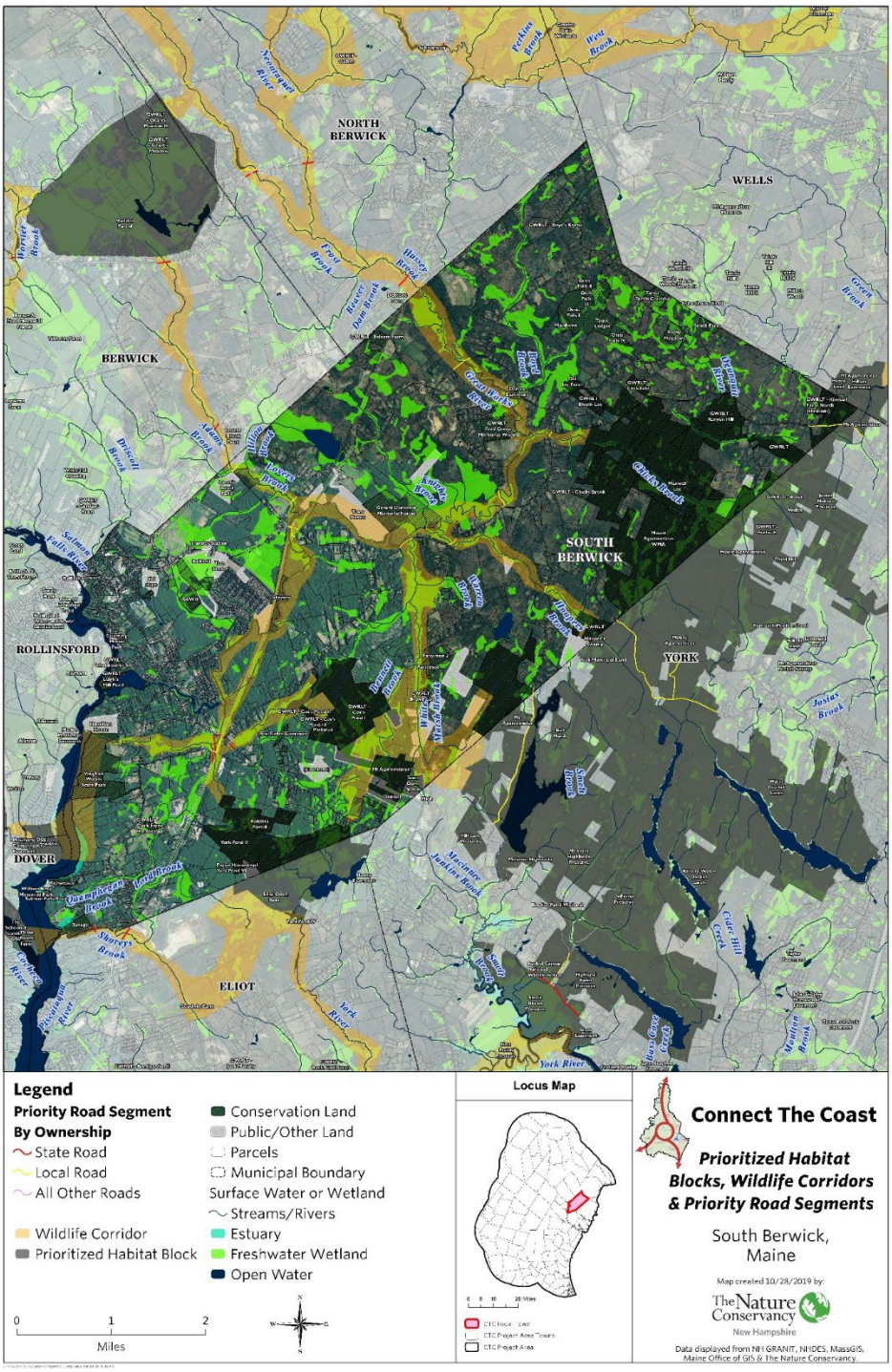
Threats to Wildlife

Inadequate stream crossings and culvert design is a common threat to all species that rely on stream continuity for survival, including invertebrates, fish, amphibians, reptiles, and mammals. Properly designed crossings include bridges, open-bottom arches, and culverts that span and are sunk into the streambed. Often, crossings that are better for wildlife can also handle a wider range of water flows, which means they are more resilient to flooding and extreme weather. The US Fish and Wildlife Service Gulf of Maine Coastal Program produced the following map which shows all road-stream crossings and dams in South Berwick, classified as barriers, potential barriers, and no barrier.

It is important to maintain connections between tracts of conserved land, open space, and habitat areas to support the long-term health and sustainability of wildlife populations. Many species require access to multiple habitat types for different purposes, such as breeding habitat or overwintering sites. Some species naturally travel long distances for other species maintain large home ranges for hunting, foraging, or breeding which may not be possible in one tract of habitat. This is where fragmenting features, mainly roads, become threating to nearby wildlife.



The Nature Conservancy's 2019 Connect the Coast plan includes an assessment of key wildlife movement corridors, and where those passages intersect with the road network. The results can be used to prioritize land for future conservation, and help spread awareness to land owners about the importance of wildlife corridors for long-term wildlife conservation.



Land Use and Natural Resources Planning

South Berwick Open Space Plan

In 2012, the South Berwick Open Space Committee and the town completed a Conservation and Open Space Plan. The plan was intended to inventory natural resources which were significant for wildlife and biodiversity as well as cultural and scenic reasons. The plan consisted of a GIS analysis which layered several priorities for conservation to identify areas for conservation in the future.

The following goals were identified as part of the plan, which were also paired with several actions and parties responsible for implementation.

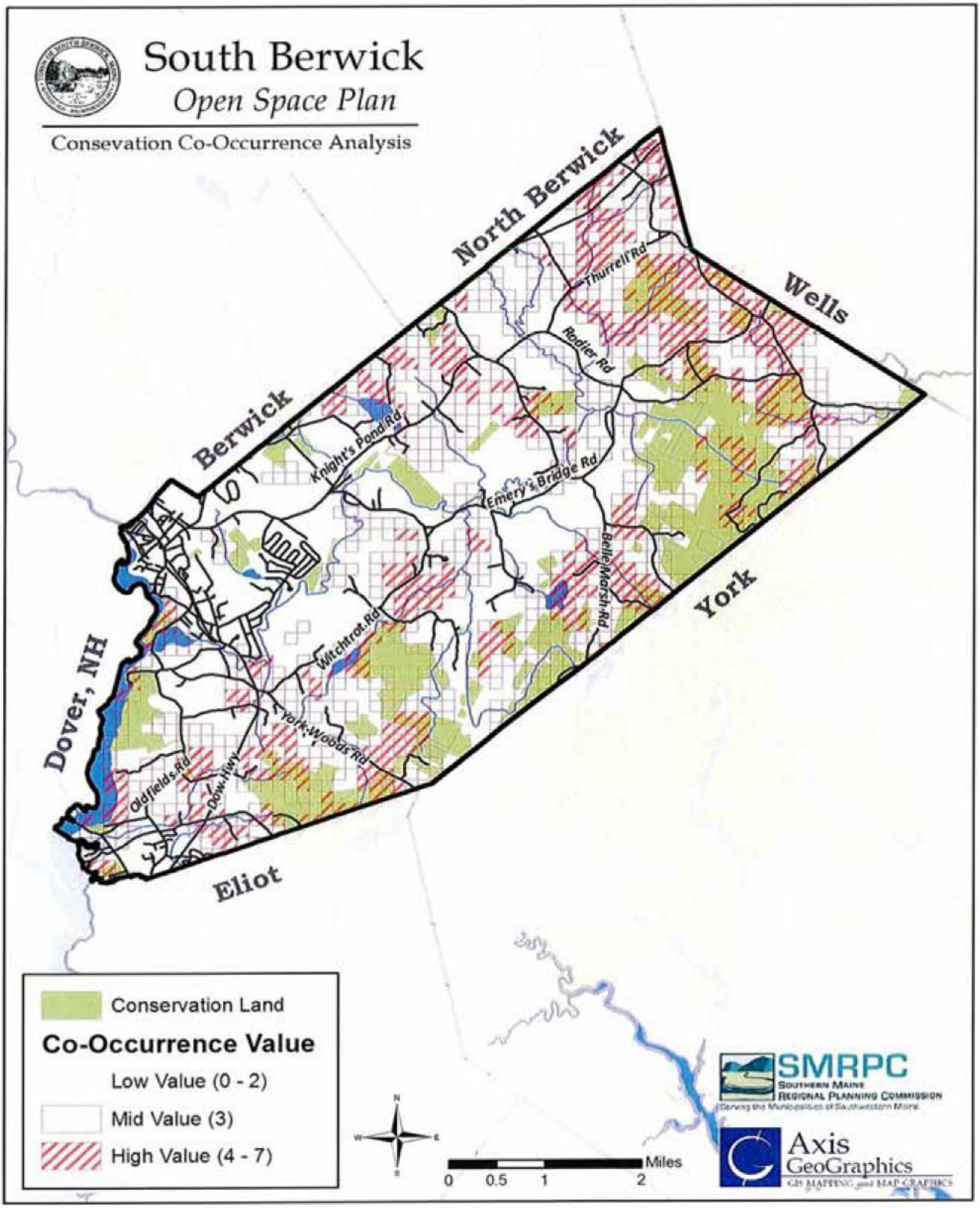
- Use this plan to build bridges between groups dedicated to the conservation of natural resources and open space protection in South Berwick and those who make decisions on these same resources
- Maintain the natural resource values that currently exist on town and non-profit owned conservation related parcels or other parcels of land in town.
- Set-up an Open Space Fund and seek methods to maintain and expand upon the Open Space Fund, with such funds to be used for conservation purchases by the town, by non-profit groups, and to be used as matching funds for purchases through grant programs and other sources.
- Build bridges to regional conservation groups who may provide financial and technical assistance to South Berwick regarding implementation of this plan and other conservation initiatives.
- Ensure that the work done as part of this plan is maintained and institutionalized as part of the town's long-term planning focus.
- Begin a process for encouraging a network of trails and/or sidewalks throughout the community.

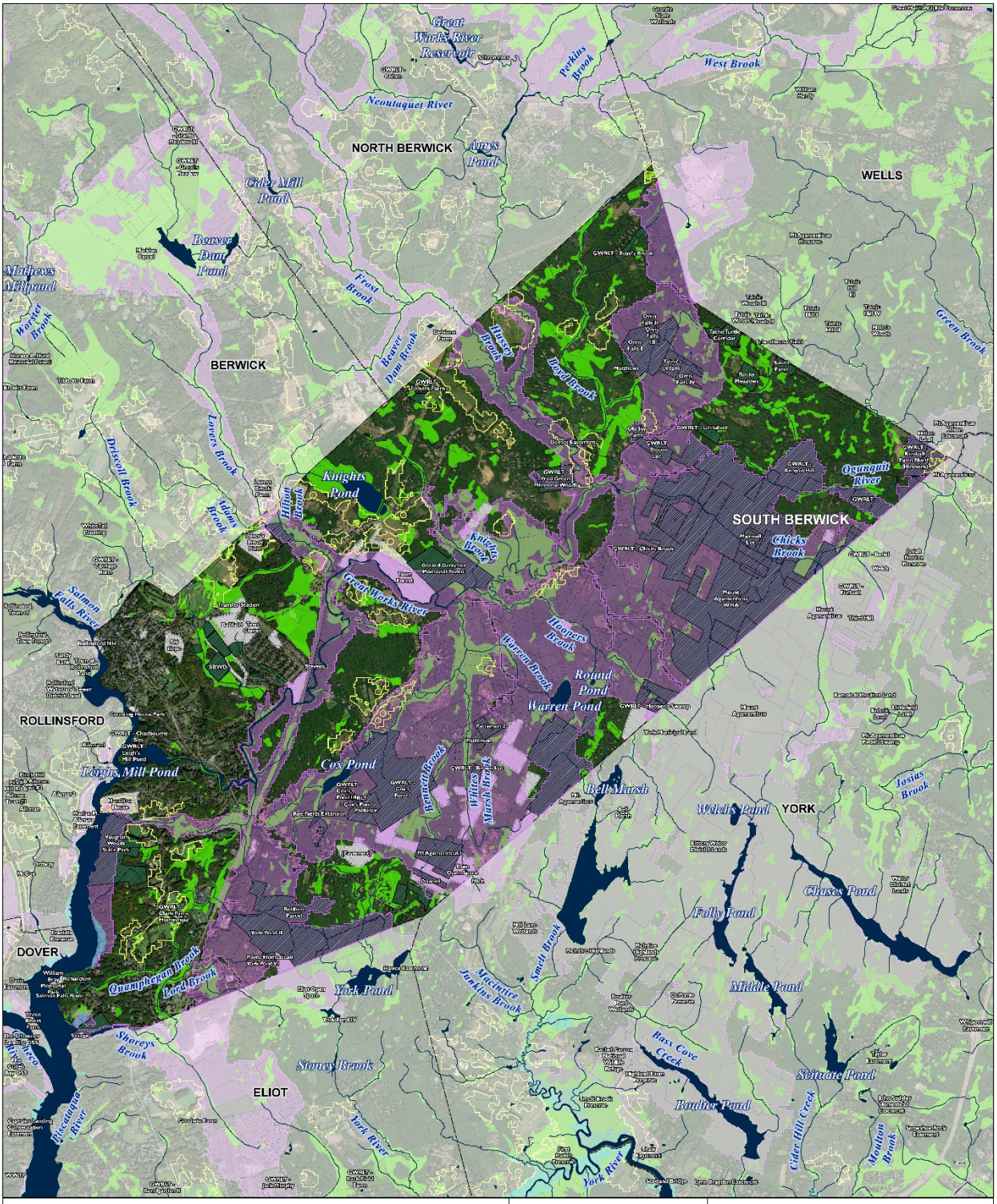
Several maps were created as part of the Open Space Plan, to incorporate regional priorities and guide future conservation work.

NH Coastal Watershed Conservation Plan

In 2021, South Berwick was included in the *NH Coastal Watershed Conservation Plan, which* identified priorities for land conservation across New Hampshire's coastal watersheds, including the Great Works River watershed. The plan incorporated measures of flood storage, public drinking water supply, and water quality, as well as the Beginning with Habitat focus areas and data about wildlife corridors and climate resiliency.

A significant amount of land in South Berwick is identified as a priority for conservation, and many of the priority parcels are already permanently protected in South. This plan can be used as a resource to explore priorities for land conservation and natural resource protection in the future. The plan can be accessed at connect-protect.org.


South Berwick
Open Space Plan
Consevation Co-Occurrence Analysis
North Berwick
Wells
Berwick
York
Dover, NH
Eliot
Thurrell Rd
Rodtier Rd
Knight's Pond Rd
Emery's Bridge Rd
Witchtrot Rd
York Woods Rd
Oldfields Rd
Dow Hwy
Belle Marsh Rd
Conservation Land
Co-Occurrence Value
Low Value (0 - 2)
Mid Value (3)
High Value (4 - 7)
N
W
E
S
0
0.5
1
2
Miles
SMRPC
Southern Maine Regional Planning Commission
Axis GeoGraphics



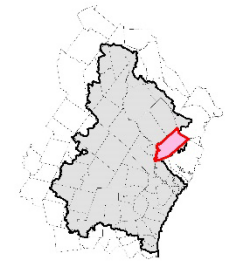
Legend

- Coastal Conservation Focus Areas
- Coastal Priority Agricultural Resources
- Conservation Land
- Public/Other Land
- Parcels
- Municipal Boundary Municipal Boundary
- Streams/Rivers
- Estuary
- Freshwater Wetland
- Open Water

0 1 2 Miles

N W E S

Locus Map



New Hampshire's Coastal Watershed Conservation Plan

South Berwick, Maine

Map created 1/20/2023 by:

The Nature Conservancy
New Hampshire

Data displayed from NH GRANIT, NHDES, MassGIS, Maine Office of GIS & The Nature Conservancy.

Implications and Summary

Adequacy of Existing Protection Measures for Natural Resources, Water Resources, and Farm, Forest & Wildlife Lands

South Berwick is a Municipal Separate Storm Sewer System (MS4) Community. As an MS4 Community, the town is subject to an MS4 Clean Water Act Permit. The Permit applies to the "Urbanized Area" of the town and is designed to reduce the discharge of pollutants from the town's regulated, separated storm drain system, to protect water quality, and satisfy appropriate requirements of the Clean Water Act. Urbanized areas are determined by the US Census Department, based on population density and impervious surface cover. The Permit requires that the towns conduct public education and outreach activities related to stormwater pollution prevention, inspect the storm drain system regularly for pollutants, and maintain the storm drain system and municipal properties. The town also teams with four other MS4 communities in York County, in a group called the Southern Maine Stormwater Working Group (SMSWG).

South Berwick's other measures to protect water resources consist of the shoreland zoning ordinance, resource protection ordinance, subdivision and site plan review standards; including standards for maximum impervious surface, drainage provisions and storage of pollution-causing materials. In many ways, the resource protection ordinance in South Berwick is stricter than surrounding communities, including scenic and cultural resources in some cases. Continued conservation and protection of open space also serves as a protection against stormwater and non-point source pollution concerns. As noted above the town has taken a stronger stance than many other communities with respect to measures designed to protect shoreland zoned areas.

Representatives from the town have also been involved with the York River Study Committee, authorized by Congress in 2014, to determine if the York River meets criteria to be designated as a Partnership Wild and Scenic River. The York River Study Committee produced the York River Watershed Stewardship Plan, which describes community-valued watershed resources and their importance, and identifies actions intended to protect those resources for the benefit of current and future generations. In December 2022, The Wild and Scenic River designation was finally approved by congress, designating the York Rivier and its major tributaries into the National Wild and Scenic Rivers System.

South Berwick had the first cluster development ordinance in the state, which along with several other benefits, is in part intended to reduce sprawl and encourage large areas of open space. The town also has a specific Agamenticus Resource District to regulate land use around this valuable resource. For example, it requires a permit for forest harvesting, and certain high intensity land uses are restricted.

Tree Growth taxation and Farmland and Open Space taxation are also current measures in effect to conserve farm and forest lands and encourage continued conservation in the future.

