

2010 Comprehensive Plan

South Bristol, Maine

Volume I

The Text

The Comprehensive Plan Team

The Town of South Bristol Maine

2010

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When referenced a citation would be appreciated

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We dedicate this Plan

*To the memory of South Bristol citizens
who, although gone from our midst,
shaped this Town which we now know and love.*

*And to the residents of today,
both year-round and seasonal,
who have inherited the legacy
and will profoundly influence our Town's future.*

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Introduction

This Comprehensive Plan for the Town of South Bristol is the product of a cooperative effort of over six years duration which has involved the townspeople, the Comprehensive Planning Committee, the Town's Planning Board, and the input of numerous local, county, state, and federal agencies which have supplied extensive statistical data and other information used in the process of creating this plan *for the people of South Bristol*.

The townspeople have been directly involved in the process of developing this plan in at least the following respects: (1) by attending and expressing their views at two independently facilitated visioning meetings held in the elementary school gymnasium on June 28, 2003 and November 18, 2003; (2) by responding to a mail survey containing numerous questions regarding the Town's future which was mailed to all property owners in early November 2003 and which received an outstanding response rate; (3) by attending Comprehensive Planning Committee meetings over the past five years, all of which have been open to public participation; and (4) by numerous written and verbal communications to the Comprehensive Planning Committee during the planning process.

The collective desires of South Bristol's citizens are described in great detail in chapter 2 entitled "Learning the People's Desires." For purposes of this introduction, suffice it to say that the great majority of South Bristol's property owners (a) wish the Town to stay the way it is, specifically with respect to its rural character, (b) want any future growth within the Town to be planned and controlled, (c) desire town-wide land use regulation while respecting landowners' rights, and (d) consider land use ordinances as necessary to respect such rights while maintaining the Town's rural character.

The expressed desire of the townspeople in this regard is wholly consistent with the State of Maine's goal in promoting comprehensive planning as follows:

To encourage orderly growth and development in appropriate areas of each community and region, while protecting the State's rural character, making efficient use of public services and preventing development sprawl.¹

For South Bristol's community to achieve its vision of maintaining its rural character, its citizens must not only adopt a comprehensive plan which expresses this vision, but they must thereafter adopt appropriate land use ordinances as implementing tools necessary to achieve that vision. Only then will South Bristol's Planning Board and Board of Appeals have the authority and jurisdiction to exercise reasonable oversight over development and construction activity within the Town in a manner consistent with the townspeople's vision. This is because comprehensive plans are not by their nature self-executing and require complementary ordinances to implement them.

Up to now, South Bristol has been somewhat unique in its lack of town-wide ordinances promoting rational land use policies. Unlike many Maine towns, South Bristol has no land use ordinance governing all of the land within its borders, as a result of which its Planning Board has no jurisdiction over construction or excavation projects unless they are occurring within the shoreland zone or are subject to the Subdivision Control Ordinance. Moreover, both the Town's Subdivision Control and Shoreland Zoning ordinances are limited in their application.

1. Richert, Evan, and Sylvia Most; *Comprehensive Planning: A Manual for Maine Communities*; Maine State Planning Office; 2005; p. 129.

Subdivision control applies only to developments involving the creation of three or more lots within a five year period, while the Shoreland Zoning Ordinance applies only to land areas situated within 250 feet of a waterfront. Thus, the Planning Board's current jurisdiction is extremely limited, as there is no current mechanism or jurisdiction available to the Planning Board to apply performance standards to excavation or construction projects located outside of the shoreland zone or with regard to construction projects not amounting to a full subdivision.

Since projects not subject to either shoreland zoning or subdivision control jurisdiction have constituted the majority of construction starts in South Bristol in both past and recent years, development in the Town has been until now largely beyond the Planning Board's jurisdiction. Thus, the Town's need for rational land use ordinances applicable to all development within the Town is not only obvious and long overdue, but enacting such ordinances is, in fact, the only effective means of fulfilling the townspeople's expressed desire to maintain South Bristol's rural character.

South Bristol's currently limited Planning Board jurisdiction is no longer consistent with state law in light of the goals and policies of the Comprehensive Planning and Land Use Act referred to above. Thus the adoption of this Comprehensive Plan by the Town necessarily carries with it the people's mandate to enact land use ordinances which implement those goals and policies. More important, local government cannot realize the townspeople's vision of maintaining South Bristol's rural character and appearance without having the tools to make that possible.

South Bristol's currently limited Planning Board jurisdiction is no longer consistent with state law in light of the goals and policies of the Comprehensive Planning and Land Use Act (30-A

M.R.S.A. § 4312 *et seq.*). More important, local government cannot realize the townspeople's vision of maintaining South Bristol's rural character and appearance without having the tools to make that possible.

This comprehensive plan is the people's vision for the future of South Bristol and, in and of itself, has no regulatory power. However, this vision can become reality, but only if necessary ordinances are enacted by the people at town meeting after the plan is adopted. This principle has recently been made clear by the Maine Supreme Judicial Court in its March 19, 2009 decision in a case entitled *Nestle Waters North America v. Town of Fryeburg, et al*, (30 ME Rep. 2009) in which the law court held that a comprehensive plan is but a vision and that, without implementing ordinances, it imposes no control and imposes no obligations on anyone.

For this reason, the adoption of this plan should be understood by everyone to be only an important and necessary first step in a continuing process which will only be complete and effective when appropriate ordinances are submitted to the townspeople for their approval. That said, the adoption of this plan is also the people's mandate to town officials to take all steps necessary to create and enact those ordinances as quickly as possible.

Finally, the enactment of a comprehensive plan by South Bristol creates a special opportunity for our Town whose citizens have expressed a clear desire to avoid sprawl and to maintain the Town's rural character – goals identical to those expressed in Maine's comprehensive planning legislation referred to above. The Comprehensive Planning Committee submits that the plan which follows is faithful to both State goals and to the expressed desires of the great majority of South Bristol citizens. The Committee thus urges the adoption of this plan and, as soon as possible thereafter, the adoption of implementing ordinances.

Acknowledgments

The Comprehensive Planning Committee expresses its gratitude to all who contributed to the successful completion of this Plan. Without their help, the Plan could not have been completed. Many people joined the Committee for brief periods, lending their particular expertise to writing a chapter. Over the six year period, it is understandable that many volunteers could not make an extensive time commitment to the all-volunteer committee. We thank them all for their help. To acknowledge each by name would invite embarrassment by omitting some whose help we greatly appreciate.

In particular, the Committee is grateful to all who attended the two visioning meetings in 2003 and took the time to fill out (and annotate extensively) the mail survey. They provided a clear picture of the people's vision for the future of South Bristol.

Numerous Federal and State agencies and private organizations contributed by providing data and information necessary to our task. We would be remiss by not singling out the continuous support of Maine's State Planning Office which was always there to answer questions, provide information, and guide us to where we could get needed information and questions answered.

The sources of all tabular data are stated at the bottom of each table as are the sources of most figures. Citations in text and sources of much text material are referenced, with the references used listed towards the end of each chapter.

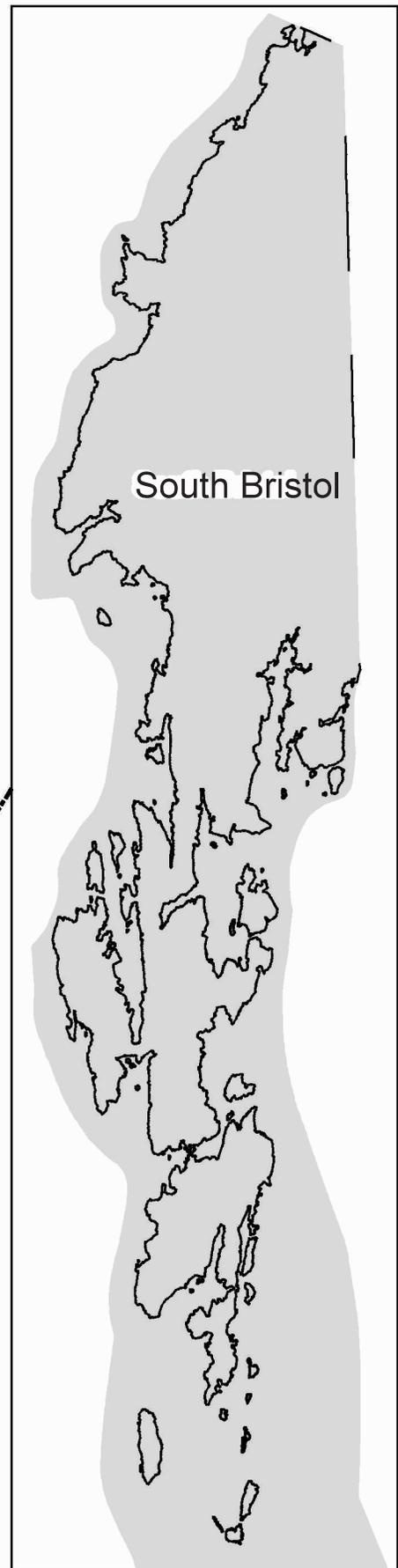
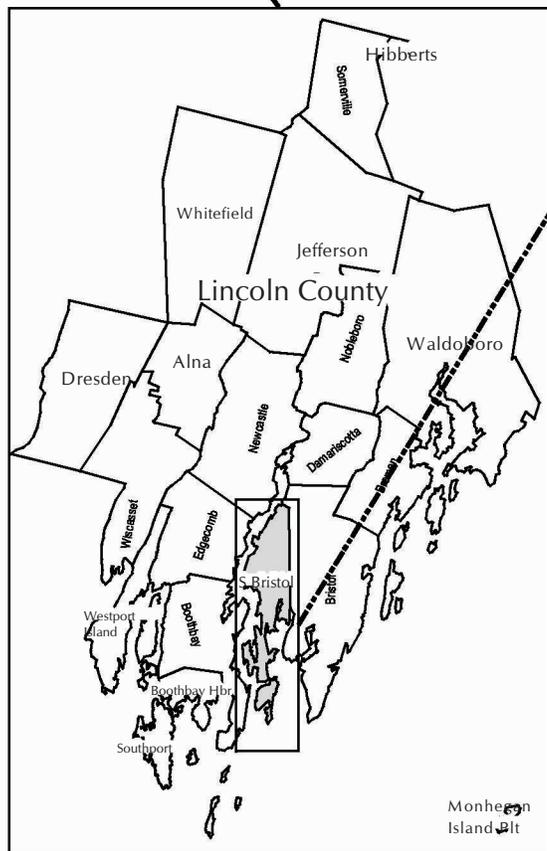
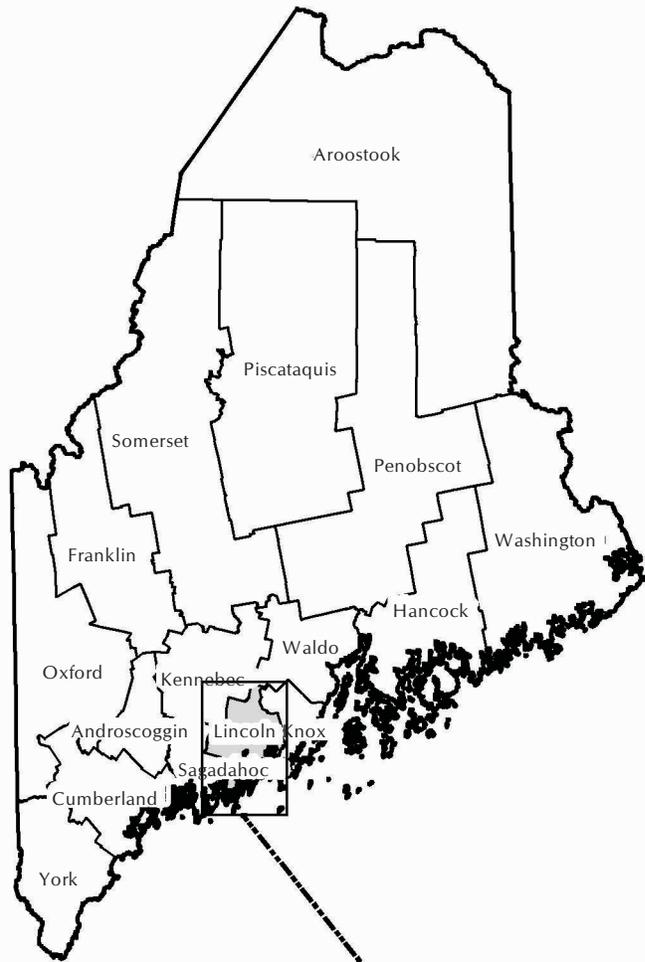
During the final two years of the Committee's work, the membership stabilized to eight people: Dirk Brunner, Elwin Guthrie, Ken Maguire, John McKeon, Bob McLaughlin, Ralph Norwood, III, Neal Prescott, and David Riddiford. Sadly, John McKeon passed away in December, 2008. His contributions included three chapters, the initial creation all but one of the maps, and inspiration to make every part of this Comprehensive Plan the best possible.

During the final year of effort, the Committee met almost every week and its members worked diligently between meetings. Each of the Committee members applied his diverse talents bringing about the successful completion of the Plan.

Last but certainly not least, we thank everyone in South Bristol for their support, encouragement, ideas, patience, and kind words over the past six years.

Everyone who has contributed deserves a thank you from all of South Bristol's citizens.

The Comp Plan Team
South Bristol, Maine
October, 2010



Location Map of South Bristol in Lincoln County in Maine

Chapter 1 — History and Community Character

History is the witness that testifies to the passing of time; it illuminates reality, vitalizes memory, provides guidance in daily life, and brings us tidings of antiquity.

~ Cicero, (106 BC - 43 BC); *Pro Publio Sestio*.

South Bristol's significant agricultural resources (38% farmland soils) and extensive marine resources – Johns Bay, the islands, and the Damariscotta River – and the 68 miles of coastline, drove the early settlement and history of the Town. While the Town has evolved and changed over almost four centuries, today these valuable natural resources continue to form the basis of the Town's existence, character, and economy.

1.1 — South Bristol History

The Pemaquid Peninsula, the shore of Johns Bay, the islands, and the Damariscotta River were used extensively by Native Americans as is evident by numerous shell middens and prehistoric archeological sites. The mouth of the Pemaquid River was a major Native American settlement and the South Bristol "Gut" was part of the important inside passage of Native American travels. Another passage, evidenced by shell middens, was the short portage between Seal Cove on the Damariscotta River and Poorhouse Cove on Johns Bay.

European exploration of the northern coast of the continent began around 1000 with visits by Norsemen. In the 1500s the explorers were primarily French, Jacques Cartier and later, after 1600, Samuel de Champlain and Sieur de Monts.

The local coast was explored during the early 1500s. One such exploration which can be documented (Morrison, 1971, p. 308-9) is that of Giovanni da Verrazzano who recorded trading with Indians in 1528 at Small Point, a few miles west of South Bristol, and then sailing among the islands and sheltered harbors northeast of there on his way back to France. By that time fishing trips from Europe to the northeast coast of North America were regular occurrences.

During the early 1600s, Englishman John Smith explored and mapped much of the coast of what is now Maine. Legend has it that he spent

Christmas of 1614 anchored in the well protected harbor of Christmas Cove on Rutherford Island, hence the cove's name. However, Capt. Smith could not have been here for Christmas since his 1614 voyage lasted only from April until October of that year, when he arrived back in England. This is recounted by Burrage (1914) who wrote "Captain Smith sailed out of Monhegan harbor as the summer drew to a close" and arrived in England in October.

Rowe (1948) describes the same schedule. Rowe says that Smith's purpose for making the voyage was to encourage colonization and that he was disappointed that the fishermen and merchants were only interested in the fishery, "voyages for profit."

Europeans came regularly to the area in the late 16th and early 17th centuries to fish and explore the coast. By the mid-17th century, English settlers, under Royal land grants, were living at Pemaquid, Monhegan, and Damariscove Island. These early settlers were farmers, fishermen, and traders. The "Gut" and east side of the Damariscotta River, which would become South Bristol, had scattered residents by the late 17th century. Pemaquid, with its fort, was a frontier, marking the border between the English and French dominions. Friction between the English, French, and Native Americans caused a series of wars which devastated the area and resulted in the abandonment of the peninsula in

the 1680s.

Resettlement of the peninsula did not occur until the 1730s when Scotch-Irish families were brought to the mid-coast region by Col. Dunbar under an English Royal mandate. Walpole, on the Damariscotta River, Harrington, at the head of Johns Bay, and Pemaquid Village were the first settled areas. This second wave of settlers were farmers and woodsmen. They created homesteads from the forested land and exported timber, stone, bricks, and hay as cash crops.

Several Walpole families became wealthy as traders and large land owners. After weathering further Indian wars in the mid-1700s, the area grew and prospered with many of the forefathers of well-known South Bristol families arriving in the latter part of the 18th century. In 1765, Bristol became one of the earliest incorporated towns in the Province of Maine. The Walpole Meeting House, along with meeting houses in Round Pond and Harrington, was built in 1772 attesting to the importance of Walpole at that time. Bristol was involved in the Revolutionary War with soldiers defending the local coast and participating in battles around Boston.

Walpole was the economic and population center of the east side of the Damariscotta River at the start of the 19th century. At that time, serious problems with land ownership surfaced. Claiming property ownership under 17th century Indian deeds and Royal land grants, heirs of earlier proprietors sought to force the current “squatters” to either pay dearly for, or vacate, their hard-won and valuable farms. To quell rising violence, the Massachusetts authorities settled land claims in favor of the “squatters.”

The economic disaster of the War of 1812 damaged the trading economy of the Damariscotta River communities and resulted in much hardship in Walpole. By the time of Maine's statehood in 1820 as half of the Missouri Compromise, fishing, both near- and off-shore, was starting to become an important economic force on the

Bristol peninsula. The rise of South Bristol village and Rutherford Island as a population center dates from that time. With the waning of timber and farming exports, fishing and boat building became the prominent occupations of South Bristol residents. While subsistence farming was still practiced in Walpole, fishermen made up a large percentage of the population in Clarks Cove, South Bristol, and Rutherford Island. South Bristol had several small fishing fleets and dried fish exporters. The Town also provided many seamen for the larger fishing fleets of Boothbay and Southport and had family ties to the Gloucester fishing industry. Ship and boat building had become an important business in the community by the 1850s, a business that has continued to today.

The Bristol peninsula sent its quota of men to the Civil War. Men from South Bristol were represented in several well-known regiments including the 20th Maine of Gettysburg fame. The Union Navy also had many South Bristol seamen. The post Civil War depression was off-set on the Bristol peninsula by the boom of the menhaden, or pogy, fishery. These oily fish were very abundant during the 1870s and the mid-coast of Maine was the center of the fishery. South Bristol had three factories converting menhaden to valuable oil and fish meal. Many of the finer houses in South Bristol village date from this time of prosperity.

With the collapse of the pogy fishery by 1880, the area suffered difficult economic times. The slow exodus of families to the west increased in the 1880s and the Bristol area population fell. Farming, fishing, and boat building continued and commercial ice harvesting and exporting took place at Clarks Cove. However, with improved transportation, including steamships, small river steamboats, and trains, summer tourists were becoming more important to the mid-coast.

Starting with a summer colony on Inner Heron Island in the 1890s, Christmas Cove, South Bristol, and Clarks Cove were welcoming

summer visitors to hotels, boarding houses, and tea rooms by 1900. The construction of shore cottages soon led to a full fledged summer colony centered on Christmas Cove. The Christmas Cove Improvement Association was founded in 1900 (Wells, 2000) and most of the large shore estates date from this period. Christmas Cove became a yachting destination early in the century. Providing services to these summer visitors became, and has remained, a major element of the local economy.

Transportation continued to improve in the early decades of the 20th century with steamboat service to Damariscotta and the arrival of the automobile in 1911. By 1915, dissatisfaction with the Bristol town government's failure to maintain the bridge, roads, and sidewalks in South Bristol, and the fact that the Bristol High School was not available to the tax payers of South Bristol, resulted in South Bristol becoming a new Town comprised of Walpole, Clarks Cove, South Bristol village, and Rutherford and Inner Heron islands.

Through World War I, the depression, and World War II, the Town had numerous family farms, several boat builders, and a small fishing industry along with the all-important "summer trade." The Harvey Gamage Shipyard, started in 1926, provided employment for many of the skilled boat builders in Town as did boatyards in East Boothbay. During World War II the Gamage yard built some wooden minesweepers for the United States Navy. After the war, the Gamage yard put South Bristol on the map with construction of many large wooden fishing and sailing vessels. It was said that at one time half of the New Bedford, Massachusetts fishing fleet had been built in South Bristol.

The 1960s and 1970s saw the beginning of significant changes in the Town. Lobstering became the dominant fishery. Better roads

allowed easier access to the Town and an increase in summer residences resulted. Farming in the northern part of South Bristol declined and more year-round residents were traveling out of town to work at places like Bath Iron Works. The Gamage Shipyard as a builder of wooden, and at the end steel, vessels came to an end in 1981. The Town became increasingly dependent on the stores and services of Damariscotta. Retirees made up a larger percentage of the Town's population reflecting a regional trend.

While South Bristol's population grew overall, the number of children in the school system declined from the 1950s levels. Shore front property, especially on Rutherford Island, became valuable and scarce. The Ira C. Darling Marine Research Center of the University of Maine opened in 1965.

Today there are several sites remaining which give a glimpse into the early history of the Town. The Thompson Ice House is now a museum open to the public. Ice is still harvested from the adjacent pond every winter and stored in the ice house for summer use. Exhibits show the ice harvesting process and the tools used. The Walpole Meeting House (1772) is still used periodically for religious services, meetings, weddings, and musical performances. Parts of the original Gamage Shipyard, now a marina and boat storage and repair facility, still stand. Other private sites include the Sproul Homestead and the Emily Means House. Those who wish to learn more about Town history may want to read Ellen Vincent's book *Down on the Island, Up on the Main* (2003) and Landon Warner's book *A history of the Families and Their Houses* (2006) or visit the South Bristol Historical Society located on Rutherford Island.

Map 1 locates the old houses in Town with approximate dates of construction.

1.2 — Community Character

South Bristol, as part of greater Bristol, was started by farmers and fishermen who earned a living by hard work and had a strong sense of family and community. South Bristol's people have always looked toward ocean and the shore. Whether, at first, as the connection to the larger world and a source of food or income or, later, for the pleasure and relaxation that makes the midcoast of Maine so well known, the Town's character has been shaped by its close relationship with the sea.

Today, South Bristol residents share the same values as those early pioneers: neighborliness, respect for and appreciation of South Bristol's small-town character, and an appreciation for the natural and cultural environment.

Over time the character of South Bristol has changed. From a series of small villages, isolated by the difficulties of travel and communication, the villages changed with the economic times. With the fishing boom of the mid 1800s, the focus of the area shifted from subsistence farming up river down to the end of the peninsula. After the economic good times of the menhaden fishery, in the 1870s, the Town's attention turned to the nascent tourist trade. The summer visitors and residents have influenced the character of the Town even before South Bristol became a separate Town from Bristol in 1915.

Today, South Bristol presents several faces. It is home to a year-round population of 900 comprised of folks who mostly work out of town or are retired. Residents travel to larger communities in the region for shopping, health care services, financial services, high school and higher education, and entertainment. Many residents also travel out of Town for employment.

During the summer, the Town's population grows to about 2500 as many families return to their cottages and seasonal homes. Because of the

Town's history of having hotels that offered people a long-term stay, and the fact that many of those early "hotel" families went on to establish the summer "colony" of South Bristol, the Town has been free of many of the social problems seen in other coastal communities. The Town of South Bristol is still a town of villages – Christmas Cove, South Bristol village, Clarks Cove, and Walpole all have different characters. Because of the Town's long, valuable coastline South Bristol is able to afford good schools and town government services.

The median age of the Town's year-round residents continues to increase and is the oldest in Lincoln County, and age-wise part of the oldest county in the state. More detail is contained in table 5.5 on page 54. Population growth has been consistently less than one percent per year. Elementary school enrollment has ranged over the past twenty years from the 60s to the 80s, with no discernible trend. Chapter 17 covers in detail the Town's school system. The pressure from the purchase of vacation/retirement homes has driven up property values to the extent that many of the long-time residents have chosen to sell waterfront or other parcels in the southern part of Town and move their residences inland and to Walpole, the northern area of Town. The same pressure is making it more difficult for young adults to develop residences in Town. This is viewed as problematic in terms of the need to maintain a diverse population, for younger people to be residents in the Town to provide services required by the aging and the summer population, to send students to the school, and to teach in the elementary school.

Most businesses in South Bristol are either marine-based, particularly lobstering and recreational boating related; are in the building trades; or are directly related to the summer season. South Bristol is home to several artists, musicians, and writers. The Ira C. Darling Center of the University of Maine, in Walpole,

is an outstanding marine biological research and teaching center.

Today, the South Bristol community still maintains a strong relationship with its marine surroundings and its rural character. The sentiment of most residents, whether year-round

or seasonal, is to keep the Town the way it is. They do not want to see tract housing characteristic of suburban areas around the larger communities of Maine. Neither do they expect or want large commercial/retail development in the area.

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Chapter 2 — Learning the People’s Desires

Nothing is far and nothing is near, if one desires. The world is little, people are little, human life is little. There is only one big thing – desire.

~ Willa Cather (1873 - 1947)

Setting out in late 2002 to update South Bristol’s 1992 Comprehensive Plan, the committee members recognized that it was imperative to gather public input in order to (1) produce an accurate inventory describing the Town’s current conditions and services, (2) analyze that inventory in order to determine its significance, (3) set goals for future planning in South Bristol, (4) devise strategies for achieving the goals, and (5) understand the desires of the people for the future of their Town. The major focus of work during 2003 was information gathering. To this end two public visioning meetings were held, and in November 2003 a four page survey questionnaire was mailed to all owners of South Bristol real estate.

2.1 — The Visioning Meetings

Two visioning meetings were held in order to get the greatest citizen involvement. The committee emphasized that both year-round and seasonal residents had stakes in the future of South Bristol and that their views should be heard.

Both visioning meetings were led by the same unbiased professional facilitator who guided each meeting’s activities. Broad topic areas were laid out and participants broke into small groups, joining a discussion topic of choice. The ideas raised were recorded on flip-chart size Post-It® notes and after about 45 minutes each group made a brief presentation to the entire meeting.

The first visioning meeting was on Saturday, June 28, 2003 with about 85 people attending. The date was chosen in order for both year-round and seasonal residents to be able to attend, yet before the rush of summer activities which might find people too busy to join in this important activity. The meeting went from morning until mid-afternoon. There were three discussion rounds at the June meeting.

The same topic areas were used for all three rounds so that participants could involve themselves in discussions of different topics of

interest to them by the end of the day.

The second visioning meeting was held on the evening of Tuesday, November 18, 2003 with about 60 people present. The format was like that of the June meeting. The date and time were selected to allow citizens to attend after the work day and before the holidays.

At the November visioning meeting the same broad topics were used for each of the two rounds. Some topics were those used in June and others were new for the November meeting.

A few people who attended the June meeting came again to the November meeting. We estimate that 130 to 135 people attended at least one of the visioning meetings.

At the end of each meeting the recorded ideas, all written on the large sheets, were hung on the walls and each participant was given 15 colored stickers to use in “voting” for what were perceived as the most important ideas to her or him. The results were later tallied.

The participants were asked to, “Select the subjects which you feel are the most important.” Hence, the highest ranked subjects are by implication those most important to the residents.

The higher ranked ideas selected as important by the participants are listed in appendixes A and B. A complete list of all subjects from each visioning meeting with their “votes” is included in *Report of Citizens' Input* which supplements this Plan. The visioning meetings provided valuable information to the committee for use in formulating the Comprehensive Plan.

The two visioning meetings allowed the participants to bring up most any subject which was thought to be of importance to the Town and

to provide guidance to the committee.

The committee learned from the participants their ideas of what is important in the Town and their concerns for the future of the Town. There were many suggestions of what needed to be done. The visioning meeting results were generally positive.

To a considerable extent, what was learned from the visioning meetings paralleled the later mail survey results.

2.2 — The Mail Survey

During the first week of November 2003 a four page survey was mailed to all owners of property in South Bristol. The questions covered a wide range of subjects about which the committee desired to learn the feelings and ideas of the citizens. The mailing included the survey, a cover letter describing the updating of the 1992 comprehensive plan and the task at hand, and a return envelope.

The committee was unable to include in the mailing those residents who rented where they were living as no reliable source was available to identify them. We publicized the survey through press releases, at town meeting, and with newspaper notices. We invited those who did not receive a survey in the mail to ask us for one. Several did.

When, later, we examined year 2000 demographics we learned that 53 (13%) of the 410 occupied housing units in Town were occupied by those renting. Although we shall never know, we doubt that had all of the renters been included in the survey their inclusion would have made a significant statistical difference.

Although the first visioning meeting preceded the survey, it had little if any influence on designing the survey. By the time results from the first visioning meeting were available much of the

survey had been drafted. The survey had been mailed shortly before the November visioning meeting. The survey was created in its entirety by the Comprehensive Planning Committee.

The survey contained 38 questions in a four page booklet. Thirty questions were multiple choice with check boxes. Three were “short essay” questions. The final five were demographic questions so that the committee could perform analysis based on those demographics. At the end of the survey was a half page where the respondents were invited to write any comments.

Before a week passed returns started to arrive. By the deadline for accepting returns, the end of May 2004, the committee had received 354 completed surveys from the approximately 925 distributed. The 38% response is considered by professional planners to be outstanding. A former municipal planner for three northeastern cities said that anything over 20% is excellent.

It is interesting to note that the returned surveys were spread about equally among year-round and seasonal residents – 49% of them came from people living in South Bristol year-round and 51% from seasonal residents. This pretty much matches the split in property ownership.

Table 2.1 – Most favored yes/no mail survey subjects

Question & subject	Yes	No	No opinion
18 Fire Protection	82%	5%	14%
19 Emergency Medical Services	79%	5%	16%
20 Police Protection	76%	11%	13%
7 Control Cell Towers	69%	22%	9%
28 Eliminate OBDs	68%	21%	11%
16 Services for Elderly	66%	13%	21%
3 Town-wide building permits	65%	30%	5%
1 Town-wide Zoning	63%	27%	10%

Source: Mail survey

Enough of the respondents answered the demographic questions covering full-time or part-time residence, age, income, location in Town, and real estate tax (a measure of property value) so that demographic analysis with reasonable statistical confidence was possible.

As the survey returns began to arrive, the committee was quite pleasantly surprised by an unexpected bonus. Of course it was hoped that the people would do some writing in response to the three “short essay” questions. That they did! The bonus was that there were many, many remarks written next to *every* question in the survey. These remarks provided significant insight into the feelings of the people. They were quite free and in many cases emphatic in letting the committee know what is important to them. Many check boxes were circled and underlined. There were expressions of strong feelings for the existing character of the Town.

The survey with numerical results is presented in appendix C of this Plan. A copy of the survey and complete results are contained in the 80 page *Report of Citizens’ Input* which supplements this Plan. Everything that was written as a remark to the questions has been recorded and is presented there as “Survey Question Remarks” starting on page 17 and going on for 38 pages. The supplement also includes the complete results

from the two visioning meetings.

It is important to note that each member of the committee received a copy of *Report of Citizens’ Input* in order to know the feelings of the people, particularly in regard to chapters which they were writing or reviewing. Many copies have been distributed to others. Several were requested via e-mail and sent to seasonal residents. They have been available at the polls at town elections and at annual town meetings each year since publication. At town elections people would pick one up, glance through it, and ask, “Can I have one?” “Certainly.” On occasions when the committee was referring to the report at its meetings, any visitors were given a copy to keep.

What did the people say? A constant theme derived from what was written was that they like the Town the way it is and wish for minimum changes. They want to preserve the Town, yet many feel that change is inevitable. They understand the changes that have taken place in other coastal towns can also occur in South Bristol, but there is the hope that South Bristol will work to maintain the current character of the Town before it is too late. Residents understood that once changes occur they can not be reversed.

Thus, the committee acquired an understanding of what the people wanted. There were some conflicting views expressed.

The survey results were striking. The first question of the survey was very direct. It addressed the sensitive issue of town-wide zoning and the possible need for it in order to preserve the historic character of the Town. Sixty three percent of the respondents were in favor of town wide zoning as compared with 27% opposed. This response has been interpreted to reflect the desire of the majority of residents for the Town to be proactive in preserving its character. Clearly, citizens of South Bristol understand the necessity

Table 2.2 – Least favored yes/no mail survey subjects

Question & subject	Yes	No	No Opinion
5 Shore land zoning be more restrictive than State law	27%	63%	10%
25 Town funded recreation programs	28%	58%	14%
26 More Village public facilities	28%	58%	14%
18 Town funded affordable housing	26%	55%	19%
13 Regional public HS	19%	55%	25%
22 Town dock only for fishermen	22%	54%	24%
24 Accommodate pedestrians & bikes on all public roads	37%	50%	13%
23 Sidewalks school to church	34%	49%	17%

Source: Mail survey

of municipal control in order to achieve that end. In relation to the topic of controls, more than fifty percent of the respondents suggested that control of sprawl (question 2), requiring building permits Town-wide (question 3), having control over construction of cell phone towers (question 7), and eliminating overboard waste water discharges (question 28) are necessary measures for managing the Town.

In at least one case, regarding affordable housing, a three way quandary was presented. Question 10 regarding Town funding of affordable housing was answered by about a 2:1 ratio against. The 15 remarks which people wrote by the question were favorable to affordable housing, but not for it being funded by the Town. State law requires a comprehensive plan to propose a means to achieve a target of 10% of new housing being affordable. Chapter 13 (Housing) will address this subject.

By a two to one margin respondents to question 8 favored an internet site which would provide Town information, allow citizens to conduct business (file permit applications, purchase licenses, etc.) with the Town office, and enable communication with Town officials.

Additionally, almost 60% responded yes to question 8 that any franchisee providing cable television service should be required to make the service available to all town residents.

Topics for which the respondents were split (or generally lukewarm) included the necessity of a bedrock blasting ordinance, the creation of economic development zones, and actively attracting young people to the area.

Negative reactions came regarding establishing a shoreland zoning ordinance which would be more restrictive than mandated by the State of Maine and the establishment of a public regional high school. Additionally, although the respondents acknowledged the importance of water access and a public boat landing, a majority (54%) felt that one should not be maintained by the Town for the exclusive use of commercial fishermen. Waterfront access and a public boat launch ramp for all was favored by well over half of the respondents.

With respect to two survey questions there were no differences of opinion between year-round and seasonal residents. Question 5 asked if the Town should have a shoreland zoning ordinance more restrictive than State requirements and question 28 asked if all overboard discharges should be eliminated. The people were strongly against more restrictive shoreland zoning and equally in favor of getting rid of all overboard waste-water discharges. For no other questions were the year-round and seasonal residents in such precise – and strong – agreement.

More than 60% favored creating reserve funds for anticipated major capital expenses in order to avoid the necessity of future borrowing. A like number favored continued support for the local elementary school.

The majority of respondents suggested that

there are sufficient services available for the needs of older residents, that the fire protective services and emergency medical services are adequate, and that current law enforcement services from the Lincoln County Sheriff and Maine State Police meet the needs of the Town.

Eighty eight percent reported having had no problem with water supply since 2000, seven percent had their well run dry, and five percent had contamination (question 30). This question was included since all local water comes from privately owned wells or cisterns. There were 38 remarks to this question, one of the most remarked questions from the survey.

Adequate fresh water has been a serious concern in South Bristol for many years. In the process of preparing the 1992 comprehensive plan a major study by Robert Gerber Associates was commissioned by that committee. Mr. Gerber has recently determined for us that the report from that study is still valid. What the committee wanted was a new set of observations from residents. The importance of this matter to South Bristol residents is the reason for a separate chapter (chapter 4) on the subject in this Comprehensive Plan.

Half of the respondents were opposed to and only a third were in favor of building sidewalks alongside the road from Rutherford Library to Union Church and to accommodating pedestrians and bicycle riders on all public roads. More than fifty percent responded negatively to creating Town-funded recreation programs for all ages and to providing public facilities such as more parking and rest rooms in the village area. Forty eight percent of those responding to question 27 said a municipally-operated

public pump out facility for boat holding tanks was unnecessary. See chapter 10 for more information on this subject.

Important to note is that 49% of survey respondents were year-round residents and 51% were seasonal residents of South Bristol. So far as can be determined, this closely matches the pattern of home ownership in Town. Those over age 60 represented 60% of the survey respondents, pretty much in line with the Town’s demographics. The most prevalent income level reported was the \$50,000 - \$100,000 range, which was above the local median household income of \$38,636 and mostly above the mean income of \$61,824 in 1999 (U.S. Census, SF3). There were 46% responding from south of the elementary school and 54% responding from north of the school. Two thirds pay over \$1100 in property tax annually.

Analysis of survey responses showed that there were few differences in opinion based on demographics. The most significant difference found is shown in table 2.3. The first question on the survey, “Would you be in favor of town-wide zoning”, was favored by better than 2:1 by both seasonal and year-round residents. Since zoning was thought to be a “hot button” issue, the question was posed first and phrased in such a way to get the reader’s attention. Many comments penned at the end of the returned surveys supported zoning as necessary to “keep the Town

Table 2.3 – Survey question 28 – eliminate all OBDs

Respondent’s residence location	Yes	No	No opinion
North of Four Corners	64 73%	13 15%	11 13%
Four Corners to School	71 80%	12 13%	6 7%
South of School	87 67%	42 33%	0
All areas	222 73%	67 22%	17 6%

Source: Mail survey, questions 28 and 37.

Note: Percentages are of the responses from each geographic location.

the way it is.”

Question 28 regarding elimination of overboard discharges was favored by about 3:1. The vast majority of overboard discharges are in the southern part of Town, mostly on Rutherford Island. When the responses to this question were analyzed using the demographic question about where the respondent lives, as might be expected most of the votes against elimination came from the southern part of Town. Note that only surveys which included answers to both questions 28 and 37 are included in table 2.3.

When asked what was most liked about South

Bristol, pages were filled with comments about natural beauty, quiet, small town - rural feel, the people, low property taxes. In contrast, the most often noted problem facing South Bristol, according to the responses to the question, “What is the most pressing local issue or problem facing the town?” was said to be high real estate taxes. South Bristol has historically had very low property tax rates (e.g., 3 to 7 mils) while having high assessed property values.

Statistical results from the survey are included in appendix C.

2.3 — The People’s Vision

Visioning meeting and mail survey results make it clear that the residents desire the South Bristol of the future to be as close as possible to the South Bristol of the past. Neither the mail survey nor the two visioning meetings asked the participants directly for their vision of the future.

But, the word vision implied that the purpose of the two meetings was to learn what the people wanted South Bristol to be like in the future. In many ways the survey was directed at helping the committee do its inventory and analysis of the Town as it currently exists. From the remarks and comments on many of the returned surveys we gained as a bonus many insights to the desires for the future.

Many of the survey questions were in the form “Should the town . . .” do something or other. From the answers, and especially the remarks which the respondents added, the people stated what they wanted and what concerned them. A common thread was that they wanted a Town little changed from the past. The rural character should be maintained to the greatest extent possible; local government should remain unobtrusive and small; residential growth, particularly seasonal homes, should be controlled.

Two thirds of the survey respondents wanted the local elementary school to be retained even though the operation of a small school is relatively expensive.

There was also a stated desire for specific changes which would help maintain the character of the Town. First and foremost was the strong statement that town-wide land management and permits for all building construction are needed. Fifty two percent of the people would like the Town to have an internet site for information and the transaction of business and 59% want cable television service available in the entire Town rather than the limited area which is currently served.

What does this add up to? Essentially, keeping the Town the way it is and the way it used to be by enacting some new or modified ordinances and administrative procedures to achieve that end. At the same time a few added modern services are desired.

It should be noted that the population of the Town is composed of less than 1000 year-round people and another 1500 (estimated) seasonal residents. Both constituencies participated with

about equal weight in the survey and visioning meetings. The seasonal residents profess a very strong attachment to South Bristol and to a considerable extent consider it to be “their town” in common with the year-round residents.

Over the past two decades many people have retired to South Bristol, some of them former seasonal residents. This has to some extent changed the demographics of the Town. Yet, these new residents have not significantly changed the character of the Town, except that a smaller percentage of the population is in the work force. Chapter 5 (Population and Demographics) covers this subject in detail.

Future economic development is desired by the people in a manner consistent with the Town’s historic character. A number of survey respondents decried the conversion of formerly commercial properties in the South Bristol Village area to private residences. There was a generally stated desire that commercial properties remain as commercial properties. There seemed to be a preference for restricting commercial development to appropriate areas – and encouraging use of the Gut area by marine related activities, be they commercial fishing or recreational boating.

Survey question 14 asked about economic development. One remark from a person in favor was, “[Yes] In the old downtown [South Bristol village]. Bring it back to life” This remark succinctly summarized many of the feelings expressed by others. People, particularly seasonal residents, view the Gut area as characterizing South Bristol and envision the commercial activity there as representing the economy of the Town. Chapter 11 (Local Economy) of this Plan further addresses this subject.

This to some extent helps differentiate the perceptions of South Bristol by year-round residents and those who are seasonal visitors. But both groups agree that controlling change is important for the Town’s future.

In the survey responses, there were 13 references to Boothbay and Boothbay Harbor. All of them viewed development and conditions there in a negative light and urged that South Bristol not “become another Boothbay.”

Explicit views on conservation of natural resources were few and far between in the survey responses. There was no question directly addressing the subject. Many opinions on the subject were expressed at the two visioning meetings. At those meetings there was support for avoiding subdivisions which would change the use of currently undeveloped land, for maintaining open space, for having the Town acquire undeveloped land to maintain it in that state, and for controlling development in order to conserve underground water resources.

By its geography and population, South Bristol’s transportation system is composed of privately owned vehicles operating over the roads. Taxi service based in Damariscotta is available. Transportation of goods is by commercial carriers and privately owned vehicles. Lobster bait comes in on trucks and lobsters are shipped out on other trucks. Common carriers such as United Parcel Service and Federal Express provide daily delivery and pickup service.

There is no direct rail, air, or bus service. The closest passenger services are rail service in Portland; bus service in Damariscotta; and air service in Rockland, Portland, and Boston. Railroad freight service is available in Newcastle.

Every indication is that the residents are happy with the transportation system available, although occasionally complaining about the condition of roads.

The single most desired change which has been expressed for many years is the need for a public site for water access and recreation which could include an all-tide boat launch ramp, space for parking, a dock, a swimming area, toilets, and likely picnic and other recreational space. This has been a local discussion subject for years and

was supported at the visioning meetings and in the survey responses. If implemented, this would be the biggest change in South Bristol in years and would satisfy the most often expressed desire by the people for change.

Few sites on salt water meet the requirements for such a facility. Finding one for sale has seemed an almost impossible task. Were a complete proposal for such a facility to be presented to the residents it would likely be

approved. The people recognize that establishing a waterfront facility would be costly. We address this in chapter 15, Recreation Resources, and in chapter 18, Fiscal Capacity.

Surprisingly, few strong specific sentiments for future land use have been expressed other than the often repeated desire to “keep the Town the way it is.” This is further discussed in chapter 19, Future Land Use.

2.4 — Conclusion

A summary of the people’s vision of the future South Bristol is they wish to see a Town little changed from the way it is now and close to what they remember from years past. Yet this may be too simplistic. From all of the evidence which the committee has gathered and what is known anecdotally, there is a recognition that “times are changing.”

Everything learned from the mail survey and the two visioning meetings has been considered by the committee as it created this Plan. In some cases the committee has attempted, hopefully with success, to balance the wishes of the people with the requirements of Maine law. In situations where the views of the people were sharply divided, attempts have been made to devise goals and policies which strike a balance between competing views. One example is the matter of overboard discharges mentioned above where the Plan recommends that the property owners use available State of Maine grants to improve their waste water systems.

This chapter is a summary of the process of

information gathering from citizens and the major subjects covered. Many more subjects were covered in the survey. Appendix C includes the full text of the survey and the statistical results.

The complete results of the survey including all comments and remarks and results of the two visioning meetings are included in the 80 page *Report of Citizens’ Input*, which is a supplement to this Comprehensive Plan.

The results from the survey and the visioning meetings have been considered carefully by the committee in preparing this Comprehensive Plan. They have provided invaluable direction and guidance in preparing this Plan for the people of South Bristol.

This Plan could not have been created without input from a broad cross section of South Bristol’s people. That input came not only from the survey and visioning meetings, but also from people who gave of their time to attend and participate in the Comprehensive Planning Committee’s meetings.

Chapter 3 — The Land

While the farmer holds the title to the land, actually it belongs to all the people because civilization itself rests upon the soil.

~ Thomas Jefferson (1743-1826); quoted in the *Des Moines Register*, July 8, 1979

The land of South Bristol owes its physical heritage to the underlying bedrock geology, the action of the glaciers, the resulting soils, and the natural and man-made land-cover.

3.1 — Bedrock Geology

The bedrock geology of the Town is made up predominantly of north-south trending Silurian to Ordovician age (410 to 500 million years) metamorphic rocks (Hussey, 2002). Roughly three-quarters of the Town is underlain by the Bucksport Formation, consisting of granofels, gneiss, and schist (rock types that are nicely exposed below the lighthouse at Pemaquid Point in the neighboring town of Bristol) while the remainder is split between the Cross River and the Cape Elizabeth Formations (figure 3.1).

Between Mears Cove and Fitch Point along the Damariscotta River, a roughly oval pluton about 1/2 mile in diameter and comprised of Devonian-Silurian metadiorite and metagabbro, intrudes the Bucksport Formation.

An outcrop of fine-grained diabase has been named the “Christmas Cove dike” after its location at the eastern-most arm of the cove. This, the youngest rock unit exposed in Town, was intruded in the Mesozoic Era approximately 200

million years ago, and extends eastward to near Port Clyde and southward to Connecticut after merging with dikes of identical composition. Overall it may exceed 300 miles in length and is considered part of a feeder system for Jurassic-age flood basalts associated with the rifting that accompanied the opening of the central Atlantic Ocean.

There are a few small historical granite quarries and small prospect pits, probably for feldspar mining, within the Town (examples of both are found on Plummer Point).

There have been only seven earthquake epicenters recorded since 1814 within ten miles of South Bristol. Most were less than 3.0 magnitude while the strongest two were between 4 and 4.9 magnitude. There is little risk of a damaging earthquake in our area especially since most buildings are two stories or less and are on thin soils over solid bedrock (Berry, 2003).

3.2 — Glaciation

The last Pleistocene continental ice sheet to cover this region had advanced from the north to the south and by around 26,000 years before present the ice margin was beyond the Gulf of Maine. The ice sheet had receded from the present coast by around 15,000 yrs before present. At that time the land surface was still

depressed from the weight of the ice sheet, and the ocean, called the DeGeer Sea, extended inland to the location of present day Millinocket, submerging most of the Pemaquid Peninsula. Land in South Bristol that is today roughly 260 ft above sea level was, at that time, at the coastline. By about 11,000 yrs BP the land had rebounded

and the coastline retreated to near its present location (Borns, 2004).

The post-glacial marine submergence and subsequent sea-fall washed away some of the glacial materials, in a few areas exposing bedrock

outcrops. The prominent uplands and ridges of South Bristol are blanketed with glacial till while the intervening lowlands typically contain silty glacial-marine sediments of the Presumpscot Formation (Smith, 1976).

3.3 — Topography

The major north-south grain of the landscape reflects both the orientation of the bedrock structures and the nearly parallel ice-flow direction during the last glaciation. Hence most slopes in the Town face easterly or westerly.

Topographically the Town is divided naturally

into three segments; Rutherford Island connected to the mainland by a short bridge at the Gut, a central section demarked at its northern end by a 1200 foot wide isthmus which separates John’s Bay from Long Cove off the Damariscotta River, and the largest segment which includes Walpole and borders on Bristol to the east and north (Figure 3.2). Note that the narrowness and small size of the southern two segments preclude any practical consideration of major new road construction in this part of Town.

Table 3.1 – Islands of South Bristol

Name	Acres	Percent
Mainland	7444.30	88.64%
Rutherford Is.	692.13	8.24%
High Is.	64.88	0.77%
Heron Is.	50.12	0.60%
Hodgdon Is.	23.18	0.28%
Witch Is.	19.59	0.23%
Thrumcap	14.20	0.17%
Farmers Is.	11.76	0.14%
Birch Is.	11.41	0.14%
Foster Ia.	11.11	0.13%
Outer Thrumcap	8.32	0.10%
Peters Is.	7.72	0.09%
Miller Is.	5.57	0.07%
Hay Is.	4.81	0.06%
Prentiss Is	3.70	0.04%
Crow Is.	3.27	0.04%
un-named	2.16	0.03%
Turnip Is.	2.09	0.02%
un-named	1.75	0.02%
Thread of Life Ledges (5 islands between 0.7 and 1.44 acres)	3.64	0.04%
Peabow Is.	1.09	0.01%
un-named	1.06	0.01%
Gem Is.	1.03	0.01%
44 un-named islands (each < 1 acre)	9.33	0.11%
Glidden Ledge	0.60	0.01%
Total	8398.82	100.00%

Source: Maine office of GIS shapefile

The highest point in Town is approximately 240 feet above sea level and is located about 1500 ft north of Split Rock Road on the town boundary with Bristol (appendix D). The Town’s shape and coastal setting provide for a relatively large coastline (69 miles) compared to its land mass (13 square miles) and therefore create a sizable shoreland zone. Many of the Town’s scenic views, as discussed in chapter 6 on page 74, are from points where the main roads run along high ridges or where they skirt the coast.

As with many of Maine’s coastal towns there are a considerable number of islands that are important in shaping the Town’s history and habitat. There are 71 islands in South Bristol from the largest, Rutherford Island, to numerous tiny un-named islands and ledges, the smallest of which measures only 2/100ths of an acre (table 3.1). It should be noted that excluding Rutherford, the islands add up to 262 acres or 3.12% of the Town. While this number appears small, when the surrounding tidal zones are included it creates an important part of the habitat

and marine resources of the Town. Note that the coastline data file used throughout all

comprehensive plan maps was defined by the USGS as the level of “mean high water.”

3.4 — Soils

The U.S. Department of Agriculture (USDA) has mapped 477 discreet soil areas (polygons) in South Bristol. Each polygon falls into one of 42 soil units as named in the National Soil Information System. In some cases there are up to three different units for a given soil type based on the topographic slope. Soils can be a limiting factor in planning future development so a table (table 3.4) on page 20 has been created using the specific soil units present in the Town to emphasize the characteristics of each unit. The first seven columns are from the USDA’s Natural

Resources Conservation Service (NRCS) Soil Survey Division. These data, available through the Maine Office of GIS, were mapped to derive the acreage and percent columns. The last two columns show the recommended density of residential development based on the soil carrying capacity of each soil unit (Gerber, 1991). Note that the first three soil units listed make up over 50% of the land area of the Town, and that the first 13 units listed make up over 90% of the land area.

3.5 — Analysis of Soils

Table 3.2 – Recommended residential density in acres per dwelling unit

Average recharge conditions			Drought recharge conditions		
Acres per dwelling unit	Percent of Town	Allowable dwellings	Acres per dwelling unit	Percent of Town	Allowable dwellings
1 acre	24.7%	2065	1 acre	9.5%	797
2 acres	42.2%	1761	2 acres	15.0%	628
4 acres	29.7%	621	4 acres	53.7%	1121
6 acres	1.4%	20	8 acres	19.7%	206
Unsuitable	2.0%	0	Unsuitable	2.0%	0

Sources: Gerber (1991) table 6 and GIS analysis of soil units exposed.

Since the USDA soils were mapped at a larger scale (1:20,000) than the standard scale used for this comprehensive plan (1:24,000), they provide an excellent aid in considering Town-wide planning policies. Note however that when considering development of an individual parcel or lot, detailed field work and soil mapping at even larger scales may reveal much more local variation in soil characteristics, or perhaps even a different soil type.

Gerber (1991) uses the following parameters

and values to calculate allowable single family lot densities:

- concentration of nitrate-nitrogen in the ground water (10 mg/L)
- concentration of nitrate-nitrogen in uncontaminated ground (soil)(1 mg/L)
- concentration of nitrate-nitrogen from septic discharge (40 mg/L)
- the average septic discharge rate (250 gallons per day per dwelling for 3 to 5 people)
- the rate of natural ground water recharge in

gallons per minute per acre (this varies for each soil type throughout the Town from 0.13 gpm/acre for soils with low permeability to 1.27 gpm/acre for highly permeable soils).

In addition Gerber assumes that dilution of the septage occurs only from mixing with ground water so surface water dilution is not included in the calculations. Gerber notes that in drought conditions the recharge rate of the soil can be reduced by as much as 60% so the quality of the ground water is more likely to be compromised from septage in drought conditions than in average conditions.

Using the Gerber report values (Gerber's table 6) and the areas of the soil units as exposed in South Bristol as determined with GIS, table 3.2 was prepared. The table shows the recommended residential density in acres per dwelling and the percentage of the Town's total area during times of average recharge (precipitation) and during drought conditions. Note that under average recharge conditions the soils in over two-thirds (67.31%) of our Town can adequately handle septage with either 1 or 2 acres per dwelling. The situation changes dramatically in drought conditions however, when less than one-quarter (23.29%) of our Town can adequately handle septage with either 1 or 2 acres per dwelling and

three-quarters of our Town requires 4 or 8 acres to support septage for a single dwelling unit.

Map 2 "Soil and Slope Constraints" shows the geographic extent of areas of all hydric soils, areas with very poor to somewhat poor drainage, and areas with highly erodable soils all depicted as patterns overlaying the color coded recommended residential density for drought recharge conditions (Gerber). A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part (<http://soils.usda.gov/use/hydric/intro.html>). By this map almost all of Rutherford Island is covered with soils which would require 4 acres per dwelling for septage disposal. While the best land for septage is located mostly north of Bradstreet Cove along the two N to NNE trending prominent ridges, in general the more restrictive soils are found in the lowlands, which can be wetter, and along the coastline which can have steep unstable slopes. As always there are plenty of exceptions to general statements such as these.

Many of the soil characteristics were carried forward to appendix D and Map 14 (Constraints to Development), since they are either severe or moderate constraints to development.

3.6 — Land Cover

The land cover of South Bristol has been mapped as part of a land cover map for the State of Maine that was prepared using Landsat satellite imagery from three seasons between 1999 and 2001. This was updated and sharpened by using higher spatial resolution (5m) SPOT satellite imagery from 2004. The result, a uniform classification for the entire State, was made available for use by the Maine Office of GIS in mid 2006. Computer classification was the main method used to create the product followed by

Table 3.3 – Land cover of South Bristol

Land Cover Category	Acres	Percent
High intensity developed	4	0.1%
Medium intensity developed	22	0.3%
Low intensity developed	47	0.6%
Open space developed	1	0.0%
Cultivated crops	19	0.2%
Pasture/hay	208	2.5%
Grassland/herbaceous	16	0.2%
Deciduous forest	924	11.0%
Evergreen forest	2955	35.2%
Mixed forest	2724	32.4%
Scrub/shrub	48	0.6%
Wetland forest	64	0.8%
Wetlands	125	1.5%
Roads/runways	302	3.6%
Unconsolidated shore	140	1.7%
Bare land	6	0.1%
Open water	137	1.6%
Recent clearcut	4	0.1%
Light partial cut	347	4.1%
Heavy partial cut	124	1.5%
Regenerating forest	181	2.2%

Source: Maine Office of GIS Maine Land Cover Map

Notes: A detailed description and characteristics of each category is provided in appendix E. Percent is of South Bristol's total area of 8398 acres.

hand editing (Palmer and Brenner, 2006). Table 3.3 provides the summary by category of the

Town of South Bristol's land cover as mapped using this technology.

Summarizing the data in table 3.3, the Town of South Bristol lands can be generally described as:

- 1% developed land with impervious surfaces
- 3% cropland, pasture or grassland
- 6% harvested from forest since 1995
- 79% forested land
- 2% regenerating as forest since being harvested after 1995

Note that the summary above is based on a 5 meter pixel and not on a parcel or other land unit basis and it is given to the nearest whole percent. There are known errors with this data set, including the omission of all roads on Rutherford Island and mapping Peters Island and some of the coast as "open water", nonetheless this data set provides a general depiction of the land cover when summarized as above. For example, these data would support the general statement that 8 of every 10 acres in the Town is wooded.

Map 3 (Land Cover) reflects much of the material from this chapter. It should be noted that the precision of this map is poor due to the quality of our sources. In particular, the outline of the shore line is inaccurate in places.

Groundwater resources, while influenced by topography, overburden, and bedrock geology, are addressed in a separate chapter 4 dealing specifically with water resources since South Bristol residents and businesses depend vitally upon well water as a resource.

Table 3.4 — Soils of South Bristol and their characteristics
(sorted by predominance)

Soil Unit Name (slope range in percent)	Potential for Low Density Development	Farmland Classification (National Soil)	Highly Erodeble Rating	Drainage Class	Hydrologic Group (infiltration)	Hydric Rating *	Acres	Percent of Town	Soil Carrying Capacity for Residential Septage Disposal (Gerber 1991) - see Land Chapter for definition	
									Average Recharge Conditions	Drought Recharge Conditions
Explanation	H High M Medium L Low	P Prime Farmland S Statewide Importance N not prime	H Highly Erodeble P Potentially Highly Erodeble N Not Highly Erodeble	See 1st table below	See 2nd table below	Y Hydric soil N Not hydric	-	-	Density in acres per dwelling	Density in acres per dwelling
Lyman-Rock Outcrop-Tunbridge Complex, 8 – 15%	L	N	P	SE	C/D	N	2724	30.2%	2	4
Buxton Silt Loam, 3 – 8%	M	S	P	SP	D	N	1152	12.8%	4	8
Tunbridge-Lyman Fine Sandy Loams, 8 – 15%	M	S	H	W	C	N	756	8.4%	1	2
Peru Very Stony Fine Sandy Loam, 3 – 8%	H	N	P	MW	C	N	718	8.0%	2	4
Tunbridge-Lyman Fine Sandy Loams, 3 – 8%	H	P	P	W	C	N	653	7.2%	1	1
Lyman-Rock Outcrop-Tunbridge Complex, 3 – 8%	M	N	P	SE	C/D	N	514	5.7%	1	2
Scantic Silt Loam	VL	N	N	P	D	Y	424	4.7%	4	8

Table 3.4 — Soils of South Bristol and their characteristics (Continued)

Soil Unit Name (slope range in percent)	Potential for Low Density Development	Farmland Classification (National Soil)	Highly Erodible Rating	Drainage Class	Hydrologic Group (infiltration)	Hydric Rating *	Acres	Percent of Town	Soil Carrying Capacity for Residential Septage Disposal (Gerber 1991) - see Land Chapter for definition	
									Average Recharge Conditions	Drought Recharge Conditions
Lyman-Rock Outcrop-Tun-bridge Complex, 15 – 45%	VL	N	H	SE	C/D	N	385	4.3%	4	4
Marlow Very Stony Fine Sandy Loam, 8 – 15%	M	N	P	W	C	N	281	3.1%	4	4
Peru Fine Sandy Loam, 3–8 %	H	P	P	MW	C	N	192	2.1%	2	4
Peru Very Stony Fine Sandy Loam, 8 – 15 %	M	N	P	MW	C	N	158	1.7%	4	4
Borosapristis, Pondered	VL	N	N	VP	D	Y	140	1.6%	NA	NA
Marlow Fine Sandy Loam, 3 – 8%	H	P	P	W	C	N	120	1.3%	2	4
Lyman-Brayton Variant-Rock Outcrop Complex, 0 – 8%	M	N	P	SE	C/D	Y partially	98	1.1%	1	4
Marlow Fine Sandy Loam, 8 – 15%	M	S	P	W	C	N	86	1.0%	4	4
Brayton Very Stony Fine Sandy Loam, 0 - 8 %	VL	N	P	P	C	Y	79	0.9%	2	4
Buxton Silt Loam, 8 - 15 %	M	S	P	MW	C	N	75	0.8%	6	8
Marlow Very Stony Fine Sandy Loam, 15 – 25%	VL	N	H	W	C	N	66	0.7%	4	8
Marlow Very Stony Fine Sandy Loam, 3 – 8%	H	N	P	W	C	N	49	0.5%	2	4
Turnbridge-Lyman Fine Sandy Loams, 15 – 25%	L	N	H	W	C	N	39	0.4%	1	2
Masardis Gravelly Fine Sandy Loam, 3 – 8%	M	S	N	SE	A	N	35	0.4%	1	1
Boothbay Silt Loam, 8 – 15%	M	S	P	SP	C	N	34	0.4%	6	8
Sheepsfoot Fine Sandy Loam, 0 – 8%	M	S	P	MW	B	N	32	0.4%	1	1
Boothbay Silt Loam, 3 – 8%	M	S	P	C	C	N	30	0.3%	4	8

Table 3.4 – Soils of South Bristol and their characteristics (Continued)

Soil Unit Name (slope range in percent)	Potential for Low Density Development	Farmland Classification (National Soil Rating)	Highly Erodible Rating	Drainage Class	Hydrologic Group (infiltration)	Hydric Rating *	Acres	Percent of Town	Soil Carrying Capacity for Residential Septage Disposal (Gerber 1991) - see Land Chapter for definition	
									Average Recharge Conditions	Drought Recharge Conditions
Eldridge Fine Sandy Loam, 3 – 8%	M	P	P	MW	C	N	29	0.3%	1	1
Brayton Fine Sandy Loam, 0 – 8%	VL	N	P	P	C	Y	20	0.2%	2	4
Rock Outcrop-Lyman Complex, 0 – 15%	VL	N	P	E	D	N	19	0.2%	NA	NA
Rock Outcrop	VL	N	N	E	D	N	17	0.2%	NA	NA
Swanville Silt Loam	VL	N	N	P	C	Y	17	0.2%	4	8
Adams Loamy Fine Sand, 8 – 15%	M	N	P	SE	A	N	14	0.2%	1	1
Adams Loamy Fine Sand, 3 – 8%	M	S	N	SE	A	N	12	0.1%	1	1
Buxton Silt Loam, 15 – 25%, Eroded	VL	N	H	MW	C	N	10	0.1%	6	8
Masardis Gravelly Fine Sandy Loam, 8 – 15%	M	N	P	SE	A	N	8	0.1%	1	1
Sulfhemists and Sulfaquents, Frequently Flooded	VL	N	N	VP	D	Y	8	0.1%	NA	NA
Biddeford Mucky Peat	VL	N	N	VP	D	Y	6	0.1%	4	8
Naumburg Loamy Sand	VL	N	N	P	C	Y	6	0.1%	1	1
Searsport Mucky Peat	VL	N	N	VP	D	Y	6	0.1%	NA	NA
Pits, Gravel And Sand	not rated	N	N	E	A	N	5	0.1%	1	1
Udorthents-Urban Land Complex	not rated	N	N	MW	C	N	5	0.1%	NA	NA
Peru Fine Sandy Loam, 8 – 15%	M	S	P	MW	C	N	4	0.0%	4	4
Beaches	VL	N	N	P	D	Y	2	0.0%	NA	NA
Charles Silt Loam	VL	N	N	P	C	Y	1	0.0%	NA	NA

NA = Not Acceptable for Septic Disposal

* A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part (<http://soils.usda.gov/use/hydric/intro.html>)

Table 3.4 — Soils of South Bristol and their characteristics (Continued)

Drainage class

Drainage class (natural) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized and shown below.

Key to Drainage Class according to the National Soil Information System relational database

E	Excessively	Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.
SE	Somewhat Excessively	Soils have high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.
W	Well	Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.
MW	Moderately Well	Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.
P	Poorly	Soils may have a saturated zone, a layer of low hydraulic conductivity, or seepage. Depth to water table is less than 1 foot.
SP	Somewhat Poorly	Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.
VP	Very Poorly	Soils are wet to the surface most of the time. Depth to water table is less than 1 foot, or is ponded.

Table 3.4 — Soils of South Bristol and their characteristics (Continued)

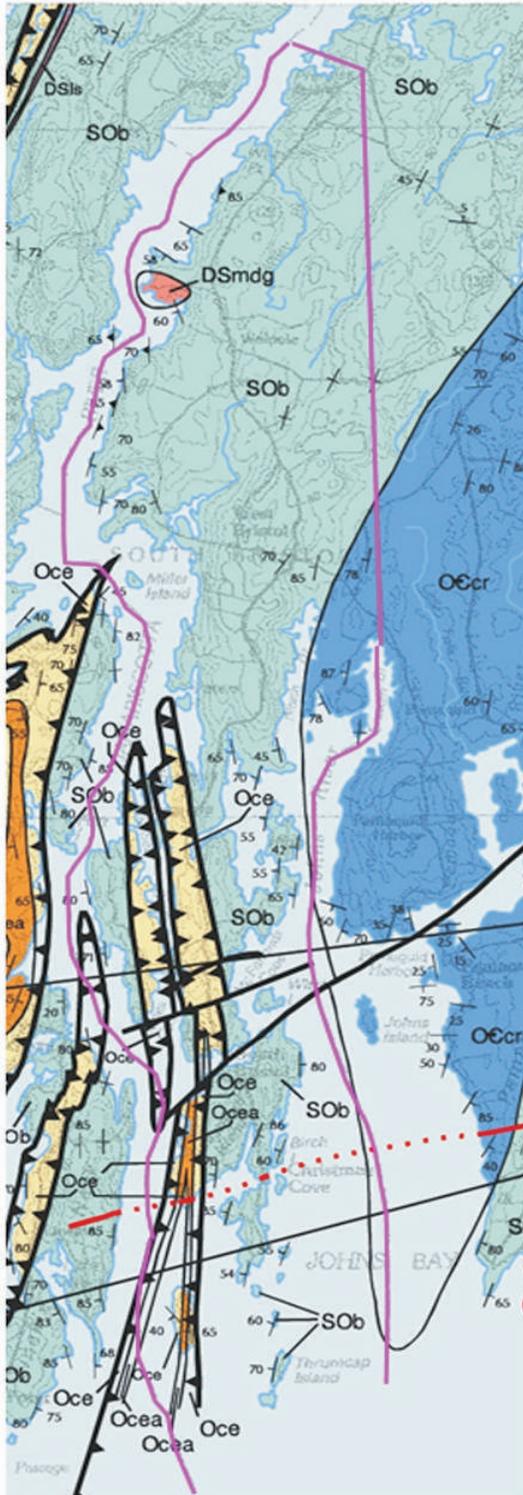
Hydrologic Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are placed into four groups A, B, C, and D, and three dual classes, A/D, B/D, and C/D. Definitions of the classes are as shown below. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only soils that are rated D in their natural condition are assigned to dual classes.

Key to Hydrologic Group according to the National Soil Information System relational database

A	Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
B	Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
C	Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
D	Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.



Bedrock Geology of South Bristol

- Mesozoic Intrusive, Christmas Cove dike (diabase)
- DSmdg Devonian-Silurian Intrusive, (metadiorite and metagabbro)
- SOB Silurian-Ordovician, Bucksport Formation (granofels and gneiss)
- Oce Ordovician, Cape Elizabeth Formation (schist)
- Ocea (amphibolite)
- OEcrr Ordovician-Cambrian, Cross River Formation (gneiss, schist, and granofels)
- Town boundary

Source: Bedrock Geology of the Bath 1:100,000 quadrangle Geologic Map O2-152, 2002 Maine Geologic Survey

Figure 3.1 – Bedrock Geology of South Bristol

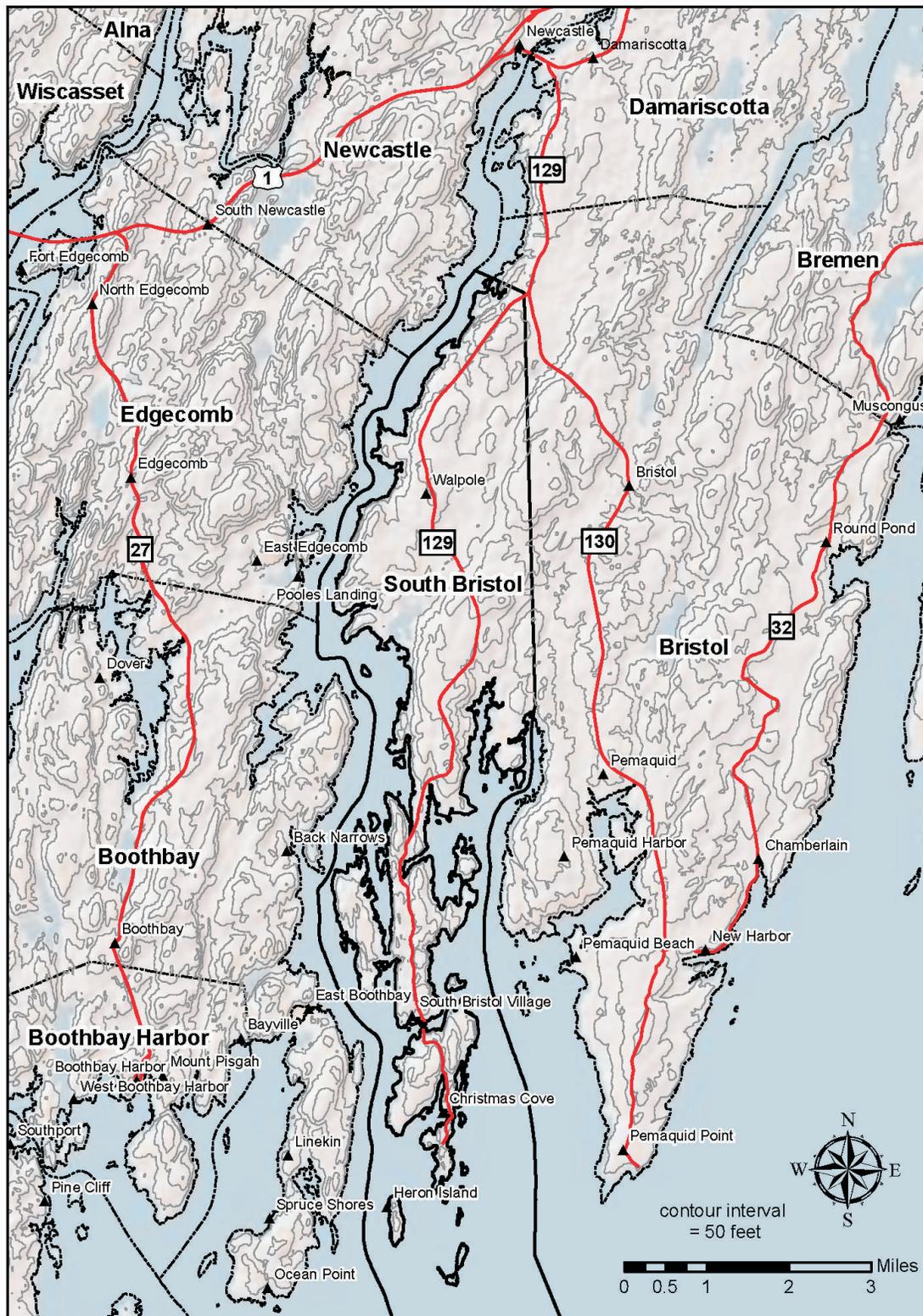


Figure 3.2 – Topographic setting of South Bristol and the surrounding region.

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Chapter 4 — Water Resources

When the well's dry, we know the worth of water.

~ Benjamin Franklin, (1706-1790); *Poor Richard's Almanac*

At present, South Bristol has no public water supply and thus its residents and businesses depend entirely on the local well water sources. There are no known extensive sand and gravel aquifers and the vast majority of the Town's water wells are bedrock wells. The Town's natural water resources must be preserved and protected to assure water quality and adequate future water supply. This chapter identifies all of the Town's water resources, outlines the issues pertinent to them, and states the policies and strategies for meeting the goal of protecting and enhancing them.

4.1 — Precipitation

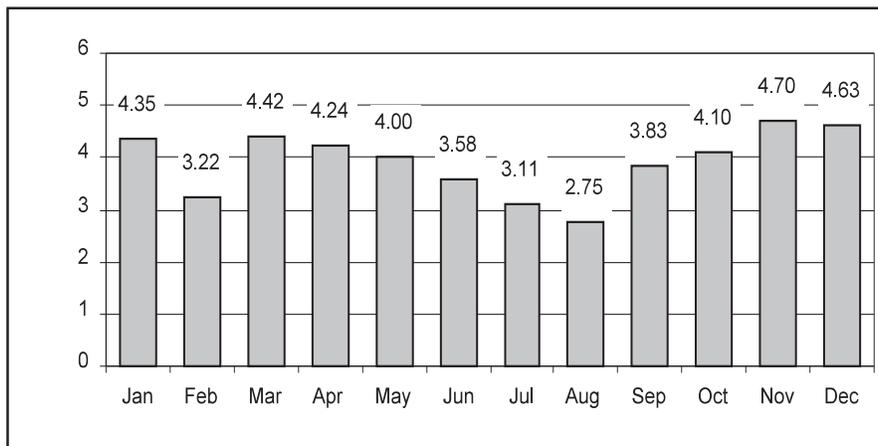


Figure 4.1 – Mean precipitation in inches from 1971-2000 for Newcastle, Maine

Precipitation plays a key role in the Town's water supply. The long term records for the nearest climatological station are from Newcastle and the mean monthly precipitation in inches from the period 1971-2000 is presented here as the best approximation of South Bristol's precipitation (figure 4.1) (source: NOAA, 2005) The mean annual precipitation over the past 30 years is 46.93 inches.

Gerber (1991) points out that November and December are important months for ground water recharge; and ground water levels rise to the

highest levels during the spring thaw which is usually accompanied by relatively high precipitation. Gerber also notes that in a period of extreme drought total precipitation may only equal 60% of the average annual amount or approximately 28 inches. The driest year on record for the Newcastle station had only 29.50 inches of precipitation. During a drought, water supplies may be contaminated since "decreased ground water recharge and lowered water table levels reduce the ability for soil and ground water to dilute and treat septic effluent" (Gerber, 1991).

4.2 — Surface Water

Table 4.1 – The nine watersheds of South Bristol listed by size

Watershed name	Area (acres)	% of town's land area	Drainage
Damariscotta River	3306	39.4%	into the Damariscotta River
Orr's Meadow Brook	1450	17.3%	from Bristol into the Damariscotta River
North Branch Johns River	994	11.8%	into Johns River
Johns River	685	8.2%	into Johns Bay
Wiley Brook	640	7.6%	into the Damariscotta River
Johns Bay/Atlantic Ocean	499	5.9%	into Johns Bay
Upper Pond Brook	378	4.5%	into Bristol
Pemaquid River	333	4.0%	into Bristol
Eastern Branch Johns River	112	1.3%	from Bristol into Johns River
Totals	8397	100%	

Sources: USGS maps and databases

Watersheds

The Town lands are divided into nine watersheds as listed on table 4.1 and shown on Map 4. With the exception of the land within the two watersheds that drain into Bristol and the Orr's Meadow watershed, there is not a square inch of the Town that is more than one mile from a coastal shoreline. The Damariscotta River and the Johns River are actually estuaries which mean that over 90% of all Town lands are located within "first-order" watersheds draining directly into coastal waters. Map 4 also shows that for much of the Town, State Route 129 runs either along, or close to, the drainage divide that separates the Town's watersheds.

Streams and Rivers

The streams shown on Map 4, and most of the maps in the Comprehensive Plan, were mapped and classified by the US Geological Survey. After field checking in two areas, revisions were made to show the true direction of water flow. South Bristol has 11.65 miles of streams. There are eight perennial streams totaling 4.57 miles and 18 intermittent streams totaling 7.08 miles. All streams are unnamed except Wiley Brook and Orr's Meadow Brook.

Only 7 of the 1046 structures in the Town are within 100 ft of any stream. A total of 43 structures are within 250 ft of any stream. 101 of the 1046 structures in the Town are within 75 ft of a coastline. A total of 458 structures are within 250 ft of a coastline. At 46.5% this later statistic means that almost half of the residential dwellings are subject to the Town's shoreland zoning ordinance.

The Town has 68.85 miles of coastline along the Damariscotta River, Johns River, Johns Bay, and the Gulf of Maine. To help express the relative vastness of this feature, consider that our coastline is longer than the total length of all the private and public roads in the Town (54.71 miles).

Public access to streams is limited to foot traffic at a stream in the Merriam Nature Trails at the Darling Center, and to one unnamed stream in the Tracy Shores Nature Preserve. Public access to the saltwater is available by foot from the following: Merriam Nature Trails at the Darling Center, Plummer Point Preserve, a pending preserve between the S Road and Seal Cove, the Tracy Shore and Library Park Preserves, and Sand Cove courtesy of the owners. Public access to piers on the saltwater is available at Hunters

Landing, the town float in the Western Gut, and the town landing float in Christmas Cove. While there is no free public access by boat ramp to any water in South Bristol, boaters may use the ramp at Bittersweet Landing or the crane at Gamage Shipyard in the Gut for a fee. A number of Town residents have been working to locate and develop what could become the Town's first public access to the saltwater which would provide boat ramp access to deep water at all tides.

Wetlands

There are 83 separate freshwater ("palustrine") wetlands dominated by trees, shrubs, persistent vegetation, or shallow water in the Town totaling 274 acres (Map 4). The largest is 40 acres, the smallest only 0.2 acres, and the mean size is about 3.3 acres. The US F&W National Wetland Inventory uses a threshold of 10 acres to identify the most important wetlands. South Bristol has several wetlands that exceed this size and these are shown in red on Map 4 (Water Resources). The largest wetland is located between Split Rock Road and Sproul Road east of Route 129 with the northern part owned by the Wawenock Golf Club. The second largest wetland, at 24 acres, is just north of Split Rock Road and the southern part of that is also owned by the Wawenock Golf Club. These two large wetlands are within the Orr's Meadow Brook watershed which drains into Clarks Cove Pond. The third largest wetland at 23 acres is located along Wiley Brook and is identified as a Fresh Water District called the Wiley Brook Swamp in the South Bristol Shoreland Zoning Ordinance. A 13 acre wetland known as the Town Hall Swamp is identified as a Resource Protection District in the South Bristol Shoreland Zoning Ordinance. There is a 12 acre wetland within the Town boundary in the Upper Pond Brook watershed. South of this wetland, in the same watershed, is an even larger wetland that extends into Bristol, known as Hunters Meadow Swamp, and it is identified as a Resource Protection District in the South Bristol Shoreland Zoning Ordinance. There

is wetland greater than 120 acres in the Pemaquid River Watershed that is almost totally within the town of Bristol but a small part of the wetland extends into South Bristol. If some development setback buffer for large wetlands is agreed upon by both Bristol and South Bristol then this buffer should be mapped across town lines even if the arm of the wetland crossing into an adjacent town is small.