Climate Change Considerations

With South Berwick's large and diverse collection of natural resources, and the community's overall value of these resources, it is important to consider future threats of climate change. Currently, the areas of the state that are most impacted by climate change are coastal communities, who have begun to see the impacts of sea level rise. However, there are still various impacts to inland communities that have more recently been observed throughout the state.

Climate change is the long-term shifting of temperatures and weather patterns driven by increased carbon dioxide and other greenhouse gases in the atmosphere. Southern Maine is undergoing changes driven by rising temperatures, altering precipitation patterns, rising sea levels, and shifting ecosystems. Communities like South Berwick are already experiencing these climate change impacts, which will have far-reaching effects on the people, places, and culture of the community. Municipalities across the state are taking action to address climate change causing emissions and to understand and prepare for local climate impacts. The following summary of climate hazards and implications is based on scientific data and analysis from the Maine Climate Council's *Scientific Assessment of Climate Change and its Effects in Maine.*

Climate Hazards

Increasing Temperatures

The emission of greenhouse gases into the atmosphere creates a layer which traps extra heat. As a result, average temperatures around the world are increasing over time. Maine's statewide temperature has increased by 3.2 °F since 1895, and is projected to warm by an additional 2 to 4 °F by 2050. Increased temperatures mean an increased frequency of extreme temperature days, which has impacts on human health, especially for children and older adults. Increased average temperatures overall impacts natural ecosystems, including a longer growing season, increased prevalence of pests such as ticks, and biodiversity loss if wildlife are unable to adapt. Lastly, there is a chance of increased severity of droughts, where lack of precipitation causes a lower water table.

Cities and towns may consider whether their residents are well equipped to withstand high heat, and evaluate what services the community provides for heat shelter, shade, and water access. Towns may also consider evaluating emergency planning for times when public and private wells suffer from a lack of recharge, and regularly evaluating well conditions throughout the summer months.

Changing Precipitation

Statewide, total annual precipitation (rainfall and snowfall) has increased by about 6.1 inches (155 mm), with more rain and less snow falling since 1895. Overall, precipitation events are more likely to be heavy, more infrequent in summer months, and more likely rain in winter months. There is also an increased likelihood of extreme weather and storms such as nor'easters, and hurricanes which may cause flooding. This translates to stress on local infrastructure such as stormwater systems and road conditions. Increased rain in the winter creates especially dangerous travel conditions. Reoccurring storms increases overall costs of municipal, private sector, and individual response and repair.

Cities and towns can take precautions for extreme weather by having updated emergency management plans in the case of flooding, overburdened infrastructure, and road closures. Changing winter weather may have implications for managing road conditions, and what plowing and salting are most effective. The town may also evaluate what services and facilities are available to residents in the case of power outages, or extreme winter weather.

Changing Ecosystems

These various changes to the climate of our region also have wide ranging impacts on the natural ecosystems in our state. Maine, and the Mt. Agamenticus region specifically, are ecological transition areas, meaning both the temperate climate of southern New England and colder boreal forests of Canada overlap. This unique position means the region naturally has many different species and types of environments. This biodiversity is at risk as not all species will be able to adapt to the changing climate. While native species are stressed by changes, this provides an opportunity for invasive species to thrive. Invasives can have impacts on water quality, agriculture, and overall ecosystem resilience.

Sea Level Rise

South Berwick does have a small area of the town which may be impacted by sea level rise. The tidal Salmon Falls River has areas of land which will be impacted by the more severe models of sea level rise. The Maine Climate Council has recommended that the State of Maine commit to manage for 1.5 feet of relative sea level rise (SLR) by 2050 and 3.9 feet by 2100. Current predictions by the Maine Geological Survey do not show significant inundation risk in South Berwick for the scenario of 1.6ft of SLR. However, in the 3.9 feet SLR scenario, property around the South Berwick Wastewater Treatment plant is at risk of flooding. For more information, visit the sea level rise viewer at the Maine Agricultural, Conservation and Forestry website.

Climate Impacts

Infrastructure

Southern Berwick's roads, bridges, and critical infrastructure are at greater risk of damage due to increasing storm severity and frequency. Extreme precipitation poses the largest risk to infrastructure. When a large amount of rain falls in a short amount of time, small watersheds can flood suddenly, damaging culverts, roads and bridges. Electricity infrastructure is particularly vulnerable to increases in storm frequency and intensity. Maine has some of the worst power outages in the country. From 2015-2019, the state had the highest average annual frequency of power outages per customer of any state (3.9 outages per customer per year). These power outages jeopardize essential public safety services and pose a risk to public health.

Economy

Climate change will provide both opportunities and stresses to the local economy. Fast-warming future temperatures, especially in winter, and declines in regional snowpack and ice cover will negatively impact winter recreation industries and the industries that support them. Alternatively, longer summer and shoulder seasons will be an opportunity for expanding summer recreation activities like boating and RVing. Maine's farms will experience benefits from warming temperatures such as longer growing seasons and lower heating costs, but also costs such as heat stress to workers, crops and livestock and higher cooling costs. Increased frosts/freezes and unpredictable precipitation are expected to grow. Plant hardiness zones will shift northward with future warming, making Maine's climate more suitable for some kinds of crops (e.g. corn and soybeans) and potentially more challenging for others (e.g. wheat, Christmas trees, and wild blueberries).

Public Services

The essential public services that South Berwick provides will be greatly strained by climate change impacts. More frequent flooding and extreme weather events will lead to higher costs and will stress municipal capacity to respond to and repair after storm events. Climate change is likely to lead to in-migration into areas like southern Maine that are perceived to be comparatively healthier and safer than areas considered to be at greater risk of climate impacts. Rapid increases in population could stress relatively small towns like South Berwick. While climate migration presents an opportunity for the regional economy, fast population increases can cause new cultural conflicts, stress housing markets, put additional demand on limited municipal resources, and overwhelm recreational facilities.

Public Health

Climate change impacts will negatively affect the health of community members. Increasing temperatures and more high-heat days are putting people at risk, especially those who are elderly, have health issues, or have limited access to home air conditioning. Warmer, shorter winters are contributing to increased tick-borne illnesses, such as Lyme disease. More frequent extreme weather may cause injuries and deaths, outbreaks of waterborne diseases, and foodborne illnesses following power outages, as well as mental health stress. Plant-based allergens already have longer to affect Mainers during the year due to longer summers and shorter winters. The length of the pollen season and the amount of pollen produced will likely increase with rising temperatures and carbon dioxide concentrations. Asthma and hay fever are also likely to increase with climate change.

Addressing Greenhouse Gases

Although towns and cities can take precautions and plan for the impacts of climate change on their services and residents, the only way to reduce the intensity of these changes is to reduce global greenhouse gas emissions. Municipalities can do their part by evaluating how they are contributing to emissions through facilities operations and the provision of services. Overall community planning changes, such as creating infrastructure for public transit and active transportation (biking and walking) can reduce overall emissions generated by the community. Greenhouse Gas Emissions Inventories are a good first step for a community to evaluate what is generating the most emissions in the community and municipal operations and help prioritize actions to work towards reduction.

Regional Issues

All natural resource issues are inherently regional issues. Ecosystems do not follow jurisdiction boundaries, making it essential for regional collaboration and communication when it comes to protecting our valuable natural resources. Regional efforts should address the continued protection of both surface and ground water resources held in common. Regional approaches to natural resource priority issues will have a greater positive impact on protecting water quality, wildlife habitat, and recreational opportunities for the future of the region.

The Greater Mount Agamenticus Area and Salmon Falls River corridor are two areas where regional efforts will remain critical for protecting natural resources. The town also shares sand and gravel aquifers with several surrounding communities, and a significant surface water resource, the Salmon Falls River, with other communities in both Maine and New Hampshire.

Chapter 9 - Historic & Archaeological Resources

Purpose

Historic and archaeological resources contribute significantly to a community's character and make each town distinctive and welcoming. These resources are important not only for their role in South Berwick's history, but also for their present-day value. Historic buildings and sites add to the town's quality of life and their presence helps maintain property values.

Specifically, this section presents a brief history of the town, describes South Berwick's historic and archaeological resources, assesses threats to these resources, and considers the effectiveness of existing measures to protect and preserve these resources.

Key Findings and Issues

- South Berwick is one of the earliest colonial settlements, and therefore has many historic structures and sites that are valued for their history and cultural significance.
- The Humphrey Chadbourne homestead is one of Maine's most important historic archeological sites.
- South Berwick has three local historic districts with an accompanying ordinance, a Historic District Commission, and a very active and well-established historical society. The South Berwick National Register District, comprising 100 buildings, was listed on the National Register of Historic Places in 2010. Two National Historic Landmarks are in South Berwick.
- Although there have been past surveys and documentation over the years, the town lacks a central inventory of sites with potential historic significance.

The South Berwick Historic District ordinance adopted in 1989 created South Berwick Village Center Historic District comprising a fraction of the historic buildings in the village (20 lots out of 100); Liberty Street Historic District; and Conway Railroad Turntable Historic District. The ordinance established a town commission to prevent "inappropriate alterations" and "the demolition or removal of designated sites or landmarks and significant historic structures within designated districts whenever a reasonable alternative exists or can be identified," but many historic resources in South Berwick are not covered.

Community Engagement Results

In every focus group, participants mentioned the value of having a downtown with historic significance. Many noted that ***having historic buildings downtown builds character, sense of place, and promotes the community as a destination.*** *Groups discussed potential benefits of bringing historic locations to the forefront with historic plaques, guided tours, and expanding historic protections.*

Historic and Archaeological Conditions

Overview

South Berwick was home to author Sarah Orne Jewett (1849-1909), whose works were well known examples of American literary regionalism, also known as "local color", which captured the life and values of 19th century Maine. Over 150 stories, novels and poems Jewett wrote in South Berwick draw

directly on the people and places surrounding her homes in the village, and she played a large role in the conservation of the Jonathan Hamilton House on the Salmon Falls River by her friends at the turn of the 20th century. South Berwick has accepted free thinkers since 1650 as a site of religious expression and diversity, attracted some of Maine's earliest Baptists, Free Will Baptists, and Quakers, and was home to temperance and abolition activists in the 1800s. Maine's oldest school, Berwick Academy (founded 1791), has educated generations of South Berwick residents, including notable civic leaders such as John Noble Goodwin, whom Lincoln appointed territorial governor of Arizona.

From the earliest years of European settlement after the construction of America's first sawmills in 1634 until South Berwick became a separate town in 1814, white residents of the old town of Berwick clustered their homes on the Salmon Falls and Great Works Rivers near waterfalls that were sources of power for lumbering, shipbuilding, and gristmills. The Great Works Mill is one of America's earliest waterpower sites, operated between 1634 -1640 near the confluence of the Great Works and Salmon Falls Rivers. The sawmill was near a later one operated by the Humphrey Chadbourne family, whose 1650 to 1690 homestead has become one of Maine's most important 17th century archaeological sites. Prehistoric artifacts in this area also indicate inhabitation of this part of Maine and the Piscataqua region for some 11,000 years before colonial settlement.

The first meeting house location and burying ground in the center of the community were near today's intersection of Brattle and Vine Streets and Old South and Oldfields Roads. For a time, this area was named Old Fields, thought to have referred to agricultural lands of the Wabanaki natives who were displaced. Back away from the water, scattered farms exploited the gentle terrain facing southwesterly from two natural hills rising above the east side of the Salmon Falls River. There were natural springs and a little creek, and the grade was flat – a plain. This is downtown South Berwick today. Documents show that residents referred to the area as "the Plain" till at least 1829.

In the 18th century, before the construction of bridges at the mouth of the Piscataqua River at Portsmouth, New Hampshire, an early highway between Boston and Portland, crossed the Salmon Falls River at the location of Quamphegan Landing, where downtown Main Street enters South Berwick from New Hampshire today. That spot was also the limit of navigation on the Salmon Falls/Piscataqua estuary. Part of the port of Portsmouth during colonial and early federal times, the town saw the construction of deep-water sailing ships along the Salmon Falls River, as local sawmills processed abundant timber. Quamphegan Landing was a port of gundalows, the river craft that was the mainstay of South Berwick commerce until the railroads came. Quamphegan Falls became an important mill site, and in the 19th century textile factories supplanted shipbuilding with woolen mills after forests disappeared.

Construction of the Portsmouth Manufacturing Company cotton mill at Quamphegan Landing circa 1830 ushered in South Berwick's factory era, and later the Irish and French-Canadian immigration in which many present-day residents claim roots. The cotton mill's counting house is now on the National Register of Historic Places, and houses the Counting House Museum, operated by the very active Old Berwick Historical Society.

The turnpike gave today's Main and Portland Streets the shape still recognized, as the town drifted north from the old settlement to a new hub on the plain. A map of 1805 shows how surveyors laid out the road to Portland through what is now downtown South Berwick, widening and straightening it to ease the route of oxen hauling heavy loads. Several buildings on this map still stand in the village today.

Other buildings downtown were constructed throughout the 1800s and include a landmark business block built after a great fire in 1870. It stands in the main intersection opposite the Jewett House.

Prehistoric Archaeological Resources

Archaeological resources are those below ground. The Maine Historic Preservation Commission refers to two types of archaeological resources: prehistoric and historic. Prehistoric archaeological places are better described as places of pre-European archaeology, namely Native Americans, and generally date prior to the 1600s and European settlement. Historic archaeological places are those associated with the earliest European settlers and later populations.

Apart from the sites of Maine's earliest inhabitants, the Paleo-Americans, at the end of the last ice age, most prehistoric archaeological sites are remnants of the Abenaki and Wabanaki nations, found along water bodies. The remains are often associated with dunes and sandy areas because these areas made suitable campsites.

Prehistoric artifacts indicate inhabitation of this part of Maine for at least 4,000 years (2000 BC). The Maine Historic Preservation Commission (MHPC) has identified a prehistoric site estimated to be 4,000 to 5,000 years old on the Hamilton House grounds owned by Historic New England. Prehistoric artifacts have also been found at the Humphrey Chadbourne archaeological site, excavated by Emerson Baker under the sponsorship of the Old Berwick Historical Society between 1995-2003, at the confluence of the Great Works and the Salmon Falls Rivers, and are now in the collection of the Counting House Museum.

According to MHPC, there are six known prehistoric sites in South Berwick. Three are located along the banks of the Salmon Falls River. The other three were located along utility corridor (gas or powerline) survey routes, well away from the river. Small areas of the banks of the Great Works River and the Salmon Falls River have been surveyed by professional archaeologists. The most extensive surveys in South Berwick to date are for the major utility corridor through the town.

Other archaeological resource potential areas include the shore lands of the Salmon Falls River, Leigh's Mill Pond, the Great Works River up to Hooper Sands Road, Knights Pond, and a wetland south of the York Woods Road and extending into Eliot. Aeolian, or sand, areas include "The Sands" along Hooper Sands Road and an area associated with White Marsh Brook and extending into the town of York.

The Commission recommends these areas of known and potential archaeological significance be surveyed and a review mechanism established to provide a field check prior to any ground disturbance and/or construction activity. They also recommend continued archaeological survey of the banks of the Salmon Falls River and Great Works River.

Historic Archaeological Resources

The earliest historic archaeological resources are sites with evidence of early European habitation during the 1600s. The most important locations of the first or earliest settlers are those that are undisturbed and have retained a significant amount of integrity. Generally, these sites or areas are found within 100 feet of navigable water.

The MHPC reports eight historic archaeological sites documented in South Berwick. They are listed in the table below. No professional surveys for historic archaeological sites have been conducted to date in

South Berwick. Future archaeological survey should focus on the identification of potentially significant resources associated with the town's agricultural, residential, and industrial heritage, particularly those associated with the earliest Euro-American settlement of the town in the 17th and 18th centuries.

South Berwick Historic Archaeological Sites			
Site Name	**Site Type**	**Periods of Significance**	**National Register Status**
Great Works Mill	mill, sawmill	1634-1670	undetermined
Jewett House Grounds	domestic	1774 on	National Register listing; National Historic Landmark
Col. Jonathan Hamilton House	domestic	ca. 1750-1949	National Register listing; National Historic Landmark
Humphrey Chadbourne Homestead	domestic	Built ca. 1643, destroyed in the Salmon Falls raids of 1689/1690	undetermined
Jacob Q. Meader	domestic	1850s to 1890s	undetermined
J. Lord	domestic	late 1600s - ca.1900	Eligible
Witchtrot Hill Homestead			undetermined
Moore Homestead			undetermined
J. Thompson	domestic	by 1872, but gone before 1893	undetermined
Source: Maine Historic Preservation Commission, 2022			

Other potential sites include:

- Miles Thompson House (1656) – near Shorey's Brook at the Savage Wildlife Preserve protected by the Great Works Regional Land Trust
- John Heard House (by 1640)
- John Morrell House (1668)
- John Plaisted House (ca. 1690)
- Daniel Goodwin, Sr. House (1654)
- John Lamb House (1656)
- Humphrey Spencer House (pre-1676)
- John Crawford House (1676)
- William Pile / James Smith House (1659/1663)
- Moses Spencer House (1680)

The Humphrey Chadbourne site, discovered in August 1995, is one of the most artifact-rich and important archaeology sites discovered in southern Maine, and is clearly a site with not only local but also national significance. The property is now under conservation with the Great Works Regional Land Trust. For nine summers after its discovery in 1995, the Old Berwick Historical Society sponsored a two-

week excavation at the site, under a collaboration among Salem State College, Old Berwick Historical Society, and the Chadbourne Family Association, as well as professional archaeologists and dozens of community volunteers. The project resulted in over 40,000 artifacts being catalogued and conserved at the Counting House Museum, where many are frequently exhibited. The site appears qualified to be on the National Register of Historic Places. The Maine Historic Preservation Commission has also noted that the entire Great Works River valley and the Salmon Falls Riverbank are archeologically sensitive and need further survey.

Historic Resources

This section describes historical buildings, structures, and objects above the ground. In 1998, the South Berwick town Council commissioned an architectural historian to initiate an historical building survey of the downtown. A survey of approximately 140 downtown properties was begun. The buildings were photographed and described by an expert. In 2010, approximately 100 downtown buildings were listed as the South Berwick Village National Register District. Approximately 20 were found to potentially merit individual listing on the National Register of Historic Places.

The National Register of Historic Places, administered by the National Park Service, is a listing of those buildings, districts, structures, objects, and sites deemed worthy of preservation for their historical, cultural, or archaeological significance. The main benefits to owning a site listed on the National Register are prestige and community recognition. Listing does not confer legal obligations on the property owner. Certain buildings may qualify for a 25 percent investment tax credit; to qualify, a building must be income-producing, depreciable and a “certified” historic structure. Structures on the National Register are also given a limited amount of protection from alteration or demolition resulting from a federal project.

South Berwick properties now listed on the National Register of Historic Places include:

- The 1785 Jonathan Hamilton House on Vaughan’s Lane
- The 1774 Sarah Orne Jewett House on Main Street
- The 1854 Jewett Eastman House on Portland Street
- The 1830 Portsmouth Company Cotton Mills Counting House on Main and Liberty Streets
- The 1853 Conway Junction Railroad Turntable site on Route 236 at Fife’s Lane
- The 1870 Cummings Shoe Factory at Norton Street and Railroad Avenue
- The Berwick Academy campus includes five historic buildings, dated 1791-1894, comprising a National Register District.
- South Berwick Village Historic District, as identified by MHPC, covers one of the town’s historic zoning districts and beyond to a larger area of downtown, a total of 100 historic properties.

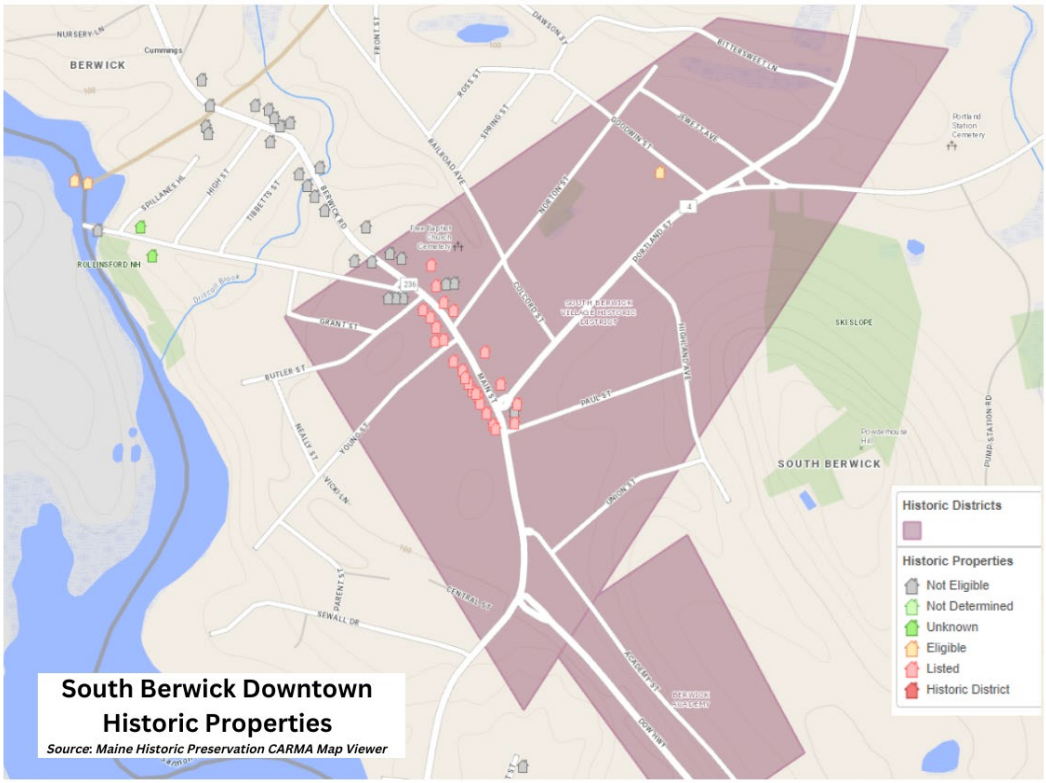
Both the Hamilton House and Sarah Orne Jewett House are also National Historic Landmarks, another federal program which identifies these properties as exemplifying American heritage.

South Berwick has five historic cemeteries, none of which are administered by town government:

- Old Fields Burying Ground (established in the 1600s), Vine Street
- Portland Street Cemetery (1818), Agamenticus Road
- Freewill Baptist Cemetery (c. 1835), Main Street
- Pleasant Hill Cemetery (mid-1800s), Wadleigh Lane

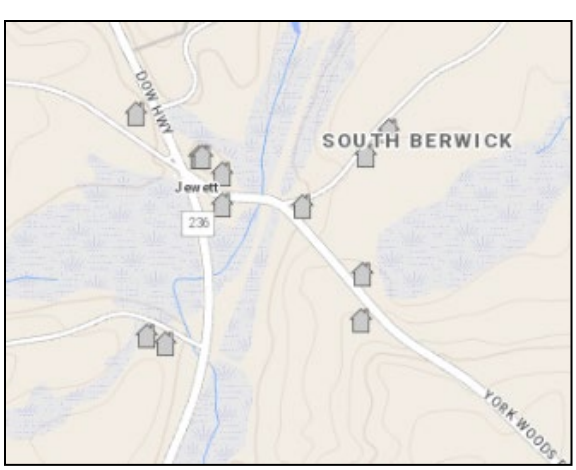
- Woodlawn Cemetery (1768), Agamenticus Road

The South Berwick Cemetery Association oversees the last four of these, but Old Fields Burying Ground, one of the oldest community cemeteries in the country, does not have any owner, let alone protection status.



(Above) Maine Historic Preservation CARMA Map Viewer, Downtown South Berwick

In addition to the downtown structures mentioned above, other sites which have been identified as for possible listing on the National Register include: the Humphrey Chadbourne site, the Great Works Mill site, the Leigh's Mill House (Vine Street), the General Ichabod Goodwin House (Oldfields Road), the Judge Benjamin Chadbourne House (Liberty Street) and the Balancing Rock.



(Above Left) Maine Historic Preservation CARMA Map Viewer, York Woods Intersection (Above Right) CARMA Map Viewer, Old Emery's Bridge Rd.

(Above Left) Maine Historic Preservation CARMA Map Viewer, Vine St on Leigh Mills Pond

The Maine Historic Preservation Commission CARMA map viewer also shows several areas in town outside of the downtown which include historic structures. These properties are over 50 years old, including houses, barns and farms, churches, public buildings, schools, commercial structures, industrial structures, cemeteries, landscapes. Also, cultural features, including tree lines, stone walls, and town pounds. Although many of them are not technically eligible for registration with the National historic Register, they are still valued, and their location may be important for future policy.

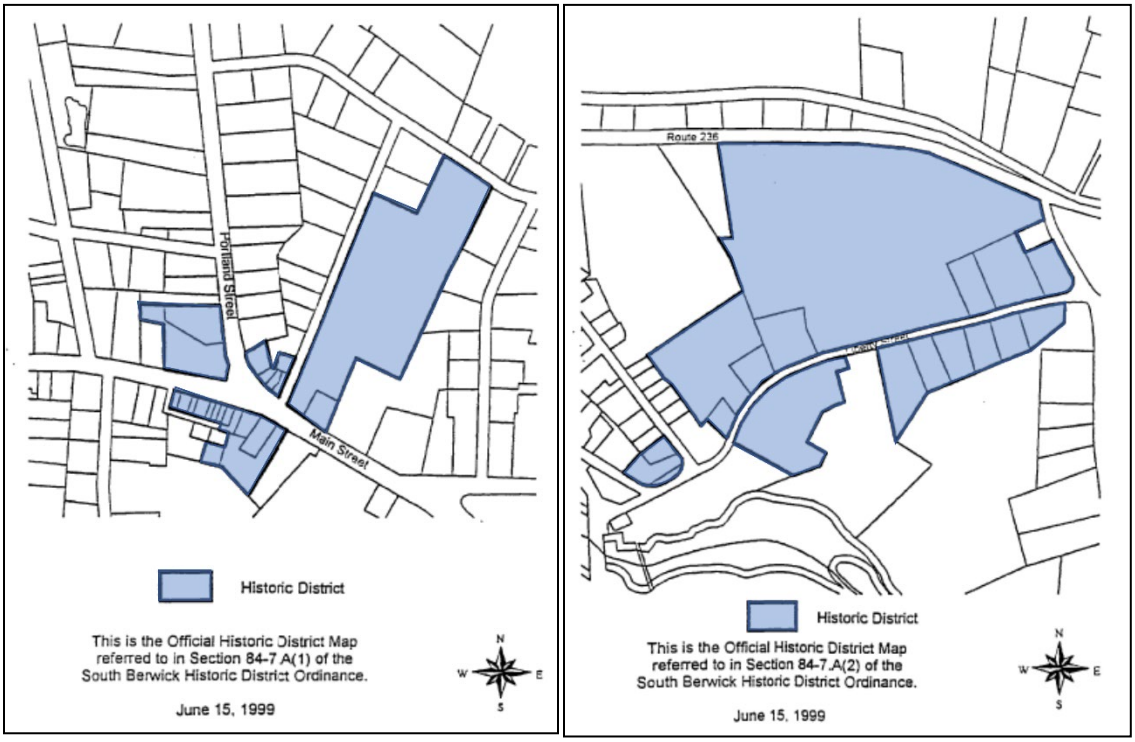
Threats to South Berwick's Historic and Archaeological Resources

The most imminent threats facing these resources are development and poor maintenance. New development such as a residential subdivision, commercial and industrial construction, or redevelopment of an existing building or area without regard to historical, archeological, and cultural resources threatens their existence. Simple neglect and inadequate maintenance have resulted in a greater loss of historic architecture than any other cause. The greatest concentration of historically significant structures is downtown, where economic stresses and high traffic make them vulnerable. The transection of two busy state highways through the center of downtown threatens the residential and pedestrian experience at the village core.

Implications and Summary

Assessment of Current Protection Measures

The town of South Berwick has three designated Historic Districts which are intended to help protect significant historic features but cover only a fraction of the town's historic resources and can prevent demolition only "whenever a reasonable alternative exists or can be identified." There is potential value in strengthening incentives for preservation as well as extending the districts to include a larger section of the downtown, as well as outside of the downtown to include other priority areas of historical and archaeological importance.



(Left) Village Center Historic District, (Right) Liberty Street Historic District and (Bottom Right) Conway Railroad Turntable Historic District. Maps are official Historic District Zoning Ordinance maps, with blue highlight added for clarity.

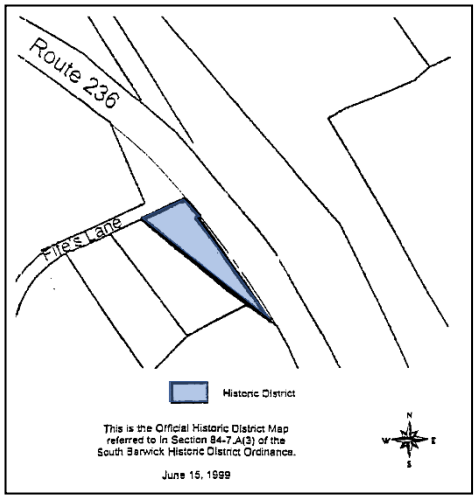
The Historic District Ordinance requires Certificates of Appropriateness be issued by the Historic District Commission for any change in exterior appearance of all buildings, structures, sites or landmarks in the historic districts, or the new construction of any buildings or structures visible from a public street in the historic districts. It also requires Certificates of Appropriateness for the demolition of any building or structure in the historic district, or the B1, B2 or BR zoning districts which cover a major portion of the downtown village area. Lastly, the ordinance also covers any alteration to an archeological site, as defined by the Maine Historic Preservation Commission. The ordinance outlines various standards of evaluation that ensure changes or new construction in the districts conform with the architecture of surrounding buildings.

The districts cover some of the most significant features of the historic downtown. The inclusion of the B1, B2 and BR zones in the demolition clause protects many historic residential homes in the downtown

from being removed or demolished without notification, but they are not otherwise protected from changes or new construction. When development is proposed within the National Register Historic District, MHPC notifies the Historic District Commission and the Old Berwick Society of the review.

Shoreland protection measures found in both State and local regulations provide limited protection of historical and archeological resources near the town's rivers and ponds. South Berwick's shoreland zoning ordinance also includes cultural resources in some cases, such as the Balancing Rock and some scenic views.

Continued documentation and raised awareness of South Berwick's historical resources and policy directing their care and protection can prevent their unintentional destruction and provide for their protection to the benefit of the town's future residents.



Conway Railroad Turntable Historic District. Maps are official Historic District Zoning Ordinance maps, with blue highlight added for clarity.

Summary

As one of Maine's earliest European settlements, South Berwick possesses several locally and nationally significant historic and archaeological sites. However, the town still lacks a comprehensive and central inventory of these all historic and archaeological resources**.** Three locally designated historic districts, and an associated zoning ordinance, provide some protection to historic resources. Other significant resources outside of the districts are not protected in any regulated way.

In the downtown, historic structures 100 and 200 years old and older still line streets that were laid in colonial times, and meet at the Sarah Orne Jewett House, a National Historic Landmark. Significant historic sites outside the downtown include schoolhouses, mill and railroad sites, the former town poor farm, a town Grange Hall, churches and cemeteries.

Limited prehistoric archaeological investigation indicates the riverfronts near the Hamilton House and at the confluence of the Great Works and Salmon Falls Rivers were occupied on several occasions during the past three to five thousand years.

Chapter 10 - Fiscal Analysis

Purpose

A comprehensive plan should examine fiscal trends in the town to strive for a stable tax rate to provide essential services to the citizens of South Berwick.

Specifically, this section will:

- summarize South Berwick's current fiscal conditions;
- discuss recent revenue and expenditure patterns;
- predict likely future revenue and expenditure trends; and
- assess South Berwick's capacity to finance capital expenditures for the next ten years.

Key Findings and Issues

- South Berwick has successfully planned for capital expenses in the past and has an active capital improvements program through 2026.
- Record breaking rates of inflation in recent years complicate fiscal trends, such as South Berwick's valuation and tax commitment change over the last 5 years. What appears to be low nominal increases in actual valuation change work out to be large decreases in value when accounting for inflation.
- Education continues to be the town's largest expense, consistent with all Maine communities.
    - Large nominal increases in town expenditures appear to be strongly tied to inflation. Over the period of 2016-2021, town expenditures increased by 1% when 2016 numbers are inflation adjusted.

Fiscal Conditions

Valuations and Tax Assessment

South Berwick's ability to raise tax revenue is dependent largely on its tax base or valuation. South Berwick's valuation increased from approximately $723 million in 2010 to approximately $759 million in 2020. This is an increase of about 5 percent over ten years. When these figures are adjusted for inflation, the total change shows a decrease of 11%, due to the inflation rate in 2020.

State Equalized Valuation and Property Tax Assessment Trends

Year	South Berwick Valuation (Current Dollars)	Property Tax Assessment
2020	$750,902,100	$13,140,787
2021	$837,718,800	$13,018,150
2022	$951,474,900	$13,834,495

Source: town of South Berwick

State Valuation Historical, 2010-2020					
	2020	2015	2010	2010-2020 Change	10-Year Change Inflation Adjusted
South Berwick	$758,700,000	$640,700,000	$723,150,000	4.9%	-11.6%
Berwick	$712,350,000	$576,350,000	$609,200,000	16.9%	-1.5%
Eliot	$1,034,950,000	$834,700,000	$888,050,000	16.5%	-1.8%
Kittery	$1,866,050,000	$1,498,600,000	$1,701,400,000	9.7%	-7.6%
North Berwick	$772,900,000	$581,300,000	$606,550,000	27.4%	7.4%
Wells	$3,533,050,000	$2,932,900,000	$2,934,900,000	20.4%	1.4%
York	$4,752,000,000	$3,967,100,000	$4,205,950,000	13.0%	-4.8%
York County	$35,851,250,000	$29,117,100,000	$31,457,900,000	14.0%	-4.0%
Source: Maine Revenue Service					

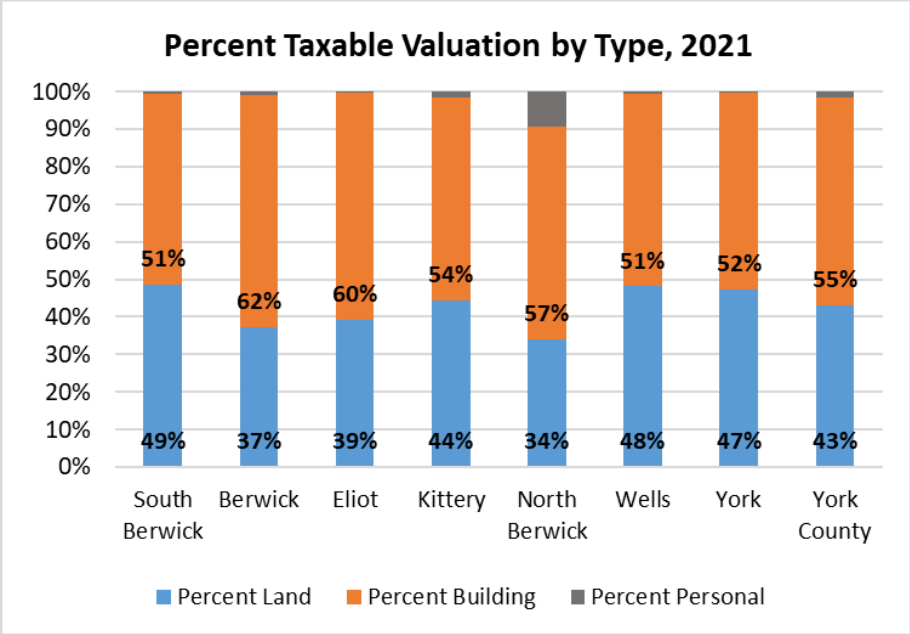
It is useful to compare valuation trends in South Berwick to those of other York County towns. The table below compares South Berwick's 2021 valuation and tax commitment to neighboring towns. South Berwick's per capital valuation and tax commitment was among the lowest of surrounding towns, higher than Berwick only. The per capita valuation is about 42 percent lower than the York County equivalent. The per capita tax commitment values follow a similar trend, with South Berwick higher than Berwick and North Berwick. Overall, South Berwick is similar to neighboring inland communities, and significantly lower than coastal towns.