Only 16 of the 1046 structures in the Town are within 100 ft of any palustrine wetland. A total of 77 structures are within 250 ft of any palustrine wetland.

Ponds

The 1992 South Bristol Comprehensive Plan identified Clarks Cove Pond, South Bristol's only large pond, as one of three options for future water supply. The following paragraphs provide an update on the current condition of this potential resource.

Clarks Cove Pond is a 29.9 acre fresh water body that has a mean depth of 5 feet and a maximum depth of 11 feet. The Maine Department of Inland Fisheries & Wildlife has stocked Clarks Cove Pond since 1989 with brown trout. Other fish species present include alewife, golden shiner, largemouth bass, mummichog, and ninespine stickleback. Beaver and muskrat also populate the pond and surrounding wetlands. Since the mid 1980s, two residents of the Town have been monitoring the Clarks Cove Pond as part of the Maine DEP Volunteer Lake Water Quality monitoring program.

Table 4.2 provides a summary of the key water quality parameters for Clarks Cove Pond. Recent dissolved oxygen (DO) profiles show moderate DO depletion in the lake. The potential for total phosphorous to leave the bottom sediments and become available to algae in the water column (internal loading) is high. The flushing rate is the amount of time required for the lake water to be renewed each year. The average flushing rate for Maine lakes is about

Table 4.2 – Key water quality parameters for Clarks Cove Pond

Water quality parameter	Williams (2003) VLMP (* historical average)	PEARL (2003) (except where noted)
2005 average Secchi transparency from 6 readings	1.8 m	1.5 m (2004)
Color	89 spu *	82 spu
Total alkalinity	9.6 mg/L *	13.0 mg/L
Specific conductance	164 μ S/cm *	75 μ S/cm
Total phosphorus	22 ppb *	49 ppb (1999)
Chlorophyll <i>a</i>	6.3 ppb *	5.9 ppb

Sources: Williams (2005) and PEARL (1999, 2003, and 2004).

1-1.5 flushes per year. The flushing rate for Clarks Cove Pond is approximately 27 flushes per year. Although the water quality of Clarks Cove Pond is below average for a Maine lake, it is average for a small, shallow, highly colored pond. High conductivity levels indicate that the lake is influenced by salt spray, a condition common to coastal ponds or more likely salt water intrusion through the reinforced concrete box culvert under Clarks Cove Road. Based on monitoring results and observations of the monitors, repairs have periodically been made to the culvert that regulates pond height and restricts inflow of water from the Damariscotta estuary. The culvert is currently being repaired on the downstream side to correct loss of rip rap and excessive seepage, and spalling of concrete.

Clarks Cove Pond is on the State's list of lakes that commonly have an algal bloom that reduces the transparency (Secchi Disk Transparency) to less than 2 meters. In fact, it is typically number one or number two in the list of lakes ordered by poorest (lowest or most shallow) transparency readings for the 885 lakes monitored in the State (Williams, 2005). Figure 4.2 shows that the transparency of Clarks Cove Pond has decreased with time since 1988.

In short, Clarks Cove Pond is currently stable in its water quality indices/parameters; but is on the cusp of significant degradation as indicated by the presence of algal blooms, low dissolved oxygen, high phosphorous, and moderate to high

chlorophyll-a. Its moderate to high specific conductivity is indicative of the need to continually maintain the Clarks Cove Road culvert to eliminate unwanted seepage of Damariscotta River saline water. This former salt marsh, now a 29.9 acre pond, provides valuable freshwater wildlife habitat for a variety of mammals, reptiles, aquatic life, and birds (including heron, ducks, geese). The trophic status of the lake is listed by the Maine Departments of Environmental Protection and Inland Fisheries & Wildlife as eutrophic (Pearl, 2003).

The watershed for Clarks Cove Pond is the Orr's Meadow Brook watershed which is 2.3 square miles in area and contains a total of 85 structures. These structures include four commercial operations, namely, King Eiders on the Green (a seasonal restaurant), Clarks Cove Farm, the Sproul Homestead and Farm, and the Michael Naylor Junk Yard. There are also four industrial structures namely Shop to Shore, Farrins Boatyard, Flowers Boatyard, and Adam Rice Maple Shack and Hydroseeding. The Wawenock Golf Club has a total of 99 acres which straddles Orr's Meadow Brook, approximately half in undeveloped wooded acreage and the other half as a nine-hole golf course. There are four civic structures within the watershed, including the town office, fire house, the Union Chapel and the Walpole Post Office. The remaining 74 structures are residential dwellings. There is a concern that the water quality problem at Clarks Cove Pond may be due

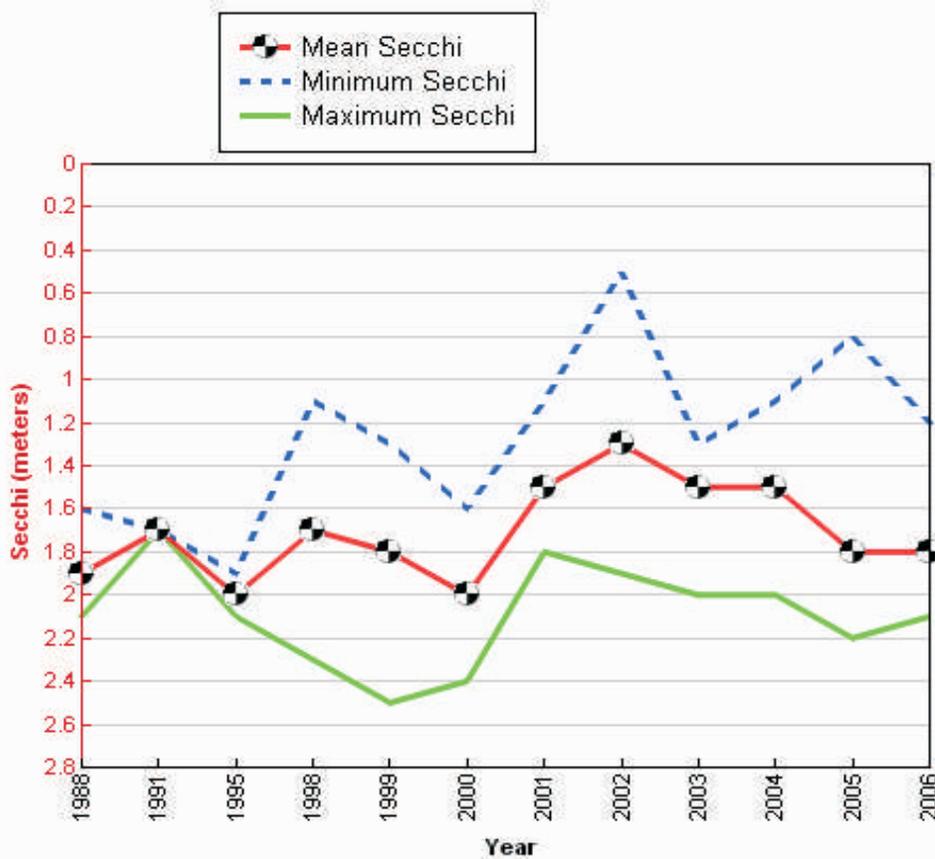


Figure 4.2 – Annual transparency for Clarks Cove Pond. Source is <http://www.pearl.maine.edu/Lake2.asp?Watercode=0035>

in part to the nitrogen and phosphorus fertilizers and pesticides used to maintain lawns, upstream of the pond. In addition, past practices at two orchards within the watershed (one orchard at the intersection of Clarks Cove Road and State Route 129 which is now inactive, and the Clarks Cove Farms orchard) may have compromised the water quality of Clarks Cove Pond.

Including Clarks Cove Pond, there are 64 freshwater ponds in South Bristol totaling 55 acres. At 29.9 acres, Clarks Cove Pond accounts for over half of the freshwater surface area in the Town. Only three additional ponds are greater than one acre (Farrin’s Pond south of Oak Ridge Road and east of Route 129 at 3.3 acres, Thompson Ice House Pond at 1.3 acres, and the unnamed pond southeast of Four Corners at 1.2 acres). Only 6 ponds, including Clarks Cove Pond, intersect the 250 foot shoreland zone. The Town’s ponds provide wildlife habitat as well as

water for fire control. Some of the ponds may be used for limited agricultural purposes. There are no significant fisheries in ponds of the Town of South Bristol. Public access to freshwater ponds is limited to foot traffic to one or more small ponds in the following parcels: Walpole Woods Preserve, Merriam Nature Trails in the Darling Center, Wawenock Golf Club, and Thompson Ice House.

Only 14 of the 1046 structures in the Town are within 100 ft of any pond. A total of 74 structures are within 250 ft of any pond.

Vernal Pools

Vernal pools or “spring pools” are shallow depressions that usually contain water for only part of the year. Although vernal pools may only contain water for a relatively short period of time, they serve as essential breeding habitat for certain species of wildlife, including salamanders and

frogs. (<http://www.maine.gov/dep/blwq/wetlands/vernal.htm>). There is one known vernal pool in the Town and it is located in the Tracy Shore Preserve which is maintained by the Damariscotta River Association. Since it is located well within the 33 acre preserve and is monitored by the DRA there is little risk to its surrounding environment. It is very likely that additional vernal pools will be identified as public awareness to this ephemeral habitat increases.

Invasives and Water Quality

The Maine Center for Invasive Aquatic Plants has a “List of Waterbodies Screened for Invasive Aquatic Plants between 2002 and 2005 by County.” See <http://www.mainevolunteerlakemonitors.org/mciap/IAPSurveys2002-2005> for more information. According to this list no waterbody in the Town of South Bristol was screened. At present there are no known problems with invasive aquatic plants in South Bristol.

The Maine DEP maintains a “Nonpoint Source Priority Watersheds List.” There are no coastal waters, streams or lakes in or abutting the Town of South Bristol on either of the sub lists; Coastal Waters, Rivers & Streams, and Lakes <http://www.maine.gov/dep/blwq/docwatershed/prilist5.pdf>

According to a map on the DEP website titled “Maine 303(d) Phosphorus-based TMDL lakes” there are no such lakes in South Bristol. <http://www.maine.gov/dep/blwq/docmonitoring/impairdwaters/lakes303d.pdf>. Notwithstanding its absence on this list, however, there is a known high phosphorous problem with the Town’s only large pond, Clarks Cove, and also Farrin’s Pond.

At present there are no known lake and pond protection and preservation measures, including local ordinances in the Town, and the same is true of river and stream protection and preservation measures. Nor are there any known existing drinking water protection and preservation measures in the Town.

Organizations protecting rivers, streams and lakes

The following organizations play a role to varying degrees in protecting and/or restoring our rivers, streams, and lakes as described below.

- Damariscotta River Association (www.draclt.org)
- Tidewater Watch (<http://www.draclt.org/TidewaterWatch.html>)
- Pemaquid Watershed Association (www.pemaquidwatershed.org)
- Boothbay Region Land Trust (www.bbrrlt.org)
- Damariscotta Lake Watershed Association (<http://www.dlwa.org>)
- Maine Island Trail Association (www.mita.org)
- Maine Coast Heritage Trust (<http://www.mcht.org/index.shtml>)

The Damariscotta River Association’s (DRA) mission statement is “to preserve and promote the natural, cultural, and historic heritage of the Damariscotta River, its watershed, and adjacent areas for the benefit of all.” As such, the DRA is active in our community primarily in protecting the aesthetic and ecological conditions associated with the Damariscotta River. The DRA is concerned about surface runoff into tributaries of the river especially from large commercial facilities and potential big-box stores. It has taken an active role in securing undeveloped land, both as public preserves and in the form of conservation easements, in South Bristol which in turn helps to minimize non-point source pollutants.

The DRA also runs the Tidewater Watch program which was created in 1988 to monitor water quality and shellfish habitat, using citizen volunteers, high school students, and professional aquaculturists who look to the river for their livelihood. The local aquaculture businesses rely on the reports of clean water to gain consumer confidence in their commercially grown products, as do shellfish harvesters. Today the program has

expanded to include taking a set of water samples (over forty sites are sampled along the river) for the Department of Marine Resources (DMR) in Boothbay. The data are included in a State-wide water quality analysis conducted by the Wells National Estuarine Research Reserve through the University of Maine Cooperative Extension Clean Water Program and the State Planning Office. The collected data are reformatted and shared with the Department of Environmental Protection. The goal is to report on water quality trends to State resource managers.

The Pemaquid Watershed Association like the DRA takes an active role in protecting lands and water quality, but their lands and activities are sited primarily in the adjacent town of Bristol.

The Boothbay Region Land Trust, like the DRA takes an active role in protecting lands and water quality, but their lands and activities are sited primarily west of the Damariscotta River.

The Damariscotta Lake Watershed Association is concerned about water quality of Damariscotta Lake and of the upper freshwater reaches of the Damariscotta River. These areas

greatly influence the quality of the downstream reaches of the river including the estuarine reaches which border our Town and support various types of mariculture.

The Maine Island Trail Association promotes conservation and stewardship on numerous islands along the coast of Maine including several in or very near to South Bristol. The organization promotes “leave no trace behind” use of the islands by their members and helps each year to clean up trash that has washed ashore thereby improving water quality.

Maine Coast Heritage Trust is a statewide land conservation organization that “conserves and stewards Maine’s coastal lands and islands for their renowned scenic beauty, outdoor recreational opportunities, ecological diversity and working landscapes.” While the MCHT does not appear to have any water quality monitoring program their conservation efforts in general help to conserve natural lands and thus to minimize runoff. The MCHT has been involved with setting up at least two conservation easements in South Bristol.

4.3 — Ground Water

Ground water is the subsurface water that fully saturates pores or cracks in soils and rocks (figure 4.3). Ground water is replenished by precipitation and, depending on the local climate and geology, is unevenly distributed in both quantity and quality. When rain falls or snow melts, some of the water evaporates, some is transpired by plants, some flows overland and collects in streams, and some infiltrates into the pores or cracks of the soil and rocks (USGS). Ground water is a transient resource in a revolving-door hydrologic cycle that includes precipitation of water onto the land, infiltration into the ground, slow flow through the ground to streams, lakes and the ocean, and evaporation

back into the atmosphere for release as rain and snow.

Ground Water Quantity

The ground water resources of South Bristol were evaluated in detail, at the request of the Town, by Robert G. Gerber, Inc. (Gerber, 1991). This report was based in part on the data derived from a well questionnaire circulated to Town residents in 1990 and supplemented by data from well drilling contractors.

According to this 1990 questionnaire out of 490 well records 91% of the water wells were bedrock or artesian wells drilled into rock, 5% were dug wells, and 4% were springs or other

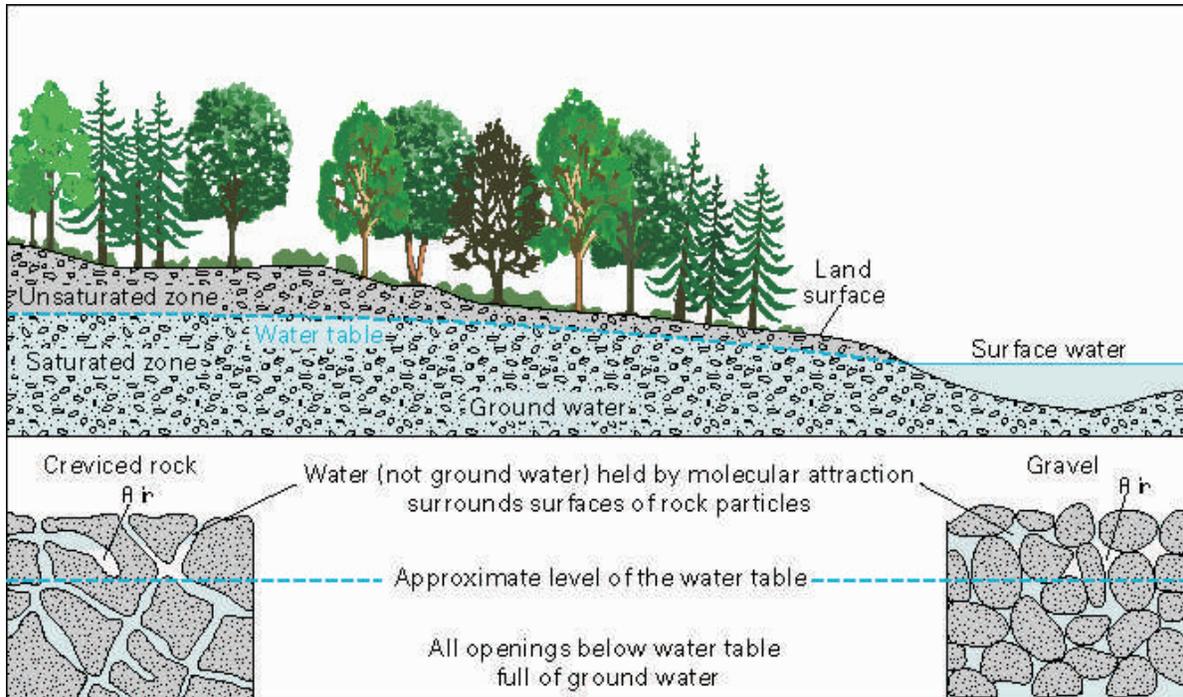


Figure 4.3 – Diagram illustrating that ground water occurs in the saturated zone below the water table (USGS). In South Bristol the saturated zone can include the soil, unconsolidated sand and gravels, and the metamorphic bedrock,

water sources. According to the mail survey done for the comprehensive plan in 2003, and based on 339 responses, 88% of the Town’s wells were drilled bedrock wells, 9% were dug wells, and 3% were cisterns. Gerber reported that the bedrock water well yields for South Bristol are about average when compared to coastal Maine. The yields and depths of the Town’s water wells are provided as figure 4.4.

Gerber also noted that most of South Bristol’s

bedrock water wells with greater than 10 gpm yield (26%) are within 300 feet of mapped “photolinears.” Photolinears were defined as any remotely expressed fabric element, in which the length is greater than 10 times the width. Aerial photography at different scales and in both stereo and non-stereo mode, was used to map the photolinears. The map, produced at 1:12,000 scale (Gerber, 1991, figure 4), is located in the South Bristol town office. Zones of potential high bedrock yields based on the occurrence of

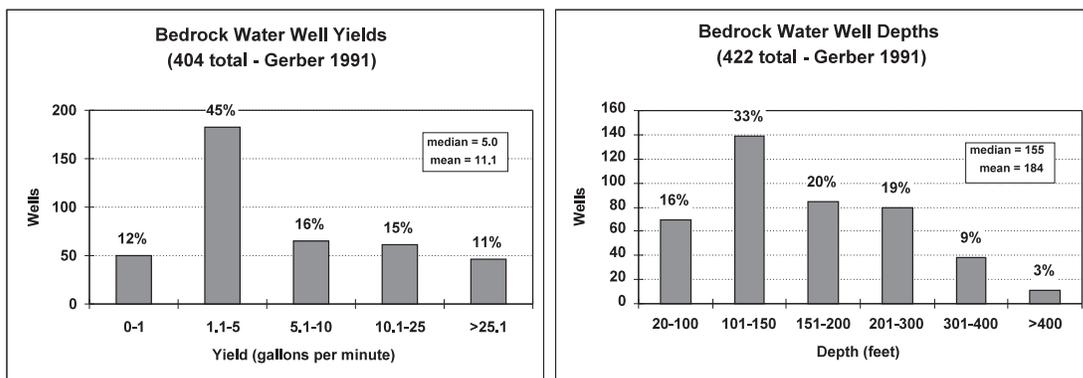


Figure 4.4 – Bedrock water well yields and depths for South Bristol (Gerber, 1991)

South Bristol Water Wells (379)

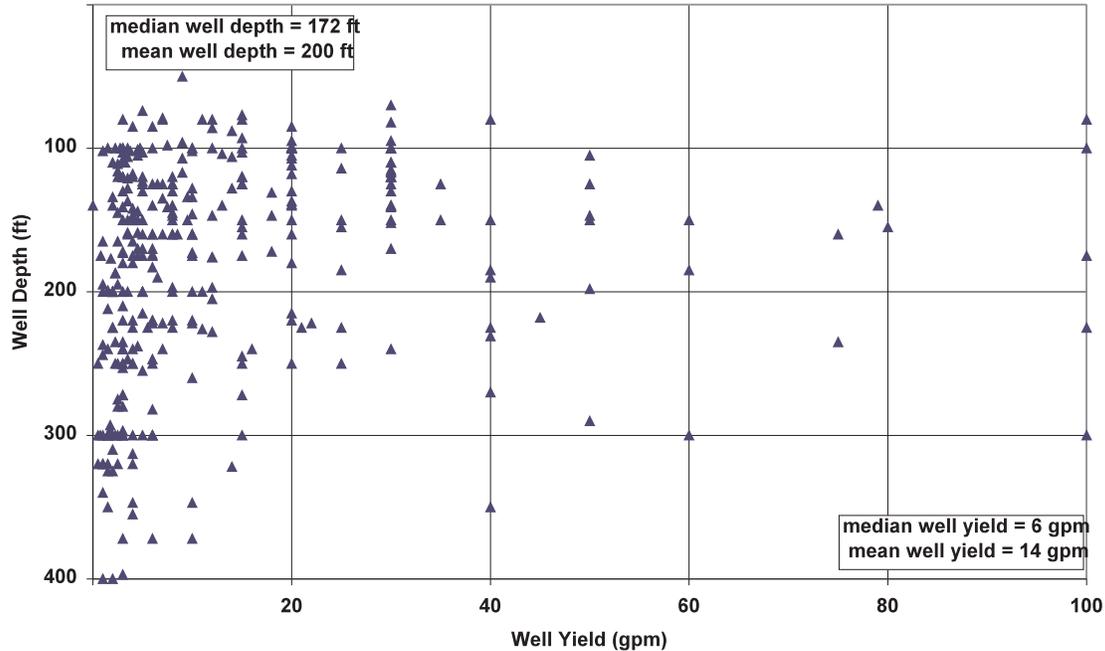


Figure 4.5 – Graph of 379 bedrock water wells showing no correlation between yield and well depth.
(Data from Maine Geological Survey)

photolinears and drillers records are delineated on the map. Gerber recommends that all areas of high bedrock water yields be protected and potential contamination sources such as gas stations and dry cleaners be prohibited from these zones. Further he suggests that new water supply wells only be located in these high yield zones if they are at least 600 feet from the coast to reduce the potential for saltwater intrusion.

Barlow (2003) included a summary of saltwater intrusion in a fractured crystalline-rock aquifer in Harpswell, Maine, and wrote as follows:

In a review of the coastal bedrock aquifers of Maine, Caswell (1979 a, b) noted that most coastal wells do not pump saltwater, even though the ocean nearly surrounds the numerous islands and narrow peninsulas of Maine's irregular coastline. This may be partly the result of the generally low pumping rates of wells that tap the bedrock aquifers, but Caswell

suggested that the absence of extensive saltwater intrusion is probably the result of the particular orientation of the water-bearing fractures of crystalline rocks along the coastline, which prevents, or at least limits, the landward migration of saltwater.

Only 3 of 60 bedrock water wells were contaminated by saltwater intrusion in Harpswell but, importantly, all three wells were located in an area where a number of large fractures crossed the narrow peninsular perpendicular to the dominant bedrock fracture direction which parallels the peninsula. South Bristol has a similar configuration of coastline and bedrock fracture direction. Gerber (1991, figure 4) mapped 32 specific areas along the South Bristol shoreline as "potential areas of saltwater intrusion" based on where one or more photolinears intersect the shore. These areas, which extend landward 600 ft, could be considered as a potential limitation for development at least with respect to drilling bedrock water wells.

Table 4.3 – Comparison of the yields of 138 bedrock wells in three sections of the Town.

Section of South Bristol	Number of bedrock water wells mapped	Median yield	Mean yield
North of McClintocks Hill	51	7.0	18.7
Between McClintocks Hill and Gut bridge	42	5.5	13.7
Rutherford Island	45	6.0	9.7
All 138 mapped wells	138	6.0	14.2

Source: Maine Geological Survey

As of 2001 the Maine Geological Survey had 379 South Bristol bedrock wells in their database drilled between 1959 and 2000. Figure 4.5 was prepared using these data to show that there is no real correlation between the yield of the Town's bedrock water wells and the well depth. Of these wells the location is known for 138 wells and they are plotted on Map 4 (Water Resources) using both symbol color and size to show the yield. There are approximately 983 dwellings in South Bristol and one could assume that each dwelling could have its own water well. Thus the data shown in figure 4.4 and on Map 4 likely represent a subset of the total population of water wells.

Nevertheless these subsets can be used to make some general observations. Inspection of Map 4 indicates that wells of high yield are located throughout the Town and there is a weak pattern that could indicate that wells of low yield are more likely to occur in the southern half of the Town. In an attempt to see if the data support this observation table 4.3 was prepared. Using the median values it seems that the yields from bedrock water wells do not appear to be significantly greater, or less, in one part of our Town than in another. Note that the mean yields reflect the presence of 11 wells that have yields over 75 gpm and thus make for a highly skewed distribution.

Ground Water Recharge

In Maine coastal communities located on peninsulas and islands, essentially all of the ground water is supplied by rain and snow-melt that falls directly on those peninsulas and islands. There are no significant aquifers, as mapped by

the State, feeding ground water from some distant source to the Town of South Bristol. As water is pumped from wells in the ground for household or commercial use, an equal amount of water must be supplied by nearby rain or snow-melt to replenish or "recharge" the resource, or the wells will eventually go dry.

In rural coastal communities where the households and businesses are supplied from drilled wells, the quantity of water available on a long-term basis is wholly dependent upon the quantity supplied by local precipitation. In South Bristol precipitation averages about 47 inches per year (NOAA, 2005, from Newcastle station records 1971-2000), which is equivalent to about 1,276,000 gallons of water falling on each acre in a year's time.

Most of this large volume of water is lost as run-off (flow over the land surface to streams and the ocean), transpiration (consumed by trees and plants), or by evaporation. The remaining small portion seeps into the ground, percolates through the soil to supply dug wells, and infiltrates cracks in the underlying ledge down into the bedrock aquifers that supply the drilled wells. This water that saturates the soil and rock is called ground water.

One key to an adequate water supply from bedrock wells in Maine is total annual recharge. "Ground water recharge rates cannot be measured directly through observation and therefore it must be modeled" to provide an estimate (Gerber and Hebson, 1996). One method of estimating recharge on a regional basis for large time periods is the Water Balance Analysis where the basic

Table 4.4 – Ground water recharge rates for surficial deposits of South Bristol

Type of surficial deposit	Average recharge rate (expressed as a percent of annual precipitation)
Shallow soils and exposed bedrock, sandy glacial till less than 3 feet thick over bedrock, typically found on shoreline areas and islands	15%
Thick silty glacial till	10%
Glaciomarine clay-silt ("Presumpscot Formation" a/k/a "blue marine clay")	5%

Source: Gerber (1991)

balance equation is Precipitation = Runoff + Recharge + Evapotranspiration. Gerber and Hebson (1996) provide descriptions of at least five additional methods for estimating recharge and indicate that for local sites it may be necessary to use one of the more sophisticated methods rather than a simple water balance analysis.

Gerber (1991) reviews the hydraulic characteristics of the surficial deposits of South Bristol. The glaciation and subsequent submergence of the Pemaquid peninsula accounts for the variety of glacial deposits but from a water resource perspective there are three main types of surficial materials covering South Bristol each with a different average recharge rate (table 4.4).

Water Supply Analysis

Detailed analysis must be performed on-site on a location by location basis to determine if there is likely to be an adequate water supply for a proposed individual house lot or for a proposed subdivision. This is because local variability in soils, slope, land cover, and bedrock type must be determined. Nevertheless it is generally instructive to use the data presented in this chapter to estimate the water supply for the entire Town of South Bristol.

Daily water consumption on a per person basis can vary but for planning purposes Gerber (1991) recommends using 100 gallons per day (gpd) while another source lists 60 gpd (Hasbrouck, 2004), and the 1992 comprehensive

Table 4.5 – Estimate of year-round population which Town could support by ground water

With precipitation of 47 inches per year one acre will get approximately:	1,276,000 gallons per year			
At an average ground water recharge rate of:	15%	10%	5%	
Each acre of bedrock aquifer will be recharged with:	191,400 gal	127,600 gal	63,800 gal	
Number of people one acre could support				
Per person consumption:	60 gpd or 21,900 gpy	8.7	5.8	2.9
	100 gpd or 36,500 gpy	5.2	3.5	1.8
Number of people the entire town land area (8400 acres) could support				
Per person consumption:	60 gpd or 21,900 gpy	73,000	49,000	24,000
	100 gpd or 36,500 gpy	44,000	29,000	15,000

Sources: Gerber (1991). Calculations by Comprehensive Planning Committee.

Notes: The calculations of the number of people which could be supported do not take into account that as more dwelling units are constructed an increasing amount of land would be made impervious to ground water recharge as a result of building, road, and driveway construction, hence increasing runoff.

Table 4.6 – Estimate of year-round population which Rutherford Is. could support by ground water

With precipitation of 47 inches per year one acre will get approximately:		1,276,000 gallons per year		
At an average ground water recharge rate of:		15%	10%	5%
Each acre of bedrock aquifer will be recharged with:		191,400 gal	127,600 gal	63,800 gal
Number of people one acre could support				
Per person consumption:	60 gpd or 21,900 gpy	8.7	5.8	2.9
	100 gpd or 36,500 gpy	5.2	3.5	1.8
Number of people the Rutherford Island land area (692 acres) could support				
Per person consumption:	60 gpd or 21,900 gpy	6050	4030	2020
	100 gpd or 36,500 gpy	3630	2420	1210

Sources: Gerber (1991). Calculations by Comprehensive Planning Committee.

Notes: The calculations of the number of people which could be supported do not take into account that as more dwelling units are constructed an increasing amount of land would be made impervious to ground water recharge as a result of building, road, and driveway construction, hence increasing runoff.

plan cited a 70 gpd rate. Since South Bristol is primarily a residential community, commercial water usage is not included in this analysis but it should be noted that commercial water usage, such as by a restaurant or other commercial facility, can be significant. If every gallon of water that was recharged into a bedrock aquifer was pumped out and consumed exclusively by residential customers then the Town could support a year around population of between 15,000 to 73,000 (table 4.5). It is important to understand how the estimate can vary by using different recharge and consumption rates as demonstrated in table 4.6.

The estimates of population that could be served by annual ground water recharge shown in table 4.5 should be considered as unreasonable extremes for several reasons. First, in a severe drought annual precipitation could be reduced by as much as 40%. Second, this type of analysis assumes that the population would be evenly spread across every acre of the Town. There are approximately 983 residential dwellings in South Bristol which means that on average there is one dwelling for every 8.5 acres. In reality there are some areas of the Town with no dwellings, including the largest at roughly 1000 acres north

of Split Rock Road in Walpole. At the other extreme there are 344 dwellings on Rutherford Island which is only 692 acres, for an average of roughly one dwelling for every two acres. It turns out that if one defines a “building envelope” of 250 ft around every dwelling in the Town, then one can say that all existing dwellings are built within approximately 2300 of the Town’s total 8400 acres. In other words, all existing development covers only 27% of the land area.

Table 4.6 seems to indicate that in general there should be adequate water supply for the people of Rutherford Island, even if there were up to 3.5 people to each dwelling and each dwelling was occupied on a year round basis. Again this picture changes during severe drought, or if commercial usage is added to the analysis, and of course during the short summer season when seasonal occupancy peaks, recharge is at a minimum, and the demand on water resources reaches it peak. Further, there are some areas on Rutherford Island, such as along The Gut, where density exceeds 4 or 5 dwellings per acre.

When local pumping exceeds recharge, inflow from adjacent areas can compensate. However, as the over-pumping area and/or rate grows larger,

the surrounding areas will not be able to yield the excess water being pumped and the water level

will possibly decrease to the point where wells go dry.

Table 4.7 – Acres required under drought conditions for each dwelling category

Recommended single family density	Area (acres) for South Bristol	Maximum number of structures	Number of existing structures
1 acre per dwelling	797	797	130
2 acres per dwelling	1256	655	131
4 acres per dwelling	4485	1229	692
8 acres per dwelling	1648	227	76
Not suitable for septage	167	—	8
Totals	8353*	2908	1037

Sources: Gerber (1991) and USDA.

Notes: Shown are the number of acres required under drought conditions for each dwelling category and the projected maximum structures for South Bristol.

* The USDA soil data do not include at least 20 small islands which together total an additional 44 acres.

Soil Carrying Capacity and Residential Septic Systems

Water is not only essential for personal consumption but is also required to deal with the loads imposed by residential septic systems. In the water resource evaluation performed for South Bristol, Gerber (1991) assigned recharge rates in gallons per minute per acre to each soil type present within the Town, one for average conditions and one for drought conditions. He then used an equation with the additional parameters for the concentration of nitrate-nitrogen in ground water, background concentration of nitrate-nitrogen in the uncontaminated ground, the concentration of nitrate-nitrogen from septic discharge, and the average septic discharge rate to calculate the allowable single family lot density in acres per dwelling unit.

The data shown in table 4.7 were derived by adding up the acreage that was assigned by Gerber (1991) to each of the recommended single family dwelling categories under drought conditions. On a town-wide basis this table seems to suggest that there could be almost three times

as many septic systems without risk of contamination problems. However, once again this type of broad-brush analysis assumes that the population would be evenly spread across every acre of the Town when in reality this is not the case. These numbers cannot be used directly for predicting the capacity for future growth of the Town without first removing from consideration all those areas where development is legally prohibited. For example, the combined total area within the Town of South Bristol of the 75 foot shore land zone, the public preserves, the conservation easements, ponds, and wetlands is over 1800 acres. There is considerable additional acreage where future development is likely to be restricted or discouraged.

How well have we done to date in locating structures in the appropriate soil type to adequately and safely handle septage? To answer this question the following GIS approach was taken. First a buffer with a 250 ft radius was drawn around each structure. Many of these small buffers overlapped so they were merged together. This buffer was used to “clip” out the soils so that only those soils within the buffer were used to

Table 4.8 – Acres required under drought conditions within 250' buffer of existing dwellings

Recommended single family density	Area (acres) within 250' buffer of existing structures	Maximum number of structures	Number of existing structures
1 acre per dwelling	308	308	130
2 acres per dwelling	311	156	131
4 acres per dwelling	1402	351	692
8 acres per dwelling	269	34	76
Not suitable for septage	20	—	8
Totals	2310	840	1037*

Sources: Gerber (1991) and USDA.

Notes: Shown are the number of acres required under drought conditions for each dwelling category and the projected maximum structures for South Bristol for the area encompassed by a 250' buffer around each existing structure.

* This includes residential, commercial, industrial, recreational, and civic structures.

redo the analysis as presented above. If the entire Town were to be re-built within the same area occupied by today’s structures and the adjoining 250 foot buffer then there would be adequate soils to accept septage for only 849 structures under drought conditions (table 4.8). Using this approach, and considering whether the soils we have built our dwellings on can adequately handle the septage, one could say that we are already 22% overbuilt.

There is concern regarding the density of dwellings already existing on Rutherford Island and in the Gut area. In particular, as noted above, that area of South Bristol may be close to its limit of septage handling capacity.

Water Conservation

As with other resources conservation may help alleviate some of the supply problems for water resources. Recent studies at 15 locations nationwide have shown that the installation of plumbing fixtures that save water can have a big impact (AWWA, 1999 and Meyer, 2005). Homes without water saving fixtures (like low-flow toilets, clothes washers, and showers) had total water use ranging from 60 to 80 gpd per person while in homes with the water-saving fixtures water use ranged from 38 to 50 gpd per person. The average water-use reduction was 38%. In parts of the Town with high density of dwellings, such as Rutherford Island, homeowners might be

encouraged to replace their existing plumbing systems with newer water saving fixtures, especially if they, or their immediate neighbors, have experienced water shortages in their wells. Such water saving devices should be mandatory on all new construction.

Ground Water Quality

Of the 261 questionnaires received as part of the Gerber (1991) study, 62 (24%) indicated water quality problems in bedrock wells. Of these 62 problems reported, 45 were for iron, 11 for saltwater, and 6 for coliform. Gerber also reviewed the water quality data on file at the Maine Department of Human Services for the period 1972 to 1987. Using federal and State standards from 1990, Gerber found that from 138 bedrock wells in South Bristol, water quality records indicated concentrations above standards for various elements as summarized in table 4.9.

The 2003 mail survey asked residents “have you experienced any problems with your water supply since January 2000?” Of the 331 who provided answers, 85% reported no problems with either water quantity or quality, 7% had wells run dry, and 5% reported contamination. Some survey respondents provided details which suggest that perhaps 2 of every 10 wells that “ran dry” were not because of supply but because of system malfunctions (e.g. leaking toilet, back wash system running continually). Seven

Table 4.9 – Frequency and type of ground water contaminants

Contaminant	% of bedrock sources that exceeded recommended 1990 standard	1990 standard	2006 standard Maine DHHS Environmental testing lab
Manganese	87%	0.05 mg/L	0.05 mg/L
Iron	42%	0.3 mg/L	0.3 mg/L
Coliform	21%	0 col/100mL	0 col/100mL
Copper*	5%	1.3 mg/L	1.0 mg/L
Chloride	2%	250 mg/L	250 mg/L
Nitrate	2%	10 mg/L	10 mg/L
Lead*	1%	0.05 mg/L	0.015 mg/L

Sources: Gerber (1991) from tests of 138 wells and Maine Department of Health and Human Services.

* The 2006 standards for lead and copper are lower than the 1990 level so the contamination percentage reported by Gerber in 1991 may be higher by today's standards.

respondents noted contamination as one of the following: bacteria, coliform, fecal, or e-coli.

Federal Environmental Data for South Bristol

The federal government maintains a database to provide a variety of information on environmental factors across the nation. South Bristol is fortunate to get a relatively clean bill of health. The US EPA website "EnviroMapper" provides the following environmental information for the Town as of November 1, 2006:

- Facilities that produce and release air pollutants: 0
- Facilities that have reported toxic releases: 0
- Facilities that have reported hazardous waste activities: 0
- Potential hazardous waste sites that are part of Superfund that exist: 0
- Facilities that generate hazardous waste from large quantity generators: 0
- Facilities issued permits to discharge to waters of the United States:
Covese Inn & Lodge
Thomas Massey Ltd

Public Water Well Systems

There are eight public water supply systems in Town that serve specific populations and facilities. The well locations, along with its 300 foot radius wellhead protection area, are shown on Map 4 Water Resources. These systems were

assessed in 2003 by the Maine Drinking Water Program of the Department of Human Services, Bureau of Health and reports are available for review at the town office. Table 4.10 provides a summary of each well and its risk for contamination using the methodology of the Maine Source Water Assessment Program.

The Heron Island well is listed as high risk because it is a dug well into unknown thickness of overburden soil. It is also listed with a high risk for existing acute contamination because it had tested positive for coliform, an indicator of bacterial contamination. It is listed as a moderate risk for future acute contamination because land within 300 ft of the well is not controlled by the association.

The Elementary School well is listed as a moderate risk for existing contamination because the school septic system is located within 300 ft of the well.

Two of the Darling Center wells were listed as moderate risk based on the thin or unknown thickness of overburden soil. One well was considered at moderate risk of future acute contamination because the Darling Center does not control all land within 300 ft of the well.

The Wawenock Golf Club well was considered moderate risk based on the unknown thickness of overburden soil at the well.

Table 4.10 – Public water supply system wells and their assessment as for contamination risk

Well ID Type	Name	Population served	Well type/ geology risk	Existing acute contamination risk	Future acute contamination risk
3127101 NC	Coveside Rest/Marina & Island View Condos	246	Low	Low	Low
3127103 NC	Coveside Rest/Marina & Island View Condos	246	assessment pending	assessment pending	assessment pending
198289301 NC	Heron Island Village Assn #1	48	High	High	Moderate
93846102 NCNT	South Bristol School	73	Low	Moderate	Low
598262101 NC	Darling Marine Center well 6	100	Low	Low	Low
98262101 NCNT	Darling Marine Center #1	35	Moderate	Low	Low
298262101 NC	Darling Marine Center #3	36	Moderate	Low	Moderate
3128102 NC	Wawenock GC/ Club House	117	Moderate	Low	Low

Source: Maine DHS Maine Drinking Water Program

Notes: These are classified as transient Non-Community Water Systems (NC) – water systems that do not consistently serve the same people – and as Non-Transient Non-Community Water Systems (NCNT) that serve the same people, but not year-round.

Next to the Walpole fire station (old Town Hall), at the intersection of Ridge Road and Clarks Cove Road, is a freshwater tap. The source is the well that supplies both the firehouse and the town office buildings. This tap provides an occasional source of water to residents who stop to fill water jugs. As such this well does not meet the Maine Drinking Water Program criteria for a “Public Water System” since it has less than 15 service connections and does not serve over 25 individuals on a daily basis. The water quality of this well is tested annually and there have been no quality problems in recent years.

Underground Storage Tanks

For South Bristol the Maine DEP online registry of underground oil storage tanks lists 24 tanks, 21 of these were removed from single or multifamily residences, retail oil, public, commercial, school, Town, and federal facilities before 1993, and two 1000 gallon gasoline tanks at Kelsey’s Garage on Route 129 were abandoned in place and purged on 1/7/1992. The remaining

storage tank is a 1000 gallon tank for #2 fuel oil located at the South Bristol Elementary School on Route 129 and is “active” since 10/1/1969 (Maine DEP, 2006).

Overboard Discharge Systems (OBDs)

South Bristol has 54 permitted Overboard Discharge Systems. These systems provide a solution to dispose of septage for dwellings along the coast that typically are on lots with insufficient area to install a conventional septic tank and leach field, and/or lots with little or no soil on rocky ledge. Since they create a potential pollution source for the nearby shellfishing resources they are described in detail in the Marine Resources chapter 10.

Other Potential Sources of Water Quality Problems

Water quality problems can occur in an individual drinking water well, in a stream, in a watershed, and potentially in the Damariscotta River or Johns River. The following is a short list

of potential sources of pollution, given the known land use and commercial and industrial facilities in our Town. This list includes both point and non-point sources and was compiled from several sources including https://www.umaine.edu/waterresearch/outreach/safe_drinking_water_digest.htm#water%20quality, and <http://www.maine.gov/dep/blwq/doceducation/nps/background.htm>,

- Fecal Coliform bacteria from human or animal waste (e.g. dogs, horses, goats, and waterfowl such as geese)
- Nitrogen compounds from organic matter (septic systems, manure, etc.) or fertilizers
- Sodium and Chlorides from seawater intrusion, road salting, sand/salt piles
- Arsenic in groundwater from former use of pesticide in orchards and field crops
- Petroleum hydrocarbons, including the MtBE gasoline additive, from spills, leaky storage tanks, junkyards, sand and gravel operations, and old private “dumps”
- Soil pollution from sources such as dirt roads, driveways, agricultural fields, forestry operations, construction sites, poorly constructed culverts and ditches, and sand used during the winter
- Boat Services including fuel pumps and pump-outs
- Boatyard wastes, paints, solvents, etc.
- Seafood processing wastes
- Construction projects
- Chemical drum storage
- Above/Underground chemical or fuel storage tanks

An incident of polluted runoff causing economic and ecological damage occurred in the past decade that resulted in the termination of an illegal sludge spreading activity in Walpole. This incident was initially reported by the maricultural operation on the Damariscotta River that lost an extensive crop of seed shellfish.

Possible Future Water Supply Options

The following options are presented roughly in the order of least desirable to most desirable.

The Town’s only freshwater pond large enough to even be considered as a possible water supply source is Clarks Cove Pond. Due primarily to its classification as eutrophic and to its declining water quality as discussed in detail above, it may not be a very practical option.

Another potential drawback to using Clarks Cove Pond as a source of public water supply is the possibility of sea water inundation by a hurricane surge as shown on Map 8.

Water supply seems to be most pressing in the Rutherford Island and the Gut area. South Bristol could build a reservoir system. Based on the experience of Boothbay Water District, there can be significant costs for this option. The Boothbay Harbor Water District uses Adams Pond, a 91 acre pond with an average depth of 21 feet to serve 3000 homes. The district is in the process of adding Knickerbocker Lake to the system and may ultimately tie into the Bath Water District via a pipeline. (The Bath water district relies upon the Nequasset Lake watershed as its primary supply source.) The required permitting process is lengthy and costs around \$300,000. For example, servicing as few as 350 homes on Rutherford Island a required filtration/treatment system would have a potential cost of between \$2 and \$3 million. Finally, a standpipe (holding tower) would be required at a cost of \$1 million. Before this option could be seriously considered an engineering firm would have to complete topographic and hydrologic surveys of potential reservoir sites throughout the Town and assess future demand for the neighborhoods to be served.

With appropriate hydrologic field studies the Town may also have the option of creating a Town well field. There are numerous photolinears in our Town that according to Gerber (1991) are typically associated with high water yields. An engineering firm would likely have to conduct well tests to select the ideal location, or locations, for a well field supply option.

In addition to the previous options, desalinization technology has improved greatly and the costs have decreased. There is a limited amount of water quality permitting required for this option. This is an option requiring research before arriving at a cost estimate.

It has also been suggested that South Bristol might build a pipeline system under the Damariscotta River and tie in to the Boothbay Region Water District system. The advantage in tying into the Boothbay region's system is that it could be done in a relatively short period of time. Further, no water quality permitting would be

involved for South Bristol. The Town would automatically be tied into the Boothbay Region Water District and all of its supply sources. This option would be subject to the approval of the PUC, the Boothbay Region Water District, and the residents of all affected towns.

All of the above options would require the construction of a distribution system to each individual residence or business from the water supply center and some would likely require a standpipe (holding tower).

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Water Resources Policies and Strategies

The overriding goal is for the Town of South Bristol to manage its water resources to preserve both future quantity and quality. To achieve this goal the following policies were formed based on the inventory and analysis of the Town’s water resources.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect sources of future water supply	Identify zones of potential high yield water wells and protect the area from development	Volunteer Committee \$500 / year 2015
	Identify topographic depressions suitable for damming and creating new freshwater supply ponds and protect the surrounding and upstream watershed from development	Volunteer Committee See above strategy 2015
Evaluate options for future town-wide, or partial town, water supply system	Actively monitor alternative water supply technologies such as desalinization	Volunteer Committee Minimal 2012 and ongoing
	Initiate discussions with Boothbay Region Water District and get an engineering estimate of costs to tie in by pipeline to their system	Selectmen & Volunteer Committee \$5000 2015
Protect the quantity and quality of South Bristol’s groundwater which serves as the primary potable water resource in the Town	Establish lot size and/or per capita limitations to prevent unsustainable drawdown of groundwater based on hydrogeologic settings (conditions) in the Town	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Establish procedures for assuring proper functioning of on-site wastewater disposal systems.	CEO / LPI Minimal 2012
	Review State regulations for boatyard wastes and if needed establish more stringent regulations through new land use ordinance	Planning Board & Selectmen-appointed committee Minimal 2012
	Develop land use ordinance to prevent location of septic and other potential contamination sources (e.g. heating oil tanks) within the 300 ft radius wellhead protection area of all public water supply system wells.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
Protect watersheds	Designate Forest North, Forest Central, and Clarks Cove Pond sectors (map 12) as critical resource areas.	Proposed in chapter 19 (Future Land Use)

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect significant water resources from non-point source pollution	Enforce State requirements in all parts of the Town to control runoff and soil erosion of disturbed areas such as paved and gravel roads, construction sites, and farming and logging activity.	Statute; CEO Minimal 2011
	Create or amend a local land use ordinance as applicable to include performance standards for storm water runoff that are consistent with the Maine Stormwater Management Law and Stormwater Rules (Title 38 MRSA Section 420-D and DEP Rule Chapters 500 and 502), which applies to any development where more than one acre of disturbed area is created during development	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Consider adopting Low Impact Development ordinance language in existing and future land use ordinances and the subdivision or site plan review ordinances to address runoff	Planning Board Minimal 2012
	Require owners (through a land use ordinance) of planned site developments, including roads, structures, waste disposal facilities, driveways (paved and gravel), to demonstrate that surface waters will not be affected by such development activity and to restore those that have been affected.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Establish requirements for appropriate management (storage, disposal and use) of animal and other waste. (e.g., proper manure storage, use, and disposal from the Town's several horse farms.)	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Provide water quality "best management practices" information to farmers, wood lot owners, and loggers.	Planning Board Minimal 2010
	Provide educational materials at appropriate locations (e.g., Town Office) regarding aquatic invasive species.	Planning Board -0- 2010

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect the quantity and quality of fresh and salt water bodies, including associated intermittent streams, wetlands, and vernal pools to provide viable and vital habitat for the healthy survival of the diverse plants, fish, birds and other wildlife in Town and to protect surface water as a potential alternative source of potable water.	Prevent the degradation and/or loss of intermittent and perennial streams, wetlands and vernal pools as a result of site development activity through a land use ordinance	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
Prevent salt water intrusion of Clarks Cove Pond to protect the fresh water resource as a potential future town water source and the freshwater habitat.	Monitor and maintain the culvert barrier annually and monitor the salinity of the pond.	Road Commissioners; Pond Monitors (see page 31) \$100 / year 2010 and annually
Provide greater setbacks and natural buffers between development and the shore of Clarks Cove Pond to minimize Cultural (anthropogenic) Eutrophication	Include restrictions in new Shoreland Zoning Ordinance	Planning Board -0- Completed
Ensure that all Town, county, and State water resources regulations are enforced	Provide the code enforcement officer with necessary tools including training and, if needed, equipment.	Selectmen \$1000 / year 2011 and annually
Protect the Town’s well outside the Walpole Fire House	Develop a wellhead protection plan to minimize contamination from septic, road runoff, and/or firehouse equipment use and maintenance practices.	Selectmen / CEO Minimal 2013
Provide a publically accessible water supply on Rutherford Island.	Investigate the possibility of providing an outside spigot at the Rutherford Island Fire Station similar to that at Town Hall.	Selectmen \$1000 2012
Protect land and water resources at sand and gravel mining sites	Incorporate water quality protection measures that complement State regulations regarding mineral extraction in a new land use ordinance for all operations regardless of size.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.

Chapter 5 — Population and Demographics

The people who are South Bristol

. . . were all America like this fair city, and all, no, only a small proportion of the population like the friends we left there, I should say, that the land was the fairest in the world.

~ Frances Trollope, (1780-1863) ²

South Bristol is a town on the coast of Maine where 897 people were counted by the 2000 decennial census. Those people, more than anything else, define the Town. The quotation above paraphrases many thoughts expressed by local people about South Bristol, many years after the words were written.

In earlier times transportation was limited, difficult, and slow; local industry which included fishing, ship building, and agriculture was a defining factor. Not any more. Now, to a great extent, people live where they wish to live based on economic and social factors; they travel to work where the jobs are. This is true in South Bristol, in Maine, and the nation. No longer is South Bristol, to a significant extent, defined by its fisheries and boat building industries as it was as recently as the middle of the 20th century.

5.1 — About the Data

Most data are from the 1990 and 2000 decennial censuses of population and housing of the United States. In all cases sources are cited. Where we found different data values from separate sources for a subject, we opted to use official U.S. Census Bureau data whenever available.

The census data come primarily from the 100 percent counts of population and housing which are referenced as from SF 1 (2000) and STF 1 (1990). SF 3 (2000) and STF 3 (1990) refer to the data from the long census forms, collected from approximately one of six households (16.7%) nationwide. The sample size (percent) increases as the size of the population being sampled decreases. The 2000 sample size for Maine was 21.8%, for Lincoln County 28.9%, and for South Bristol 50.8% – just over half of the households in South Bristol. The varying sample sizes allow for consistent statistical confidence levels when the data are extended to entire populations.

Data such as employment, occupation,

education, and income are from the sample of households selected randomly to fill out the long census form. Those data were statistically extended by Census to infer characteristics of entire populations. The Census Bureau normally sets a sample size to achieve a 90% confidence interval.

Historical data have been acquired from the U.S. Census Bureau, Maine SPO, and other sources which are cited. Unless otherwise noted, population and housing data are for April 1 of that year.

Although there are a few instances of data more recent than 2000 being available, these are more often than not estimates based on surveying of samples. We have chosen in most cases to rely on and use the 2000 data as being the most useful and reliable. Being familiar with South Bristol, the Comprehensive Planning Committee believes that there has not been much change since 2000.

2. Quoted from *Domestic Manners of the Americans*, ch. 34 (1832). Trollope had been traveling through the United States; here she referred to her departure from New York City as she departed on her trip home to England. Cited by *The Columbia World of Quotations*. Copyright © 1996 Columbia University Press.

5.2 — Historical Population Changes

Table 5.1 – Historical population growth, 1920 - 2000

Year	South Bristol		Lincoln County		Maine	
	Count	Change	Count	Change	Count	Change
1920	581	—	15,976	—	768,014	—
1930	563	– 3.1%	15,498	– 3.0%	797,423	3.8%
1940	582	3.4%	16,294	5.1%	847,226	6.2%
1950	631	8.4%	18,004	10.5%	913,774	7.9%
1960	610	– 3.3%	18,497	2.7%	969,265	6.1%
1970	664	8.9%	20,537	11.0%	992,048	2.4%
1980	800	20.5%	25,691	25.1%	1,124,660	13.4%
1990	825	3.1%	30,357	18.2%	1,227,928	9.2%
2000	897	8.7%	33,616	10.7%	1,274,923	3.8%

Sources: U.S. Census and University of Maine Fogler Library

South Bristol was set off from the town of Bristol on July 1, 1915; therefore population history of South Bristol as a town goes back only to the decennial census of 1920. Population data for the area of Bristol which became South Bristol are either difficult or impossible to acquire. In any event, they are thought to be immaterial to this Comprehensive Plan.

Through 1980 the population of South Bristol changed roughly as did the population of Lincoln County. (See table 5.1.) Since 1980 population growth in the Town has been slower than in the county. It is notable that the rate of population growth in Lincoln County from 1980 to 2000 had significantly exceeded that of the State.

It should be noted that analysis of the 2000 census (SF 1) for all census blocks on Rutherford Island found some of the counts to be questionable. The official count shows 204 people living on the island on April 1, 2000. Careful review of all of the residences in three of the census blocks on the island found that the majority of those residences were used seasonally and likely unoccupied on April 1, 2000. We estimate that the actual number of people living on the island then was at the most between 100 and 120.

Whether the apparent over-count was due to the enumeration not being completed until early

summer or to a tabulation error we have no way of knowing. But since year-round population on Rutherford Island has remained relatively stable in recent years it will be interesting to learn the results of the 2010 census.

This anomaly points out the large effect on percentages that a minor change in the numbers can cause when the total population in question is relatively small. We accept 897 as the correct population of South Bristol.

Large population increases occurred in the 1970 to 1980 decade in the Town, county, and State. The exact reason for this is unknown to the committee. It would seem to be connected to the latter part of the post WW II migration away from cities and to the economic boom which followed World War II. At that time Maine still had a vibrant manufacturing economy.

Table 5.2 compares population growth in South Bristol since 1960 with other towns in the region, Lincoln County, and the State. Eleven of the 19 municipalities in Lincoln County are included; inland towns such as Whitefield (close to Augusta), Jefferson, Somerville, and others are sufficiently different from South Bristol that few if any comparisons would be meaningful.

Except for two small population decreases in Boothbay Harbor, the towns, county, and State all

Table 5.2 – Comparative population changes, 1960 - 2000

Municipality	1960	1970	1980	1990	Change 1980-'90	2000	Change '90-2000
Boothbay	1,617	1,814	2308	2,648	14.7%	2,960	11.8%
Boothbay Harbor	2,252	2,320	2,207	2,347	6.3%	2,334	- 0.6%
Bremen	438	454	598	674	12.7%	782	16.0%
Bristol	1,441	1,721	2,095	2,326	11.0%	2,644	13.7%
Damariscotta	1,093	1,264	1,493	1,811	21.3%	2,041	12.7%
Edgecomb	453	549	841	993	18.1%	1,090	9.8%
Newcastle	1,101	1,076	1,227	1,538	25.3%	1,748	13.6%
Nobleboro	679	850	1,154	1,455	26.1%	1,626	11.7%
South Bristol	610	664	800	825	3.1%	897	8.7%
Southport	416	473	598	645	7.9%	684	6.0%
Westport Island	133	228	420	663	57.9%	745	12.4%
Lincoln County	18,497	20,537	25,691	30,357	18.2%	33,616	10.7%
State of Maine	961,296	980,910	1,124,660	1,227,928	9.2%	1,274,923	3.8%

Source: U.S. Census

Table 5.3 – Natural and migration South Bristol population changes, 1970 - 2005

	1970 - 1980		1980 - 1990		1990 - 2000		2000-2005	
	Count	Effect	Count	Effect	Count	Effect	Count	Effect
Beginning census	664	---	800	---	825	---	897	---
+ Births	65	9.8%	85	10.6%	68	8.2%	33	3.7%
- Deaths	110	- 16.6%	89	- 11.1%	108	-13.1%	55	- 6.1%
= Natural change	- 45	- 6.8%	- 4	- 0.5%	- 40	- 4.8%	- 22	- 2.5%
+ In migration	181	27.3%	29	3.6%	112	13.6%	7	0.8%
= Ending census	800	---	825	---	897	---	882	---

Sources: U.S. Census, Maine SPO, and Town Reports.

Notes: Effect is the percent change of the number to the immediate left on the beginning census count above. Percentages are rounded to the nearest 0.1%. Natural change is the net of births and deaths. 2005 population of 882 is the Census estimate.

experienced continuous, if erratic, population growth since 1960. It is worth noting that the decade of the 1970s saw considerable growth almost everywhere. The baby boomers were themselves beginning to raise families and anecdotal evidence indicates that Maine with a 14.7% population increase was experiencing considerable in-migration, part of that likely being connected to the back-to-the-land movement.

Boothbay Harbor is the only town included in table 5.2 which has had little land available for new construction, and as such has been unique in Lincoln County. Other towns have a considerable amount of space available for the construction of

new residences, both year-round and seasonal. Inland (north of US Route 1) there are still many working farms, although their numbers are decreasing as is noted in chapter 9.

Table 5.3 illustrates that since 1970 the population of South Bristol has been reduced by natural changes (births minus deaths) and increased by in-migration. In-migration has slowly changed the age distribution of South Bristol’s population towards an older population which is illustrated in table 5.5 below. Simply stated, there are now fewer young families than in earlier decades, although that trend and the number of children in the school appears to have

Table 5.4 – Nativity of populations, 2000

	Within Maine	Other US State	Outside US
South Bristol	52.8%	43.9%	3.3%
Lincoln County	61.7%	35.5%	2.7%
Maine	67.3%	28.9%	3.8%

Source: Census (SF 3) [DP2]

stabilized.

Table 5.4 provides some insight regarding

migration. In 2000 only slightly over half of the population of South Bristol was born in Maine.

Although not as pronounced, in Lincoln County over a third of the population was born outside of Maine. This clearly indicates that other parts of Lincoln County share and benefit from the changes brought about by people moving in from outside of Maine.

Table 5.5 – Recent population trends by age

Age Range	Population 1990			Population 2000			Ten year change		
	South Bristol	Lincoln County	Maine	South Bristol	Lincoln County	Maine	South Bristol	Lincoln County	Maine
Under 5	41	2,012	85,722	29	1,621	70,726	- 29.3%	- 19.4%	- 17.5%
5 to 14	100	4,309	173,085	83	4,534	175,274	- 17.0%	5.2%	1.3%
15 to 24	67	3,387	173,967	79	3,314	159,141	17.9%	- 2.2%	- 8.5%
25 to 34	97	4,269	205,235	63	3,403	157,617	- 35.1%	- 20.3%	- 23.2%
35 to 44	122	4,937	193,345	106	5,206	212,980	- 13.1%	5.4%	10.2%
45 to 54	97	3,323	124,751	154	5,397	192,596	58.8%	62.4%	54.4%
55 to 64	103	3,096	108,450	159	4,034	123,187	54.4%	30.3%	13.6%
65 to 74	102	2,804	91,600	118	3,221	96,196	15.7%	14.9%	5.0%
75 to 84	77	1,660	53,547	77	2,067	63,890	0.0%	24.5%	19.3%
Over 84	19	560	18,226	29	819	23,316	52.6%	46.3%	27.9%
Totals	825	30,357	1,227,928	897	33,616	1,274,923	8.7%	10.7%	3.8%

Source: U.S. Census (STF1 and SF 1)

Table 5.5 illustrates the shift in the age of the people who make up the Town of South Bristol, Lincoln County, and Maine. Comparing the percentages in the “Ten year change” columns, there is no clear difference between population changes in South Bristol and Lincoln County. The county by 2000 had the oldest population in Maine and South Bristol had the oldest in the county.

In South Bristol, the county, and Maine the population had become older in a decade. The change in the 25 to 34 age group shows the out-migration of young people. That is a matter for consideration beyond the scope of this

Comprehensive Plan; yet the loss of people in this age group may have undesirable sociological consequences in future years, especially if people upon reaching the 25 to 34 year old group continue to move away.

The populations of South Bristol and Lincoln County are becoming older more rapidly than Maine as a whole. At the same time that the populations in the Town and county are becoming proportionally older, the total populations are increasing at a much greater rate than is the population of Maine.

Table 5.6 – Historical South Bristol school enrollment

School year — >	1974-75	1977-78	1980-81	1983-84	1986-87	1989-90	1992-93	1995-96	1998-99	2001-02	2004-05	2007-08
Grades K-8	105	102	76	80	66	87	66	63	74	74	79	75
Grades 9-12	51	66	67	40	40	31	35	44	38	39	32.5	36.5
Totals	156	168	143	120	106	118	101	107	112	113	111.5	111.5

Sources: School Union #74 and South Bristol Annual Town Reports.

Notes: Enrollment figures are for October 1 of the school year except for 1974-1975 where the only data available are for February 1975. Home schooling is not included.

Changes in school population provide further insight into South Bristol's demographic changes. Table 5.6 shows the gradual decline of school age children. This also reflects a decline of young families and possibly a decline in family size.

During the years from 1990 to 2005 South Bristol children being home-schooled have varied from none to three each year, the most common counts being one and two. They are not included in table 5.6.

The reduction in the school population which occurred during the 1970s further illustrates the change in the age composition of the people of South Bristol. Since the mid 1980s school enrollment has been relatively stable while the school age population has become a smaller percentage of the total town population. This change is addressed again in chapter 17.

5.3 – Current Population

Table 5.7 – Age distribution comparisons, 2000

Area	Age ranges (years)							Totals	Median age 1980; 1990; 2000
	0-4	5-19	20-24	25-44	45-64	65-84	85 +		
South Bristol	29 3.2%	139 15.4%	23 2.6%	169 18.8%	313 34.9%	195 21.8%	29 3.2%	897	39.4; 43.9; 51.5
Lincoln County	1,621 4.8%	6,665 19.8%	1,183 3.5%	8,609 25.6%	9,431 28.1%	5,288 15.7%	819 2.4%	33,616	33.8; 37.4; 42.6
Maine	70,726 5.5%	264,759 20.7%	69,656 5.5%	370,597 29.1%	315,783 24.8%	160,086 12.5%	23,316 1.8%	1,274,923	30.4; 33.9; 38.6

Source: U.S. Census (SF 1) [QT-P1]

Notes: The percentages are the percent of total population represented by the population count immediately above.

Since the age makeup of South Bristol's people has changed towards an older population during the past decade or two, it is worthwhile to examine closely the current makeup of the Town. This gives us a picture of who we are as a Town and provides information on the population to be

served and provided for now and in the near future. That the age of our people has changed cannot be denied and there is no reason to believe that the trend will reverse during the next few years.

Table 5.7 shows how the populations of South

Bristol, Lincoln County, and Maine are distributed by various age brackets. The percentages are the important numbers. Note carefully that the age brackets cover differing numbers of years and so when reading horizontally the percentages should not be compared. (That is, for South Bristol do not compare the 2.6% for ages 20-24 which covers five years with the 18.8% for ages 25-44 which covers 20 years.)

Considering the numbers in table 5.7, it will be noted that there are two age ranges where the population distribution veers from a relatively straight line of more and more people in *each year of age*. Were the people in the age range of 20 to 24 evenly distributed there would be 4.6 people of each of the ages. This is compared to 9.9 people in each year of the 5 to 19 group and 8.5 people in each year of the 25 to 44 year group. It might be that many of the young people in the 20 to 24 age group are away at college or serving in the military.

More significant is the bump in the opposite direction seen in the 45 to 64 year age group. In that group there are 15.7 people for each year compared to 8.5 people for the next younger group and 9.8 people for each year of the following group. That this age group, people at the peak of their careers and probably the peak of their earnings, comprises the largest block of South Bristol’s population says much about the Town and its people.

To some degree the first of these two anomalies hold true for Lincoln County and the State of Maine. The second is slightly true for Lincoln County. Table 5.8 below should be consulted for another picture of these relationships on a broad geographic scale.

The age brackets in table 5.7 are chosen since each covers a significant part of a person’s life –

pre-school, public school, post secondary school and college, etc. Instead, look at the percentages in each column to learn how the Town, county, and State compare. There, for example, you will note that the Town has fewer children than the county and the county fewer than the State as percentages of their populations. This relationship

Table 5.8 – Age group profiles, 2000

Age group (years)	South Bristol	Lincoln County	Maine	New England	Nation
Under 25	21.3%	28.2%	31.8%	32.8%	35.3%
25 – 44	18.8%	25.6%	29.1%	30.6%	30.2%
45 – 64	34.9%	28.1%	24.8%	23.0%	22.0%
Over 64	25.0%	18.2%	14.4%	13.6%	12.4%

Source: U.S. Census (SF 1)

holds through the 25 to 44 age group. From age 45 up exactly the opposite holds true for all three geographic regions.

Again, the people of South Bristol are older than those in the county and State. Note the median ages in the rightmost column in table 5.7 which bear this out.

Table 5.8 provides population profiles for geographic areas beyond South Bristol. The upper two rows clearly illustrate that the population of the nation is younger than that of New England, New England is younger than Maine, and so on back to South Bristol. In the same manner, the two lower rows illustrate the opposite.

We calculated the percentages for the Northeast Region of the country (New England plus New Jersey, New York, and Pennsylvania) and found that they are nearly identical to those for New England.

These data are an example of where regional considerations for planning purposes must extend far beyond neighboring towns and beyond the county. Local knowledge, although admittedly anecdotal, is that in-migration to South Bristol is primarily from the Northeast while out-migration of young people is to a much wider area of the United States.

Table 5.9 – Age distributions – town, county, and state

Age range (years)	South Bristol				Lincoln County 2000		Maine 2000	
	1990		2000		Count	Percent	Count	Percent
	Count	Percent	Count	Percent				
0 to 5	41	5.0%	29	3.2%	1,621	4.8%	70,726	5.5%
5 to 9	58	7.0%	39	4.3%	2,083	6.2%	83,022	6.5%
10 to 14	42	5.1%	44	4.9%	2,451	7.3%	92,252	7.2%
15 to 19	37	4.5%	56	6.2%	2,131	6.3%	89,485	7.0%
20 to 24	30	3.6%	23	2.6%	1,183	3.5%	69,656	5.5%
25 to 29	44	5.3%	25	2.8%	1,533	4.6%	71,951	5.6%
30 to 34	53	6.4%	38	4.2%	1,870	5.6%	85,666	6.7%
35 to 39	54	6.5%	44	4.9%	2,436	7.2%	104,149	8.2%
40 to 44	68	8.2%	62	6.9%	2,770	8.2%	108,831	8.5%
45 to 49	49	5.9%	64	7.1%	2,780	8.3%	101,921	8.0%
50 to 54	48	5.8%	90	10.0%	2,617	7.8%	90,675	7.1%
55 to 59	46	5.6%	82	9.1%	2,310	6.9%	68,490	5.4%
60 to 64	57	6.9%	77	8.6%	1,724	5.1%	54,697	4.3%
65 to 69	44	5.3%	68	7.6%	1,708	5.1%	50,100	3.9%
70 to 74	58	7.0%	50	5.6%	1,513	4.5%	46,096	3.6%
75 to 79	47	5.7%	46	5.1%	1,243	3.7%	38,098	3.0%
80 to 84	30	3.6%	31	3.5%	824	2.5%	25,792	2.0%
85 & over	19	2.3%	29	3.2%	819	2.4%	23,316	1.8%
Totals	825		897		33,616		1,274,923	
Median age	43.9		51.5		42.6		38.6	

Source: U.S. Census (STF 1 & SF 1)

Note: The percent figures are the percentage of the total population represented by the count to the immediate left, e.g. for 0 to 5 years for South Bristol in 1990, 41 is 5.0% of 825.

Table 5.9 provides a different insight into South Bristol's population. Except for the 85 years and older age group, each of the rows in the table represents a five year age group. The percentages in a column can be compared with each other in order to recognize the age distributions of the people in each geographic area.

Glancing down the year-2000 columns for South Bristol one can see that the older age ranges, particularly from age 50 up, represented a significantly larger proportion of the population than ten years earlier in 1990.

Comparing the percentages for the three year-2000 columns, it is again obvious that the Town has an older population than both the county and

State.

South Bristol's population in 2000 was almost evenly distributed between males and females. That year there were 445 males and 452 females comprising respectively 49.6% and 50.4% of the total population of 897. The only age group where there was a notable and not surprising difference was in the 75 years and older group where women outnumbered men 58 to 48.

Since the age distributions show mostly recent changes it becomes a challenge to predict what will happen in the future. There is no evidence that the transition to an older population, at least in South Bristol and Lincoln County, will not continue. For planning purposes we project that the trend, even if slowed, will continue.

One possible scenario would be fewer young families, thus fewer children in the schools and fewer younger people working their way up in the working world. Coupled with this might be an influx of retired people who would place greater demands on available services which those past their working years might expect or need.

Another possible scenario is that of the younger population, those in their early career years and those raising families, remaining stable. That would likely hold the population of school age children fairly stable. Along with that, South Bristol would have all of the benefits of ambitious younger people adding life to the Town and its economy. Along with this we would expect to see a continued increase in the number of people deciding to make South Bristol their home in their later working years and in retirement.

A third possibility – one which would be undesirable – would be for the younger generation and school population to decline in numbers while the population of a more advanced age continues to grow. This would be contradictory to the often expressed desire, both in the mail survey and visioning meetings, to keep the Town “the way it is.”

The first scenario would result in many changes in the character of the Town. The second would continue gradually the changes which have occurred over the last 10 or 20 years. The third is unlikely.

We expect that the second scenario is South Bristol’s most likely future when considering changes over the past few years. It anticipates a gradual continuation from the prior two decades.

5.4 — Future Population

Table 5.10 – Official population estimates and projections, 1990 - 2030

	U.S. Census estimates				Maine SPO projections				
	1990	1995	2000	2005	2010	2015	2020	2025	2030
South Bristol	828	940	897	882	873	859	841	812	772
	—	13.5%	- 4.6%	- 1.7%	- 1.0%	- 1.6%	- 2.1%	- 3.4%	- 4.9%
Lincoln County	30,450	31,326	33,706	35,238	36,683	38,311	39,793	41,438	42,556
	—	2.9%	7.6%	4.5%	4.1%	4.4%	3.9%	4.1%	2.7%
Maine	1,231,051	1,237,202	1,277,293	1,321,501	1,362,938	1,401,553	1,433,404	1,454,813	1,470,869
	—	0.5%	3.2%	3.5%	3.1%	2.8%	2.3%	1.4%	1.1%

Sources: U.S. Census and Maine SPO

Notes: Population estimates and projections are for July 1 of that year. Percentages are of five year changes.

The U.S. Census Bureau and various State agencies (SPO, DHS, etc.) provide forecasts of population growth. Although all of the forecasts use proper statistical methods, the results often differ. The differences are usually attributable to the use of different bases and methodologies. For example, the U.S. Census Bureau uses a methodology which is based on building permits issued. Since South Bristol and several other towns in Lincoln County issue permits only for building in the shoreland zone, the Census Bureau

imputes the number of new residential buildings based on what is happening in the county. Since roughly half of the housing in South Bristol is seasonal, and much new construction is in the shoreland zone and seasonal, any forecast based on permits is, at best, a guess.

The Committee is reluctant to place much credence in predictions of future year-round population growth based on such methods. We present forecasts based on both the official work

Table 5.11 – Committee projected South Bristol population changes

Historical actual census population counts and annual change rates								
1920	1930	1940	1950	1960	1970	1980	1990	2000
581	563	582	631	610	664	800	825	897
	- 0.31%	0.34%	0.84%	- 0.33%	0.89%	2.05%	0.31%	0.87%
Projected population counts and annual change rates								
2005	2010	2015	2020	2025	2030	2035	2040	
873	894	915	936	957	978	999	1020	
- 0.54%	0.48%	0.47%	0.46%	0.45%	0.44%	0.43%	0.42%	

Sources: Actual Counts are from U.S. Census. Projections are from South Bristol Comprehensive Planning Committee.

Note: All populations are for April 1 of the referenced year. The percentages are **annualized population change rates** for the ten or five years then ending.

of the U.S. Census Bureau and State agencies and also our population-based forecast created using population-based regression analysis.

Table 5.10 presents the official forecast for population changes to 2030. It predicts that South Bristol’s population will decrease at an increasing rate while both Lincoln County and the State will continue to grow, although at decreasing rates.

The lure of a small town, coastal setting has drawn people to South Bristol for both a place to live while part of the working world and as a place to enjoy retirement. Some who have retired here are people who summered here for many years and over those years became an integrated and welcomed part of the community.

It is the opinion of the Comprehensive Planning Committee that this growth trend will continue for the foreseeable future.

Table 5.11 presents the population forecast for South Bristol prepared by the Comprehensive Planning Committee. It is based on historical official decennial census population counts since the Town was set off from Bristol in 1915. It uses linear regression analysis (least squares) to determine the trend of the population change rate. Although there have been some population “bumps” over the years, the resulting line fits reasonably well the population history.

Any forecast is just that – a projection based

on intelligent assumptions and sound reasoning. When looking more than ten or fifteen years forward it becomes more of an educated guess since it is difficult or impossible to predict all influencing factors.

Our forecast differs from the U.S. Census Bureau and SPO forecast in table 5.10 as it is based on historical population counts rather than on building permits issued. The methodology used by U.S. Census and SPO in preparing their forecasts of population change in towns which do not use building permits is available at http://www.census.gov/popest/archives/methodology/90s_su_meth.txt. In essence, population change for non-building-permit-issuing towns is estimated using building permits issued in other parts of the county. South Bristol, along with many other Lincoln County towns, does not issue building permits except in the shoreland zone.

The Committee believes that the Census Bureau methodology is inappropriate for South Bristol and that the resulting forecast of declining population in table 5.10 is incorrect for four reasons. First, there is no sign of decreasing population in Town. Second, some people who have been seasonal residents are making the Town their permanent home in retirement. Third, South Bristol is a desirable place to live for many reasons and there is presently adequate land available for development. Fourth, the number of

younger families with children in school has stabilized after declining until the 1980s.

Maine taxes have a negative influence on the number of retired people choosing to make South Bristol their permanent home. There are several families who have year-round homes in Town, yet are careful to not spend 180 days a year here which would have them considered Maine residents under State law and thus subject to Maine resident income tax on *all* of their income. In addition their estates would be ultimately subject to Maine’s high inheritance taxes. These

people instead maintain their legal residence in a state with no personal income tax or a tax rate much lower than Maine’s, and a less onerous inheritance tax rate.

The most common state where these people maintain their legal residence is Florida which has no personal income tax. Were Maine to lower its tax rates, this might well result in a significant short term and permanent increase in our population. Many people have said bluntly that Maine taxes are what keeps them from becoming year-round residents.

5.5 — Seasonal Population

Table 5.12 – Seasonal population estimate

Persons per housing unit	Total occupancy of the 502 seasonal housing units		
	If 100% occupied	If 90% occupied	If 80% occupied
1	502	452	402
2	1004	904	803
2.5	1255	1130	1004
3	1506	1355	1205
3.5	1757	1581	1406
4	2008	1807	1606

Sources: Census (SF 1) and Comprehensive Planning Committee

There are no direct measures of South Bristol’s seasonal population available. The Comprehensive Planning Committee knows of no way to directly measure that population, but it can be estimated.

It has often been stated anecdotally that in the summer the population of the Town climbs to about 2,500. Considering the census count on April 1, 2000 of 897 year-round residents, that would indicate about 1600 seasonal residents at the peak of the summer season – late July and early August.

The 2000 census of population and housing shows that there were 502 housing units in Town used seasonally (vacation homes). This is the beginning and end of hard data!

The committee has inquired of real estate agents, members of the summer community, and others in an attempt to acquire parameters which would allow a reasonably accurate estimate of South Bristol’s peak summer population.

It is estimated that 85% to 90% of the seasonal housing units are occupied at any one time in July and August, the “peak season”. Occupancy of any unit can vary from one or two people to six or more. The best estimate is that an average is three or four people. Six or eight is not unusual.

Table 5.12 was constructed starting with the census count of 502 seasonal or vacation housing units. We then calculated the number of people who would occupy the residences at three different occupancy rates and various average numbers of people in each. Thus, if 90% of the units were occupied by an average of two people each there would be 904 summer residents. If 80% were occupied by an average of 3.5 people we would have a peak seasonal additional population of 1406.

Assuming 80% to 90% occupancy at peak and three to four persons per housing unit, the seasonal population count would be in the range described by the six lower right cells of table 5.12. The Committee believes this is reasonable.

Based on this analysis, the peak summer population (year-round and seasonal) is in the range of 2,300 to 2,500 people including about 1,400 to 1,600 seasonal residents.