Valuation and Tax Commitment Comparison, 2021					
	2020 Population	2021 Valuation	2021 Valuation Per Capita	2021 Tax Commitment	2021 Tax Commitment Per Capita
South Berwick	7,467	$784,500,000	$105,062.27	$13,018,150	$1,743.42
Berwick	7,950	$770,400,000	$96,905.66	$13,534,607	$1,702.47
Eliot	6,717	$1,069,200,000	$159,178.20	$15,145,459	$2,254.80
Kittery	10,070	$2,132,700,000	$211,787.49	$27,153,849	$2,696.51
North Berwick	4,978	$824,850,000	$165,699.08	$7,625,430	$1,531.83
Wells	11,314	$3,810,950,000	$336,834.89	$35,587,063	$3,145.40
York	13,723	$4,886,600,000	$356,088.32	$54,731,977	$3,988.34
York County	211,972	$38,444,400,000	$181,365.46	$496,607,019	$2,342.80
Source: Maine Revenue Service					

South Berwick has also seen the lowest nominal 5-year change in tax commitment, comparing 2021 values to 2017. However, after converting 2017 values to 2021 numbers, the percent change looks very different. Record breaking inflation in recent years contributes to this difference. Since the South Berwick commitment has changed so little nominally, it has experienced a 5% decrease in value of the total tax commitment over the 5-year period. North Berwick has a similar trend.

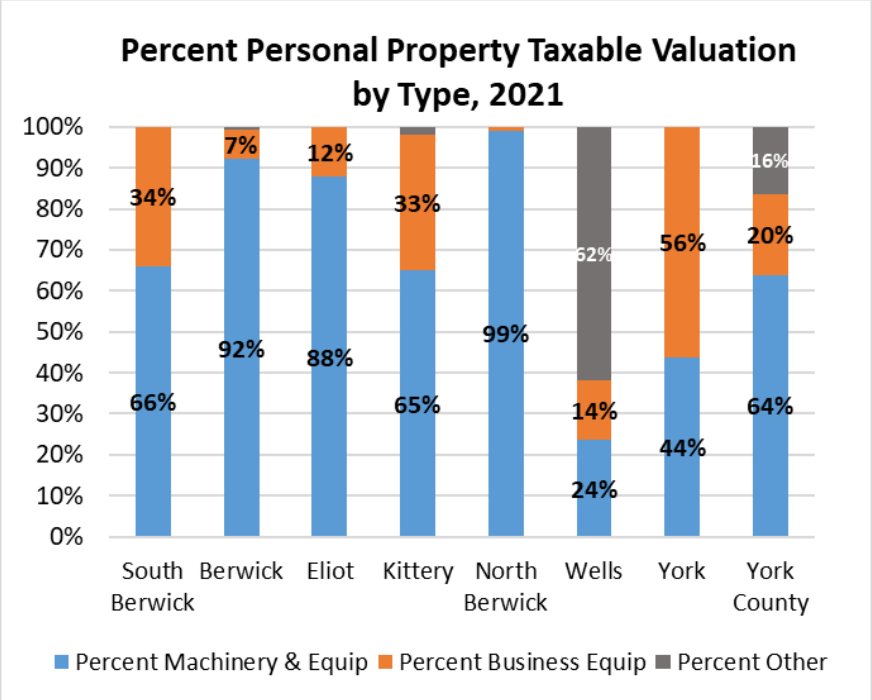
Tax Commitment Historical, 2017-2021							
	2021	2020	2019	2018	2017	5-Year Change	5-Year Change Inflation Adjusted
South Berwick	$13,018,150	$13,140,787	$13,054,626	$12,801,092	$12,435,461	4.7%	-5.3%
Berwick	$13,534,607	$13,968,876	$12,648,407	$11,420,279	$10,831,916	25.0%	13.0%
Eliot	$15,145,459	$14,441,544	$14,377,808	$14,184,665	$13,684,434	10.7%	0.1%
Kittery	$27,153,849	$26,629,234	$25,679,320	$24,495,932	$23,710,612	14.5%	3.6%
North Berwick	$7,625,430	$7,487,147	$7,471,729	$7,492,555	$7,238,076	5.4%	-4.7%
Wells	$35,587,063	$34,331,868	$33,740,133	$32,762,990	$31,534,719	12.9%	2.1%
York	$54,731,977	$53,245,641	$51,138,493	$49,221,707	$46,474,728	17.8%	6.5%
York County	$496,607,019	$482,489,082	$470,470,117	$451,775,743	$433,801,900	14.5%	3.6%
Source: Maine Revenue Service							

Total municipal valuation is made up of several factors, land valuation, building valuation and personal property valuation, which vary slightly for each community. South Berwick has the highest percentage of total valuation attributed to land values at 49%, which is more similar to Wells and York than the other inland communities. South Berwick has the second lowest total taxable personal property, higher than Eliot only.



Taxable Valuation by Type, 2021				
	Total Taxable Municipal Valuation	**Taxable Land Valuation**	**Taxable Building Valuation**	**Total Taxable Personal Property**
South Berwick	$837,718,800	$407,933,400	$423,948,200	$5,837,200
Berwick	$739,595,993	$275,544,500	$456,680,512	$7,370,981
Eliot	$1,121,885,850	$440,239,100	$677,388,550	$4,258,200
Kittery	$2,088,757,640	$928,993,239	$1,125,918,501	$33,845,900
North Berwick	$699,580,700	$238,809,100	$396,168,400	$64,603,200
Wells	$3,382,800,634	$1,627,225,617	$1,736,189,550	$19,385,467
York	$5,500,701,250	$2,595,649,600	$2,883,095,500	$21,956,150
York County	$36,861,743,131	$15,846,557,242	$20,429,278,219	$585,907,670
Source: Maine Revenue Services				

Personal property, including business equipment, production machinery and equipment as well as other property, accounts for .7% percent of South Berwick's total valuation. This is similar to surrounding communities, except for Kittery (1.6%) and North Berwick (9.2%) who are outliers, likely due to the presence of large employers. Industrial and commercial growth adds to this value and can reduce demand on taxing only real property.



Total Personal Property Valuation by Type				
	Total Taxable Personal Property	**Table Machinery & Equipment**	**Taxable Business Equipment**	**Other Taxable Personal Property**
South Berwick	$5,837,200	$3,859,600	$1,977,600	$0
Berwick	$7,370,981	$6,791,560	$536,127	$43,294
Eliot	$4,258,200	$3,741,500	$516,700	$0
Kittery	$33,845,900	$22,024,730	$11,147,290	$673,880
North Berwick	$64,603,200	$64,038,500	$564,700	$0
Wells	$19,385,467	$4,592,160	$2,784,556	$12,008,751
York	$21,956,150	$9,598,921	$12,357,229	$0
York County	$585,907,670	$374,234,796	$115,228,492	$96,444,382
Source: Maine Revenue Services				

Current and Future Revenue Trends

The town collects revenues from several varying sources outside of property taxes. Trends show that over the last 5 years, the town's overall revenues have increased 14% nominally. After adjusting for inflation, the budget's true value has only increased by 1%.

The largest revenue source besides property taxes is intergovernmental revenues, such as state revenue sharing, and reimbursements received by the town. Intergovernmental revenue has increased the most in the last 5 years, by almost 100% after adjusting for inflation. The town charges for services provided to other governmental and quasi-governmental entities as well as to the public, including solid waste transportation, police special details, town Hall room rental, recreation programs and bookkeeping. Charging for services, which has historically been the next highest source, decreased by 45% (inflation adjusted) since 2016. This is in part due to dispatch being regionalized at that time.

The town charges for a variety of licenses and permits including weapon permits, marriage and birth certificates, building permits, subdivision fees, planning review fees, alarm fees, police reports, accident reports and zoning variances. This source has increased since 2016, by 12% inflation adjusted.

Town Expenditure Comparison 2016 to 2021				
Expenditure Type	**2016 Actual**	**2021 Actual**	**Percent Change**	**Percent Change** ***(Inflation Adjusted)***
Property and Other Taxes	$13,026,944	$14,379,371	10%	-2%
Intergovernmental	$699,439	$1,574,635	125%	99%
Licenses, Permits and Fees	$116,199	$147,161	27%	12%
Charges for Services	$501,151	$308,999	-38%	-45%
Investment Income	$15,538	$29,699	91%	69%
Miscellaneous	$59,187	$49,444	-16%	-26%
Total	**$14,418,458**	**$16,489,309**	**14%**	1%
Source: 2016 Annual town Report & 2021 Annual town Report				

The Maine Department of Transportation provides funding to assist in the maintenance of roads. This revenue source, amounting to $62,500 in 2022, covers about 5% of total Public Works expenditures for the town. The town receives excise taxes on motor vehicles and boats. Generally, excise taxes have increased as population growth continues. This source accounted for about 8.5% percent of revenues in 2021.

Town Revenue Comparison 2016 to 2022					
Select Revenue Sources	**Collected FY15/16**	**Budgeted FY22**	**Percent Change**	**Percent Change** ***(Inflation Adjusted)***	**Projected FY23**
Vehicle Excise Tax	$1,280,700	$1,400,000	9%	-8%	$1,425,000
Vehicle Registration	$20,049	$19,000	-5%	-20%	$23,000
State Highway Local Road Assistance	$64,440	$62,500	-3%	-18%	$62,500
Homestead Reimbursement	$149,787	$500,000	234%	181%	$500,000
State Revenue Sharing	$409,544	$500,000	22%	3%	$1,125,000
Building Permits	$36,205	$30,000	-17%	-30%	$30,000
Disposal Fees	$48,132	$37,000	-23%	-35%	$37,000
Pay Per Bag Disposal	$118,382	$110,000	-7%	-22%	$110,000
Total Revenue (Property Tax Excluded)	**$3,357,429**	**$3,930,000**	**17%**	**-1%**	**$4,278,350**
Source: town of South Berwick FY19 Revenue Projections & FY23 Revenue Projections					

The town maintains a healthy undesignated fund balance for the purpose of funding operations prior to collection of tax revenues, budgeted as $700,000 in FY22. Consistent appropriations to this fund have resulted in a surplus level adequate for more than four months of operation expenses. Current town policy seeks to maintain a surplus adequate for at least three months.

Diversifying the town's revenue sources through the exploration of additional non-tax revenues has been a priority in the past. The town may consider what fees for services, licenses, permitting, and other sources that can allow for expansion of service provisions without requiring subsidization through general property tax revenues.

Current and Future Expenditure Trends

Education remains the single largest expenditure in South Berwick, regularly accounting for more than half of the town’s total expenses. The following table shows overall district spending compared to South Berwick’s annual education costs.

Education Expenditure Trends, 2018-2021		
	South Berwick Education Cost	**South Berwick Percent of Total town Expenditures**
2020-2021	$8,251,076	55.5%
2019-2020	$8,093,830	55.2%
2018-2019	$7,839,906	55.7%
2017-2018	$7,781,935	55.6%
Source: South Berwick Annual Reports		

Five Year Budget Comparison

	FY2017	FY2018	FY2019	FY2020	FY2021
Student Enrollment (October 1)	2,373	2,369	2,315	2,225	2,229
Expenditure Budget	$30,961,228	$30,988,082	$29,985,127	$31,316,020	$31,734,837
Teacher Retirement Cost	$482,944	$602,600	$602,600	$652,500	$661,010
Total Expenditure Budget	$31,444,172	$31,590,682	$30,587,727	$31,968,520	$32,395,847
$ change from prior year =	$995,125	$146,510	-$1,002,955	$1,380,793	$427,327
% change from prior year =	3.3%	0.5%	-3.2%	4.5%	1.3%
State Subsidy	$11,969,766	$11,739,706	$10,175,733	$10,972,668	$11,208,458
$ change from prior year =	-$322,209	-$230,060	-$1,563,973	$796,935	$235,790
% change from prior year =	-2.6%	-1.9%	-13.3%	7.8%	2.1%
Eliot Assessment	$9,068,824	$9,399,776	$9,770,341	$9,957,757	$10,200,711
$ change from prior year =	$251,892	$330,952	$370,565	$187,416	$242,954
% change from prior year =	2.9%	3.6%	3.9%	1.9%	2.4%
South Berwick Assessment	$7,566,392	$7,729,930	$7,787,281	$8,039,227	$8,247,097
$ change from prior year =	$153,614	$163,538	$57,351	$251,946	$207,870
% change from prior year =	2.1%	2.2%	0.7%	3.2%	2.6%
District Local Assessment	$16,635,216	$17,129,706	$17,557,622	$17,996,984	$18,447,808
$ change from prior year =	$405,506	$494,490	$427,916	$439,362	$450,824
% change from prior year =	2.5%	3.0%	2.5%	2.5%	2.5%

Above table is from the MSAD 35 2021 Budget Summary

The following table compares selected expenditures between 2016 and 2021 adjusted for inflation. The most rapid spending increases were in culture and recreation and debt service. Two bonds received in 2016 are likely reflected in the 2021 costs and not 2016. General government, public safety, and education spending all roughly kept pace with inflation. Both Public Works and Public Health & Welfare expenses decreased significantly, over 35% each, inflation adjusted.

The town maintains a capital improvement plan. The impacts of new development are considered relative to the town's capacity to provide municipal services. At this time, there is no mechanism, such as impact fee assessments, to offset the costs of growth. The tool currently available for managing demands on services is a reliance on requiring phasing of developments so that municipal services can be expanded in a parallel fashion.

Town Expenditure Comparison 2016 to 2021				
Expenditure Type	**2016 Actual**	**2021 Actual**	**Percent Change**	**Percent Change *(Inflation Adjusted)***
General Government	$1,804,817	$2,012,671	12%	1%
Public Safety	$1,753,338	$1,971,441	12%	2%
Public Works and Sanitation	$2,252,821	$1,278,727	-43%	-49%
Public Health and Welfare	$62,596	$41,925	-33%	-39%
Culture and Recreation	$206,014	$268,253	30%	18%
Education	$7,451,037	$8,251,076	11%	0%
Debt Service	$302,936	$667,594	120%	100%
Fixed Charges	$353,293	$380,350	8%	-2%
Total	**$14,186,852**	**$14,872,037**	**5%**	**-7%**
Source: 2016 Annual town Report & 2021 Annual town Report				

Municipal Debt and Capital Financing

South Berwick presently has a relatively low volume of debt when compared to the maximum debt allowed by state law. Towns may borrow up to 7.5 percent of their total state valuation, which in South Berwick's case would be about $63 million in 2021. As of June 30, 2021, the amount of outstanding long-term debt was equal to 0.943% of property valuation for the year then ended. The largest portion of town debt is from the Police Station construction.

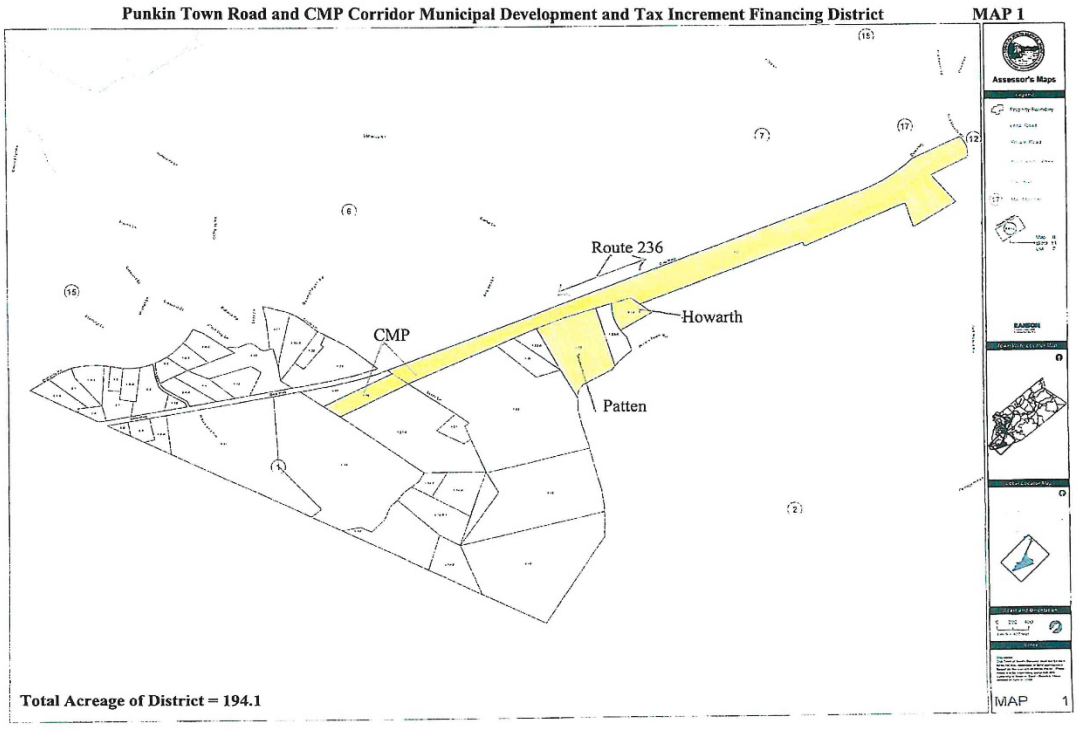
Municipal Long-Term Debt					
Lender	**Description**	**Interest**	**Payments**	**End**	**Outstanding as of 6/30/21**
Maine Municipal Bond Bank	Library Bond 2008C	2.075-5.575%	$31,579	2028	$221,317
Maine Municipal Bond Bank	Capital Improvement 2010DE	2.124-5.124%	$27,000-$45,000	2030	$391,000
Moors and Cabot	Library Construction Bond of 2012	2-5%	$100,000	2026	$500,000

Moors and Cabot	Road Reconstruction Bond of 2016	1.49-2%	$400,000	2026	$2,436,834
Moors and Cabot	Police Station Construction Bond of 2016	3-4%	$140,000-$265,000	2038	$3,816,700
Tax Exempt Leasing Corp	2014 Capital Lease for Fire Truck	2.87%	$31,561	2021	$31,294
Source: 2021 Annual town Report					