Such a seasonal increase in population can put an additional load on public services. The most notable is on the solid waste transfer station. Since the transfer station is a joint operation of South Bristol and Bristol and no differentiation is made between waste from the two towns South

Bristol's added load is unknown. Both towns have sizeable seasonal populations. Emergency medical service, fire service, and law enforcement calls increase somewhat, but not to the point that the services are strained. Seasonal residents are generous in their financial support of South Bristol's fire and EMS services.

The South Bristol Elementary School benefits from the influx of seasonal residents. The school collects returnable bottles and cans. During the summer their volume surges due to the generosity of the seasonal residents taking their returnables to the two collection points. The proceeds go towards paying for the eighth grade spring trip, usually to Washington, D.C.

5.6 – Current Demographics

Table 5.13 – Populations 3 years and over enrolled in school, 2000

Grade level	South Bristol		Lincoln County	Maine	New England	Nation
	Count	Percent				
Nursery & preschool	21	13.8%	5.3%	5.5%	6.8%	6.5%
Kindergarten	7	4.6%	5.5%	4.8%	5.1%	5.4%
Grades 1-8	60	39.5%	49.8%	45.5%	42.5%	43.9%
Grades 9-12	52	34.2%	26.3%	23.2%	20.5%	21.4%
College or graduate school	12	7.9%	13.0%	20.9%	25.2%	22.8%

Source: U.S. Census (SF 3)

Having traced a changing population by counting people we still do not have a complete picture of the citizens of South Bristol as things now stand. Examining some current demographics will provide an understanding of who we are in the first decade of the 21st century.

First we will examine education and employment.

In 2000 there were 152 people, 17% of the Town's total population of 897, enrolled in school. Table 5.13 covers everyone three years old and older enrolled in school. There is no upper age limit for this category. Note carefully

that the percentages are of those in school. For example, of the 152 people living in South Bristol and enrolled in school, the 52 in secondary school comprise 34.2% of those 152 students.

It is unclear from the data sources whether full- and part-time students or only full-time students are included in the college figures. We deem this to be unimportant for our analysis.

Except for the "Nursery & preschool" and college grade levels, there are little differences across the various geographic areas cited. That South Bristol has a larger percentage of children in nursery and preschool is interesting and

indicates either a bump in the number of children of that age group in 2000 or a disposition of local parents to start the formal education of their children as early as possible. The low percentages of South Bristol and Lincoln County people in college relative to the wider areas is likely explained by the way that college students are counted for census purposes.³

As we did in table 5.8 earlier, we include data beyond the State of Maine. The data for New England and the Northeast Region (New England, New York, New Jersey, and Pennsylvania) were virtually identical except for college enrollment. For the Northeast Region 23.9% of the students were in college compared to the 25.9% for New England. This is likely attributable to the concentration of highly regarded schools in all six of the New England states, both excellent liberal arts colleges – Maine has three: Bates, Bowdoin, and Colby – and world-renowned universities.

We compared the official census numbers (shown in table 5.13) for South Bristol school enrollments on April 1, 2000 with those reported by the Superintendent of Schools for the same date. The superintendent's report shows 7 kindergarten students, 56 South Bristol children plus four tuitioned from other towns in grades 1 to 8, and 39 from South Bristol in grades 9 to 12.

Data from the Superintendent of Schools indicate that school enrollments in both elementary and secondary grades have been relatively stable in recent years.

The kindergarten counts from both sources are identical. The counts for grades 1 to 8 are reasonably close. It is possible that the difference

of four students in grades 1 to 8 could be attributed to students being home-schooled.

The significant secondary (grades 9 to 12) difference of 13 students has no apparent explanation. Regardless of where students are attending secondary school, be it locally or away at a boarding school such as Choate or Philips Exeter, for census purposes the students are counted at the residences of their parents.

Part of the difference may result from the differences in how students are counted by Census and the School Board. Census does not differentiate between full- and part-time high school students. The school system counts part-time students as half a student equivalent .

It is possible that since the census count of students in school comes from the 50.8% of the households in Town which filled out the long census form and which the Census Bureau statistically extended to infer the entire population of South Bristol that we have a statistical anomaly. We doubt this.

Table 5.14 on the next page examines how far the population 25 and older went in school. Note that the population totals are only for those over the age of 24. Each person over 24 is counted once; for example in the case of South Bristol there were 704 people 25 and older and 72 of them, 10.2% of 704, held masters degrees as their *highest* educational attainment.

It is obvious that South Bristol has a well educated population. Over a third of the 704 people over 24 hold a bachelor's degree or higher. From bachelor's degrees and higher, the Town exceeds both the county and State percentages. This is likely due in part to the fact that the Town has a fair number of retired professional and management people in its citizenry, thus skewing the numbers a bit.

3. According to the U.S. Census Bureau, college students are counted for the census where they are actually living, such as in a dormitory, an apartment, or at home, on April 1 of the census year. (The same is true of active duty military personnel.) For example, a student from Kansas living in a dormitory at the Darling Marine Center would be counted as a South Bristol resident.

Table 5.14 – Highest educational attainments of populations 25 years and older, 2000

Attainment	South Bristol		Lincoln County	Maine	New England	North-east US	Nation
	Count	Percent					
Less than high school	51	7.2%	12.1%	14.6%	15.6%	18.4%	19.6%
High school graduate	216	30.7%	35.1%	36.2%	28.9%	30.7%	28.6%
Some college, no degree	134	19.0%	19.6%	19.0%	17.7%	16.9%	21.0%
Associate degree	53	7.5%	6.6%	7.3%	7.2%	6.6%	6.3%
Bachelor's degree	144	20.5%	16.9%	14.9%	18.4%	16.4%	15.5%
Master's degree	72	10.2%	6.8%	5.4%	8.5%	7.4%	5.9%
Professional school degree	15	2.1%	2.0%	1.7%	2.4%	2.4%	2.0%
Doctorate	19	2.7%	1.0%	0.8%	1.4%	1.1%	1.0%

Source: U.S. Census 2000 (SF 3)

Table 5.15 – Education achievements of populations 25 years and older, 2000

Achievement	South Bristol		Lincoln County	Maine	New England	North-east US	Nation
	Count	Percent					
At least high school diploma	653	92.8%	87.9%	85.4%	84.5%	81.6%	80.4%
At least bachelor's degree	250	35.5%	26.6%	22.9%	30.7%	27.5%	24.4%
At least master's degree	72	10.2%	6.8%	5.4%	8.5%	7.4%	5.9%
Ph.D., M.D., J.D., etc.	34	4.8%	3.0%	2.6%	3.8%	3.6%	2.9%

Source: Census (SF 3)

Statistics for areas beyond Maine are shown as they allow local conditions to be compared to wider geographic areas. We include both New England and the northeastern United States in order to point out that New England has a better educated population than New England plus New Jersey, New York, and Pennsylvania. These figures provide insight into how the local area compares to the wider areas since many Maine people consider much of the State to be local.

Table 5.15 presents education data in a different form. Here we show the percentages of the population which has achieved or gone beyond each level. Stated another way, everyone with a bachelor's degree is assumed to have a high school diploma and is included in the high school numbers. Likewise, everyone with a Ph.D. is assumed to have a high school diploma, a bachelor's, and a master's and so is included in each of those achievement levels. Although some professional degrees have been in the past considered to be master's degrees – a J.D. is an

example – we have included them with historical doctorates such as Ph.D., M.D., D.D., and Sc.D. since differentiation using census data is apparently not possible.

Careful reading of these data and comparing the percentages make it clear that the educational achievements of South Bristol citizens exceed those in all of the other areas shown, often by a wide margin. The fact that 92.8% of South Bristol people over 24 have high school diplomas is significant. That 106 hold advanced degrees says much about the people who have chosen South Bristol for their home.

In the next table we show that a smaller part of South Bristol's population is active in the civilian labor force than for the county or the State.

Table 5.16 on the next page shows who is in the labor force and who is not. The armed forces portion shows the statistically insignificant presence of the United States military in the State.

Table 5.16 – Employment status of populations 16 years and over, 2000

Employment Status	South Bristol	Lincoln County	Maine
In Armed Forces	0.0%	0.2%	0.4%
In civilian labor force	55.2%	62.8%	64.8%
Not in labor force	44.8%	37.0%	34.7%

Source: U.S. Census (SF 3)

Note: Percentages may not add to 100 due to rounding.

Since the 1960s there has been a significant reduction of military bases in the State, particularly the closing of Dow Air Force Base in Bangor in 1968 and Loring Air Force Base in Limestone in 1994. The Navy has closed some small activities, particularly in Hancock and Washington counties, although the Very Low Frequency Communication Station in Cutler (for submarines operating in the North Atlantic) is still in operation, since October 2000 being operated by a civilian contractor providing local employment in Washington County.

Upcoming in 2011 is the closure of Naval Air Station Brunswick which is likely to have effects well beyond the Brunswick area since economies, particularly housing and retail, are linked over wide regional areas.

It is significant that only somewhat over half of those 16 years old and older in South Bristol are in the civilian labor force. A larger percentage of Lincoln County’s population is in that labor force and an even larger percentage of the State’s.

Table 5.17 shows in summary form how South Bristol people in the labor force are employed. More detailed information is presented in appendix F, although unfortunately fishing is not broken out from farming and forestry.

The table shows that 419 people 16 and older in South Bristol were in the civilian labor force in 2000. These people comprised 46.7% of the total population.

As might be expected, fishing ranks high compared to the county and State; however fishing and allied occupations comprise less than 11 percent of our workforce. Other than that, the occupations of the people of South Bristol are not very different from the county and the entire State.

The reader should be careful to not interpret these statistics as describing employment or businesses in South Bristol since many local people work out of Town, some as far away as Portland. Conversely, many workers employed in South Bristol live elsewhere and so are not included in South Bristol census counts.

As shown above in table 5.16, there was no one living in Town in the active military. According to the 2000 census there were 176 veterans (U.S. Census, SF 3) living in South Bristol which was 23.5% of the 748 people 18 and older. This compares with 18.4% for Lincoln County and 15.9% for Maine.

Table 5.17 – Occupations of employed civilian populations 16 years and older, 2000

Occupation	South Bristol		Lincoln County	Maine
	Count	Percent		
Management, professional, etc	142	33.9%	31.7%	31.5%
Service occupations	49	11.7%	15.4%	15.3%
Sales and office	87	20.8%	21.7%	25.9%
Farming, fishing, and forestry	45	10.7%	5.1%	1.7%
Construction and maintenance	51	12.2%	12.8%	10.3%
Production, transportation, etc.	45	10.7%	13.2%	15.3%
Totals	419	100%	100%	100%

Source: U.S. Census (SF 3) [P 50]

5.7 — Households

Table 5.18 – Occupied housing units (households), 1990 - 2000

	Owner occupied			Renter occupied			All households		
	1990	2000	Chg	1990	2000	Chg	1990	2000	Chg
South Bristol	299	357	19.4%	55	53	- 0.4%	354	410	15.8%
Lincoln County	9,955	11,755	18.1%	2,013	2,403	19.2%	11,968	14,158	18.3%
Maine	327,888	370,905	13.1%	137,424	147,295	7.2%	465,312	518,200	11.4%

Source: Census (STF 1 & SF 1)

A household includes all people living in a housing unit – a detached “single family” house, an apartment, etc. – as their usual place of residence. The number of households is increasing as is the population.

Along with population growth during the 1990 to 2000 decade the number of households has grown. The rate (percentage) of household growth has exceeded the rate of population growth. This is a significant demographic change, illustrating that family sizes and number of household members are steadily decreasing. The consequence is that if this trend continues, and there is no evidence that it will not, housing units required in the future will have to increase at a faster rate than the population. We address this in chapter 13 (Housing) and chapter 19 (Future Land Use).

The number of households in South Bristol grew at about the same rate as in Lincoln County during the decade of the 1990s. It is notable that in South Bristol, the number of households residing in rented quarters remained about constant. Whether this reflects the nature of the market for rental housing in Town or the lack of rentals is unknown. In any event, in 2000 13% of the households in South Bristol were living in rented units.

Although the rate (percentage) of decrease of average household size in South Bristol during the 1990 to 2000

decade was less than in the county or State, it should be noted that in 1990 the average number of people in a South Bristol household was already less than it would become ten years later in Lincoln County and Maine. It is also worth noting that there are no retirement communities in Town where the size of the household is often one or two.

The nature of population and housing changes in South Bristol are shown in table 5.19. Simply stated, while population is growing household sizes are declining. Specifically, household sizes are declining relative to population.

The consequence of this is that if population increases at the rate predicted in table 5.11 on page 59, housing construction will have to accelerate at an even greater rate in order to accommodate the population increase. This is probably not a problem in itself, but it makes it clear that South Bristol should have clear

Table 5.19 – Populations, households, and sizes compared

		1990	2000	10 yr chg
South Bristol	Population	825	897	8.7%
	Households	354	410	15.8%
	H’hold size	2.33	2.19	- 6.0%
Lincoln County	Population	30,357	33,616	10.7%
	Households	11,968	14,158	18.3%
	H’hold size	2.54	2.37	- 6.7%
Maine	Population	1,227,928	1,247,923	1.6%
	Households	465,312	518,200	11.4%
	H’hold size	2.64	2.37	- 10.2%

Sources: Census (STF 1 & SF1)

guidelines for future housing growth and growth locations in order to maintain the character of the Town.

Table 5.11 forecasts population growth at just under half a percent a year. With 410 year-round housing units in 2000 as shown in table 5.18, this

predicts of the need for construction of about 17 to 20 year-round housing units each decade, given the slow growth of population which we forecast and the declining average household size. Chapter 13 on housing and chapter 19 on future land use further address this matter.

Table 5.20 – South Bristol household types, 2000

	Householder 15 to 64 years		Householder 65 and older		All householders	
	Count	Percent	Count	Percent	Count	Percent
Total households	282	100%	148	100%	410	100%
Family households	187	71.4%	91	61.5%	278	67.8%
Married-couple family	165	63.0%	81	54.7%	246	60.0%
With own children under 18	65	24.8%	0	0.0%	65	15.9%
No own children under 18	100	38.2%	81	54.7%	181	44.1%
Other family	22	8.4%	10	6.8%	32	7.8%
With own children under 18	19	7.3%	0	0.0%	19	4.6%
No own children under 18	3	1.1%	10	6.8%	13	3.2%
Non-family households	75	28.6%	57	38.5%	132	32.2%
Householder living alone	51	19.5%	53	35.8%	104	25.4%
Householder not living alone	24	9.2%	4	2.7%	28	6.8%

Source: Census (SF 1)

A picture of the households in South Bristol and their characteristics in 2000 is presented in table 5.20 above. The term householder is used by the U.S. Census Bureau to identify the person commonly referred to as head of the household. It is notable that over a third, 148 out of the 410 households in Town, were headed by someone 65 and older.

Table 5.21 – Comparison of households owning and renting

Household	South Bristol		Lincoln County	Maine	
	Count	Percent			
1 9 9 0	Owners	299	84.5%	83.2%	70.5%
	Renters	55	15.5%	16.8%	29.5%
	Total	354	100.0%	100.0%	100.0%
2 0 0 0	Owners	357	87.1%	83.0%	71.6%
	Renters	53	12.9%	17.0%	28.4%
	Total	410	100.0%	100.0%	100.0%

Sources: Census (STF 1 & SF 1)

The “other family” category is composed of families headed by a male with no wife present and by a female with no husband present. There were seven households headed by men (six with own children under 18 present) and 15 led by women (13 with own children under 18 present).

Comparison with household composition in 1990 is difficult. The Census Bureau changed the structure of the reports between 1990 and 2000. Having examined the data available for 1990, we do not feel that such a comparison would provide meaningful information.

In table 5.21 we compare those who own their domicile with those who rent. It is the percentages which should be considered. In Lincoln County there has been little change. In the State home ownership has gone up, despite what some might expect when considering the influx of refugees and immigrants into Maine. The changes percentage-wise have been slight.

5.8 — Household Income

Table 5.22 – Household income, 1999

Income range	South Bristol		Lincoln County	Maine
	Count	Pct		
Less than \$15,000	64	15.6%	15.1%	17.9%
\$15,000 to \$24,999	58	14.2%	15.3%	14.8%
\$25,000 to \$34,999	56	13.8%	14.8%	14.2%
\$35,000 to \$49,999	76	18.6%	20.5%	18.3%
\$50,000 to \$74,999	70	17.1%	18.3%	19.4%
\$75,999 to \$99,999	45	11.0%	8.2%	8.4%
\$100,000 to \$199,999	23	5.7%	6.5%	5.8%
\$200,000 and more	16	3.9%	1.4%	1.3%
Median household Income		\$38,636	\$38,686	\$37,240
Mean household Income		\$61,824	\$49,006	\$47,383

Source: Census (SF 3) [QT-P32]

An important demographic characteristic of any town is the income of its households. This provides a measure of how well the people are getting along.

In table 5.22 we present the distribution of household incomes in South Bristol with comparisons to Lincoln County and the State.

For South Bristol the counts are the number of households in each range out of the 408 households in South Bristol in 1999 as are likewise the percentages for Lincoln County and Maine. The South Bristol data were recorded from the 50.8% of the households in Town which were selected to fill out the long census form; then those data were statistically extended by Census to infer characteristics of the Town's entire population.

The data are, of course, for 1999 the year before the census was conducted. They reflect actual income for the year preceding the census rather than the expected income for the year of the census.

Except for the lowest and highest

income ranges, there is not a significant difference in incomes between South Bristol, Lincoln County, and the State of Maine. Exceptions are the \$75,000 to \$99,999 and over \$200,000 ranges where South Bristol is well ahead of both the county and State.

It would be useful, were data available, to know the composition of the income of households earning over \$200,000 a year. Although it is tempting to assume that much of this income is what is termed unearned income (not from current employment) we doubt this conclusion. Many people have moved to South Bristol while in their peak earning years.

The median (half of the households below and half above) and mean (average) income numbers in table 5.22 provide some insight. They show, particularly in the case of South Bristol, that mean income is weighted by high income households. The average house-hold income in South Bristol is well above the county and State. Yet except for a small number of the seasonal residences South Bristol does not have the look of a “wealthy town” when compared with some others.

Table 5.23 presents income data in a format which is useful when considering the affordability

Table 5.23 – Low and moderate income households, 1999

Income level	South Bristol		Lincoln County	Maine
	Count	Percent		
Very low Under \$20,000	106	25.9%	22.1%	25.1%
Low \$20,000 to \$30,000	35	8.6%	16.3%	14.8%
Moderate \$30,000 to \$60,000	142	34.8%	36.8%	34.9%
Market Over \$60,000	125	30.6%	24.9%	25.3%

Source: Census (SF 3) [QT-P32]

of housing. The income ranges are somewhat arbitrary but useful. They must be considered relative to local housing prices.

The most notable difference between South Bristol and the county and State is in the top range where South Bristol households exceed each of the wider areas by about 20%. It is interesting that South Bristol has such a small percentage of its population in the \$20,000 to \$30,000 range.

We have not determined household incomes separately for people who own their homes and

for those renting. We believe those data could be acquired by analyzing the complete Summary File 1 (SF 1) which is available for download from the Census Bureau.

Chapter 13 (Housing) further explores the ability of people to afford housing and policies which will be needed to address any perceived problems. It is important to recognize, in the light of real estate prices in Town, that 69.4% of the households in South Bristol had annual incomes in 1999 of under \$60,000.

Population and Demographics Policies and Strategies

The population and demographic data shall be maintained periodically in order to keep them current and those data shall be readily available from the Town.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Maintain demographic data	Update population and demographic data	Comprehensive Plan Advisory Committee See chapter 20 on page 282 regarding this committee. <hr/> \$1000 <hr/> 2012, after 2010 census data become available

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Chapter 6 — Natural Resources

*Those who contemplate the beauty of the earth find resources of strength
that will endure as long as life lasts.*

~ Rachel Louise Carson (1907-1964), *The Sense of Wonder*

South Bristol is a relatively small coastal town with an area of only 13 square miles that is mostly rural with an extensive forest cover, yet it contains a diversity of natural habitats and several are considered “Critical Natural Resources.” This chapter provides a description of the key natural resources.

6.1 — Wetlands

Freshwater (palustrine) wetlands, numbering 83 and covering 274 acres, are described in detail in chapter 4 and mapped on both the Water Resources Map 4 and the Natural Resources Map 5. One hundred seventy three estuarine and marine wetlands dominate much of the Town’s 69 miles of coastline and surround many of the islands. Their total area, as defined by the National Wetlands Inventory, is 709 acres (Map 5). In terms of number and extent, the saltwater wetlands are twice as predominant as the freshwater wetlands for the Town of South Bristol.

Wetlands provide a number of important habitat functions and have been scored by the Beginning with Habitat Program at the Maine Department of Inland Fisheries and Wildlife based

on the following six criteria: Sediment Retention, Floodflow Alteration, Plant and Animal Habitat, Finfish Habitat, Marine Shellfish Habitat, and Educational/Cultural Value. Those wetlands with three or more of these criteria are considered “multi-function wetlands”. Table 6.1 shows that while only 1/5th of the Town’s freshwater wetlands serve multiple habitat functions, every single estuarine, or tidal, wetland is considered as a key resource by this analysis. The six freshwater wetlands in South Bristol that are “multi-function” are shown with a red background color on Map 5. The characterization of the wetlands is mapped in more detail on the Beginning with Habitat Supplementary Map 7 available at the town office.

Table 6.1 – “Multi-function” wetlands in South Bristol

Type	Number	Area (acres)	Percent of all wetlands of same type, by area
Freshwater (palustrine)	6	56	20%
Estuarine	106	569	100%
Marine	3	2	1%

Sources: National Wetlands Inventory and Maine DIF&W.

Note: See Map 5 for locations of the freshwater “multi-function” wetlands.

6.2 — Wildlife Habitat

Data provided by the Beginning with Habitat Program at the Maine Department of Inland Fisheries and Wildlife has been included on the Natural Resources Map 5. Since habitat rarely ends at a town boundary all mapped habitats are shown here to ½ mile beyond the edge of South Bristol’s border. The Natural Resources Protection Act defines “Essential” and “Significant” habitats.

The essential habitats of our immediate area include a bald eagle nest site on the north tip of Stratton Island (aka Hodgdon Island) in the Damariscotta River and the roseate tern nesting habitat centered on Outer Thrumcap Island.

The significant habitats include the inland and tidal wading bird / waterfowl habitats (all rated “high” or “moderate” value), and the single seabird nesting island (Outer Thrumcap). Note that while the Town has two deer wintering habitat areas they are both rated as “intermediate” and therefore fall just short of the significant habitat designation.

There is an abundance of plant and wildlife species in South Bristol that ranges from deer, bear, and moose, to coyote, fisher, fox, raccoon, skunk, beaver, muskrat, squirrel, turkey, grouse,

quail, pheasant, owls, hawks, geese, great blue heron, woodduck, woodcock, song birds, turtles, frogs, salamanders, mice, shrew and mole, and lady slippers including some endangered or threatened species. Many residents have suggested specific habitats beyond those mapped (e.g. where they have seen deer in winter), but it was decided that it is better to map habitats based on the single consistent IF&W source rather have a map based on mixed sources.

The following data files, available from the Maine Office of GIS, were inspected and found to contain no mapped occurrence within the Town:

- Atlantic salmon habitat
- piping plover and least tern habitat
- rare wildlife species
- shorebird feeding and roosting habitat
- rare plant and exemplary natural community (data from Maine Natural Areas Program)

Of course this does not necessarily mean that South Bristol is devoid of these habitats, undoubtedly there are rare plant and wildlife species that have yet to be discovered within the Town.

6.3 — Unfragmented Habitat Blocks

In part due to the narrow shape of the Town and the presence of a single arterial route running north-south along the peninsula, the pattern of residential development has been primarily as single dwellings either along Route 129, or off the secondary driveways or public roads. One result of this is an almost “fishbone-like” pattern of development and consequent fragmentation of habitats. According to wildlife scientists, large unbroken blocks of land are necessary for the breeding, feeding, and protection of many species, and in general the larger the species (e.g., moose) the larger the unfragmented habitat must be.

To assess the status for South Bristol, a 500 foot buffer was mapped along both sides of all e911 roads whether public or private. Areas within this buffer are considered “fragmented” and not suitable as prime natural resource habitats. This buffer area is 5080 acres, so 60% of the Town’s original wild habitat has been

“fragmented”. Map 5 and Map 6 show all unfragmented areas and the seven blocks greater than 100 acres in size are labeled. It is important to note that all three of the largest unfragmented habitat blocks extend eastward into the neighboring town of Bristol (table 6.2). Thus if any proposal for the protection or treatment of these large habitats is prepared, the town of Bristol should be invited to the discussion.

Using ArcGIS and data from the Maine Office of GIS, the committee analyzed all unfragmented habitat blocks in Lincoln County and found that there are 30 unfragmented blocks greater than three square miles in area. These blocks were determined using a 500 foot buffer around roads. Several of these blocks appear on a map as two connected by a few hundred foot wide isthmus. Many are contiguous except for a dividing road. Except for one block in Waldoboro. All are some distance from the coast.

Table 6.2 – Unfragmented habitat blocks greater than 100 acres

Maps 5 & 6 key	Total block size including any portion in Bristol (acres)	Acres in South Bristol or within ½ mile of border	Acres entirely within Town of South Bristol
A	2020	1767	1217
B	876	757	484
C	688	447	11
D	395	395	395
E	>200	193	0
F	115	115	115
G	104	104	104

Sources: Maine Office of GIS and Maine Dept. of Inland Fisheries and Wildlife.

Note: Areas calculated by Comprehensive Planning Committee.

6.4 — Scenic Views

Table 6.3 – South Bristol scenic views from land

Maps 7 & 15 key	View of: (Direction of view)	Tax Map	Lot No.	Primary Attributes
0	Wiley Woods along Rt. 129 (SW)	31	4	Large expanse of undeveloped forested land.
1	Wawenock Golf Course (E)	29	19	Open, uncluttered easterly view with forested background and no visible development
2	Mount Washington, N. H. (W)	27	41	Visible on clear days from town office.
3	Clarks Cove Pond and River (N) also: (S)	27 27	24 22	Historical ice pond with no development on distant shoreline and limited development in foreground looking east. Sweeping overwater westerly view of river and Clarks Cove with recreational boat moorings and forested land to north and undeveloped forested land on western shore.
4	McLaughlin Farm, Johns Bay (S)	27	74	Sweeping view across open fields to bay
18	Sproul Homestead (Rote Farm) (NW)	26	8	Historic 18 th century farm house set high on open pasture with forested backdrop
5	Bay Ridge Farm (SE)	26	1	19 th century dairy farm, open fields.
6	Swamp and pond (NW)	24	14	Fall foliage; fresh water habitat
7	McFarlands Cove (S)	22	23	View across low field to the cove
8	Seal Cove (N)	20	19	Undeveloped; forested shoreline, ledge outcrop.
9	Richardson Farm (W)	21	8	Damariscotta River view.
10	Jones Cove (E)	20	5	Jones Cove beyond open field and trees.
11	The Gut and Damariscotta River (SW)	17	11	View across Western Gut and Damariscotta River to Boothbay; residences and commercial activity on shoreline.
12	The Gut and South Bristol Harbor (NE)	17	7	Easterly view of working commercial harbor with fishing boats and wharves; residences on shoreline.
13	Farnham Point and East Boothbay (NW)	13	5	View across river to East Boothbay; largely forested shore of Farnham Head.
19	Clifford Cove, Damariscotta R.(W)	11	13	View from road of small cove, river, and Boothbay shoreline
14	Christmas Cove (S) also: (W)	10 10	36 30	Attractive well protected harbor, pleasure boat moorings; some commercial activity; residences.
15	Johns Bay and Hay Island (S)	10	30	Hay Island, breaking seas, view to open ocean.
16	Johns Bay and Atlantic Ocean (SE)	8	34A	View to Monhegan Island and Pemaquid Point
17	Sand Cove, Inner Heron Isl. (SW)	8	6	Sandy beach and view of Inner Heron Island, Ram Island Light

Note: These views from public reads are listed roughly from north to south. The tax map and lot numbers represent the approximate center of each view and are not meant to define the total extent as the viewshed could include adjacent lots.

The winding roads, and occasionally hilly topography, provide many scenic views to all who travel the peninsula of South Bristol. The specific views listed in table 6.3, all from public roads, have been identified as outstanding and the access to these views is worthy of protection.

The public has access by boat to all waters along the Town’s coastline and thus innumerable views from offshore to the shore are provided. Undoubtedly some have only “visited” the Town

by passing through its waters on a boat. Many of these landward views are worthy of a scenic designation. Table 6.4 presents a list of some of these notable views. These include relatively undeveloped forested views, uninhabited islands, an active fishing harbor, and residences and docks spanning the Town’s history.

A scenic view can be impacted negatively by development of adjacent lands that, while not directly in the “viewshed,” diminish the

experience by making the viewpoints harder to find. It is appropriate to consider creating a buffer

around each scenic viewpoint and adding specific protection for these areas in a land use ordinance.

Table 6.4 – South Bristol scenic views from the water

View of	View from	Primary attributes
Prentiss Island	Damariscotta River	Undeveloped island; undeveloped mainland shoreline.
Wiley Point to Fitch Cove	Damariscotta River	Private docks, moorings, town dock, wooded shoreline
Kelsey Pt. to Wentworth Pt.	Damariscotta River	Undeveloped forested shoreline with a few scattered docks.
Lowes Cove	Damariscotta River	Undeveloped southern shoreline with the University's Darling Marine Center dock and moorings to the north
McGuire Point and Clarks Cove Upper	Damariscotta River	Recreational and working boats on moorings and floats; one large commercial dock, two private docks; aquaculture operation; wooded shoreline with two cottages; open field sweeping uphill to historic house.
Miller Island	Damariscotta River	Wooded shoreline with one private dock, nesting birds
Clarks Cove Lower	Damariscotta River	Recreational boat moorings with widely spaced docks and limited visible development; sweeping view of field to house and barn on hilltop.
Albee High Head to Peters Island to Plummer Point to Hodgdon Island	Damariscotta River	Undeveloped wooded shoreline and islands, nesting birds.
West side of Seal Cove	Seal Cove	One dock, undeveloped shoreline.
Eastern Ledge to Jones Point	Damariscotta River	Mostly wooded shoreline with several visible residences and private docks and moorings.
Western Gut	Damariscotta River	Large boat building shop (Gamage Shipyard), recreational moorings and commercial working waterfront; single family residences along shoreline
Miles Estate Tower	River, Atlantic Ocean, Johns Bay	Tall square wooden tower rising above wooded hill on Rutherford Island.
Christmas Cove	Mouth of cove by Tripod Ledge and Nabys Rock	Recreational and a few commercial moorings; numerous cottages and docks along the shore; restaurant on marina dock overlooking the water.
Inner Heron Island	Mouth of Damariscotta River.	Wooded island with cottages, former general store and post office, and substantial dock – in mouth of Damariscotta River.
Thrumcap Islands	Atlantic Ocean	Fields and shrubs; inner island with a cottage and dock; outer island is a protected bird nesting sanctuary (See table 6.5)
Turnip Island	Thread of Life	Half acre wooded island with small cottage
Crow Island	Johns Bay	Picturesque small wooded island.
Hay Island	Johns Bay	Seascape with visible residences on Rutherford shoreline.
Birch Isl. & Emily Means House	Johns Bay	Steep shore, mostly wooded shoreline; historic house.
Davis Point (NE Rutherford Island)	Johns Bay	Mostly wooded with some development; white rock outcrops.
Witch Island	Johns Bay	One cottage, forested shoreline.
Eastern Gut	By Witch Island	Numerous commercial moorings and fishing boats; working waterfront wharves and buildings; single family residences along the shore.
Southern McFarlands Cove	Johns Bay	Summer community, moorings.
High Island	Johns Bay	Steep, high wooded island.
Sproul Point	Johns Bay	Open fields/pasture stretching from shoreline up the hill, barn and farmhouse at top of hill.
Eastern and North Branches	Johns Bay	Undeveloped forested shorelines along narrow inlets
Peabow Island	Johns Bay	Fish house and rustic shelter; seals on shore.

Note: These views are listed generally southbound on the Damariscotta River then around Thrumcap into Johns Bay.

6.5 — Protected Lands

There are various parcels of land in South Bristol that are protected to different degrees. There are 10 preserves (289 acres) with public access and 22 conservation easements (462 acres) that are permanently protected from development (table 6.5). Over 770 acres in 18 parcels are presently in “tree growth” and provide habitat protection. Four parcels (206 acres) are presently in “open space” and similarly provide some habitat. Both the open space and the tree growth

designations cannot be considered to provide permanent land and habitat protection since the land owner, or subsequent landowner, may chose to pay the back taxes and remove the parcel from this designation and potentially develop the parcel. Parcels in tree growth, where the forest cutting is managed, are known to attract moose foraging for the new undergrowth that appears following the cutting.

Table 6.5 – Lands permanently protected from development

	Parcel Name (in So. Bristol unless noted)	Acres	Owner
Public Preserves	Dodge Point (Newcastle)	168.3	Maine Dept. of Conservation
	Plummer Point Preserve	73.9	Damariscotta River Association
	Walpole Woods	48.2	Town of South Bristol
	Fort Island (Boothbay)	43.8	Maine Dept. of Conservation
	Linekin Preserve (Boothbay)	42.1	Boothbay Region Land Trust
	Tracy Shore	34.6	Town of South Bristol
	Seal Cove Preserve	33.4	Damariscotta River Association
	Stratton Island	23.2	Damariscotta River Association
	Orcutt Preserve	18.8	Damariscotta River Association
	Witch Island	18.6	Damariscotta River Association
	Library Park Preserve	17.4	Damariscotta River Association
	McLaughlin Preserve	10.8	Damariscotta River Association
	Outer Thrumcap Island (includes two ledges)	8.9	USF&WS Maine Coastal Island National Wildlife Refuge
	Big Huckleberry Preserve (Boothbay)	2.1	Damariscotta River Association
	Hodgdon Island Ledges	1.3	Maine Dept. of Conservation
	Witch Island	1.0	Damariscotta River Association
			Easements below are all privately owned and are maintained by:
Conservation Easements	16 Parcels	297.1	Damariscotta River Association
	3 parcels	108.5	Maine Dept. of Inland Fisheries and Wildlife
	2 parcels	54.3	Pemaquid Watershed Association
	1 parcel	2.1	Boothbay Region Land Trust

Notes: These lands are within South Bristol or within a half mile of the Town border. Some preserves extend beyond the half-mile buffer around the Town line and therefore have a larger area than listed above. All are permanently protected from development. Recent changes outside of South Bristol may be incomplete.

6.6 — Critical Natural Resources

The marine and estuarine waters which create the greater part of the Town's border provide key wildlife habitats and should be considered as a critical natural resource for the Town. The Town's Shoreland Zoning Ordinance if kept consistent with periodic changes to the State's Shoreland Zoning Ordinance should provide adequate protection of these coastal habitats. Several of the freshwater wetlands are presently included in the "Freshwater Districts" or the "Resource Protection Districts" of the Town's Shoreland Zoning Ordinance. Three of the six freshwater wetlands that are "multi-function" represent 52 of the 56 wetland acres and they should be considered critical natural resources. Each of these wetlands is also designated as a Resource Protection District 4 in South Bristol's Shoreland Zoning Ordinance.

The unfragmented blocks of land (table 6.2) should be carefully evaluated to assess the relative importance and diversity of habitat. The future land use plan (chapter 19) will consider alternatives such as purchase by the Town or a land trust, conservation easement, or purchase of development rights to provide permanent

protection for several of these blocks.

This Plan designates three critical resource areas in chapter 19 (Future Land Use). In addition, many natural resources, some of them critical, are shown on Map 5. We recommend that all development recognize these resources and take appropriate measures to minimize or prevent adverse impact. Such measures should be included in a future Land Use Ordinance.

We recommend that information be made available, at the Town Office, to all citizens regarding applicable State, Federal, and local regulations regarding critical resource areas. The Maine Department of IF&W has available a brochure on the subject.

It is important to note that recreational activities such as hunting, hiking, canoeing, swimming, and the like on undeveloped land (which is not posted) do not create liability upon the owner of the land. This is in accord with the Maine tradition of allowing free access to open land. The landowner's limitation of liability is codified in Title 14 MRSA §159-A.

6.7 — Tidal Resources

A dominant natural resource of South Bristol is the Damariscotta River. This tidal river is characterized as being an estuary north of the Narrows at Fort Island. An estuary is defined as seawater that has significant freshwater. The Damariscotta Estuary is important to both commercial fishing and aquacultural economies and many non-commercial species (e.g., horseshoe crabs). Below Fort Island it is primarily seawater. The estuary portion of the river is reported to have three basins (McAlice, 1993):

- Lower - Fort Island to Fitch Point;
- Middle - Fitch Point to Damariscotta-Newcastle Main Street bridge; and
- Upper - Damariscotta-Newcastle Main Street bridge into Great Salt Bay.

The Lower- and a portion of the Middle Basin form part of South Bristol's western boundary. Much of the following information was summarized based on a variety of documents at the University of Maine Darling Marine Center (McAlice, 1993). With a mean annual tide of 8.9 ft, there is a substantial amount of water that diurnally flows into and out of the estuary. The volume of water between low and high tide is referred to as the tidal prism.

The tidal prism north of Fort Island is 56,000,000 cubic meters (15 billion gallons). With a cross-sectional area of 2400 square meters (26,000 square feet), the mean current in the lower basin over a tidal period is 1.1 meters per second (2.5 miles per hour or 2.2 knots). Peak currents are considerably higher. For reference, the NOAA current prediction station at Cavis Point (approximately 0.8 nautical miles or 5100 feet south of the Narrows) reports an annual maximum ebb (outgoing) current of 1.5 knots and flood (incoming) of 0.8 knots.

The tidal prism that passes Fort Island supplies sea water to all three basins, with 55 percent of the prism remaining in the Lower Basin. Approximately 36 percent of the tidal

prism remains in the Middle Basin, with 9 percent moving into the Upper Basin (Great Salt Bay). The mean current speed at the Damariscotta-Newcastle Main Street bridge is 1 meter per second (2 miles per hour or 2 knots), similar to the current in the lower basin, with peak currents considerably higher. The volume of flow at this point is considerably less than below the Lower Basin at Fort Island.

A good reference regarding tidal electric power generation is found at <http://dic.academic.ru/dic.nsf/enwiki/193170> where there is an extensive discussion of various types of facilities and a list of projects worldwide. This Comprehensive Plan does not address the potential for local tidal electric power generation, but raises the idea for future consideration.

For reference, tidal energy power projects (<http://dic.academic.ru/dic.nsf/enwiki/193170>) typically look for currents greater than 1 meter per second (2 knots) at neap tide (tide occurring just after the first and third quarters of the lunar month). Differences between high and low tides are smallest at these times. Of course there are many other factors affecting the viability of a potential tidal energy project, such as ecological impact, navigational hazards, availability of appropriate electricity transmission and distribution lines, and economic viability.

The mean depth of the Lower Basin is 9.76 meters (32.0 feet) at mean low tide and 11.05 meters (36.36 feet) at mean high water. Depths at the narrows (NOAA, 1995) are reported on charts (mean low low water) to be 46 ft or less. At the nun and can buoys just south of the Narrows, the depth is reported to be approximately 60 ft. The can is known to be pulled under water during higher currents and currents at the Narrows are anecdotally reported to be 4 to 5 knots with peaks at 7 knots or more.

References

Academic Dictionaries and Encyclopedias; <http://dic.academic.ru/dic.nsf/enwiki/193170>

Beginning with Habitat; Augusta, Maine; Maine Department of Inland Fisheries & Wildlife

Faunce, Robert F.; 2007; Protecting Local Scenic Resources; Augusta, Maine; Maine State Planning Office.

McAlice, Bernard J.; 1993; Environmental Characteristics of the Damariscotta River Estuary, Maine; Darling Marine Center Special Publication No. 1; Orono, Maine; University of Maine.

NOAA; 1995; Chart 13293; corrected to April 22, 1995.

NOAA web site: www.tidesandcurrents.noaa.gov

NOAA; For a set of tables/charts for 2008 that presented the maximum currents for each tide cycle each day for each month at Cavis Point in the Damariscotta River go to:

http://tidesandcurrents.noaa.gov/get_predc.shtml?year=2008&stn=5595+Portsmouth+Harbor+Entrance&secstn=Damariscotta+River,+off+Cavis+Point+&sbfh=%2D0&sbfm=49&fldh=%2D0&fldm=44&sbeh=%2D1&sbem=24&ebbh=%2D1&ebbm=18&fldr=0.5&ebbr=0.6&fldavgd=350&ebbavgd=215&footnote

Wetlands Characterization, April 6, 2007, Supplementary Map 7, Town of South Bristol, 1:24,000; Beginning with Habitat, Maine Department of Inland Fisheries & Wildlife; on file at the town office.

Natural Resources Policies and Strategies

The overriding goal is for the Town of South Bristol to manage and conserve its natural resources for the benefit of the community. To achieve this goal the following policies were formed based on the inventory and analysis of the Town’s natural resources.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Conserve critical natural resources	Ensure that the Town’s shoreland zoning ordinance is kept at least consistent with State requirements and thus protect the critical marine and estuarine coastal habitats.	Planning Board \$2000 over 10 years 2010 (update in process)
	Assess and rank the habitat in the largest unfragmented blocks, especially in the northern half of the Town where they extend into Bristol, to determine which blocks should be designated as “critical”. Work with Beginning With Habitat on this.	Comprehensive Plan Advisory Committee See chapter 20 on page 282 regarding this committee. \$1000 2013
	Work with the town of Bristol to protect shared natural resources.	Planning Board or Comp Plan Advisory Committee -0- 2013
	Ensure that natural resources are protected during all road and other town construction and maintenance, and require contractors to also comply.	Selectmen -0- 2011 and ongoing
	Include in a Planning Board Policy the requirement that the Planning Board incorporate natural resources maps and data into their review processes.	Planning Board -0- 2011
	Encourage the purchase or conservation easement of critical resource areas by the Town or local land trusts.	Board of Selectmen Cost depends on land value 2011 and ongoing
Protect scenic views	Ensure that a land use ordinance encourages the preservation and protection of landscapes and historic scenic views as shown on Maps 7 and 15 and table 6.3	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	If public roads are widened or rebuilt, provide sufficient shoulder space to allow motorists to stop at the scenic viewpoints.	Road Commissioners and Maine DOT Unknown Immediate and ongoing

Chapter 7 — Hazard Mitigation

The smart thing is to prepare for the unexpected.

~ Chinese proverb

Recognizing hazards, both natural and man-made, is necessary if we are to be protected from or prepared to deal with possible future disasters. Possible natural disasters include flooding, ice storms, wildfires, droughts, and high winds. Man-made ones include accidents involving vehicles or vessels carrying dangerous cargos, fires involving large amounts of petroleum products, and major leaks of oil or gasoline. Catastrophic failure of the swing bridge over the Gut, aircraft crashes, and terrorist attacks are within the realm of possibility.

There are actions which can be taken to largely prevent many adverse consequences of man-made problems which could turn into disasters. Proper planning and preparation can go a long way towards reducing the adverse effects of natural hazards on the citizens of South Bristol and prevent them from becoming disasters. In this chapter we identify present and potential hazards and, where possible, propose actions which should be taken to minimize their unwanted effects.

7.1 — Natural Disasters

South Bristol, as many other coastal towns, faces a variety of naturally caused situations that can lead to disasters. These conditions are generally caused by inclement weather and most result in flooding from heavy rain, rapid thawing conditions, or storm-created tidal surges (e. g., hurricanes and other strong storms that occur during high tide).

The largest storm surge in Maine was reported by the Maine Geological Survey to have been approximately four feet in 1947, but it occurred during a mean high tide (MHW). The largest coastal flooding event was reported to be the 1978 blizzard which occurred during a spring tide with a storm surge of 3.5 feet.

FEMA-prepared Flood Insurance Rate Maps (FIRMs) for South Bristol are available for examination at the town office, but are not available in digital format. These maps identify areas of Town subject to flooding at a frequency of once in 100 years (base flood, roughly 10 feet NGVD) and likewise areas subject to flooding once every 500 years. As severity of precipitation and tidal surge heights increase as a result of

climate change, as discussed in chapter 4, these maps prepared by FEMA may need to be revised to include larger areas.

A review of the current (July 16, 1990) maps indicates several roads may become flooded during a base flood. These roads in the vicinity of the noted tax parcels identified by map and lot numbers include:

- West Side Road (14 – 35)
- State Route 129 at the Gut bridge
- State Route 129 at culvert north of the Gut bridge (17 – 13)
- Miles Road (15 – 4)
- Little Harbor Road (15 – 4)
- Shipyard Road (16 – 5-A, 6, 7, 12)
- High Island Passage (22 – 38-3, 38)
- High Island Passage (22 – 38-B, 33)
- Private drive off Holmes Road (26 – 12)
- Private drive off East Branch Road (26 – 18)
- Clarks Cove Road (27 – 42)
- Clarks Cove Road culvert (27 – 23, 24)
- State Route 129 at Sproul Road
- Split Rock Road (29 – 40)
- State Route 129 at Wiley Brook (31 – 1-A)

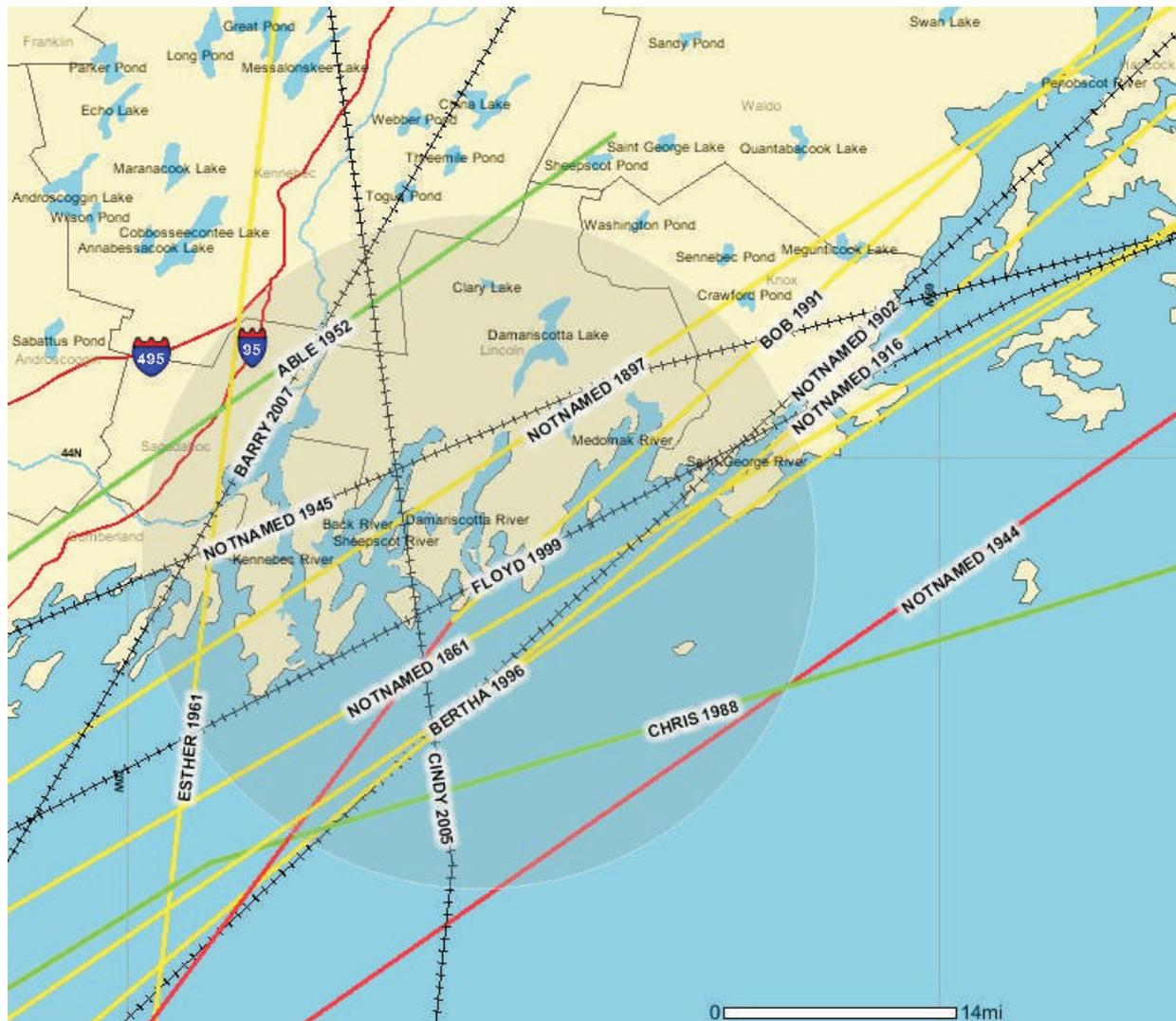


Figure 7.1 – Historical hurricane and tropical storm tracks within 25 nm of South Bristol

There may be other private roads or driveways subject to flooding during a 100 year base flood that were not mapped by FEMA on the 1990 FIRM.

FEMA is in the process of creating new FIRMs for all of Maine, having started at the New Hampshire border. It will likely be late 2011 or sometime in 2012 before a new FIRM is available for South Bristol. That new map will only be available in digital format (DFIRM) except possibly a single hard copy for the Town.

When a new DFIRM becomes available, the Town will have to update its Floodplain Management Ordinance. At the same time, the list on the previous page of roads subject to flooding

may have to be revised by the Comprehensive Plan Advisory Committee.

South Bristol participates in the National Flood Insurance Program via its Flood Plain Management Ordinance, making it possible for homeowners in areas of potential flooding to obtain flood insurance. Such insurance is usually required by lenders in order to obtain a mortgage.

That above listing of roads shows clearly that evacuation of South Bristol residents during a 100 year base flood event would be extremely difficult as State Route 129 would be flooded at two locations north of Four Corners (also blocking access to Split Rock Road) as would Clarks Cove Road and most likely Harrington and Carl Bailey

Table 7.1 – Historical hurricanes and tropical storms near South Bristol

Date	Storm name	Wind speed (kts)	Pressure (mb)	Category
Sept. 28, 1861	Not Named	50	Unknown	Tropical storm
Sept. 24, 1897	Not Named	35	Unknown	Tropical storm
June 17, 1902	Not named	35	Unknown	Extratropical
July 21, 1916	Not named	45	1001	Tropical storm
Sept. 15, 1944	Not named	65	966	Category 1
Sept. 19, 1945	Not named	25	Unknown	Extratropical
Sept. 2, 1952	ABLE	25	Unknown	Tropical depression
Sept 25, 1961	ESTHER	35	Unknown	Tropical storm
August 30, 1988	CHRIS	20	1008	Tropical depression
August 19-20, 1991	BOB	85/60	964/977	Category 2 / Tropical storm
July 14, 1996	BERTHA	60	994	Tropical storm
Sept. 17, 1999	FLOYD	45	984	Extratropical
July 9, 2005	CINDY	30	1007	Extratropical
June 5, 2007	BARRY	35	992	Extratropical

Source: NOAA Coastal Services Center

Notes: BOB (August 1991) was rapidly deteriorating when it came ashore during the night. Records prior to WW II are somewhat sketchy.

roads in Bristol. To the east of Four Corners, Little Falls Brook where it goes under Carl Bailey and Harrington roads in Bristol are frequent flooding locations; at both locations the roads have been washed out in recent years.

Evacuation of Rutherford Island would be precluded if State Route 129 were flooded in the village. This occurred around 1980 to a depth of about six inches of sea water. The “bar” between Christmas Cove and Johns Bay which separates the southern part of Rutherford Island from the northern part has been blocked on occasion by sea water flowing across it during a south east storm, and occasionally blocked by boulders thrown onto the road by wave action.

Flooding may also occur as a result of seismic or landslide created waves, though these have not been a problem in the past for South Bristol. Most, but not all, flooding is related to tidal flooding which inundates low-lying roads and structures near the 69 miles of coastline causing isolation of segments of Town, including 78 residences, 3 commercial buildings, 2 industrial

buildings, and 2 recreational buildings in the category 4 tidal storm surge area. (No mapping was available from the State for a category 5 hurricane.)

The most destructive hurricane to affect South Bristol in recent years was CAROL on August 31, 1954. Its center passed well inland, but its broad swath caused tremendous damage all along the New England coast. Figure 7.1 on the previous page and table 7.1 above document tropical storms and hurricanes whose centers have passed close by.

Only 1 mile of the roads in Town are identified as susceptible to flooding due to hurricane storm surge (see Map 8); however, this condition would at least temporarily isolate residents who live on the east side of the Clarks Cove Pond culvert (8 residences), High Island and the approach to High Island (18 residences), and prevent access or egress for the 344 residences on Rutherford Island. Access to the southern portion of Rutherford Island south of Christmas Cove would also be blocked at the bar.

Crow, Turnip, Hay, and Peabow islands as well as several unnamed, uninhabited islands would be inundated as would be Glidden and Thread of Life ledges. A substantial portion of Birch, Outer Thrumcap, Witch, Hodgsons, Peters, and Prentiss islands would be inundated. Gradually rising sea levels (see chapter 4) can be expected to increase those areas subject to tidal flooding, and the number of residences and other buildings at risk.

Flooding can result in direct loss of life and property and also interrupt infrastructure such as transportation, communication systems, and electrical power for periods of a few hours to several weeks. If these interruptions occur in the winter, then further losses can result as most heating systems in Town rely on electrical power and frequent delivery of fuel.

Intensive rainfall may also interrupt road travel along Split Rock Road, Sproul Road and Clarks Cove Road due to flooding at culverts or adjacent ponds. Beyond the Town border, flooding by Little Falls Brook at Carl Bailey and Harrington roads in Bristol could limit egress from South Bristol to only Route 129 north.

Ice storms are a common occurrence along the coast. As climate changes continue to occur, the duration and severity of storms are expected to become worse. When ice storms are prolonged or result in excessive amounts of ice on infrastructure, then transportation, communications, and electrical systems are interrupted. These interruptions tend to isolate this Town due to its long and narrow configuration with limited primary transport routes and service corridors. Since ice storms occur during the heating season, they can lead to further losses if electrical power is lost.

The forested nature of South Bristol, with homes and other structures located within wooded settings, exposes the Town to potentially severe losses should a wildfire result from natural or man-made causes. Droughts are expected to

become more severe as our climate changes, increasing the risk associated with wildfires. During prolonged droughts the water levels in ponds which supply water for firefighting sometimes get dangerously low. Our forested lands are generally not managed to remove tinder and reduce the risk of fire or to rapidly control wildfires through a network of roads that can be traveled by responding vehicles.

In addition to the effect that prolonged droughts have on the occurrence and severity of wildfires, they cause the watertable to drop as a result of insufficient groundwater recharge. While the greatest effect is observed on watertable aquifers, even the deeper aquifers can be affected, especially if the drought is widespread. Most residents of South Bristol rely on groundwater for their source of potable water. Dropping of water levels in wells to below the intake of suction lines/pumps interrupts the supply of potable water to residents and businesses which then seek alternate sources of water. Sometimes these other sources are also stressed or may not be potable. In the immediate vicinity of the coast, these lowered groundwater levels may result in seawater intrusion into the groundwater supplies.

Windstorms are a common occurrence in South Bristol and create navigational hazards on our coastal waters as well as physical damages to our infrastructure, including residences, docks, and other structures. Most windstorms are coupled with precipitation in the form of hurricanes, thunderstorms, ice storms, or snow storms. While tornados have not been reported in South Bristol, several micro-bursts have caused significant interruptions and damages to our infrastructure. Downed trees have caused property losses; interrupted electrical, cable, and telephone services; and blocked roadways. As climate change occurs, windstorms and associated results can be expected to become more severe. The Town has no building code standards to address hurricanes, severe winds, or fire storms. FEMA does impose building code requirements

within their designated floodplains.

Coastal erosion and its effect on unstable bluffs is a threat to 54 structures (mostly dwellings) along a significant portion (10.6 miles) of our 69 miles of marine shoreline. Highly erodible soils are mapped along an even larger segment of our marine shoreline. Areas subject to coastal erosion are indicated on the maps which

are part of the Shoreland Zoning Ordinance and available at the Town Office. Significant erosion events (e.g., landslides) have occurred in recent years. As sea levels rise and storm intensity becomes more severe from changing climate, these erosion problems will also increase (see chapter 4).

7.2 — Man-made Disasters

Since there are no railroads or large industries in Town or nearby, potential man-made disaster emergencies are more commonly represented in South Bristol by bulk cargo truck accidents. Typical hazardous cargoes traveling roads in Town are propane, gasoline, and fuel oil in delivery trucks. In addition, fuel dispensing businesses in Town (South Bristol Fishermen's Cooperative, Eugley's Wharf, Gamage Shipyard, and Osier's Wharf), are served by larger bulk tankers delivering gasoline and diesel fuel. Boat yards and a few individuals may also use welding supplies, including acetylene and other gases. Boat yards use flammable resins and solvents.

Accidents involving these delivery trucks represent a potential threat to our natural environment (oil and other liquid fuel spills to waterways and drains) and a potential threat of explosion and fire. Since the Town is on the coast, it is possible that it could be the site of a maritime accident involving hazardous cargo. With the dependence of a portion of our residents on the high quality of our marine environment, a maritime disaster involving a hazardous material spill, including spills from vessels, would have long-term effects on our environment and our economy.

Some of our increasingly older population rely on oxygen to assist their breathing.

Often overlooked as potential sources of problems are outdoor residential kerosene storage

tanks. Some are not located on solid foundations. All should have their filters protected from falling ice or branches by a canopy. Were the fuel filter to be broken off or the tank spring a leak, the resulting spill could pollute wells in the area.

Perhaps the most troubling concern to residents of Rutherford Island is the potential inability to close the swing bridge between the mainland and the island, particularly if due to a mechanical problem. This occurrence has potentially significant effects, particularly during emergencies such as fire and emergency medical needs. The current poor condition of the bridge and its mechanical equipment amplifies this concern.

Should electric power be interrupted, not a rare occurrence, while the bridge is open it might possibly remain open until utility power is restored. There is no backup generator for the bridge. Should the bridge suffer catastrophic failure – trucks as heavy as 100,000 pounds as well as 18-yard loaded dump trucks use it – Rutherford Island would be isolated for an unknown length of time.

Aircraft crashes are infrequent, but impose a significant load on emergency services of a small town when they occur. With the nearest airport being less than 20 miles distant in Wiscasset, it is possible that a small aircraft crash could occur in Town. It is less likely, though not impossible, that the Town may experience larger aircraft crashes.

Planes flying overhead at high altitude are a regular occurrence. These may be commercial or military aircraft. Many of the main air corridors for commercial flights between the northeastern United States and Europe are directly over South Bristol. Lower flying commercial and military aircraft including turboprop and rotary wing aircraft are commonly seen overhead.

The most recent incident involving an aircraft occurred in the early 1980s when a Piper Cub ran out of fuel while returning to a private airstrip in

Town. The pilot skillfully glided onto a lawn with no damage to the plane or injury to himself.

Military or terrorist attacks are possible, though not a likely occurrence due to the absence of strategic national resources in South Bristol.

With the closure and decommissioning of the Maine Yankee Atomic Power Plant in Wiscasset, there is no nearby radiological source of disaster emergency concern to South Bristol. The spent fuel rods are stored there in dry casks.

7.3 — Conditions and Trends

The Town adopted an Emergency Operations Plan (EOP) that addresses many of the hazards identified above and includes extensive involvement of county and state agencies. It was approved by the Board of Selectmen on September 6, 2007. This EOP addresses many of the hazards faced by South Bristol and identifies other regional and state agencies and organizations that we can rely on in the event of a disaster emergency. Four phases of emergency management (prevention, preparedness, response, and recovery) are incorporated in the EOP. The plan requires annual review and maintenance. The plan does not explicitly address some hazards described above such as the inability to operate the Swing Bridge if it becomes stuck open or the hazard associated with loss of potable groundwater during a prolonged drought. A few portions of the EOP need updating to accurately reflect current local conditions, town government, and points of contact. The EOP should also include a current South Bristol School emergency plan.

Anticipating potential need, the EOP addresses emergency shelters. The Red Cross is identified as the sole operator of South Bristol long term emergency shelters (see EOP Annex E-Shelter, IV-Execution, D-2). The Red Cross has not identified a shelter it would operate in South

Bristol, relying instead on the use of Great Salt Bay School in Damariscotta to serve as a regional emergency shelter. The EOP identifies South Bristol School as a shelter (see EOP Annex E, Appendix E-Shelter Listing).

Several South Bristol residents participated in training for opening, operating, and closing Red Cross emergency shelters; several years ago one resident completed the full Red Cross course to qualify as an emergency shelter manager.

While not mentioned in the EOP, warming or comfort shelters have been identified as the second floor of the Rutherford Island Fire Station and the Town Office in Walpole. These two facilities include restrooms, back-up electric generators, and limited cooking facilities. The Town Office has two ground level entrances and the Rutherford Island Fire Station has a chair lift on the stairs to the second floor.

Notification for evacuation is addressed in the EOP. The obvious evacuation route is State Route 129 north to Damariscotta or to access Bristol Road (Route 130) and then State Route 32 to areas east and north of South Bristol. Fallen trees, roadway washouts, or other road blockage of State Route 129 south of Four Corners would essentially prevent evacuation from south of that intersection, except by water. In the winter about

500 people live south of Four Corners, and at the height of the summer season about 1850 live to the south. Road blockage north of Four Corners may be avoided by using Harrington Road, Harrington Road/Carl Bailey Road or Sproul Road/Split Rock Road to access Route 130 to areas to the east and north.

While housing development continues at a relatively slow pace in South Bristol, it tends to be along the shoreline and in wooded areas. Increasingly, these developments are on longer driveways or private roads which may not provide for ease of access and egress by emergency vehicles. These vehicles require greater travel width, height clearances, and radius of curves than do cars and pickup trucks. These developed areas are also potentially at risk to wildfires or

flooding. This risk can be expected to be greater as the climate changes. Increased shoreline development is exerting increasing pressure to develop into the 100 year flood plain.

Access and egress is limited at four locations where there are roads which dead end within sight of another road. These locations, all involving private property, are:

- John Gay Road and Miles Road
- Atlantic Avenue and Old Sled Road
- Stowaway Lane and Miles Road
- Texas Road and Johns Bay Road

Connecting these roads would improve access and egress by emergency vehicles for structure fires, firestorms, and other emergencies.

References

Federal Emergency Management Agency (FEMA); 1990; South Bristol Flood Insurance Rate Map (FIRM); Available at the South Bristol Town Office.

South Bristol Emergency Operation Plan (EOP); 2009; Town of South Bristol; Available at the South Bristol Town Office.

South Bristol Shoreland Zoning Ordinance; 1993; Town of South Bristol; Available at the South Bristol Town Office.

Hazard Mitigation Policies and Strategies

The overriding goals for the Town of South Bristol are to discourage development in natural hazard areas and protect the residents from loss of life and property from natural and man-made hazards that may cause disaster emergencies.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Create and maintain emergency plans adequate to protect South Bristol people	Review and revise the Emergency Operations Plan (EOP) annually to assure the plan is pertinent to current South Bristol and regional organizational and physical conditions and requirements.	Emergency Management Director (EMD) -0- 2011 and annually
	Conduct simulated emergency disaster response drills to improve implementation of the EOP when an actual need arises.	EMD, Fire Dept., Selectmen \$1000 biennially 2012, 2014, 2016, etc.
	Establish a contingency plan with appropriate resources in the event the Swing Bridge over the Gut is stuck open or out of commission and cannot support vehicle traffic.	EMD, Selectmen \$2000 2010
	Seek Red Cross review and approval of the main fire house on Rutherford Island, South Bristol School, or town office as an emergency shelter.	See two strategies on page 229 in chapter 16 for responsibility, cost, and target date.
	Participate in the Lincoln County program and continue to maintain a South Bristol list of residents with special needs (e. g., elderly, oxygen support, etc.) for use during an emergency.	Selectmen None 2011 and continuing
	Develop and maintain a list of property managers and caretakers of residences to contact during an emergency.	Selectmen None 2012
Maintain infrastructure to reduce potential problems	For public safety purposes and protection of structures and roads, establish maintenance standards to keep culverts on town and private roads clear and functional.	Road Commissioners \$500 / year for Town roads 2013
	To prevent interruption of utility services, continue to encourage tree management programs by the utilities that service our community and encourage property owners to manage their trees to prevent interruption of services.	Selectmen and CMP None Immediate and continuing

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Create necessary ordinances and codes to mitigate hazards	Establish ordinances for private roads and driveways that will allow the passage of emergency vehicles	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Revise the Shoreland Zoning Ordinance to prevent new development in areas identified as highly erodible coastal bluffs and potential landslide areas as mapped by the State.	Planning Board \$1500 2010 (in process)
	Revise the Subdivision and Shoreland Zoning ordinances to require by reference (to the land use ordinance), to the extent practicable, stormwater management practices that will retain stormwater on site to the extent it was before development. To be included (in future ordinance updates) by reference to a future land use ordinance).	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Adopt a building ordinance (code) containing at least minimum building standards for hurricanes, severe winds, and firestorms.	To be included in a future building ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
Encourage citizens to do their part to reduce hazards.	Encourage the proper management of forested lands through information dissemination, and possibly in Town ordinances, to reduce tinder and the risk to residences from wildfire hazards.	Selectmen & Town Fire Warden Minimal 2013
	To prevent development within the 100 year (base) flood plain and mapped erodible coastal bluffs, encourage property owners to use open space and tree growth tax incentives to encumber the zone or to create nature preserves or open space and conservation easements.	Planning Board None 2012 and thereafter
	Develop a South Bristol hazard mitigation information brochure and distribute to all year-round and seasonal residents.	Emergency Management Director \$1000 2012
	Periodically, provide training for residents in order to prevent permitted open fires from spreading and becoming uncontrolled.	Town Fire Warden & Fire Department Minimal Immediate and ongoing
	Educate and encourage people with propane fueled standby electrical generators to have adequate standby fuel capacity for a two to three week power outage and to identify their generating capability to the Town to facilitate emergency relief to neighbors.	Selectmen & Emergency Management Director None 2012

Chapter 8 — Historical and Archeological Resources

People ought to know about the past.

If it's something to be proud of, they ought to take example from it.

~ Ruth Moore (1903-1989) ⁴

The traces of earlier times left by those who were here before us, to some extent, define the heritage of South Bristol. Over time memories fade and physical evidence can waste away or be plowed or bulldozed into oblivion. It behooves we who are now here to preserve for future generations as much as is reasonable of both the physical evidence and knowledge of times past.

8.1 — Historical Settlement Patterns

South Bristol is a town rich in history. Reminders of that history remain in the form of old homes, farmsteads and barns, unfragmented forest, scenic fields and landscapes, old cemeteries, stone foundations and ruins, old schoolhouses, an historical icehouse, remnants of brickyards and mills, the remnants of commercial-scale ice businesses, lobster pounds, and the working waterfront buildings and village at the Gut. These landmark and landscape resources from the past define the character of our Town. Unless these resources can be protected and maintained, the people's desire to "keep the Town the way it is" may not be achieved.

The recorded history of the Bristol Peninsula goes back to about 1000 AD when Norse explorer Leif Ericson (c.970-c.1020) sailed here from Iceland. Little if any physical evidence other than a purported Norse coin or two remains. English fishermen established a year-round operation on nearby Damariscove Island in about 1604. English settlers arrived on the mainland during the first half of the 17th century.

The coast was explored during the early 1500s. One exploration which can be documented (Morrison, 1971, p. 308-9) is that of Giovanni da

Verrazzano who recorded trading with Indians in 1528 at Small Point and then sailing among the islands and sheltered harbors northeast of there on his way back to France. By that time fishing trips from Europe to the northeast coast of North America were regular occurrences.

Although we think of our European-connected history as going back only to the 1600s, the northeast coast of the continent was well known to Europeans centuries earlier.

Native Americans were here millennia earlier. Bourque (2001) writes "We know that humans were in Maine shortly after the retreat of the glaciers. We are certain from archaeological evidence that they were hunting mammoths and mastodons . . . and we know that such animals did exist in Maine during the late Pleistocene."

There remain many remnants of early European settlement in the area, although the earliest are not in South Bristol but across Johns Bay in Pemaquid, dating to the early and middle 1600s. The earliest remaining physical evidence of European settlers in South Bristol dates to the 1700s.

Until 1915, South Bristol was part of the town

4. From *The Walk Down Main Street*; William Morrow & Co.; 1960. Ruth Moore (1903-1989) was a Maine author who grew up on Gott Island off of Mount Desert Island and became an important regional writer in Maine. The novel has been reprinted by Blackberry Books; Nobleboro, Maine; 1988.

of Bristol, whose borders once encompassed the land of the Pemaquid peninsula and north through Nobleboro. It is not surprising then that the natural characteristics and development patterns of areas near South Bristol's border with Bristol are shared by both towns. An example of this is the early settlement area known as Harrington, at the head of John's Bay.

The town line separating South Bristol from Bristol bisects the Harrington area roughly halfway along Harrington Road which connects State Route 129 in South Bristol with Bristol Road in the Pemaquid area of Bristol. The road on both sides of the town line contains a number of the area's older homes and is characterized by limited roadside development, scenic views across fields, old barns, and elevated views of Johns Bay. The Harrington Meetinghouse, built in 1772, is on the Bristol side of the line and was built to serve the Harrington area. A great number of the early settlers of the Town are buried in the cemetery of the Harrington Meetinghouse.

Other examples of historical resources shared by South Bristol and Bristol are the scenic landscapes resulting from the large, intact, forested areas remaining on both sides of the town line starting at the intersection of Route 129 and Bristol Road and running south to Johns Bay. These areas are important parts of the two communities' scenic resources and bring to mind past eras when forestry was an important part of the Towns' economies.

There are important natural and historic areas in both towns which cannot be adequately protected without the cooperation of both towns.

Europeans came to the area to fish and explore as early as the late 16th and early 17th centuries. Fishermen, farmers, and traders with settlement intentions began to arrive in the mid 17th century. The area which would become South Bristol had only scattered residents by the late 17th century, as early settlement concentrated in the vicinity of the fort at Pemaquid. That fort and its

environs were very much a frontier for English-speaking settlers; Pemaquid became the line of demarcation between French and English interests in this area of the New World.

In the 1680s the entire Bristol peninsula was devastated by violence and was ultimately abandoned for the duration of the Indian Wars, most notably King Phillip's War. The visible remnants of this early period are located primarily at the Restoration at Pemaquid and consist of old foundations of the original Pemaquid village and many artifacts on display in a seasonal museum at the village site. This site, which includes a reproduction of the last of a series of the forts erected at Pemaquid, has been designated a National Historic Landmark and is maintained by the National Park Service. Within South Bristol there are a number of unidentified old stone foundations, some of which may date from this early settlement period.

Resettlement of the Bristol peninsula after the worst of the Indian Wars started in the early 1730s when Col. David Dunbar brought a number of Scotch-Irish families to the region under the authority of a royal commission granted to him in 1729. During this period, South Bristol's Walpole area on the east side of the Damariscotta River and its Harrington area at the headwaters of John's Bay were "subdivided" into lots which Dunbar intended to grant to settlers who were willing to settle in these areas. Although some early families chose to do so, most chose to settle in present day Boothbay, then known as Townsend. In addition to the settlers brought by Col. Dunbar, some settlers in this period came from the Massachusetts Bay Colony and elsewhere in New England.

Col. Dunbar also brought with him from England Robert Rutherford, a Presbyterian minister, as a chaplain for the fort at Pemaquid. Rutherford received a grant of the island portion of South Bristol which now bears his name. However, Dunbar's land titles conflicted with the claims of Massachusetts authorities and with those

of the Proprietors of the Pemaquid Patent who used their influence to secure his dismissal. Dunbar ultimately returned to England and Rutherford abandoned his grant and relocated to the St. George area. (Warner 2006, p. 2)

In the mid 18th century, settlement in the area was sparse. According to a 1751 map, the present day area of Walpole contained the houses of only seven families and a 1764 English census shows only 200 people residing in the combined areas of Harrington, Walpole and Pemaquid. (Warner 2006, p. 2) By 1772, however, populations in Bristol were sufficient to warrant the construction of three meetinghouses that year, two of which still stand. The Walpole Meetinghouse is located in the far northern part of Walpole, just off State Route 129. Harrington Meetinghouse is alongside the Harrington Road in Bristol. Both of these historical buildings are listed in the National Register of Historic Places and both are well maintained by non-profit organizations.

The sustained settlement of South Bristol in the last half of the 18th century followed a rural pattern common to an agrarian and maritime economy. Early settlers were attracted to the area by the prospect of cheap land and were primarily engaged in subsistence farming. The proximity of their land to the surrounding waters created opportunities for trade and for the relatively easy shipment of cash crops which included forest products, hay, fish, and in late 19th century, ice. The Town landscape which resulted from this pattern is one characterized by farmsteads, barns, stone walls and open fields along main roads, with large tracts of unfragmented forest between and behind them from which forest products could be harvested. Shore areas contained brickyards, docks, shipyards, and other structures for marine related uses.

After President Jefferson's Embargo, the Non-Importation Acts, and the War of 1812 badly damaged the area's trading economy; there was a shift in the Town's economic base. By the time of

Maine's statehood in 1820, fishing had become the major economic factor in the lives of South Bristol residents. As noted in chapter 1, the development at South Bristol's village and the rise of Rutherford Island as a population center can be traced to that time.

By 1900 summer colonies were developing on Rutherford and Heron islands. Year-round residents were becoming involved in meeting the needs of seasonal residents, including, at times, renting their own homes to the visitors. The service trade became a local industry. The remaining evidence of this is the large number of "cottages" on both islands.

Both islands have many traditional cottages with unsheathed inside walls, most always a fireplace, and a wood or kerosene stove in the kitchen. Some early cottages were ordered from the Sears & Roebuck catalog and delivered board-by-board on steamers. A few cottages were built elsewhere in Town, usually along the shore. Collectively, the cottages comprise an architectural heritage. Thus a seasonal population was established.

Once a seasonal population was established, more cottages gradually appeared along the Town's shores. During the first half of the 20th century the progression of these shorefront cottages was relatively slow, but their numbers increased as the century wore on. Over the past 30 years, the development pressure on shorefront properties has increased dramatically and continues to be unrelenting.

Historical population patterns are still evident throughout South Bristol. The rural landscape remains most visible along Route 129. The agricultural heritage is evident in the stone walls which once surrounded farm fields. The southernmost prominent stone walls are just south of McClintocks Hill. People who settled south of there were primarily involved in maritime trades, including fishing and boat building.

8.2 — Historical Resources

In 1978 Warner (2006) identified 221 South Bristol houses then standing which were built before 1940, nearly 100 of them prior to the Civil War. Many of the very early ones are still standing although a few, particularly along the shore, have been since torn down to make way for new homes, some used primarily in the summer. Map 1 shows the locations and dates of construction of these old houses as well as noting those which were gone by 2006.

National Register of Historic Places

South Bristol is fortunate to have four architectural resources which were nominated for and subsequently placed on the National Register of Historic Places: the Walpole Meeting House, the Sproul Homestead, the Thompson Ice House, and the Emily Means house.

The **Walpole Meeting House** [I,5]⁵, built by the town of Bristol in 1772, was placed on the National Register in 1976. It is significant that the meetinghouse remains “today in virtually unaltered condition” (NPS, 1976). The meetinghouse remains an excellent example of late 18th century New England houses of worship. It is still a place for summer worship services and weddings.

Of note is that there has never been electricity introduced to the building; occasional evening services are lit by candles. The meetinghouse remains “in perfect keeping with the times in which it was produced.” (NPS, 1976) The meetinghouse is now owned by the Town of South Bristol and well maintained by the Walpole Meeting House Corporation.

The **Thompson Ice House** [II,11] is the other non-residential structure in South Bristol on the

National Register. It traces its history to 1826 when Melvin Thompson began harvesting ice and was placed on the National Register in 1974. The present building was reconstructed in 1990 following appropriate procedures for reconstructing historic buildings and using as much of the original materials as possible.

There is no written record of an ice house having been built when harvesting began in 1826. It is unknown when the first ice house or the building which the current ice house reproduces was built. It can be assumed, given the expected deterioration from dampness-induced rot, that the building which many older South Bristol residents remember probably goes back no more than to the early 1900s. It is certain that it predates the end of World War II. Thompson Ice House was the last commercial ice harvesting operation in Maine.

The property now belongs to the Thompson Icehouse Preservation Corporation which harvests ice every February and stores it in the icehouse; the traditional ice harvesting is being carried on. The property was gifted to the corporation in 1987 by Herbert Thompson and his wife Gwendolyn. Herb Thompson was the last commercial operator of the business and a direct descendant of Melvin Thompson. In addition to maintaining the ice house and annually harvesting ice, the corporation has and is accumulating an extensive collection of traditional tools which are regularly used during the ice harvests.

The **Sproul Homestead** [I,63] is the first of two quite different homes in South Bristol on the National Register. In Town it is often referred to as Rote Farm, or “the Ruth Robinson place” after a long time owner. It is located on the west side of State Route 129 just above McClintocks Hill and was placed on the National Register in 1978.

The main house, built in 1815, is a two story Federal style building with two internal chimneys. Attached to the west is an earlier colonial cape

5. Brackets [] enclose references to the maps and tables in Warner (2006). Unless otherwise noted, construction dates are from Warner.

style house built in 1749. The main house was moved from the east side of the road in 1833 and attached to the cape, the cape becoming an ell (NPS, 1978).

The Sproul Homestead still serves as a private residence, and there is still a limited amount of agricultural activity carried on.

The **Emily Means House** [not in Warner] is situated on Birch Island off the east side of Rutherford Island, overlooking Johns Bay. Of the four National Register places in South Bristol it is the newest and in 1985 became the most recent addition to the Register.

Built in 1914, the house is a “rare example in Maine of a summer cottage in the Mediterranean style using stucco covered terra cotta tile.” (NPS, 1985) Miss Means retained Samuel R. T. Very of New York City to design the house. It is also important as the “home of Emily Means who was nationally known as an authority in horticulture and who, on the island, maintained extensive rock gardens containing rare species of plants.” (NPS, 1985).

The house is largely unaltered from its original construction and now serves as a private residence, owned by a retired couple and remaining well maintained.

Historically Significant Houses

South Bristol has many early period houses which still stand and which continue to serve as private residences. While two South Bristol homes have been listed on the National Register, there are many other houses which are as old or older and which have equal importance to the history, development, and architectural appearance of the Town. Warner (2006) describes many of these houses and the stories associated with them. Vincent (2003) provides some additional information dating back to the late 1800s.

One of the oldest houses in Town is located at Clarks Cove on the Damariscotta River and currently serves as a residence. It is the old cape

style dwelling located off of Clarks Cove Road at 21 Orchard Road. [I,38] This house was built by John Kent before 1751, replacing an earlier log cabin. John and William Kent, along with their families, arrived in Walpole in the 1730s after emigrating from Northern Ireland, with stops at Boston and Londonderry, New Hampshire. In 1746, John Kent was deeded the land on which both his and William’s house sit by the Proprietors of the Pemaquid Patent.

William Kent purchased part of John’s land and before 1751 built a Federal style house. [I,45] This well-maintained structure at 331 Clarks Cove Road is an outstanding example of American pre-Revolutionary architecture. The house has additional historic interest because in the late 1800s it served as one of several houses which were used to board workers at Clarks Cove Pond during the years that the pond supplied ice for the large commercial ice harvesting business run by the Bristol Ice Company and its successor the American Ice Company. (Warner 2006, p.27)

Another of the Town’s earliest houses [I,58] was built by a settler named George Clark from whom Clarks Cove takes its name. Clark moved to Walpole from Londonderry, New Hampshire prior to 1751 and built the large cape (now yellow) at 1169 Route 129, about a half mile south of the intersection of Clarks Cove and Harrington roads with Route 129 (Four Corners). The present owners have added to the property a small post and beam barn which was originally located behind the Col. Hall House in downtown Damariscotta. When the Hall House was removed to make room for the construction of the new Skidompha Library building, the barn was disassembled and reassembled at its present location.

At the top of the hill on Clarks Cove Road across from the Town Hall still stands a beautiful white cape surrounded by fields and stone walls with sweeping elevated views to the west and south. [I,53] The house was built by Mercy Goudy and her sons after 1764, after Mercy’s

husband Amos drowned in a mill pond located on the property. Mercy and Amos had emigrated from Marblehead, Massachusetts and arrived in Walpole in 1760. The property on which this cape stands was originally part of William Kent's land. Amos Goudy was wealthy by the standards of those times and also owned property in York. The inventory of his estate provides insight into the lifestyle of the times and includes farm animals, farm tools, mechanic implements, six guns, a barn valued at £13.65 and his log house valued at only £1.45. Apparently, Mercy and Amos lived in the log house, which no longer stands on the property, prior to Amos' death in 1764.

A cluster of four early houses of historic interest was situated on the Harrington Road east of four corners either on or in close proximity to the road itself. Three of these houses remain in their original locations and the fourth has been moved. According to Warner (2006), the first three of these houses were the homesteads of the pioneer farmers in this area of Town, and the fourth was built by the son of one of those pioneers.

The oldest of these four homesteads [I,56] was built in the 1780s by Robert Porterfield who served in the Continental Army during the Revolutionary War and settled in Town with his wife Hannah Young after his service was over. This small cape is located on the Harrington Road and is one of a small number of "hall and parlor" capes in Maine. When acquired by its current owners this old house had fallen into poor repair and is now undergoing restoration.

The next of these old homesteads was built on the nearby Carl Bailey Road by James Morton, Jr. in the 1790s. [I,55] This property is sometimes called the Carl Bailey Homestead after its early owner and for whom the road is named. This early Federal style home is in good repair and remains a private residence.

The third pioneer homestead and farm [I,54] was located at the northeast side of the

intersection of the Harrington Road and State Route 129 and was built in 1802 by William McIntyre, Jr., another Revolutionary War veteran. McIntyre had occupied an earlier log cabin at the same site. According to Warner (2006), McIntyre was called "Squire McIntyre" after being appointed a justice of the peace in 1799. The house passed to McIntyre's son, Captain William McIntyre, whose schooner carried produce and bricks made on the property to Portland and Boston. The house is in excellent repair and several years ago was moved from its original location to nearby property located at Clarks Cove.

The fourth [I,57] house in this cluster of homesteads is located on the Harrington Road southeast of and next to the Robert Porterfield house. This large farmhouse was built in 1843 by Robert Porterfield's son William, who had inherited the property in 1815. It was occupied by William and his successors continuously until 1919. Robert, his wife, William, and their respective families are all buried in the nearby Harrington Meetinghouse cemetery.

This farmhouse has recently been restored by its owners who also own the Robert Porterfield House next door. The farmhouse is a good example of early Greek Revival architecture and occupies high ground overlooking large fields which front on the shores of the Eastern Branch of Johns Bay. Along with those at Clarks Cove and those from the West Side Road overlooking the Damariscotta River, views from the Harrington Road at the site of this farmhouse are among the most beautiful in the area.

There are many other historical homes in South Bristol. A few worthy of mention are the Bedfield Plummer, Jr. house [II,1] built c. 1810; the Brannon-Bunker Inn [I,9] built in 1815, an example of New England continuous architecture (connected buildings); the Walpole Meetinghouse Manse [I,3] built in 1783; Clarks Cove Farm built in 1760 in Warren and moved in the 1960s to the Ridge Road in Walpole; the Samuel Otis house

[III,41] built in 1788; and the Solomon Cavis home [III,23] built in 1829. All of these homes are privately owned and in good repair.

Commercial Buildings and Remnants

The Thompson Ice House was one of two commercial ice harvesting operations in South Bristol, the other being the **American Ice Company** at Clarks Cove in the late 1800s and early 1900s. The latter was a larger operation, harvesting ice primarily for shipment south in sailing vessels. The only physical evidence remaining from the Clarks Cove operation are a couple of eye bolts in ledges that anchored the conveyer which moved ice to large storage sheds, a portion of the conveyer chain, and what is apparently part of the stack from the boiler for the steam engine which powered the conveyer. As previously noted, however, there remain at the Clarks Cove site several houses where workmen employed at this once major commercial site boarded. (Warner 2006)

It is worth noting that ice harvesting was a major industry on the Kennebec River in northwestern Lincoln County and adjacent Kennebec County between 1870 and 1920 when the industry collapsed. Kennebec River ice was harvested for shipment in schooners to the south, both to lower latitudes in the United States and islands in the Carribean. (Everson, 1970).

Near the end of Goudy Pasture Road can be found the remains of the stone foundation of what once was likely a **water-driven sawmill**. It was built in 1818 by John and Amos Goudy. The last record of its existence was in 1873. (Committee conversation with owners of the land who recently researched land records.) The water source for this mill was Orr's Meadow Brook which originates at the high ground north of Split Rock Road, runs in a generally southwesterly direction through a large wetland, crosses Route 129, and meanders southwesterly before entering Clarks Cove Pond.

Further downstream, at the southern end of

Clarks Cove Pond above the existing dam at the outlet, are the remains of a rock dam which may have also been the site of a mill. There are also the stone remains of a tidal mill on the Damariscotta River side of the culvert that drains Clarks Cove Pond. This tidal mill dates from the 1760s and was initially a grist mill and later may have been a lumber mill.

Much of the Town's commercial history centers around South Bristol Village at the Gut which separates the mainland from Rutherford Island. Once mostly commercial and part of a working waterfront, a number of these buildings have been converted to private residences. The mail survey (Report, 2005) contains numerous remarks objecting to this change of character. An interesting and comprehensive narrative and photographic account of many of these village buildings can be found in Vincent (2003).

The largest building in the Gut area dates to World War II and is the imposing building shed of the historical **Gamage Shipyard**. This building dominates the Western Gut and both the building, and the shipyard which dates back to 1926, have a history of producing fishing draggers, yachts before WW II, minesweepers for the Navy during the war, and towards the end of boat building in 1978 several sailing vessels for the cruising trade.

The **last three schooners** were the nearly identical 95 ton schooners *Bill of Rights* (1971) and *Harvey Gamage* (1973), and at the end schooner *Appledore* (1978). All three schooners are still sailing, *Bill of Rights* on the West Coast and *Harvey Gamage* and *Appledore* in New England, and off season in the Carribean.

The shipyard property is now a marina and the old building shed, since 2006, is used only for occasional storage of pleasure boats during the winter. The shop building has been falling into disrepair and its future is uncertain.

No significant historical buildings other than the Gamage Shipyard shop building are known to be falling into disrepair.

No mention of South Bristol's commercial buildings would be complete without recalling its boardinghouses and hotels. The most prominent of these were located at Christmas Cove and near the Gut. They included the Holly Inn (three iterations), the Russell House (Ware House, Coveside Inn), the Thompson Inn, and the Summit House. The guest trade in South Bristol was in full swing by the 1880s and continued into relatively modern times. Vincent (2003) provides an excellent discussion of these hotels and boardinghouses. Most of these structures including all of the hotels have been torn down or lost to fire. The most spectacular fires were at the various Holly Inns and numerous photographs exist of those fires.

Likewise, there are no obvious remnants of the menhaden (pogy) fishery, although there were once three processing factories in what is now South Bristol. Woodard (2004) says that by 1878 Bristol had become the center of Maine's menhaden industry. "Seven hundred people were employed in Bristol's eleven rendering factories and twenty-nine inshore menhaden steamers throughout the spring and summer."

Schoolhouses

Many of the stories and local lore of South Bristol involve its old one room schoolhouses. The Town is fortunate that many have survived to the present day, most as private residences. Many residents of South Bristol have memories of having attended these schools. The best sources of information regarding the old schools are Averill (2001) and Vincent (2003).

Starting at the northern border of Town, the first of these schools was called the **Hunter School** (or Upper School) and is believed to have been built in 1815. The structure is now located on the east side of State Route 129 at number 40, just south of the intersection with Bristol Road (Route 130). It formerly was located right at the intersection. An ell has been added to the left side of the original structure and it now serves as an

attractive and well maintained private residence.

The next school along Route 129 was the **Gladstone School**, which is also believed to have been built around 1815 and rebuilt in 1957. This lovely Greek Revival structure occupies its original location on the southwest corner of the intersection of Route 129 with Clarks Cove Road, near the golf course. This former school building now serves as a private residence. According to local legend, the teacher at the Gladstone School went off to fight when the Civil War came and 17 of his students volunteered to fight for the Union in response to President Lincoln's "first call" in 1861. This wholesale departure of teacher and students caused the school to shut down for the duration of the war.

The next schoolhouse heading south was the **Four Corners School** and, as its name implies, it was located near the intersection of the Clarks Cove and Harrington roads with Route 129. This schoolhouse continues to exist, but has been moved to a location north of the Ridge Road's intersection with Route 129. An addition has been added to the front of the structure which now serves as a residence.

Proceeding south, the last old schoolhouse on the mainland is the **S Road School**. This schoolhouse, whose official name became later the **Roosevelt School** in honor of President Teddy Roosevelt, was built about 1860 when the then Supervisor of Schools of the Town of Bristol described it as "... a new and commodious house, built during the summer at an expense of six hundred dollars... the scholars here, after waiting so long, now have the best schoolhouse in town." (Vincent, 2003, p.101) The building is currently owned by the Town of South Bristol and is undergoing major architectural restoration by the South Bristol Historical Society. Furnishings are being acquired as they become available in order to restore the schoolhouse to its appearance during the 1930s. The S Road School closed in 1943 upon the death of the teacher. It never reopened due to lack of a replacement.

The southernmost old schoolhouse was on Rutherford Island and known as the **Lincoln School**, and sometimes as the Island School. The structure still stands alongside Route 129 and at present is a private residence. The school was built in 1898 as a single-story structure. Its second story was added later at an undetermined date, most likely after World War I. It served grades 1-12 until the new elementary school on the mainland opened in 1961. High school continued there for another two years until South Bristol closed its high school and began tuitioning its secondary school students to Lincoln Academy, a private academy in Newcastle. (Averill, 2001)

Before the Lincoln School was built, island children went to school in the building that is now known as Clugston's Barn, built in 1848. This structure still stands and sits across from the Union Church on property adjacent to the school. It is generally believed that this was not the original location of the building. (Averill, 2001)

The **South Bristol Elementary School** which opened in 1961 serves grades K-8. It is located on Route 129 near the Rutherford Library.

The Town Hall also served as a school from 1952 to 1960 and was known as the **Sarah Emery School** in honor of the longtime teacher at the S Road and Gladstone schools during the first half of the 20th century. As recently as 1971, kindergarten classes were held here and occasionally at other locations.

Although located on the Harrington Road on the Bristol side of the line, another old schoolhouse deserves mention since many South Bristol residents attended school there. This is the **McKinley School** which was built in 1857. This schoolhouse still stands and is located along the Harrington Road near its intersection with Bristol Road. After its life as a schoolhouse, the building came into the ownership of the Neighborly Club, a group of local ladies who used the building for many years and who dedicated themselves to helping their neighbors. When that organization

recently dissolved, its remaining members transferred the building to the Old Bristol Historical Society, a non-profit organization dedicated to preserving the artifacts, monuments, and history of the town of Bristol as it existed in its original composition. That organization maintains the building in good repair and uses it both for its regular meetings and for a lecture series each summer and fall.

Public Buildings and Churches

According to Warner (2006), "In 1876 James Harvey Goudy contracted for a substantial commercial building to be erected at the top of the hill on the Clarks Cove Road. Known as '**Centennial Hall**' from the date of its construction, it contained a general store and post office on the ground floor and a community hall on the second."

South Bristol was set off from Bristol on July 1, 1915. Warner (2006) reports that "The first town meeting of the new Town of South Bristol was held in Centennial Hall at Clarks Cove." A photograph from July, 1915 reproduced on the cover of the 1981 Town Report and elsewhere shows the sign on front which reads "Town Hall South Bristol." Over the years selectmen held their meetings in the **Town Hall**, but officers such as the clerk, treasurer, and tax collector traditionally worked from their homes.

By the 1980s town officers had moved their operations from their homes to the Town Hall where they remained until the new **Town Office** was built in 1998. Until the new elementary school opened in the fall of 1961, annual town meetings were held in the large hall on the second floor of the Town Hall. The last town meeting held in that large hall was a special town meeting which enacted a shoreland zoning ordinance on a warm August evening in the early 1980s. The meeting went on for over two and a half hours and was attended by a standing-room-only crowd of year-round and seasonal residents. (*Moderator's recollection*)

An article in the *Damariscotta Herald* on September 5, 1918 confirms that the town hall is the building once known as Centennial Hall.

When serving actively as Town Hall in earlier times, it also was used for card playing, dances, plays, and skits. Judging from older photographs, the building continues to look much the same as it did in earlier times. The rear section with a recent addition is used as a fire station by the South Bristol Fire Department. The structure is kept in good repair by the Town and recently received a new metal roof.

The new **Rutherford Library** building located immediately north of the elementary school was completed in 1998. Although new, it is already a part of South Bristol's history. The current building replaced the cramped quarters of the 1930s Federal government-built bungalow which now houses the Historical Society.

That bungalow was built by the Civilian Conservation Corps (CCC). The location on Rutherford Island was chosen because the Town owned the land and the building in back (to the east) was then the Town's fire house.

Thus, three relatively modern buildings, the elementary school, the town office, and the library have recently replaced older buildings. Yet, the three replaced buildings are preserved and still serving the Town.

Union Hall on Rutherford Island's Middle Road has a long history of public use. Built in 1871 by the Masonic Lodge Association as a "public hall for the different lodges, Masonic, Eastern Star, Red Men, Boy Scouts, etc." (Gamage, 1923), over the years this hall was used for basketball games, dances, high school plays, bazaars, public suppers, and traveling entertainment. The exterior of the building and the interior first floor retain their original appearance while the second floor has been remodeled. It is now a private seasonal residence.

Another building with a public history is the

Federal style home south of McClintocks Hill at 1562 State Route 129, overlooking Poorhouse Cove. It was built ca. 1810 by Bedfield Plummer, Jr. on a farmstead overlooking the body of water now known as Poorhouse Cove. (Warner, 2006) In 1873 William T. Kelsey became **Overseer of the Poor** for the town of Bristol and purchased the Plummer farmstead. Kelsey resided in this house; the poor lived in another structure on the property which has been gone for many years. Two large ash trees, known locally as "the marriage trees," stood in front of the house. One tree remains, the other was recently removed.

The three **church buildings** in South Bristol all predate 1900: the Walpole Meetinghouse (1772); the Walpole Union Church (1886); and the South Bristol Union Church on Rutherford Island (1898). At least one deed from 1895 for a house on Middle Road near the Union Church mentions a church at or near the location of the current Union Church; but research has yet to come up with any details. It is generally believed that the present Union Church was built in 1898 and that the current congregation was gathered in 1902. Gamage (1923) states, "The Union Church Building at Rutherford's Island was dedicated August 6, 1898."

Vincent (2003) says that Union Church was built in 1887 and incorporated in 1898. She also recounts that for many years school graduation ceremonies were held in Union Church.

The **Casino** of the Christmas Cove Improvement Association was built in 1902, two years after the CCIA was founded. (Wells, 2000) Since then it and the association have been centerpieces of summer social activities at Christmas Cove. The tennis courts and swimming pool have been fixtures since the start of the association.

It must be noted that CCIA membership includes both seasonal and year-round people and that the Association has historically supported the Town in many ways.

An Historic Schooner

On April 28, 1871 the schooner *Lewis R*



Lewis R French, ca. 1890

French was launched at Christmas Cove. Built by two brothers, she was named for their father. The *French* is the only remaining schooner built in Maine during the 19th century. This is a shame, since Chapelle (1935) says, “The movement

of wooden ship-building away from New York in the 1860s made Maine supreme in American shipbuilding in the ‘70s and ‘80s.”

For about 100 years, until 1971, she carried freight along the coast of Maine. Lumber, bricks, granite, and lime in her early days; later fish; and in the end whatever cargos could be found.

After 1971 she spent three years being rebuilt to bring her hull back to fully sound condition. At the same time she was outfitted for passenger carrying in the tourist sailing trade. She is still without an engine, relying on the wind and when necessary a push from her powered yawl boat. Sails and anchor are still hoisted by hand.

On December 4, 1991 the *Lewis R French* was declared a **National Historic Landmark** by the National Park Service. She now sails out of Camden carrying passengers along the Maine Coast, a proud schooner – still part of South Bristol’s, Maine’s, and America’s proud shipbuilding heritage.

Historical Remnants

Many other points of historical interest such as monuments, cemeteries, landscapes, and scenic

viewsheds are scattered throughout South Bristol and shown on Maps 7 and 15.

Cemeteries: South Bristol has nine known cemeteries. The location of each is identified on Map 7. At least one of the cemeteries in Town contains the remains of veterans of the Revolutionary War. The West Bristol Cemetery located just south of the Wawenock Golf Course contains remains of many former residents who either fought in or died in the Civil War. For anyone studying Town history by researching the occupants of local cemeteries, it would be wise to visit the cemetery at the Harrington Meetinghouse in Bristol since that cemetery contains many of the Town’s early settlers and their families, including a number of Revolutionary War veterans.

The historical society has done research work regarding each of the cemeteries and the graves therein.

Stone Walls: Another historical resource of our Town is the many stone walls one sees while driving through the countryside. Some are readily visible from Town roads, particularly in the areas of the Harrington, Clarks Cove and Carl Bailey Roads. Far less obvious are miles of stone walls which can be found running through the interior of many properties, particularly north of McClintocks Hill.

Not generally known is that, although it may now be forested or developed, South Bristol has within its borders much land (nearly 40%) which has been identified by the State of Maine as “prime farmland soils” and “soils of statewide significance.” These are shown on Map 10.

In the 1800s more land in South Bristol was cleared for agriculture than is now apparent. As fishing became a more important economic factor to the Town, farming became less important and fields and pasture were allowed to revert to woodlands. As a result, many stone walls formerly visible in fields and pastures are now located in wooded areas and not easily visible from Town roads.

Granite Quarries: As noted in chapter 3 on page 15, there are a few abandoned granite quarries within the Town as well as a number of “prospect pits,” probably dug for possible feldspar mining. Examples of both can be found at Plummer Point, a preserve on the Damariscotta River.

Lobster Pounds: There are two former lobster pounds – created by damming coves – in South Bristol. The first of these is located at High Island, by the causeway at the south end of the island. The age and origins of this structure are as yet undetermined. The second of these pounds is located between Birch Island and Rutherford Island. This lobster pound was operated by the James S. Hook Lobster Company of Boston until about 1976 and is believed to have been built just after WW II.

Historical Landscapes: It is obvious that the physical character of South Bristol is defined in part by the scenic landscapes. Beautiful scenes of fields, forest and water can be easily seen from public roads. The 1992 Comprehensive Plan identified certain views and viewsheds as especially important and scenic. The scenic landscapes, both from land and water, are identified in chapter 6 and on Map 7. They are not only scenic in nature but also an important part of the Town’s historical resources.

Some of these landscapes are threatened, but most remain intact. However, an increasing number of visible houses have been built since 1992 in the areas of Goudy Meadow, Maine Coast Orchards, and along the entire length of

State Route 129 between the turnoff from Bristol Road and the intersection at Four Corners.

Ironically, an even more aggressive pattern of residential waterfront development has had less visual impact on the Town from the vantage point of its public roads. The appearance of these new homes from the waters surrounding the Town has had a visual impact, but that impact has been somewhat softened because of the setback and vegetation management restrictions of the Town’s Shoreland Zoning Ordinance. However, the many new driveways leading to shore land homes have a negative environmental impact because the long driveways from Route 129 to waterfront areas have the effect of fragmenting, and thus degrading, previously unfragmented habitat blocks and of increasing the potential for erosion.

We have previously stated that South Bristol has the look and feel of a small fishing village located in the midst of a rural landscape. The Town’s rural character is not defined by a single viewshed or landscape, but rather by the totality of visual images which a person receives when driving the entire 12 mile length of Route 129 from the Town’s northern border to the south end of Rutherford Island. The same can be said of the visual experience of driving the Harrington and Clarks Cove and S roads. The overall impression of “ruralness” is created by a visual absence of development. And the entire landscape of the Gut with its views from its hills and docks is the core of our maritime village and accounts for its character as a fishing community.

8.3 — Archeological Resources

Obvious archeological sites are few in South Bristol. The Maine Historic Preservation Commission has surveyed 52 prehistoric archeological sites in South Bristol. Most are shell middens. Chapter 1 on page 1 describes the importance of what is now South Bristol to the

Native Americans, not only as part of their inside passage along the coast, but also as a place to camp as evidenced by shell middens. The most prominent in South Bristol are on the shore of Poorhouse Cove at the eastern end of the portage from Seal Cove on the Damariscotta River.

Whether or not this portage was used later in historic times is questionable, but it is known that there was once a tavern in the area of the portage.

Shell middens provide important archeological evidence of pre-historic life along the coast. (Bourque 2001) His extensive discussion of the Damariscotta oyster shell heaps has relevance to South Bristol.

The Maine Historic Preservation Commission has identified and surveyed 28 historical archeological sites from the 18th, 19th, and 20th centuries which include brickyards, brig/schooner/steamer wrecks, ice works, grist mills, shipyards, and quays.

Research to date has focused on the coastal areas. Future surveys are necessary to document the inland agricultural, residential, and industrial sites related to early Euro-American settlement of the Town.

Map 9 shows the archeological sites in South Bristol which are known to the Maine Historic Preservation Commission. These sites are not identified with precision, but in most cases are indicated as 500 meter squares. This lack of precision – confidentiality by the Commission – is

intentional and is designed to prevent vandalism and to prevent amateur artifact seekers from inadvertently destroying the potential historical and archeological values of the sites.

In South Bristol the potential for destruction of important archeological sites is more than a theoretical concern. Map 9 shows that the Town has many areas of documented historical value as well as many sensitive areas. Sensitive areas are areas of potential historic value that have not yet been surveyed by a professional archeologist.

Since South Bristol presently has no ordinance or regulation for reporting the vast majority of excavation or construction projects, there is no mechanism in place which would enable the Town to notify the Commission of planned activity in either a sensitive area or in an area of documented historical importance.

If South Bristol is to preserve these important resources it is obvious that there should be a mechanism in place for monitoring construction and earth moving activity in order to prevent the unwitting destruction of historic and/or archeological sites.

8.4 — Historical Society and Preservation

The **South Bristol Historical Society** is actively working to acquire historical material and catalog it. Housed in a 1930s Civilian Conservation Corps built bungalow on Rutherford Island which once served as South Bristol's library, the society's volunteers have acquired and continue to add to an impressive collection of material related to the Town's history. While the society's efforts have been primarily directed to acquisition of important memorabilia, it is commendable that it has taken on the task of restoring the Town-owned S Road School.

Each year the society sponsors several public programs on various aspects of South Bristol

history, open to the public and usually well attended. Among its notable accomplishments are the publication of two books. Ellen Vincent's *Down on the Island, Up on the Main* (2003) captured recollections of many residents and old photographs before they were lost. Publication of Landon Warner's *A History of the Families and their Houses* (2006) made accessible to the public Warner's manuscript which had been "only a box of papers in the Society's back room."

Financial support for the society comes from members' annual dues, sales of its two books, gifts and grants, and an annual appropriation from the Town, voted each March at town meeting.

8.5 — Recent Trends

Over the past 20 years there has been a slow but steady diminishment of the Town's rural appearance, primarily because driveways and newly constructed residences visible from public roads are filling in the open spaces formerly occupied by open fields and forests. If this trend continues, the Town will not retain its rural character but will begin to look increasingly suburban. This trend is contrary to the people's expressed desire to "keep South Bristol the way it is." (Report, 2005)

South Bristol village has retained its appearance as a small fishing community. This is largely because the area of the Gut still has its old buildings, the swing bridge, lobster boats at their moorings, an occasional trawler, docks, and piles of lobster traps, buoys and fishing gear. What is less apparent is that a number of the old commercial buildings in the village have been converted to private residences. The 2003 mail survey commissioned by the Comprehensive Planning Committee contains numerous remarks objecting to this change in the character of the

village. (Report, 2005)

At some time there should be consideration of designating the South Bristol Village as an Historic Preservation District. The village still has the look and feel of a small, coastal fishing village – which it is.

South Bristol has a Shoreland Zoning Ordinance which is periodically amended. It is anticipated that further restrictions will be placed on land use on the shores of the Gut; essentially to retain uses to those related to traditional marine activities.

Town-wide protection of historic and archeological resources is needed. The subdivision ordinance requires checking with the Maine Historic Preservation Commission regarding any known resources in the area of a proposed subdivision. Except in the shoreland zone there are no other governing ordinances. We are proposing that protection for such sites be included in a future land use ordinance.

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Historical and Archeological Resources Policies and Strategies

It should be the policy of South Bristol to conserve its historic and archeological resources to the fullest extent practicable. The Town will attempt to prevent the destruction and promote the preservation of those resources by enacting appropriate procedures and safeguards in ordinances to be enacted and by modifying existing procedures where necessary.

Policy	Implementation strategy	Responsible entity		
		Estimated cost		
		Completion date		
Protect existing historical and archeological resources	For sites with identified potential for containing historical and/or archeological resources, as shown on Map 9 or other documents from State agencies, require by ordinance all property developers and/or owners to notify the Planning Board and Maine Historic Preservation Commission of any planned development within such sites before site or construction work is begun.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.		
	For all sites, require the developer or owner to look for and identify historical and archeological resources, to take appropriate measures to protect the resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation, and report to the South Bristol Historical Society and the Maine Historic Preservation Commission.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.		
	By land use ordinance, require the Planning Board and Board of Appeals to incorporate Map 9 of this plan, and information provided by the Maine Historic Preservation Commission, into its review process.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.		
	Whenever artifacts are found, require by ordinance that they be left undisturbed or conserved appropriately as determined by the Maine Historic Preservation Commission.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.		
	Wherever possible, identify and protect stonewalls and old house sites (including cellar holes) of historic significance as determined by Maine Historic Preservation Commission.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.		
	Assess the desirability of designating certain areas of South Bristol as historic districts.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Planning Board</td> </tr> <tr> <td style="text-align: center;">None</td> </tr> <tr> <td style="text-align: center;">2015</td> </tr> </table>	Planning Board	None
Planning Board				
None				
2015				

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect historical scenic views	Encourage the preservation and protection of landscapes and historic scenic views as shown on Map 7 and table 6.3 as they are of historic value. This could be accomplished by an educational effort.	Planning Board \$1000 2012
	Protect the Town’s scenic and historic views from the vantage points of the waters of the Damariscotta River, Johns Bay and its branches, and the Gulf of Maine. This is already partially accomplished by restrictions in the Shoreland Zoning Ordinance limiting construction close to the shore.	Planning Board Minimal 2012
Document resources	Work with and assist the South Bristol Historical Society in its preservation work.	Selectmen \$500 is appropriated for the Historical Society each year at Town Meeting Present practice
	Work with the South Bristol Historical Society and the Maine Historic Preservation Commission to assess the need for, and if necessary plan for, a comprehensive community survey of South Bristol’s historic and archeological resources.	Selectmen & Historical Society \$500 2014

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Chapter 9 — Agriculture and Forestry

*A town is saved, not more by the righteous men in it
than by the woods and swamps that surround it.*

~ Henry David Thoreau (1817-1862)⁶

Neither agriculture nor forestry is now of great economic importance to the Town of South Bristol. There are no large commercial agricultural or forestry operations in South Bristol. Agricultural and forestry activities have been reasonably stable for well over a decade and are not expected to change in the near future. These historical activities may experience a revival as the demand for locally grown food increases and wood lot management plans required by the tree growth tax incentive are implemented.

9.1 — Current Activity

A few small agricultural operations still exist in South Bristol. The largest is an apple orchard which is a part time operation for the owner. Another orchard in Town has not been active for over a decade. A small farm grows some vegetables and sells them at its farm stand. None of these operations is the primary source of income for the owners.

There has been talk of another small farm which will go into vegetable sales but will not grow the produce at the farm. Two local farms cut and sell some firewood.

The last farm which provided primary income for its owner was a dairy farm which closed down about two decades ago. That farm sold its milk locally, primarily delivering it to the homes of its customers.

The small amount of farming in South Bristol does not have a significant impact on the local economy. Most residents buy all of their agricultural products from grocery stores, although there are a number of seasonal farm stands in Town and farmers' markets in neighboring towns.

With no significant commercial farming in South Bristol and little forestry activity, new home construction has not had any material effect on those activities for a few decades. In a few instances, the construction of a new home has resulted in a house lot being cleared in the edge of a forested area.

There are some large fields in Town which could probably be brought back into hay production. Horses are becoming increasingly popular in Maine and we have about 25 in South Bristol. These horses contribute to the economy of the area if not directly to the Town. Hay and grain are good businesses in the region. There is a big need for large animal veterinarians, but very few are available. Travel time makes their services very costly. Other horse related businesses such as farriers, saddle, harness, and tack dealers, etc. operate in the region. A recent study estimates that horse related activities generate \$364 million a year in economic activity in Maine. People who move to Maine and want horses buy farms, which helps preserve farmland and open space.

6. From *Walking* (1862); in *The Writings of Henry David Thoreau*; vol. 5, p. 229; Houghton Mifflin; Boston; 1906.

9.2 — Agricultural Land

Only four properties in South Bristol are taking advantage of the open space tax exemption, the same as in 1997. The total acreage involved is only 206 acres. No farms are participating in the agricultural tax incentive program.

The number of farms in Maine has remained relatively constant from 1995 to 2005 as has their average size of about 190 acres. The average size has not fluctuated by more than ten acres during that period. At the same time the value per acre of the farmland has increased by 69% which makes selling farmland an attractive option for the owners.

Table 9.1 shows that farming is still active in Lincoln County. The number of farms has actually increased in the county while the average size has gone down.

More than a third of the land area of South Bristol is covered with soils well suited for farmland. Twelve percent (994 acres) of the Town's 8397 acres is classified as prime farmland soil and 26% (2216 acres) is classified as soils of statewide importance. Of the total 3210 acres, just over two thirds (2176 acres) are now forested.

These soils are shown on Map 10 (Farmland Soils) as are the areas of those agricultural soils which are now forested.

The U.S. Department of Agriculture (USDA) defines **prime farmland soil** as the land that is best suited to producing food, feed, forage, fiber and oilseed crops. The criteria for determining

and delineating this land type are determined by the USDA Natural Resources Conservation Service. Generally, prime farmland has soil qualities, growing seasons, and moisture supplies needed to produce a sustained yield of crops while using acceptable farming methods. Prime farmland produces the highest yields and requires minimal amounts of energy and economic resources, and farming it results in the least damage to the environment. Prime farmland is a limited strategic resource; no more of it is being made.

Farmland soils of statewide importance are also significant for the production of food, feed, fiber, forage, and oilseed crops. Criteria for defining and delineating this land type are also determined by the USDA Natural Resources Conservation Service. Generally, farmlands of statewide importance include those which are nearly prime farmland and which can economically produce as high a yield as prime farmlands if conditions are favorable.

Farmland is the land that is more likely to be developed because it is usually flat and more easily built upon. A large portion of this land has already been developed to some extent because it is in small pieces and scattered throughout the Town. This is particularly true in the southern part of Town. Map 10 includes the dwellings and other buildings in Town, showing where the farmland soils have been built upon. Most of the prime farmland is along State Route 129, the main

Table 9.1 – Farmland in Lincoln County

	1974	1979	2006
Number of farms	99	103	292 (15 organic)
Total acres	29,210	25,920	30,618
Average size (acres)	487	123	105
Total crop land (acres)	10,595	11,010	11,137
Total hay (acres)	6,063	6,409	6,790
Number of orchards	71	117	16

Source: Maine Department of Agriculture

Note: Total acres not accounted for are either pasture or forest.

road in Town. Although there are some large areas in the northern or Walpole area, most of the prime farmland soil in the southern part of Town is in very small pieces. A lot of this land has already been broken up into single dwelling lots and built upon. A small amount of this land is in fields, but most of it is forested at this time.

It is worth noting that the early settlement of Walpole, as evidenced by many old houses, was along the best farm land soils. Prior to the early 1900s there were many working farms there. The many stone walls testify to locations of previously cultivated areas, but some now in grown up woods.

Although agricultural land and forest land have economic value, this land has many other values as well. This land is what gives the Town its rural character. Most people in Town who have given input said they want to keep the Town as it is. We cannot do this unless we are willing to preserve some of the land as it is. This holds true especially for the land that one can easily see when driving through Town. The fields and farms and woods are what give the Town its character. Selling small pieces of land along the roads and building houses within sight of the roads will have an effect which is opposite what most people said they desire.

Active farms contribute more in local property taxes than they require in municipal services. Farms do not require schools, roads, utilities and emergency health and safety services to the extent residential areas do. National data show that for every dollar of tax revenue collected, farmland produces an average surplus of 64 cents. Residential uses of land consistently cost more for municipal services than the tax revenue they produce, requiring an average of \$1.15 in services for every dollar paid in taxes.

Farms and forest land are also important for tourism which brings revenue into the State and local areas such as South Bristol. Farms contribute greatly to Maine's many fairs which

attract tourists as does our foliage in the fall. Farms provide opportunities for family outings such as picking strawberries, blueberries, apples, and around the holidays pumpkins and Christmas trees. Farm and forest land provides forage and habitat for wildlife and thereby provides opportunities for hunting, fishing, hiking, cross country skiing, snowmobile riding, ATV riding, horseback riding, and photography. Wildlife photography is a growing activity. Watching the wildlife is popular in Maine with the abundance of moose, deer, birds and other wildlife. All of these recreational activities contribute to the State and local economies.

Farm land and forests also supply and protect water resources by preventing flooding, and providing ground water recharge. These areas also slow and filter runoff before it flows into streams, rivers, and groundwater aquifers. This subject is covered in depth in chapter 4 of this Plan. These lands are not now protected.

Farms and forests contain ponds, streams, wetlands, and vernal pools all of which provide important habitat and breeding grounds for a diverse array of fish, amphibians, waterfowl, and other wildlife.

Farms, fields, and forests provide a sense of peace and tranquility instead of the hectic crowded feelings people may get in some other towns and urban areas. Maine's back roads and small towns like South Bristol offer travelers some of New England's finest scenery.

The Town must be careful to not encumber farmers with rules against farm stands, signs, and activities necessary for successful operation of farms. The Town should do whatever is necessary to become farm-friendly.

As time goes on, climate change may cause small scale vegetable farming to become profitable. Should this happen, South Bristol has an abundance of land appropriate for farming, land which could easily be brought back into production if it has not been built upon.

9.3 — Forestry in South Bristol

Although South Bristol is now mostly forested, there are no large commercial tracts of forest in Town. About 95% of the soil in Town is rated either high or medium for productivity for growing trees. Thus, forests in South Bristol are considered a renewable resource. There are some rare American chestnut trees in South Bristol along with abundant red and white oak, spruce, fir, pine, birch, and beech.

At present, for tax purposes 779 acres in Town are in tree growth. The owners receive a tax benefit and most have a forest management plan prepared by a licensed forester.

Tree harvesting in South Bristol in the past has been on a relatively small scale and this is unlikely to change in the near future. Harvesting is more likely to happen because it comes due as part of a forest management plan, and sometimes for economic reasons. (Land in tree growth is required to have a management plan which, among other things, requires some periodic harvesting.) There are several diseases affecting different species of trees. These diseases have some likelihood of necessitating harvesting to salvage lumber from affected trees.

Most harvesting in this region is of softwood which is used for lumber. Pine is probably the

most used in this area, Spruce is also valuable but not much large spruce is left. There exists a small market for hemlock for planks and boards. There are a few large sawmills in the region, and a number of small portable band saw mills which do custom sawing. There is a fair market for chips in this area. Most of the hardwood cuts in this area go to firewood. There is some call for birch for the spindle turning mills north of here. There once was a fair market for oak for lobster pots, but this market no longer exists as the traps are now all wire. Some oak goes to boards and planks for boat building and a little for things like grade stakes.

Clear cutting does not seem to be a problem in South Bristol. When there are clear cuts they are small and mostly for the purpose of harvesting trees rather than clearing for sub divisions. South Bristol has averaged four timber harvests per year since 1993 as shown in table 9.2.

Most harvests have been selective cuts with few clear cuts in recent years. The preponderance of harvests in Town has utilized all of the wood cut. Larger logs are used as saw logs and transported to mills in the area to be sawn into lumber. The remaining tops and small trees are chipped and sold for either biomass fuel or pulp for local paper and wood products mills.

Table 9.2 – Recent tree harvests in South Bristol

	Selective harvest (acres)	Clear cut (acres)	Total harvest (acres)	Change of land use (acres)	Number of harvests
1993	54	0	54	0	4
1994	44	0	44	0	3
1995	33	0	33	1	3
1998	77	0	77	0	4
1999	135	0	135	0	6
2001	42	0	42	0	3
2002	24	1	24	1	3
2006	2	2	2	2	1
2007	55	0	55	0	2

Source: Maine Department of Forestry

Note: Above years are the only recent data available.

After forest land has been harvested, it is appropriate to replant species which are native to the area and avoid invasive species.

Land use patterns in South Bristol are contributing somewhat to loss of forested land, but not at an alarming rate. Most development in Town is for single family dwellings that are on the main roads. This creates adverse effects in that it tends to break up the large blocks of wooded areas that provide wildlife habitats. It also takes away from the rural look and feel of Town.

Many houses in Town are built along the water with access from the main road which runs down the center of the peninsular. The resulting long access drives and side roads tend to fragment some larger tracts of forest.

The only ordinances which address building construction in South Bristol are the Shoreland Zoning Ordinance and the Subdivision Ordinance. This matter and the need to address construction town-wide will be covered in chapters 19 and 20.

There is an ongoing attempt to set aside open space through donations of land and conservation easements to the Town and preservation entities. A number of entities are working in Town and several areas have already been protected. Some landowners have established conservation easements on all or part of their land, thereby protecting it from development. For more detailed information see page 76 in chapter 6 under protected land.

Many towns have tried to address sprawl by creating ordinances which have relatively large minimum lot sizes. It has been found that this does not work and can exacerbate the problem by breaking large areas into smaller pieces which are too small to do anything with in the way of conservation or forest management.

New ideas are emerging all the time such as cluster development where a development clusters houses on small (e.g. $\frac{3}{4}$ acre) lots and keeps part of the land for open space that can be managed

and enjoyed by all residents in the project.

Preservation of land must be an ongoing concern for the Town of South Bristol.

Forested areas in the northern end of Town should get special consideration. The two areas this plan refers to as Forest North and Forest Central (Map 12) are especially important as the only large unbroken forested areas left in South Bristol. If land in these areas becomes available for purchase, the Town should consider purchasing those lands if at all possible. Any chance to buy conservation easements should also get serious consideration. Encouraging landowners in these areas to consider putting land into tree growth or the open space tax exemption programs would help the owners save on taxes and at least preserve the land on a temporary basis.

The Maine Department of Forestry provides services to both the Town and individual landowners. Foresters provide advice and help in managing forested land. Forest rangers can provide advice regarding fire protection and invaluable help to fire departments should a woods fire occur.

Since forested land is not commercially harvested extensively in South Bristol, there is a build-up of naturally occurring tinder that poses a potentially significant fire hazard. This tinder results from dead and storm-damaged limbs and trees and from natural progression of plant species as the forest matures. Removal of this tinder and slash from small-scale harvesting, consistent with federal and State wildlife and forestry best management practices, would greatly reduce the potential for a significant forest fire in Town, while providing wildlife habitats. Should such a forest fire occur, access by emergency vehicles to suppress the fire can be delayed and difficult due to narrow width, dead-falls across logging roads or erosion gullies. Such delays could result in significant loss of forest and property that may be located within or adjacent to the forest.

Agriculture and Forestry Policies and Strategies

The goal of South Bristol shall be to safeguard its agricultural and forestry resources to the greatest extent practicable, and where reasonable to protect from development those agricultural lands which might be brought back into production.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Removal of tinder and upgrading of logging/wood/skid roads should be encouraged by the Town to preserve the forests that residents love and benefit from economically and recreationally and to control property losses that may result from a significant forest fire.	Incorporate in a land use ordinance requirements for areas immediately adjacent to structures to be cleared of tinder.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Incorporate in a land use ordinance requirements for logging and skid road construction/ improvement and slash and tinder removal/ management, consistent with wildlife and forestry best management practices, during wood lot harvesting activities.	
	Encourage the upgrading of logging/wood/skid roads in a manner that improves water quality and appropriate access for emergency vehicles.	Selectmen Minimal 2015
The Town should encourage the safeguarding of lands identified as Prime Farmland Soil or Farmland Soil of Statewide Importance. (See Map 10)	Avoid placing permanent buildings or paved areas on these soils, and to the extent practicable, avoid placing permanent above ground or underground structures on these soils.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Consult with Soil and Water Conservation District when creating any regulations pertaining to agricultural land use and practices.	
	Use conservation subdivision techniques such as high density subdivision cluster housing to avoid placing permanent buildings and, to the extent practicable, avoid placing permanent above ground and underground structures in these soils.	To be included in a future conservation subdivision ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
	Educate land owners about placing the areal extent of these soils into a permanent restrictive easement held by a third party (e.g., Maine Farmland Trust, Knox/Lincoln Conservation District) that only allows open space and agricultural uses, including silvacultural uses, that employ best management practices as described by the National Resources Conservation Service (including district staff) or the Maine Department of Agriculture.	Planning Board -0- for Town 2015

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
The Town should encourage the safeguarding of lands capable of supporting commercial forestry.	Encourage the continuation and expansion of the use of Open Space and Tree Growth tax incentive programs for existing wooded land by providing at the Town Office information and applications.	Assessors -0- Immediate and ongoing
	Encourage the placement of existing wooded land into permanent restrictive easement held by a third party (e.g., Small Woodlot Owners Association of Maine, Knox/Lincoln Conservation District) that only allows open space and forestry uses, including recreation, that employ best management practices as described by the National Resources Conservation Service or the Maine Department of Agriculture.	Assessors and land owners Minimal Immediate and ongoing
	When adopting and enforcing Town ordinances, the Town should not impose constraints to commercial forestry that follows best management practices as described by the National Resources Conservation Service or the Maine Department of Forestry (check with district forester), and should require a visual buffer along all property lines to maintain the wooded view.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
Support farming and forestry and encourage their economic viability.	When adopting Town ordinances, the Town should not adopt constraints to farming or forestry that adversely affect the economic production or local retail sale of products based solely on aesthetic considerations such as odor, noise, or visual impacts that result from the use of best management practices as described by the National Resources Conservation Service or the Maine Department of Agriculture or Department of Forestry.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.

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Chapter 10 — Marine Resources

We have often thought that the fittest locality for a human dwelling was on the edge of the land, that there the constant lesson and impression of the sea might sink deep into the life and character of the landsman, and perhaps impart a marine tint to his imagination.

~ Henry David Thoreau (1817-1862) ⁷

Marine resources have been significant to the life and economy of South Bristol since the first settlers arrived in the late 17th and early 18th centuries; they remain so today. Early on, the fishery resources were the most important and the most valuable. During the 18th and 19th centuries boat- and ship-building were carried on (Rowe, 1948), although records of this are sketchy. Since the early part of the 20th century, access to the ocean for recreation and vacationing by the sea have taken on an important role in the Town, in parallel with fishing and other commercial activities connected with the ocean.

Since World War II, competition between traditional commercial and modern recreational uses of our marine resources, particularly shore access, has increased. South Bristol needs to carefully plan in order that neither of the two uses becomes detrimental to the other. There are adequate resources for both to coexist — if the resources are carefully managed.

10.1 — Harbors and Natural Resources

South Bristol, like some other coastal towns on Maine's craggy coast, is almost surrounded by water. Of the 74.34 miles of town border, 68.85 miles are on salt water. The only land border is the 6.49 miles along which South Bristol borders Bristol to the east and north. The extensive border on the water includes many small coves and inlets and two significant harbors.

South Bristol Harbor

The Gut is South Bristol's principal harbor. It is the waterway separating Rutherford Island from the mainland and connects Johns Bay to the east with the Damariscotta River to the west.

South Bristol Village is located on both sides of this waterway and on the small unnamed island in its center where the bridge tender's house and Osier's are located and across which State Route 129 passes to the swing bridge.

The harbor is commonly described as the Eastern Gut (east of the bridge) which is primarily an anchorage for commercial vessels and the Western Gut where mostly recreational vessels are moored.

The Eastern Gut is one of the best protected anchorages on Maine's coast, well shielded from storms and with good holding ground. Mooring permits between the bridge and Witch Island are restricted by ordinance to commercial vessels, mostly lobster boats, except for the statutorily permitted moorings for abutting property owners.

The harbor is now generally ice free during the winter; it has been at least 15 years since the Coast Guard has broken ice in the harbor. That the Gut opens onto both the Damariscotta River and Johns Bay is a great convenience for the fishermen.

7. From "Paradise (To Be) Regained" (1843); in *The Writings of Henry David Thoreau*; vol. 4, p. 289; Houghton Mifflin; Boston; 1906.

The northeastern end of the Gut, between Witch Island and the mainland, is also a good anchorage area which in recent years has filled with moorings, mostly for pleasure vessels.

The Western Gut is deep and opens to the west and thus offers limited protection from southwest and westerly winds. The bottom is hard making for poor anchoring and requiring very heavy anchor blocks for the moorings there.

Gamage Shipyard had 12 moorings in the Western Gut as of 2007 which they rent to boat owners, usually by the season. Likewise, Bittersweet Landing had nine in the Eastern Gut. These moorings are formally permitted by the Corps of Engineers as well as by the Town. Those who provide rental moorings also provide tie-up space at their floats for dinghies.

Christmas Cove

Located on Rutherford Island and opening onto the Damariscotta River, Christmas Cove serves principally recreational craft during the summer. The cove includes the inner harbor, east and north of the three ledges, and the outer harbor to the west. While the inner harbor at Christmas Cove provides excellent shelter from the north and east, severe southwesterly storms are dangerous and have caused a great deal of damage in past years.

During the 1940s and 50s there was adequate space in the inner harbor for large passenger schooners such as the *Alice Wentworth* and the *Stephen Tabor* to anchor overnight. By the 1970s the schooners were anchoring in the outer harbor.

Until sometime in the 1970s there were no moorings in the outer harbor, the inner harbor having had until then adequate space. In recent years more and more moorings have been placed in the outer harbor to satisfy demand. Most of these moorings are along the southern shore of the harbor, providing some protection from the prevailing southwest wind and storms of summer.

Coveside Marina has 14 moorings for rent,

primarily to cruising yachts.

Among the problems related to moorings is the scarcity of places to park and places to tie up dinghies or row boats used to get to and from the moorings. Many people pay by the year for a place to keep dinghies.

The annual fee charged by South Bristol for a mooring permit is \$10.00 for residents and \$50.00 for nonresidents.

Other Coves and Anchorages

The smaller harbors of McFarlands Cove, Clifford Cove, Poorhouse Cove, Jones Cove, Seal Cove, and several reaches of open water principally serve recreational craft during summer months. Over the past three or four decades the use of moorings in these places has grown along with the rise of recreational boating.

Of interest are the moorings for pleasure boats northeast of Inner Heron Island. Although this is open water, the moorings are well protected from the prevailing southwest winds of summer. A severe storm from the eastern quadrant would drive hard into that mooring area.

The increase in the use of smaller coves for mooring pleasure boats has been concurrent with the increase of residences being built along the shore and the docks and floats which the owners have built. Docks and floats are discussed later in this chapter.

Harbor Management

The care of these harbors is under the jurisdiction of the Board of Selectmen through their appointed representatives the harbor masters. The harbor masters are also required to act for the Maine Department of Environmental Protection, (DEP) and the U. S. Army Corp of Engineers. Wharf permits are issued by the DEP (representing also the U. S. Army Corp of Engineers) and the Board of Selectmen, with the portion of the wharf above the high tide line being permitted by the town Planning Board. Mooring

permits are granted by the harbor masters.

Use of South Bristol's harbors is governed by the Town's harbor ordinance. The Harbor Committee, appointed by the selectmen as mandated by the ordinance, manages the harbors assisted by the harbor masters.

Matters regarding moorings, particularly their locations, are in the province of the harbor master. This includes receiving applications, determining whether the requested space is available, and determining exactly where permitted moorings will be located.

Until 2007 the demand for mooring permits increased. Since then it has slacked off, reducing or eliminating the backlog of permit applications for mooring space in the Town's harbors.

Neither of the two principal harbors has vacant mooring space and some of the new mooring areas are filling rapidly. As of 2007 there were 669 moorings in South Bristol, 474 of which were recreational, while 195 were commercial.

Some fishermen have more than one mooring. Most moorings in the Gut are commercial. In the Eastern Gut 70 moorings are commercial and 12 are recreational. Usually, there are people on waiting lists for moorings. In 2007 there were five waiting for moorings in Christmas Cove and 18 in the area by Witch Island. The biggest increase has been in the safe mooring area between Witch Island and the back shore.

Something that might be helpful to increase the mooring field capacity would be to hook a float to a mooring and tie two boats to the float. This would take up about half of the mooring space. But a float cannot be put on a mooring (even for a day) without registering it with the Corp of Engineers. There are one or two such floats, used by lobstermen, on moorings in the Eastern Gut.

All indications are that the harbors of South Bristol are well managed. There are no harbors

shared with other towns. The only shared marine management is that of the clam flats on the North Branch of Johns Bay where the management is shared with Bristol.

Moorings for recreational vessels cannot be transferred from one person to another, a situation which can be a problem when someone with a mooring permit passes away and the family desires to retain the permit for another member of the family. Were there no waiting lists for moorings this would not be a problem. If the mooring in question is in front of family owned shore front property another family member, an owner of the property, would have a right by Maine law to the mooring. Otherwise, the available mooring goes to whoever is on the top of the waiting list.

Uses of three areas of the shoreland are restricted. These areas are, generally, from the bridge over the Gut eastward to where the Gut widens; from the bridge westward for some distance on both sides; and in parts of Christmas Cove. These areas are defined as commercial districts in South Bristol's Shoreland Zoning Ordinance. In recent years, two commercial buildings immediately adjacent to the drawbridge have been converted from commercial to residential use. These two conversions caused a number of respondents to the mail survey to pen comments decrying the changes.

The Shoreland Zoning Ordinance controls land use at the harbors as well as along all of the shore land in Town.

Harbor Problems

The swing bridge across the Gut is a vital link for boat traffic through the Gut and land traffic over the Gut. This is the only way that vehicle traffic can cross onto or off of Rutherford Island. This bridge gets constant use year round but is especially busy in the summer months. It opens on average 57 times a day year around. During the summer months the bridge opens as many as 75 or 80 times a day. It is the only way for

emergency vehicles to service the island. Half of our fire apparatus and our rescue vehicle are housed on the island at the main firehouse.

The bridge is old. Some parts of the machinery which opens and closes it are believed to be badly worn. It is doubtful that the bridge was designed to carry vehicles that weigh as much as the large trucks which use it today. When heavy vehicles stop before the bridge as it is about to open they exert great force onto the bridge abutments, especially coming down the hill on the island side. The Maine Department of Transportation (DOT) acknowledges that the bridge is in need of major repairs or replacement.

There is a strong sentimental attachment to the horizontal draw bridge (the “swing bridge”). The current bridge replaced a failed bascule bridge in

1933 and has had major overhauls twice since then, both since World War II.

A few years ago part of the west end of the island side bridge abutment (not affecting bridge integrity) collapsed into the boat channel. The depth of water is supposed to be 6 feet at MLW. Fishermen report that at times their boats drawing 3.5 feet scrape the bottom at a low tide while transiting under the bridge.

The harbor master has expressed the need for dredging in the Gut and the harbor channel and has requested maintenance dredging from the Corp of Engineers. This has not come about. The harbor masters believe that our dredging has been on the Corp’s list of “things to do” for several years.

10.2 — The Working Waterfront

Since the earliest days of European settlement, the area which is now South Bristol has had a working waterfront. It was the abundant fishery resource which first brought Europeans to this area in the 16th century. Since that time fishing has remained important although the major catch has shifted from cod to other fin fish and now to lobster and shrimp.

Fishing Industry

South Bristol is one of the few working harbors remaining in Maine. It accounts for a significant portion of the commercial fishery landings in Lincoln County. By far, the major fishery is now lobstering. Tables 10.1 and 10.2 provide summaries of seafood landings in recent years.

Employment in the fishing industry and the economic importance of the industry to South Bristol and the region will be covered in chapter 11.

Fishermen are dependent on buyers for their

catch. With the decline of fishermen working from their own docks, in part due to the fact that fewer and fewer own waterfront property (which was common in the past), they depend on the buyers not only as a market but also for access to their boats.

The major seafood buyer in Town is the South Bristol Fishermen’s Co-op which buys lobster and shrimp. In addition Eugley’s Wharf and Osier’s Wharf buy catch, including some ground fish. All three of these businesses are located on the Eastern Gut.

Until recently, Massey Seafood on the Eastern Gut (now out of business) was a major buyer and processor of seafood, but not lobster. The real estate and plant have been sold to a new owner who indicates an interest in reviving a buying and processing business. The mid-coast location would be excellent for a business buying, processing, and shipping seafood.

The fishing industry in the region consists of

more than lobstering, and shrimping in the winter. There is still some ground fishing activity, although the amount is greatly diminished from the level of two or three decades ago. Clams are dug in the flats not closed due to the presence of nearby overboard discharges (OBDs) and some scallops are landed.

Table 10.1 – Near-shore live fishery landings, South Bristol and Lincoln County, 1992-2005

Year	South Bristol live pounds	Lincoln County live pounds	South Bristol percent of Lincoln County
1992	3,343,358	22,643,469	14.8%
1993	3,043,090	26,633,990	11.4%
1994	3,392,676	19,837,286	17.1%
1995	3,272,468	20,217,592	16.2%
1996	4,310,739	20,411,251	21.1%
1997	4,428,241	17,368,067	12.2%
1998	4,439,174	19,101,711	23.2%
1999	2,793,198	29,038,368	9.6%
2000	3,743,148	10,003,133	37.4%
2001	5,960,802	17,847,186	33.3%
2002	5,165,335	13,811,806	37.4%
2003	2,590,896	10,596,516	24.4%
2004	2,093,939	11,106,541	18.8%
2005	1,580,130	n/a	—

Source: Maine Department of Marine Resources.
 Note: During the period above, these data were from reports of buyers (dealers), primarily of lobster and shrimp.

Table 10.2 – Off-shore fisheries landings, Port of South Bristol, 2003-2005

Species	2003 pounds	2004 pounds	'03-'04 change	2005 pounds	'04-'05 change
Cod	22,460	8,545	- 62%	15,490	81%
Flounder	108,459	31,852	- 71%	7,830	- 75%
Grey sole	79,177	54,345	- 31%	33,285	- 39%
Haddock	8,530	4,485	- 47%	1,540	- 66%
Hake	30,200	32,035	6%	4,945	- 85%
Monkfish	58,085	38,040	- 35%	15,845	- 58%
Monk tails	64,115	43,625	- 32%	21,500	- 51%
Pollock	11,296	25,245	123%	9,910	- 61%
Hake, white	8,965	7,077	- 21%	1,105	- 84%
Lobster	111,923	127,826	14%	144,495	13%
Shrimp	223,302	311,308	39%	375,933	21%
Unclassified	20,157	45,383	125%	42,434	- 6%

Source: NOAA, National Marine Fisheries Service, Gloucester.
 Note: Compiled from trip reports submitted by boat operators.

Fishery Landings

Although showing considerable variation up and down over the years, seafood landings in South Bristol have over recent years accounted for about a third of total landings in Lincoln County. In recent years fin fish landings have dwindled to near insignificance as has the offshore fishery based here.

Data for near shore fishing, mostly for lobster and shrimp, are collected by the Maine Department of Marine Resources (DMR). For the offshore fisheries which include fin fish, data are collected by NOAA’s National Marine Fisheries Service.

The data in table 10.1 are primarily for lobster and shrimp which have become the targets of most of the local commercial fishing effort. Lobster landings have been steady or increasing over the last decade. Shrimp landings on the other hand have been cyclical due to biological reasons – some years they are plentiful and some years not – and market conditions. Of late there have been times when fishermen could get good shrimp catches, yet the price they would receive would not cover their expenses. Since 2005 the situation has not improved.

Data in table 10.2 are from the offshore fishery, collected by the federal government from vessel trip reports. They clearly illustrate the decline of offshore fishing in the Gulf of Maine up to 2005, the latest data available at the time of writing.

It is unknown how much overlap there is in lobster and shrimp data between tables 10.1 and 10.2. In any event the data in each table should be considered separately and not combined. Also, remember that the data are for landings at South Bristol and not necessarily for landings by only South Bristol resident fishermen.

That many people from other towns fish from South Bristol points out a way that the Town supports the regional economy.

The Darling Marine Center of the University of Maine in Walpole is a center for research on lobsters. Research there has not only addressed biological factors, but also habitat and the effect of lobster fishing activity. Recently, as an experiment in order to determine the effect of bait in traps as a food source, lobstermen agreed to remove all traps from a moderate size rectangular area near the Thread of Life. Almost immediately the lobster population in that area virtually disappeared. From this came the conclusion that the lobster industry might be considered to be farming the ocean bottom, feeding and growing the lobster stock much as a farmer feeds livestock on land. It also posed the question, as yet unanswered, “Is the intensive lobster catching activity with all of the bait being used at least partially responsible for the increase in the lobster population?” It is also possible that the demise in the cod population may contribute to the increase since cod are known to feed on lobster larvae.

Aquaculture

Aquaculture of European flat oysters, Eastern American oysters, blue sea mussels, northern quahog clams, Atlantic razor clams, and sea scallops is a thriving industry in the Damariscotta River. This modern industry in Maine began in South Bristol when the first aquaculture permit was issued to Abandoned Farm, Inc. in Walpole in 1973 (Myers, 2004) for the cultivation of mussels, the first in North America. The late Edward Myers is credited with being the father of the aquaculture industry in Maine with his Abandoned Farm.

Map 11 shows the locations of ten aquaculture leases in the Damariscotta River and includes a table describing each lease. These leases are located in the waters of South Bristol, Newcastle, and Edgecomb. We understand that all of the leases indicating past expiration dates have been

renewed.

These aquaculture operations rely on high quality sea water of the right temperature and salinity which is readily available in the Damariscotta River. In addition, the businesses need facilities on shore from which to work and places to store equipment. Aquaculture has grown over the past quarter century with at least ten leases now active in South Bristol. Its growth is expected to continue so long as space remains available in the river.

In addition to the leases in the river, Mook Seafarm has a large hatchery on the riverbank in Walpole raising oyster seed stock for oyster growers. Mook relies on the clean river water as do the growers.

Clamming

The only direct involvement of the Town of South Bristol in the fisheries is management of the soft shell clam flats and issuing commercial and recreational shell fishing licenses. The Board of Selectmen has delegated management of the clam flats to an appointed Clam Committee. For all practical purposes there is no harvesting of wild mussels due to the waters in the southern part of Town being closed due to the presence of OBDs.

South Bristol has 459 acres of soft shell clam flats, plus 239 more acres if you include a ½ mile buffer around the Town.

In 2005 the Maine Department of Marine Resources prohibited harvesting of clams and other shellfish in 1440 acres (2.25 square miles) of intertidal zone within South Bristol due to the proximity of wastewater system overboard discharges. As shown on Map 11 the closure zones include every OBD permit site. However, much of this area is not mud flats so the impact on clamming is not as great as might be expected. The closed marine area is over twice as large as the land area of Rutherford Island.

It is our understanding that the closure area around the southern part of Town is due entirely

Table 10.3 – South Bristol’s overboard discharge permits as of August 24, 2005

Active overboard discharge permits	Rutherford Island (74%)	40
	Mainland (26%)	14
	Total	54
Licensed flow volume limit in gallons per day (gpd)	Minimum	100
	Mean	491
	Median	400
	Maximum	5000
	Total	28,030
Type of system	Sand filter	29
	Mechanical package plant	23
	Primary	2
Usage	Seasonal (< 8 months)	31
	Year round	18
	Unknown	5
Facility type	5A residential <= 600 gpd	46
	5B residential > 600 gpd	6
	5C commercial	2

Source: Maine DEP; Bureau of Land and Water Quality.

Note: The OBD at Coveside Restaurant and Marina has been recently eliminated. This discharge had accounted for over 1000 gpd.

to the presence of the overboard discharges.

Some mud flats in the northern part of Johns Bay are shared with Bristol. The Town of South Bristol has a clam ordinance and a mutual agreement with the town of Bristol for clam management and enforcement.

Pollution

Until the 1950s, it was normal for residential waste water from shore front homes and cottages to be discharged directly overboard from “straight pipes.” With the recognition that the resulting pollution was undesirable, proper wastewater systems were gradually installed.

In places where the soil allowed, conventional septic systems were built. Given the shallow soil cover along much of the shore front land, such systems were often impossible using the technology which was then available. In those

cases various treatment systems were installed, most of them treating the waste water chemically and then discharging the effluent overboard, hence the term overboard discharge system.

Overboard discharge systems (OBDs) are defined by Maine DEP as “licensed systems that treat, sanitize and discharge wastewater from homes and businesses to streams, rivers and the ocean.”

Overboard discharges require licensing and inspections by the Maine DEP and payment of an annual fee. All OBDs include a process to clarify the wastewater and then disinfect it prior to discharge. If these processes are not properly maintained or if they malfunction, they have the potential to discharge harmful bacteria and other pathogens directly into the water.

South Bristol has 54 permitted OBD systems out of approximately 1,570 statewide. The State has worked to reduce the number of OBDs starting in 1989 when the statewide number of OBD permits was more than double the current figure. Key characteristics of South Bristol’s OBDs are shown in table 10.3. Approximately three quarters of the OBD permits are for systems located on Rutherford Island. To encourage the reopening of shellfish harvesting areas and improve Maine’s water quality by replacing OBDs with conventional septic systems, the State has established an Overboard Discharge Removal Grant Program which provides reimbursement of 25% to 100% of the replacement cost based on the applicant's income. The most common OBD treatment systems are sand filters and mechanical systems.

Numerous regulations are pertinent to obtaining and maintaining overboard discharge licenses. Some of the important ones are:

- The DEP must inspect all systems.
- Licenses must be renewed every 5 years.
- Owners of mechanical treatment systems must annually provide proof of a private maintenance contract.

- Expansion of the system, including adding sources of wastewater (additional bedrooms), increasing the months of seasonal use, and increasing licensed flow is prohibited.
- Buyers of property served by OBDs are required to obtain a qualified licensed site evaluator's (LSE) evaluation of whether the OBD can be replaced with a technologically feasible non-discharging alternative system prior to sale of the property. If such a system is feasible a replacement system must be installed within 90 days, weather permitting.
- Prior to license renewal, owners must obtain from an LSE an evaluation as to whether there is a technologically feasible replacement for the existing system. If such replacement is feasible it must be installed within 180 days, *but only if grant money is offered by DEP*. If no funds are offered, replacement may be postponed.

The rules regarding overboard discharges will change in 2012 when there will be severe restrictions to new licenses, and renewal of licenses will be contingent on there not being a viable non-discharging alternative to the existing system.

The State has a grant program to help property owners repair or replace defective septic systems and leach fields which are causing water pollution. This program depends on the availability of funding. There has been at least one case of a defective system causing pollution in the Damariscotta River a few years ago.

The only known pollution from a marina or boatyard facility was a discharge of gasoline from the Coveside Marina a few years ago. That facility no longer dispenses fuel. Regardless, we recommend that all boatyards and marinas in Town participate in clean marina and boatyard programs supported by Maine DEP.

Marine Services

Numerous services for mariners are available in South Bristol, all of which provide support to those who utilize and depend on the Town's abundant marine resources. Below we briefly

describe some of them.

Gamage Shipyard on the north side of the Western Gut provides fuel, water, electric power, holding tank pump-out, and maintenance for both cruising yachts and commercial vessels.

The yard has a 25-ton Travelift® giving them the ability to quickly take a vessel out of the water for repairs when necessary. They provide winter storage services including haul-out, all types of maintenance, and spring fitting out.

This yard was a major builder of commercial fishing boats and then passenger schooners from 1926 until 1978 when the schooner *Appledore* was launched.

Prior to World War II the yard built some sailing yachts. In the late 1930s, that business dried up as a result of the Great Depression when a number of contracts were cancelled. The business was soon rescued by contracts to build minesweepers and other small wooden vessels for the U.S. Navy.

Bittersweet Landing Boatyard provides repairs, winter storage, and maintenance for both pleasure and commercial boats. They have an all-tide ramp which is available to all for a nominal fee.

Johns Bay Boat Co. builds traditional wooden boats and provides repairs and maintenance. They have a marine railway for hauling and launching. They do not routinely launch boats brought in by road.

The **South Bristol Fishermen's Co-op** is a major lobster and (in winter) shrimp buyer. The member-owned co-op is one of the oldest fishermen's co-ops in Maine. It provides fuel (diesel and gasoline) and commercial fishing supplies, particularly those needed by fishermen, and sells lobsters and clams at retail, fresh and cooked.

Osier's Wharf sells seafood and fuel and in addition provides limited provisions including

snacks, beer, and pizza.

Harborside Grocery and Grille, a five minute walk north from the docks in South Bristol Village, can provide many of the basics which a traveling sailor might need. Bread, milk, sandwiches, fresh pizza, snacks, soda, beer and wine, paper goods, and canned provisions are available. They serve breakfast, lunch, and supper to eat there or to take out.

In Christmas Cove during the summer, **Coveside Marina** has available moorings and dock space. They no longer sell fuel but provide water and showers. The restaurant overlooking the cove serves lunch and dinner.

During the summer, Coveside and Gamage

Shipyard provide pump-out service for boat holding tanks. Otherwise, the closest pump out facilities are the six in Boothbay Harbor.

There are no **tour boats** operating from or stopping in Town. Some occasionally come into our harbors but do not take on or disembark passengers here. Many years ago the *Balmy Days* stopped a couple times a week at Christmas Cove on its trip from Boothbay Harbor to Monhegan Island and back.

Until sometime after World War I there was regular steamboat service at South Bristol and Christmas Cove, to and from Damariscotta and ports to the west and east.

10.3 — Residential Growth and Development

Of the 69 miles of shoreline in South Bristol only about one half mile is considered working waterfront. This half mile has adequately served commercial fishing needs for many decades. Any increase in the amount of access available for commercial fishing would likely be of benefit to the local fishermen.

Until after WW II many local lobstermen operated from their own shore front property and rowed small boats and dories to haul their traps. They primarily fished close to shore and never in the winter. During the winter their traps were stacked on the bank, their boats were hauled out of the water, and they spent their time building and repairing wooden traps while their wives knitted “heads” for the traps. As often as not, they had other jobs during the off months.

There is little if any likelihood that the Town will be involved in any direct purchase or development of commercial waterfront land. The desires of the people on this matter were clearly expressed in their answers to question 22 of the mail survey where 54% of the respondents were

opposed to and 22% in favor of the Town owning and maintaining a public landing for the exclusive use of commercial fishermen.

More significant – and obvious – has been the slow but steady construction of new residences along the shore. Where a half century ago there were some extended stretches of un-built-upon shore there are now houses. Many of these are used as vacation homes, but all are constructed in the manner of year-round homes as contrasted with the cottages of a century ago.

Along with the proliferation of new homes along the shore has been an increase of the number of private wharves and floats. Fifty years ago there were far fewer floats and they were often shared among neighbors. There might have been a half dozen or more rowboats tied up, each having a different owner. The trend of late has been for those who could meet the requirements to build their own dock.

This later trend has a negative impact on the coastal wetlands of South Bristol. A departed sage, South Bristol’s own Ed Myers, eloquently

addressed this trend:

. . . skip the private dock, explore alternatives, set an example (maybe a mooring with the dinghy on a haul-off), join the community, fender your rowboat heavily and use the town dock, listen, mellow out and make friends, ask advice and receive wisdom, and come to a careful considerate conclusion: if the town dock is too small, give them a float or two, at a fraction of the cost of the dock you planned — and deductible besides. . . . It's a wonderful personal decision, showing respect for the people around you and those to follow. (Myers, 2004)

These changes are not unique to South Bristol. The changes are slowly moving northeast, and have been noted all the way down east to Washington County.

Along with the increased shoreline development and increased property values has come increased assessment and taxes for those using their shorefront as working waterfront. There are two programs designed to address and alleviate some of the financial pressures for those working waterfront properties:

1. A locally administered working waterfront

property tax abatement program established by State law that is similar to the farmland, tree growth, and open space abatement programs which have been used for more than a decade to encourage those uses and discourage development pressures. The abatement is achieved by reducing assessed property value by up to 50%. As with the other programs, the working waterfront program can be a significant financial expense if the land is taken out of the program (i.e., there is a financial penalty for withdrawal).

A description of the program is available at <http://www.maine.gov/revenue/forms/properly/pubs/workingwaterq&a.htm>

2. A State funded and administered Working Waterfront Access Pilot Program to place working waterfront into a permanently protected status when that property is used by multiple commercial waterfront enterprises (e.g., several commercial fishermen). Description of this program, administered by Coastal Enterprises, Inc., is at their web site <http://www.wwapp.org/>.

10.4 — Scenic Quality and Water Access

Twenty notable scenic views have been identified and are listed in table 6.3 on page 74. Table 6.4 lists many from the water. There are many others. Exhaustive lists would fill pages, but these have been determined as examples worthy of protection to the extent possible. The front porch of every house on the shore has a view which the owners consider special. The locations of the viewscapes from public roads are indicated on Maps 7 and 15.

At this time the only protection the Town has of these areas is what can be provided through the Shoreland Zoning Ordinance. That ordinance establishes a maximum vertical height of 35 ft

above mean existing grade for any new structure and allows the Planning Board to consider impacts on scenic views.

In addition to the three Town owned piers and floats, public access to the water is available by foot along the shores of several preserves and public easements. Many owners of unimproved land – what little is left along the shore – have traditionally not objected to occasional public access, particularly when permission is requested.

Recreational access with hand carried boats can be accomplished at all three town floats without a fee, but larger boats (i.e., those

launched from a trailer) must travel to Pemaquid or Damariscotta harbors for free launching or pay a fee at the Bittersweet Landing or Gamage Shipyard facilities. The Heron Island community has a launching ramp and dock at Christmas Cove. This facility is not available to the public. Also, Darling Marine Center has an excellent all tide launching ramp which is likewise not available to the public.

The Town continues its efforts to locate and develop a public waterfront recreational and boat launch facility. Any such facility will need to include adequate parking capacity. There is limited parking capacity at the three existing Town-owned access points. Opportunities for improved access and parking are not immediately available, but are of interest to the Town and its residents.

Public Facilities

The Town provides three points of public-owned direct access to the water. These are a float in Christmas Cove near the CCIA, a float in the Western Gut at South Bristol village, and a float on the Damariscotta River at Hunters Landing in Walpole. Limited space is available for the tie-up of small craft (rowboats, etc.) at the floats at the village and Hunters Landing. No overnight tie-up is available at Christmas Cove. None of these provide shore access for launching boats, but boats can be launched at Bittersweet Landing and Gamage Shipyard for a fee. Alternatively, free launching is available at Damariscotta and Pemaquid Harbors.

The expressed need for a public boat launch in Town has been addressed for several years. Efforts have been made by the selectmen and the Planning Board as well as by private citizens to find waterfront properties that would be suitable for a dock and town landing. So far 39 shoreline

parcels have been identified as having potential for a boat ramp, and additional potential sites may be considered.

Although near the Gut might be an ideal location for a boat launch and recreation area, the harbor is quite congested and few pieces of property in that area would be large enough to build such a facility. The need for additional parking near the Gut is obvious, especially in the summer months. The only thing that keeps this from being a major safety concern is the fact that the road is so crowded that traffic cannot move fast enough through the area to create a hazard.

The natural setting of the Town's coast imposes limitations. Only about 10% of the Town's 69 miles of coastline is suitable as a potential boat ramp location, since any such site must have deep water (greater than 5 feet) at all tides that extends out at least 150 feet from the shoreline and have stable soils on a shoreline that is not too steep. In the mail survey (appendix C, ques. 21) and visioning meetings (appendix B) the townspeople have stated their desire for a public boat launching ramp.

On the other hand, they expressed an unwillingness to spend Town money to create parking in the Village area. (Appendix C, ques. 22 & 26)

While investigating potential sites for a waterfront access facility, town officials found that in some cases neighbors of possible sites expressed concern about the activities which would take place and whether they would be disruptive to the neighborhood. We suggest that a waterfront access ordinance will be needed eventually, and that the portion covering rules for use (hours, permitted activities, etc.) be immediately drafted.

10.5 — Key Issues

Sea Water Quality

Water quality has been and is being monitored in the Damariscotta River and Johns Bay by the Maine Department of Marine Resources and by Padre/DRA alliances, with local schools and non-governmental organizations also participating. These monitoring efforts are generally acceptable, although there is interest by clam harvesters to improve the monitoring program to close and reopen mud flats to harvesting activity in a more timely manner.

There has been no identified pollution from storm water runoff, nor from faulty or poorly maintained wastewater sewerage or septic tank/leach field systems. However, improvements in water quality can be attained by improving management of storm water runoff and maintenance of septic tank/leach field systems. In recent years, there have been incidents in South Bristol of significant effect on aquacultural activities from improperly operating septic tank/leach field systems and improper discharge of septage (septic tank pumpings).

There is a State program to eliminate overboard discharges from residential and commercial/industrial sources. This is an important issue for South Bristol which relies extensively on marine resources for its local economy and has more than 50 overboard discharge systems currently licensed. The elimination of these OBDs would reduce the areas closed to shellfish harvesting.

Failure of conventional septic systems and leach fields located close to tidal waters is always a potential source of pollution. This is due in part to the typically shallow soil cover over bedrock along the shore.

Sustainable Fisheries and Marketing

The Town has an agreement with Bristol to manage clam harvesting which appears to be

functioning well. There is no mechanism which would allow the Town to become involved in management of the ground fishing or the lobster industries. These industries are critical to the local economy and welfare of residents. Opportunities to participate would be welcome and are strongly encouraged.

A community supported maritime activities (CSMA) program could be developed similar to community supported agriculture (CSA) programs. Such a CSMA is currently underway in Port Clyde.

Coastal Land Use

Traditional water dependent uses of shore land in South Bristol include commercial fishing, boat building, boat services, and recreation. Recreational use, mostly from privately-owned shore land, is increasing steadily. Changes in ownership of these lands is generally within the family or to folks whose income is derived from economies not found in South Bristol or the region. Due to the high purchase prices of waterfront parcels, it is unlikely these shore lands will be converted to commercial uses. Public access to the water remains as it has been for several decades: limited to town-owned piers and floats at Christmas Cove, South Bristol Village, and Hunters Landing. Boat building continues in South Bristol, but on a smaller scale than existed for over a hundred years.

Gamage Shipyard, the last large shipbuilder in Town, closed in the 1980s, but continues as a recreational boat launching and service yard. Fuel and water are available at South Bristol Fishermen's Co-op, and Gamage. Osier's sells fuel. Coveside Marina provides water and holding tank pump-out during the summer.

In recent years, South Bristol has seen some changes in use of shore front property, but no significant loss of working waterfront. There seems to be a reasonable balance between

commercial and recreational uses. However, in the future continued pressure for privately-owned recreational waterfront use could result in conversion (loss) of some working waterfront. This conversion could even include the creation of condominiums within the inner Gut, although it is anticipated that changes in the Shoreland Zoning Ordinance limiting use in the Gut to commercial activities will preclude this.

Local zoning in the harbors is controlled solely by the Shoreland Zoning Ordinance. This ordinance is being revised, but currently identifies (by citation of specific tax parcels) only certain Gut and Christmas Cove areas as commercial districts. Areas adjacent to these districts are identified as residential districts. The ordinance does not prohibit the conversion of working waterfront to residential uses in these districts and allows commercial activities requiring water access. Coastal land use regulations are similar to those in Bristol, Newcastle, Damariscotta, and Edgecomb, but are not as stringent as those in Boothbay.