Tax Increment Financing

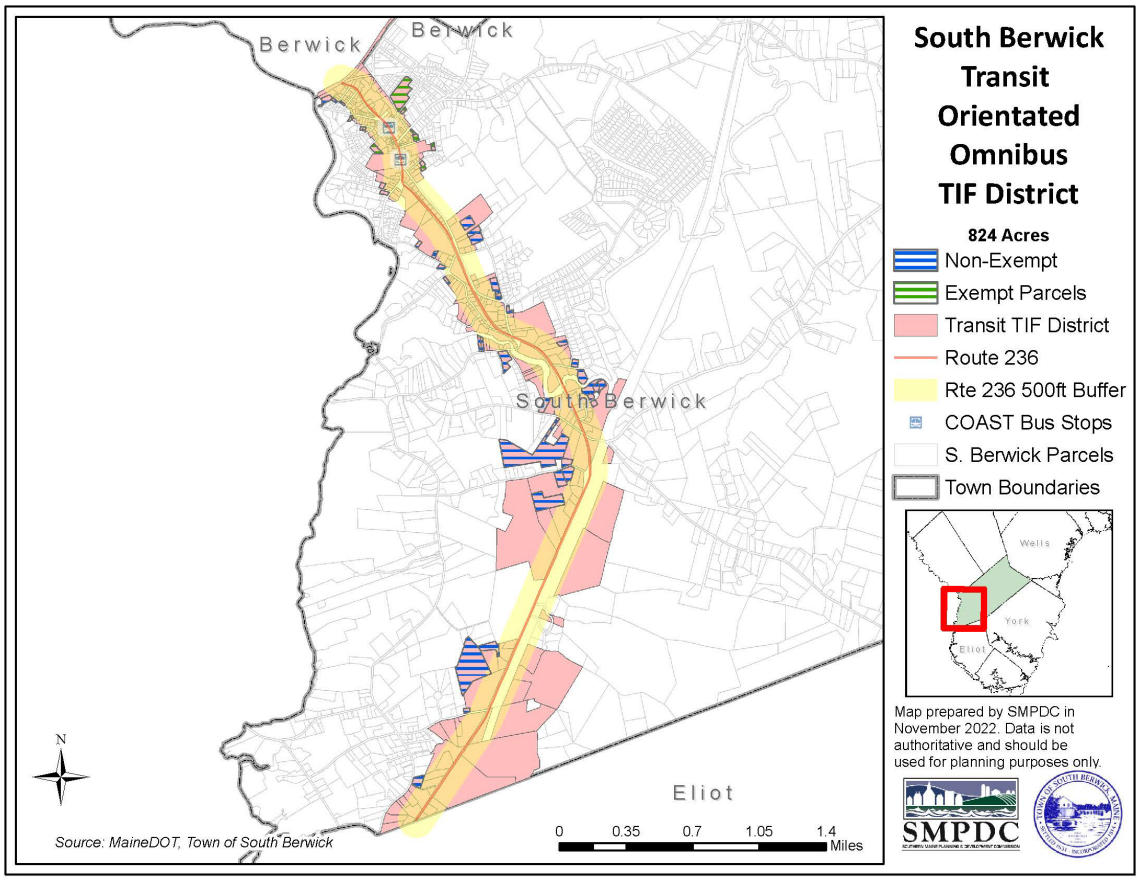
Tax increment financing (TIF) is a tool used to generate funds within a community that generally for the use of community development, infrastructure improvements, and economic development. A TIF district works by capturing the increased tax revenue of an area of the community as it develops. The town currently has two tax increment financing districts which provide revenue to the community for specific goals.

In 2010, the town established the Punkin town Road district, which encompasses 194 acres of land, and between 2010 and 2023, generated over $2.7 million in revenue. The TIF has been used for various projects, such as utility infrastructure, bike and pedestrian improvements, and increasing staff at town Hall to include an Economic Development Director. The TIF revenues continue to be directed toward other community development initiatives such as traffic improvements, planning studies, communications and awareness, business grants, etc.



In 2023, the town proposed an additional Transit-Oriented TIF district that covers the downtown area, and is focused more on transportation, streetscape improvements, water and sewer infrastructure, as

well as general economic development activities. The TID will exist for a 30-year period and is projected to generate approximately $42 million in revenue over the entire period.



Capital Improvements Program

South Berwick must make capital investments to meet the needs of the community in a cost-effective manner. Possible capital investments include such things as road reconstruction, fire engines, trucks for snow plowing, building repairs, road upgrades and improvements to public property. Capital investments can have a large impact on the budget, becoming obvious targets when it comes to trimming the budget.

South Berwick has an ongoing capital improvements program (CIP). Individual departments have prepared 10-year capital spending plans which are included in the CIP. The capital improvement contributions through 2026 are appended to this chapter, and include reserve funds for pedestrian safety, office equipment and general government expenses, highway equipment, road improvements & repairs, transfer station equipment & future planning, town buildings, fire equipment, and police equipment.

Implications and Summary

Overall, South Berwick is in good fiscal health. The town has long prepared for large capital expenses and continues to have a forward looking capital improvement plan. Recent extreme inflation rates

complicate looking at past valuation and tax trends. Since the town has seen minimum changes to valuation and tax commitment in recent years, it has not kept pace with inflation. However, it is yet to be determined if inflation rates will stay very high, and therefore trends could even out in time.

Town revenues and expenses have both increased, as expected. When adjusted for inflation, the total increase of both revenues and expenses is very minimal, about 1% each. Education continues to be the largest town expense; however, state education allocations have increased in recent years. No major changes in what and how the town allocates funds are expected. At this time, there is no mechanism, such as impact fee assessments, to offset the costs of growth.

Chapter 11 - Existing Land Use

Purpose

This section discusses current and likely future land use patterns in South Berwick. Understanding land use trends is important for determining South Berwick's ability to absorb future growth. The Growth Management Act of the late 1980's was the catalyst for a more technical examination of how Maine cities and towns should manage their growth. It was the result of a decade of extremely strong residential growth. The major emphasis of the law then, and now, was how to provide for growth in specific areas (growth areas) served by public infrastructure (particularly water and sewer), close to municipal services while also maintaining rural areas that could support natural resource based industries, wildlife habitat and conservation of natural features. The state of Maine considers the Land Use Section of any comprehensive plan to be the essential part of the plan. Specifically, this section:

- summarizes the breakdown of developed and undeveloped land in terms of estimated acreage and location,
- discusses major changes in South Berwick's land use patterns and how these might affect future land use; and
- identifies land areas suitable and unsuitable for growth.

Key Findings and Issues

- Development in South Berwick slowed between 2000 and 2010, but it appears to be on an uptick since 2020.
- Development has happened in some ways as expected based on the zoning ordinance; however, more development has taken place in rural areas than expected, compared to residential growth areas and developing zones.
- Most of the vacant developable land remaining in South Berwick is in the rural zoning districts. This means that development has successfully been concentrated in the village areas, but considerations should be made for future planning of the rural zones.

Community Engagement Results

Revisiting the zoning ordinance was discussed at length in the Land Use and Housing focus group. In addition to creating new provisions that encourage the goals of the comprehensive plan, participants also noted ***the importance of reviewing current regulations for barriers to desirable development, such as affordable housing, diverse housing, suitable economic development, and natural resource protections****. Participants shared concerns about* ***ambiguity in the ordinance****, and hoped a review would include making language as clear as possible to the lay person. Other zoning concerns shared included creating* ***provisions for unexpected uses*** *and known new uses and reviewing* ***the effectiveness of parking requirements****.*

Lastly, participants were concerned about how public infrastructure relates to future development, including ***planning for expanded infrastructure in a way that promotes suitable development****.*

Historic Development Patterns

South Berwick consists of approximately 21,057 acres (32.9 square miles). Until around 1990 or so, there was little evidence of sprawl. This is largely due to the continual reinforcement of the traditional development patterns in town; first, as it occurred before land use regulation and then, as it was reinforced through the town's Zoning Ordinance. Historically, most development was located near the town center. This happened in an organic fashion, similar to other New England villages. Development was concentrated near rail corridors, water bodies and regional transportation networks. Subsequently, sprawl is a more recent phenomenon of the late 1990s to present. Beginning in the 1980s and with the approval of the Old Mill and Agamenticus Estates subdivisions, the town began to see growth expanding from the village area proper. At the time, Agamenticus Estates was the largest single family residential subdivision in the state. An expanding town center began to evolve. South Berwick was fortunate to have had a strong zoning ordinance in place during this time and notably had the first cluster/open space ordinance developed in the state of Maine. The first Comprehensive Plan and subsequent zoning changes under the Growth Management Act attempted to add emphasis on village and expanding village growth while conserving the more rural parts of town. Much of the 1992 full scale rewrite of the ordinances is still contained in the current ordinance.

The degree to which the ordinances have managed to concentrate growth in the so called "growth zones" is one part of the analysis below. Market forces and the desire of new residents to own land in a rural setting was and is a constant battle for a suburban bedroom community such as South Berwick. It is clear more growth in rural areas is taking place, particularly along rural roadways, and private roads. Balancing that growth with increased demands for housing of all types is a major upcoming challenge.

Zoning Districts

The following is the list of zones and their intended uses as outlined in the South Berwick Zoning Ordinance (see the Natural Resources chapter for Shoreland Zoning):

R1 Residential Village

- To provide areas of medium to high density residential development in locations compatible with existing development and in a manner appropriate to the economical provision of community services and utilities.

R1A Residential Growth

- To provide an additional area for future village growth contingent upon the provision of water and sewer services.

R2 Residential Developing

- To provide areas of suburban and medium density development in locations relatively close to the village service area, compatible with existing development.
- To direct growth into areas where extension of community services is likely to become economically feasible

R2A Residential Suburb Growth

- To provide an additional area for future suburbangrowth contingent upon the provision of water and sewer services.

R3 Residential Transitional

- To retain the rural residential character of an area of the town by encouraging low density uses and the maximum number of uses, consistent with controlling nuisances and unsafe and unhealthy conditions.
- To provide an area where agriculture and conservation uses are encouraged.
- To direct growth where it can be planned for the most reasonable use of community services.

R4 Residential Rural

- To retain the rural residential character of an area of the town by encouraging low density uses and the maximum number of uses, consistent with controlling nuisances and unsafe and unhealthy conditions.
- To provide an area where agricultural and conservation uses are encouraged.

R5 Residential Agamenticus Resource

- To protect the "Mt Agamenticus area" in accordance with the goals andstrategies of the Comprehensive Plan.
- To allow for low density housing, while creating a contiguous area of importantnatural resource systems of scenic beauty and recreational opportunity.
- To minimize and prevent those uses which could prove detrimental to the environment of the Mt. Agamenticus area.

B1 Business Central Commercial

- To encourage the location of commercial uses on those lands within the community which are best suited for such development.
- To protect the present commercial development from the blight, congestion and inconvenience caused by inappropriate and poorly located development of commercial facilities.
- To avoid the economic disadvantage of providing essential services to commercial facilities which would occur if commercial facilities developed in a strip fashion along highways and major thoroughfares.
- To provide areas in which the location of public facilities can serve the greatest number of people as economically as possible.
- To provide areas for high density residential development in locations compatible with existing development and in a manner appropriate to the economical provision of community services and utilities.

B2 Business Mixed

- To protect residences, residential character, and residential amenities.
- To provide locations for business and service establishments and mixed-use properties consistent with the needs of a growing town for expanded personal and professional services.
- To encourage the location of service uses along existing service corridors in a zone where lot sizes permit sufficient parking and amenities necessary for those uses.
- To provide a limited area for the establishment of light industries which do not intrude on abutting properties.

BR Business Residential

- To maintain the streetscape of a gateway of the town while allowing for professional and small business development.
- To provide an area with high visibility for mixed-use, including residential and low-impact business enterprises.
- To preserve the existing residential streetscape while encouraging limited business uses in presently established buildings, and the residential, architectural and historical character of the area

Industrial Zone I1 and I2

- To promote the location of light industry or high value business where services and transportation facilities presently exist or can reasonably be provided.
- To prevent inappropriate juxtaposition of industrial uses and residential uses.
- To provide effective siting and controls on those uses which, by virtue of their size or external effect (noise, waste discharge, glare, fumes, dust, smoke, traffic generation and parking areas, etc.) could otherwise create nuisances or unsafe or unhealthy conditions.
- Eliminate residential use in the I1 zone.
- Retain existing mixed-use in the I2 zone.

Development Overview

While all South Berwick's zones limit development to 35 feet tall, lot sizes vary. The Business Residential zone allows the smallest residential lot sizes, including 3,500 square feet for multifamily development, 5,000 square feet for two-family development, and 10,000 square feet for single-family development. Several zones allow 10,000 square feet for residential lot sizes. South Berwick's zones focused on rural development patterns have higher minimum lot sizes at 80,000 or 120,000 square feet. The complete dimensional standards are found in the community's ordinances.

Residential Development

In 2000, South Berwick had approximately 2,488 total housing units. That increased to 2,911 by 2010 (17%) and to 2,987 (2.6%) by 2020. South Berwick had the lowest increase in total units from 2010-2020 among surrounding communities, representing a significant shift from the decade before, where South Berwick and Berwick saw growth rates faster than the county and state overall.

Total Housing Unit Change 2000-2020					
	2000	2010	2020	2000-2010 Change	2010-2020 Change
South Berwick	2,488	2,911	2,987	17.0%	2.6%
Berwick	2,414	2,934	3,200	21.5%	9.1%
Eliot	2,418	2,669	2,966	10.4%	11.1%
North Berwick	1,705	1,930	2,087	13.2%	8.1%
York	8,053	8,649	9,049	7.4%	4.6%
Rollinsford	1,060	1,099	1,135	3.7%	3.3%
Maine	651,901	721,830	739,072	10.7%	2.4%
York County	94,234	105,773	112,198	12.2%	6.1%
Source: US Decennial Census, 2000, 2010 & 2020					

As of 2021, South Berwick had 228 multi-unit structures with a total of 698 dwelling units. 11% of dwelling units in multi-family structures have been built since 2010. Multi-unit structures have become more popular and accepted development in recent years, especially in southern York County. South Berwick has seen a handful of multi-family developments, all concentrated in the downtown area. The assessing database lists 3 structures with 20+ units.

Multi-Unit Housing Structures, 2021		
Assessing Code	**Total Database Entries**	**Total Dwelling Units**
COMMERCIAL	22	109
EXEMPT	9	59
MIXED USE PRIMARY COMM	2	6
MIXED USE PRIMARY RES	1	2
MOBILE HOME	2	4
MULTI SEPARATE DWELLINGS	1	2
RES 2 FAMILY	100	208
RES 3 FAMILY	14	41
RES 4-6 UNITS	18	85
RES 7+ UNITS	8	77
RES SINGLE FAMILY	51	105
Total	228	698
Source: South Berwick Assessing		
Multi-Family Units 2000-2021		
	Structures	**Units**
Built 2020-2021*	4	31
Built 2010-2020	13	47
Built 2000-2010	12	27
Total	**29**	**105**
*Source: South Berwick Assessing *Only two years*		

Note: Assessing data does not show what year a structure may have been converted to multi-unit, only the year built. Therefore, this data omits units which may be in older structures that were converted in this time period.

The following table shows how single-family development has been dispersed throughout the town over time. The R1 Residential Village zone historically saw the most residential development, especially before 1990. Between 1990 and 2019, the R3 Residential Transitional Zone had slightly more development than the village zone. Since 2020, the R1A, R2 and R2A zones have all seen fewer single family homes than the R3 and R5 zones.

New Single-Family Homes by Zone, 1980-2022

ZONE	Before 1980	1980-1989	1990-1999	2000-2009	2010-2019	2020-2022*
B1	5.1%	0.2%	1.5%	2.4%	3.0%	21.0%
B2	2.5%	0.2%	0.0%	0.3%	0.7%	1.6%
I1	0.8%	12.0%	0.4%	0.3%	0.7%	0.0%
R1	39.0%	36.6%	26.6%	21.4%	23.7%	12.9%
R1A	5.6%	1.2%	1.1%	2.4%	2.2%	0.0%
R2	4.4%	18.1%	7.1%	5.3%	2.2%	1.6%
R2A	2.9%	2.7%	6.7%	2.1%	3.7%	14.5%
R3	29.8%	19.9%	31.5%	40.9%	29.6%	17.7%
R4	7.5%	5.7%	16.1%	16.6%	22.2%	12.9%
R5	2.4%	3.3%	9.0%	8.3%	11.9%	17.7%
Total	**906**	**814**	**267**	**337**	**135**	**62**

*Source: South Berwick Assessing Database, * Only two years*
No BR in this table because it was created by overlaying home points on the zoning GIS layer

Most multi-unit structures are in the business zones and the village district. The R3 transitional has the second most residential parcels overall, including multi-unit dwellings.

Residential Parcels by Zone and Number of Units, 2022

	1 Unit	2 Units	3 Units	4-6 Units	7+ Units
B1 BUSINESS CENTRAL COMM	28	12	4	8	4
B2 BUSINESS MIXED	27	14	1	1	
BR BUSINESS RESIDENTIAL	1	2	1		
I1 INDUSTRIAL	9				
R1 RESIDENTIAL VILLAGE	777	42	5	9	3

R1A RESIDENTIAL GROWTH	73	3			
R2 RESIDENTIAL DEVELOPING	200	4			
R2A RESIDENTIAL SUBURB GROWTH	81				
R3 RESIDENTIAL TRANSITIONAL	718	23	3	1	
R4 RESIDENTIAL RURAL	241	3			
R5 RESIDENTIAL AGAMENTICUS RESOURCE	126	2			
Source: South Berwick Assessing Database					

Commercial Land Use

Commercial development in South Berwick has always been gradual. Since 2000, the town has permitted a total of 45 commercial building permits, with a steady decrease in the number of permits since 2005. The town has prioritized more economic development in recent years, especially in local TIF districts.

Commercial Building Permits						
Years	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2019**	**2020-2021***	**Total**
Permits	15	13	10	7	2	45
*Source: town Reports; *Only 2 years*						

Commercial development has, as expected, concentrated in the B1 business district, the industrial district, and the village. The large acreage in the R2 zone is in part the golf course.