Harbor Management

Management of the harbors is going well and there are few problems. The continued access to shore facilities for landing commercial harvests, presence of services for working and recreational boats, absence of conflicts, and few accidents indicates harbor management has been effective. The harbor ordinance seems to be serving well and no difficulties are reported by the harbor master. The commercial users (fishermen, etc.) do a good job of self-policing and working out their differences. The Town established a Harbor Committee that meets on an as needed basis to address any issues that may develop in the harbors. While there is no specific plan developed by the Town or the committee, management of the Gut is guided by the principle that the Eastern Gut is for commercial fishing activity.

All of South Bristol's harbors are within the

Town limits and are not shared with neighboring towns on a formal basis. There are commercial fishermen from neighboring towns who keep their boats in South Bristol and work with their local peers to keep the harbor working efficiently. They also voice their opinions to the Harbor Committee and the harbor masters.

Other than the Harbor Ordinance, the only control the Town has of the waterfront area is the Shoreland Zoning Ordinance.

As indicated above, there is a need to conduct a maintenance dredge of the Gut, particularly in the western approach to the swing bridge. This has been presented to and discussed with the Corp of Engineers on several occasions over the past years. Unfortunately, there has been no commitment by the Corp to conduct the dredging, but the Corp did conduct a survey in the fall of 2009 at the behest of Maine DOT as part of the project to replace the swing bridge. Commercial fishing vessels are reported to sometimes drag bottom during low tides, thereby restricting access from the west to the commercial fishing facilities in the Eastern Gut.

Enforcement

Primary responsibility for enforcing all ordinances and rules and regulations in South Bristol's marine areas rests with the harbor master and his two assistants, with guidance from the Harbor Committee. The work is funded with an annual town meeting appropriation (currently \$5000). The greatest single responsibility of the harbor master is the management of boat moorings.

Along the shoreland, responsibility for enforcement lies with the Code Enforcement officer. It is important that all shoreland zoning provisions be enforced in a consistent manner, and that the CEO be provided with adequate training, tools, and resources.

References

Myers, Edward A.; 2004; *Turnaround: Musings on the Earth's future*; Gardiner, Maine; Tilbury House, Publishers.

Rowe, William Hutchinson; 1948; *The Maritime History of Maine*; New York; W. W. Norton & Company.

Marine Resources Policies and Strategies

South Bristol will work to protect and enhance its marine resources in order that all uses – maritime, commercial, residential, and recreational – can coexist and flourish to the greatest extent possible.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect, maintain, and, (where warranted and feasible) improve marine habitat and water quality.	Continue to work with local residents and businesses, the DEP, the DMR, and neighboring towns to protect fishery habitats and eliminate point and non-point sources of pollution.	CEO Minimal Present practice
	Continue to consistently enforce shoreland zoning ordinances and their provisions and provide all necessary training and adequate funding to the CEO.	Selectmen & CEO \$500 / year for training 2011 & thereafter
	By presenting case studies and information pamphlets, encourage owners of marine businesses and industries to participate in the Maine DEP funded Maine Clean Boatyards & Marinas Program.	CEO Minimal Immediate and ongoing
	Work with property owners holding OBD permits, the DEP, and the DMR to develop a program to eliminate those OBDs that have caused shellfish harvesting areas to be closed. Consider funding options such as state funds, a revolving loan fund, and fees levied on permit holders.	Selectmen & CEO Minimal Ongoing from 2011
	Work with commercial and recreational boat owners, the Maine DEP and DMR, and the U.S. Coast Guard Auxiliary to eliminate overboard discharges from vessels into Town waters.	Harbormaster Minimal Immediate and ongoing
Maintain and where appropriate improve harbor and other marine resource management.	Continue working with Bristol to manage shared clam flats.	Shellfish Committee Minimal Presently occurring
	Continue to provide sufficient funding for and staffing of the Harbormaster and the Harbor Committee.	Selectmen Traditionally included in Town budget (\$5000) Present practice
	Continue to encourage and request support by the US Coast Guard, the US Army Corps of Engineers, and Maine DOT for a maintenance dredge of the channel through and near the Gut bridge.	Selectmen & Harbormaster Minimal Immediate

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Foster water-dependent land uses in balance with other complementary shorefront land uses.	Develop a plan as part of the Town’s continuing effort for providing additional recreational and commercial water access to include a boat launch ramp, parking, dock space, and swimming and picnic facilities. Explore the possibility of a grant(s) for planning and implementation.	Selectmen and a citizens’ committee appointed by the selectmen \$10,000 2011
	Acquire appropriate land and implement the above plan.	Selectmen \$2,000,000 As soon as possible
	In anticipation of creating a waterfront access facility for recreational use, consider preparing a draft of acceptable use rules for ultimate inclusion in an ordinance.	See chapter 20 on page 286 for discussion, timing, and responsibility.
	Investigate the possibility of allowing South Bristol residents to use the Heron Island Landing boat launch ramp, at least during the off-season.	Selectmen Minimal 2011
	Investigate the possibility of allowing South Bristol residents to use the Darling Marine Center boat launch ramp.	Selectmen \$500 / year 2011
	Pro-actively inform working waterfront businesses about the advantages of property tax reductions allowed by statute and/or the Maine constitution.	Assessors Minimal Immediate and ongoing
Protect, maintain, and where warranted improve physical and visual public access to South Bristol’s marine resources for all appropriate uses, including fishing, clam harvesting, recreation, and viewing.	Continue to work with land owners, land trusts, and others to protect significant points of visual and physical access to coastal waters and other scenic views, especially along public roads and over protected land.	Planning Board and Selectmen Minimal Present practice
	Continue to support the acquisition and protection of shorefront property by land trusts in order to make that land available for public use.	Selectmen -0- Present practice
Take an active role in furthering the sustainability of the fisheries which are important to the local and regional economy and which support a portion of the Town’s population.	Continue to work with Bristol in the management of mud flats for commercial and recreational harvesting of shellfish. Ensure adequate warden oversight of harvesting activities.	Selectmen and Shellfish Committee Minimal Present practice
	Continue maintenance and seeding of clam flats, including when necessary closures to prevent depletion of the resource.	Shellfish Committee Minimal Present practice
	Actively participate with regional, state, federal, and non-government programs designed to improve the sustainability of fisheries which are important to the local and regional economies and ecology.	Selectmen \$1000 / year 2012

Chapter 11 — Local and Regional Economy

I have often found no greater satisfaction than achieving success through honest dealing and strict adherence to the view that, for you to gain, those you deal with should gain as well.

~ Alan Greenspan (1926 -)

Even in the early times of settlement in what is now South Bristol there most certainly was economic activity. Some settlers were farmers, some were fishermen, some worked in the woods. In all likelihood, many of the settlers engaged in different productive endeavors over the course of a year. By the early 1800s we know that there was a water driven sawmill on Orr's Meadow Brook. Rather than only informal bartering, formal business was likely being transacted between the settlers.

Some of the early economic activities are referred and alluded to in chapters 1 and 8. The recounting of some of the houses and churches being built before the Revolutionary War, some of which remain, speaks to the certainty of skilled tradesmen practicing their crafts. From then to now our town's economy has evolved to its present state.

11.1 — The Businesses

There are no large industrial businesses in South Bristol. The two largest employers are the Darling Marine Center of the University of Maine and the South Bristol Elementary School.

South Bristol is unique in that it is a small town with limited infrastructure, and with a large percentage of property taxes paid by seasonal residents. South Bristol's economy, and to some extent the region's, is somewhat less subject to cyclical fluctuations than the rest of Maine.

The 1992 Comprehensive Plan provided a cautious assessment of the South Bristol economy. Jobs in the marine, construction and forestry industries were the most numerous. Seasonal residents and to some extent tourists had and still have a significant impact on the local economy.

South Bristol presently has a solid economic base. Since 1992, the town's 69 miles of coastline, as well as the shores of nearby coastal towns, have seen growth of new vacation and retirement homes. New building and other construction have provided a variety of jobs in the

building trades. Agriculture and forestry are no longer significant in the local economy, but as will be described below the marine industry continues to supply jobs.

The fin fish catch has decreased in recent years due to reduced biomass and regulations intended to enhance biomass recovery. The lobster and shrimp catches have remained strong. Any significant decrease in the lobster catch which is not offset by a price per pound increase will have a serious effect on the local fishing economy. Most lobster boats have a crew of two while the larger boats in the fin fishery usually employ several people. The lobster industry provides support to many other local and regional industries such as boat building and repair, trap manufacture, bait and supplies, and trap storage.

In addition to commercial fishing South Bristol has many recreational boaters who contribute to the local economy through goods and services purchases such as boat sales and repair, fuel purchase, maintenance, storage and launching facilities. Recreational boaters provide

Table 11.1 – South Bristol businesses operating since 2000 (part 1 of 2)

Business (owner)	Product or service	Employees
Ax Wood Products (Barnaby Porter)	Wood products	1 - 4
Bittersweet Landing	Boat launch/storage/repair	5 - 9
Brannon Bunker Inn	Bed & breakfast	1 - 4
Buffum, Mona	Lawn care	1 - 4
Busch, Stephen	Marine arbitrator	1 - 4
Calm & Sense Animal Care (Sally Gundersen)	Animal care	1 - 4
Christmas Cove Improvement Association *	Private recreational club	5 - 9
Clarks Cove Enterprises	Commercial wharf	1 - 4
Clarks Cove Farm	Apple orchard, bed & breakfast, event center	5 - 9
Coveside Restaurant and Marina *	Restaurant and marina	10 -24
Cushing, Arthur	Building contractor	1 - 4
Damariscotta River Campground *	Campground	1 - 4
Damariscove Seafood	Oyster and mussel farming	1 - 4
Darling Marine Center, University of Maine	Marine biology education and research	25 - 50
Eugley's Wharf	Fish and lobster buyer	1 - 4
Farrin's Boatshop	Boat builder	1 - 4
Flower's Boatyard	Boat builder	1 - 4
Fox Head Industries	Transportation consultants	1 - 4
Fox Hill Consultants	Consultants	1 - 4
Gamage Shipyard	Marina, boat storage, repairs, supplies	5 - 9
Granite Hill Electric (Richard Forstrom)	Electrical contractor	1 - 4
Hair Express (Iris Poland)	Beauty parlor	1 - 4
Harborside Market and Grill	Convenience store and restaurant	5 - 9
Hoagland Marine Service	Classic yacht repair and restoration	1 - 4
Holme, Charles	Real estate appraiser	1 - 4
Island Grocery *	Grocery and lunch	1 - 4
Johns Bay Boatshop (Peter Kass)	Boat builder	5 - 9
JP Marine / Moorings Unlimited	Docks, floats, ramps, moorings, maintenance	5 - 9
King Eider's on the Green *	Restaurant	1 - 4
Lincoln, Kenneth	Building contractor	1 - 4
Mainely Earth Images (John McKeon)	Mapping consultant	1 - 4
McCready, Peter	Licensed site evaluator	1 - 4
McFarland, Pete	Boat shop	1 - 4
McFarland Trap Company (Wayne McFarland)	Lobster trap builder	1 - 4
McLaughlin, Robert	Attorney	1 - 4
Mook Seafarm	Oyster cultivation	5 - 9
Naylor, Michael	Junk yard	1 - 4
Osier's Wharf	Seafood buyer, restaurant, marine fuel	5 - 9
Peterson, William	Naval architect	1 - 4
Plummer Excavation (Toby Plummer)	Excavation contractor	1 - 4
Poseidon Kayak (Ken Fink)	Kayak sales	1 - 4
Rice, Adam	Hydro seeding, firewood, Maple syrup, Maine Guide	1 - 4
Richards, Peter	Furniture builder	1 - 4

Table 11.1 – South Bristol businesses operating since 2000 (part 2 of 2)

Business (owner)	Product or service	Employees
Riley Well Drilling (Paul Kelsey)	Water well driller	1 - 4
Roguls, Stanley	Contractor	1 - 4
Salty Dog Builders	Building contractor	1 - 4
Seaside Seafood (Kevin Farrin)	Seafood buyer	1 - 4
SeaView Systems (Kenneth Maguire)	Information technology consulting	1 - 4
Seiders, Kenneth	Building contractor	1 - 4
Seiders, Dwayne	Building contractor	1 - 4
Shew & Burnham	Wooden boat building and restoration	1 - 4
Shop to Shore (Rene Goulette)	Boat repair and maintenance	1 - 4
Smith, Darrin	Trucking, excavation	1 - 4
South Bristol Fishermen's Co-op	Lobster and shrimp buyer, retail seafood, fuel	5 - 9
South Bristol Elementary School	Education	10 - 24
South Bristol Town Government	Government	5 - 9
Sproul Homestead (Gary Pitcher)	Vegetable grower, firewood	1 - 4
Sunset B & B	Bed & breakfast	1 - 4
Sykes, Eric	Building contractor	1 - 4
Tomasula, Alexsondra	Pottery	1 - 4
Torres, Yvette	Art work and gift shop	1 - 4
Unique Yankee	Bed & breakfast	1 - 4
U.S. Post Office South Bristol	Post office	1 - 4
U.S. Post Office Walpole	Post office	1 - 4
Wawenock Golf Club *	Golf club	5 - 9
Zahner, Carol	Dance, meditation, oyster grower, event center	1 - 4

Source: Comprehensive Planning Committee

Note: Asterisk (*) indicates seasonal summer business.

income for marine services and for the installation and management of moorings, docks, and floats. They are also the source of mooring fees and excise taxes paid to the town.

The University of Maine's Darling Marine Center in Walpole has an international presence in marine biological research and teaching and employs about 40 area residents throughout the year. This number includes faculty, researchers, and maintenance and support personnel, all of whom live in the region, including in South Bristol, Bristol, and as far away as Whitefield. Student and faculty requiring temporary housing generate income for rental property owners and support area retailers such as restaurants, food stores, pharmacies, and the like. The Darling Center also draws upon area service providers such as plumbers, electricians, HVAC

contractors, and general construction contractors.

There are numerous small businesses in South Bristol. Many of these are "cottage industries" which support the marine industry. Table 11.1 lists most of the businesses in town and makes it clear that most of them are quite small. Many are

Table 11.2 – Artists and writers working in South Bristol

Carol Brightman	Maggie Macy (Peterson)
Stephen Busch	Kay Miller
Jen Casad	David Norwood
Viola Glendinning	Rachel Norwood
Duncan Halm	Maude Olsen
Marlene Hosey	Susan Bartlett Rice
Frances Kidder	Michael Uhl
Tracy Kidder	Joy Vaughn
Sally Loughridge	

Source: Comprehensive Planning Committee

only one person. There are a number of artists’ studios and writers (table 11.2) and professional offices in town.

Small businesses come and go. Many are but one person, self employed, maybe with a helper or two, so when that person retires or moves to a new endeavor the business ends. But there are always more business endeavors coming along.

Each of the lobster and shrimp boat-owning fishermen is also an independent small business, sometimes incorporated. Most fish with a stern man who is also a small business because of the

way the system works (he or she receives a part of the catch as “pay”). This system of compensation is formally recognized by the Internal Revenue Service with required reporting and accounting procedures.

There are no longer any large industries in South Bristol, nor are there any expressed desires or future plans for any. Large boat building ended on the Gut three decades ago. Although we have no evidence, it is likely that reestablishing ship building at the Gamage Shipyard location would be welcomed as the return of a South Bristol tradition.

Table 11.3 – State marine resource licenses held by South Bristol residents, 2000-2008

License type	2000	2001	2002	2003	2004	2005	2006	2007	2008
Commercial fishing – crew	7	6	6	8	9	8	6	5	5
Commercial fishing – single	12	14	13	6	6	7	6	5	10
Commercial shrimp – crew	6	6	6	5	6	7	8	8	9
Commercial shrimp – single	3	1	2	2	2	1	0	0	1
Commercial shellfish	24	22	18	14	13	12	12	13	13
Elver (all license classes)	4	3	3	4	3	1	2	1	1
Lobster/crab – classes I&II (all ages)	33	32	36	32	32	30	31	30	30
Lobster/crab – apprentice (all ages)	0	2	3	1	3	4	1	0	0
Lobster/crab – non-commercial	4	7	8	3	5	3	4	4	4
Lobster/crab – over age 70	4	4	3	4	4	5	4	5	6
Lobster/crab – student	6	3	5	4	6	5	4	5	6
Lobster/crab – under age 18	2	2	2	2	1	1	2	1	1
Marine worm digging	na	na	na	1	2	2	3	2	2
Scallop diver	3	1	1	1	0	0	0	0	0
Scallop dragger	4	2	3	3	1	1	1	1	3
Scallop – non-commercial	2	4	2	3	3	4	5	4	2
Sea urchin diver	4	3	2	1	1	1	1	1	0
Sea urchin/scallop tender	3	3	2	0	0	0	1	1	0
Retail seafood	3	3	3	4	2	3	2	4	4
Other dealer & wholesale permits	na	na	na	7	9	13	10	12	12

Source: Maine Dept. of Marine Resources 2006 and 2009.

Notes: There was one seaweed license and one mussel by hand license in 2003.
 “Na” indicates that data were not available.

Table 11.4 – Count of residents holding state marine resource licenses, 2000-2008

License type	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dealers	5	6	5	6	5	6	4	7	7
Harvesters	78	71	70	58	60	56	60	58	57

Source: Maine Dept. of Marine Resources, 2006 and 2009.

Fin fish landings and processing have declined severely in recent years as shown in table 10.2 on page 121. Considering the overall decline of that fishery, there is little likelihood of local recovery in the near term.

Coveside Restaurant and Marina offers many seasonal jobs. Some of these jobs are filled by local people and others by college students who come from many places.

Many surrounding towns provide jobs for South Bristol residents. In Bath there is Bath Iron Works (the largest private employer in Maine); Miles Memorial Hospital including Cove's Edge nursing home and Schooner Cove retirement home is the largest employer in Damariscotta; and in Newcastle there are Lincoln Academy (regional private secondary school), the Lincoln Home retirement home, and R. H. Reny's headquarters and warehouse. Several residents provide in-home services for elderly or infirm area residents. Shops and stores in the region employ some South Bristol residents.

South Bristol is part of the Waldoboro Labor Market Area (LMA) which includes all of Lincoln County east of the Damariscotta River plus Newcastle and Alna.

It is common for residents to commute to Augusta, Portland, Bath, Brunswick, or Rockland for work, and to shop for those items not available locally. Damariscotta is the regional service center nearest South Bristol for services not offered locally. There one can find grocery stores, a department store, hardware stores and lumber yards, pharmacies, doctors and dentists, lawyers, and a hospital.

The importance of the fisheries to South Bristol's economy is illustrated by the number of marine resource licenses held by the residents. Table 11.3 shows the individual licenses held by South Bristol residents over a nine year period. Many people living in other towns also fish out of South Bristol and thus add to the local economy.

Since it is common for a fisherman to hold multiple licenses, we include table 11.4 which counts individual license holders regardless of the number of licenses held by each. The decrease in the number of licensed fishermen is likely due to fewer people ground fishing alone (commercial fishing – single) and fewer digging clams (commercial shellfish) as shown in table 11.3.

The number of marine resource licenses cited in table 11.3 as held by South Bristol residents and the count in table 11.4 of residents and dealers holding at least one license is not an accurate indication of the number of people fishing from South Bristol. Dealer licenses are usually active. Individuals may have a license even though not actively using it. The reason for this is that "limited entry" into some fisheries means that if a license was surrendered (not renewed) getting a new license at a later date might be difficult or impossible.

Several South Bristol fishermen have federal lobster permits (NMFS, 2009) allowing them to catch and land lobsters from beyond the Maine three mile limit. Lobstering beyond that three mile line is pretty much confined to the winter when the lobsters move offshore.

Seasonal residents play a major role in the local economy with the population increasing from 897 in the winter (Census, 2000) to about 2500 during the summer. See table 5.12 on page 60 and the accompanying discussion for the estimation of the summer population. And tourists arrive via automobile, boat, or bicycle on day trips. Tourism is important for the regional economy, but it is not particularly significant in South Bristol.

It is not uncommon for cottage owners to rent their cottages for brief periods during the summer, usually a couple of weeks or so, but primary cottage occupancy is usually by the owners and their families. Occasionally year-round residents will rent their house and move to their own cottage – an historic tradition. The two

major day-trip tourist attractions are the scenic views, particularly in the village with the attractive working harbor, and Coveside Restaurant on Christmas Cove. There is not a gift or souvenir shop anywhere in town. Some businesses sell tee-shirts and the like. There is no desire among the residents to increase tourism.

The town has few restaurants, no motels or hotels, and three bed and breakfasts. Retail stores are small convenience stores, aimed at the tourist trade or to provide emergency supplies. The village area of South Bristol is usually considered to be the center of the town and is a primary area of tourist attraction, with its popular and beautiful scenic harbor. Other than two small eateries and a seasonal and a year-round convenience store, little else has been recently or is presently offered for tourist services.

High speed DSL service is offered throughout the town while cable service is only available in limited parts of the town. There are no current plans to increase cable presence. The presence of high speed DSL – possibly the fastest in Maine – makes South Bristol an excellent place to do business requiring modern communication with the world. Cellular phone service is fair, at best. Three phase electric power availability is limited to Harrington Road, State Route 129 south of Four Corners to the head of Christmas Cove, and three short side roads. Private wells and septic fields are used by homeowners and businesses with no municipal water or sewer services available or planned at this time.

In table 11.5 below we present what data are available for taxable sales in South Bristol, the only sales data readily available in Maine. Data from before 2003 are not maintained by the Department of Revenue. Only sales subject to Maine’s sales tax are reported. In some cases the numbers are inexact. There are non-disclosure rules intended to protect the privacy of stores in smaller towns which would explain food stores and general merchandise showing zero. Although there is no proof, it is a reasonable assumption that the large amounts shown as consumer sales represent sales of boats and their supplies. There are three active boat builders in South Bristol plus two yards doing maintenance and repairs. All are privately owned and so do not disclose sales figures or other financial data. Available data illustrate the importance of the industry to the Town.

Precise dollar figures for the fishing industry are elusive at best. One estimate which we offer is that if lobster landings averaged about 3.5 million pounds during the period shown in table 10.1 on page 121 and the boat price averaged \$3.00 per pound (probably lower than average) we see that payments to the fishermen averaged well over \$10,000,000 per year. Considering the economists’ multiplier effect and that much of that money was spent in the region for bait, fuel, supplies, and family expenses, if we use a multiplier of 4 which may be low, South Bristol’s fishing industry contributes over forty million dollars to the regional economy each and every year.

Table 11.5 – South Bristol taxable sales (\$1,000), 2003-2007

Year	Auto	Bldg Supply	Bus. Oper.	Food Store	Gen'l Mdse	Lodging	Consumer	Other retail	Restaurant	Total
2003	0	0	80.2	0	0	0	1,297.7	163.3	0	1,377.9
2004	0	0	166.3	0	0	111.2	1,437.4	36.7	325.1	1,603.7
2005	0	0	315.5	0	0	213.5	1,825.9	32.0	342.1	2,141.4
2006	0	0	313.7	0	0	232.7	1,153.0	29.9	52.7	1,466.7
2007	0	0	332.0	0	0	279.9	2,336.2	90.1	515.8	2,668.2

Sources: Maine Dept. of Revenue and SPO

Notes: These are sales-taxable sales reported as from South Bristol. See text for discussion.

Three important parts of South Bristol's economy need their significance pointed out. All three bring outside dollars into South Bristol and the region due to the fact that they export products and services.

Except for the small parts of the lobster and shrimp catches landed here which are sold to local retailers and directly at retail, the catches all go to processors and other wholesalers outside of the local region, thus bringing dollars from outside into the region. Particularly in the case of lobsters, many of the dollars are Canadian since much of Maine's lobster catch goes to Canada for processing. Some portion of the catch goes ultimately to Europe, particularly to France where Maine lobster is considered a delicacy.

Most of the products of the local aquaculture industry, primarily oysters and mussels, are sold to buyers outside of Lincoln County. A part of this industry is seed oysters, millions of which are

cultivated at an operation on the Damariscotta River shore in South Bristol.

Third is the support of recreational boating. While many of the recreational boaters in town are year-round residents; the majority are seasonal residents. Hence their spending is with dollars from away – dollars moved into and which support the local economy.

Boat building, of both commercial and recreational boats, is still important in South Bristol. Although a few of the new boats are sold to local buyers, the majority of both types is sold to buyers from away.

As previously mentioned on page 135, the Darling Center brings in considerable outside money each year. These funds come from such varied sources as government and private grants, gifts, and the university's operating budget.

11.2 — The Labor Force

Table 11.6 – Occupations of employed civilian populations 16 years and older, 2000

Occupation	South Bristol		Lincoln County Maine	
	Count	Percent	County	Maine
Management, professional, etc	142	33.9%	31.7%	31.5%
Sales and office	87	20.8%	21.7%	25.9%
Construction and maintenance	51	12.2%	12.8%	10.3%
Service occupations	49	11.7%	15.4%	15.3%
Farming, fishing, and forestry	45	10.7%	5.1%	1.7%
Production, transportation, etc.	45	10.7%	13.2%	15.3%
Totals	419	100%	100%	100%

Source: U.S. Census (SF 3) [P 50]

Although table 11.7 shows only, at most, 58 residents employed directly in the fishing industry, when supporting occupations and services such as boat building are considered, fishing is more important to the town’s economy than is any other industry. The importance of this industry to the town’s economy becomes more apparent when the number of fishermen from outside of town fishing from the port of South Bristol is considered.

Just over a third of the 419 South Bristol residents over age 16 in the work force are employed in management, professional, and related occupations. (Table 11.6) This is what might be expected given the population’s educational achievement shown in table 5.15 on page 63. Well over a third of the residents over 25 have a bachelor’s or advanced degree. The most significant difference from county- and state-wide occupations is in the farming, fishing, and forestry category. The percentage of South Bristol residents in

service occupations is about 25 percent lower than either the county or state.

Table 11.7 clearly illustrates the importance of fishing in South Bristol relative to the wider regions. It is interesting that the proportion of South Bristol residents employed in retail trade is about half again as great as for Lincoln County and Maine residents. Since there are relatively few retail establishments in South

Bristol, this indicates a need for many residents to seek employment outside of town.

It is clear from tables 11.4 and 11.7 that although many South Bristol residents hold commercial fishing licenses some of them do not count fishing as their primary occupation (or source of income). Of the 58 people shown in table 11.7 as being engaged in agriculture, forestry, fishing, etc., there are at least two

Table 11.7 – South Bristol residents’ employment by industry, 2000

Industry	South Bristol		Lincoln County Maine	
	Count	Percent	County	Maine
Education, health, social services	88	21.0%	22.3%	23.2%
Retail trade	76	18.1%	12.4%	13.5%
Agriculture, forestry, fishing & hunting, mining	58	13.8%	6.4%	2.6%
Manufacturing	45	10.7%	12.4%	14.2%
Construction	39	9.3%	9.0%	6.9%
Professional, scientific, administrative	28	6.7%	6.9%	6.9%
Other services	20	4.8%	5.3%	4.7%
Arts, entertainment, recreation, accommodation, food services	18	4.3%	6.7%	7.1%
Finance, insurance, real estate	13	3.1%	4.7%	6.2%
Transportation and warehousing, utilities	12	2.9%	3.2%	4.3%
Public administration	10	2.4%	5.5%	4.5%
Wholesale trade	8	1.9%	2.6%	3.4%
Information	4	1.0%	2.1%	2.5%
Totals	419	100%	100%	100%

Source: U.S. Census

Note: Percentages are of persons employed in each industry.

Table 11.8 – Worker classes, all industries, age 16 and over, 2000

Worker class	South Bristol		Lincoln County		Maine	
	Count	Percent	Count	Percent	Count	Percent
Employee of for-profit private company	184	43.9%	8,272	51.1%	390,945	62.7%
Self employed in own <u>not incorporated</u> business	116	27.7%	2,867	17.7%	58,153	9.3%
Government workers	49	11.7%	2,595	16.0%	90,388	14.5%
Employed in private not-for-profit business	46	11.0%	1,615	10.0%	63,603	10.2%
Self employed in own <u>incorporated</u> business	22	5.3%	769	4.7%	19,246	3.1%
Unpaid family workers	2	0.5%	79	0.5%	1,676	0.3%

Source: U.S. Census SF3 [P51]

people (personal knowledge) in that category who do not fish leaving a maximum of 56 people reporting fishing as their primary occupation.

Except for fishing, the employment of South Bristol people is not significantly different from elsewhere. It is worth noting that education, health, and social services employ over a fifth of the working people living in the Town, in the county, and in the state. Maine has an economy heavily committed to and dependant on services.

The Census Bureau’s grouping of workers into classes provides insight into the employers of people. It tells what sort of employers there are and what sort of employers attract people. When considering a particular geographic area it provides some insight into the nature of the local economy.

Table 11.8 provides a summary of the types (classes) of employers of the 419 South Bristol people over 16 in the work force, ordered by predominance. The data are presented in greater detail in appendix G. It is significant that South

Bristol people are far more likely to be to be self employed than are residents of either Lincoln County or Maine as a whole. This illustrates an important characteristic of South Bristol’s economy. South Bristol is a town of small businesses, of entrepreneurs. This has been true since the first settlers arrived many centuries ago.

The high percentage of government workers in Lincoln County can be attributed to the northern part of the county, particularly Whitefield which is a rapidly growing rural bedroom community close to the state capital of Augusta. Whitefield is the fastest growing town in Lincoln County.

Table 11.9 shows that, as is true elsewhere, most South Bristol workers drive alone to work. That South Bristol is a geographically small town may account for the fact that eight percent of the workers walk to work. This may be connected to the number of people who work at their own close-by businesses.

Fifteen to 29 minutes is enough time to drive from anywhere in South Bristol to Damariscotta

Table 11.9 – Means of transportation to work, 2000

Means of transportation	South Bristol		Lincoln County	Maine
	Count	Percent		
Drove alone	271	67.6%	76.5%	78.6%
Carpooled	56	14.0%	12.3%	11.3%
Public transportation	3	0.7%	0.2%	0.8%
Other means	6	1.5%	1.0%	0.9%
Walked	32	8.0%	3.8%	4.0%
Worked at home	33	8.2%	6.2%	4.4%

Source: U.S. Census SF3 [P30]

Table 11.10 – Time to travel to work, 2000

Time	South Bristol		Lincoln County	Maine
	Count	Percent		
Less than 15 minutes	130	32.4%	32.9%	35.7%
15 to 29 minutes	155	38.7%	31.3%	33.1%
30 to 59 minutes	66	16.5%	23.6%	21.0%
60 minutes or more	17	4.2%	6.1%	5.9%
Worked at home	33	8.2%	6.2%	4.4%

Source: U.S. Census SF3 [P31]

and Newcastle. Forty five minutes gets one to Bath Iron Works. Table 11.10 shows the times that residents spend commuting. Overall, the only significant differences in commuting times between South Bristol, county, and state residents are the fewer South Bristol people who spend over an hour commuting and the relatively larger number of residents working at home. This in a way points to the local nature of employment.

Table 11.11 – Median household income and change, 1989 - 1999

	1989	1999	Change
South Bristol	\$27,188	\$38,636	42.1%
Lincoln County	\$28,373	\$38,686	36.3%
Maine	\$27,854	\$37,240	33.7%

Source: U.S. Census STF3 and SF3

Household income has been shown in detail in table 5.22 on page 67 and discussed there so will not be repeated here. Median incomes are shown above in table 11.11 along with ten year changes. In all cases the growth represents a compound annual growth rate of about three percent, with South Bristol slightly exceeding the growth rates of Lincoln County and the state.

With a significant elderly and retired population it is important to compare the sources of household income in South Bristol with the county and particularly with the state. This we do in table 11.12. An important observation is that

the percentages for South Bristol differ in the same direction (up or down) from Lincoln County percentages as the county percentages differ from the state. This is true except for “other types of income” where the differences are statistically insignificant.

Although income statistics are available from Census for households, families, and individuals, we chose to use household numbers as the most meaningful for this Plan. They best describe South Bristol – its economy and its people. Over half of the households have interest, dividend, rental (likely a small component), and Social Security income. Nearly a quarter of the households have retirement income. These sources are to be expected in a town with an significant retired component of its population. Chapter 5 explored the fact that South Bristol has the most elderly population in Maine.

At the same time two thirds of South Bristol households have earned (wage, salary, and self employment) income. One cannot but recognize that the “personal economies” of most South Bristol citizens are in good shape.

But, South Bristol has in its midst some who are struggling. A few are helped by public assistance and Supplemental Security Income. We address this later in this chapter. Although South Bristol property taxes are extremely low, housing

Table 11.12 – Sources of household income, 1999

Households:	South Bristol		Lincoln County	Maine
	Count	Percent		
All households with income	408	100%	100%	100%
With wage or salary income	265	65.0%	69.5%	74.7%
With self employment income	145	35.5%	26.0%	15.8%
With interest, dividends, or net rental income	222	54.4%	45.1%	37.8%
With Social Security income	148	36.3%	32.7%	28.9%
With Supplemental Security Income	11	2.7%	3.5%	4.6%
With public assistance	6	1.5%	3.3%	4.8%
With retirement income	91	22.3%	20.9%	17.4%
With other types of income	63	15.4%	14.0%	15.0%

Source: U.S. Census SP3 [P58-P66]

Note: A household may have multiple income sources.

is expensive as will be covered in chapter 13.

One measure of an economy, be it individual, family, household, town, region, or state is poverty. Poverty is measured in a multiplicity of ways by federal, state, and many other agencies. Essentially, poverty is calculated relative to local economic conditions; an income at below poverty level in South Bristol might be calculated at above poverty level in a municipality in a county with a lower average household income.

Poverty level is measured differently for households, families, categories of families, and individuals. It is appropriate for the purposes of this Comprehensive Plan to examine poverty at the household level. For those wishing more specific information we refer them to the U.S. Census and an internet search.

Considering the data in table 11.13 we can see that household poverty in South Bristol is, relatively, not much different from that in Lincoln County and Maine. The only significant variance is that South Bristol has fewer family households below poverty.

This may well not be a proper measure of

Table 11.13 – Household poverty levels, 1999

Households	South Bristol		Lincoln County	Maine
	Count	Percent		
Total households:	408	100%	100%	100%
Income below poverty level:	39	9.6%	10.0%	11.5%
Family households	10	2.5%	4.5%	5.1%
Non-family households	29	7.1%	5.5%	6.4%
Income at & above poverty level:	369	90.4%	90.0%	88.5%
Family households	274	67.2%	63.2%	60.9%
Non-family households	95	23.3%	26.8%	27.6%

Source: U.S. Census SP3 [P92]

local and regional poverty. Since 1960 a primary determinant of “poverty” at the federal level has been the ability to pay for a minimal food menu as determined by the U.S. Department of Agriculture with 30% of income. Since then, housing and medical costs have climbed to ever larger parts of everyone’s expenses. Housing costs in particular are high in Midcoast Maine.

An alternative measure of poverty that has come into use of late, since the basic food budget is still used in determining poverty, is to use 150% of the calculated poverty income as the determinant. We present the same groupings as in table 11.13 in table 11.14 which uses 150% of the standard measure of poverty. We feel that this table presents a more reasonable picture of poverty in South Bristol and Lincoln County.

That said, a fifth of South Bristol households were at the point in 1999 of getting by financially, but not all that well.

Table 11.14 – Household income v. 150% poverty levels, 1999

Households	South Bristol		Lincoln County	Maine
	Count	Percent		
Total households:	408	100%	100%	100%
Income below 150% of poverty level:	81	19.9%	17.9%	21.5%
Family households	36	8.8%	8.8%	9.9%
Non-family households	45	11.0%	9.1%	11.5%
Income at & above 150% of poverty level	327	80.1%	82.1%	78.5%
Family households	248	60.8%	58.8%	56.1%
Non-family households	79	19.4%	23.2%	22.4%

Source: U.S. Census SP3 [P93]

11.3 — Economic Development

The people of South Bristol have made it clear in the mail survey and at the two visioning meetings (see appendixes A, B, and C) that they wish for the town to stay the way it has been – to retain its historic character. This does not mean that there should not be economic development, only that development should not change the character of the town as the people have known it.

That the citizens of town would support economic growth while not changing the character of South Bristol was clearly stated in remarks in the mail survey returns (Report, 2005).

Economic development must be considered on a regional basis. No municipality can host development without considering transportation, be it for retail customers, workers, or material in and out.

South Bristol in general lacks the necessary infrastructure – roads and electric power, water and sewer – which would be necessary for any major industrial development. In addition there is little suitable land available.

That being said, the continued creation of small businesses is possible and appropriate. The number and variety of businesses listed in table 11.1 indicate that South Bristol has in the past spawned businesses, most of which are “first generation” individually owned. Some are family businesses now in the second or third generation of ownership.

Although the first automobiles arrived in Town in 1911, until after World War I South Bristol was like many coastal towns somewhat isolated. As we mentioned earlier, the town was still served by steamboats until somewhere around 1930. Self sufficiency was a way of life and to some extent the local economy was quite local. It was not much different from the way it is now with one major exception. Until a short while after World War II there were at least one general store and one grocery store which could provide

for most of the citizens’ needs. Good roads and the automobile changed that.

South Bristol has long supported cottage industry and the mail survey results and the two visioning meetings indicated continued support. Larger businesses other than ones involved with marine resources such as seafood processing or boat building could easily change the character of the Town, a character which a majority of the people wish to see preserved.

Since somewhere around 1960 there has been little change in the economy of the town. Probably the most significant change was the end of building large wooden vessels at Gamage Shipyard; fishing vessels into the 1960s and cruising schooners until 1978. In those days, the shipyard was the largest employer in town. Since then, the only significant employer change has been the establishment of the University of Maine’s Darling Marine Center.

Citizens and town officials seem happy with the current situation. There is little interest (see appendix C) for having the town government involved financially in promoting economic development.

It is appropriate for town government to become involved with regional economic development, either by direct involvement of elected officials or by an appointed committee.

During the past five years, there have not been any economic development plans either explicitly for South Bristol or in the region which would directly involve the Town. There is no recollection of such plans for a much longer period.

The closest economic plan in recent years is the ongoing Gateway 1 project of Maine DOT which does involve Damariscotta. We recommend in the next-to-last strategy of this chapter that South Bristol actively participates.

The Gateway 1 project sponsored by Maine DOT hopes to bring about coordination of development along the Route 1 corridor from Brunswick to Stockton Springs. Development along this corridor will affect not only the towns along Route 1 but also adjacent towns such as South Bristol.

South Bristol does not have any economic development incentives such as Pine Tree Zones and Tax Increment Finance Districts and has not had any in the past.

Development and population growth has been increasing along Midcoast Maine for many years. Opening of the new bridge across the Kennebec River from Bath to Woolwich brought about growth in Woolwich. When and if a bypass highway is built around Wiscasset the boom will advance to towns east of the Sheepscot River. When the Damariscotta Route 1 bypass was built in 1961 eliminating the bottleneck which was Main Street in Damariscotta, the next town east, Nobleboro, saw an increase in the rate of residential growth. Main Street was no longer an east-west travel barrier.

Development and growth are inexorably moving east and South Bristol must participate in regional planning as well as doing careful local planning.

Walpole, the northern section of South Bristol, has adequate land available for residential development. This will be covered in chapters 18 and 19. Population pressure from the west will be the driving force. With population growth will come the need for municipal services and the associated costs.

Orderly economic development town-wide will require improvements in public utility infrastructure. Three phase electric power should be made available when and where needed to support economic development. Cable (CATV, data, phone) should become available in the entire town, not only the present limited area. Cellular telephone service must be improved, even if it requires local antenna facilities.

In order that the town retain an appropriate mix of people, affordable housing will continue to be necessary. This will be covered in chapter 13.

References

Gateway 1; <http://www.gateway1.org/> Current information available at this URL.

Maine Department of Marine Resources (DMR); 2006 and 2009; this is the source for landing data and licensing.

Maine Department of Revenue (Revenue); 2008; retail sales data.

National Marine Fisheries Service (NMFS); 2009; Gloucester, Massachusetts.

South Bristol Comprehensive Planning Committee (Report); 2005; *Report of Citizens' Input*; South Bristol; Town of South Bristol.

U.S. Census; 2000; various tables.

Local and Regional Economy Policies and Strategies

South Bristol should encourage appropriate, probably low impact, economic development appropriate for the resources available and in concert with the townspeople's expressed desire to maintain the historic character of the Town.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Support the types of economic development which the town desires – commercial fishing, aquiculture, forestry, farming, elder care services, low impact cottage industries, etc. – which will reflect South Bristol's appropriate role in the region.	Amend the local Shoreland Zoning Ordinance to reflect the desired scale, design, and intensity of future economic development.	Planning Board \$1000 Currently in process
	Ensure that a future land use ordinance contains provisions which will support and not hinder economic growth in South Bristol.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Upgrade and improve the reliability of electric service. Expand three phase power availability if necessary for economic development.	Selectmen & CMP -0- to town 2013
	Provide cable service to the entire town in order to offer competitive TV, high speed internet, and phone services.	Selectmen -0- Next franchise renewal
	Consider developing a cellular telephone tower ordinance that addresses location and appearance while seeking solid town-wide coverage.	Towers will be addressed in chapter 20. See page 286 for discussion and possible ordinance enactment.
	Establish an elder care advisory committee to work with area hospital and health care providers to set up an elder care program in South Bristol (e.g., set up a branch of Miles Elder Care activities in South Bristol) or to ensure that appropriate services will be available.	Selectmen and Comp Plan Advisory Committee Minimal 2012
	Work with developers to provide low income housing.	See chapter 13 for a complete consideration of the matter of affordable housing
	Encourage and support waterfront services to land, manage, handle, and process various fishery catches.	Selectmen, Assessors & Planning Board -0- Immediate and ongoing

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Make financial commitments as necessary to support desired economic development for commercial fishing, aquaculture, forestry, farming, cottage industries, and elder care services, including any needed public improvements.	When appropriate, assign responsibility and provide financial support for economic development activities to a South Bristol representative(s) to a regional economic development organization (e. g., DECD, LCED) or initiative.	Selectmen \$500 per year 2011, Ongoing thereafter
	Develop and adopt incentives suitable for the types and locations of economic development appropriate for the Town.	Selectmen, Town Meeting \$500 per year 2012
	Where public investments are seen as desired, identify the mechanisms to be considered to finance them (e.g., local tax dollars, creating a Tax Increment Finance district, Community Development Block Grants, impact fees, etc.).	Selectmen -0- 2012
	Establish a committee, appointed by town government, to assist in the consideration, selection, and purchase of existing processing facilities and boat yards in order to ensure the perpetuation of boat building, fish processing, and marine services. Funding might be accomplished by creating a TIF district(s) or with loans, grants, state, or regional funding sources.	Selectmen \$500 per year 2013 and ongoing
Coordinate with regional development organizations and surrounding towns as necessary to support desired economic activity.	Initiate participation in any regional economic development efforts.	Selectmen -0- Immediate and ongoing
	Consider the possibilities of renewed agricultural activity and the potential of small scale forestry activity in both local and regional economic development planning.	Planning Board and Selectmen Minimal Immediate and ongoing
	Join and actively participate in the Maine DOT Gateway 1 project.	Selectmen \$500 per year Immediate and ongoing
	Actively participate in the Damariscotta Planning Advisory Committee (DPAC) because Damariscotta is the nearest service center municipality.	Selectmen \$100 per year Immediate and ongoing

Chapter 12 — Land Use Patterns

*We abuse land because we regard it as a commodity belonging to us.
When we see the land as a community to which we belong,
we may begin to use it with love and respect.*

~ Aldo Leopold (1886-1948) ⁸

Land use in South Bristol has undergone many changes since the first permanent settlers arrived in the 1730s after the Indian Wars. First there was sustenance farming and the shoreland being used as a base for fishing. The intertidal zone was a source of shellfish. The forest soon became a source of logs for lumber. In the northern part of town land was cleared for farming. The forests were over time cut for saw logs, firewood, and fuel for the kilns at the brickyards. A hundred years ago Rutherford Island was almost bare of trees as evidenced by photographs.

In the last hundred years farming has nearly died out. Much of the land that was cleared has reforested itself leaving stone walls in the woods as the only evidence of where once land was plowed and crops raised. Houses have grown up, but typically not in a manner to despoil the landscape and character of this rural town.

12.1 – Historical Land Use

Land use in the area currently encompassing South Bristol was a mixture of farming, residential, marine-related, industrial activity, and natural resource harvesting from the early days of permanent settlement in the 1730s. Marine related activities included fishing, shipbuilding and repair, and transportation of people and goods – travel to the southern part of town was mostly by boat until about 1900. Industrial activity included brick making, lumbering and saw mills, a little quarrying, and the shipyards. Natural resource harvesting on the land was mostly forestry and ice, most products being shipped out by sea.

As evidenced by the forests grown up where there was once cleared farm land, permanent change to the land did not occur except for the stone walls which once bordered farm fields and are now in the woods.

Many of the town's oldest buildings still standing (Map 1) were built in the mid-eighteenth century in Walpole (including the 1772 Walpole Meeting House to minister to needs of the residents), at Clarks Cove, along Harrington Road, in the area south of McClintocks Hill, along McFarlands Cove and S roads, and near South Bristol village.

During the 19th century, new housing starts tended to be within these areas. In the late 19th and early 20th centuries, seasonal tourism and associated service industries became established in the southern portion of town in the Gut and Christmas Cove areas. Summer cottages were built during this time, primarily on Rutherford Island and Inner Heron Island, and also to some extent in the Gut area. Farming gradually declined to the limited agricultural activity of today.

8. From *A Sand County Almanac: and sketches here and there*; New York; Oxford University Press, USA; 1989. Aldo Leopold is considered to be one of the foremost conservationists of the last century.

12.2 – Current Land Use

The Town still enjoys maple syrup making and vegetable farms, but the last dairy closed in the early 1980s. Tree harvesting continues on a limited scale with one commercial saw mill, and includes several tree growth tax abatement parcels. Haying also continues on a limited scale. Cutting hay in fields keeps them from reverting to forest thus maintaining some open views.

Over the past 10 years, there has been an increase in the number of horses, particularly in the northern portion of town where there are more open fields capable of supporting the horses which are kept primarily for recreational purposes. It is possible that this increase in the number of large domestic animals may continue as there is ample land available in the northern portion of town to support such growth.

Boat building and maintenance activities continue in the town with two facilities on the Gut, one on Johns Bay, and four facilities in the Walpole area on Split Rock Road, Sproul Road, Ridge Road, and Carl Bailey Road. None of the Walpole yards are on the Damariscotta River. These operations typically have larger buildings specifically built to support the enterprise and are considered commercial and industrial activities. Two of the yards were new starts in the past decade. It is unknown whether there will be additional new starts in the next 10 years. There are several smaller operations in town which are considered cottage industries as they have no significant footprint other than would be expected at a typical residence.

Residential development, primarily year-round structures, continues on Rutherford Island and on the mainland from the Gut to Walpole Meeting House. There is a trend for long-time residents of the southern part of town to occasionally sell their valuable shorefront property and move to the northern part of town. Over the past ten years, there were two subdivision developments on Rutherford Island

and one in Walpole. There have been several dozen individual new housing starts throughout town during this period. Over the next 10 years, this trend is expected to continue.

As the pressures on waterfront property continue to build throughout town, especially near the Gut and on Rutherford Island, the prices of such land and the associated taxes have significantly increased, making it difficult for the younger generation of fishermen to have their own access to the water. Maintenance of the working waterfront nature of the Gut can be enhanced through property tax abatements as recently adopted by the state. There is concern that existing working waterfront will be sold and converted to residential use, further restricting the ability to maintain a viable maritime economy other than recreational boating. Over the past 10 years, several of the working waterfront businesses and properties changed hands, but were not converted to residential use. Over the next 10-year planning cycle and in the absence of development controls, it is prudent to expect that one or more parcels will be converted to residential use if no working waterfront restrictions are enacted by owners or the town.

The land cover of South Bristol was discussed in chapter 3 and is illustrated on Map 3 and is further described in appendix E. Map 3 also shows land use based on the type of land cover (forest, fields, etc.). Map 13 showing all structures as of 2006 clearly indicates that development has been focused on Rutherford Island; along the main arteries of State Route 129 and Harrington Road; along feeder roads such as S, Clarks Cove, Sproul, McFarlands Cove, and Thompson Inn roads; and along the shore.

Nearly 47% of the dwellings in town are within the 250 ft shoreland zone and 49% of them are within 200 ft of a public road. Seventy percent are within 500 ft of a public road. This strip development began in the earliest days of the area

Table 12.1 – South Bristol structures built, 1997 through 2006

Tax map	New Yr round	New Seasonal	Valuation Added
8	2	0	\$395,000
9	0	4	\$1,470,000
11	1	0	\$137,600
12	1	3	\$1,190,000
13	0	1	\$209,800
14	1	2	\$471,200
15	2	3	\$1,389,700
16	1	0	\$189,000
17	3	3	\$1,286,100
18	1	2	\$1,337,300
20	4	3	\$3,097,000
21	2	3	\$2,270,600
22	2	6	\$1,768,600
23	1	0	\$592,800
24	2	1	\$971,800
25	2	0	\$534,100
27	13	2	\$1,539,700
28	1	0	\$146,000
29	26	2	\$5,713,500
30	7	1	\$2,411,000
31	11	5	\$3,617,800
Totals	83	41	\$30,738,600

Sources: Various, see appendix H

Notes: Tax maps not included had no new building during the period. Maps are numbered 1-31.

and continues today. However, new housing starts in the past 10 years are also being located along other roads (e.g., Carl Bailey Road, Sproul Road, and Split Rock Road) well away from the water and traditional arterial roads.

New building in town is summarized in table 12.1 and shown in detail in appendix H. The period from 1997 to 2006 was chosen since South Bristol did a total reassessment of real estate in 2007 which would have made changes in property values complex or impossible to determine. Over the ten year period 83 year-round and 41 seasonal homes were built.

During the ten year period from 1990 to 2000 the population increased by only 72 people. This makes it appear that new homes were being built

faster than the population could absorb them. This anomaly may be partially explained by the fact that quite a few of the new houses were built after 2000 and many of the new homes are occupied by two person families. Nevertheless, new construction, much of it scattered around the town, is using once vacant land and in some cases breaking up once extensive areas of unbroken forests and fields.

Some housing starts are located in areas that have been mapped by the State as representing a special wildlife habitat area such as a deer wintering area. Yet there remain extensive stretches along the arterial and feeder roads where the natural environment continues largely untouched except for occasional tree harvesting activity. These natural areas provide the town with the rural atmosphere the residents want to retain as made clear by the mail survey and at the two visioning meetings.

Based on visual evidence from driving along public roads, there are concentrations of dwellings in the Walpole Post Office area, Clarks Cove, and south of McClintocks Hill. Dwellings are even more densely located in the South Bristol Village area and on Rutherford Island. Nearly 35% of the dwellings in town are located on Rutherford Island. Critical review of existing land uses in town led to identifying several sectors (areas) with each sector having its own unique character. These sectors are depicted on Map 12, with the salient characteristics of each sector listed in appendix L.

Other than the working waterfront in the Gut area, there are no areas where commercial or industrial activities are concentrated. Agricultural activity appears to be focused in the northern portion of town, but wood harvesting occurs in small areas throughout town. Recreational marine activity is focused in the Christmas Cove area with the CCIA and Coveside Marina. There is some recreational marine activity in the Gut as well. As is noted on page 118, many of the smaller coves along the shore are seeing more

recreational boating activity, if for no other reason than mooring space is becoming increasingly scarce.

Two large parcels of land in the northern part of town are those of the Darling Marine Center of the University of Maine and the Wawenock Golf Club. These facilities represent valuable resources of the town, supporting the local and regional economy and providing recreational and educational opportunities. Continued maintenance of these attributes is important for the future well being of the town. Recreation and open space will be covered in chapter 15.

As presented on page 73 in chapter 6 (Natural Resources) and shown on Map 6, there are large blocks of land in the northern part of town that represent a wide range of natural resources and

support a diverse population of small and large plants and wildlife ranging from moose and American chestnut to moles and Lady Slippers. Some of these blocks are shared with Bristol and management of the areas would benefit by joint activity. Other blocks are mapped as special habitats, for example deer wintering areas. These large blocks of land, identified on Map 12 as Forest North and Forest Central, deserve special consideration in developing land use controls and designating growth areas.

Hunting occurs in sparsely and unpopulated areas throughout town and represents an important management tool for controlling overpopulation of targeted species. It is important to maintain areas where hunting can continue in the future.

12.3 – Analysis and Key Issues

Except for two boat yards created in Walpole, recent development appears to be mostly residential, occurring on a lot-by-lot basis, in subdivisions such as the Meetinghouse Subdivision in Walpole, and with planned development aspects as at the Coveside subdivision on Rutherford Island. The majority of the recently built structures are constructed as year-round dwellings, but many are occupied seasonally. That so many new houses are ready for year-round use has brought about winter visits by their owners. Most structures built were set back from the roadway so they are not readily seen. This is consistent with the community's vision to keep the town the way it is, with large expanses of forested land along the town's main roadways. Unfortunately, this also puts new development in conflict with the desire to maintain large blocks of undeveloped (unfragmented) land for wildlife habitat and recreation.

Based on the mail survey and two visioning

meetings, South Bristol residents consider the town to be rural. This is exemplified by the long segments of forested land and open fields along roads in town. The town has only limited commercial activity, mostly centered in the Gut and focused on marine-related activity. While there are two small grocery or convenience stores, most people do their grocery shopping in Damariscotta or beyond as well as their financial, medical, and other commercial activity. Regionally, the town's rural character is consistent with the surrounding economic climate and opportunities.

As described above, historical development of the town has been along the few major roads (e.g., State Route 129 and Harrington Road) and several of the secondary roads typically associated with past or present maritime activity, including recreational uses (e.g., seasonal residences on the tidal shore). This practice continues today. Newly created structures are typically in-fill or expansion along the traditional roadways, though there is

pressure being exerted on the larger undeveloped blocks of land.

Current land use regulations, primarily the Shoreland Zoning Ordinance, are effective in keeping development off the immediate shoreline, thereby preserving to a reasonable extent the view from the water of undeveloped or sparsely populated lands. The appearance of more and more finger docks is a tell-tale that more development is present than meets the eye. Outside of the shoreland zone, there are no land use regulations that direct growth to appropriate areas and protect critical resources. However, there is a strong disposition of residents to place natural resource valued lands into conservation easements, most of which are publicly accessible. This practice should continue to be encouraged as it provides recreational opportunities as well as strengthens the segment of the town's economy that provides services to seasonal residents who are drawn to South Bristol for its simple, unadorned life style and natural beauty.

However, there is continued pressure to develop into the large unfragmented blocks of land that are outside the shoreland zone and thereby risk the loss of wildlife habitat and recreational opportunities for seasonal and year-round residents.

The loss of these large blocks of land can be prevented through one or more of several approaches. Encouraging and providing landowners an opportunity to cash in some of the value of their undeveloped land would benefit the town if it could transfer development rights to an area where growth would be more appropriate (e.g., closer to more developed parts of town near the school and South Bristol village or other developed parts of town). Developers could also be encouraged by the use of tax incentive programs to focus on these areas rather than encroach into the natural resources which the town values.

Another approach would be to encourage or

require any development in valued areas to minimize the footprint of the development and design it in such a way as to have as little impact as possible on the natural resources of the area. Such conservation developments may even bring the developer higher lot sale prices than would traditional development lots.

Traditional village and neighborhood character have not been affected by the current rate of growth. This is in large part due to in-fill development and gradual extension of the traditional building areas (see Map 13) along the roads. Current regulations do not promote or inhibit development in these areas since they are beyond the shoreland zone.

Examination of Map 13 reveals that north of Long Cove 47 new inland residences versus 15 in the shoreland zone were built in the decade ending in 2006. (Also see appendix H.) Thus, over three quarters of that new development was beyond Town review except for plumbing permits which are State controlled. This reinforces the need for South Bristol to adopt town-wide development standards.

Based on the population growth projection for the next 10 years and beyond presented in chapter 5, residential growth can be expected to consume at least 30 to 60 acres for the 45 to 50 or so new residents per decade as projected in table 5.11 on page 59. This assumes two to three people and one to two acres per residence. Given that many of the new resident families are retired couples, it is safe to assume small family sizes.

The two boatyards created in the past ten years consumed less than 2 acres each. It is unknown whether a similar expansion in this industry can be expected in the next ten years as there were nearly 15 years of no expansion and, in fact, contraction for the industry. Residential development can be expected to continue to occur on Rutherford Island and in other areas in the southern part of town. The more recent trend of development in the northern portion of town can

be expected to continue or accelerate since more land is available there.

The town has currently a five member Planning Board with two alternate members, a part-time code enforcement officer (CEO), and a part-time licensed plumbing inspector (LPI). The board has recently adjusted its administrative procedures to reduce the time it takes to obtain a permit. Under the current regulatory framework, any development outside the shoreland zone does not ordinarily require Planning Board consideration unless it is a subdivision. There have been a limited number of subdivisions over the past ten years and this trend is expected to continue. The LPI issues plumbing permits for wastewater disposal systems (typically septic tank with leach field) for any newly created structure anywhere in town with toilet facilities. The

planned growth is similar to what it has been for the past ten years; therefore the administrative capacity should be adequate for the next ten years. If additional responsibilities are placed on the planning Board and/or the CEO then increased CEO work time would be required which would require adjustment to compensation and perhaps administrative changes by the Planning Board to accommodate increased permitting activity.

Environmentally suitable areas are available for mobile home parks in the southern and northern portions of town where growth is expected to occur. The size of these parks may be limited by the capacity of the land to accept waste and provide drinking water. Potential areas for growth, including mobile home parks are designated as yellow or gray on Map 14.

12.4 – Conditions and Trends

The town has one land use ordinance that creates land use districts: the Shoreland Zoning Ordinance. This ordinance establishes the entire shoreland zone as residential district except where it is otherwise designated. These other designations include commercial districts at the Eastern and Western Gut and at Christmas Cove; a Freshwater District encompassing lots surrounding Clarks Cove Pond and lots comprising Orr’s Meadow and Wiley Brook Swamp; and resource protection districts including Witch Island, Plummer Point, Town Hall Swamp, Hunters Meadow Swamp, Outer Thrumcap Island, and Thread of Life Ledges.

These districts are not limited by the name of the district. For example, campgrounds are allowed by Planning Board permit in commercial, residential, and freshwater districts; campsites (private individual) are allowed by Planning Board permit in resource protection districts; and marine related commercial activity is allowed by Planning Board permit in residential districts.

These districts are shown on the Shoreland Zoning maps at the Town Office.

Lot dimensions in the shoreland zone are one acre minimum with at least 150 foot frontage on the tidal shore and 200 feet on non-tidal shoreline for residential uses. These frontage minimums increase to 200 feet and 300 feet respectively for industrial, commercial, and governmental uses. There are no minimum frontage requirements for marine related commercial uses in the commercial district, but non-marine related uses in tidal areas of the commercial district require a 200 foot minimum.

Lots created and primary structures built during the past 10 years include residential and industrial uses. No commercial or institutional structures were built during the last 10 years. Residential structures were built throughout town. Industrial structures (2 boat shops) were built on Split Rock Road and Carl Bailey Road.

Constraints to development based on

geological conditions and hydrology are shown on Map 2. These conditions are discussed at length in chapters 3 and 4. Potential constraints based on natural resources are discussed in chapter 6 and shown on Map 5. Those based on historical and archeological resources are discussed in chapter 8 and shown on Map 9.

There are numerous areas which are restricted from development due to current use, ownership (e.g., preserves), conservation easements, and the like.

Map 14 (Constraints to Development) shows numerous restrictions and potential restrictions to development categorized by severity.

Based on existing ordinances, mobile home parks are allowed anywhere in town, provided they conform to the shoreland zoning regulations if within 250 feet from the shore, can secure a waste disposal plumbing permit, and comply with

state requirements – the Maine DEP Development of Site rules.

Land use in South Bristol is currently managed through the town’s Shoreland Zoning Ordinance, Subdivision Ordinance, and Flood Plain Management Ordinance. The Shoreland Zoning Ordinance was described briefly above in presenting minimum lot sizes and districts. In essence, this ordinance conforms with minimum state standards. It is more stringent than the state requirement in only one area, requiring a 100 foot setback (compared to 75 feet) from Clarks Cove Pond. Similarly, the Subdivision and Flood Plain Management ordinances conform with Maine’s minimum requirements.

The amount of land which will be required for housing growth in the next 10 years was discussed above under Analyses and Key Issues.

Land Use Patterns Policies and Strategies

All policies and strategies regarding land use will be included in chapters 19 and 20, Future Land Use and Bringing the Plan to Life.

Chapter 13 — Housing

An [English]man's home is his castle.

~ Various sources, all English

*The best security for civilization is the dwelling,
and upon properly appointed and becoming dwellings depends,
more than anything else, the improvement of mankind.*

~ Benjamin Disraeli (1804-1881)

Existing housing in South Bristol dates from the 1750s to the present and represents a variety of styles and functions from the early cape and federal architectural styles that served the farming and mariner families of the 18th and 19th centuries, to more recent houses of local people, to the small cottages and large hotels (now gone) serving the late 19th and 20th century summer people, to the homes of today's year-round residents whose incomes derive from both local and regional economies, to the current vacation residences of people who earn their livelihood away from South Bristol, and to the homes of those families and individuals who have chosen South Bristol for retirement.

13.1 – Existing Housing

Housing stock

Current housing stock in South Bristol dates back to the mid-1700s when the economy was based primarily on forest products, farming, and maritime activity. During the late 1800s and early 1900s, South Bristol experienced the start of seasonal housing located primarily near the Gut, on Inner Heron Island, and at Christmas Cove with the construction of inns and family seasonal cottages.

Housing stock built before 1900 accounts for 15% of South Bristol's current total. The old houses, a few now gone, have been described by Warner (2006) and their importance was discussed in chapter 8. All of the early houses are shown with dates on Map 1. Current structures are shown on Map 13.

Until after World War I, seasonal residents usually stayed for the season and would arrive via steamships from Portland or Bath, or by rail to Newcastle with carriage or steamboat travel to their final destination. Year-round residents

Table 13.1 – Age of South Bristol housing units, 2000

Year built	Number	Percent
1939 or earlier	452	48.7%
1940 - 1959	56	6.0%
1960 - 1969	64	6.9%
1970 - 1979	112	12.1%
1980 - 1989	117	12.6%
1990 - 1994	58	6.2%
1995 - 1998	64	6.9%
1999 - March 2000	6	0.6%
Total	929	100.0%

Source: U.S. Census

continued to be supported by the maritime industry, including boat building and repair, fishing, and shipping of locally made or harvested products and other products such as bricks, lumber, fish, farm produce, and ice.

By the mid 1900s, lumber, brick, and ice production had ceased as viable industries and there were very few operating farms in town. More recently, in the late 1900s and early 2000s, housing starts have largely, but not exclusively, been driven by families whose income does not

rely on the local economy and by retirees seeking seasonal and year-round accommodations.

A summary of the number of homes and when they were built is shown in table 13.1 on the previous page. Review of the table indicates that nearly half of the homes were constructed prior to 1939. Since 1950 the number of new homes built increased from 12 per decade and has stabilized in the range of 112 to 122 per decade (U.S. Census, 2000). This is larger than the 40 to 50 new starts per decade that might be expected to accommodate the slow population growth of roughly 8 to 9 percent per decade. The median year of the residential construction is 1971 for owner-occupied residences and 1940 for renter occupied residences (U.S. Census).

It is noteworthy that some of the newer residences are major renovations or complete rebuilds of older structures. Based on the mail survey of town residents (seasonal and year-round) conducted in 2003, 56 percent of the respondents were seasonal and 44 percent were year-round. This is consistent with the 2000 Census data that reported 502 units, or 53.9% of the housing units in South Bristol, identified as vacation or occasional use units. For reference, Bristol was 44.8% and Maine statewide was 15.1% seasonal.

The influence of seasonal residences on the town’s housing inventory is shown in table 13.2.

- North of Four Corners 20% are seasonal.
- Between Four Corners and the Elementary School 56% are seasonal.
- South of the school 68% are seasonal.

Many of the seasonal residences being renovated and most of those being rebuilt are suitable for year-round occupancy even though now occupied only seasonally. So far as is known, all of the newly built homes are suitable for year-round occupancy.

There are 932 residential units in town of which 502 or 54% are seasonal (U.S. Census, 2000). The 51% seasonal shown in table 13.2 is well within the expected statistical variation indicating that the data in the table are valid.

Figure 13.1 shows the distribution of lot sizes where a structure is present. Nearly 60% of the structures in South Bristol are located on lots of two acres or less.

There are few areas of town that do not have at least one residential unit. The largest blocks of undeveloped land are located in the north and east portions of town. Since the town is long and narrow with the primary transport route, State Route 129, running nearly the full length, houses were built since the 1700s along this route.

The highest density of houses is in the southern portion of town on Rutherford Island and in the Gut area. More than two thirds (70.4%) of the houses in town are within 500 feet of public roads or along the 69 miles of shoreline. It is this latter area, the shoreland zone, where nearly half (46.5%) of the town’s dwellings are found. This propensity to dwell on the coastline is most pronounced in the southern parts of town (e.g., 34.6% of all dwellings are on Rutherford Island) as well as along the Damariscotta River all the way to the northern part of Town.

Table 13.2 – Year-round versus seasonal occupancy of homes by geographic location

Location	Year-round		Seasonal		Combined	
	Number	Percent	Number	Percent	Number	Percent
North of Four Corners	70	22%	17	5%	87	27%
Four Corners to Elementary School	38	12%	48	15%	86	27%
South of Elementary School	48	15%	101	31%	149	46%
Totals:	156	49%	166	51%	322	100%

Source: 2003 mail survey, 322 returns responding to both questions 34 and 37.

Note: Percentages are of the 322 homes for which data are available.

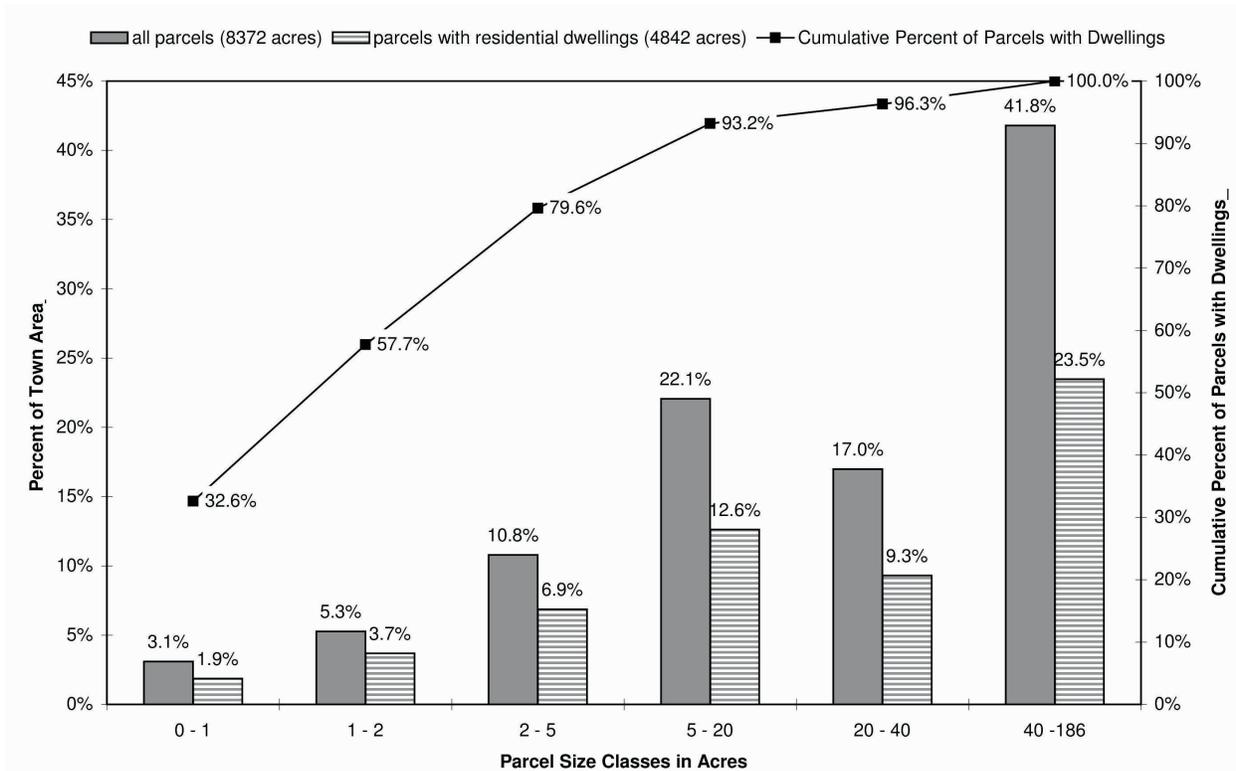


Figure 13.1 – Tax parcels of South Bristol with residences as of April 2006

Comparing the houses shown on Map 13 as of 2006 to those houses identified in the historical recount of houses and families in South Bristol (Warner, 2006) and shown on Map 1 reveals little difference in distribution of dwellings, except for more houses in 2006, especially on Rutherford Island and along the shoreline.

More recently, the Lincoln County Planner’s Office used USGS maps and other sources to prepare build-out maps for the years 1891, 1957, 1969, and 2006. Starting with 1891, there were 214 buildings. In 1957 there were 488 structures, an increase of 42 structures per decade. In 1969 there were 582 structures, an increase of 78 structures per decade. In 2006 there were 983 structures, an increase of 108 per decade. The locations of these new structures (the four maps are available at the town office) show a continued increased density of homes in the Gut area, on Rutherford Island, along the shoreline, and along State Route 129.

Using town tax records and annual reports for

the period 1997 through 2006, the Comprehensive Planning Committee identified 124 new (not replacement) structures as shown on Map 13 and detailed in appendix H. During this 10-year period, 55% of the new residences created in town were located north of Farrin’s Pond; 36% of them were created between Farrin’s Pond and Split Rock Road. South of Farrin’s Pond to Birch Island 50 residences were created with an additional six south of Birch Island.

It is also notable that during this period 1.5 new residences were added for every new resident. One must recognize that many of the new homes are, at least for the moment, for seasonal use, so the ratio of new year-round homes to population increases is probably less than 1.0. Approximately 23 percent of the new homes were located in formal subdivisions; two of which have dedicated waterfront access.

Over the 10-year period from 1990 to 2000 the number of households and housing units grew

Table 13.3 – Changes in South Bristol, 1990-2000

Factor	1990	2000	Change	
			Nbr	Percent
Population	825	897	72	9%
Households	354	410	56	16%
Housing units	790	932	142	18%
Owner-occupied	299	357	58	19%
Renter-occupied	55	53	- 2	- 4%
Mobile homes	33	20	- 13	- 39%

Sources; U.S. Census 1990 and 2000.

at a rate faster than the population as shown on table 13.3 above. This is interpreted to be the result of the trend toward smaller families, each seeking their own house, and to the increased demand for housing units for seasonal purposes and/or in anticipation of retirement. Comparison of the proportion of seasonal or vacation homes in South Bristol and other areas in the state within about 50 miles of South Bristol (table 13.4) indicates the town is definitely a vacation town; it has more vacation housing units than year-round units. Mount Vernon and St. Albans are included since they are inland vacation areas about the same driving time from Boston and the south as is South Bristol.

Housing conditions and types

In general, the housing stock in South Bristol is of good to excellent quality (Roundy, 2002), though some older units could benefit from improved insulation and routine maintenance. A windshield survey conducted in 2006 indicated no significant change in the quality of housing units throughout town.

For the most part, housing in South Bristol is owner-occupied single family units, except for some seasonal homes which are typically rented on a weekly basis for part or most of the summer

Table 13.4 – Seasonal or vacation housing, 2000

Location	Total housing units	Vacation housing units	Percent vacation
Maine	651,901	101,470	15.1%
South Bristol	932	502	53.9%
Bristol	2,290	1,027	44.8%
Damariscotta	1,151	158	13.7%
Belfast	3,121	138	4.4%
Mount Vernon	956	320	33.5%
Palmyra	851	42	4.9%
Saint Albans	1,100	334	30.4%
Waterville	6,819	67	0.9%

Source: U.S. Census 2000

when not occupied by the owner. Table 13.5 lists the numbers of different types of housing units in South Bristol in 2000. Of the 929 housing units, less than two dozen are mobile homes. Similarly, there are only 13 multi-family units. In 2006, there were no condominiums and most renters were in single family units.

In 2007, the number of year-round households renting in South Bristol was 54 (MSHA, 2007). This represented 13 percent of the total housing stock. Of the 54 renters, 48 were households with moderate or lower incomes.

Table 13.5 – Housing types in South Bristol, 2000

Housing unit type	Number	Percent
Single-family, detached	884	95.2%
Single-family, attached	10	1.1%
Duplex units	2	0.2%
Multi-family	13	1.4%
Mobile homes	20	2.2%
Boat, RV, Van, etc.	0	0.0%
Totals:	929	100.0%

Source: U.S. Census SF1 [DP-4]

13.2 – Income and Housing Affordability

An owner-occupied house is considered to be affordable if, at the time of purchase, the anticipated housing costs (mortgage, insurance, property taxes, utilities, and energy costs) do not exceed 28 to 33% of the household’s gross income. A renter-occupied house is considered affordable if the monthly housing costs (rent, utilities, and energy costs) do not exceed 28% to 33% of the household gross income.

Lower income households have a gross household income of less than 80% of the county median income. These households are split into two groups:

- Low income households having 50% to 80% of county median income; and
- Very low income households having less than 50% of the county median income.

Another category that is to be considered in planning for affordable housing is the moderate income household with a gross income from 80% to 150% of the county median income. See table 11.14 on page 143.

For reference, table 13.6 shows the median gross household income (half of the household incomes were above and half below that median),

median home sale prices reported by the Lincoln County Multiple Listing Service (50% of homes sold for more and 50% sold for less), and home cost that a median income household can afford in South Bristol for the period from 2000 to 2008 (MSHA, 2007; SPO, 2009).

Roughly two out of three year-round households in South Bristol are identified by the state as having “moderate” or “lower” gross household incomes. The median household income for Lincoln County was \$45,675 in 2008, slightly higher than South Bristol, although Lincoln County had been closer to 20 percent higher in earlier years.

Also listed in table 13.6 is the affordability index, the ratio of the targeted group’s home purchase ability (based on median income and assumed mortgage, utility, etc. expenses) divided by the median house sold price. The index has decreased steadily to be the lowest index in Lincoln County and Maine.

The 2008 housing affordability index for South Bristol was 0.31 (MSHA/SPO, 2009), the lowest in the state. (At the same time, the affordability index for Lincoln County was 0.74 and for Maine and the Waldoboro LMA they were 0.79). This indicates that a major portion of the town’s working residents were essentially priced out of the housing market. Comparison of the relatively slow growth of median income to the dramatic growth of median home sale prices (table 13.6) reveals a great disconnect between the two. This is largely due to the purchase of shorefront property in South Bristol by folks who are not year-round residents of the town and thus are not

Table 13.6 – Median incomes, home sales, and affordability, 2000-2008

Year	Median household income	Median home sale price	Home median income h’hold can afford	Affordability index
2000	\$38,636	\$172,000	\$117,000	0.68
2001	\$41,567	\$140,000	\$126,000	0.90
2002	na	na	na	na
2003	\$41,917	\$182,000	\$136,000	0.75
2004	\$41,774	\$320,750	\$135,981	0.42
2005	\$42,879	\$425,000	\$143,147	0.34
2006	\$44,394	\$385,000	\$143,970	0.37
2007	\$45,220	\$436,800	\$146,650	0.34
2008	\$46,574	\$482,500	\$151,053	0.31

Sources: Maine State Housing Authority, Maine State Planning Office.

Notes: Home sales include only those sales through a real estate broker; private sales are not included. Median is the mid point which represents the point about which half of the numbers in the range are below and half are above. “na” indicates data for 2002 are not available.

included in the income statistics.

Figures 13.2 and 13.3 on page 163 graphically illustrate the distribution of resident household income and prices of broker-sold homes in South Bristol. Figure 13.3 shows prices of the seven homes sold in 2005 and the ten homes sold in 2006 in South Bristol, and that *no* homes were sold for under \$200,000. The median sold price was \$425,000 in 2005 and \$385,000 in 2006. Looking at figure 13.3 and table 13.6 reveals that no homes were sold by a broker in town that would be affordable by the median income household.

Furthermore, as illustrated in table 13.7 below, one would have needed a household income of \$127,000 to buy the median sold home, three times the median income in South Bristol.

Thus, only roughly 15 percent of the town’s year-round households could afford to buy the median sold home.

A review of transfer tax records available at the town office for 2005-2006 indicated nine properties with houses were transferred from one owner to another. Two of the nine properties had a sale price lower than the price a median income household could afford (\$84,792 and \$74,900). But, the lower priced property was listed in the 2009 assessment records as having a value of \$538,600.

It should be noted that with few arms-length home sales in town each year, one or two sales at a relatively low or high price will severely skew median and mean price statistics.

Table 13.7 – South Bristol housing tidbits, 2005

Median household income (year-round household)	\$43,000	
Median (half sold for less) houses sold price	\$425,000	
Income needed to purchase median sold house	\$127,000	
House that median income could afford	\$143,000	
Houses sold for less than \$200,000	0	
Affordability index (lowest in Lincoln County and Maine)	0.34	143,000/425,000
Households in South Bristol	414	
Households which could afford median sold house	Less than 62	Less than 15%
Households with moderate or lower income	275	66% of all households
Homeowners with moderate or lower income	227	55% of all households
Senior (65+) households	151	37% of all households
Senior households with moderate or lower income	91	
Renter households	54	13% of all households
Renter households with moderate or lower income	48	89% of all renters
<u>Typical workforce annual incomes:</u>		
School teacher	\$30,000 - \$50,000	
Commercial fishing helper	\$20,000 - \$30,000	
Entry level engineer	\$40,000 - \$50,000	
Carpenter helper	\$15 - \$25 / hour	\$31,000 - \$52,000 (40 hr. week, 52 weeks / year)
Seasonal helper	\$15 - \$20 / hour	\$31,000 - \$42,000 (40 hr. week, 52 weeks / year)

Source: Maine State Housing Authority, 2007

Notes: Moderate income is 80% to 150% of county median income.

Low income is 50% to 80% of county median income.

Very low income is less than 50% of county median income.

South Bristol median income was \$43,000 in 2005.

Affordability is based on 28% to 33% of gross household income for housing.



Figure 13.2 – Income distribution of South Bristol households, 2005 and 2006

Source: Maine State Housing Authority, 2007.

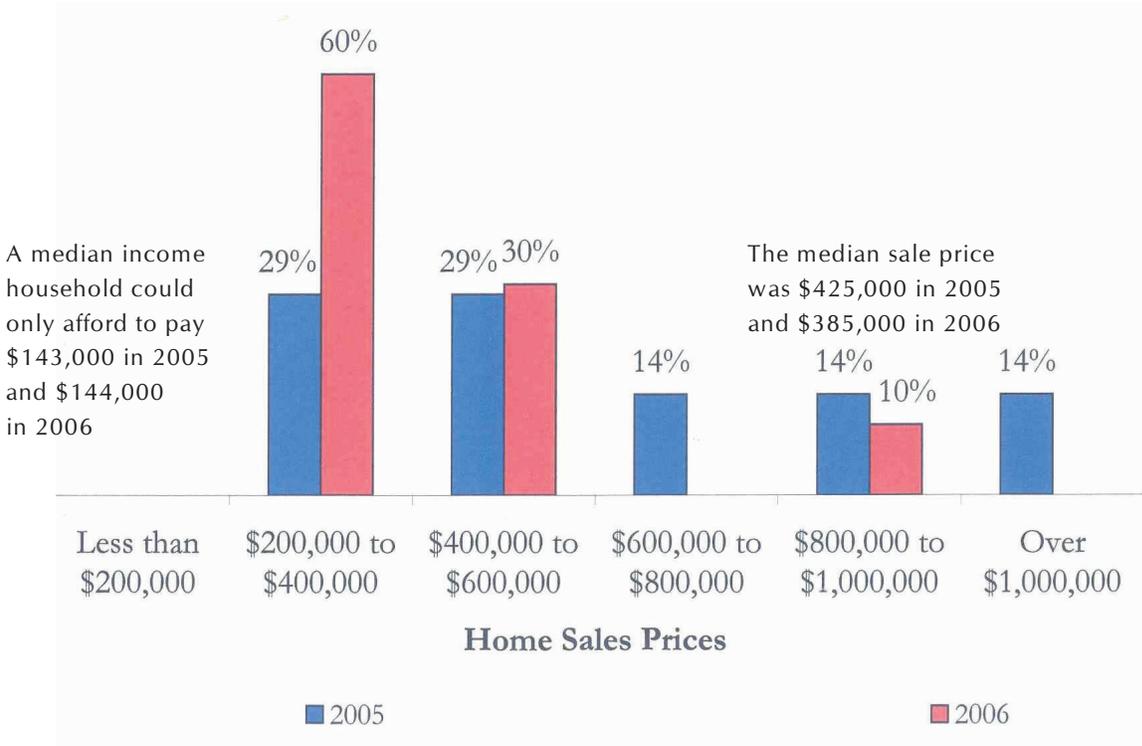


Figure 13.3 – Homes sold in South Bristol, 2005 (7 homes) and 2006 (10 homes)

Sources: Maine State Housing Authority, Maine State Planning Office.

Note: Only sales through real estate brokers are included here.

13.3 – Housing Needs and Affordable Housing

Existing land use and other regulations in South Bristol are silent with respect to affordable housing. The town has only a Shoreland Zoning Ordinance and a Subdivision Ordinance. There are no other land use control regulations in South Bristol. Neither of these two ordinances explicitly hinders affordable housing nor mobile home parks, but the Subdivision Ordinance might possibly be amended to provide incentives to meet affordable housing needs.

The Maine DOT Gateway 1 project includes affordable housing as part of its comprehensive planning along the US Route 1 corridor. North of South Bristol, the Damariscotta Planning Action Committee (DPAC) is actively addressing affordable housing. Affordable housing projects completed in the region include those in Damariscotta, Edgecomb, Boothbay, and Bristol. Agencies involved in these projects have included Coastal Economic Development Corporation and Coastal Enterprises, Inc. Other organizations involved with affordable housing have included Community Housing Improvement Program (CHIP) and Habitat for Humanity.

While the housing stock has been growing at a rate faster than the year-round population, much of that new stock is used seasonally and not available for year-round occupancy. Therefore, to accommodate the projected 0.47% per year year-round population growth rate over the next ten years, housing will be needed for an estimated 50 people. (See table 5.11 on page 59.) Assuming that these additional people will be in two person households, there will be a need for approximately 25 new housing units over the ten years. Assuming also that the same distribution between rental and homeowner continues as it has in the recent past, 13 percent or up to four units over ten years will need to be rental units.

Analyses and Issues

Based on the conditions and trends of housing in South Bristol as described above, the town continues to be a seasonal destination with more than half of its housing units serving seasonal residents. The cost of purchasing a residence in South Bristol far exceeds the ability of most year-round working residents. This situation creates a significant challenge for the town to maintain a diversity of residents and workers serving the community in a variety of important economic and service functions. Without affordable housing, the town's school, working waterfront, volunteer fire department, and seasonal and year-round service businesses will be challenged by the need to attract workers from towns to the north and inland.

Options for Addressing Affordable Housing

Affordable housing in South Bristol is an imposing challenge not faced by any other community in Maine to the extent it is here. This situation is due to the extremely high value of a large portion of the town's real estate, which is itself driven by the fact that much of it is along the town's 69 miles of shoreline – in high demand for both vacation and year-round homes. Even areas away from the shore on Rutherford Island and in some other parts of town are in high demand for vacation homes. Considering the average wages of the labor force in the year-round population (which are typical for Maine), housing is beyond the means of the average worker except in the northern part of town.

Meeting this challenge is necessary because the town need teachers to educate its children, firemen to protect its structures and respond to emergencies, personnel to provide the services required by residents whether year-round or seasonal, workers for the marine-related businesses, and decent housing for elderly residents. The following are some options for the Town to consider:

- Work with other towns to increase the availability of affordable housing at the regional level. This should include actively participating in regional planning activities (e.g., Gateway 1, the proposed Lincoln County Regional Planning Commission), and working with regional organizations such as Coastal Economic Development Corporation (CEDC) and Coastal Enterprises, Inc. (CEI) which can facilitate the creation of affordable housing for working residents as well as for elderly residents.
- Require subdivisions to include a provision that 10 percent of new residences are affordable (based on a 5-year average historical development) to those year-round residents (households) earning moderate or lower incomes.
- Establish a fund to be administered and used by the Town to facilitate meeting the state goal that 10 percent of all new housing starts are affordable to those year-round residents (households) earning the moderate or lower incomes. This could include gap financing for the purchaser, developer financing help, purchasing land, site development costs, and affordable housing construction cost. The fund could be financed by placing a surcharge on dwellings built in town that are priced greater than the affordable house for the year it was ready to be occupied, a tax paid by all residents, or use gifts and other money given to the Town.
- Use one or more tools provided or allowed by the State to facilitate affordable housing construction and purchase, including:
 - Tax Incremental Financing (affordable housing or commercial) where increased property taxes are set aside for covering costs incurred by the town or the developer in making the development project work (e.g., site development, land costs, consulting, legal). State revenue sharing is not affected as a result of any increased valuation.
 - Affordable Housing Subdivisions where the developer receives cash to offset the cost of setting aside building lots for affordable units.
 - First Home Project Financing with very favorable rates.
 - Community Development Block Grants.
 - Transfer of Development Rights with a bonus if the developer commits to affordable housing.
- Work with Habitat for Humanity, CHIP, or other organizations to construct affordable dwellings in town on land donated or otherwise provided.
- Wherever the land will support it (well water supply and septic capability), allow and support the construction of duplex dwelling units on single family lots.
- Encourage use of accessory apartments
 - to provide income and assistance to elderly who live in their own houses.
 - to provide housing for seasonal or year-round workforce.
 - to provide housing opportunities for elderly residents.
- Continue to allow mobile homes as a viable low-cost residence.

Sustainable Growth in a Rural Setting

In addition to the affordability issue, the town needs to control development of new residences in a manner that is sustainable and protective of the town's rural setting, including the availability of potable groundwater and the maintenance of the scenic views from land and water and along state and town roads.

Elderly Housing

With the aging of South Bristol's population, the town is entering uncharted territory since a significant number of new year-round residents are recent retirees. It is unclear whether these new residents will continue to be residents of the town

or region as they age and require more care such as provided by assisted living and nursing care facilities. These facilities are regionally available in Damariscotta and Newcastle and elsewhere in Lincoln County. When these facilities can no longer meet the regional needs for elderly housing, additional capacity will need to be developed.

Another consideration touched on earlier in

chapter 11 on page 137 is the desirability of providing in-home support services for the elderly so that they can remain in their homes. Some services are currently available. Meals-on-Wheels helps by providing nutritious meals to those who might otherwise simply not have the ambition, ability, or inclination to cook for themselves, particularly those living alone.

References

Maine State Housing Authority (MSHA); 2007; various documents and reports.

Maine State Planning Office (SPO); various dates; various material.

Roundy, Charles G.; 2002; *Bristol/South Bristol Housing Assessment Project Report*; Government Resources, Inc.; Augusta, Maine.

U.S. Census; 2000; various tables.

Warner, H. Landon, 2006; *A History of the Families and Their Houses: South Bristol Maine*; South Bristol; South Bristol Historical Society

Housing Policies and Strategies

It is the goal of South Bristol to encourage and promote affordable housing opportunities for its year-round residents, whether it be in historical houses, cottages, apartment buildings, mobile homes, apartments auxiliary to existing residences, or newer structures.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Encourage and promote adequate workforce housing to support South Bristol's and the region's economic development.	Create a volunteer community affordable housing committee and work with regional affordable housing coalitions; report annually to town.	Selectmen Minimal 2012
	Encourage workforce housing by allowing residential development on smaller lot sizes in the designated growth areas in and around South Bristol Village and in Walpole.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Allow and encourage accessory apartments in existing and proposed residential structures for elderly and workforce segments of our population by promoting the establishment of such apartments.	Planning Board Minimal 2014
Ensure that land use controls encourage the development of quality, affordable housing, including rental housing.	Enact land use regulations to increase density or provide incentives such as density bonuses, to make housing less expensive to develop.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Promote the construction of duplexes on single family lots where appropriate as an incentive for affordable housing.	
Work to achieve that at least ten percent of all housing units built or placed during the next decade be affordable.	Working with private developers, CHIP, Habitat for Humanity, and government agencies(e.g., Coastal Economic Development Corp) and using innovative financing techniques where appropriate (e.g., Tax Incremental Financing, land trust, Transfer of Development Rights [TDR], gap financing), South Bristol will work to achieve the goal of at least 10% of new residential construction/development meeting the state definition of affordable housing.	Selectmen, Citizens Committee, Planning Board Minimal 2013
	Require subdivisions to construct one affordable housing unit for every 9 market-priced residences (10 percent) or contribute an equivalent cost to a town-managed fund designated solely for the establishment of affordable housing.	To be included in an amended subdivision ordinance. See chapter 20 on page 286 for anticipated cost and completion date.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Encourage and support the efforts of regional housing coalitions in addressing affordable elderly and workforce housing needs.	Establish a working committee with appropriate budget to work with neighboring towns and regional and state agencies to establish a regional approach to providing affordable housing to residents of South Bristol.	Selectmen \$500 per year 2013
Manage new residential development so that it does not exceed the capacity of South Bristol to provide efficient and adequate services.	Evaluate the impact which any proposed residential development will have on town services and enact the capability to impose a residential development cap to ensure the ability of the town to provide facilities and services.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Periodically review the capacity of the town, including the cost of providing services and the cost of regional services, to accept new development.	Selectmen -0- 2012 and thereafter
Promote a pattern of development that is consistent with South Bristol's local and town-wide character and in areas that do not endanger human safety and natural resources.	Pursuant to 30-A MRSA 4358(3)(M), allow mobile home parks provided they are protective of groundwater supply and quality, have adequate stormwater and sanitary sewerage facilities, and have appropriate vegetative/ natural screening from Town and State roads.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Adopt a land use ordinance that protects environmentally sensitive areas such as Forest North, Forest Central, and Clarks Cove Pond sectors, including deer wintering areas, and other special wildlife habitats from uncontrolled development. See Map 12.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Adopt a conservation subdivision ordinance that encourages, when possible, development of 5 acres or more of undeveloped land to be planned using conservation, open space, or cluster housing development techniques to retain the rural vistas and wildlife habitats and corridors.	To be included in a future conservation subdivision ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
	Discourage residential or commercial development in the 100 year flood plain as defined by FEMA.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Ensure that environmentally sensitive areas receive adequate protection from the effects of development construction and use.	CEO, Planning Board Minimal 2011

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Encourage all new construction to be environmentally sustainable and to conserve energy	Adopt a building ordinance that includes “green” standards and which is widely recognized and used in order to avoid imposing unique, special requirements on builders and contractors.	To be included in a future building ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
	Develop design review standards, including energy and water conservation, for new construction or expansions.	To be included in a future building ordinance. See chapter 20 on page 285 for anticipated cost and completion date.

Chapter 14 — Transportation

Transportation is Civilization

~ Rudyard Kipling (1865-1936)

While South Bristol's character is greatly influenced by its coastal and marine attributes, its transportation for most residents, except those who make their living on the water, is primarily dependent on motor vehicles. The Town occupies the southwesterly portion of the Bristol peninsula stretching about 13 miles north to south; at its widest a little over two miles from east to west, but mostly a mile and a half or less.

Understanding the extent and characteristics of the town's vehicular transportation network, the trends in its use, the potential for alternative modes of transportation, and how changing development could impact this network are important when planning for South Bristol's future.

14.1 – Road Network and Traffic

The Road Network

The principal mode of transportation in South Bristol is by private vehicle traveling on state and local roads. South Bristol's road network consists of 26.39 miles of public roads. With the exception of 0.07 miles of gravel road, all public roads in South Bristol are paved. There are also 27.47 miles of private roads which serve mostly seasonal shorefront properties and residential developments, but increasingly they also serve year-round residences. The roadway network is presented on Map 15 and in table 14.1 on the next page. Appendixes I and J contain additional details of both public and private roads.

The public road network can be classified into three categories:

- The 10.10 miles of major collector roads, which are defined by the Maine Department of Transportation (MeDOT) as highways that provide connections between arterial and local roads. The only major collector road in South Bristol is the state portion of Route 129 extending from the town line in the north to the south across the swing bridge and up to Union Church.
- The 0.93 miles of minor collector roads, which MeDOT classifies as roads that provide

connections between major collector roads and local roads. Harrington Road is a minor collector extending from State Route 129 at Four Corners to the Bristol line and continuing to Bristol Road (Route 130).

- The 15.36 miles of local public roads that provide connections between collector highways and access to adjacent land.

The Town maintains 15.29 miles of paved roads and 0.07 miles of gravel road (Fellows Point Road) and plows just under 26 miles of state and local roads. Portions of Sand Cove and Split Rock roads and all of East Side Road are not plowed in the winter. The State of Maine maintains Route 129 from its northern end to the church on Rutherford Island, and Harrington Road from Four Corners to the Bristol town line.

The town's maintenance responsibilities could increase in the future as new residential development continues along town roads. Such development, while not now explosive at less than one percent per year, still leads to accelerated deterioration of the existing road network due to increased passenger vehicle and truck traffic. Requests from homeowners for improved roads and requests from the fire and other emergency service departments for better year-round access

are also reasons for road improvements. Capital expenses can include better road base, widened travel ways, and improved drainage, especially to roads that now are only a lane and a half wide, such as Carl Bailey, Ridge, Split Rock, and

Sproul roads.

At last count, there were 117 private roads in Town, the longest at 1.24 miles being East Branch Road off of Harrington Road on the South Bristol - Bristol border. Good Day Drive and

Table 14.1 – South Bristol public roads

Road	L'gth miles	Condition	Last Paved	Comments
Burma Road	0.18	Fair-good	2000	One lane wide; 0.11 gravel beyond pavement is private.
Carl Bailey Road	0.86	Excellent	2004	Narrow; 2004 pavement overlay with no work on base; poor sight distances; minimal snow storage space
CCIA Road	0.05	Fair	?	
Clarks Cove Road	2.72	Fair-good	1995 2003	Pavement stress cracks in new section; culvert cover cracks; rebuilt near town hall; Ridge Road to Route 129 poorer.
Coveside Road	0.58	Good	1997	Pavement holding up better than some other roads
East Side Road	0.28	Excellent	2001	Short sight distance; narrow; not plowed in winter.
Fellows Point Rd.	0.07	Fair-good	Gravel	Poor drainage; no turnaround
Harrington Road	0.93	Poor-fair	?	Pavement sags, stress cracks & base movement; gravel shoulders
Hill Road	0.10	Fair-good	1997	No turnaround; 0.09 gravel section beyond pavement private
Ledge Hill Road	0.09	Fair	?	Unknown if section beyond pavement has been abandoned.
McFarland Cove Rd	0.48	Fair-good	2000	Cracked culvert cover; little drainage; some pavement edge deterioration; sight distances; skim coat only in 2000
Middle Road	0.74	Fair-good	2007	Base and pavement wear. Only part of road done in 2007
Old Barn Road	0.17	Poor	?	Old pavement very poor; heavy truck use; base; drainage; width
Prescott Road	0.15	Good	2001	Narrow
Ridge Road	0.86	Fair-good	1999	Pavement cracking; 1.5 lanes; good shoulders; drainage
Roderick Road	0.41	Fair-good	1998	Narrow; 0.30 gravel section beyond pavement private
S Road	1.55	Good-excellent	2000 2003	0.56 paved 2000; 1.00 paved 2003; 2000 section shows wear; limited drainage; some cracks in 2003 section due to residential construction; very narrow near far end
Sand Cove Road	0.17	Fair-excellent	2001	Pavement excellent; 0.03 section beyond pavement is private; winter plowing to Sand Cove only
Shipleigh Road	0.38	Poor-good	2001	1.5 lanes wide; lower end 1.0 lane wide and poor.
Shipyards Road	0.39	Poor-good	1998 2001	0.19 paved 1998; mostly poor condition; 0.20 paved 2001; good except wear at boatyard; 1.5 lanes to Burma Rd.; 1.0 lane beyond
Split Rock Road	1.22	Fair	1997	Pavement checking; 1.0 to 1.5 lanes wide; significant frost heaves
Sproul Road	0.58	Fair	1999	Some pavement deterioration; poor sight distances
State Route 129	10.10	Excellent	2008	State portion Some paved shoulders - rest are gravel
State Route 129	1.35	Good	2002	Town portion Good condition; some pavement cracks
Sunset Loop	0.18	Poor	?	Poor pavement surface, drainage, and base; limited use
Thompson Inn Road	0.20	Fair	1998 2001	0.12 gravel section beyond pavement is private
Walpole Meetinghouse Road	0.57	Excellent	2004	Realigned 2004 at west end; new housing development
West Side Road	1.03	Fair	2007	Culverts 2002; pavement and base fair
Total miles:	26.39			

Sources: MeDOT; Town records; Comprehensive Planning Committee

Note: See additional details in appendix I. Question mark (?) for date indicates date unknown.

Elliots Cove Lane at 0.03 miles are the shortest. Most private roads are gravel surfaced and maintained by abutters. They are listed in appendix J.

Traffic Patterns

A significant concern on the part of the residents, particularly those living adjacent to Route 129 between Harrington Road (Four Corners) and the northern town line, is excessive speed. Fifty percent of the 36 accidents in South Bristol reported to MeDOT during a three year period were in this five mile stretch of Route 129. (See tables 14.4 and 14.5, and discussion on page 179.) This is also the more improved section of Route 129 with gradual curves, good road surface, and wide shoulders. While the wide shoulders are conducive to non-vehicular uses of the roadways by pedestrians, bicycles, and horses, the excessive speeds discourage such use and create hazardous conditions for those who do use the shoulders. While the road is posted at 50 mph, truck and auto speeds in excess of 65 mph are not uncommon, even through the village area of Walpole. Excessive speed in the village area is particularly dangerous since the area includes the post office entrance/exit and the golf cart and pedestrian crossing at Wawenock Golf Club.

Other stretches of road where excessive speed routinely occurs include:

- Route 129 south of Four Corners
- Harrington Road
- Route 129 at bottom of McClintocks Hill

- Route 129 at CCIA tennis courts.

In the past, the Town of South Bristol has generally not accepted the transfer of private roads to become public town roads. This practice is considered sound given the adequacy of the current network of public roads and the generally slow growth of population.

Regional Issues

The Town should actively participate in regional transportation planning and assessment activities to address such things as the safety concerns posed by alternative uses of Route 129 shoulders in South Bristol, Bristol, and Damariscotta, the resolution of the Wiscasset delays encountered by residents and visitors to South Bristol and surrounding towns east of Wiscasset, and the increasing vehicular traffic and associated delays passing through downtown Damariscotta.

The poor condition of School Street in Damariscotta, a minor collector used regularly by South Bristol residents, represents a safety hazard to residents seeking access to Route 1 to the north.

Considering the changing age demographics of South Bristol (see chapter 5), the Town should support regional and local initiatives to provide transportation for its elderly and disabled residents. In recent years the Town at town meeting has provided support to Coastal Trans.

14.2 – Road Maintenance and Capital Costs

Fifty-eight percent of South Bristol’s public road mileage (15.36 miles out of a total of 26.39 miles) consists of local roads, as contrasted with collector roads. This compares to local road percentages of 49% in Alna, 54% in Newcastle, 70% in Nobleboro, and 59% in Whitefield. In South Bristol only five roads – State Route 129, Harrington Road, Walpole Meetinghouse Road, Carl Bailey Road, and Split Rock Road – provide direct travel routes to a neighboring town.

State Route 129 and Harrington Road bear a large portion of the Town’s commuter and truck traffic. Most of the public roads in South Bristol serve neighborhoods within the community and do not experience a lot of automobile or truck traffic. This situation tends to keep traffic levels down on town maintained roads. As town roads, year-round maintenance and capital improvements are the responsibility of South Bristol rather than the state.

The principal sources of truck traffic in South Bristol are associated with residential construction, renovation, and maintenance; boat building and maintenance; and commerce which includes the seafood industry. The volume of this traffic can be expected to grow in the future as the economies of South Bristol and the mid-coast continue to expand.

South Bristol does not have any significant gravel mining operations, so almost all aggregates for construction are trucked in from Whitefield and Jefferson via State Route 129. Route 129, therefore, serves as the principal truck route in the community with Harrington Road providing some truck access to Bristol. Thompson Inn Road and Shipyard Road carry considerable truck traffic with Shipyard Road, in particular, exhibiting deterioration in the vicinity of the shipyard driveway.

In recent years, there have been instances where major construction projects such as construction of the flowing seawater laboratory at

Darling Marine Center and the Coveside residential subdivision have resulted in severe deterioration to Clarks Cove Road and to Middle and Coveside roads, respectively. In both of these cases the Town requested and received financial assistance from the developers in repairing the damage caused by the heavy truck traffic.

The MeDOT has available for local community use a computer program, the Road Surface Management System, that can be used to identify maintenance options and estimated costs for paved and gravel roads. The program requires a thorough inventory of at least town-owned roads. It could also include private roads.

A survey of road conditions is first performed and entered into the program files. This survey includes a number of characteristics including the type and extent of cracking on paved roads. The Town already has a copy of this program. If this program were to be used for town-owned roads, then one or two trained individuals (a two day training course is offered by the DOT) would need to conduct the survey of road conditions and input the information. Possible maintenance options could then be identified and the Road Commissioners could identify the options desired and establish a maintenance schedule over one or more years.

The MeDOT Six-Year Plan identifies long-term plans for improvements to federal, state and state-aid roads. In addition, MeDOT’s Biennial Transportation Improvement Program (BTIP) identifies projects that will be implemented during the current two-year budget period. There are no South Bristol highway projects in either the Six-Year Plan or the BTIP except for replacement of the bridge over the Gut. Due to MeDOT budget constraints this project was put on hold in late 2005. In 2009 the project restarted.

MeDOT will rebuild existing state roads as funds are available. However, its top priority will continue to be its pavement preventive

maintenance (PPM) program. The condition of a well-paved road tends to be stable for the first five to ten years. Then, as cracks form and water gets into the pavement and base, the rate of deterioration accelerates. The PPM program focuses on applying lighter, less expensive pavement treatments earlier and more frequently in a pavement's life, thereby avoiding the point at which the pavement quickly deteriorates and the cost of repair accelerates. These same concepts also apply to town-owned and maintained roads.

Many of South Bristol's roads wind through rural landscapes and have views of the Damariscotta River, Johns River, Johns Bay, and the Gulf of Maine. Until relatively recently, almost all development was in close proximity to the shore and views to salt water from Route 129, West Side Road, and Clarks Cove Road, for example, were unimpeded. Many of these views are listed in table 6.3 on page 74. As development in coastal South Bristol continues to become more dense, demand for water view lots in locations more removed from the shore will increase, thereby potentially affecting traditional scenic views in the community. In addition, although not primarily an agricultural community, there are still active and former farm fields in South Bristol that reinforce the sense of ruralness in the community.

Roads such as Clarks Cove Road, Harrington Road, Route 129 for the first mile or so when entering the Town from the north, Route 129 through South Bristol Village by the Gut, Route 129 south of the head of Christmas Cove, and West Side Road are particularly attractive and represent both visual and functional assets to the community. (See appendix I for additional road segments and table 6.3 on page 74 for an extensive list of scenic views.) As these roads are rebuilt or improved to accommodate safety standards for modern trucks and cars, and to improved drainage, some of these important visual attributes could be lost. Context-sensitive design is a technique often used to ensure that, as

roads are brought up to modern standards, the characteristics of the existing roads and surrounding environment are not diminished.

As noted above, maintenance of most of State Route 129 and all of Harrington Road is the responsibility of MeDOT. In 2007 Route 129 was scheduled for paving maintenance of a number of sectors, some places needing two layers of new asphalt. As carried out that year, the entire road was repaved, some parts with two layers of fresh pavement, bringing the road to first class condition. The paving project was continued north through Bristol and Damariscotta to the terminus of Route 129 at Business US Route 1 by the Damariscotta Baptist Church

Harrington Road maintenance is badly needed, but is awaiting MeDOT funding. The pavement is in poor to fair condition over the entire length from Four Corners in South Bristol to the road's terminus at Route 130 in Bristol.

The current (2010) MeDOT/MMA Highway Simplification Study (HSS) may ultimately transfer maintenance responsibility for Harrington Road to the Town after MeDOT improves it to the point where maintenance will not be needed for ten years. At the same time, winter plowing of Route 129 from the Bristol town line to Union Church would likely be assumed by MeDOT.

Improvement of the structural facilities, markings, and signage of Route 129 and Harrington Road shoulders to provide for alternative uses of the right-of-way might be desirable. This includes the need to provide alternate right-of-way in some areas where there is currently inadequate width in the current right-of-way. These are state maintained roads. The Town should continue to provide input to MeDOT regarding locally perceived needs.

Because of the physical restrictions which we address later on page 186, changes to Harrington Road may not be possible without violating context-sensitive design standards.

South Bristol tries to maintain a regular paving cycle for most of its roads. In general, the town-owned roads are in fair to good condition. Both town- and state-owned roads could benefit from improved base, shoulders, and guard rails. Work on roads needing additional improvements, such as new base, extensive drainage work, etc., is often delayed, however, due to budget constraints. As noted in appendix I, a number of roads, including McFarland Cove Road, Middle Road, Ridge Road, Sproul Road, Sunset Loop, and West Side Road appear to lack adequate base and/or drainage resulting in pavement deterioration. Until these issues are addressed, the life expectancy of new pavement will be low. The surfaces of some recently paved roads are exhibiting stress cracks due to poor or insufficient base materials or local construction projects that result in significant heavy truck traffic.

The selectmen who also serve as road commissioners have had an informal policy of charging developers for the cost of repairing roads damaged by construction projects. We noted above that in two cases developers have helped in the reconstruction of roads damaged by heavy construction truck traffic. The current Subdivision Ordinance requires potential road damage to be addressed by the Planning Board when considering a subdivision application.

We recommend that the Road Commissioners institute a formal, written policy, or possibly create a Highway Ordinance, to require that the Town be paid the cost of correcting any damages to local roads resulting from heavy construction activities, resource harvesting, or mineral extraction.

When necessary, roads should be posted either seasonally or year-round to control use by certain types of vehicles.

Actual town expenditures for highway and

Table 14.2 – Annual road maintenance expenses

Year	Expenditure
2001	\$54,396.72
2002	\$96,349.91
2003	\$37,207.29
2004	\$69,536.33
2005	\$9,422.88
2006	\$13,113.66
2007	\$135,674.93
2008	\$96,767.54

Source: Town reports
 Note: Plowing excluded

road maintenance over the past several years are summarized in table 14.2. Details regarding local road maintenance are presented in appendix K. These expenditures do not include snow plowing. The Town plows all public roads including State Route 129 and Harrington Road. In recent years winter road maintenance (plowing plus sand and salt) which is done by a private contractor has cost about \$115,000 each winter.

Each year South Bristol receives a grant from the state for “DOT Road Assistance.” Of late the amount has been a little over \$26,000 each year. This annual grant was established many years ago when the Town took over maintenance of Route 129 south of Union Church.

There has not been a recent independent assessment of the conditions and needs for structural improvements of private-, town-, and state-owned roads in South Bristol. This might be accomplished at moderate cost by developing a cooperative project with the University of Maine Civil Engineering Department.

An alternative would be to retain a civil engineering firm to carry out a complete analysis of all town roads with cost estimates and a capital improvement schedule.

14.3 – Traffic Volumes and Patterns of Use

Table 14.3 below presents MeDOT Average Annual Daily Traffic (AADT) counts completed between 1995 and 2005 within South Bristol. The 2002 and 2005 traffic counts south of McFarland Cove Road appear to be unusually low overall so the 1997-2000 period may be more representative of actual traffic conditions.

The Maine DOT measures road usage in South Bristol at roughly 12 locations every 2 to 3 years. A count of usage (traffic) was conducted in late August 2005, capturing the seasonal use. Based on these results from one week, and data from permanent, year-round monitoring locations such as Trenton and other seasonal communities, a factor is applied to the weekly data to generate an Annual Average Daily Traffic (AADT) number (or count). For example, on Route 129 north of Split Rock Road the actual 24 hour counts for August 23 and 24, 2005 were 2647/day and 2973/day, respectively. Peak hourly measurements were 214 and 248 before noon and 267 and 271 after noon, respectively. The actual daily average for the 2 full days and 2 partial days was 2913 per day. These measurements are then adjusted using the above factor and yield an AADT of 2100. Comparison of the actual and the

calculated averages indicates the actual seasonal traffic is nearly 40% higher than the estimated AADT. There are no off-season measurements in South Bristol to validate the factor used to convert the seasonal data to an annual value.

Review of the 2005 hourly distribution of usage indicates that most roads have usage around the clock and similar hourly trends with the majority of usage between 4:00 a.m. and 7:00 p.m. Higher usage generally occurs between 8:00 a.m. and 5:00 p.m. during the seasonal measurements.

Comparison of 2002 and 2005 AADT numbers indicates a general decrease of usage on the order of 5% to 25%. These decreasing trends appear to be long-term. Because South Bristol has a considerable increase in population during the summer months (see table 5.12 on page 60), it is difficult to make accurate year-to-year comparisons without data from the same weeks of each year. Other observations made from table 14.3 are that:

- McFarlands Cove Road, serving more than 70 dwellings (primarily seasonal residences), has experienced increased usage as the area becomes more densely populated.

Table 14.3 – MeDOT traffic counts for South Bristol, 1995-2005

Location		AADT	AADT	AADT	AADT	AADT	Change
Road	Specific site	1995	1997	2000	2002	2005	2002-05
S Road	W of Route 129				240	180	- 25%
West Side Road	SW of Route 129				360	280	- 22%
Harrington Road	4 Corners, E of Route 129		890	930	950	910	- 4%
Clarks Cove Road	4 Corners, W of Route 129		150	160	120		
Route 129	4 Corners, N of intersection		1600	1700	1670	1680	1%
Route 129	4 Corners, SW of intersection		1720	1800	1780	1760	- 1%
Route 129	N of Split Rock Road	1960	2190	2350	2090	2100	- 1%
Route 129	N of McFarland Cove Road	1650	1620			1620	
Route 129	S of Thompson Inn Road	1840	1650	1560	1440	1340	- 7%
Route 129	N of East Side Road		580	420	320	290	- 9%
Sproul Road	SE of Route 129	140	130	140			
McFarland Cove Rd.	E of Route 129	210	260			310	

Source: MeDOT

Note: AADT is the imputed Average Annual Daily Traffic count of vehicles passing. Vehicle counts are typically done between April and November. The vehicle counts for 2002 and 2005 were conducted in August.

- Traffic over the Swing bridge usage appears to be decreasing since 1995; however, recent increased development on Rutherford Island may reverse this trend.
- Not surprisingly, the highest traffic is found on the northern section of Route 129.
- S Road, serving more than 50 dwellings (primarily year-round residents) is located south of McFarlands Cove Road and has experienced a decrease in usage.

The greatest occupancy of seasonal residences occurs from around July 4 to mid August. We believe that the August 2005 survey was conducted after families had begun departing to get ready for school, hence the apparent drop in traffic from 2002 to 2005. South Bristol's summer population is very much a family population with children and grandchildren. In recent years, young people's activities at the CCIA have ended a week before Labor Day.

Closer examination of the available data indicates a substantial contribution of traffic to Route 129 from Harrington Road. (See Clarks Cove Road east of Route 129 compared to Harrington Road). Most of the traffic increase from Harrington Road is towards the north on Route 129 compared to the south (see Route 129 north of Sproul Road compared to Route 129 south west of Clarks Cove Road). Most of this traffic is interpreted to divert onto Clarks Cove Road at its northern end near the golf course as the traffic count on Route 129 south of that end of Clarks Cove Road is notably smaller than traffic north of that point. Dramatic decreases in Route 129 traffic north of East Side Road is a bit anomalous. Possible explanations include reduced summer occupancy south of that point, reduced visitor trips from the north to Coveside Restaurant and CCIA, or reduced trips across the swing bridge in response to increased frequency of openings. For reference, in 2005 there were 9662 openings allowing 13,369 boat passages (see table 14.7 on page 183).

Regardless of the reasons for the general traffic growth – increased seasonal and year-

round population, Darling Marine Center growth, or other economic activity – local roads in the community will likely continue to experience additional vehicle use in the future. This is an important factor to be considered for any municipal road improvement program.

All but one of the roads listed in table 14.1 on page 172 are paved but some may need wider travel ways and other improvements such as wider shoulders, improved drainage, and subbase replacement in order to continue to serve a growing community. Split Rock Road, Ridge Road, and Carl Bailey Road are 1.5 lanes wide. South Bristol has an active paving program, but as indicated in table 14.1 and appendix I, some recently paved roads appear to be experiencing unusually rapid deterioration of travel surfaces. The reasons for these conditions need to be investigated but they may be due at least in part to inadequate road base material and/or drainage. If this is the case, some local roads, in addition to the southern half of Route 129 and Harrington Road, may require structural improvements prior to paving in order to extend the life of the investment in pavement.

While the road usage information presented above is interesting, it does not indicate a significant carrying capacity problem, as the state and town road networks are generally adequate to handle present and anticipated usage in the future. No new state or town roads are anticipated. However, there are some significant maintenance issues that the state and Town need to address.

Due to the rural nature of the Town and the absence of heavy industry or concentrated commercial retail establishments, there is no designated heavy haul truck route in Town. The only exception are the dump trucks loaded with gravel and other materials related to construction activities on Rutherford Island and on the mainland. These heavily loaded trucks aggravate the condition of several roads in Town, including State Route 129.

There are no state traveler/freight facilities in Town. Such facilities would include rest areas, visitor information centers, park and ride lots, Scenic Byways, railroad stations, and intermodal centers.

Since many South Bristol residents travel outside of Town for employment, shopping, and recreation, a park-and-ride facility located near or north of the Route 129/130 junction to serve the Bristol peninsula might encourage car pooling and reduce fuel consumption. Such a park-and-ride

facility might also be located in Damariscotta or Newcastle in order to serve a larger population.

There is currently a park and ride lot on US Route 1 in Edgecomb just west of the Newcastle-Edgecomb town line.

Regional transportation management plans do not, except for Route 129 and Harrington Road, specifically address the road network in South Bristol. Neither does the Route 1 corridor management activity (Gateway 1).

14.4 – Road Safety Considerations

Dangerous Intersections and Roads

MeDOT identifies locations which experience motor vehicle accidents. All accidents that result in more than \$1,000 in property damage or in injury or death are analyzed on a rolling three-year period. Any location that experiences 8 or more accidents in a three-year period or that has a Critical Rate Factor⁹ (CRF) of 1.0 or higher is considered a high crash location. Note that CRF is primarily applicable to intersections rather than to road segments.

Table 14.4 presents MeDOT accident data for intersections and table 14.5 for road segments. None of the intersections or road segments in South Bristol are identified as high crash locations, but some appear to have experienced more crashes than others. The intersection of Route 129, Clarks Cove Road, and Harrington Road (Four Corners) had three accidents in the 2000-2002 period with a CRF¹ of 2.20. While it is not considered a high crash location, it represents almost one-half of all intersection accidents on Route 129. In fact, 89% of all accidents in South Bristol were on Route 129,

which reflects the highway's predominant transportation role in the community. None of the town road intersections had more than one accident during the three-year period so it is difficult to discern a pattern.

Road segments that appear to have high numbers of accidents include:

- McClintocks Hill on Route 129 due to grades and curves, which aggravate winter driving conditions;
- Route 129 between Texas Road and South Bristol Village due to poor pavement slope; particularly by the Main Cemetery where the pavement slopes sharply downward on the outside of the curve causing skidding off the road in the winter;
- Wiley Hill on Route 129 south of Walpole Meeting House Road due to grade and speed; and
- Route 129 between Route 130 and the Walpole Post Office due to speed.

Most accidents occur in the winter months during the early morning, late afternoon or at night, and there is little variation over the course of the week. This suggests the need to ensure continued good winter road maintenance.

During the period from 2000 to 2005 there were a total of 65 accidents (crashes), 23 of which were run-off-the-road crashes. None of these 65 crashes involved a fatality. Of the 65 crashes, 18 involved illegal or unsafe speed. Crash locations

9. The Critical Rate Factor (CRF) is a statistical measure that compares accident frequency at a location with similar locations throughout the state.

for 2004 and 2005 are depicted on the transportation map (Map 15). The accidents seem to cluster along the northern stretch of Route 129 in the vicinity of Wiley Woods and in the older stretch of Route 129 below McClintocks Hill to south of the S Road. Thirteen accidents involved hitting deer and ten accidents involved a turning action prior to the crash.

Although not within South Bristol, almost all traffic to and from the community must use the Route 129-130 intersection. Based on 2000-2002 traffic statistics, this intersection is not a high crash location. Of the five accidents during this period, two were rear-end crashes, two were intersection movement crashes and one was a ran-off-the-road crash. MeDOT has no plans to improve this intersection in the foreseeable future. However, as population and vehicle use increase in both Bristol and South Bristol, there may be a need for improved traffic control at this intersection.

A potential danger to motorists is the lack of guard rails, or the need for maintenance of existing guard rail systems along steep shoulders of roads. This is evident along most roads in Town, including Route 129, town roads, and private roads. This dangerous condition may pose a risk to the Town in the event of an accident that guard rails could have prevented.

In the broader context, a transportation safety and maintenance needs assessment has not been independently conducted for the roads in South Bristol. Formally assessing the conditions of right-of-way and traveled way width, pavement, overhanging brush and trees (potentially impairing emergency vehicle passage), guard rails, lines of sight on vertical and horizontal curves, shoulders, signage, pavement

Table 14.4 – Accidents, typical years, Jan. 2000 - Dec. 2002

Road 1	Road 2	Acci- dents	CRF
Route 129	Old Barn Road	1	1.79
Route 129	North end of Clarks Cove Road	1	0.00
Route 129	Four Corners	3	2.20
Route 129	McFarland Cove Road	1	0.00
Route 129	Middle Road	1	1.13
Total:		7	

Source: MeDot

Note: CRF is a statistical comparison to accidents at similar locations throughout Maine.

Table 14.5 – Accidents not at intersections, typical years, Jan. 2000 - Dec. 2002

Road	Road segment	Acci- dents
Route 129	Bristol town line to Walpole Meetinghouse Rd.	1
Route 129	Walpole Meetinghouse Rd. to Mook Farm Rd.	3
Route 129	Mook Farm Road to Black Duck Road	3
Route 129	Glidden Ledge Road to Old Barn Road	1
Route 129	Old barn Road to Split Rock Road	1
Route 129	Sproul Road to Ridge Road	1
Route 129	Ridge Road to Four Corners	2
Route 129	Four Corners to Holmes Road	1
Route 129	Holmes Road to Poole's Landing	3
Route 129	Texas Road to McFarland Cove Road	4
Route 129	McFarland Cove Road to S Road	1
Route 129	S Road to Thompson Inn Road	2
Route 129	Thompson Inn Road to Gut Bridge	1
Route 129	Gut Bridge to West Side Road	1
Split Rock Road	Sproul Road to Bristol town line	1
Clarks Cove Road	North end at Route 129 to Ridge Road	3
Total:		29

Source: MeDOT

stripes, and drainage/culverts would greatly assist the Road Commissioners.

Speed control in village areas of the Town (e.g., Walpole and north of the Gut) needs to be more effective and visible such as with improved signs and the use of portable radar signs that indicate the speed of individual vehicles.

Access Management

MeDOT has adopted an Access Management Rule that controls the development of driveways and entrances on all state and state-aid roads. A driveway is an access that serves up to five dwelling units or other uses that generate less than 50 vehicle trips per day while an entrance includes anything that exceeds these driveway thresholds. Two key goals of the rule are to reduce the number of curb cuts, particularly on busy roads, and to preclude entrances at locations where the sight distance along the road might make the entrance accident prone.

The Town has no formal policy on access management for town roads. Preventing excessive numbers of access points is consistent with “keep South Bristol the way it is now.”

Limiting the number and location of new driveways and entrances to one plus an emergency access in the case of subdivisions along state, town, and private roads would not only improve safety but would maintain visual aesthetics as was expressly desired at the visioning meetings and in the mail survey.

Access management is primarily intended to ensure the safe use of, and access to, roadways. Minimum sight distance requirements, drainage improvements, and width standards are as important for the safe use of local roads as for

state highways. Some of South Bristol’s municipal roads, including Carl Bailey Road, East Side Road, McFarland Cove Road, Sproul Road, and Split Rock Road, among others, have horizontal and vertical curves that limit the visibility of driveways. A minimum sight distance standard for all new driveways would go far in improving safety on town roads in the future.

Traffic Control Devices

The only traffic control devices employed in South Bristol are flashing lights at the school and the swing bridge and the stop signs at intersections. MeDOT has not indicated the need to install additional traffic control devices within the community.

Emergency Vehicle Access

It would be beneficial to establish minimum standards (e.g., snow plowing, width, height clearances, and turning radius) for town roads (public and private) which are expected to provide access for emergency response vehicles.

In a number of places in Town the far ends of two private roads are within sight of each other. These roads and their relevance to public safety was discussed on page 87. The Town should consider requiring that when private roads are created in such a situation they should be connected if safety would be improved.

14.5 – Bridges

Table 14.6 below lists the two bridges in South Bristol. Each bridge has a sufficiency rating, which reflects functionality (width and weight capacity) and structural condition, among other criteria. The swing bridge at the Gut is owned and maintained by the state while the bridge and dam at Mill Stream holding back Clarks Cove Pond (Ice Pond or Mill Pond) on Clarks Cove Road is owned and maintained by the Town. This bridge carries the relocated Clarks

Cove Road immediately downstream from the location of the former Paul Bridge. As indicated by the sufficiency rating, the Swing Bridge at the Gut is a candidate for replacement by MeDOT.

Preliminary engineering for a new Gut Bridge was included in MeDOT’s BTIP and the Department held meetings with the Town in 2004 and 2005 to discuss design alternatives. Budget constraints caused the project to be put on hold.

The project was revived in 2009 (see next page).

The Town should continue to work with the MeDOT to develop a mutually acceptable upgrade of the draw bridge at the Gut to provide timely, safe passage for road vehicles (including emergency response) and waterway vessels.

The culvert north of the swing bridge in South Bristol Village replaced a larger fixed bridge a few years after World War II. Many of the town’s older citizens remember rowing under that bridge as kids.

The bridge at the Gut is vital to the economic well-being of the local fishing industry and to the safety of the residents of Rutherford Island. Fishermen need timely and easy passage from one side of the Gut to the other. Residents need to be serviced by emergency vehicles (fire, ambulance, law enforcement) without delay as there is no other means of getting to the island by vehicle. The bridge opens an average of 25 times a day on an annual basis, with a monthly maximum of 62 times a day in July. Assuming a 3 to 5 minutes cycle time (people waiting would say this is low!), this amounts to 3 to 5 hours a day that the bridge is closed to road traffic, primarily during daylight hours (see table 14.7). The number of boats passing during each opening is usually one, but in

July and August, two boats pass through on average during every other opening.

Without data for the number of boats passing each month, it is impossible to determine whether the recent slight reduction in openings is due to reduced boat traffic or to the operator holding the bridge open longer for boats approaching from a distance.

Review of the information presented in table 14.7 indicates, as may be expected, that the greater number of openings occur during June, July, August, September, and October. This is consistent with increased commercial fishing and recreational boating activity during this period. July is consistently the busiest month for bridge openings, with August a close second. Increased openings from 2002 through 2006 suggests growth in recreational boating passages as commercial fishing activity had not increased over these years. Bridge openings in March 2006 were anomalously small – 81 openings less than average.

The total number of openings had increased steadily through 2004 and have decreased slightly since then. We do not consider the changes up and down to be significant. The boat traffic consists primarily of commercial fishing vessels

Table 14.6 – Bridge assessments

	Gut Bridge	Clarks Cove Bridge
Location	State Route 129 in So. Bristol Village	Clarks Cove Road
Feature spanned	The Gut between Damariscotta River and Johns Bay	Mill Stream
Owner	State of Maine	Town of South Bristol
Year built	1933; rebuilt twice since World War II	1929
Span type	Through plate girder	Box culvert
Span material	Steel with concrete deck on north end	Concrete with tide gate at north end (note 3)
Structure condition (note 1)	6-7	5
Posted load	Not posted	Not posted
Last inspected	2001	2002
Sufficiency Rating (note 2)	40.4	64.7

Source: MeDOT, Bridge Maintenance Division

- Notes:
1. Structure Condition ratings range from 0 to 9 with 9 representing the best condition.
 2. Sufficiency Rating reflects functionality, structural condition, and water analysis. Range: 0 to 100 (best)
 3. Concrete spalling, reinforcing steel exposed on east end, cast iron tide gate is cracked and repaired with strap steel.

except during the summer when pleasure boats are estimated to make up two-thirds of the boat traffic.

The bridge provides the only road access for approximately 300 homes on Rutherford Island plus it carries additional tourist traffic during the summer months. The number of homes on the island has increased in the last few years and can be expected to continue to increase over the next five to ten years in response to development pressures.

Fishermen, tourists, and customers of the commercial establishments in the immediate area use the shoulder areas near the Gut for parking.

The frequency and duration of bridge openings along with more vehicle traffic during the summer months is resulting in congestion and delay around the bridge. This congestion, coupled with the limited parking area that encroaches onto the shoulder and travel way of the road is creating an unsafe condition. Increased use is also causing wear on the bridge leading to more breakdowns of the operating mechanism, further aggravating the congested condition. There is increasing pressure for additional parking in this area. Any road improvements or development should address this parking issue.

With the condition of the Gut bridge becoming more critical, MeDOT initiated new planning work in 2009 and public information meetings were begun in the summer of 2009 to discuss the entire matter of bridge replacement. Since then four meetings have been held, each with additional design considerations and criteria presented. Public reception has been generally positive. At each meeting public input has been solicited; MeDOT has regularly communicated with all attendees by e-mail with updates. Preliminary engineering work has been ongoing. Financing is expected to be State and possibly Federal, with no local funding for construction or operation and maintenance. The project is anticipated to make limited revisions to the grade (elevation) of the roads on either end of the bridge in order to maintain access to local adjacent structures. Two types of bridge designs were favored during the meetings.

- Swing bridge (rotates horizontally as does the current bridge)
- Heel trunnion bascule bridge (rotating vertically from the mainland side). The preferred design for this type of bridge is a European style bridge with overhead counterweight beams on pylons and operating machinery overhead, well above any possibility of sea water encroachment.

Table 14.7 – Gut bridge openings by month and year, 2001-2008

	2001	2002	2003	2004	2005	2006	2007	2008	Average openings	Percent of total opens
January	151	221	222	160	259	172	97	222	188	2%
February	???	135	???	204	162	133	169	218	170	2%
March	114	131	88	93	163	27	84	165	108	1%
April	213	188	142	168	167	195	103	179	169	2%
May	383	370	392	424	415	393	424	400	400	4%
June	1051	1148	947	1178	1068	1381	1162	956	1111	12%
July	1705	1782	1930	2039	2148	1937	1921	1897	1920	21%
August	1749	1758	1821	1906	1972	1781	1821	1872	1835	20%
September	1168	1146	1390	1551	1518	1281	1406	1243	1338	15%
October	1005	958	1021	1321	1089	1061	1138	1014	1076	12%
November	556	586	539	696	705	708	601	517	614	7%
December	255	317	293	318	296	288	243	281	286	3%
Totals:	8350	8740	8785	10058	9962	9357	9169	8964	9216	100%

Source: MeDOT, Bridge Maintenance Division

Notes: Averages and percentages are rounded. February average openings are for the six years available.

There are some residents who want to keep the existing bridge as it appears, with upgrades to the operating machinery.

There will be more public meetings as the engineering work progresses. At this point, plans provide no significant changes to the bridge approaches. The replacement of the road surface will be limited to a few hundred feet either side of the bridge abutments. As part of the reconstruction activity associated with the bridge, there may be some benefit to consider other improvements as well, such as:

- Improved boater safety by straightening the water passage to provide better visibility in an area often affected by strong currents. This would involve the U.S. Coast Guard and the U.S. Army Corps of Engineers.
- Replacement of the culvert pipe under Route 129 on the north side of the Gut with a culvert or bridge of larger cross section set lower to improve tidal flow, thus better flushing sediments from Elliot's Cove, and better flushing the Eastern Gut. The floor of the culvert should allow water flow at all but the lowest tides. A larger culvert (or a bridge) with water flowing at all but the lowest of tides would encourage paddlers and rowers to use that route rather than under the draw bridge with the attendant dangers of proximity to power boats and limited visibility.
- Moving utility wires from overhead to beneath the water where they cross the Gut in order to eliminate the demonstrated safety hazard from boats striking the wires; and improving the Village esthetics by eliminating

the wires and tall utility poles. The wires were underwater until sometime after World War II and would be best put there again.

The bridge/culvert at Clarks Cove Pond is vital to maintaining this freshwater habitat and year-round recreational water body. The pond serves as a source of fire fighting water and could represent a source of public water supply if adequately treated. The pond also has provided a limited economic activity by the harvesting of ice in the past; and more recently from the harvesting of beavers, bait fish, and elvers.

Loss of the bridge/culvert/dam function would cause loss of this fresh water resource as it would revert to the saltwater marsh it was before the mill dam was built to create the pond in the late 18th or early 19th century. Since the DOT sufficiency rating of the bridge in 2004 (see table 14.6), the water level has dropped below the bottom of the culvert. This indicates the presence of preferential pathways through the earthen material below the culvert and therefore a need to repair the earth fill around and beneath the culvert. In addition, the concrete on both ends of the culvert is spalling, exposing reinforcing steel.

Discussion with the MeDOT bridge inspector on September 22, 2006 indicated the spalling of concrete can be reduced by eliminating vegetation directly above the concrete.

The Town should provide the necessary maintenance and upgrades to keep the Clarks Cove bridge functional as a dam separating the freshwater pond from the estuary to the south of the bridge.

14.6 – Traditional Village Development and Road Layout

Historically, South Bristol consisted of several villages, including Clarks Cove, Harrington, South Bristol Village, and Rutherford Island. Over time, seasonal and year round development along the shore has greatly increased the total number of dwellings in South Bristol without significantly affecting the village areas or the appearance of many public roads. For the most part, the historical villages of South Bristol are intact, but a significant and growing component of new year-round housing consists of development sprawl along public roads. For example, recent development has occurred on Walpole Meeting-house Road, outer Split Rock Road, Sproul Road, Ridge Road, Carl Bailey Road, and others. For the most part, these roads or significant portions of them were essentially undeveloped until quite recently.

This development along town roads has resulted in more driveway/entrance access points and greater traffic, both of which affect road safety. Since much of the frontage along town roads is still undeveloped, one may expect still more new homes and associated increased traffic in the future as the Town's population grows. This will significantly alter the current visual aesthetics of the town's road network; more miles of roads may need to be upgraded. These changes can be controlled through the use of mandatory setbacks, visual screening, access management, and focusing population growth on the villages, which traditionally have been the centers of year round development in South Bristol.

Just over half of the total road mileage in the community consists of privately owned and maintained roads. For many years, most of the private roads served mostly seasonal residences. Over the past several years, an increasing number of these residences are being converted to year-round use. In addition to the conversion of seasonal residences, a growing portion of South Bristol's new year-round residential development appears to be locating on undeveloped parcels

along town roads. In most cases, the road base, alignment, drainage, and surface of these roads has not been upgraded to accommodate increased year-round use.

Increased traffic on town- and private- roads may be expected in the future as the population grows. As has been seen in several neighboring towns, higher density housing such as condominiums has resulted in increased year-round and seasonal residential units. Such higher housing density leads to increased traffic on the existing roadways; the quality of roads needs to be kept abreast of population increases.

Parking Facilities

The only significant public parking facilities in Town are located at the elementary school (20 to 30 spaces – available during non-school hours) and by the town float at Christmas Cove (about 12 spaces). While there are many residents who travel north from Town to commute to work, to shop, or for recreational activities, there are no commuter parking lots in Town or in the immediate regional area. There is limited parking (5 spaces) at the town-owned Walpole Woods. This parking is intended for access to the walking trails and is not intended as a commuter lot. Similarly, there is limited parking (5 spaces) at Tracy Shores for those walking that preserve's trails.

Parking at the South Bristol School is adequate for daily school use, but roadside parking that encroaches on the travel way is common during school events, town meetings, and other events at the school. On Sundays, there is roadside parking on Middle Road and State Route 129 during church services. There is also roadside parking on Route 129 by the Gut in South Bristol Village which creates a travel hazard at times. There are ten parking spaces by the Christmas Cove float and three near the Town float at the Gut on Rutherford Island. There are

also two spaces at the Hunters Landing facility. Additional parking in the vicinity of the town floats would likely increase their use. Several of the Town's cemeteries are located along Route 129 and visitors to these sites sometimes need to park within the right-of-way.

During the winter, sledding and cross country skiing are popular at the golf course. Participants park along the road. As this section of Route 129 is well traveled and posted at 50 miles per hour a dangerous situation is created, with adults and children getting out of and into vehicles parked on the travel way. The Town should consider making an arrangement with the Wawenock Golf Club to improve winter parking such as plowing the parking lot.

Pedestrian, Bicycle, and Equestrian Facilities

Pedestrian facilities in the Town are characterized as hiking trails and roadside walking paths. There is no sidewalk system. Public lands and preserves where there are hiking trails are shown on Map 7 and are further described in chapter 15 (Recreation and Open Space).

Many of the lightly traveled roads in South Bristol can reasonably accommodate pedestrians, bicycles, and horses within the traveled way. State Route 129, which runs through the entire community, and Harrington Road are not provided with the appropriate facilities, markings, and signage to support these alternative uses in the shoulder areas. There are no parallel secondary roads to provide for these alternative through-travel uses.

Runners, walkers, equestrians, and bicyclists are seen most frequently during summer months, and are becoming more common during the other three seasons. The large differential in speed between motor vehicles and other users can be a significant source of accidents. The danger is amplified when the shoulders are narrow and rough, resulting in mixed and possibly dangerous use of the travel way.

The advent of "hybrid" motor vehicles has introduced a new safety concern. These vehicles are propelled by electric motors powered by a battery; they have gasoline or diesel engines which automatically start when the battery requires charging. As a consequence, unless the gasoline or diesel engine is running they make no sound other than from the air flowing over their very aerodynamic bodies. The quiet approach of such a vehicle makes it difficult or impossible for a bicyclist, horseback rider, walker, or jogger to have an auditory clue of the approach of such a vehicle.

Most of Route 129 north of Farrin's Pond has wide shoulders and a sufficient right-of-way for pedestrian use. However, the surface quality of the shoulders varies from fair to poor with areas of broken pavement interspersed with areas of poorly maintained gravel, and in some areas very limited cleared width. South of Farrin's Pond, Route 129 has insufficient shoulders even for safe automobile operation. In addition, some portions of the right of way, such as between the school and South Bristol Village, may be too narrow for installation of shoulders adequate for pedestrian use and may require alternative rights-of-way that parallel the road.

The community has expressed divergent opinions regarding improving pedestrian facilities. Question 23 on the mail survey (see appendix C) asked if there should be sidewalks from the school to Union Church. The responses were 34% in favor and 49% against. Opinions (Report, 2005) range from no further improvement for pedestrian or other alternative means of travel (stating that unfavorable shoulder conditions tend to dampen vehicle speed) to significant improvement and paving of shoulders to enhance alternate use in a safe manner.

In the case of Harrington Road, historical development and houses may make it difficult or impossible to widen the road without substantial eminent domain takings and adverse visual consequences. Widening of the road might also

violate the concept of context-sensitive design.

In those areas where sufficiently wide shoulders are not possible, the Town and MeDOT need to explore off-road alternatives for pedestrian travel, such as easements across abutting property. Second, shoulder improvements need to be considered whenever work is planned on town roads. This could also help address drainage deficiencies as cited elsewhere in this chapter.

At the visioning meetings and in response to the mail survey (appendixes A, B, and C) the citizens indicated that widening of roads for alternative uses was not desired. Again, “Keep the Town the way it is.” This is in direct contradiction to the state’s desire to make roads amenable to multiple, non-motorized uses. Further remarks elaborating survey respondents’ thoughts (Report, 2005) were mixed. Although

the responses to the mail survey question on road widening (appendix C, ques. 24) did not favor road widening, there was no clear consensus from the visioning meetings and the remarks written on the survey returns. (Report, 2005)

The only potential area for a sidewalk is from the library, past the school, to the village, and possibly to Union Church. From two hundred yards south of the village to the church, particularly at the curve beyond West Side Road, creating a sidewalk would be difficult, but not impossible. Legend has it that lack of proper maintenance of wooden sidewalks in the Village area was one of the factors which brought about South Bristol being set off from Bristol in 1915.

South Bristol must carefully balance competing uses of the roads with whether or not the changes would be good for the Town. This is a challenge.

14.7 – Transportation Services and Facilities

Public Transportation

There is no fixed route public bus system that serves South Bristol. Coastal Trans, Inc. (CTI) is a private, non-profit corporation that provides demand response services to South Bristol residents. CTI uses volunteer drivers whenever possible to reduce transportation costs. These drivers use their own vehicles to transport program-qualified people needing non-emergency transportation.

Concord Coach operates two daily local north- and two south-bound bus trips in the mid-coast area that connect southbound into the nationwide intercity bus system, Logan Airport in Boston, and Amtrak service in Portland and Boston. Northbound service is to Bangor. The nearest bus stop is at Waltz Pharmacy in Damariscotta. Salt Bay Taxi and Courier Service provides local taxi and delivery service. Mid Coast Limo provides pick up and drop off

limousine service in South Bristol.

No public water taxis, ferries or charter boats currently provide service in South Bristol. Seasonal ferry service to Monhegan Island is available in New Harbor in Bristol and had been available from Christmas Cove in the past. Year-round ferry service to Monhegan Island is available from Port Clyde. Sightseeing and fishing charters have been available at Damariscotta in the past several years. Such economic activity is possible in South Bristol, but would require adequate parking and dock facilities.

Airports

There are no general aviation airports in South Bristol, although a private landing strip operated in the vicinity of Clarks Cove Road in the recent past. Private seaplane use has occurred on the Damariscotta River south of the Narrows and in Seal and Christmas coves. Maine airports

that serve South Bristol residents include Maine State Airport in Augusta, Wiscasset Airport, Knox County Regional Airport in Owls Head, Portland International Jetport, and Bangor International Airport. The Augusta, Bangor, Knox County, and Portland airports offer scheduled air service. Various improvements are planned at these airports as part of MeDOT's Six-Year Plan.

Many residents of the region use Manchester (New Hampshire) airport because of low fares to certain destinations. Others use Logan Airport in Boston because of favorable fares, direct service to much of the world, and bus service from Damariscotta directly to the Logan terminals. In addition, hourly bus service between Portland and Boston's Logan Airport and South Station (Concord Coach) coupled with \$3.00 a day parking in Portland is attractive.

Railroad Facilities and Rail Service

Railroad service is provided in the region by Maine Eastern Railroad, the closest point of access being in Newcastle. Freight service is provided with facilities for unloading cars on the team track in Newcastle. The only current passenger service is weekend excursion trains during the summer between Brunswick and Rockland, with extra service for the Rockland Lobster Festival, Halloween, and Christmas.

Previous ownership of the railroad line included most recently the Maine Central Railroad. Prior to World War II, the line was a primary means of passenger travel in the region. Pullman car service from Washington and New York was available until about 1950. After the war ridership rapidly declined. Maine Central RR daily passenger service ended in 1961. With threat of abandonment in the 1990s, the State of Maine purchased what was then the Maine Central's Rockland Branch from Brunswick to Rockland along with the "lower road" from Brunswick as far north as Augusta. In 2002 and 2003 the State rebuilt the Rockland Branch at a cost of about \$28 million with the objective of

allowing use by heavy freight equipment and modern passenger equipment in order to encourage economic development. No portion of the state's Rockland Branch is located within South Bristol. The state is planning a passenger rail station in Newcastle that will be convenient for South Bristol residents. While there are plans for extending Amtrak service from Portland to Brunswick and possibly to Rockland, the most likely daily passenger service in the near future would be commuter service from Newcastle (and probably Rockland) to Bath, and maybe to Brunswick and Portland.

Waterways, Ports, Harbors, and a Ferry

The Town of South Bristol is surrounded on three sides by plentiful deepwater with associated tidal areas. These waterways are well marked with USCG navigational aids and depths and shoals are well mapped on readily available charts. Historically, the major mode of transportation for commerce and tourism was the Damariscotta River. Sailing vessels would haul natural resources and manufactured products such as ice, forest and agricultural products, and bricks to larger metropolitan areas. River ports included Hunters Landing, Clarks Cove, the Gut and Christmas Cove among other protected areas with deep water access. Sailing vessels and steamships would bring tourists from larger cities to the Gut and Christmas Cove.

For quite a few years after World War II, there were passenger ferries (*Argo* and *Balmy Days*) operating from Christmas Cove to Boothbay Harbor, Pemaquid Harbor, and Monhegan. Given the increasing population of retired people, rejuvenating these services may offer a new recreational activity and a transport alternative for South Bristol residents and tourists to those destinations.

There is also, and has been for as long as anyone can remember, *ad hoc* commuting from South Bristol to East Boothbay across the Damariscotta River. It is unknown if a

commercial service would be viable.

Today, there are commercial fishing interests in the Gut, Clarks Cove, and Hunters Landing, a teaching and research facility at Wentworth Point (Darling Marine Center of the University of Maine), and recreational facilities at the Gut, Christmas Cove, and Hunters Landing.

The Town maintains floats at Christmas Cove, the Gut (southwest of the bridge), and Hunters Landing. These facilities are available for use by the town residents without any exclusions. Parking in the vicinity of these facilities is extremely limited. There are two commercial boat launch facilities in the Gut. There are several private, non-commercial launch facilities throughout the Town as well. The University maintains a launch facility on its campus for its various research vessels, but it is not available for public use.

The Town, with its Harbor Master, monitors and controls the moorings along the town's coastline. The mooring program was discussed in detail in chapter 10 on page 119. In addition to seasonal and year-round moorings and commercial dockage, the many coves along the town's coastline offer ideal anchorage for cruising yachts. Seal Cove and Jones Cove on the Damariscotta River are particularly favored locations, being somewhat close to the Downeast passage between Boothbay and Rockland.

By sea, South Bristol is a one day voyage by sail or power from Portland, Bar Harbor, and

Yarmouth, Nova Scotia, Canada. Any vessel, regardless of country of registry, arriving from a foreign port must first clear United States Customs. The closest customs ports are Bar Harbor and Portland. Christmas Cove is one of the most attractive ports in Maine for cruising yachtsmen. No longer do customs personnel travel to various ports on request.

The residents (seasonal) of Heron Island have their own private passenger ferry service, operating from their landing in the north end of Christmas Cove where there is some parking space. They recently purchased land off of Middle Road for additional parking.

Scenic Byways and Special Views

There are many scenic or special views throughout Town. A few of the views are across private land and roads, but all are from locations on public roads. These are depicted on Map 15 (Transportation) and Map 7 (Recreation and Historical Information) and listed in table 6.3 on page 74 and discussed there. These views are unique to South Bristol and should not be altered, in accordance with the people's wishes as expressed at the visioning sessions and in the mail survey conducted in 2003. (See appendixes A, B, C and Report, 2005.) In addition to these special views, there are ample road segments that are primarily wooded which lend a unique rural-like setting, feeling, and view unique to the Town and which differentiates South Bristol from many of its neighboring towns.

14.8 – Regional Planning

Corridor Planning

Several state and state-aid highways connect South Bristol with its neighbors. These include:

- Route 129, the north-south corridor through Town and which extends to Damariscotta. (Route 130 branches off of Route 129 at the intersection just north of the South Bristol / Bristol town line and goes south to Pemaquid Point.)
- US Route 1 (Wiscasset, Damariscotta, Newcastle, Nobleboro, and Waldoboro)
- River Road (Newcastle to Boothbay and Boothbay Harbor)
- Route 215 (Newcastle, Whitefield, and Jefferson)
- East Pond Road (Jefferson, Somerville and North Waldoboro)

Many of these towns share similar issues and concerns along these corridors and several are in the process of preparing comprehensive plans. It would be beneficial for these communities to jointly discuss issues such as road safety (for example, wider shoulders along Route 129 north of the Bristol-Damariscotta town line to more safely accommodate alternate uses), speed limits, and community character. Indeed this is the subject of Gateway 1, a major corridor planning effort sponsored by MeDOT. South Bristol has been invited to participate as a town and as a member of the region. The Gateway 1 project began in earnest in 2005.

One clear regional issue that South Bristol residents deal with year-round, but particularly in the summer months, is the delay encountered when driving through Wiscasset on US Route 1. Another is the delay encountered driving into and through Damariscotta

More locally, South Bristol has secondary roads that connect east-west to Bristol beginning with Harrington Road and Carl Bailey Road in

the mid-town area and Split Rock Road and Walpole Meetinghouse Road in the north. Communications and planning with Bristol should continue regarding the appropriate management of these roads.

Regional Transportation Planning

Transportation planning at the regional level is now primarily in the hands of regional commissions. The Lincoln County Regional Planning Commission (LCRPC) covers Lincoln County. Sixteen of the 19 municipalities in Lincoln County are members; in 2010 South Bristol selectmen voted not to join the commission, thus the Town does not have a voice on the LCRPC. Boothbay and Monhegan Plantation are not members.

Many recommendations were made by the now-gone Regional Transportation Advisory Committee. They are still valid and hopefully will be pursued by the LCRPC. These include:

- Continue to evaluate posted speed limits and adjust as necessary.
- Encourage alternative scenic loops.
- Provide MeDOT technical assistance for bridge structures less than 20 feet in length that are not on state or state-aid roads.
- Give high priority to arterial highway improvements.
- Identify gravel truck routes and increase priority within the major collector program.
- Continue the Rural Road Initiative that provides towns with a two thirds match.
- Consider expanding the state bridge program in the future.
- Encourage towns to plan because unplanned land use can affect the functionality of roads and the longevity of road improvements.
- Encourage Context-Sensitive Design that is based on consistent decision-making; environmental consciousness; protection of

human and natural environments; and encouragement of citizen input, collaboration and consensus building.

- Continue to evaluate all state bridges for potential public access to water.
- Work with towns to address the community impacts of highway projects.
- Encourage transportation and its land use impacts to be a strong component of

comprehensive plans.

- Explore opportunities for attracting new shippers and consider supporting improvements such as loading platforms if such public investments facilitate freight growth.
- Encourage towns to incorporate access management into their local ordinances.

References

Gateway 1; <http://www.gateway1.org/> Current information available at this URL.

Maine Department of Transportation (MeDOT or DOT) <http://www.maine.gov/mdot/>

South Bristol Comprehensive Planning Committee (Report); 2005; *Report of Citizens' Input*; South Bristol; Town of South Bristol

Transportation Policies and Strategies

Transportation – the roads and everything involved with them – is a crucial consideration for any municipality. In modern times this is a matter of more than local consideration. Any town’s economy has transportation considerations which at times span the world. Transportation is a critical consideration for all economies. Roads are regional.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Determine and prioritize local and regional transportation needs to achieve safe, efficient, and optimal use of transportation systems.	Work with MeDOT on the Gateway 1 project to help establish regional goals and impart local needs of South Bristol.	Road Commissioners -0- Immediate and ongoing
	Review the transportation needs of local elderly and disabled residents and explore means of providing for unmet transportation needs.	Selectmen Minimal 2013
	Work with MeDOT to correct the poor condition of School Street in Damariscotta, a minor collector road used regularly by South Bristol residents.	Road Commissioners Minimal 2011
	Work with Bristol to monitor the Routes 129/130 intersection and inter-town roads, and develop solutions to any identified issues.	Road Commissioners -0- 2012
Safely and efficiently preserve and improve the transportation system.	Establish minimum sight distance requirements and other rules for all new curb cuts on public and private roads.	Consider for inclusion in a possible future highway ordinance as discussed on page 286.
	Work with MeDOT to establish a Pavement Preventive Maintenance program for Town and private roads.	Road Commissioners \$1500 2013
	To enhance safety, establish that damage to public roads caused by construction, tree harvesting, mineral extraction, and development shall be corrected at the expense of the responsible party.	Consider for inclusion in a possible future highway ordinance as discussed on page 286.
	Contract with a third party for a safety and maintenance needs assessment of public and private roads.	Road Commissioners \$5000 2014
	Work with Wawenock Golf Club to develop appropriate winter parking away from the highway shoulders, for the safety of sliders and skiers.	Road Commissioners \$1000 initially \$500 /year plowing 2011

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Promote public health, protect natural and cultural resources, and enhance livability by managing land use to maximize transportation system efficiency and minimize vehicle miles traveled.	Establish by ordinance a requirement to preserve scenic and cultural views from public roads.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Coordinate with Bristol to evaluate the feasibility of a commuter parking lot in the vicinity of the Routes 129/130 intersection.	Road Commissioners \$500 for planning 2015
	Evaluate the feasibility of replacing the culvert at Elliots Cove with a larger and deeper one, possibly in conjunction with the Gut Bridge project. Repair shoulder and rip-rap.	MeDOT -0- to Town 2010
Meet the transportation needs of all residents and through travelers by providing a safe, efficient, and adequate transportation network for all types of users (motor vehicles, equestrian, bicycles, pedestrians).	Develop a plan to improve shoulder widths and condition on state and town roads in order to increase separation between motor vehicles and alternative uses.	Road Commissioners \$5000 to review conditions, state requirements, and develop plan. 2015
	Work with MeDOT to develop a plan to provide adequate shoulders, other facilities, markings, and signage on State Route 129 and Harrington Road in order to facilitate alternative highway uses.	Road Commissioners Minimal 2015
	Support and actively participate in regional initiatives to provide public or private transportation for elderly and disabled residents.	Selectmen appointed committee Minimal 2012
Promote fiscal prudence by maximizing the efficiency of the state and state-aid highway network.	Work with MeDOT to ensure that any changes to local public and private roads do not have an adverse effect on the two state-aid roads in South Bristol.	Road Commissioners Minimal 2012
Promote and ensure sound road design, maintenance, and utilization practices.	Establish by ordinance a policy limiting subdivision access to one driveway or private road in order to preserve visual aesthetics and promote safety.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	With an education program, encourage minimum standards for private roads in order to enhance year-round access by emergency vehicles.	Planning Board \$1000 2013
	Maintain and upgrade the Clarks Cove bridge and dam to ensure adequacy of the dam to maintain the pond's water level and support vehicular traffic. See discussion on page 256 in ch. 18.	Road Commissioners Unknown – see ch. 18 2011

Chapter 15 — Recreation and Open Space

*The bow cannot always stand bent,
nor can human frailty subsist without some lawful recreation*
~ Miguel de Cervantes (1547-1616)

Recreational activity in South Bristol, considering both year-round and seasonal opportunities, occurs more than anywhere else on the Town's greatest open space – the adjacent waters of the Gulf of Maine, the Atlantic Ocean, and the connected bays, rivers, and coves.

South Bristol is blessed with a rich variety of recreational resources and opportunities for all ages. Among them are sailing, kayaking and canoeing, motor boating, cross country skiing, sledding, snowmobiling, hiking, hunting, fresh and saltwater fishing, golf, hiking, geocaching, walking and jogging, tennis, horseback riding, and sightseeing.

15.1 – Open Space

Preserved Lands with Public Access

South Bristol is fortunate to have some large areas of land which have been permanently preserved and protected from development. Ownership of the various parcels is by the Town, the federal government, the University of Maine, and various land trusts. With the exception of Outer Thrumcap Island, all are open year-round for hiking, picnicking, and most other appropriate outdoor activities. Some properties are on the water and offer swimming spots. Many have marked trails. These preserves are shown on Map 7.

Tracy Shore Nature Preserve. The entrance to this Town owned 35 acre wooded preserve is at a small parking area on the corner of Route 129 and the S Road. The well marked trail “winds through mature soft wood stands, crosses a forest stream, runs between huge granite cliffs and large rock outcroppings, and has spectacular views of Jones Cove.” (Roberts, 2003). Hiking, dog walking, bird watching, nature study, and hunting are popular public uses of this extraordinary preserve.

The Tracy Shore trail has been recently linked

to the Library Park Preserve. To reach Library Park Preserve, follow the signs on the Tracy Shore trail, cross Route 129 to the driveway that has a large boulder with the number “1922,” then proceed to the south (to your right) behind the cemetery and along the remnants of Hill Road to signs behind the library leading into the Library Park Preserve.

In addition, there is a side trail which leads to the northern end of Burma Road. This trail is only available during the summer, and respect for neighboring private property is appreciated. Ownership: Town of South Bristol; Managed by Damariscotta River Association (DRA).

Plummer Point Preserve. This 74 acre peninsula preserve has two main trails off of the left side of the dirt entry road. One of the two trails takes walkers to Seal Cove, the other to Long Cove. Points of interest include abandoned granite and feldspar quarries, a beautiful green fringed cove, and a point of land overlooking the Damariscotta River and Farmer and Hodgdon islands. The two trails join to form a loop. Parking for this preserve is on the west side of Route 129 just south of and across from Alice Norwood Road. This preserve is open to the

public for hiking, cross-country skiing, nature study, hunting, and other recreational activities. Ownership: DRA.

Merriam Nature Trails. These trails are in the Darling Marine Center off Clarks Cove Road. After entering the Darling Center, a parking area is on the right about 0.3 miles from the entrance. A large network of trails crosses small forest streams, passes steep ledges and a waterfall, travels through old forests, and follows the shore of the Damariscotta River and Lowes Cove. Trails are well marked and color coded. A kiosk with trail maps is to the left of the first white building. The trails are maintained by the Gulf of Maine Foundation. Ownership: University of Maine.

Menigawum Preserve. This preserve is located on 23 acre Hodgdon (or Stratton) Island in the Damariscotta River. It can be reached only by boat. Canoes located on the Plummer Point Preserve are available free for use in reaching the Menigawum Preserve. (Call the DRA office to reserve/check out canoes – 563-1393.) The trails offer panoramic views of the Damariscotta River, surrounding islands, and the mainland. Maps are available near Boat House Beach on the northern end of the island. Seals can be seen in Seal Cove, as well as ancient Indian shell heaps (middens) on the southern end. There are eagles to be seen in the area, and the northern point where they nest should be avoided. The island can be visited from dawn to dusk. Fires and camping are not permitted. Ownership: DRA.

Library Park Preserve. The trail on this 17 acre preserve begins on the east side of Rutherford Library, leads down to McFarland Cove and loops back to the library. Paved parking is available at the library. There are views of Johns Bay, Fort William Henry, and Witch Island. Mosses, ferns, vernal pools and wild life can be viewed. (See Tracy Shore Preserve above regarding the trail linking Tracy Shore to Library Park Preserve.) Ownership: DRA.

Witch Island. This 20 acre island, located at the mouth of the Eastern Gut, can be reached by boat from the South Bristol town landing or from Bittersweet Landing. About 15 minutes of easy paddling is required to get to the island. Perimeter trails give spectacular views of Johns Bay, Pemaquid, and South Bristol Harbor. A sand beach on the northern shore is ideal for landing small boats or kayaks.

There is a cottage located at the southwest end of the island where sometimes resides a summer caretaker. Ownership: DRA.

Walpole Woods. The trail loop in this 48 acre preserve starts at a small parking area on the east side of State Route 129, 2.7 miles south of the Route 129-130 intersection. A forest stream and Birkett Pond can be viewed along the trail. Trails and foot bridges were added and improved in early 2005. Ownership: South Bristol; managed by DRA.

Outer Thrumcap Island. This 9 acre island (also known as Little Thrumcap Island) has been designated an essential nesting habitat for the endangered roseate tern. It is open to the public to the extent that use of the island is consistent with seabird restoration efforts. Visitors must respect nesting areas and other posted restrictions. The island features a sheltered sand beach and superb views. Visitors are welcome to use a mooring near the beach. No trails currently exist. Ownership: USFWS – Maine Coastal Islands National Wildlife Refuge; management assistance by DRA.