Commercial Development by Zone		
Zoning District	**Total Acres**	**Parcels**
B1 BUSINESS CENTRAL COMM	15.7	35
B2 BUSINESS MIXED	0.8	1
BR BUSINESS RESIDENTIAL	0.6	2
I1 INDUSTRIAL	130.8	15
R1 RESIDENTIAL VILLAGE	4.0	8
R2 RESIDENTIAL DEVELOPING	124.9	4
R2A RESIDENTIAL SUBURB GROWTH	1.4	1
R3 RESIDENTIAL TRANSITIONAL	121.0	5
Total	**399.1**	**71**
Source: South Berwick Assessing Database		

Industrial Development

South Berwick has a small amount of industrial development along Route 236, and mainly in the industrial zoning districts. No significant industrial growth has happened in the community in recent years.

Industrial Development by Zone		
Zoning District	**Total Acres**	**Parcels**
BR BUSINESS RESIDENTIAL	2.1	1

I1 INDUSTRIAL	21.9	5
Total	24.0	6
Source: South Berwick Assessing Database		

Developable Land Analysis

Constraints to Development

There are several constraints to development. Some are physical characteristics of the land which make development impossible, less feasible, or are protected under certain resource conservation regulations. Other constraints such as conservation and current use programs hold land in ways that make it not readily developable, even if it is vacant. South Berwick has long had a large portion of the town area in conservation or held publicly. This is a natural deterrent to development, especially in the environmentally sensitive or valuable places where it should be discouraged.

Current Use

The town currently has over 2,300 acres in Farmland and Open Space or Tree Growth tax programs. Landowners that enroll in these programs are incentivized to keep the land in current use for a certain period of time, making it not readily available to development.

Current Use Parcels	
Current Use Type	**Acres**
Farmland	39.3
Open Space	625.3
Tree Growth	1672.6
Total	**2337.1**
Source: South Berwick Assessing Database	

Publicly Owned & Tax-Exempt Land

The town also has over 3,500 acres that are tax-exempt or owned by public entities. Over 2,000 acres of this land is owned by the state, most of which is in the Mt. Agamenticus conservation area. The town itself owns over 600 acres, and public utilities hold over 300 acres.

Publicly Owned & Tax-Exempt Land	
Owner/Type	**Acres**
Town of South Berwick	622.02
South Berwick Water District	135.23
State of Maine	2055.01
Berwick Academy or SAD 35	124.94
Utility (CMP, Granite State Gas, etc.)	232.66
Other Exempt	353.96
Total	**3523.81**
Source: South Berwick Assessing Database	

Vacant vs Developed Land

The following table shows the total vacant developable land based on the assessor's parcel data. This analysis estimates that around 22% of South Berwick's land area is vacant and not held in one of the above constraints to development. However, this does not consider physical constraints to development.

Assessing Parcel Dataset Developable Lands Analysis					
	Total Acres	**Percent of Total Acres**	**Parcels**	**Percent of Total Parcels**	**Avg Parcel Size**
Current Use	2,337.2	11.7%	74	2.3%	31.6
Not Readily Developable	3,955.9	19.9%	245	7.7%	16.0
Developed Residential	8,673.2	43.6%	2,508	78.7%	3.5
Developed Commercial	399.4	2.0%	73	2.3%	5.5
Developed Industrial	24.0	0.1%	6	0.2%	4.0
Developable Residential	4,469.6	22.5%	276	8.7%	16.2
Developable Commercial	17.9	0.1%	4	0.1%	4.5
Developable Industrial	14.9	0.1%	2	0.1%	7.5
Total	**19,892.1**		**3,188.0**		**88.8**
All Developed	9,096.6	45.7%	2,587.0	81.1%	
All Vacant/Developable	4,502.4	22.6%	282.0	8.8%	
All Current Use or Not Developable	6,293.1	31.6%	319.0	10.0%	
Source: South Berwick Assessing Database *Includes all parcels with coded property description.*					

To get a more accurate picture of vacant developable land, physical constraints to development were removed from vacant land. These included soils with low suitability for development, conserved lands, shoreland zoning buffers and waterbodies. Some of these constraints, such as 10-acre wetland buffers, account for 13% of the town's total land area. Note, there is a significant amount of overlap of physical constraints, so the total acreage is more than the total town area.

After removing land with physical constraints to development, land not readily developable, and land already developed, there is estimated to be 1,344 acres of total developable land remaining. This represents about 7% of the town's total land area. The majority of the remaining vacant developable land is within the R3, R4 and R5 zones, which should be a major consideration for future land use planning.

Geospatial Developable Lands Analysis		
Physical Development Constraints	**Acres**	**Percent of Total Acreage**
Low Soil Suitability for Development	11,847.76	59%
Conserved Lands	4,429.57	22%
Stream Buffers	1,165.93	6%
River Buffers	563.67	3%
Great Pond Buffers	1,571.23	8%
10 Acre Wetland Buffers	2,636.77	13%
Waterbodies	243.04	1%
Developable Land	**Acres**	**Percent of Total Acreage**

Total Physically Developable Land *(No Physical Constraints)*	5,279.62	26%
Total Developable Land *(No Physical Constraints & Land is Readily Developable)*	4,624.04	23%
Total Vacant Developable Land *(No Physical Constraints, Land is Readily Developable & Not Already Developed)*	1,343.80	7%
Source: SMPDC Developable Land Analysis, South Berwick Assessing Database		

Developable Land by Zoning District			
Zoning District	**Physically Developable Acres**	**Developable Acres**	**Vacant Developable Acres**
B1	25.88	11.16	0.26
B2	19.70	16.10	0.00
I1	134.77	78.91	28.67
R1	526.07	420.88	106.14
R1A	82.30	80.61	0.00
R2	212.14	166.00	23.11
R2A	157.85	150.25	9.65
R3	2,387.07	2,070.25	648.58
R4	1,211.20	1,137.65	383.77
R5	522.65	491.76	144.09
Source: SMPDC Developable Land Analysis, South Berwick Assessing Database			

Average Parcel Size by Zone		
Zoning District	**Average Parcel Size (Acres)**	**Total Parcels**
B1 BUSINESS CENTRAL COMM	0.53	108
B2 BUSINESS MIXED	0.65	57
BR BUSINESS RESIDENTIAL	0.85	8
I1 INDUSTRIAL	12.64	49
R1 RESIDENTIAL VILLAGE	1.19	935
R1A RESIDENTIAL GROWTH	2.02	79

R2 RESIDENTIAL DEVELOPING	4.38	252
R2A RESIDENTIAL SUBURB GROWTH	6.90	102
R3 RESIDENTIAL TRANSITIONAL	8.29	1045
R4 RESIDENTIAL RURAL	11.65	326
R5 RESIDENTIAL AGAMENTICUS RESOURCE	16.01	227
Source: South Berwick Assessing Database		

Residential Parcel Analysis			
	Acres	**Parcels**	**Avg. Parcel Size**
Residential 1 Unit	8001.3	2281	3.5
Residential 2 Unit	271.5	105	2.6
Residential 3 Unit	24.0	14	1.7
Residential 4-6 Units	45.2	19	2.4
Residential 7 or More Units	6.8	7	1.0
Condos Residential	1.5	3	0.5
Source: South Berwick Assessing Database			

Implications

Impact of Zoning and Growth Management Techniques

South Berwick's zoning measures have been relatively successful over the years in directing growth to the village and surrounding area, although much of the concentration of village growth has been present for decades. It is clear however, that the availability of land for development in the so called "growth areas" is diminishing and based on the current zoning construct may not be adequate for growth projected into the future. Recent development in the rural zones has increased and the availability of land in those areas is far greater than availability in and around the village. This has major implications for residential growth in rural zones in the future.

The town's B1 zone, which has no minimum lot size requirement, has been almost fully built out. Several multifamily projects and conversions have taken place in this district in recent years.

One interesting piece of South Berwick's growth has been how the purchase of conservation lands in the rural areas has worked as a growth management technique in its own right. It is hard to imagine what the R5 Mt. Agamenticus Zone would look like without the volume of conservation lands and easement purchased over the last 30 years. Cluster/Open Space options, while not eliminating growth in rural areas can work to preserve natural and recreational assets. South Berwick has been amongst the most active communities in the region in that regard.

Another positive pattern has been the increase in multifamily development in and around the village over the past decade. Upwards of 50 units have been built in the village – development which might have taken place in open space otherwise. The trend towards increased housing options is now a major issue in Maine and will need to be addressed within the recommendations of this plan.

One of the largest zones in town is the industrial zone, essentially encompassing both sides of Route 236 from the intersection of Route 91 south. Residential dwellings are currently not permitted in the industrial zone, thus removing a large area potentially available for housing from the town. As the industrial zone continues to develop options for creative zoning measures in these areas might be warranted.

Overlaying all these issues is the impact and the town's preparation for LD 2003, the recently adopted Maine Statute addressing the need for housing options. The availability of land on water and sewer and the relative lack of available land within the town's growth area will need to be examined when addressing the law.

Future Development & Planning Considerations

Land Use Planning can be used to improve the efficiency of land use, to minimize conflicts between incompatible uses, to reduce or eliminate environmental hazards and to minimize degradation of the environment. This analysis inventories the location and extent of the various land uses and identifies future land use trends. This information, along with that from the location and capacity of water, sewer, and transportation services and facilities, soil suitability, and other environmental concerns, provides the basis for land use planning.

Land Use Development Patterns

More efficient use of land and municipal services and facilities consists of: encouraging infill development near village center, and full use of urban areas; concentration of development near water, sewer, and highway systems; and the conservation of open space. It has been and continues to be South Berwick's policy to encourage growth in the R-1 and R-2 zoning districts in and adjacent to the village (where higher density is allowed), and to limit development in the more rural R-3, R-4, and R-5 districts. The town is committed to avoiding the problems of development sprawl.

Land Use Compatibility

Another goal of land use planning is to assure compatibility of adjacent land uses and reduce or minimize conflicts between incompatible adjacent uses. Current zoning districts in South Berwick attempt to minimize such conflicts by segregating industrial and high volume commercial uses from the residential districts.

Projected Land Acreage Needed for Development

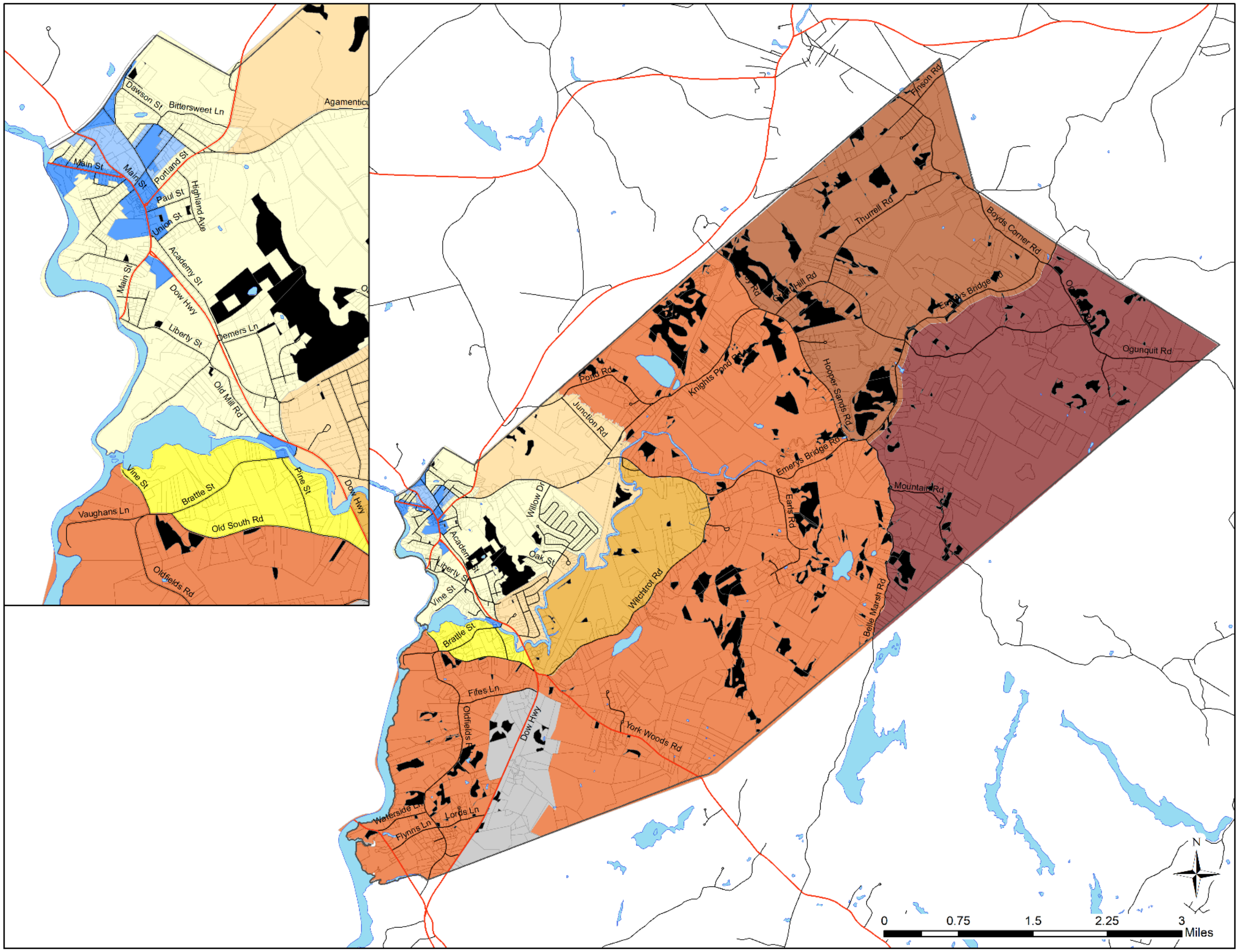
The Housing Chapter included housing projections based on a 3.3% and 11% increase in population over the next 20 years. It also considered scenarios where the average household size stayed the same as 2020, and if it decreased at the same rate as it has over the last decade. This resulted in an estimate of between 190 to 340 housing units needed by 2040 with a steady average household size, and 280 to 440 new housing units if average household size continued to decrease.

The average parcel size for parcels coded as single family is 3.5 acres, and that decreases to 2.3 acres for duplexes and 2.4 for four to six-unit structures. At an average of 3.5 acres per parcel and assuming average household sizes stay the same, the town would need 665 to 1,190 acres for new development in the next 20 years. However, as multi-unit dwellings become less regulated due to new laws, it is possible that South Berwick will reach the upper threshold of needed units on far fewer acres. At an

average of 2.3 acres, the town would only need 437 to 782 acres for the same number of units. It is also likely that development in South Berwick will be less than projected.

Future Land Use Plan

The Future Land Use Plan is the crux of the recommendations which the Comprehensive Plan asserts. The Future Land Use plan which results from the findings of this chapter is included in the Implementation section following the inventory of this plan.



South Berwick Developable Land Analysis

South Berwick Comprehensive Plan

After removing land which is not readily developable, due to ownership or conservation status, and land which is already developed (at least one structure), there is approximately 1,345 acres of developable land remaining in South Berwick.

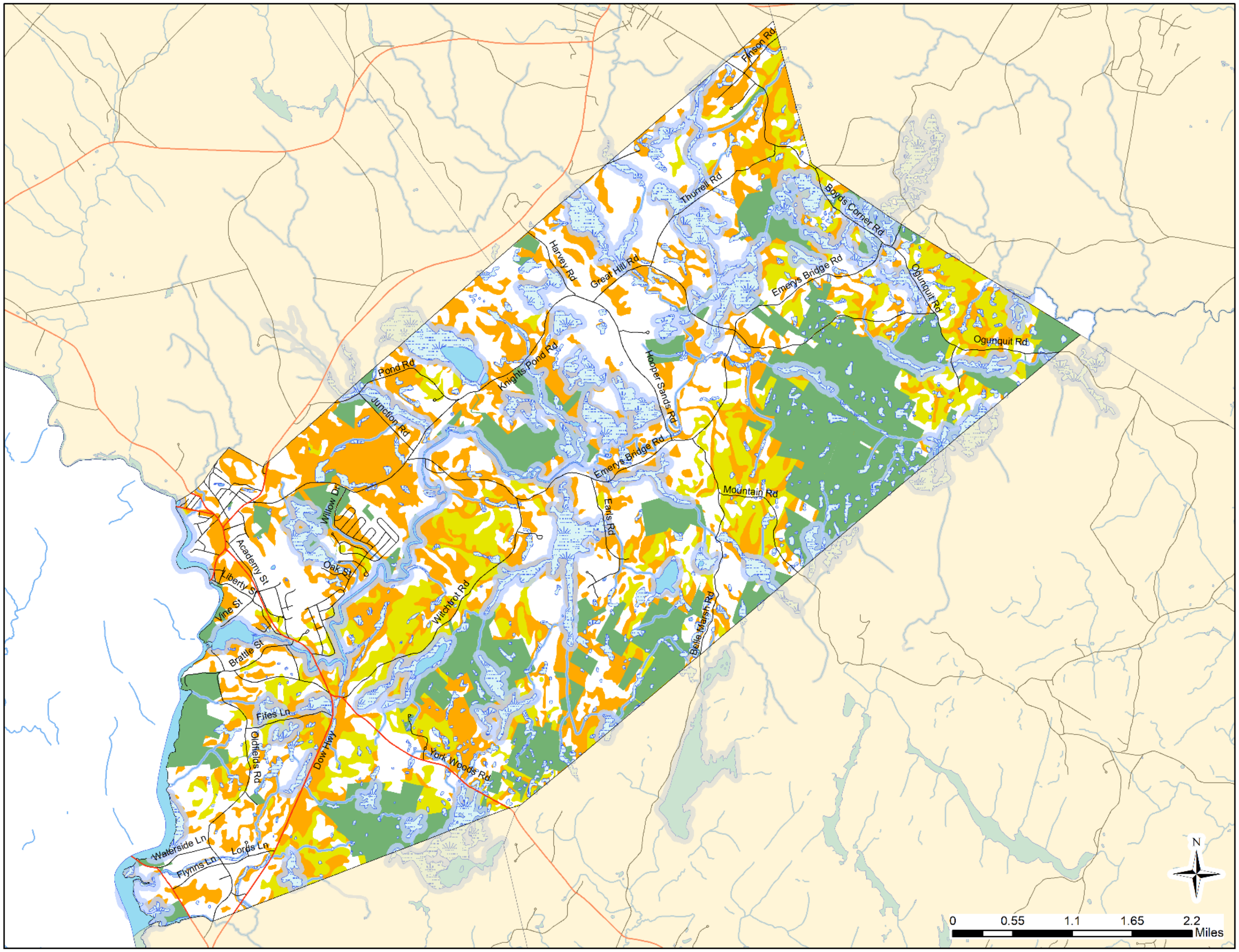
- Developable Land
- South Berwick Parcels
- Waterbodies

ZONE

- B1
- B2
- I1
- R1
- R1A
- R2
- R2A
- R3
- R4
- R5

This map is not authoritative. Data should be used for planning purposes only. Source: Beginning with Habitat, York County Soil and Water

SMPDC



South Berwick Development Constraints

South Berwick Comprehensive Plan

The white space here represents developable land based on the physical constraints below. This map estimates approximately 5,600 acres of land without physical development constraints.