Seal Cove Preserve. This preserve was purchased by the DRA in 2007. The property consists of 33 acres of wooded shore land with a half mile of waterfront on the west side of Seal Cove with access from the S Road. Plans are to build a trail system which will provide access to the shore and Seal Cove for walkers, clam diggers, and others. Ownership: DRA.

Orcutt Preserve. This recently created 18 acre preserve is located between West Side and

Roderick roads on Rutherford Island and extends south towards Foster Point and the Gulf of Maine. The preserve has diverse habitats including a mature spruce-pine forest, a peat land, and a scrub-shrub wetland. The DRA purchased the parcel in 2007 and will work with the local community to plan for public access. Importantly, it is the Town's only public access preserve located on Rutherford Island. Ownership: DRA.

McLaughlin Preserve. Located on the east side of Route 129 immediately south of Farrin's Pond and north of Tidewater Way, this recently created 11 acre preserve was a gift to the DRA. This wildlife preserve extends to the North Branch of Johns Bay from the 300 foot road frontage and is open to the public in the context of protecting the wild shores of the North Branch. Ownership: DRA.

Hunting is allowed in all of the preserves owned or managed by the DRA, subject to the hunting regulations in effect throughout Maine. These preserves are also pet-friendly; dogs are not required to be on leash, but if unleashed must be under control as required by state law.

This enumeration of preserved lands covers only those within South Bristol. There are many others in nearby towns; some of which are included on Map 7. Some of the preserves have information kiosks with trail maps. Maps for many of the preserves are available at DRA headquarters on Belvedere Road in Damariscotta. Roberts (2003) provides excellent guidance for many hiking trails in Lincoln County including some in the preserves described above.

There are few formal records maintained regarding use of these preserves and other public access lands. There are visitor logs which users are invited to sign at a few locations including Outer Thrumcap Island, Menigawum Preserve, and Dodge Point Preserve in Newcastle. It is unknown what percentage of the users sign the logs and how many may be in the party of the signer. The state has at times had staff on hand to

do actual counts of the users of the Dodge Point Preserve.

Special Lands

In addition to the preserves listed above, conservation easements are held by several organizations and a state agency on parcels of open land in South Bristol, much of which is undeveloped shore land, islands, wetlands, and forested uplands. These easements, which were discussed in chapter 6 on page 76, protect significant scenic views, wildlife, plant and marine habitats, and historical sites.

There are 22 conservation easements (462 acres) in Town that permanently protect land from development although the land remains privately held. In addition, the 976 acres in either "tree growth" or "open space" use classification are, unless withdrawn, protected from development. In most cases the privately held lands are informally available for public access.

Table 6.5 on page 76 provides additional details on preserves – some in neighboring towns – and local conservation easements.

There are many informal trails that residents and visitors may find interesting to follow. Long time residents can provide helpful information on the location of these trails to those who are interested. Most of these trails cross private land. When using these, it is important to show respect to the landowner and the land and to treat this land as if it were your own.

Maine has a long tradition of public access to private land, a tradition without parallel in the nation. (LeVert, 2008) This tradition still exists in South Bristol with relatively little land being posted. It would be appropriate for the Town to make available to landowners information on the benefits of allowing public access to undeveloped land and the limitation of liability for injuries. The limitation of liability is contained in statute at Title 14 MRSA §159A.

15.2 – Access to Water Bodies

South Bristol has 69 miles of shoreline, yet relatively little public access across that shoreline to the water. We discussed this at length under Marine Resources starting on page 126.

Perhaps the most common concern of residents is to improve existing public recreational access to the salt water. Currently, the only facilities in Town for launching a boat on a trailer are at two commercial facilities on the Gut, both of which charge a fee for the service.

While there is no public beach in Town, privately owned Sand Cove beach has long been used for swimming and sunbathing. Unfortunately, it has sometimes also been used for noisy late night partying by folks who have not always respected the desire of those living nearby for quiet evenings. Continued permissive access to this beach is considered an important recreational asset of South Bristol and depends upon the respectful use of the property.

Although access to freshwater ponds and lakes has typically not been restricted, most water bodies in South Bristol are surrounded by private property with no formal easements guaranteeing public access, thus posing the potential for restricted or no access in the future.

None of South Bristol’s recreational facilities,

except for the school gymnasium, are handicap accessible. With the increasing age of the population and greater dependence on walking aides and wheel chairs, plus the impaired mobility of other people, handicap accessibility should be a priority as recreational facilities are created, maintained, upgraded, or expanded.

Recreational uses of marine water resources can be threatened by inappropriate (and illegal) overboard discharge of wastewater from boats which do not use pump-out facilities, and by malfunctioning overboard discharges from facilities on land. Overloaded or improperly maintained septic tank/leach field systems represent a health threat to surface-water-based recreational activity. These risks are discussed in more detail in chapter 10 (Marine Resources) beginning on page 123.

South Bristol is fortunate that several of its public preserves, and some in neighboring towns, notably the La Verna Preserve in Bristol and the Dodge Point Preserve in Newcastle, provide access to shorefront for sightseeing, picnicking, and in some cases swimming. The La Verna Preserve in particular provides spectacular ocean views across Muscongus Bay to nearby islands, Monhegan Island, and across the bay to islands off of the mouth of the Saint George River.

15.3 – Town and other Recreation Facilities

We have described earlier the three town floats at Christmas Cove, South Bristol Village, and Hunters Landing which are in the water year-round. All three are regularly used for launching kayaks and occasionally a canoe or rowboat.

The gymnasium at the elementary school is available for public use (tennis, basketball, jogging, etc.) outside of school hours. Arrangements for using the gym must be made with the school office. The gymnasium was built

using a combination of privately raised and town money.

The ballfield behind the school is likewise available to the public. Use of this facility must be coordinated with the school.

Outside of school hours, the playground with its recently installed playground equipment is available to the public. The playground equipment is suitable for use by youngsters in the

kindergarten through eighth grade age range.

Meeting rooms are available at Rutherford Library, the South Bristol Fire Station on Middle Road, Union Church's Parish House, and Darling Marine Center. For big meetings, the school gymnasium where annual town meetings are held can seat several hundred people. On occasion, the CCIA makes available its meeting rooms for gatherings of town-wide interest.

There are no public pools or outdoor public tennis courts in South Bristol. An indoor tennis court is available to the public in the South Bristol School gymnasium. (See previous page.) Indoor tennis is also available in Damariscotta at the Central Lincoln County YMCA. The Christmas Cove Improvement Association (CCIA), a private member-supported facility, has two clay and two hard outdoor tennis courts, a saltwater pool, and indoor function rooms.

Swimming occurs in the several freshwater ponds in Town and along the 69 miles of marine shoreline. Freshwater swimming is also available in neighboring towns and saltwater swimming and sunbathing are available at Pemaquid Beach in Bristol for a nominal fee.

For the last few years, Central Lincoln County (CLC) YMCA in Damariscotta has expressed interest in adding an indoor swimming pool to its facility. Thus far, the major fund raising which would be required has seemed to be out of reach. Such a swimming facility would become a major asset to the region. Currently, the only significant local indoor pool is at the Boothbay YMCA, an hour's drive from South Bristol. Each year at town meeting South Bristol citizens appropriate a donation to CLC YMCA.

There are two golf courses in Lincoln County; the excellent 18 hole course in Boothbay and the Wawenock Golf Club in South Bristol. Wawenock is said by many to be one of the finest nine hole courses in Maine. It has two different tees on each hole for front and back nine play, giving the golfer the experience of playing a full 18 holes.

Wawenock is open for play from April to November, weather permitting. The club is owned by a nonprofit corporation and welcomes members and visitors. During the summer it provides professional instruction clinics free to children and adult beginners, and sponsors many local tournaments. Private lessons are also available. The historic club house building is located in Walpole on the west side of Route 129, requiring golfers walking or in carts to cross the road to reach the golf course on the east side.

Land has been purchased by the club north of Split Rock Road and efforts to develop additional golfing facilities are underway. These facilities would include improved practice areas (i.e. driving range, putting green, and bunker practice site), and an executive or par three course. This multi-use concept of development will move Wawenock in a direction away from its original intention of adding nine holes that would have been an extension of the first nine. The reason for this change is that South Bristol has an older population, the majority of which rarely plays a full eighteen holes. It is likely that this segment of population will grow in the future and will welcome a shorter, but still challenging, course. The practice areas and shorter course will also be useful for new players and young players taking up the game. If this plan is achieved, Wawenock will become more user friendly and family oriented.

In the winter, the golf course becomes a well used outdoor recreation area. The most common use seems to be sliding off of the first tee, where at times with the right snow conditions the youngsters make it almost to the first green. Snowmobiles track around the entire golf course, particularly in the evening. Cross country skiers enjoy both reasonably level skiing areas and the challenge of the somewhat hilly terrain on parts of the course. As a bonus, the snowmobiles pack trails for easier going when the snow is deep.

Recognizing the winter use (multi-use) of the golf course, in the fall the golf club surrounds

each of the nine greens with stakes joined with bright tape in order to prevent damage. Winter users respect the stakes.

In chapter 14 on page 186 we cited the danger from traffic to those using the golf course in winter for activities on the snow. This an important concern which should be addressed as proposed in chapter 14.

Limited off-road parking at or near public recreational facilities is available at the school, Walpole Woods, Tracy Shore, Rutherford Library, Darling Center, and at the town floats in Christmas Cove, the Western Gut, and Hunters Landing. We discussed parking in more detail on page 185.

There are no publicly-owned toilet facilities in South Bristol, except at the school gym. Facilities

for use by customers, members, and guests are available at CCIA, Coveside, commercial boat launch/service facilities, and at the golf course.

The absence of public toilet facilities poses a potential for unsanitary conditions in outdoor recreational areas. To alleviate this concern, at least seasonal facilities would be useful in the vicinity of the Gut and in Walpole. There is public land with adequate space in Walpole at the lot on which the firehouse and town office is located. It is more problematic at the Gut, but the firehouse on Rutherford Island and the ballfield at the school present opportunities to use existing public land. The question raised is: How close to the location of an activity or attraction must toilet facilities be located in order to serve their intended purpose?

15.4 – Recreational Activities

Boating

Sailing, power boating, paddling kayaks, rowing, and “messaging around in boats¹⁰,” is the most visibly apparent recreational activity in South Bristol, particularly from spring to fall. These activities contribute about \$18,000 a year in excise taxes plus other fees to South Bristol’s treasury.

Virtually all recreational boaters use their own vessels, from skiffs and outboards to what seem locally to be large sailing and power yachts. The dearth of available mooring space (see page 119) speaks to the popularity of recreational boating in Town.

Recreational boating has been popular here for at least the last century, since the first arrival of summer vacationers. Still extant old

photographs (Wells, 2000; and SBHS) testify to early recreational boating activity, in the early days either sail or muscle powered. In the early part of the 20th century there were also small steam powered recreational vessels, although we have no records of them here.

South Bristol offers a rich coastal environment along its 69 miles of shoreline for both local and cruising sailors. For cruising sailors, there are facilities for serving these typically larger boats at Bittersweet Landing and Gamage Shipyard in the Gut and at yards across the Damariscotta River in nearby East Boothbay. Boating is an important recreational resource for South Bristol which is also discussed in chapter 10 (Marine Resources) and chapter 11 (Local Economy).

There are at present two pump-out facilities for boats in South Bristol; at Coveside in Christmas Cove and at Gamage Shipyard in the Western Gut. Cruising boats frequently anchor in Pleasant Cove, Seal Cove, Jones Cove, Christmas

10. From the Pogo comic strip, Mole often said, “There’s nothing better than messaging around in boats.”

Cove, and at the several anchorages in Johns Bay. Intensive use of these areas is a concern to the Town if overboard discharge of sanitary waste and fuel spills should occur.

During the summer months kayaks can be rented at the Coveside Restaurant and Marina at Christmas Cove and from other nearby locations. Public access points to the Damariscotta River, Johns Bay, and the open ocean are limited and more access points are needed. Kayaks are regularly launched from the three town owned floats. The nearest public boat launch facilities for trailered boats are at Pemaquid Harbor and at the Damariscotta Public Landing. Boat launchings are available for a fee at the Bittersweet Boatyard and the Gamage Shipyard. The beach at Sand Cove is a popular launch point for kayaks.

Hiking

There are many excellent hiking trails in South Bristol, many having scenic views and picnic and swimming spots. All of the preserves described in the first part of this chapter have or will have trails; many of the trails were mentioned in the descriptions of the preserves. Roberts (2003) is the best source of information about hiking trails throughout Lincoln County.

Golf

We discussed above the two golf courses in Lincoln County. Wawenock Golf Club in Walpole is an excellent nine hole course which is a significant recreational asset to South Bristol.

Cross-country Skiing, Snowshoeing, Sled-ding, and Snowmobiling

These activities are available in much of the Town. Although snowmobiles are more common in the northern part of Town where there is more open space, they are not uncommon as far south as Rutherford Island, including on the roads immediately after new snowfall. Snowmobile activities are more common in Walpole.

In the winter, children and adults from South

Bristol and neighboring towns converge on the hill at the Wawenock golf course first tee to ski and slide. Cross-country skiers, snowshoers, and snowmobilers enjoy the open space of the course.

At night throughout the year, amateur astronomers sometimes use the dark, open area of the course for stargazing. There is an active local group of amateur astronomers, part of the Central Maine Astronomical Society (see references) which meets regularly for nighttime observation sessions, most often at the DRA farm in Damariscotta.

Leading from the ninth tee to the north is a snowmobile trail that eventually connects with a system of trails in Bristol referred to as Route 66. (The trail map can be obtained from Route 66, PO Box 231, Bristol, ME 04539.) There are numerous other opportunities for cross-country skiing and snowmobiling along the many logging roads that crisscross the Town's wooded areas. These same logging roads offer opportunities for all terrain vehicle (ATV) riders during other seasons as well. Since these roads are privately owned, contacting the landowner for permission is encouraged before using them. Some of the hiking trails on the preserves described above offer good opportunities for snowshoeing.

Fishing

Fresh water fishing in South Bristol is enjoyed by its residents and by those of neighboring towns. Brook trout are stocked annually in Birkett Pond in Walpole Woods and in the Thompson Ice House Pond. This is a "put and take" stocking situation, as these trout do not reproduce.

Although there was once brown trout fishing in Clarks Cove Pond, large mouth bass have now been stocked in the pond and they will reproduce in the future. A few brown trout may still be found in the pond. These are a hearty fish and can coexist, but cannot reproduce with bass present.

Several other ponds and lakes in neighboring

towns, for example Pemaquid Lake, Biscay Pond, Pemaquid Pond, Boyd Pond, and Damariscotta Lake, also provide summer and winter fishing opportunities.

Many serious fresh water fishermen and women, when they can, head to the great fishing lakes and rivers inland which make Maine one of the premier fresh water fishing states in America. In this sense, the fishing is a regional activity – the region covering all of Maine.

In **salt water**, smelts migrating in the spring to fresh water to spawn can be harvested in tidal pools and brooks along the South Bristol coast. Recreational fishing for mackerel and striped bass is seasonally available and often quite good in the Damariscotta River and Johns Bay. A local Registered Maine Guide reports that striper fishing is excellent especially in the Damariscotta River. Occasionally, blue fish can be found in Johns Bay and the Damariscotta River, but seldom stray east of the mouth of the Kennebec River.

Hunting

For many residents, November means deer hunting with rifles. There is also bow hunting in October and a muzzle loader season during the two weeks after the deer season ends on Saturday of Thanksgiving weekend.

The Wiley Woods and the areas around Split Rock Road, Harrington Road, Carl Bailey Road, and along Orrs Meadow Brook are among the more popular hunting sites. These areas are part of a number of large blocks of undeveloped (unfragmented) land in South Bristol which are shared with Bristol and which are conducive to a thriving wildlife environment. The Town generally views deer hunting as a wild life management tool. Hunters are encouraged to get permission from land owners before entering private property, although little land is posted in Town. Land owners who grant permission to hunters help to keep deer populations under control.

Land owners often post their land with No Hunting and No Trespassing signs. New signs have been developed and are available from the Maine Department of Inland Fisheries and Wildlife (DIFW). They read “Access by Permission Only” and “Access Permitted.” If access permission is granted, please treat the land as if it were your own.

Maine has wild turkey hunting seasons in spring and fall in most of the state. Since turkeys were reintroduced into Maine some years ago, the population has thrived; they are common throughout Lincoln County. The turkey population appears to be growing despite the presence of predatory fishers.

The Samoset Fish and Game Club raises pheasants for hunting. Starting in 2003, the Club released 30 birds in the sand shed area of Walpole during early October. The club plans to make this an annual event. Partridge or ruffed grouse hunting season runs from approximately October to December, the exact dates being set each year by the Maine Department of Inland Fisheries and Wildlife.

There is, to date, no hunting season for moose in South Bristol. A small population, perhaps as many as a dozen, is located in Wiley Woods in Walpole. Residents are cautioned to be alert for moose on South Bristol roads, especially during early evening and in the nighttime.

As the population continues to grow, there are increasing safety concerns during hunting season, especially in the more densely populated areas of Town. State hunting rules prohibit discharging a firearm or crossbow within 100 yards of a residential dwelling or a farm building used for sheltering livestock, machines, or harvested crops. Accordingly, there is a very limited area of Rutherford Island that can legally be hunted with crossbow or firearm as a result of this 100 yard exclusion zone. While it may be important to manage the deer herd to control unwanted browsing in gardens and other landscaped areas,

deer herd management through hunting in populated areas poses safety concerns.

Cycling, Jogging, Walking, and Horseback Riding

Residents frequently use the shoulders of town roads and many private roads for walking, jogging, and horseback riding. There are no formal horseback riding trails in Town although riders are often seen on the road shoulders in Walpole. As noted in chapter 14, except on Route 129 from Farrin’s Pond north to the Bristol line, there are few usable shoulders on the roads.

The East Coast Greenway, an ambitious multi-use trail system, is planned from the Florida Keys to Calais and, if implemented, may be routed through part of South Bristol. The Damariscotta Area Greenway Committee is developing side routes and loops to enable local residents and visitors to experience the beauty of this part of Maine.

Other Outdoor Activities

There is one privately owned **campground** in Town, located off Rte 129 in Walpole. In addition to this facility, one can camp on Fort Island in the Damariscotta River off of Boothbay. Most public preserves in South Bristol and neighboring towns do not allow overnight camping.

In this electronic age, there has emerged an outdoor activity referred to as **geocaching** – the search for a ‘treasure’ left at a location identified by global positioning system (GPS) coordinates. Participants can access the web site (www.geocaching.com) for cache locations and then try to find the cache. There are at least three known caches in South Bristol.

The Town offers **sightseers** many scenic views, mostly from town and private roads. Many are listed in table 6.3 on page 74. Residents and visitors enjoy the scenic views from their vehicles, while driving by or occasionally stopping on the traveled way.

15.5 – Connection, Proximity, and Issues

South Bristol is blessed with a rich variety and quality of recreational activities and opportunities for all ages. These activities include hiking, golf, cross-country skiing, sledding, snowmobiling, kayaking, boating, fishing, swimming, tennis, hunting, indoor recreation/exercise facility, cycling, jogging, walking, horseback riding, camping, and sightseeing. Many recreational sites are shown on Map 7.

In general, recreational facilities available in South Bristol for its residents and for regional and seasonal visitors are adequate for the current population and its anticipated demographic change over the next decade. The issues associated with recreational opportunities that are of concern now and in the future include:

- reduction in large undeveloped blocks of land and

wildlife habitat due to development pressure on these privately-owned lands;

- access to saltwater and freshwater;
- handicap accessibility;
- fecal contamination of surface waters;
- road safety;
- adequate playgrounds;
- maintaining Clarks Cove Pond fishery and wildlife habitat; and
- adequate toilet facilities.

South Bristol is essentially a rural town and wants to remain so. Rutherford Island and South Bristol Village comprise the most built-up part of Town. Recreational opportunities are scattered throughout the Town, from the border in the north and east with Bristol to the Damariscotta River to the Atlantic Ocean. Every recreational

opportunity is close to a few people and distant from many others.

With preserves and their hiking trails scattered throughout the Town, many people can walk to their “favorite place.” However, the recreational opportunities at the South Bristol Elementary School are within walking distance for only a few.

While there is an excellent playground at the school, there is no similar facility in the northern part of Town. Year-round population growth seems to be occurring primarily north of Four Corners. This growth includes young families with children who would welcome the closer availability of a community playground that does not require traveling six miles or more to the school. A potential location would be at the town office since it is nearer the residential density in the northern part of Town.

The valuable recreational fishery, hunting, and wildlife habitat at Clarks Cove Pond is an important asset of the Town. The pond, formerly a salt marsh in the early 18th century, is created by a dam located at the culvert under Clarks Cove Road that drains the pond and Orr’s Meadow Brook to the Damariscotta River. It is important to keep the culvert in good condition through periodic maintenance in order to preserve this recreational asset. Maintenance activities should include periodically removing debris from the dam/culvert, repairing or replacing the tide gates, stopping seepage through the earth fill on which the road is built, repairing/replacing riprap, especially on the river embankment, and repairing spalling concrete. Additional information on Clarks Cove Pond is presented in chapter 4.

The Forest North and Forest Central areas of Town (Map 12) are important areas for recreation as well as for wildlife habitat. They should be maintained as much as possible in a unfragmented state in order to preserve their recreational and wildlife values. These areas are part of the headwaters for several watersheds (Map 4) including Orr’s Meadow Brook which feeds

Clarks Cove Pond and Little Falls Brook which drains into Bristol.

Chapter 14 (Transportation) addresses road safety, but it is mentioned again here as it influences the availability, ease, and safe use of the Town’s recreational resources.

The delight of snow-based recreational activity at the golf course occurs at the same time as do potentially dangerous, slippery road conditions, sometimes with limited visibility. From a safety concern, it is best to get as much separation of children and other pedestrians as possible from vehicle traffic in a stretch of road where drivers are used to traveling at high speeds. During the other seasons of the year, there is a safety risk posed by golfers crossing the road.

During spring, summer, and fall, there are many town and private roads, in addition to Route 129, where walkers, joggers, bicyclists, and horseback riders use the right-of-way. In general, shoulders are insufficient to separate these slower uses from the higher speed vehicle use. Such large differences in speed represent a potential for accidents. This potential can be greatly reduced through signage, enforcement of speed limits, and, perhaps more importantly, wider shoulders where possible to help separate the different uses of roads in Town. Wider shoulders might also reduce the safety risks associated with sightseers who now sometimes stop in the traveled way to take in views.

All of the Town’s large blocks of undeveloped land are privately owned. These lands support a vigorous and diverse wildlife population as well as occasional timber harvesting. The more favorable hunting opportunities for deer and other wildlife are located in these areas. Hiking, skiing, snowmobiling, and ATV use commonly occur on the logging roads that traverse these blocks of land. There continues to be development pressure in these areas, resulting in reduction of the “undisturbed” nature of these lands and their value as wildlife habitat.

References

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Roberts, Paula; 2003; *On the Trail in Lincoln County*; Newcastle, Maine; Lincoln County Publishing Co.

Route 66 Snowmobile Club, PO Box 231, Bristol, Maine 04539.

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Recreation and Open Space Policies and Strategies

The Town of South Bristol should promote and protect the availability of indoor and outdoor recreational opportunities for all residents, including access to surface waters, consistent with maintaining the Town’s rural character and protection of its natural resources.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Maintain and/or upgrade existing facilities in order to meet current and future recreational needs.	Establish a Recreation Committee to explore ways to address the issues identified in this chapter and to guide the implementation of the policies set forth.	Selectmen -0- 2011
	Work with public and private partners to maintain and extend the existing motorized and non-motorized trails, and to connect with regional trail systems where possible.	Recreation Committee \$250 per year 2011 and onward
	Develop a recreational plan and a list of needs to address the townspeople’s wishes.	Recreation Committee \$300 2012
	Work with the DRA and property owners to develop a trail linking Plummer Point and Tracy Shore preserves	Recreation Committee Minimal 2012
	Work with appropriate organizations and landowners to install anchored and secure picnic tables and trash barrels at public access lands.	Recreation Committee \$300 for two town-site tables, \$400 per year for disposal 2013
	Work with Samoset Fish and Game Club to support stocking Clarks Cove Pond with brown trout, and Birkett and Ice House ponds with brook trout.	Selectmen and Recreation Committee \$100 per year 2011

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Preserve, and where appropriate extend, open space for recreational use.	The Planning Board should consider the policies in this chapter when deliberating on any proposed development.	Planning Board -0- 2011 and ongoing
	Continue to partner with DRA or other land trusts, conservation organizations, and government agencies to protect important open space or recreational land, and provide access to that land and surface water resources.	Recreation Committee Minimal Immediate and ongoing
	Educate landowners on the benefits and protections associated with allowing public recreational on their property, and protecting their property from over development.	Planning Board, Recreation Committee Minimal 2011 and ongoing
	The Town should be encouraged to, whenever the opportunity arises, acquire or otherwise encumber land in the areas identified as Forest North and Forest Central on Map 12 in order to protect the relatively undeveloped character of those areas. These lands would be made available for recreational activity and would protect wildlife habitat	Selectmen, Town Meeting Unknown until an opportunity arises 2011 and thereafter
Seek to achieve and maintain at least one major point of public access to salt water, to maintain it, and work with nearby property owners to address concerns.	Plan and develop a major salt water access facility.	See chapter 10 on page 132.
	Maintain and support the above salt water access facility.	Selectmen and Recreation Committee \$10,000 per year 2014 and ongoing
	Increase the opportunities for small boats to access the marine shoreline. This can be accomplished by encouraging appropriate new commercial shoreline development to include a public access ramp.	Planning Board Minimal 2011

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Improve and expand recreational services.	To protect recreational uses of water in South Bristol, increase the availability of pump-out stations in South Bristol and neighboring towns. This can be done by encouraging or requiring new waterfront access points servicing boats with holding tanks to provide pump-out capability and by increasing enforcement of State regulations that prohibit overboard discharge within 3 miles of the shoreline.	Planning Board, Harbor Master -0- 2012
	In order to accommodate continuing increased recreational activity on existing town land and facilities (e.g., ball field and floats/docks), increase access to public toilet facilities. This can be accomplished by requiring new waterfront access facilities to include public toilets. The Town might purchase land and construct such facilities, or providing seasonal portable toilet facilities. <u>Cost (to be later determined) and timing not included to the right.</u>	Planning Board -0- 2012
	Improve the safety for sliders, snowmobile riders, and cross country skiers who park along Route 129 at the golf course in the winter.	See chapter 14 on page 193.
	Build a playground in the Walpole section of Town in order to provide recreational opportunities for the growing young population there.	Selectmen \$50,000 2017
	Actively support swimming lessons for all residents. This activity to be organized and managed by the Recreation Committee proposed in the first strategy on the second preceding page of this section.	Recreation Committee Fee supported 2012

Chapter 16 — Public Facilities and Services

That government is best which governs least.

~ Henry David Thoreau (1817-62)¹¹

Public facilities and services in South Bristol are adequate for a small, rural town. When a citizen calls 911, appropriate emergency service personnel are soon at their door. When hospital services are needed, a 50-bed acute care hospital is less than a half hour away. When it snows, the roads are well plowed. When someone desires a book to read or public internet access, it only takes a trip to the Rutherford Library in South Bristol Village. The only long perceived need is for a Town owned recreational water access facility which would include a boat launch ramp, a swimming area, a picnicking area, and parking space.

16.1 – Public Safety

Law Enforcement

South Bristol does not have a municipal police department. The Lincoln County Sheriff's Department is the primary law enforcement service in South Bristol, with backup available from Maine State Police should the need arise. Only four towns in Lincoln County (Boothbay Harbor, Damariscotta, Waldoboro, and Wiscasset) have municipal police departments.

During a recent year, the Sheriff's Office responded to 289 calls for service in South Bristol, including 22 traffic accidents, 47 reports and investigation of crimes against individuals/property, 27 court/civil services, 51 traffic assists/offenses, twelve 911 hang-up investigations, 39 business/residential alarms, and 13 assists to residents. County-wide, the Sheriff's Office calls for service were over 11,000. South Bristol accounted for 2.6 percent of the total service calls. For perspective, South Bristol accounted for approximately 2.5 percent of the county population.

Over three quarters of those responding to the mail survey (appendix C, ques. 20) felt that law enforcement services were adequate. The nine remarks to the question (Report, 2005, p.23) did not note any perceived problems except for one remark about control of speeding on the roads and another about leash law enforcement.

Most of the time there are three sheriff's deputies patrolling the county. Consequently, there is usually a deputy less than a half hour away from anywhere in Lincoln County and anywhere in South Bristol.

Although South Bristol's population increases considerably in the summer (see table 5.12 on page 60), the sheriff has stated that the increased population does not unduly strain his resources.

Fire Service

The Town of South Bristol has a volunteer fire department that was founded in the 1930s. The department began with a firehouse located on Rutherford Island with one fire truck. During the early years, the department operated with what

11. *Civil Disobedience*, first paragraph, *Walden and Civil Disobedience*, ed. Owen Thomas, p. 224 (1966). This essay was first published in 1849. The motto Thoreau referred to was almost certainly that of *The United States Magazine and Democratic Review*, a literary-political monthly: "The best government is that which governs least." Although the ideas expressed in this quotation may be in line with Thomas Jefferson's opinions and are often attributed to him, the exact phrasing is almost certainly not Jefferson's.

equipment could be obtained at little expense while the firefighters (firemen in those days) did their best to suppress fires.

The department has grown over the years to two fire stations and a trained cadre of firefighters. In 1994 a modern station was built on Middle Road on Rutherford Island. The second station is at the Town Hall/Sarah Emery School in Walpole. (See Map 15.) These stations provide heated space for all equipment, a place for the routine maintenance of equipment, and room for training. The apparatus fleet consists of eight vehicles, a trailer, and a boat. Turnout gear worn by firefighters has been upgraded since the 1980s from the original boots and raincoats to modern protective equipment which complies with all OSHA regulatory safety requirements.

The department is organized as a volunteer organization with town stipends provided for the Chief, two Assistant Chiefs, and volunteers on duty at fire and emergency scenes (\$8.00/hr). The department relies on voluntary contributions (\$24,506 in 2005) and budgeted support (\$38,100 in 2005) from the Town. The Town also appropriates annually (\$20,000 in most years) to a reserve account for the future purchase of fire equipment. Insurance coverage is through the Town and the Maine Municipal Association and includes worker compensation benefits.

The services and duties of the department include responding to structure fires, to vehicle accidents and water accidents, and to boat, woodland, and field fires. When electric power is out and cellars are flooding, the department helps out by pumping out the water. When trees fall and block roads, unless fallen wires are involved, the firefighters cut up the tree to reopen the road. The department also provides emergency services which typically require medical (First Responder) assistance to stabilize a patient's condition until the Central Lincoln County Ambulance Service arrives to transport the patient. The department also notifies residents of emergency evacuation orders, such as may occur in advance of

hurricanes and other weather emergencies.

As the local provider of emergency services, it is appropriate for the fire department to respond to fuel spills, both on land and along the shoreline. The department responded to a gasoline spill in Christmas Cove a few years ago. Then, as is common, Lincoln County emergency management provided major assistance in the clean-up. Since quick response to spills on both land and the water is critical, the fire department should be provided with the training, equipment, and materials necessary to mitigate potential damages.

Operationally, the department has a formal mutual aid agreement with the town of Bristol. This arrangement automatically activates the Bristol fire department via pager to a standby status when a structure fire call comes into the South Bristol department. In addition, there are mutual aid agreements with other nearby towns including Damariscotta, Newcastle, Edgcomb, Nobleboro, and Bremen. These arrangements may require those towns to send equipment and personnel to a call and to reposition equipment in their towns for optimum response in the event of a concurrent call.

The **South Bristol Fire Station** was built in 1994 using town funds and to a great extent volunteer labor. The two story, three bay structure meets all current National Fire Protection Association (NFPA, 2008) and OSHA requirements for fire stations including decontamination facilities for personnel and equipment. The second floor includes a large meeting room, a kitchen, and restrooms and is handicap accessible with an electric chair lift on the stairway. Three offices, including the chief's, are located across the front (east) side. The building is sprinkler equipped and has an automatic backup emergency electric power generator. The communication center is located in an enclosed gallery overlooking the lower floor.

The fire station's water well has exceptional capacity, estimated at well over 50 gpm, and is used for filling fire truck water tanks after a fire. In addition, there is a high pressure breathing air system for filling air packs.

The South Bristol fire station should be adequate to meet South Bristol's needs for 15 to 20 years.

The **Walpole Fire Station** is housed in an ell of the Town Hall (Centennial Hall, 1876, see page 99). Over the years it has been expanded from a single bay to its current three bay configuration, the most recent expansion being completed in 2003 in order to accommodate additional apparatus. It does not have any space for more vehicles. There is ample office and training space to meet needs at this location. Back-up electric power was recently installed.

This fire station should be adequate to meet the needs in the northern (Walpole) section of town for at least the next decade.

Fire Department Apparatus

The South Bristol Fire Department currently (2010) has nine pieces of apparatus. Except for the 1962 American LaFrance pumper, all are well maintained and in regular service. They are housed at the two fire stations; occasionally although infrequently, trucks are moved between the Rutherford Island and Walpole stations for operational reasons.

Below is the current (2010) apparatus list:

- 1962 American LaFrance pumper; out of service.
- 1986 GMC 1000 gallon per minute (gpm) pumper. Due for replacement in 2011.
- 1996 Ford rescue vehicle. Due for replacement.
- 2002 E-One 1500 gpm pumper with 1000 gallon tank. Truck has center mounted controls (elevated behind the cab) for better operator visibility of the fire scene. This truck has built-in foam capability.

- 2005 E-One 4x4 brush truck. This is a multiple use vehicle for woods fire suppression, emergency services, motor vehicle accident response, and structure fire suppression. Procured through a federal grant.
- 2004 Water Master 3500 gallon vacuum tanker. It can be filled in as little as 2 minutes, 9 seconds and dumped in 2 minutes. Procured with a federal grant.
- 2008 AEM Freightliner 2500 gallon vacuum tanker.
- 2008 Kubota RTV 900 utility off-road vehicle with trailer.
- 12 foot inflatable rescue boat with 20 hp outboard, along with a 6 by 12 foot cold water trailer and rescue suits.

All vehicles have an expected service life of 20 to 25 years, with the exception of the rescue vehicle. Rescue vehicles are normally purchased used for a substantial savings, but thus they have a shortened expected service life with the Department.

Emergency Medical Services (EMS)

In 1982, the fire department recognized the need for and implemented an emergency medical services capability known as First Responders, which includes trained Emergency Medical Technicians (EMTs) and an emergency rescue vehicle.

Starting with six local people, some of them members of the fire department, the service has grown into a highly capable corps of dedicated people who respond around the clock to medical emergencies in Town. Starting with being State licensed as basic first responders, the training level has advanced so that many members are now licensed as emergency medical technicians (EMTs) and in some cases as advanced EMTs. With higher levels of training, the members are able to provide more advanced life saving procedures.

The EMS service is part of the South Bristol Fire Department. Motor vehicle accidents are routinely responded to by EMS, and whenever it

is considered appropriate a fire engine with an engine crew also responds. The department acquired extrication equipment after an unusually severe motor vehicle accident several years ago when family members and friends of the five young people involved in the accident quickly raised and donated about \$10,000 so that South Bristol's department could acquire its own extrication equipment and train to use it.

Currently, when a call comes in for the South Bristol Fire Department it is more likely to be for a medical emergency – all motor vehicle accidents are potential medical emergencies – than for a fire.

South Bristol is a “non-transporting” EMS service, which means that the department does not provide ambulance service to transport patients. Transport is provided by Central Lincoln County (CLC) Ambulance Service out of Damariscotta which is dispatched as soon as it is determined that patient transport may be needed.

Communications and Dispatch

Requests for police, fire and emergency medical service in South Bristol are made by calling 911. The local Public Safety Answering Point (PSAP) is the Lincoln County Communications Center, run by the Lincoln County Sheriff Department. The back-up PSAP is the Maine State Police in Augusta Regional Communication Center (RCC). South Bristol has an addressing officer and has successfully completed the naming of all roads. The town has not adopted an addressing ordinance.

Dispatching is handled by the Lincoln County Communications Center, the local PSAP. Within the department, communications are handled through mutually compatible base radio stations located at each fire-house. All department vehicles and the chief and assistant chiefs have vehicle radios that allow communications with the base stations and with the dispatchers in Wiscasset.

Eighty percent of the firefighters and EMTs have handheld radios. All volunteers have pagers. Sirens that were installed by Maine Yankee Atomic Power Company as part of its emergency notification system have been removed. Their absence does not affect the communications of the department. The existing system works well. However, there is an FCC requirement to convert all emergency services communications to a different radio frequency and transmission type by 2012 which may interfere with the clarity (i.e., more noise) of transmissions. This will present a challenge to the department in the next decade, as it will require all radio equipment to be replaced.

Fire Department Staffing

The effectiveness and success of the fire department depends on volunteer fire fighters and EMTs. The department currently believes it is adequately staffed, but believes it is always on the edge regarding the number of people who have stepped forward to volunteer. The rigors of firefighting, such as dragging fire hose, lugging ladders, donning personal protective equipment, and working safely inside a burning structure requires training and the strength and stamina of younger people. EMT functions also require extensive training but can typically be done by both younger and older residents.

With a considerable number of department personnel employed outside of South Bristol during the day, having enough people to respond to a call is a constant concern. This concern is shared with many of the volunteer departments in Maine.

Training

Most indoor training is conducted at the South Bristol firehouse. Outside training (pumper operation, simulated fire scene work, and the like) is conducted at appropriate locations throughout Town. On occasion, joint training sessions are conducted with other departments, in particular controlled burns.

The Lincoln County Fire Chiefs' Association sponsors occasional training sessions throughout the year for fire departments which promote cooperation and provide experience working together. These training sessions are also an opportunity for members of the participating departments to learn about the equipment and capabilities of other departments.

The effectiveness and personnel safety of the department is very dependent on the training of its volunteer membership. Examples of state and federal mandated training include:

- Fire attack
- Driving
- Ladder handling
- Pump operation
- Self contained breathing apparatus (air packs)
- Emergency scene command
- Sexual harassment awareness
- Blood borne and biological hazards
- Vehicle extrication

In addition to these requirements, some of which require refresher sessions, there are various skills training that department members need in order to become proficient fire fighters. This training is obtained on the volunteer's own time. Training is a continuous process and represents a significant investment on behalf of individuals and the Town. EMTs are required to periodically take refresher courses in order to maintain their licenses.

The fire department holds monthly training sessions. Sometimes these involve simulated emergency situations with trucks and personnel responding and sometimes they are indoors at a firehouse. One of the goals is to have as many firefighters as possible trained on the many aspects of firefighting and emergency response so that whenever a call comes the people responding will be able to handle the situation.

Fire Insurance Rating

Residents of the Town are subject to property insurance rates that are in part based on the

capability of the local fire protection services. Rates are established by an insurance industry organization (ISO). Ratings for the fire protection capability range from 1 (excellent) to 10 (not acceptable). The rating for South Bristol is 9 (adequate/acceptable). To raise South Bristol's rating to 8 or 7 would require the preparation of paperwork over a one to two year period and a day-long test of personnel, equipment, and the mutual aid system. To progress to a rating higher than 7 would involve increasing levels of financial support for the department as it would involve having paid full-time staff.

Access to Structures

Some structures in South Bristol are located at the ends of long and sometimes winding private roads and driveways which can present an obstacle to the safe passage of fire fighting equipment. Typically, emergency vehicles need a 10 foot wide travel way with 12 foot overhead clearance and with turnaround capability for maneuverability and egress (e.g., to allow tankers to leave the site when empty and return with more water). Turns, or radii of curvature, of roads and driveways should be greater than 17 feet (5.0 meters) and the entrance angle of the drive with the main road should not be less than 45 degrees for ease and safety of turning (Maine DOT Section 800 Standard Details, 2002). DOT also recommends vertical grades to be less than 4 percent up or down within 7 feet of the main road and that drives with slopes greater than 10 percent be paved. Long drives should include turnouts to allow vehicles to pass.

On page 87 we discussed four situations in Town where pairs of private roads dead end close to each other. Were the roads in each of these situations to be connected, emergency vehicle access would be greatly improved.

Water Supply

The fire department keeps its water tanks full while at the stations to provide immediate "knockdown" capability in the event of a fire.

Most fires require additional water supply to control. There are several sources of fire fighting water in town including Nellie Frey's pond on Rutherford Island, the pond on Middle Road with a dry hydrant, Thompson Icehouse Pond, Clarks Cove Pond, and Farrin's Pond near Four Corners.

Except for a pond in the woods near the Meetinghouse Estates subdivision, there is no immediate source of firefighting water in the far northern end of Town. It would be desirable to create a fire pond with a dry hydrant in that area in order to provide a ready source of firefighting water, particularly since we have defined a growth area there in chapter 19. This might be accomplished in cooperation with the Bristol Fire Department with which South Bristol has a mutual aid agreement.

It is desirable to have a local supply pond of 500,000 gallons with a 6 foot minimum depth (to get water during winter) where there are groups of 3 or more homes in close proximity. When necessary, water can be drawn from the Damariscotta River and other saltwater locations, although this requires extensive clean-up of pumping equipment and everything touched by the salt water to remove the corrosive salt residue.

Another approach is an easily accessed underground tank or cistern of at least 20,000 gallon capacity with a dry hydrant. Such a tank could be a requirement in a subdivision application. The fire department could be given an easement to access the tank.

Emergency Services Outreach Program

The fire department currently does not have a formal outreach program to alert residents to conditions that represent potential fire and other dangers in their homes, backyards, and nearby woods. For example, one of the biggest concerns of the Fire Chief is a woods or wild-land fire that goes unnoticed for several hours. As experienced in other states, and here in Maine in 1947,

extreme dry spells can lead to devastating fires that spread quickly and cause significant financial, human, and wildlife loss.

Within the home, there are fire prevention practices and actions that can significantly reduce losses and save lives. Irrefutable evidence has shown that smoke detectors have saved many lives in Maine and nationwide in recent years. Carbon monoxide (CO) detectors have also begun to exhibit their life-saving value.

It is unknown how many dwellings in Town are equipped with these life-saving devices. It is almost standard to equip new residential construction with smoke detectors which are powered by both line voltage power and batteries and which are interconnected so that if one detector detects smoke all of the devices sound a warning.

The South Bristol Fire Department should consider initiating an outreach program to promote the installation of smoke and CO detectors. Working with the Lincoln County Fire Chief's Association, it should be possible to purchase the devices in bulk and offer them at cost to the citizens. An extensive amount of publicity material and other support for these programs is available from the National Fire Protection Association (NFPA, 2008).

During extreme weather conditions and loss of electrical power, there are significant health and life threatening risks that can be mitigated through an effective response plan where neighbors can be mobilized to help those in need. These risks are amplified in the case of older residents who may need special assistance with medication, food, heat, transportation, and water supply. The selectmen have over the years maintained a list of older residents who might need assistance in an emergency. The Lincoln County Communications Center is also providing such a service.

16.2 – Municipal Services

The locations of municipal buildings and other facilities which are within South Bristol are shown on Map 15.

Water Supply and Sewers

The Town of South Bristol has no municipal public water supply or sewerage systems. There are no plans to establish such systems in the foreseeable future since their absence is not viewed as a deterrent to current and projected population growth. Should a public water supply system be needed in the future there are several options available, including desalination, groundwater wells, treating water from Clarks Cove Pond, and connection to a nearby system such as the Boothbay Region Water System which services East Boothbay (1.2 mile underwater connection to the Gut) or the Great Salt Bay Sanitary District (over 10 mile connection to the Gut). The options are described in greater detail in chapter 4 (Water Resources) beginning on page 45.

Eight water systems used by 25 or more people daily exist in Town serving specific populations and facilities. These systems were assessed by the Maine Drinking Water Program of the Department of Health as shown below in table 16.1 (identical to table 4.10 and reproduced here for convenience). Discussion of the other than low risk assessments is on page 43. The wells listed in the table are shown on Map 4.

Septage

The former septage storage and disposal facility adjacent to the Bristol-South Bristol transfer station included two storage tanks (60,000 gallon total capacity) and 12 acres of septage spreading fields. Septic waste was handled at the transfer facility by direct spreading onto the designated fields or by discharge into the two holding tanks for eventual application during the growing season. This facility was permanently closed around 2005.

Table 16.1 – Public water supply system wells and their assessment as for contamination risk

Well ID Type	Name	Population served	Well type/ geology risk	Existing acute contamination risk	Future acute contamination risk
3127101 NC	Coveside Rest/Marina & Island View Condos	246	Low	Low	Low
3127103 NC	Coveside Rest/Marina & Island View Condos	246	assessment pending	assessment pending	assessment pending
198289301 NC	Heron Island Village Assn #1	48	High	High	Moderate
93846102 NCNT	South Bristol School	73	Low	Moderate	Low
598262101 NC	Darling Marine Center well 6	100	Low	Low	Low
98262101 NCNT	Darling Marine Center #1	35	Moderate	Low	Low
298262101 NC	Darling Marine Center #3	36	Moderate	Low	Moderate
3128102 NC	Wawenock GC/ Club House	117	Moderate	Low	Low

Source: Maine DHS Maine Drinking Water Program

Notes: These are classified as transient Non-Community Water Systems (NC) – water systems that do not consistently serve the same people – and as Non-Transient Non-Community Water Systems (NCNT) that serve the same people, but not year-round.

Both septage from septic tanks and pumpings from holding tanks (as well as grease from restaurants) are now taken to Interstate Septic Systems, Inc. in Rockland where compost is made. Whatever remains is discharged into the Rockland sewer system.

Great Salt Bay Sanitary District in Damariscotta does not accept septage or holding tank waste.

In all cases, property owners are responsible for arranging with a private contractor for septic tank and holding tank pumping and paying for the service.

Stormwater Management

The Town of South Bristol has no combined or separated storm sewers or other stormwater management facilities. The Town is not a designated Municipal Separate Storm Water System (MS4) community.

Solid Waste

The towns of Bristol and South Bristol joined together in the early 1980s to create the Bristol-owned and jointly operated Transfer Station located on the Bristol Road. Both towns needed to develop a long-term solution for the solid wastes generated in each town that had previously been deposited in the old landfill located in Bristol on Foster Road between Routes 130 and 32, east of the Bristol Consolidated School. The landfill has since been closed, sealed, and vented.

The Transfer Station, encompassing approximately 80 acres, consists of the solid waste recycling and transfer station located off of Route 130 a short distance north of Harrington Road. It includes an area for containers for storage of recycled material (cardboard, paper, glass, cans, etc.). In addition to the transfer station, there is a bulky waste (white goods, construction, demolition, and yard waste) storage area and a compost area. The transfer station houses the administrative offices for the entire operation. Operated as a corporation, the transfer

station is managed by a manager and staff and overseen by the Solid Waste Committee comprised of the Selectmen from each town.

Recycled material (cardboard, paper, glass, cans, plastic, etc.) are handled by the Lincoln County recycling operation run by the county in Wiscasset. They periodically collect full containers and replace them with empty ones. That facility collects recycled material from many of the towns in the county, aggregates it, and attempts to sell it.

Wastes that cannot be sold or given away are trucked to the Pine Tree consolidation facility in West Bath. Combustible wastes are currently sent to the MERC facility in Biddeford. Non-combustible wastes are sent to a landfill (via the Pine Tree transfer facility in West Bath). When accepted, wastes of special concern such as tires, electronic consumer goods, batteries, and mercury containing wastes, are segregated and shipped for appropriate recovery and disposal. Waste oil is recovered for use in the Bristol Town Garage heating system. Fluctuating market values for recovered materials, accessibility to an ultimate disposal facility, and maintenance of existing facilities are a few of the future difficulties to be overcome. Increasing pressure to operate efficiently in the face of increasing costs and waste loads pose additional obstacles in the near and long-term future.

The Transfer Station employs several pieces of equipment including four roll off compacting containers for general waste, a forklift, a backhoe, a truck scale (there is a per pound charge for bulky waste), and a shredder for construction waste.

By the inter-local agreement between the two towns, South Bristol pays 40 percent and Bristol pays 60 percent of the budget not covered by facility fees. In recent years the total budget for the operation has been a half a million dollars, give or take a few thousand. Fees charged for bulk waste disposal cover about 20 percent of

Year	Municipal MSW	Municipal Recycling	Bulky Waste	Bulky Recycling	Total Recycled	Total MSW	Base Recy Rate %	Adj. Recy Rate %	Regional Expenses
93	1,800.0	202.1	714.6	140.2	343.2	2,857.0	12.0	23.0	
94	1,826.0	309.7	1,032.2	258.3	568.0	3,426.0	16.6	25.6	
95	1,783.0	296.6	570.6	588.5	885.1	3,238.0	27.3	42.3	
96	1,749.0	337.7	588.3	871.5	1,209.2	3,546.0	34.1	47.1	
97	1,782.0	347.7	962.6	257.8	605.5	3,350.0	18.1	33.1	
98	1,826.0	527.0	1,190.6	252.0	779.0	3,795.6	20.5	35.5	
99	1,865.0	672.0	1,069.6	325.0	997.3	3,932.0	25.4	40.4	
00	1,895.0	781.0	913.1	420.1	1,201.1	4,009.2	30.0	45.0	\$424,890
01	1,942.0	475.0	726.0	315.0	790.0	3,458.0	22.8	37.8	\$432,000
02	2,159.0	497.1	1,308.7	183.0	680.1	4,147.8	16.4	31.4	\$447,197
03	2,206.0	514.1	742.0	335.0	849.1	3,797.1	22.4	37.4	\$465,108
04	1,920.0	518.3	933.0	202.0	720.3	3,573.3	20.2	35.2	\$454,500
05	1,619.1	307.7	1,032.0	679.6	987.3	3,638.4	27.1	36.1	\$478,454
06	1,730.80	311.4	1,270.86	185.1	496.5	3,498.15	14.2	25.2	\$469,323

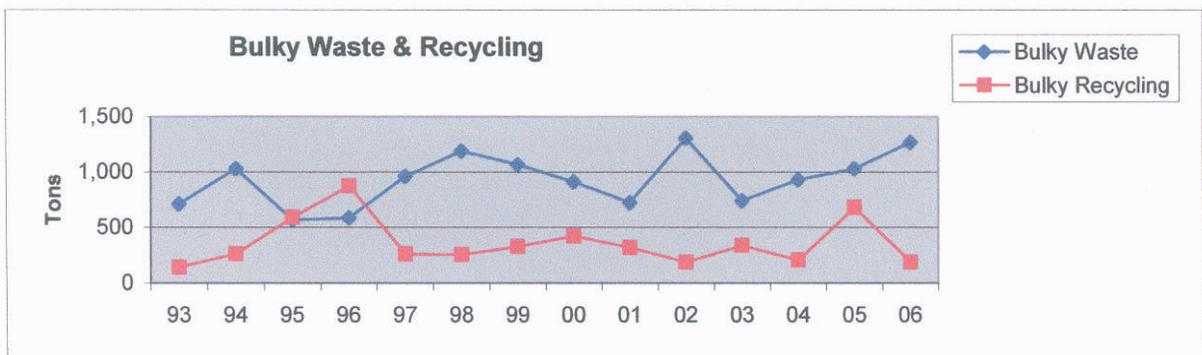
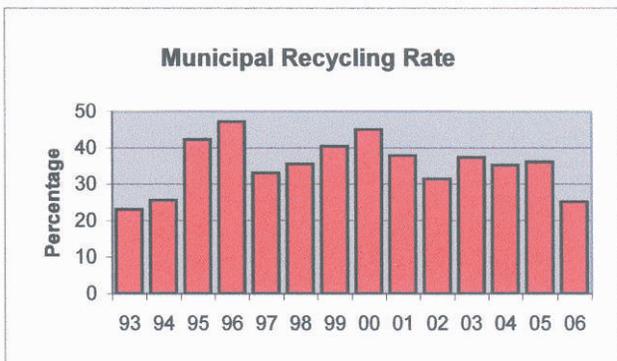
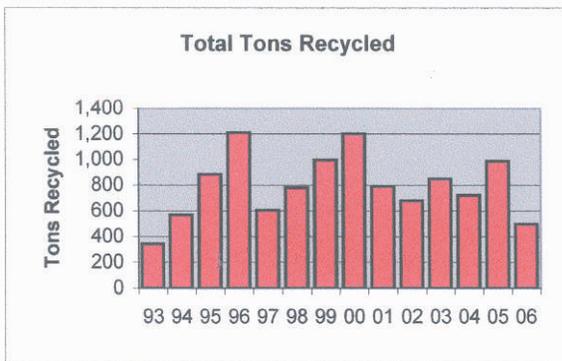
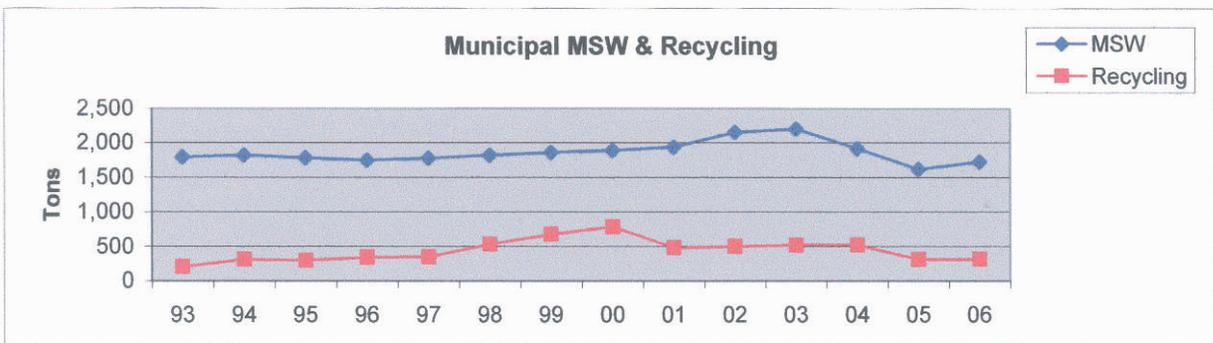


Figure 16.1 – Municipal solid waste (MSW) and recycling, Bristol/S. Bristol Solid Waste Facility

Source: Maine State Planning Office

Note: Except for the three right hand columns in the table, all values are tons.

this, or about \$100,000 each year. Other fees such as for municipal solid waste and disposal of mercury containing waste come to about \$20,000 each year. Some money is reserved each year for replacement of capital equipment.

For the 2008 fiscal year the proposed budget was \$512,540. South Bristol appropriated \$137,216 and Bristol \$205,824 toward this at their annual town meetings.

The towns do not operate or contract municipal waste collection services. Residential solid wastes are delivered to the transfer station by individuals or by waste haulers hired by the homeowners. Likewise, businesses may bring their own waste to the transfer station or contract for the hauling of it. A fee is charged by the transfer station for commercial wastes.

The volume of incoming waste changes daily with significant variations between winter and summer months. The amount of waste is influenced by factors beyond the control of the two towns. Examples of this include an increase in the year following the September 11, 2001 terrorist attack, presumably due to more domestic tourist activity and reduced overseas travel by residents, the state of the economy (e.g., white goods increase as the economy increases), and gradual but steady population growth. Conversions or replacement of existing dwellings to year-round residences by the influx of retired residents also adds new burdens to the existing system. Seasonal waste quantity varies by a factor of two or more, with higher quantities in the summer months.

Figure 16.1 illustrates with numbers and graphics the waste from the two towns and its composition. There is no effort made to separate waste from the towns of Bristol and South Bristol. Review of the amount of solid waste that flows into the transfer facility (locally referred to as the Transfer Station or “the dump”) yields the following observations:

- The amount of municipal and commercial solid

waste that is not recycled has fluctuated from year to year and peaked in 2003 at 2,206 tons. In 2005 it was 1619 tons, 200 tons less than in 1993.

During this time, population of Bristol and South Bristol has increased roughly 10 percent. The lack of increased amounts of wastes in response to population growth indicates improved waste prevention techniques (e.g., less packaging wastes associated with consumer goods), improved recycling, waste prevention, and composting practices by the public prior to these materials reaching the transfer facility.

- The amount of bulky waste that was not recycled also fluctuated extensively and peaked in 2002. In 2005 it was 1032 tons, the same as in 1994.
- Recycling rates (adjusted) had been in the high 40 percent range for several years, but since dropped into the mid 30 percent range through 2005.
- Regional expenses had increased \$53,564 over 5 years or 2.5 percent a year.
- On an annual average, each person in Bristol and South Bristol contributes nearly 1 ton of municipal, commercial, and bulky wastes (including recycled material).
- It costs on average \$133 per person to manage these wastes.
- The Bristol-South Bristol waste stream is roughly 60 percent municipal and commercial waste and recyclables and 40 percent bulky waste and recyclables.

Over a ten year period (1993-2002), municipal solid waste sent to an incinerator increased from 1800 tons to 2159 tons (3.6 percent per year). Recycled materials returned to the economy grew from 202 tons to 497 tons. A peak of 781 tons was recycled in 2000, but has dropped due to a lack of demand in the market place for recycled materials. Bulky waste sent to landfill and other outlets has cycled over the past ten years beginning with 1032 tons in 1994, dropping to less than 600 tons in 1995 and 1996, rising to 1070 tons in 1999, dropping again to 726 tons in 2001 and rising to 1309 tons in 2002. The quantity of recycled bulky waste peaked in 1996 at 872 tons and then dropped off to less than 500 tons as a result of state mandated termination of shrimp waste composting of bulky waste. Select wood continues to be recycled. The overall

recycling rate increased from 23 percent in 1993, peaked at 47 percent in 1996 and dropped to 31 percent in 2002. The state goal is 50 percent.

To better manage the volume of commercial waste that is delivered to the transfer facility, a \$.06/pound tipping fee was initiated January 1, 2004. This is expected to reduce the waste load in the long term to the transfer facility by 300 tons per year. There are two primary commercial haulers: Pine Tree and Regional Rubbish. Each hauls approximately ten tons per month in the summer and five tons per month in the winter, illustrating the significant seasonal variation. Part of the variation is attributable to the seasonal population increase and part to the weather induced construction season.

As part of Maine's initiative to control mercury containing wastes and consumer electronic component wastes (e.g., computers, televisions) by preventing them from going to incinerators or landfills, the transfer facility has waste storage facilities that isolate these wastes for special pick-up and transport to facilities where the waste is appropriately treated and recycled.

Cemeteries

The cemeteries of South Bristol are an important aspect of the Town's responsibilities. They are the final resting place for members of the community and they are an important visual and emotional link to the Town's past.

There are town-maintained cemeteries on Rutherford's Island (Island Cemetery), on Route 129 approximately one mile north of the Gut (Main Cemetery), and the West Bristol Cemetery in Walpole. There are also several very old, smaller cemeteries scattered throughout Town, including those near the Walpole Meetinghouse, near the Walpole Union Church, and near McFarlands Cove Road.

In 1989, Mr. Linwood Goudy donated a piece of land to the West Bristol Cemetery asking that

it be named The Old Oak Cemetery for the old oak tree beside it. It is located across Route 129 from the West Bristol Cemetery. The Old Oak Cemetery is the only cemetery in Town that has burial space available. It is estimated that there is enough room for another 100 years or so. For many years the only available burial space in South Bristol was in the West Bristol Cemetery in the newer southern portion.

The Old Oak Cemetery is considered an adjunct to West Bristol Cemetery and is managed by the West Bristol Cemetery Association. Arrangements for burial space are made with the Association. To make reservations, contact the Secretary/Treasurer of the Association.

Municipal Facilities

The Town operates from a relatively new Town Office building (1998) located at the intersection of Ridge and Clarks Cove roads. Also at this location, in the former Town Hall and Sarah Emery School House, is the Walpole Station of the Fire Department. The town has a sand and salt shed at the end of Old Barn Road in Walpole. Winter sanding operations and road maintenance are done by contract so there is no Public Works Department.

Emergency Shelter

The Town does not have a structure that is certified to meet current American Red Cross requirements for an emergency shelter in the event of a disaster. Such shelters typically have auxiliary electrical power, heating, cooking facilities, water supply, and are not built of wood.

The South Bristol Fire Station has back-up electrical power, food preparation facilities, and is fully handicapped accessible and thus might meet the Red Cross facility requirements for a shelter.

The Elementary School would appear to be a good choice in the southern end of town, but it does not currently have a back-up generator to supply electricity and has no food preparation

capability. With emergency back-up power and an arrangement with nearby Harborside Grocery and Grille for food preparation, the school might qualify.

The town office in Walpole has a basement that is currently used as an auxiliary meeting room and storage area. The building has emergency generator capability and the basement is being used to store cots and other equipment to serve an emergency shelter. However, there is very limited cooking capability. The lower level has the only significant open space, but the only rest room is on the upper level and is not handicap accessible from the lower level without exiting the building.

Great Salt Bay School in Damariscotta is a certified shelter location. Its close proximity to the

Walpole section of South Bristol (four miles from the northern border) make it appropriate for use when necessary by people living in that part of Town.

Other Government Facilities

Except for Post Offices, there are no county or federal government facilities in South Bristol. The only state facility in Town is the Darling Marine Center, part of the University of Maine (Orono). The Darling Marine Center is a graduate-level marine biology teaching and research facility that has world-wide renown. The Center has an outstanding faculty and hosts many visiting scholars, both researchers and students, from around the world during the summer months.

16.3 – Other Services

The locations of churches, cultural facilities, and Post Offices are shown on Map 15.

Health Care

The South Bristol Health Officer is responsible for improving public health, sanitation, and housing conditions in the town. In the past this has included addressing issues raised by the fish processing workforce working and residing in town. Currently the emphasis is on planning for future potential outbreaks of avian bird flu and West Nile virus. This planning is being coordinated with the Lincoln County administrator. In addition, the health officer monitors the more familiar endemic diseases such as Lyme disease and rabies.

Other public health issues for the region include alcohol and drug abuse. Services are available regionally to those individuals who seek help.

The closest hospital is Miles Memorial Hospital, a 50 bed (current license) acute care

hospital in Damariscotta three miles north of the town line. Miles and St. Andrews Hospital in Boothbay are both affiliated with Maine Medical Center in Portland.

Miles Hospital has an excellent emergency department with full time physician staffing. Emergency transport by ambulance from South Bristol is always to Miles. The hospital can now land Life Flight helicopters for rapid transfer of patients to other facilities.

Associated with Miles on the Damariscotta campus are the Schooner Cove retirement community (apartments), the Chase Point assisted living facility, and the Cove's Edge nursing care facility (41 beds) which provides full-time nursing care.

Other hospitals close by are Mid Coast Hospital in Brunswick (94 acute care beds), Penobscot Bay Medical Center in Rockport (109 beds), and Maine Medical Center (662 beds) and Mercy Hospital (230 beds) in Portland. Maine

Medical Center is the largest hospital in northern New England and provides virtually every medical service available in the United States. The next larger hospital is Massachusetts General Hospital (900 beds) in Boston. Mass General is the oldest and largest hospital in New England.

A large number of physicians have offices in Damariscotta and in nearby towns such as Wiscasset, Bath, Brunswick, Waldoboro, and Rockland. In the local area most specialties are covered, although some surgical specialists are most often only available in Portland, close to Maine Medical Center and Mercy Hospital.

South Bristol regularly appropriates financial support for regional public health and social service agencies at town meeting. In recent years these have included Kno-Wal-Lin, Central Lincoln County Ambulance Service, Spectrum Generations, Mobius, New Hope for Women, Miles Foundation (Miles Hospital), Central Lincoln County YMCA, Healthy Kids, Eldercare Network/Trans-Linc, and Center for Teens. All of these organizations are located outside of South Bristol but provide regionally-based services.

Public Utilities

Electrical power is provided in South Bristol by Central Maine Power Company (CMP). All areas of the Town have single phase service available, usually delivered at 120/240 volts. Three phase service is available only along Harrington Road and then south along Route 129 to the head of Christmas Cove and on parts of Shipyard, Thompson Inn, and John Gay roads.

Reliability during storms has been an issue, but in recent years CMP has been aggressively trimming trees in the vicinity of power lines which seems to have improved the situation.

The Town is not served with natural gas. Propane service is available to individual users from a number of regional vendors.

Telephone service (land line) is provided throughout town by Tidewater Telecom, Inc.

Cellular phone service is available in the area from several vendors, although coverage in some parts of town is at times spotty. There are no cell towers in Town, but one can see several towers in neighboring towns.

Cable TV service provided by Time-Warner is available on Harrington Road, Route 129 south of Four Corners, some side roads off of Route 129, and on most of Rutherford Island. There are no plans to increase cable presence. However, respondents to the mail survey (appendix C, ques. 6) strongly favored by a 3:1 ratio extending cable service to the entire Town.

Large and small satellite dishes can be seen throughout Town including in areas served by cable. For those who choose not to subscribe to satellite TV service or do not have access to cable, three commercial television stations and one public-broadcasting television station can generally be viewed with variable success. Since the end of analog television signal transmission, an outside antenna is required in most parts of Town for satisfactory reception of off-the-air transmission. There are no locally-based radio or television stations located in town. As part of the cable franchise, there is a Lincoln County television channel with offices on Sheepscot Road in Newcastle.

Broadband data service is available throughout Town. DSL from Coastal Telco Services, a subsidiary of Lincolnville Telephone Company, is universally available at speeds up to 6 Mb/sec. Time-Warner provides broadband at varying speeds in the areas served by its cable network. The town has no publicly accessible WiFi capability at this time. There is a limited system at South Bristol School intended for use by students, teachers and administrators.

Churches

South Bristol has three church buildings, one of which has an active congregation.

The Walpole Meetinghouse built in 1772 is

the oldest of the three. The structure, described on page 94, is on the National Register of Historic Places and is still used for occasional worship services, weddings, and concerts.

Walpole Union Church on Route 129 just north of the golf course is maintained in excellent condition. It is used on occasion for weddings and concerts and in recent years has hosted an annual Christmas Eve service.

Union Congregational Church on Rutherford Island is the home to an active United Church of Christ congregation. The church was built in 1898 and the current congregation was gathered in 1902. The church has a Parish House across Middle Road which is used for both church and community activities and gatherings. It also has a parsonage on Middle Road built by Warren Gamage in 1905 which serves as the minister's residence.

In the Damariscotta-Newcastle area there are many churches of different faiths. Notable is Saint Patrick's Roman Catholic Church in Newcastle, the oldest Catholic church in New England built in 1807-08 of local bricks and since then continuously housing a congregation.

The Damariscotta Baptist Church – a landmark whose steeple is currently being restored – and Second Congregational and Saint Andrews Episcopal churches in Newcastle each have notable pipe organs in exceptionally well maintained condition. Saint Andrews is notable as an early design by architect Henry Vaughan (brought to this area by a Capt. Glidden) who later designed the magnificent Washington National Cathedral.

Cultural Facilities

Rutherford Library provides reading material, educational outreach, internet connection, meeting space, and audio-visual resources to the residents of South Bristol. The library receives an annual stipend from the town. It is located close to the South Bristol school – a walking path connects

them – enabling efficient use of the library resources by the school. The Skidompha Library in Damariscotta provides similar services and is available for use by the residents of South Bristol, although a fee is required (currently \$40) in order to obtain a library card and borrow books.

The Thompson Ice House Museum, located on State Route 129 at the corner of McFarlands Cove Road is the only museum in South Bristol and is on the National Register of Historic Places. Each winter, depending on the weather, an ice harvest is conducted using traditional tools. The harvested ice is stored in a restored ice house. Harvesting tools are displayed and many are used during the harvest. Throughout the year the displayed tools can be viewed and ice is available in exchange for donations.

At Pemaquid Point in Bristol, there is a nautical museum located on the first floor of the Pemaquid Point Lighthouse keeper's house.

While several resident artists have retail galleries in their homes, there are no art centers in South Bristol. The River Arts Center located in Damariscotta provides classes and performance/exhibiting opportunities for local and distant artists. Occasionally, a musical group will present a concert at the Walpole Meetinghouse, primarily as a fund raising activity for the care and maintenance of the structure. The world-renowned DaPonte String Quartet has for many years presented concerts at Union Congregational Church during the summer.

Resident musicians perform with the MidCoast Symphony Orchestra and with several community bands including the Boothbay Band, Bath Municipal Band, Hallowell Community Band, Lincolnville Band, and Midcoast Band. There are two theater groups in Damariscotta – the Lincoln Community Theater and Heartwood Theater. Choral groups in the region include St. Cecilia Choir, Tapestry Singers, Coastal Chorale (formerly the Occasional Chorale), and the Sheepscot Valley Chorus.

The South Bristol Historical Society occupies the former Rutherford Library building just south of the Gut on Rutherford Island. The Society receives an annual stipend from the town.

Postal and Delivery Services

The South Bristol Post Office (ZIP 04568) is located in recently expanded space in the lower level of Union Congregational Church's Parish House at the intersection of Route 129 and Middle Road on Rutherford Island. The Walpole Post Office (ZIP 04573) is housed in a small free-standing building on Route 129 a short distance north of the golf course. Both facilities are

adequate for present and foreseen mail volumes.

Package delivery is provided by both United Parcel Service (UPS) and Federal Express (FedEx) who provide daily deliveries and pickups.

Future Needs

Overall, public utility services and other facilities and services are expected to be adequate for the next decade or more. Unforeseen economic development and other changes might alter this situation.

16.4 – Town Government

South Bristol was set off from Bristol as a new town on July 1, 1915 by an act of the Maine legislature. Some of the reasons for the separation are recited on page 3 and other interesting facts are discussed in Warner (2006). As is not uncommon for small Maine towns, South Bristol does not have a charter. In Maine, a municipal charter is sort of a local constitution.

South Bristol's legislative body is its open town meeting which has ultimate control over town government and everything the Town does. The business portion of Annual Town Meeting is held at the South Bristol Elementary School on the evening of the second Tuesday of March. On the day before, Monday, the election of Town Officers by secret ballot – Selectmen, School Board members, Town Clerk, Treasurer, and Tax Collector – takes place. For the last three decades, in most cases those elected were administered their oaths of office by the Moderator at the beginning of open meeting on Tuesday evening as part of the opening ceremonies. South Bristol Annual Town Meetings are usually well attended as are any elections – Town, State, or Federal.

Attendance at Annual Town Meetings is

usually about 125 people; three or four years ago it was somewhat less due to winter weather.

Special Town Meetings are held occasionally; most often for enacting ordinance updates. If the meeting is for something relatively minor such as an update to the Shellfish Ordinance, the meeting might be held at the town office. For something like the Shoreland Zoning or Subdivision ordinances, the meeting is a major event to be held at the Elementary School.¹²

The recent changes in Maine's school funding law requiring secret ballot approval of school budgets have brought about a new round of special town meetings, since a referendum in a town is in the form of a special town meeting even though the only articles on the warrant are to

12. The greatest attendance at any town meeting – annual or special – in recent memory was a special town meeting on a warm August evening in the early 1980s to enact a Shoreland Zoning Ordinance. The meeting was held in the second-floor meeting room (and historically the dance hall) of the old Town Hall with standing-room-only. It was the last Town Meeting held where the first and decades of subsequent South Bristol town meetings had been held.

elect the Moderator and hold the referendum by secret ballot. Although turnout at these referendum votes is less than for an election, South Bristol can depend on about a fifth of its registered voters, better than in many municipalities, particularly the cities.

The town’s week-to-week business is managed by three Selectmen who are elected for staggered three year terms. Traditionally, the Town votes at Annual Town Meeting for the Selectmen to also serve as Road Commissioners.

The elected officials of South Bristol are:

- three Selectmen, Assessors, and Overseers of the Poor serving staggered three year terms.
- Town Clerk, three year term.
- Tax Collector, three year term.
- Treasurer, three year term.
- five Board of Education members serving staggered three year terms.
- five Budget Committee members serving staggered five year terms. One member is elected each year at open town meeting.

In addition to the Town’s elected officials, there are a number of other officials appointed for varying terms by the Selectmen including:

- Administrative Assistant who handles much of the day-to-day town business for the Selectmen.
- Planning Board, five members and two alternate members serving varying terms.
- Board of Appeals, five members.
- Registrar of Voters, usually the Town Clerk.
- Ten election clerks appointed biennially.
- Harbor Committee, currently six members.
- Shellfish Committee, seven members.
- Shellfish Warden.
- Harbor Master and three Assistant Harbor Masters.
- Code Enforcement Officer
- Plumbing Inspector
- Fire Chief and two Assistant Chiefs (Selectmen appoint after election by the Fire Department).
- Emergency Management Director
- Public Health Officer.

- Animal Control Officer.

The School Board manages education for South Bristol. The Board sets policy and oversees overall operation of the Elementary School. It is responsible for interpreting, understanding, and implementing the various mandates from the State. The board works with the budget committee to prepare budget estimates to present to the voters at Annual Town Meeting in March.

The Planning Board implements ordinances affecting land and related permits. The Comprehensive Planning Committee operates under the auspices of the Planning Board. An Appeals Board provides recourse for a permit applicant if needed.

In response to mail survey question 33, “What is the most pressing local problem facing the Town?” a respondent wrote, “Planning Board needs to be elected, not appointed . . .” (Report, 2005, p, 51) There were other similar remarks on this matter.

In consequence to those remarks, we suggest that the Planning Board appoint a committee (to be composed of both Board members and citizens) to consider all of the ramifications of having the Planning Board elected by South Bristol’s voters, and within one year of appointment report to the Town.

The Budget Committee (members elected at annual Town Meeting) works with the Selectmen and organizations seeking financial support from the town to review articles for consideration by the voters at Annual Town Meeting. It also administers the post-secondary scholarship program described in chapter 17.

The Harbor Committee is responsible for safety in the town’s harbors, implementing the mooring permit program, and assessing the need for improvements in the management of the Town’s harbors.

The Shellfish Committee is responsible for overseeing the Shellfish Warden and assessing

and making appropriate recommendation for additional controls to maintain and improve the sustainable shellfish harvest in town.

Ordinances

South Bristol has, at the time of writing, seven ordinances (local laws) which have been enacted by the citizens at town meetings. The enactment of each ordinance and any amendments was preceded by a public hearing where anyone could offer their ideas and opinions. Occasionally, after the public hearing those responsible for authoring the ordinance would make changes and hold another hearing. The reason for this process is that, under Maine law, a town meeting article to adopt an ordinance can only be voted up or down and cannot be amended at the town meeting.

Adoption of some ordinances tends to be rather perfunctory; others draw great interest. On page 223 is a footnote describing a special town meeting where enactment was anything but perfunctory; the result turned out to be satisfactory to all.

The current seven ordinances are:

- Shoreland Zoning Ordinance
- Subdivision Ordinance
- Harbor Ordinance
- Shellfish Ordinance
- Floodplain Management Ordinance
- Solid Waste and Recycling Ordinance
- Solid Waste Transfer Station Ordinance

Each ordinance is updated when necessary; the Shoreland Zoning Ordinance is being updated at the time of writing to bring it into conformance with state law.

Town Services

At the town office one can get questions answered, pay property taxes, review and purchase copies of ordinances, register to vote, vote by absentee ballot, purchase a hunting or fishing license, license a dog, purchase a fishing

or hunting license, register a motor vehicle or trailer or boat, take a look at the property maps, check the voter list, or visit with the friendly people there. They might help in filling out Planning Board permit applications and other official forms. Credit cards are not accepted in payment for permits or other fees and taxes.

Residents can register to vote during the Registrar of Voters' office hours. Whenever there is an election coming up, voting by absentee ballot is quick and easy in the privacy of the meeting room. Anyone can search and read the statutes of Maine at the town office in the books of annotated statutes, held by every municipality in Maine. Maine's statutes are also available at <http://janus.state.me.us/legis/ros/meconlaw.htm> where the statutes and Maine's constitution are provided in up-to-date searchable format.

Communication with the town office is by telephone (207-563-3911), facsimile (207-563-1978), and e-mail (sbristol@tidewater.net). Otherwise, visit the office.

South Bristol does not have a World Wide Web site on the internet. Thus, access to copies of ordinances, various application forms, tax maps, minutes of official meetings, a calendar of meeting schedules, office hours, contact information, and other useful information are not yet available online.

Many towns, some smaller than South Bristol, have created Web sites since it is no longer an expensive nor difficult thing to accomplish.

Establishing a South Bristol web site would be clearly desirable. It might be possible to get it going with one or two volunteers with appropriate professional expertise, and for them to train the town office staff on maintenance.

By a 2:1 ratio, respondents to the mail survey (appendix C, ques 8) said that they "would like the Town to have an Internet site which will provide Town information . . ." A salient remark to the question was the response of "Yes," triple underlined. Another remark was, "I would like a

town web site for information – at least.”

On line services which are typically provided by municipal web sites include

- issuing dog and other licenses so long as documents need not be presented.
- property tax payment.
- vehicle and boat registration renewals and excise tax payment.
- filing of permit applications.

Current Town Office hours are Monday and Wednesday 9-4 and Friday 9-1. With no evening or weekend office hours, those needing to conduct town business may sometimes need to take time off from work in order to transact business with the Town.

Two or three years ago evening office hours once a week were tried. Virtually no one came. It was decided that evening office hours service was not needed.

Open burning permits can be obtained on line via a State web site, although there is a fee involved rather than them being free when obtained from a local fire warden. The local fire

department is notified by e-mail when the State issues a permit.

A relatively new program allows hunting and fishing licenses to be obtained on-line directly from Maine Inland Fishing and Wildlife rather than from the Town Clerk. The license is issued by e-mail making it easy to print a new license if the original is lost.

Tax Exempt Property

A small amount of land in South Bristol is owned by the Town. Table 16.2 lists that land and its assessed value. In addition, property held by tax exempt organizations including State and Federal agencies has an assessed value of \$30,941,400 bringing the total value of untaxed property in South Bristol to \$37,179,600.

Although the total value of Town-owned untaxed real property may seem high, it comprises only 4.8 percent of all of the real estate value in South Bristol.