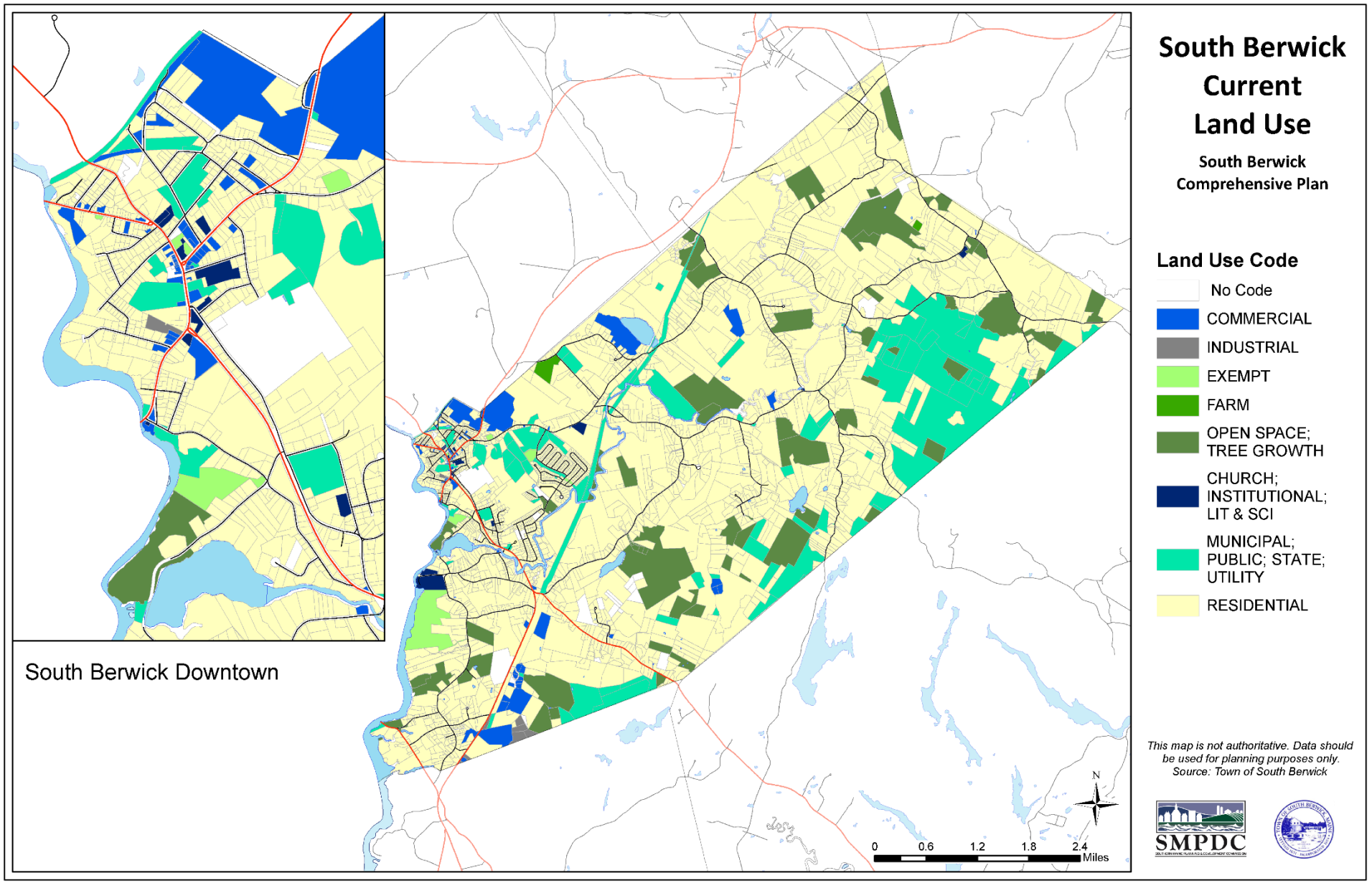
- Waterbodies
- Wetlands
- Great Ponds 250ft Buffers, Wetlands 250ft Buffers, Rivers 250ft Buffers, Streams 75ft Buffers
- Conserved Lands

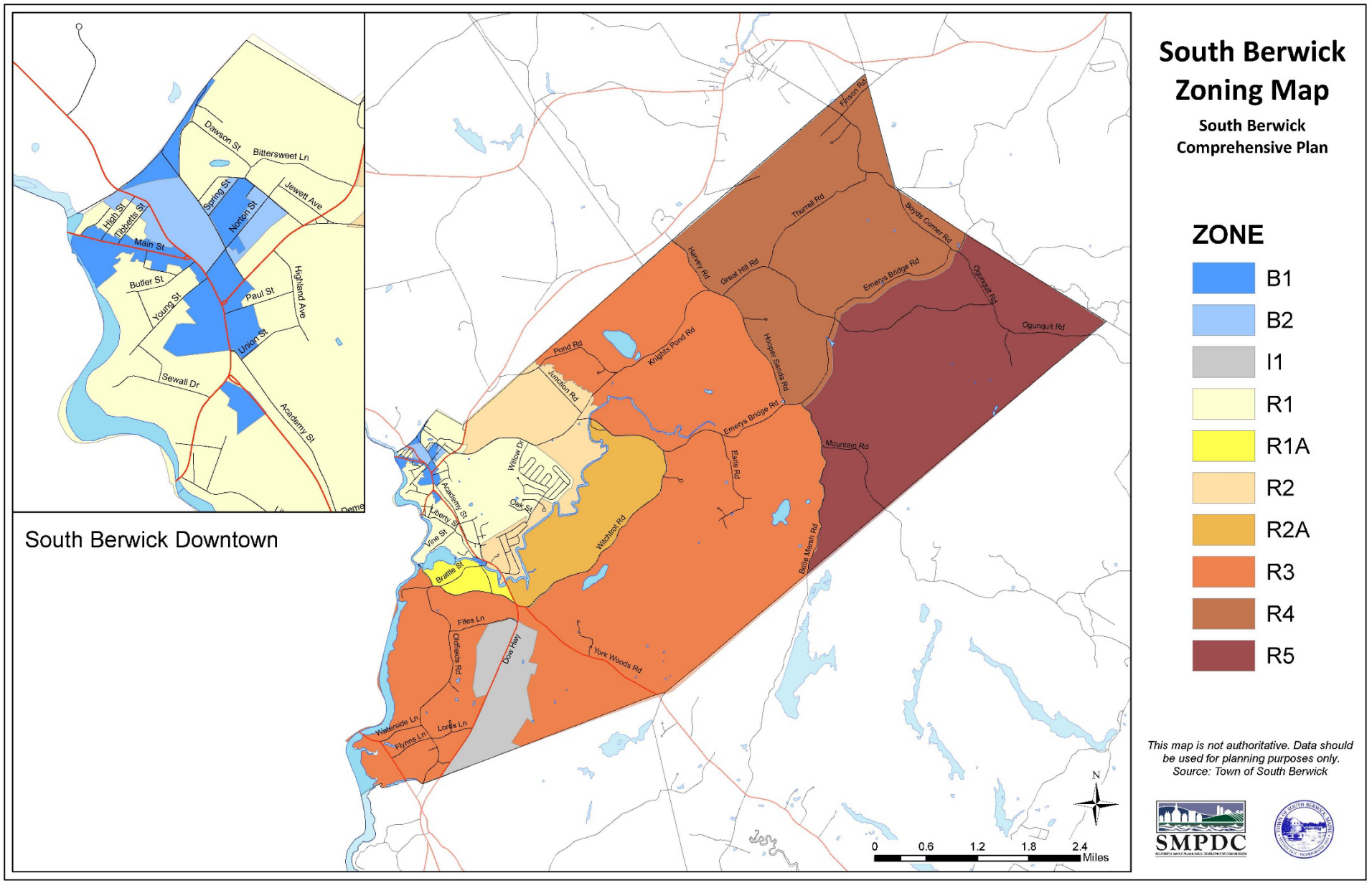
Soil Suitability for Low Density Development

- Low
- Very Low

This map is not authoritative. Data should be used for planning purposes only. Source: Beginning with Habitat, York County Soil and Water

SMPDC


South Berwick Current Land Use
South Berwick Comprehensive Plan
Land Use Code
No Code
COMMERCIAL
INDUSTRIAL
EXEMPT
FARM
OPEN SPACE; TREE GROWTH
CHURCH; INSTITUTIONAL; LIT & SCI
MUNICIPAL; PUBLIC; STATE; UTILITY
RESIDENTIAL
South Berwick Downtown
0 0.6 1.2 1.8 2.4
Miles
N
This map is not authoritative. Data should be used for planning purposes only.
Source: Town of South Berwick
SMPDC


South Berwick Zoning Map
South Berwick Comprehensive Plan
ZONE
B1
B2
I1
R1
R1A
R2
R2A
R3
R4
R5
South Berwick Downtown
Dawson St
Bittersweet Ln
Jewett Ave
Spring St
Norton St
High St
Tibbetts St
Main St
Butler St
Young St
Paul St
Highland Ave
Union St
Sewall Dr
Academy St
Pond Rd
Junction Rd
Knights Pond Rd
Harvey Rd
Great Hill Rd
Thurrell Rd
Emerys Bridge Rd
Hopper Sands Rd
Boyds Corner Rd
Ogunquit Rd
Mountain Rd
Earls Rd
Willow Dr
Oak St
Wilchford Rd
Belle Marsh Rd
Vine St
Brattle St
Files Ln
Oldfields Rd
Dow Hwy
York Woods Rd
Waterside Ln
Flynns Ln
Lords Ln
0 0.6 1.2 1.8 2.4 Miles
N
This map is not authoritative. Data should be used for planning purposes only.
Source: Town of South Berwick
SMPDC

Appendix – Local Economy

Retail Gap and Potential, 6-Digit NAICS, Local Trade Area (2022)

NAICS	Description	2022 Total Demand	2022 Total Sales	Retail Gap (Demand - Sales)	Leakage Capture (10%)	Total Supportable Square Feet
441110	New Car Dealers	$5,122,731	$779	$5,121,952	$512,195	1,576
722513	Limited-Service Restaurants	$10,848,611	$6,148,544	$4,700,067	$470,007	1,442
454110	Electronic Shopping and Mail-Order Houses	$4,885,946	$433,975	$4,451,972	$445,197	1,361
447110	Gasoline Stations with Convenience Stores	$3,146,697	$89,960	$3,056,737	$305,674	932
445110	Supermarkets and Other Grocery (except Convenience) Stores	$5,594,937	$2,859,394	$2,735,543	$273,554	831
452311	Warehouse Clubs and Supercenters	$3,896,514	$1,203,877	$2,692,638	$269,264	816
722511	Full-Service Restaurants	$9,330,079	$7,260,040	$2,070,039	$207,004	625
452210	Department Stores	$1,941,116	$18,315	$1,922,801	$192,280	579
446110	Pharmacies and Drug Stores	$2,271,648	$360,377	$1,911,271	$191,127	574
312120	Breweries	$1,328,654	$6,723	$1,321,931	$132,193	396
454390	Other Direct Selling Establishments	$1,899,854	$760,968	$1,138,886	$113,889	340
444190	Other Building Material Dealers	$1,204,011	$65,166	$1,138,844	$113,884	339
443142	Electronics Stores	$1,592,539	$570,819	$1,021,720	$102,172	303
441120	Used Car Dealers	$912,707	$35,457	$877,250	$87,725	260
448140	Family Clothing Stores	$1,197,174	$385,078	$812,096	$81,210	240
441310	Automotive Parts and Accessories Stores	$841,962	$54,534	$787,428	$78,743	232
442110	Furniture Stores	$833,016	$58,054	$774,962	$77,496	227
812112	Beauty Salons	$1,358,647	$590,665	$767,982	$76,798	225
713940	Fitness and Recreational Sports Centers	$822,874	$75,167	$747,707	$74,771	218
451110	Sporting Goods Stores	$688,164	$55,181	$632,983	$63,298	184
448120	Women's Clothing Stores	$709,671	$82,044	$627,627	$62,763	182
722515	Snack and Nonalcoholic Beverage Bars	$594,281	$5,328	$588,953	$58,895	170
452319	All Other General Merchandise Stores	$1,053,735	$469,496	$584,238	$58,424	168
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	$1,031,523	$500,787	$530,736	$53,074	153
312130	Wineries	$505,103	$1,262	$503,841	$50,384	144
441320	Tire Dealers	$529,788	$38,015	$491,773	$49,177	141
448210	Shoe Stores	$550,299	$61,602	$488,697	$48,870	139
453310	Used Merchandise Stores	$496,812	$27,373	$469,440	$46,944	133
312140	Distilleries	$453,619	$3,660	$449,960	$44,996	127
448310	Jewelry Stores	$754,668	$307,518	$447,150	$44,715	126
444130	Hardware Stores	$433,058	$17,782	$415,276	$41,528	117
446120	Cosmetics, Beauty Supplies, and Perfume Stores	$439,535	$30,055	$409,480	$40,948	115

Source: Lightcast, Camoin Associates

Continued: Retail Gap and Potential, 6-Digit NAICS, Local Trade Area (2022)

NAICS	Description	2022 Total Demand	2022 Total Sales	Retail Gap (Demand - Sales)	Leakage Capture (10%)	Total Supportable Square Feet
454310	Fuel Dealers	$560,547	$168,809	$391,738	$39,174	110
447190	Other Gasoline Stations	$450,123	$64,713	$385,410	$38,541	108
812113	Nail Salons	$468,596	$91,475	$377,121	$37,712	105
448190	Other Clothing Stores	$471,035	$97,174	$373,861	$37,386	104
445310	Beer, Wine, and Liquor Stores	$398,211	$60,785	$337,426	$33,743	94
722410	Drinking Places (Alcoholic Beverages)	$332,340	$34,693	$297,647	$29,765	82
453991	Tobacco Stores	$301,928	$15,260	$286,668	$28,667	79
453910	Pet and Pet Supplies Stores	$308,729	$27,769	$280,959	$28,096	77
446199	All Other Health and Personal Care Stores	$315,609	$42,434	$273,175	$27,317	75
442210	Floor Covering Stores	$329,458	$67,894	$261,564	$26,156	72
441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers	$261,613	$15,392	$246,221	$24,622	67
451120	Hobby, Toy, and Game Stores	$257,230	$17,443	$239,787	$23,979	65
311811	Retail Bakeries	$259,264	$23,500	$235,764	$23,576	64
453210	Office Supplies and Stationery Stores	$252,584	$17,748	$234,836	$23,484	64
454210	Vending Machine Operators	$216,163	$0	$216,163	$21,616	58
441210	Recreational Vehicle Dealers	$256,009	$46,914	$209,095	$20,910	56
445120	Convenience Stores	$387,487	$196,744	$190,743	$19,074	51
446130	Optical Goods Stores	$195,681	$31,052	$164,628	$16,463	44
445299	All Other Specialty Food Stores	$215,547	$53,596	$161,950	$16,195	43
812910	Pet Care (except Veterinary) Services	$252,551	$90,853	$161,698	$16,170	43
448110	Men's Clothing Stores	$165,411	$19,347	$146,063	$14,606	39
445210	Meat Markets	$143,994	$4,521	$139,473	$13,947	37
448150	Clothing Accessories Stores	$268,044	$137,990	$130,054	$13,005	34
446191	Food (Health) Supplement Stores	$152,499	$25,994	$126,505	$12,651	33
453920	Art Dealers	$160,411	$42,669	$117,742	$11,774	31
444120	Paint and Wallpaper Stores	$168,270	$63,859	$104,411	$10,441	27
	Total				**$5,078,268**	**15,082**

Source: Lightcast, Camoin Associates

Note: Includes industries for which the gap is greater than $100,000

Appendix – Public Facilities

Recreation Facilities By Ownership

STATE OWNED				
Area	***Tax Map/Lot***	***Acres***	***Facilities***	***Comment***
Buildings/Storage	1-13 Route 236	7.38	State Highway Dept. property	
Vacant	2-1	18.5	Vacant	Inland Fisheries & Wildlife (IF&W) – York Pond Cons. Area
Vacant	2-3	68.5	Vacant	IF&W – York Pond Cons. Area
Vacant	2-31	28.9	Vacant	IF&W – York Pond Cons. Area
Vacant	2-63	58	Vacant	IF&W – York Pond Cons. Area
Vacant	4-6	9	Vacant	IF&W – Mt.Agamenticus (Mt. A.)
Vacant	4-39	14	Vacant	IF&W – Mt. A.
Vacant	4-41	20	Vacant	IF&W – Mt. A.
Vacant	4-43	136	Vacant	IF&W – Mt. A.
Vacant	4-45	20	Vacant	IF&W – Mt. A.
Vacant	4-46	48	Vacant	IF&W – Mt. A.
Vacant	4-73C	5.3	Vacant	IF&W – Mt. A.
Vacant	4-74	26.3	Vacant	IF&W – Mt. A.
Vacant	4-76	449.4	Vacant	IF&W – Mt. A.

Vacant	4-79A	19.5	Vacant	IF&W – Mt. A.
Vacant	4-85	13	Vacant	IF&W – Mt. A.
Vacant	2-50	30	Cons. Comm.	Mt. A Cons. Area
Vacant	2-51	16	Cons. Comm.	Mt. A Cons. Area
Vacant	2-57	40	Cons. Comm.	Mt. A Cons. Area
Vacant	2-61	7.4	Cons. Comm.	Mt. A Cons. Area
Vacant	3-17	4.5	Cons. Comm.	Mt. A Cons. Area
Vacant	3-36A	10	Cons. Comm.	Mt. A Cons. Area
Vacant	3-39	3.9	Cons. Comm.	Mt. A Cons. Area
Vacant	3-46	16	Cons. Comm.	Mt. A Cons. Area
Vacant	3-49	20	Cons. Comm.	Mt. A Cons. Area
Vacant	3-52	22	Cons. Comm.	Mt. A Cons. Area
Vacant	3-62	38	Cons. Comm.	Mt. A Cons. Area
Vacant	3-63	24	Cons. Comm.	Mt. A Cons. Area
Vacant	4-64	4	Cons. Comm.	Mt. A Cons. Area
Vacant	4-73	17.2	Cons. Comm.	Mt. A Cons. Area
Vacant	5-40	4.2	Cons. Comm.	Mt. A Cons. Area
Vacant	7-65 (16)	2.38	Open space	subdivision
Vacant	8-91		Open space connector to ET town Forest	Aggie estates-cons. comm. developing management plan
Vacant	9-28	21.6	Well heads	Hooper Sands contamination

Demolished building	9-52	0.9	Flood plain	
Buildings/Park	11-1	38.9	Sports fields/open space	Little League, soccer fields, etc.
Buildings	11-364	3.2	Transfer Station	
Buildings	11-37	1	Dwelling	
Vacant	12-68	88.5	trail	town Forest – Cons. Comm.
Vacant	12-77	11	trail	Cons. Comm.
Vacant	12-78	3.9	Vacant	Cons. Comm.
Vacant	15-16 Route 101	2.4	town landing, waterfront rest area	Boat ramp/picnic area/scenic
Vacant	25-5		Counting House Park	Boat portage, picnic, fishing, scenic
Vacant	25-31	0.2	Counting House Park	annex
Vacant	28-56	2.1	Vacant	
Vacant	28-70	0.9	Parking area and pong	Opposite to Community Center
Vacant	28-75	0.4	Parking area	Post Office
Building	28-105A	12.7	Powderhouse Ski Hill	Ski Lodge/Hut
Parking	28-143	0.2	Parking	On Paul Street
Municipal Building	28-170 Main Street	1.9	town offices and meeting rooms	Benches/rest area in front of building
Buildings/Storage	31-102	4.4	Highway Dept.	
Building	31-121	0.2	Former EMT building	
Building	31-132	0.7		

			Community Center/Public Safety Center	Fire Dept/EMT/offices/C ommunity kitchen/meeting rooms
Building	31-132A	3	Apartments and open space	Formerly Cummings Mill Building
Building	33-140	9.3	Soccer fields/parking/skate board park	Location for Teen Center ** VACANT**
	34-41	0.4	Vacant	
	34-59	0.4	Vacant	
	34-62	9.3	Open Space	Subdivision
	35-106	0.8	Open Space	Subdivision
	35-107	1.1	Open Space	Subdivision

MSAD 35 SCHOOL RECREATION FACILITIES				
Area	***Tax Map/Lot***	***Acres***	***Facilities***	***Comment***
Central School	27-83	8.4	Multipurpose field, playground, 1 gymnasium	
Marshwood Great Works School	Unknown		1 ballfield, 1 multipurpose field, 1 gymnasium, 1 jogging course/trail.	Recreation Department Summer Camp location.
	24-9	51		

Marshwood High School			Athletic fields for football, baseball, softball, lacrosse, soccer, field hockey, track and field facilities, tennis courts, outdoor basketball areas, gymnasium, auditorium.	
Marshwood Middle School	24-9	13	2 ballfields, 1 football field, 1 multipurpose field, 1 gymnasium, track and field facility.	

PRIVATELY OWNED FACILITIES				
Area	***Tax Map/Lot***	***Acres***	***Facilities***	***Comment***
Rod and Gun Club	1-14 Route 236	46.5	Building and land, target range	Owned by Rod and Gun Club
Hamilton House	6-2 Vaughn's Lane and Salmon Falls River	35	House tours, garden walk	Owned by Historic New England
Jewett House	28-78 Portland Street	1.2	House tours	Owned by Historic New England
Jewett-Eastman Memorial	28-78A Portland Street	0.46	Library	Jewett-Eastman Memorial Committee
Counting House Meeting Place	25-4 Liberty Street	0.09	Building	Owned by Olde Berwick Historical Society
Berwick Academy	26-14 through 26-17 Academy Street, Wadleigh Lane	73.5	Athletic fields for soccer, lacrosse, field hockey, baseball, softball, cross country trails, 6 tennis courts, 1 gymnasium and field house, 1 banquet hall, 1 outdoor basketball court	Owned by Berwick Academy Trustees

Spring Hill Recreation Area	12-47 Knights Pond Road	81	Banquet rooms, beach/swimming area, picnic tables, bath house	Owned by Spring Hill Corp.
Outlook Golf Course	Nov-32	95 (South Berwick & Berwick)	18 hole golf course with driving range	
Federated Church	28-2		Meeting area	

OTHER FACILI TIES				
Area	***Tax Map/Lot***	***Acres***	***Facilities***	***Comment***
Vacant	30-19	4	town of Rollinsford	
Vacant	2-6	100	GWRLT	York Pond Cons. Area
Vacant	2-35	15	TNC	Mt. A. Cons. Area
Vacant	2-36	10	GWRLT	Mt. A. Cons. Area
Vacant	2-43	23	GWRLT	Mt. A. Cons. Area
Vacant	3-47A	10	GWRLT	Mt. A. Cons. Area
Vacant	4-44	11	GWRLT	Mt. A. Cons. Area
Vacant	4-47	10	GWRLT	Mt. A. Cons. Area
Vacant	5-14	96	GWRLT	Mt. A. Cons. Area
Vacant	9-33	22	Black Swan	Open space from subdivision
Vacant	10-26	97	GWRLT	Mt. A. Cons. Area
Vacant	10-27A	15	GWRLT	Mt. A. Cons. Area

Vacant	44879	1.6	SB Water District	Watershed protection
Vacant	44880	41	SB Water District	Watershed protection
Well site	12-37A	17	SB Water District	Watershed protection
Vacant	12-37-004	9	SB Water District	Watershed protection
Vacant	14-42	13	GWRLT	Mt. A Cons. Area
Vacant	22-1	7.6	Historic New England	Waterfront
Vacant	23-47	2	GWRLT	Waterfront
Vacant	23-7 B-9	12	Portsmouth Housing Foundation	Open space from subdivision
Buildings	25-2	5.6	SB Sewer District	Treatment facilities adjacent to Counting House Park
Building	26-2	3	SB Water District	Water storage
Sport field	32-105	3.4	Old Mill Comm. Assn.	Open space from subdivision
Vacant	32-106	3	Old Mill Comm. Assn.	Open space from subdivision
Pool & tennis	32-107	3.7	Old Mill Comm. Assn.	Recreational land from subdivision
Vacant	32-108	10	Old Mill Comm. Assn.	Open space from subdivision
Vacant	32-109	3.3	Old Mill Comm. Assn.	Open space from subdivision
Vacant	32-110	7	Old Mill Comm. Assn.	Open space from subdivision
Vacant	34-63	9	SB Water District	Watershed protection

Recreation Facilities By Type

HISTORIC SITES			
Name	***Acres***	***Ownership***	***Comment***
Hamilton House	35	Private	House tours, garden walk
Sarah Orne Jewett House	1.2	Private	House tours
Eastman House/Public Library	0.46	Private	Public library
Olde Berwick Historical Society County House	0.09	Private	Meeting place, historical exhibits

BALLFIELDS			
Name	***Acres***	***Ownership***	***Comment***
town of South Berwick – Willow Drive	2	town	2 Little League fields, 1 softball field
Marshwood Great Works School		MSAD 35	1 ballfield
Marshwood High School	51	MSAD 35	1 ballfield-regulation size, 1 softball field
Marshwood Middle School	2	MSAD 35	1 ballfield (minor league, softball size), 1 multi- purpose field (soccer)
Berwick Academy	73.5	Private	1 ballfield-regulation size

PLAYGROUNDS			
Name	***Acres***	***Ownership***	***Comment***
Berwick Academy		Private	Various apparatus

Central School		MSAD 35	Various apparatus
Shoetown Playground		town	Designed for ages 2-5

TENNIS COURTS			
Name	***Acres***	***Ownership***	***Comment***
Marshwood High School	50	MSAD 35	5 tennis courts
Berwick Academy	2	Private	6 tennis courts (leased land) open to town citizens at scheduled times

GYMNASIUMS			
Name	***Acres***	***Ownership***	***Comment***
Central School		MSAD 35	1 gymnasium
Marshwood Great Works School		MSAD 35	1 gymnasium
Marshwood Middle School		MSAD 35	1 gymnasium
Marshwood High School		MSAD 35	1 gymnasium
Berwick Academy		Private	Gymnasium and field house

BASKETBALL COURTS- OUTDOORS			
Name	***Acres***	***Ownership***	***Comment***

Berwick Academy		Private	2 hoops
Marshwood High School		MSAD 35	4 hoops in stadium parking area
Powder House Hill		town	2 hoops

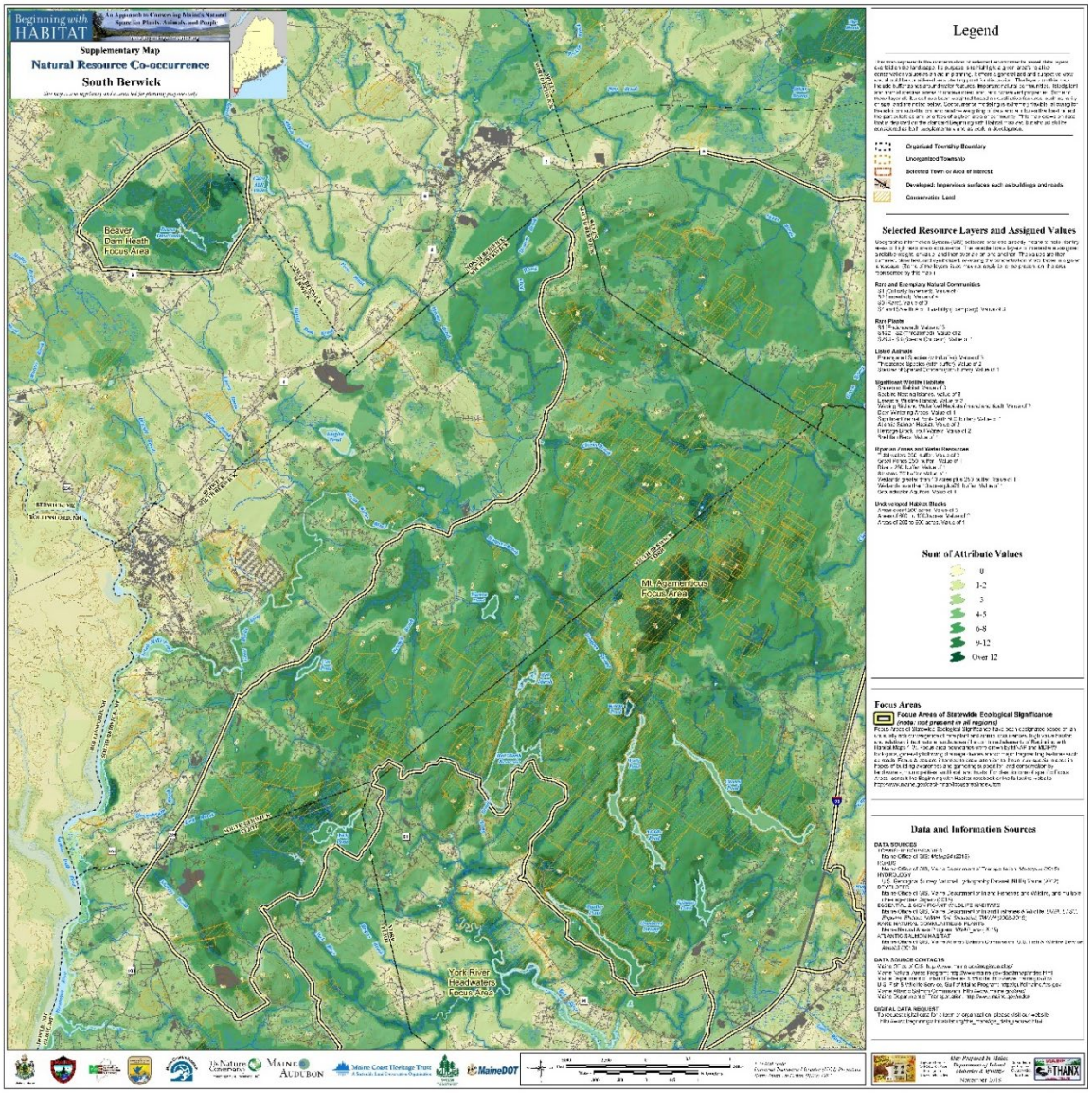
BASKETBALL COURTS - INDOORS			
Name	***Acres***	***Ownership***	***Comment***
Berwick Academy		Private	1 court plus 3 potential in Field House
Central School		MSAD 35	1 court
Marshwood Great Works School		MSAD 35	1 court
Marshwood Middle School		MSAD 35	1 court
Marshwood High School		MSAD 35	1 court

HIKING/CROSS COUNTRY TRAILS			
Name	***Acres***	***Ownership***	***Comment***
town Forest		town	Several trails for walking/hiking
Vaughn Woods State Park	165	State	12 picnic tables, 5 trails, grills, outhouses

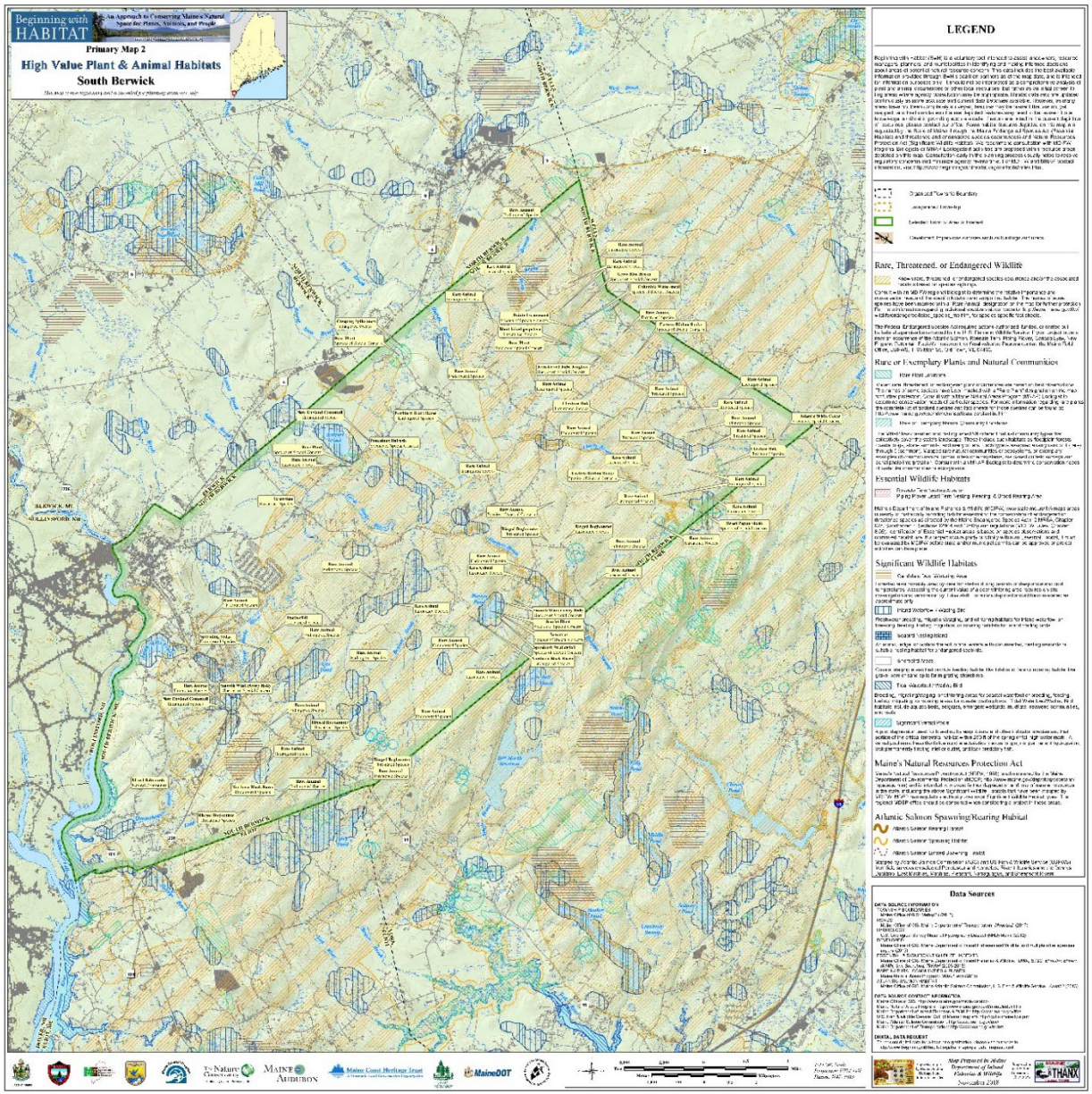
REST AREAS/SCENIC PARKS			
Name	***Acres***	***Ownership***	***Comment***
town Landing at William Bray Park	3	town	Waterfront rest/picnic area
Chicks Brook Park		town	Rest Area

town Hall		town	4 benches, rest area

Appendix – Natural Resources



[Full size Cooccurrence map available at on Beginning with Habitat website.]



[Full size High Value Plant and Animal Habitat map available at Beginning with Habitat website.]