Table 16.2 – Town owned tax exempt property, 2009

Town Property	Map-Lot	Assessment
Elementary School	20-34	\$2,602,100
Fire Station, South Bristol	14-18	\$519,600
Holiday Land (part of school campus)	20-44a	\$70,000
Hunters Landing Wharf	31-5v	\$110,200
Old Oak Cemetery	29-2a	\$10,000
Parking lot at Gut float	17-6	\$168,900
Rutherford Library	20-30	\$520,900
S Road School	21-17	\$85,600
Sand & Salt Shed	30-3a	\$149,400
South Bristol Historical Society	17-68	\$178,800
Town Hall (Centennial Hall, 1876) & Town Office	27-41	\$657,600
Tracy Preserve	20-27	\$867,300
Walpole Meetinghouse	31-7	\$127,300
Walpole Woods Preserve	30-3	\$170,500
Total assessed value:		\$6,238,200

Source: Town Report

16.5 – Rate of Growth

South Bristol is fortunate in that it does not foresee the need for major capital projects over the next decade or two except for creating an open-water access facility (see page 126) and possibly a playground in the northern part of Town as discussed on page 204. With the new gymnasium, the Elementary School will be more than adequate for the foreseeable future. The town office was built a few years ago using back taxes due when a large tract of land was removed from tree growth in order to create a residential subdivision. The Rutherford Library is housed in an attractive new building close to the school. With routine maintenance, the town roads are standing up well. The fire department is well equipped; for many years at town meeting, funds have been appropriated in order to keep the department apparatus and equipment up to date and replaced when necessary.

As discussed in chapter 5, the anticipated South Bristol population growth is about half a percent a year. Our forecast is shown in table 5.11 on page 59. Even if our conclusion of an over count by the 2000 census (see discussion in chapter 5) is proven false, South Bristol's population is expected to remain under 1000 for upwards of two decades. The structure of Town government and the services presently provided are more than adequate for this potential growth.

One caveat must be mentioned, namely water

supply on Rutherford Island. In chapter 4 we pointed out that the carrying capacity for septic systems on the island may be approaching its limit. In addition, there is the possibility that well water there may be becoming scarce. Although the Town has not in recent years experienced two successive years of drought, a two-year drought might well cause many wells to run dry. Experiences of salt water intrusion into both new- and long-existing wells as cited in chapter 4 on page 42 and as discussed on page 37 may be a warning sign that without a municipal water system on the island, housing expansion there may be approaching a limit.

Were South Bristol to experience unexpected population growth – younger families, maybe in reasonably affordable housing – in the designated growth areas or in any part of Town, an increase in the population of younger families would make the Town's overall population somewhat younger. The net effect might be to have a few more children riding the school bus. The South Bristol Elementary School would welcome and easily handle such an increase in its student body.

To summarize, we do not see any expected population increase nor upcoming needs for municipal services having a marked effect on the future of South Bristol.

References

National Fire Protection Association (NFPA); 2008; Various documents; <http://www.nfpa.org/>

Saint Patrick's Church, Newcastle; <http://www.stpatricksnewcastle.org/history/index.htm> ; here is the history of the oldest Roman Catholic church in New England, designed by Nicholas Codd and built 1807-08.

South Bristol Comprehensive Planning Committee (Report); 2005; *Report of Citizens' Input*; South Bristol; Town of South Bristol

U.S. Department of Labor; Occupational Safety & Health Administration (OSHA); <http://www.osha.gov/>

Warner, H. Landon; 2006; *A History of the Families and Their Houses: South Bristol Maine*; South Bristol; South Bristol Historical Society.

Public Facilities and Services Policies and Strategies

The goal is for the Town of South Bristol to efficiently and economically provide facilities and services which the citizens need and expect. Although the needs and desires of South Bristol people are currently being well met, the next decade will require some incremental changes in order to meet technological and societal changes.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Maintain and where necessary upgrade public facilities and services in order to meet the needs of South Bristol citizens.	Investigate the possibility of creating an American Red Cross certified disaster shelter at the town office.	Emergency Management Director -0- 2014
	Determine the cost of creating an American Red Cross certified shelter at the South Bristol Elementary School or the South Bristol Fire Station on Middle Road.	Emergency Management Director -0- 2014
	Appoint a citizen committee to investigate the desirability, utility, and cost of creating a Town Web site.	Selectmen -0- 2011
	Review Fire Department staffing, compensation, and operational needs in order to maintain effective fire protection services. This should include a review of compensation.	Fire Chief and Selectmen Minimal 2012
	In order to promote public safety, develop a program to make smoke and carbon monoxide detectors available to citizens at a reasonable cost.	Fire Chief Minimal 2012
	Create at least one new "fire pond" in the northern part of town. This might be accomplished in cooperation with the Bristol Fire Department.	Fire Chief & Selectmen \$1000 2014
	Arrange with Skidompha Library in Damariscotta for borrowing privileges for South Bristol residents.	Librarian \$500 per year 2011
	Appoint a committee to investigate the possibility, cost, and ramifications of replacing the currently appointed Planning Board with a Board elected by the voters.	Planning Board appointed committee Minimal 2012

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Ensure that the fire department is able to respond to any spill of hazardous material along the shores of South Bristol.	Provide the fire department with appropriate training and supplies to enable immediate response to and remediation of any fuel spill.	Fire Department \$1000 / year 2012 and biennially
Provide any new public facilities which may be needed or desired by the citizens and so far as possible accomplish this in a manner that supports development in designated growth areas.	Create a public shorefront access area with a boat launch, a picnic area, a swimming area, parking, etc.	See page 132 in chapter 10 for details, cost, and proposed completion dates of both planning and implementation.
	Build a playground in the Walpole section of Town in order to provide recreational opportunities for the growing young population there.	See page 208 in chapter 15 for details, cost, and proposed completion date.

Chapter 17 — Schools and Education

*The true division of humanity is between those who live in light and those who live in darkness.
Our aim must be to diminish the number of the latter and increase the number of the former.
That is why we demand education and knowledge.*

~ Victor-Marie Hugo (1802-1885)

Education and the schools involved have always been important to the people of South Bristol, even well before 1915 when the Town was still part of Bristol. There were one-room schools throughout town so that every youngster had a school close-by, within walking distance. Those were the days before school buses – and before automobiles became common.

During recent decades, the Town has been willing to appropriate the funds deemed necessary by the School Board, and has been fortunate to have been able to afford the cost while maintaining a low property tax rate.

17.1 – Educational Resources

South Bristol is part of Alternative Organizational Structure (AOS) 93, also known as the Central Lincoln County School System, which was formed under Maine’s recent school consolidation legislation. The AOS was originally envisioned as a consolidation of the six towns in School Union 74 (Bremen, Bristol, Damariscotta, Newcastle, Nobleboro, and South Bristol) plus Boothbay, Boothbay Harbor, Edgecomb, and Jefferson. In referendum voting, Boothbay, Boothbay Harbor, and Edgecomb rejected the consolidation while the six towns of Union 74 and Jefferson voted in favor. The result was that the original School Union 74 remained intact with Jefferson added, to become the new Central Lincoln County School System.

Bremen, Damariscotta, and Newcastle send elementary students to Great Salt Bay School in Damariscotta which operates as a consolidated school district (CSD). The other four towns each has its own elementary school. There is no public high school within the seven towns, so that secondary school students are tuitioned to a number of public and private secondary schools.

The school systems and particularly the

options for where students attend secondary school represent a regional approach and serves as an example of regional cooperation and cost saving while providing educational opportunities to all students.

South Bristol Elementary School

The Town-owned South Bristol Elementary School, located on the east side of Route 129 a quarter mile north of South Bristol Village, was built in 1960 to provide a single building to replace smaller school buildings throughout Town, and the Island (or Lincoln) School on Rutherford Island. The elementary school is ten miles south of the northern town line and two miles north of the southern tip of Rutherford Island. Most staff members travel by motor vehicle to the school where there is adequate parking for staff and visitors. Students are bused from Rutherford Island and the mainland; currently none walk to school. The Town does not have a nearby sidewalk network or adequate shoulders for students to safely walk in the vicinity of the school, nor is it considered possible to create such shoulders.

The school was enlarged in 1989 to provide additional instructional and service areas and again in 2002 to provide additional instructional areas and a sports facility (gym) for students. The school includes adequate classrooms and recreational facilities (playground with climbing equipment and the gymnasium).

The school does not have a fully equipped kitchen (no cooking facility) and therefore is limited in its capability to comply with State requirements to provide breakfast and/or lunch to eligible students. Breakfasts and lunches are prepared several miles away at the Bristol Consolidated School and delivered to South Bristol.

Town residents also use the school gymnasium during non-school hours for recreational activity and community functions, including basketball, tennis, voting, and town meetings. While there is adequate space, the Red Cross may not be able to designate this facility as an emergency shelter due to the absence of emergency electrical generation and complete kitchen facilities.

A comprehensive assessment conducted in 1996 analyzed the building utilization according to state standards and found that the school was in

good physical condition overall and should provide years of additional service to the Town. The school’s long range plan update in 2004 concluded that classroom space should be adequate for at least the next 10 years. Despite the many facility improvements made in 1960, 1989, and 2002, some challenges still exist. Some special services are conducted in limiting and uncomfortable areas that have been carved from spaces originally intended for storage or other non-educational use. The school could benefit from improved facilities for occupational therapy, speech therapy, physical therapy, etc.

A number of other current situations should be addressed. Among them are

- the need for a quiet study or individualized instruction and assessment area.
- the lack of a conference room.
- the need for a complete kitchen and food preparation area in order to comply with the Maine mandated requirement that breakfast or lunch be served.
- there is no space (which could be shared) for speech therapy and an occupational therapist.
- the kindergarten room is too small.
- there is no teacher preparation room.
- the intercom system is inadequate.

Table 17.1 – School enrollments, expenditures, and per pupil expenditures, 1998 – 2009

School Year	Enrolled Students			Elem School Staff	Annual Expenditure	Annual Expenditure Increase	Per Pupil Expenditure
	K – 8	9 – 12	Total				
1998–99	74	38	112	18	\$885,184	A	\$7,912
1999–00	65	44	109	18	\$909,228	A	3%
2000 –01	72	46	118	17	\$1,033,844	A	14%
2001–02	74	39	113	22	\$1,112,992	B	8%
2002–03	74	40	114	23	\$1,184,462	A	6%
2003–04	79	33.5	112.5	21	\$1,214,395	A	3%
2004–05	79	32.5	111.5	23	\$1,321,393	B	9%
2005–06	70	36.5	106.5	24	\$1,418,840	B	7%
2006–07	75	33.5	108.5	22	\$1,490,776	B	5%
2007–08	75	36.5	111.5	23	\$1,532,092	A	3%
2008–09	70	39	109	23	\$1,566,066	A	2%

Source: Town Reports

Notes: A indicates actual expenditure, B indicates budget for that year when actual expenditures were not readily available. Historically, actual expenditures have been slightly below budget.

Community focused issues should also be addressed. These issues include:

- There should be a handicapped ramp to the ball field behind the school.
- There is a need for restroom facilities adjacent and close to the ballfield, available at all times during both school team contests and whenever the field is open for use.
- The school should be considered for conversion into a compliant emergency shelter for use by its citizens. Backup electric power generation, complete cooking capability, and adequate food storage are likely needed to make this use possible.

Several of the costs for the needs identified above can be combined, shared, and supported by the educational needs and those of the community at large. For example, improving the kitchen and food preparation area would benefit both the school and the Town – the Red Cross might then designate the facility as suitable for use as an emergency shelter.

No major construction or expansion of the South Bristol Elementary School is anticipated for at least a decade. The recently built gymnasium was the only perceived need at that time. In chapter 19 we will propose that one growth area in Town will be near the Gut and therefore close to the school. Whether or not safe walking and biking facilities can be developed is an important question since this would involve major road work by Maine DOT and right-of-way acquisitions. Development and growth elsewhere in Town with additional students can be easily handled by busing the students to school.

South Bristol Elementary School provides an excellent quality of education to its students. The school has several programs designed to build the self-esteem of the students; their academic achievement has been above average. Use of computers has been embraced by the teaching staff and the students have fared well when entering secondary and post-secondary positions. Graduates of South Bristol School have gone on to become owners of businesses, knowledgeable

seafarers, important contributors to local and regional communities, and leaders in a variety of trades and professional fields.

School staff counts since 1998 are shown in table 17.1. For nearly a decade the count has been stable in the range of 22 to 24 positions. The increase between 2000 and 2002 should be noted; State and federal mandates for additional services had been enacted, and it is generally agreed that these additional services have improved the quality of education for all students. Many of these services are provided under the aegis of the superintendent's office, thus some of the staff members are at South Bristol Elementary School for between half a day each week and half time with their time being shared with other schools in the district. This has proven to be a fiscally appropriate approach to providing services to the students. The Town Report lists the school staff each year with the percentage of time spent by the part-time staff members.

During the 2008-09 school year there were five teachers covering kindergarten through grade 8 instruction, two administrators (principal and secretary), and two custodians taking care of maintenance. The other 14 staff members, many of them part-time, provided for all of the other needs of the students. Now that the school has a modern, full-sized gymnasium, physical education has assumed a larger role than a few years ago.

Prior to the 2000-2001 school year, South Bristol owned its own school buses and ran the busing program. It was decided at the 2000 town meeting that the Town would be better off getting out of the busing business and leaving behind the headaches of owning and maintaining yellow school buses. As a consequence, starting in the fall of 2000 transportation of students was contracted out and the count of school staff dropped by one (the driver was counted as staff) for the 2000-2001 school year. One of the Town's long-time bus drivers was hired by the contractor and still drives the school bus for South Bristol students attending Lincoln Academy.

Over the years, the question of whether South Bristol should continue its elementary school or seek consolidation with another town has often been asked. The question was answered unequivocally by the responses to the mail survey. Sixty five percent of those responding (appendix C, ques. 12) opted for keeping the elementary school while 18 percent wanted the Town to join a consolidated school and 17 percent had another or no opinion.

There were a large number of remarks and comments (Report, 2005, p.20) on both this subject and on the secondary school question.

Secondary and Vocational Schooling

Since the end of the 1950s, South Bristol has sent its high school students to Lincoln Academy in Newcastle or to another high school or vocational school selected by the student. Prior to that time, South Bristol had its own high school housed in the Lincoln (or Island) School on Rutherford Island. (The debate on closing the high school was one of the most notable in the history of the Town!) The costs for educating these students are raised by the Town at town meeting as part of the total education budget based on a state formula. Tuition was \$8,553 for the 2008-09 school year. A summary of students attending secondary schools from 1998 through 2009 is provided in table 17.1.

The high quality of education provided by Lincoln Academy is evidenced by the achievements of its graduates. Some become successful in various endeavors soon after graduation, some join the military occasionally making the military a career, some go on to universities or community colleges in Maine, and some go on to the most prestigious colleges and universities in the country. Many eventually become leaders in their vocations and in their towns.

Long before the closing of South Bristol's high school, and possibly well before there was a high school in Town, some parents sent their

children to Lincoln Academy. It was not uncommon for a student to board with a family near Lincoln Academy for the school year. Now, South Bristol provides bus transportation to Lincoln although a number of students drive to school in their own vehicles.

Lincoln Academy was founded in 1801 as a private secondary and preparatory school. Significant improvements to the physical facilities of Lincoln Academy are ongoing. These have included a dining hall, library, the performing arts facility, main building renovations, and upgraded science laboratories. In response to an appeal for support of the academy's capital improvements, South Bristol contributed a total of \$19,800 toward these improvements during the years 2002, 2003, and 2004.

Lincoln Academy continues as an excellent non-boarding preparatory and secondary school providing educational services to towns in the region. The academy is governed by a board of trustees composed of local citizens, many of them Lincoln Academy graduates.

Vocational education is provided to those students who prefer such an educational program. This program is offered through a regional approach with classes being offered in Bath and Rockland. These programs include the traditional basic academic classes at Lincoln Academy with transportation provided from Lincoln in Newcastle to Bath or Rockland.

The citizens were strongly opposed to any effort at establishing a regional public high school as reported in the mail survey (appendix C, ques. 13). Fifty five percent were against the idea. 19 percent liked the idea, and 25 percent had no opinion.

Adult Education

South Bristol participates in the Union-wide (now AOS-wide) adult education program which is paid for with a combination of local allocations, registration fees, state funds, and federal grants.

Each year at town meeting, South Bristol appropriates funds to support the program which is used by a number of local citizens. The appropriation usually grows a bit annually, and most recently was \$3172. The amount requested annually from each town is based on participation of citizens from each town in the program.

An Adult Education Advisory Board includes two representatives from South Bristol.

Over the years the courses offered by the adult education program have increased in response to the desires of participants, available facilities and instructors, and desires of the citizens. The most recent brochure lists varied courses in areas such as:

- college transition courses
- college planning
- GED test preparation
- health care training
- health and wellness
- parenting
- business and skills training
- travel opportunities
- personal enrichment
- arts and crafts

Senior College

The University of Maine System offers college courses for enrichment of the State's increasing population of senior citizens. Locally, these courses are offered in Thomaston at the University of Maine at Augusta's outreach center. Regular university courses are also offered at Thomaston throughout the year.

The center was established in the newly restored Thomaston Academy building about 20

years ago which now also houses an expanded Thomaston Public Library.

Some Senior College courses are offered at locations other than Thomaston, including the Skidompha Library in Damariscotta.

Other Opportunities

South Bristol residents have attended classes at regional colleges such as Southern Maine Community College, University of Southern Maine, University of Maine at Farmington, University of Maine at Augusta, University of Maine Orono, University of Maine Hutchinson Center in Belfast, as well as at other public and private colleges and universities. The Darling Marine Center, Damariscotta River Association, and the River Arts Center (at Round Top Farm) each offer seminars and short courses.

The Rutherford Library, a short walking path from the school, is supported by an annual town appropriation – \$4000 in recent years – and its own fund-raising activities.

Post-Secondary Scholarships

The Town of South Bristol voted at town meeting in 2007 to establish scholarships for South Bristol students pursuing post-secondary education. Since then, town meeting has approved continuation of the program which is administered by the Budget Committee. These scholarships are funded by earnings from the generous bequest of Anne Stratton. The earnings used for the scholarships come from the royalties of mineral rights (natural gas wells in West Virginia) included in the bequest. Twenty one scholarships of \$1,250 each were awarded in 2008, 20 in 2009, and 21 in 2010.

17.2 – School Enrollment & Activities

After a precipitous decline ending in 1980, Elementary School enrollment has been in the mid 60s to mid 80s range for nearly three decades. A summary of the school populations for every three years since 1974 was presented in table 5.6 on page 55. Since the drop in enrollment which ended during the 1980s, the table shows that the total number of South Bristol youngsters in school has remained relatively stable.

Year-by-year enrollment numbers are shown in table 17.1. Although there are a few notable ups and downs in elementary student counts, total student counts over all grades have remained relatively stable. In the 2005-06 school year the elementary student count dropped to 70 from a previous year count of 79. This is explained by the graduation of 13 eighth grade students – 16 percent of the student body – in June 2005. With South Bristol's relatively small population of school-age children, the recent-year changes are not statistically significant. The total student count for all grades as shown in table 17.1 has remained stable for a decade.

An examination of projected population changes and the future demographic composition of the Town discussed in chapter 5 leads us to conclude that there will not be any important changes in school enrollment over the next decade. The Town population is forecast to grow at under one percent a year, and it is expected that most of the growth will be biased towards an older population rather than younger families. Even if this bias expectation proves incorrect, the school system can easily absorb an increase in its student population.

South Bristol has for years had no misgivings about appropriating at town meeting the funds requested by the School Board. Education is important to the citizens. In recent years, approximately 60 percent of the Town's budget has gone to the school budget. (The Lincoln County tax runs about 25 percent, the remainder

is for municipal expenses). South Bristol receives very little State money for education, primarily due to the Town's high real estate values.

South Bristol's per pupil education cost has for years been very near the highest in Maine. In part, this is a consequence of the relatively small elementary school population. It also reflects the desire of the citizens to provide the best possible educational opportunities for the town's youngsters. Per pupil costs are shown in table 17.1, calculated by dividing the total budget by the number of students served each year.

Were K-8 and secondary per pupil costs to be calculated separately, the K-8 figure would be much larger and the secondary lower than that shown in table 17.1. This is because the secondary tuition is set by the State, recently at \$8,553 per year.

In recent years the school budget has been rising at an average rate of five percent a year, slightly exceeding the rate of inflation as measured by the consumer price index. The budget increases are partly due to unfunded State and federal mandates. Whether this rate of increase will continue or abate is unknown – the School Board and citizens at town meeting will decide.

South Bristol Elementary School is strong on both curricular- and extracurricular-activities. The basketball team works hard despite the small student body as a source of players. (School basketball, to paraphrase *Bangor Daily News* retired managing editor Kent Ward, is almost a religion in Maine.) The jump-rope team is the best for a small school in the region. Other activities include tone chimes, handbells, soccer, circus arts, running club, nature club, peer mediators, community service clubs, etc.

Each year during the April break, the senior (eighth grade) class departs on its class trip, most often to Washington. It is said that a third of the

cost is covered by the collection of deposit bottles. At one time parents and kids went door-to-door collecting. In recent years, two new bottle collection buildings by the South Bristol Post Office and the West Bristol Cemetery have become the collection means. This is not only a

fund-raising activity but also a service to the Town's citizens – the bin by the South Bristol Post Office is filled almost to overflowing by the end of each summer weekend. The students appreciate the support.

17.3 – Educational Attainment

South Bristol has a well educated population and is statistically better educated than the county, State, northeast region, and the entire United States. This is due partially to the achievements of its long time citizens; and is partially the result of well educated people moving into Town, often in retirement. The educational attainment of the people may in part explain the strong support of South Bristol's school system year after year at town meeting. There is an attitude of, "We are willing to pay the cost of ensuring that our young people get the best education possible."

At the same time, there is a feeling that the school system must be a responsible participant in the effort, hiring and retaining the best faculty possible and expecting measurable results. It is not about simply appropriating money to the school system and expecting that money is all which is required.

Educational attainments and achievements were shown in tables 5.14 and 5.15 on page 63

where we also discussed this topic. It is significant that nearly 93 percent of the people 25 years old and older in town have at least a high school diploma, 13 percentage points above the country as a whole. Over a third of the citizens over 24 have at least a bachelor's degree!

That 92.8 percent of those over 24 have at least a high school diploma (2000) is significant, particularly considering that in 1980 only 76.9 percent had one.

Attainment of South Bristol School graduates is not tracked by any organization. However some insight may be gleaned in the future by the number of Stratton Scholarships awarded each year.

Overall, education is held in high regard in South Bristol. This bodes well for the Town's future and the future of the young people growing up and being educated by our schools.

References

Central Lincoln County Adult Education; <http://clc.maineadulted.org/> ; has up-to-date information on all adult education within the Central Lincoln County School System with schedules and registration information.

Central Lincoln County School System; <http://www.schoolunion74.org/> ; this link makes available considerable information about AOS 93 including information specific to South Bristol Elementary School and Adult Education resources.

South Bristol Comprehensive Planning Committee (Report); 2005; *Report of Citizens' Input*; South Bristol; Town of South Bristol

South Bristol Town Reports; a complete collection dating back to 1915 is available for viewing at the Town Office during normal business hours.

United States Department of Labor, Bureau of Labor Statistics; Consumer price index (CPI) is available at <http://www.bls.gov/CPI/> along with considerable other information.

Schools and Education Policies and Strategies

South Bristol will continue to support its school system as it has in the past. Inasmuch as the physical plant is in excellent condition, there are few if any capital improvements perceived to be necessary during the next decade other than maintenance and ballfield access and possibly a restroom facility there. Very desirable would be backup electrical generation capability, not only to reduce interruptions of the school day, but also for possible creation of an emergency shelter.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Provide efficiently safe and sanitary educational and recreational facilities to students and other residents who use the school facilities.	Design and build an appropriate handicap access ramp to the ballfield behind the school.	Selectmen & School Board \$10,000 2013
	Provide back-up electric power generation capability.	Selectmen, School Board \$20,000 - 30,000 2012
	Create appropriate sanitary facilities accessible from the ballfield.	Selectmen & School Board To Be Determined (TBD) 2014
	Investigate the feasibility of providing a safe walking and bicycling environment in the vicinity of the school and report to the Town.	Selectmen & MeDOT Minimal 2012
Continue to utilize and efficiently integrate into the curriculum appropriate information technology using reasonably current hardware, software, and connectivity technology.	Periodically assess the currency of information technology capability and use at South Bristol Elementary School, including faculty capabilities. Provide annual budgets for necessary improvements.	School Board TBD because of rapid technology changes 2011 and ongoing
Since the South Bristol School represents a significant investment in our children and in the community, appropriate improvements and maintenance should be provided in the most efficient manner practical.	Periodically review the adequacy of the physical plant and recommend to the voters appropriate improvements, including associated costs, in order to continue to educate students in a safe and efficiently operated facility.	School Board TBD 2011 and ongoing

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Chapter 18 — Governmental and Fiscal Capacity

*In all those things which deal with people, be liberal, be human.
In all those things which deal with the people's money or their economy,
or their form of government, be conservative – and don't be afraid to use the word.*
~ Dwight David Eisenhower (1890-1969)

Money and taxes are seldom contentious in South Bristol, at least in regard to town government. Having a large, mostly residential tax base, and relatively low expenses in relation to the tax base, the Town is able to provide good services while keeping the property tax rate low. If recent trends continue, this somewhat idyllic situation should remain unchanged.

President Eisenhower's remark quoted above fairly well describes South Bristol's local government.

18.1 – Revenue and Spending

South Bristol has been fortunate for decades to have been able, except for borrowing in 2002 for the school gymnasium, to operate fiscally on a pay-as-you-go or plan-ahead basis. This is due to a number of factors. The root condition which has placed the Town in its advantageous fiscal position is the large number of shorefront homes which have high values. The 69 miles of shore in a town of just 13 square miles is somewhat unique, even in Maine. In the southern part of Town the shore is dotted with homes both old and new; available land for construction along the shore has become increasingly scarce, consequently increasing its value.

At annual town meeting on March 9, 2010 the voters changed the Town's fiscal year from February through January to the calendar year, creating a 2010 fiscal year of 11 months. Annual town meeting is in early March and, unlike many towns, the warrant includes the school budget. (Many towns with March town meetings hold a second meeting in June to enact a school budget after the amount of state aid is known. South Bristol with its high property values receives relatively little state aid for education, so an estimate is adequate for enacting the school budget.)

The assessors commit taxes in June, after the Lincoln County tax amount is known. The tax collector then has the tax bills out by the beginning of July. Town meeting each year passes an article providing for a two percent discount if taxes are paid within 30 days of billing. The result is that a significant portion of the property taxes are paid quickly, thus for at least several decades there has not been a need for the Town to borrow in anticipation of taxes.

Approximately half of the nearly 1000 homes in South Bristol are seasonal residences. Therefore, only about half of the households have the potential of sending children to school or requiring many services year-round – with the exceptions of fire protection, snow plowing, and law enforcement.

Each year a prudent amount is kept in the surplus account, usually about a half million dollars, or a quarter of the Town's annual spending. The largest source of "surplus" is motor vehicle and water craft excise taxes, all of which remain in Town; some of the rest comes from unspent (lapsed) amounts appropriated the previous year. Should a sudden problem or emergency arise during the year, a special town

meeting can appropriate funds from surplus to cover the problem. In addition, each year at Town Meeting \$10,000 has been regularly appropriated for the selectmen to use “to meet unanticipated expenses and emergencies that occur during the fiscal year.” This appropriation has helped reduce the need for special town meetings to cover situations where the expenses for an account exceed the appropriation.

Early in 2006, South Bristol received the proceeds of a generous bequest from Ann Stratton, a seasonal resident. When received, the cash amount was approximately nine and a half million dollars. Since then it has been conservatively invested with the objective of preserving the principal while providing reasonable income. The fund weathered fairly well the recent economic decline.

In addition to the money, the bequest included mineral rights leases on natural gas wells in West Virginia. Royalties from natural gas production have run as high as \$5000 each month. The gas well funds are kept separate from the cash bequest. Since 2007, the Town Meeting has authorized scholarships for South Bristol students pursuing post-secondary education, to be paid from the royalties account. The Budget

Committee reviews applications and makes the award decisions.

In 2007, ‘08, ‘09, and ‘10 the Town Meeting voted to appropriate money from the interest on the invested funds from the bequest “in order to reduce the tax commitment.” During those four years, the amount appropriated exceeded a million dollars.

The only borrowing in recent years was in 2001 when \$700,000 was borrowed for the new gymnasium at the elementary school. The idea of a full-size gymnasium came from many sources and resulted in a citizens’ project to privately raise half of the anticipated million and a quarter dollar cost. Much of the hoped-for half of the cost was pledged and raised. When it appeared that public fund raising had reached its limit, the Town agreed to pick up the remaining part of the cost and borrowed the necessary funds.

Historical Finances

Table 18.1 outlines appropriations for the last ten years. Over the decade, municipal appropriations have remained at about the same portion of total appropriations while increasing at a compound rate of 5.58 percent, about twice the under-three-percent rate of inflation. (See table

Table 18.1 – South Bristol appropriations, 2000-2009

Year	Municipal Approp.		School Approp.		County Tax		Overlay	Total appropriation
	Amount	% of total	Amount	% of total	Amount	% of total		
2000	216,959	15.4%	940,860	66.8%	221,747	15.7%	30,020	1,409,586
2001	241,381	15.5%	1,024,424	65.8%	273,613	17.6%	18,715	1,558,133
2002	327,184	18.0%	1,126,179	62.1%	313,027	17.2%	47,843	1,814,233
2003	270,020	15.0%	1,175,770	65.5%	309,225	17.2%	39,379	1,794,394
2004	284,236	14.8%	1,200,832	62.4%	379,119	19.7%	59,591	1,923,778
2005	364,925	17.3%	1,334,153	63.3%	372,363	17.7%	35,442	2,106,883
2006	323,099	13.5%	1,460,906	61.2%	571,476	23.9%	33,435	2,388,916
2007	501,324	21.3%	1,157,464	49.1%	647,586	27.5%	50,155	2,356,529
2008	365,576	14.2%	1,515,301	58.8%	669,583	26.0%	27,096	2,577,556
2009	353,668	13.8%	1,440,159	56.1%	735,675	28.6%	39,632	2,569,134
Growth*	5.58%		4.84%		14.25%			6.90%

Source: Assessors’ Reports in Town Reports.

Note: *Growth is the compound annual rate of growth of the column above over the nine year period.. The reason for the anomaly in municipal and school appropriations in 2007 cannot be reasonably determined; the numbers have been verified to the original signed assessors’ report.

Table 18.2 – South Bristol mil rates, 2000-2009

Year	Assessed value	Appropriations	Mil rate
2000	235,276,100	1,409,586	
2001	241,438,200	1,558,133	6.35
2002	248,504,600	1,814,233	7.20
2003	252,941,900	1,794,394	7.00
2004	259,896,600	1,923,778	7.30
2005	266,494,900	2,106,883	7.80
2006	270,112,600	2,388,916	8.80
2007*	732,611,800	2,356,529	2.50
2008	737,518,800	2,577,556	3.00
2009	741,068,700	2,569,134	3.12

Sources: Town Reports.

Notes: *South Bristol reassessed all real estate in 2006 and used new full market value assessments in 2007.

18.4 for inflation rates.) The various individual expenses as reported each year in the Town Report have increased at varying rates. The largest extraordinary municipal expense during the period was building the new school gymnasium and paying off the loan.

The overlays in table 18.1 are the amounts determined by the assessors each year in order to raise funds for the surplus account should they be needed for special town meeting appropriations. The amount is usually about \$30,000 and is adjusted so that the mil rate comes out to an exact multiple of 0.01 mils.

South Bristol controls its own school system, for years as part of School Union 74 and now as part of Central Lincoln County School System (AOS 93). As such, the Town has complete control over its school expense except for its portion of the allocated cost of operating the superintendent's office. The school budget has grown faster than the rate of inflation. Even municipalities far less able than South Bristol to absorb increases in the cost of education have seen

large increases in their budgets. It must be noted that education has, over the decade, represented an ever-decreasing portion of the total budget.

South Bristol receives very little state aid for education, mostly as a consequence of its high property values. In the near future, the only likely change is the possibility of the aid amount being further reduced.

Except for its seat on the county budget committee, South Bristol has little influence on the Lincoln County budget. That committee is advisory; the three County Commissioners make the final decisions on the budget and spending. South Bristol, along with several other towns, has the opportunity to vote every four years for the District 2 county commissioner. During the decade being considered, South Bristol's county tax has more than tripled and its percentage of the town budget has nearly doubled.

That the county tax over which the local citizens have virtually no control now comprises almost 30 percent of the local budget illustrates a diminishing control of the citizens over local taxes. What is now approaching a third of the local property tax is but a bill which the Town

Table 18.3 – South Bristol tax exempt property, 2009

Exempt Property/Owner	Location	Assessed Value
Damariscotta River Association	Nine parcels	\$5,494,600
Me. Audubon Soc. (Sold to DRA 2009)	19-8	\$960,600
Mobius, Inc.	31-14a	\$52,500
Nature Conservancy	24-17B & 25-1	\$2,125,000
State of Maine (bridge tender's building)	17-64a	\$386,700
Thompson Ice House	22-6	\$77,000
Union Church (church, parsonage, parish house)		\$603,900
United States Fish & Wildlife Service – Outer Thrumcap Isl.		\$235,900
Univ. of Maine, Darling Marine Center and Willett property		\$19,423,900
Walpole Union Church	29-20	\$117,100
Wawenock Golf Club	Four Parcels	\$1,464,200
Total non-municipal tax exempt property:		\$30,941,400
Town owned tax exempt property:		\$6,238,200
Assessed value of all tax exempt property:		\$37,179,600

Source: Town Report

Notes: Town owned tax exempt property is listed in table 16.2. A detailed list of all tax exempt property is available in the 2009 Town Report, pp 42-3. There was one increase (\$279,600) in 2008 and none in 2009.

Table 18.4 – South Bristol valuations, appropriations, and mill rates in constant dollars, 2000-2009

Year	CPI increase	Compound deflator	In current year dollars			In constant year 2000 dollars		
			Town valuation	State valuation	Town approp.	State valuation	Town approp.	Constant mil rate
2000	3.4%		235,276,100	216,050,000	1,409,586	216,050,000	1,409,586	6.52
2001	2.8%	1.02800	241,438,200	246,950,000	1,558,133	240,224,000	1,515,694	6.31
2002	1.6%	1.04448	248,504,600	259,650,000	1,814,233	248,600,000	1,737,026	6.99
2003	2.3%	1.06847	252,941,900	282,200,000	1,794,394	264,116,000	1,679,405	6.36
2004	2.7%	1.09732	259,896,600	329,250,000	1,923,778	300,049,000	1,753,162	5.84
2005	3.4%	1.13463	266,494,900	374,850,000	2,106,883	330,373,000	1,856,893	5.62
2006	3.2%	1.17094	270,112,600	452,200,000	2,388,916	386,187,000	2,040,177	5.28
2007*	2.8%	1.20372	732,611,800	571,400,000	2,356,529	474,694,000	1,957,702	4.12
2008	3.8%	1.24946	737,518,800	640,100,000	2,577,556	512,300,000	2,062,930	4.03
2009	2.7%	1.28320	741,068,700	728,850,000	2,569,134	567,994,000	2,002,132	3.52

Sources: Town Reports; Maine Revenue Service; US Department of Labor, Bureau of Labor Statistics.

Notes: *South Bristol reassessed all real estate in 2006 and used new full market value assessments in 2007. Constant dollar numbers are relative to 2000. State valuations are calculated and available to the nearest \$1000 and are calculated here to the same precision.

must pay.

Table 18.2 summarizes local property assessments, appropriations, and the resulting mill rates. Changes in assessed valuations from year to year are not a true measure of property values since they do not take into consideration changes in value of existing property, and ignore much construction outside of the shoreland zone since South Bristol has no town-wide requirement for building permits and no town-wide land use ordinance. For many years South Bristol has had close to or the lowest mil rate in Maine.

In 2009 (see table 18.3) property owned by the Town and tax exempt organizations had a total value of \$37,179,600. That year it was 5.0 percent of the value of all property in Town. Just over half of the exempt property was that of the University of Maine’s Darling Marine Center. Except for the addition of one property acquired by The Nature Conservancy in 2008, the list of tax exempt property has been unchanged for three years.

Over the years, there has been little need for new services in this small town. As in many small Maine towns, there is an attitude of do-it-yourself rather than let-the-government-do-it. Those

services which the Town should supply – winter road plowing, solid waste disposal, fire protection, emergency medical service, law enforcement (from Lincoln County Sheriff), and road paving – are well taken care of. Things like rubbish collection are taken care of by the citizens on their own. There are no public water or sewer systems, nor are they anticipated in the near future. It is unlikely that there will be changes or need for changes in this overall situation in the near future, particularly since future development in Town is expected to be mostly residential and to occur slowly.

Changes

The dollar amounts of all spending by South Bristol have been increasing faster than inflation over the past ten years. It is worthwhile to evaluate Town’s ability to pay for ever increasing expenses.

One way to evaluate the Town’s ability to pay is to compare the tax base with expenses. Since the ability to pay (the tax base) has increased at a greater rate than the expenses, the tax burden is decreasing.

Another way to look at “ability to pay” is to

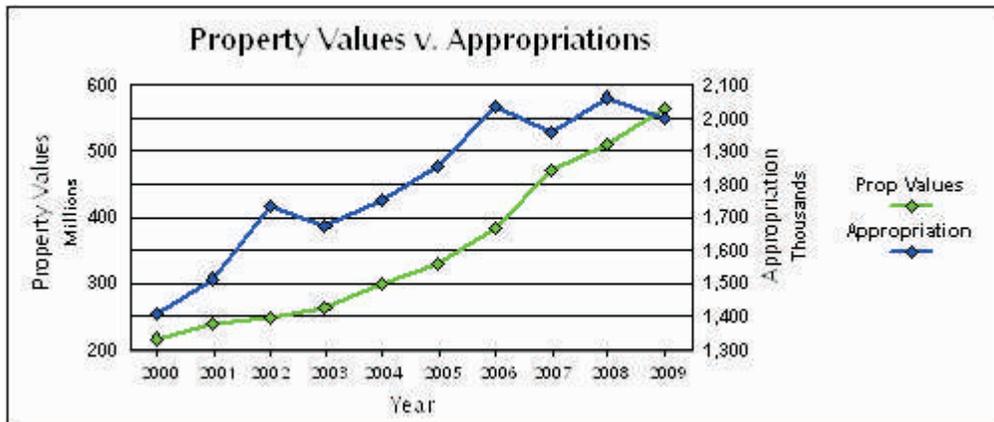


Figure 18.1 – Property values v. appropriations in constant year 2000 dollars.

See table 18.4 for sources and specific values.

compare appropriations with household income. We feel this comparison to be inappropriate for South Bristol since over half of the residential property is owned by seasonal residents for whom it is impossible to accurately determine household income.

In analyzing a municipality’s situation, a consistent valuation of its tax base (real and personal property) is required. This is provided by the Maine Revenue Service in its annual valuation of the property in each town. At times there have been questions of whether those valuations are correct. They are a reasonable effort to provide comparable valuations state-wide. They are used for many purposes, including the distribution of State (and sometimes Federal) dollars to municipalities.¹³

When comparing changes of valuations and appropriations over time it is useful to remove (discount) the effect of inflation from both. This is especially important when analyzing governmental activities. Table 18.4 presents ten years of valuations and appropriations in constant year 2000 dollars.

Figure 18.1 above displays graphically the

changes in South Bristol property valuations and annual appropriations (the taxes the citizens paid). Although appropriations climbed faster than property values in the early part of the decade, to a large extent as a result of paying for the new school gymnasium, they settled back at the end of the decade in consequence to careful budgeting while total property valuations caught up.

Note that figure 18.1 displays numbers in constant year 2000 dollars and thus discounts the effects of inflation, as is necessary in order for such comparisons to make sense.

To summarize, the graph illustrates that over the decade municipal spending and the underlying property values have pretty much kept pace with each other. Were appropriations to have grown faster than property values, it might have shown spending growing faster than the ability to pay – not a desirable situation. The rightmost column in table 18.4 says that the opposite is true.

The key to discounting the effects of inflation is the Consumer Price Index (CPI-U) provided by the US Department of Labor. With those data, dollars from any subsequent year can be discounted to dollars for a base (starting) year. In table 18.4 both Town appropriations and the State’s valuations were adjusted to consistent year 2000 dollars, allowing us to calculate the “real” taxation load on the citizens of South Bristol relative to property values.

13. It should be noted that the State’s valuations are usually about 20 months behind actuality, but they are consistent. In most cases, they are considered to be two years behind.

The CPI is the familiar number widely used as a measure of inflation. It is the most common measure and the best. For example, in 2001, it says that you would need 2.8 percent more dollars in your pocket to buy the things which you bought in 2000 for a dollar. And thus down the column; in 2002 you would need 1.6 percent more dollars than in 2001 to buy what you bought in 2001. The third column of table 18.4 presents the factor for reducing costs in any year to year 2000 dollars. For example, divide year 2002 dollars by 1.04448 (the compounded deflator) to “deflate” 2002 dollars to equivalent year 2000 dollars.

To the details: Under “In constant year 2000 dollars” we have restated the State valuations of South Bristol property and the Town’s appropriations in constant year 2000 dollars. It is here where the effect of compounding becomes apparent. The numbers in these two columns have had the effects of inflation removed.

The mil rate (appropriations divided by state valuation – again using constant year 2000 dollars) provides the revenue which would be necessary to cover the spending. Except for a jump in 2002, that calculated tax burden has continuously declined. This means that the overall tax burden on South Bristol’s taxpayers relative to the value of their property has declined!

Why? A quick look at the third column from the right in table 18.4 makes it obvious that real estate values have climbed during the decade at a rate much faster than inflation. To some extent this has been a result of new construction, a decade of which is detailed in appendix H.

Consider again the question of whether or not the State valuations are reasonably accurate. Remembering that published state valuations run about two years behind actuality, in table 18.4 we see that the verified fair market valuation for South Bristol property on April 1, 2007 (\$733 million) and Maine’s valuation for 2009 which was as of 2007 (\$729 million) are but a half of one percent apart. This verifies the validity of the state valuations for South Bristol. State valuations are used for determining state revenue sharing, grant eligibility, and such. This means that revenue sharing is ordinarily based on conditions two years earlier.

Fiscal Practices

South Bristol has a history of putting money into reserve funds for future major expenses. The 2006 revaluation was about half paid for with money appropriated in earlier years for the purpose. Every year money is appropriated to the reserve fund for future major fire department

Table 18.5 – South Bristol municipal spending, 2000-2009

Year	General Govt.	Public Safety	Highway Maint.	Winter Roads	Transfer Station	General Assist	Dona- tions	Gym Project	Unclas- sified	Annual Total
2000	89,839	76,270	40,403	83,250	137,084	1,455	16,059	0	30,591	474,953
2001	92,172	83,437	54,397	101,000	135,960	440	18,931	377,042	38,730	902,110
2002	95,781	82,099	96,350	76,464	121,279	514	39,934	183,966	68,703	765,119
2003	97,624	85,751	37,207	92,237	122,606	1,720	41,270	94,898	19,860	593,171
2004	95,132	89,853	69,536	111,630	111,800	462	41,836	84,829	19,863	624,941
2005	101,240	90,823	9,423	96,943	120,944	1,855	20,825	86,000	24,446	552,500
2006	115,679	126,573	13,114	95,767	137,624	462	24,444	83,394	95,139	692,196
2007	134,586	113,338	135,675	114,854	136,488	2,263	48,695	86,207	61,391	833,497
2008	168,494	280,111	96,768	114,624	137,216	3,214	54,646	83,411	58,063	996,546
2009	136,463	156,058	16,308	164,305	127,686	3,381	49,151	80,469	58,204	792,025

Source: Town Reports, Selectmen’s Financial Reports.

Notes: Appropriations to reserve accounts are not included, but expenditures from reserve funds are included. Borrowing for the gymnasium in 2001 and 2002 is not included, but the subsequent repayment is.

purchases; \$20,000 annually in recent years. The creation of reserve funds was strongly endorsed by the citizens in responses to the mail survey (appendix C, ques. 9).

Table 18.5 details actual spending over the last ten years. The annual Selectmen's Financial Reports detail financial transactions resulting from town meeting actions. Table 18.5 does not include appropriations to reserve funds since such appropriations remained with the Town.

The bank loan for the Elementary School gymnasium has been addressed in a like manner in table 18.5. Gym spending in 2001 and 2002 includes only funds which were on hand absence borrowing. The remaining payments for the gymnasium (including interest) are reflected in loan payments from 2003 through 2009. The loan is scheduled to be fully repaid in 2011.

In table 18.1, actual appropriations by town meetings are shown. Items such as appropriations to reserve funds are included since they committed funds. (This total of dollars appropriated, the overlay, the Lincoln County tax, and property value determine the mil rate.) In contrast, table 18.5 is restricted to money actually spent – if you will, to checks written – not money moved from

one pocket to another.

South Bristol's commitment to planning ahead for major spending becomes obvious when carefully examining tables 18.1 and 18.5. In the rightmost column of table 18.5 it is clear that major spending is not an annual occurrence. But it does and must occur. A new fire truck (2008) and a real gymnasium for the school (2001-02) are not the purchases a town of 897 people usually considers in a single year. Instead, they are perceived needs of the town which are planned and budgeted for.

The purchase in 2008 of the tanker for the fire department was long anticipated and money had been laid aside for many years. The result was that the South Bristol Fire Department's tanker was purchased with cash on hand.

Citizens foresaw the desirability of a full-size school gymnasium in the late 1990s and started the private fund raising effort to partially fund it. The Town showed its approval of the project by appropriating \$25,000 each year at the 2000 and 2001 Town Meetings.

The school gymnasium required borrowing for the Town's part of the cost if the gym was to be built soon in response to the obvious desire of

Table 18.6 – South Bristol general fund revenue, 2000-2009

Year	Property taxes	Homestead reimburse	Excise taxes	Education	Intergovt. revenue*	Other revenue	Total revenue
2000	1,364,729	12,080	180,380	52,212	33,221	82,540	1,725,163
2001	1,533,854	12,802	196,529	46,973	25,000	244,740	2,059,897
2002	1,759,004	13,653	223,705	60,905	25,000	233,930	2,316,197
2003	1,755,230	9,450	217,074	69,269	50,164	183,781	2,284,968
2004	1,901,507	8,140	228,559	69,603	26,533	71,800	2,306,142
2005	2,068,214	3,499	220,509	108,803	28,025	144,756	2,573,806
2006	2,393,760	17,472	234,088	121,399	21,393	130,323	2,918,434
2007	1,827,876	5,037	219,557	183,898	22,130	180,200	2,438,699
2008	2,179,817	5,853	225,968	98,098	18,489	115,405	2,643,629
2009	2,303,875	6,307	208,544	70,717	14,193	394,528	2,998,163

Source: Independent auditors' reports in Town Reports

Notes: *Intergovernmental revenue (or transfers) includes various sources such as revenue sharing, state aid for roads, etc. Education includes both State Aid to Education and partial reimbursement for special education expenses. All amounts rounded to nearest dollar.

the townspeople. The selectmen negotiated a construction loan for up to \$750,000 with a local community bank for the construction. This was an example of South Bristol’s interest in supporting the regional economy.

Most revenue directly available for Town expenses comes from two sources – property taxes as discussed above and motor vehicle and boat excise taxes. In recent years the excise taxes have amounted to about ten percent of the property tax amount. Revenue from such as dog licenses, clerk’s fees, and revenue sharing does not make up a significant portion of town revenue and is detailed each year in the Town Report.

Table 18.6 shows South Bristol’s general fund revenue sources over the past decade. The property taxes each year are a consequence of Town Meeting appropriations that March, and when committed and received go into the general fund. The Town has little if any control over other revenue sources.

Not included in table 18.6 is interest earned by the various designated funds such as the reserve for new fire equipment, the Town (centennial 2015) Anniversary Fund, and the Stratton Bequest Fund. Royalties from the natural gas wells are also excluded. These are separately accounted for and detailed each year in the Town Report. Any use of money from these funds requires action by Town Meeting, such as was done in 2007, ‘08, and ‘09 when about a million dollars of interest from the Stratton bequest was used to reduce the tax commitment. (This explains the sharp drop in property tax revenue from 2006 to 2007 in table 18.6.)

It is clear from an examination of table 18.6 that the major sources of revenue in South Bristol are local taxes – both property taxes and excise taxes on vehicles and boats. South Bristol receives very little general Aid to Education from the State; the increases in 2005-07 were primarily due to a one time special education reimbursement. The “other revenue” category is rather

unpredictable and includes such diverse sources as one time grants, investment earnings, and donations to the Town.

An insignificant amount of revenue – a fraction of one percent – has been dedicated to tax incentive programs such as tree growth, working waterfront, and open space. Little change is anticipated.

Over the past decade, there have been three other significant sources of operating funds. In 2002, \$700,000 was borrowed for the town’s share of the school gymnasium construction cost. As noted above, interest from the Stratton bequest has been used to reduce the tax commitment. Some of the income from the royalties from the natural gas wells, also part of the Stratton bequest, has been used for scholarships and to pay for about half of the 2006 revaluation.

LD 1 has not caused any fundamental changes in South Bristol’s finances. Municipal spending has not exceeded the LD 1 limits since enactment of the law. School spending always exceeds the Essential Programs and Services (EPS) limit (part of LD 1) calculated by the Maine Department of Education. The budget amount exceeding EPS is routinely approved at Town Meeting and later ratified at the required (by Maine law) secret ballot referendum.

Table 18.7 details education budgets since the enactment of LD 1 and the beginning of the

Table 18.7 – Spending exceeding LD 1

School year	Total school budget	Amount exceeding EPS
2005-06	\$1,418,840	\$487,607
2006-07	\$1,490,776	\$484,495
2007-08	\$1,532,092	\$574,459
2008-09	\$1,566,065	\$731,268
2009-10	\$1,646,885	\$560,257

Sources: Town Reports; Central Lincoln County School System.

Note: School appropriations exceeding EPS are the only instances where South Bristol has exceeded the limits of LD 1.

Maine Department of Education's determination of the minimum amount which a municipality must appropriate to cover Essential Programs and Services. There is a general belief throughout Maine that the minimum, the EPS amount, for education is inadequate for providing a quality education for all students.

Understanding that a kindergarten through eighth grade school with well under a hundred students has inherently higher per-pupil costs than a larger school, the citizens responding to the mail survey were strongly in favor of retaining the elementary school – by better than 3:1 (appendix C, ques. 12).

Shared Efforts

The most significant shared capital investment is the Bristol/South Bristol solid waste transfer station on Bristol Road in Bristol. After sharing an open dump in Bristol for as long as anyone can remember, in 1990, with a push from the State to close open dumps, the two towns constructed the new transfer station. The operation is governed by an inter-local agreement and is overseen by a board made up of the six selectmen from the two towns. Cost are shared with South Bristol paying forty percent and Bristol the rest.

The shared facility works well, with few if any mentions of dissatisfaction. The facility is open from eight in the morning to four in the afternoon, five days a week, more hours than most neighboring transfer stations. Occasionally, the two days when the station is closed have been changed in order to best accommodate the needs of the citizens of the two towns.

Recycling is encouraged and the citizens actively participate as described on page 216 and illustrated in figure 16.1, resulting in cost savings for both towns.

Another case of sharing which helps contain municipal expenses is the mutual aid agreement between the South Bristol and Bristol fire departments. Part of the agreement is that whenever there is a fire call for a structure fire in either town, the other fire department is automatically called to respond. South Bristol also has mutual aid agreements with other towns, with aid being called when needed.

At this time, there are no other perceived opportunities for sharing capital investments, but South Bristol is open to exploring other opportunities should they arise.

18.2 – Future Finances

Except for possible major projects to be discussed in section 18.3, the spending shown for implementing policies throughout this plan in the Policies and Strategies sections of each chapter can be easily absorbed into annual budgets without a marked effect on each year's mil rate.

We have estimated the cost of each strategy as best we could. Many of the costs are shown as zero if it is expected that either the cost is already included in annual budgets or if there will be no cost to the Town in carrying out the strategy. Where we have forecast the cost as minimal, it is expected that there will be some small cost

involved, but that it will be probably under two or three hundred dollars.

Where we have estimated a larger cost to implement a particular strategy we have in most cases rounded the estimate to \$500, \$1000, or multiples of \$1000. The estimates in many cases are probably high since the Comprehensive Planning Committee did not wish to underestimate the costs of future actions.

Throughout this plan there are numerous strategies which, if implemented, will be either the sole responsibility of the Code Enforcement

Officer (CEO) or the responsibility will be shared by the CEO and someone else. South Bristol has a part time CEO. Additional responsibilities may require that the CEO spend more hours on the job each week. How many is hard to say, but we do not envision the CEO position becoming a full time job. As the Town slowly grows and activities required by Maine law increase, the responsibilities of the CEO and the work load will likely increase, even without anything outlined in this plan.

For the same reasons, the responsibilities of the Planning Board are bound to increase.

Some costs associated with strategies cannot be estimated without work beyond the responsibility of the Comprehensive Planning Committee. An example is upgrading the Clarks Cove Pond dam and the bridge at the outlet. That cost can only be determined by a proper engineering study. In such cases we have estimated the cost as unknown.

New real estate development in South Bristol consists mostly of individual single family homes on individual pre-existing lots or on one or two lots carved from a larger one. Occasionally new residences are built to replace older buildings, leaving the housing unit count unchanged, but increasing property value. During the last decade there have been two major subdivision

developments; one on Walpole Meetinghouse Road and the other at Christmas Cove. Both subdivisions still have the majority of the lots unbuilt upon.

New development is slow and expected to remain slow for the next five to ten years. As noted elsewhere, Town services as currently established are expected to remain adequate. Municipal expenses will continue to grow. As can be seen in table 18.1 they have grown at a slow rate in the past and, with no fundamental changes anticipated, they are expected to continue to grow slowly.

The South Bristol Elementary School is in excellent physical condition. The only significant plant improvement foreseen is the possible installation of backup electric power generation as recommended in chapter 17. The school plant could easily absorb a significant increase in enrollment. In the 1970s enrollment was over 100 students – before the addition of the new gymnasium.

Based on population trends addressed in chapter 5, significant school enrollment increases are not likely. In the event of enrollment increases, it is reasonable to expect that staffing would be increased as necessary. We do not feel that it is necessary to plan for increases in school costs other than those resulting from inflation and unknown State and Federal mandates..

Chapter 5 covered the changing demographics of South Bristol, in particular that the population is trending to an older one. A reversal of the trend and an influx of younger families would not change how local government operates.

Most South Bristol expenditures except for Lincoln County taxes are reasonably predictable. Table 18.1 shows the historical trends.

The rates at which total annual appropriations and the value of all property

Table 18.8 – Appropriations & valuations, 2000-2009

Year	Total appropriation		State assessed value	
	Amount	Change	Amount	Change
2000	1,409,586		216,050,000	
2001	1,558,133	10.5%	246,950,000	14.3%
2002	1,814,233	16.4%	259,650,000	5.1%
2003	1,794,394	-1.1%	282,200,000	8.7%
2004	1,923,778	7.2%	329,250,000	16.7%
2005	2,106,883	9.5%	374,850,000	13.8%
2006	2,388,916	13.4%	452,200,000	20.6%
2007	2,356,529	-1.4%	571,400,000	26.4%
2008	2,577,556	9.4%	640,100,000	12.0%
2009	2,569,134	-0.3%	728,850,000	13.9%

Sources: Town Reports, Maine Revenue Service.

Note: Change is from the previous year.

have changed are shown in table 18.8. The differences in the rates are significant. Over the nine years, appropriations rose 82 percent, or 6.9 percent a year when compounded annually. At the same time the value of all property rose 237 percent, or 14.5 percent a year compounded annually. Both rates far exceeded inflation! Total inflation for the nine year period was 28.3 percent, representing an average annual rate of 2.81 percent. The most significant appropriation increase was the county tax which more than tripled.

State valuations were used in table 18.8 since South Bristol reassessed all property in 2006 so local assessments could not be used. As noted earlier, state assessments are about two years behind. The 2009 value is for use in determining various state aid programs that year, but it represents values as of 2007. Because of this, it is difficult to determine accurately the effect of the recent economic downturn on property values and on new construction.

It is significant that, over the past decade, property and excise taxes have provided 88 percent of South Bristol's general fund revenue, a situation which is expected to continue into the foreseeable future – at least for five to ten years and probably well beyond. It is reasonable to expect that year-to-year variations in other sources of revenue will continue to follow the past unpredictable (over the long term) pattern.

During the decade of the 2000s, two significant factors affected year-to-year revenue and spending. In 2001 and 2002 the South Bristol Fire Department received two major federal grants for the purchase of fire apparatus. In the 2007-09 period the Town appropriated a total of about a million dollars from earnings on the Stratton bequest to reduce the property tax commitment.

Grants cannot be forecast; each is a one-time bonus. The fire department grants simultaneously increased revenue and spending in those two

years. Using investment earnings may or may not continue, depending on the will of the voters at Town Meeting and on earnings from the investments.

Prudent planning – and prudent forecasting – requires that only revenue which can be reasonably expected is considered for covering expected year-to-year Town government expenses.

County taxes are a unique matter. As noted earlier, the county commissioners have the sole authority to set the county budget. The total budget is apportioned among the 18 towns and one plantation in Lincoln County based on assessed property value using state valuations. South Bristol's very high property values cause the Town to be assessed a disproportionate amount relative to its population. Climbing South Bristol property values cannot but exacerbate the situation.

Currently, a Town appropriation (spending) increase of about \$7400 causes an increase of 0.01 in the mill rate. In other words, if the Town spent an additional \$7400 in 2009 the mill rate would have been 3.13 instead of 3.12.

Ten Year Forecasts

Forecasting municipal finances involves many variables, including changing real estate values, unexpected municipal expenses (for example, if a major storm washes out roads), actions of the state and federal governments (both mandates and revenue sharing), and the desires of citizens for new town services.

A significant factor for the next decade will be Maine's and the country's recovery from the economic downturn of the latter part of the 2000 decade.

Historically, the South Bristol real estate market has been somewhat immune from economic ups and downs. Education expenses have to some extent been driven up by both state and federal mandates. Reimbursement for the

expenses of complying with such mandates has been unpredictable and often unforthcoming. Municipal budget expenses have been pretty much immune from influences beyond local control except for state mandated shoreland zoning management and enforcement. South Bristol has relatively little commercial business except for the fisheries which were discussed in chapters 10 and 11. As a consequence, the overall level of business activity has now little effect on the Town’s finances.

Experience has shown that there is no way to predict the Lincoln County tax. In 2006 Lincoln and Sagadahoc counties jointly built the Two Bridges Regional Jail for about \$25 million. Most of the money was borrowed, secured by the full faith and credit of the two counties which made

the municipalities in the two counties ultimately responsible. The cost is reflected in the county tax beginning in 2006 (table 18.1). The Lincoln County Sheriff’s Department provides law enforcement services for South Bristol and all but four of the towns in the county.

It can be reasonably expected that the county tax will continue to increase faster than inflation (table 18.4, col. 2). From 2000 to 2009 South Bristol’s county tax increased at a compound annual rate of 14.25 percent, strongly influenced by the payments on the jail bonds starting in 2006. From 2000 through 2005 the rate was 11 percent. During the years with new jail payments (2006-09) the rate was nine percent. Considering these factors we expect that South Bristol’s county tax will increase by about ten percent each year.

Table 18.9 – South Bristol appropriation and property value forecasts – 2010-2020

Year	Municipal Approp		School Approp		County Tax		Total Approp	Property Value	
	Amount	Chg	Amount	Chg	Amount	Chg		Amount	Chg
2000	216,959		940,860		221,747		1,379,566	259,650,000	
2001	241,381	11%	1,024,424	9%	273,613	23%	1,539,418	282,200,000	9%
2002	327,184	36%	1,126,179	10%	313,027	14%	1,766,390	329,250,000	17%
2003	270,020	-17%	1,175,770	4%	309,225	-1%	1,755,015	374,850,000	14%
2004	284,236	5%	1,200,832	2%	379,119	23%	1,864,187	452,200,000	21%
2005	364,925	28%	1,334,153	11%	372,363	-2%	2,071,441	571,400,000	26%
2006	323,099	-11%	1,460,906	10%	571,476	53%	2,355,481	640,100,000	12%
2007	501,324	55%	1,157,464	-21%	647,586	13%	2,306,374	732,612,000	14%
2008	365,576	-27%	1,515,301	31%	669,583	3%	2,550,460	783,895,000	7%
2009	353,668	-3%	1,440,159	-5%	735,675	10%	2,529,502	838,767,000	7%
2010	374,888	6%	1,512,167	5%	809,243	10%	2,696,298	897,481,000	7%
2011	397,381	6%	1,587,775	5%	890,167	10%	2,875,323	969,279,000	8%
2012	421,224	6%	1,667,164	5%	979,183	10%	3,067,571	1,066,207,000	10%
2013	446,498	6%	1,750,522	5%	1,077,102	10%	3,274,122	1,172,828,000	10%
2014	473,288	6%	1,838,048	5%	1,184,812	10%	3,496,148	1,290,111,000	10%
2015	501,685	6%	1,929,951	5%	1,303,293	10%	3,734,929	1,419,122,000	10%
2016	531,786	6%	2,026,448	5%	1,433,622	10%	3,991,856	1,561,034,000	10%
2017	563,693	6%	2,127,771	5%	1,576,985	10%	4,268,449	1,717,138,000	10%
2018	597,515	6%	2,234,159	5%	1,734,683	10%	4,566,357	1,888,851,000	10%
2019	633,366	6%	2,345,867	5%	1,908,151	10%	4,887,384	2,077,737,000	10%
2020	671,367	6%	2,463,161	5%	2,098,967	10%	5,233,495	2,285,510,000	10%

Sources: Appropriations 2000-09 from Assessors’ Reports in Town Reports; Assessed values 2000-06 from Maine Revenue Service; Assessed value 2007 from Assessors’ Report; Assessed values 2008-09 by Comp Plan Committee (see text); Forecasts 2010-20 by Comp Plan Committee.

Note: See text for explanation and discussion of the rationale for 2010-20 forecasts. Overlay is ignored.

During the nine years ending in 2009 municipal expenses have grown at an annual compound rate of 5.6 percent. With little likelihood of increased municipal services, we believe that municipal spending will grow by about six percent each year.

Comprising a decreasing majority of Town spending (see table 18.1, col. 5), the school appropriation has experienced the most restrained growth compared to municipal and county spending over the decade of the 2000s, having increased at a compound annual rate of but 4.85 percent. The greatest increases were in the early part of the decade when staffing was increased. It is unlikely that the move from School Union 74 to a nearly identical Central Lincoln County School System (Jefferson joined with us) will have any significant financial effect on South Bristol. Thus, our expectation is that the education budget will increase by about five percent each year.

As discussed earlier and shown in table 18.6, historically about 88 percent of South Bristol's revenue has come from property (mostly residential) and excise taxes. There is no likelihood that this will change in the near future. (Excise taxes have been about ten percent of the amount of property taxes.) The real estate "bubble" of the 2000 decade makes forecasting difficult, but the bubble never really burst in South Bristol, just slowed sales somewhat. During the nine years ending in 2009, the compounded annual increase in assessed value was 13.7 percent.

We see property values, the primary base of Town revenue, increasing faster than expenses over the next decade. This bodes well for the financial future of South Bristol and will allow for, when appropriate, an increase in Town services without increasing the tax burden relative to the total value of property.

Forecasting property values for more than two years is not a science. We rely on local knowledge of the market for new housing, in

particular vacation and retirement housing. The strong demand for well over a decade has resulted in a steady increase in the value of housing.

We analyzed the increase in property values over the decade of the 2000s in numerous ways. One was to try to exclude the influence of the rapid rise in property values during the middle of the decade. The minimum rate of annual growth in values which we could calculate was 13 percent!

We anticipate a steady increase in the total value of real property, both from new construction and from the increased value of existing property, of at least 10 percent beginning in 2012. To account for the current economic slowdown, we conservatively estimated seven and eight percent annual growth for the 2008-11 period. The estimates (or forecasts) of growth in property values have been kept deliberately low. It is likely, considering historic patterns, that our forecasts will be exceeded.

Since South Bristol reassessed all property to fair market in 2006 and those values were used by the Town in 2007 to set taxes, we use that value in table 18.9. Up to that year we use Maine Revenue Service numbers for reasons stated earlier. In 2008 and 2009 the Town's official assessed value for taxation was increased only by new construction which was known to the assessors. In order to estimate the full market value of real estate in South Bristol for 2008 and 2009 we took into account new construction, inflation, and observed market conditions.

Table 18.9 presents the Committee's forecasts of expenses and assessed property values for the next ten years. The table transitions from actual appropriation numbers through 2009 (from table 18.1) to projections thereafter.

Projections are based on actual rates of increase over the past decade. Table 18.1 includes the compounded annual rates of growth in each appropriation category; we have used these rates for our projections.

18.3 – Significant Future Expenditures

South Bristol has never had a formal plan for capital improvements (Capital Investment Plan) nor a Capital Improvement (spending) Program. The only long term planning has been the reserve account for fire equipment into which funds are appropriated annually.

Capital improvements are “investments” in items such as equipment, buildings, machinery, roads, real estate, etc. which have an extended life expectancy and which can be added to the town’s fixed assets on the balance sheet and depreciated. The investments can be for either purchase or major repair and maintenance. The improvements do not include consumables – a shed full of sand and salt for winter roads is not a

capital improvement, only an annual expense.

Capital improvements are characterized by their cost, purpose, and that they are not annually recurring. For our purposes we characterize any appropriate, non-recurring expense of \$10,000 or more as a capital improvement. This fits well for South Bristol.

Since capital improvements involve non-recurring spending and often significant amounts of money, it is worth considering how such expenditures might be funded. Several alternatives for funding are available to South Bristol, some which have been used in the past, some which have not:

Table 18.10 – South Bristol Capital Investment Plan, 2011-20

Project	Priority	Year	Cost Estimate	Funding	Plan references
Clarks Cove Pond dam and bridge repair/ replacement	Urgent (or Necessary)	2011	Unknown, needs engineering study	Town, possibly state grants	Ch. 4, 7, & 14 and strategy on page 194
Fire apparatus replacement	Necessary	Approx every six years	\$200,000 each time – see text	Annual approp of \$35,000 to a reserve fund	Ch. 16, page 211
Major (capital) road rebuilding and paving	Necessary	A paving project every 2 or 3 years	Approx \$150,000 per year, long term	Annual approp of \$150,000 to a reserve fund	Ch. 14
School backup power	Necessary	2012	\$20,000 to \$30,000	Town	Ch. 16 & 17.
Affordable and elderly housing	Desirable	2015 ???	Research & regional cooperation will be necessary	If a project develops, funding likely to be from various sources	Ch. 5 & 13
Road condition analysis. Could be an engineering analysis (see page 176)	Desirable	2011	To be determined. Probably less than \$10,000.	Town and grants	Ch. 14
Ramp to ball field	Desirable	2013	\$10,000	Town	Ch. 17
Water access facility	Desirable	2012	\$2,000,000	Town and donations	Ch. 2, 10, 15, & 16
Walpole playground	Deferrable	2015	\$50,000	Town and donations	Ch. 15, 16, & 17

Source: Comprehensive Planning Committee.

Notes: Referenced chapters contain detailed discussions of each project and the needs. See brief discussion of each project in this section. Projects with identical priorities are arranged alphabetically.

- Making annual appropriations to reserve funds for anticipated expenses.
- Paying all at once by town meeting appropriations.
- Seeking grants from state, federal, and private sources.
- Borrowing, either with loans or by issuing bonds.
- Using earnings or principal from the Stratton Bequest fund.

So long as the annual budget can afford it, putting away funds in reserve accounts is an excellent way to be prepared for predictable major expenses. This approach was solidly endorsed by respondents to the mail survey (appendix 3, ques. 9). The reserve account for fire truck purchase is the longest running reserve account in South Bristol. Of late, each year \$20,000 has been appropriated to the account. Reserve accounts are listed each year in the Town Report.

Unless there is an offsetting one-time source of revenue, paying for a major capital improvement out of one year's budget can be expensive for and upsetting to the taxpayers. In 2001 and 2002 grants were received for purchase of fire apparatus, offsetting most of the costs. Small one time capital improvements, say for less than \$10,000, can be easily absorbed in an annual budget. It should be noted that the Town carries a healthy amount of surplus which can be used for smoothing the effect of year-to-year spending variations on the tax rate.

Borrowing allows for improvements to be accomplished without funding being on hand, and then for the improvement to be paid for as it is serving its purpose. This was done for the school gymnasium project.

South Bristol has adequate borrowing capacity for any likely project. The statutory limit (15 percent of assessed value per 30-A MRSA § 5702) is over a hundred million dollars. A more reasonable limit of five percent would allow for borrowing of about \$35 million.

Richert (2005) suggests that a town's debt limit can be related to the town's per capita income, limiting the per capita debt to under five percent of the town's per capita income. For reasons discussed on page 244 regarding ability to pay, this is an inappropriate measure for South Bristol.

The generous bequest from Ann Stratton was without any restrictions, leaving it up to the townspeople as to how to use it. Ann relied on the wisdom of the voters to decide at Town Meeting.

Another option, not applicable to any anticipated project in South Bristol, is user fees.

Although common in some larger municipalities, South Bristol does not have any impact fee ordinances. The closest thing to such an ordinance is the Road Commissioners' informal policy of seeking reimbursement for the cost of repairing road damage resulting from construction projects as described on page 176.

Projects and Priorities

Capital improvements are often prioritized into four categories based on urgency, necessity, and desirability.

- A. Urgent. Required to address a public health or safety problem, comply with a regulation or mandate, or meet an immediate need connected with growth.
- B. Necessary. Should be undertaken in the near future in order to service expected growth or to address a potentially serious needs or consequences.
- C. Desirable. Will improve the Town's ability to accommodate growth, enhance the quality of life, or satisfy expressed desires of the citizens for changes, improvements, or additional town services.
- D. Deferrable. Nice to have, but could be deferred without significant detriment to supporting growth or providing town services.

Table 18.10 provides the Committee's proposed Capital Investment Plan with the nine projects prioritized by the above four categories.

In South Bristol capital projects are not expected to be driven by growth. Growth is forecast to be slow and mostly, if not entirely, residential. The usual municipal buildings in a small town – the elementary school, town office, library, and two fire stations – are relatively new. For the moment, the fire apparatus is pretty much up to date. South Bristol does not have a public works department and is unlikely to need one in the next decade. Public works projects such as road paving, culvert maintenance, and roadside brush clearing are hired out, a practice which has worked well over the years.

Throughout this comprehensive plan are many strategies which, if implemented, will require spending of relatively small amounts, in most cases less than \$5000. Any proposed spending of less than \$10,000 for an item or to implement a strategy is excluded from the discussion here as it can be easily absorbed by an annual budget.

The school backup power and ballfield ramp will be close to the Southern and Village growth areas (chapter 19). The water access facility would best be on or near the Gut in the southern growth area, but could be in the north. The Walpole playground should be in or near the northern growth area.

The most critical project is to address the deterioration of the dam and bridge at the outlet of Clarks Cove Pond. No projects are necessary to directly address anticipated growth, although school backup power, the ballfield ramp, and the playground in Walpole are related to growth.

Were the **Clarks Cove Pond dam** to fail or be undermined the pond could drain, releasing upwards of fifty million gallons of water. The failure could take out the bridge over the dam, closing Clarks Cove Road at that point.

In order to determine the magnitude of the repair/replacement task and cost, an engineering study will be required which is beyond the scope of the Comprehensive Planning Committee's task and budget.

The pond is the largest fresh water body in South Bristol, with scenic, recreational, wildlife habitat, and potential water supply importance. The pond and former mills at its outlet, commercial ice cutting, and at least one mill along its tributary are of historical significance. Clarks Cove Pond is an important asset to South Bristol and its citizens.

Fire apparatus replacement is becoming an increasingly large part of municipal budgets as have other public safety concerns. About \$200,000 is the going price for a new fire truck (pumper or tanker), and the costs keep increasing as new federal regulations proliferate and technology improves. In most cases, the regulations which cover all aspects of the fire fighting profession improve safety for firefighters and improve their effectiveness in carrying out their work.

Except for a pumper due for replacement in 2011, most of the South Bristol Fire Department's apparatus is up to date, due primarily to two federal grants received a few years ago. Although otherwise replacement of the four major pieces of apparatus is probably fifteen years off, we (the Committee) recommend that South Bristol's reserve for major fire department equipment be accounted for totally separate from the annual budget and used only for major capital equipment.

Assuming that a major piece of apparatus now costs in the vicinity of \$200,000, and with four pieces with an expected life of 25 years, ongoing replacement will require an annual expenditure of about \$35,000. Minor capital equipment will take some more dollars.

Given these considerations, the Comprehensive Planning Committee recommends that starting at the annual town meeting in March of 2011, \$35,000 be appropriated annually to the separately accounted for **Fire Department Equipment Reserve Fund** each year in order to ensure that the Department's apparatus remains up to date.

Major road rebuilding and paving is becoming increasingly expensive, the most significant cost increase due to the cost of petroleum based paving material. Another layer of asphalt is the usual “cure” for a road which is severely cracking. Except for some sections of Route 129, the base under most of South Bristol’s roads is the gravel which was once the road – over time covered with layer after layer of asphalt.

The Road Commissioners have done a good job over the years of keeping the roads smooth with yet another coat of asphalt. Sometimes the new paving holds up well; sometimes it soon cracks with water infiltrating the cracks.

It would be prudent to have an analysis of road conditions (including maintenance and the need to rebuild certain sections to reduce maintenance costs) performed by a qualified transportation or civil engineer.

Using numbers from MeDOT, we have calculated some long term costs with the assumption that State/Town responsibilities will not change.

South Bristol has 26.39 miles of public roads, 11.03 miles of Route 129 and Harrington Road being the responsibility of the State. Although most roads are two lanes, many are a lane and a half wide with little traffic.

MeDOT calculates that the cost of re-paving every ten years is about \$65,000 per lane mile. We figure that for South Bristol in consideration of several public roads with little traffic and some lane and a half roads, \$50,000 is a better number to use. That still comes to over \$200,000 per year. Taking into account what we know of South Bristol roads and the traffic they carry, the Committee recommends that an annual appropriation of \$150,000 each year at Town Meeting be made to a **Roads Improvement Reserve Account** as appropriate to ensure continued improvement and maintenance of South Bristol’s roads.

Back-up electric power for the elementary school would serve two main purposes. First and most important it would allow classes to continue without interruption when utility power fails during the day. When classes are dismissed early in the day, a consequence is another day to be made up in June. Secondly, with back-up power the school could be used as a shelter, Red Cross certified or not, during extended periods of power outage.

School power loss has a number of consequences which should be precluded if possible. Most important is the disruption of the students’ day. Second is the effect on families who have to address such things as arranging at short notice child care, and leaving work – and losing pay – in order to head home. These are real economic costs which we are unable to quantify, but which are important and significant.

Affordability of housing (low-income, average worker’s, and for the elderly) is a matter which is best addressed on a regional basis. Reality is that the cost of housing in South Bristol is extremely high, making any creation of “affordable housing” in Town at the very least difficult, but not impossible. The Town’s subdivision ordinance requires one acre for every housing unit created, a possible impediment to cluster housing or condos. The Committee cites this matter as an important consideration for the near future without any estimate of costs.

Road condition analysis is worthwhile since highway maintenance has becoming increasingly expensive for a number of reasons, not the least of which is the cost of petroleum-based paving material. Until an analysis or a Pavement Preventive Maintenance program or other long range plan is implemented by the Road Commissioners, estimation of future costs, over the next decade, is speculative.

There have a number of requests from citizens for a **handicapped negotiable ramp** to the ballfield behind the elementary school. The

ballfield was built using federal funds and so is available for anyone to use. This small project, possibly involving other accommodations, would enhance the facility.

Public shore access has long been desired by the citizens. South Bristol has no publicly owned boat launch, swimming facility, or recreational access to the shore. This is despite having 69 miles of shoreline. With available shorefront land becoming increasingly scarce and expensive, if the Town is to ever provide such a facility it should be done soon.

A shore access facility would have economic benefits for South Bristol. Its presence would be an attraction to those considering moving here, particularly young families. The quality of the elementary school has recently attracted two families with young children.

A **playground in Walpole** would enhance the quality of life in the northern part of South Bristol. Due to the high cost of housing in the southern part of town, it is expected that the majority of new families with school age children will settle in the northern growth area. There is already a children's playground alongside the elementary school in the south.

Long Term Financial Planning

A Capital Investment Plan – a required part of

a comprehensive plan – is a formal list of the capital improvements expected to be needed in the future. In the case of a comprehensive plan, it covers the improvements foreseen for a decade, covering needs and, when possible, costs; but not explicitly the detailed mechanics for implementation. Table 18.10 presents the Committee's proposed plan.

A Capital Improvements (spending) Program derives from the Capital Investment Plan. It usually budgets major improvements over a five or six year period and is updated regularly. We recommend that the selectmen and the Budget Committee keep in mind any potential capital spending requirements and, if they deem it necessary, develop a formal spending program.

To summarize: A Capital Investment Plan defines what will be needed; a Capital Improvement (spending) Program details how the needs will be accomplished and financed.

In reality, many small towns do not formalize this process. Often, towns have some idea of the major capital projects looming in the future and then address them when the need becomes critical. The lack of planning – waiting until a need becomes in some way vital – can suddenly become the source of contention. “How in the world are we going to handle and pay for this?”

References

- Maine Revenue Service, Property Tax Division <http://www.maine.gov/revenue/propertytax/homepage.html> provides equalized property tax valuations for all municipalities since 2000.
- Richert, Evan, and Sylvia Most; 2005; *Comprehensive Planning: A manual for Maine communities*; Augusta, Maine; Maine State Planning Office.
- United States Department of Labor, Bureau of Labor Statistics; Consumer Price Index (CPI) is available at <http://www.bls.gov/CPI/> along with considerable other information.

Governmental and Fiscal Capacity Policies and Strategies

The policy of South Bristol will be to continue to be driven by the will of the people at Town Meeting (the local legislative body). Conservative fiscal practices should continue, while working to provide those facilities and services which the citizens need or desire.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Finance existing and future services and facilities in a cost effective manner.	Whenever appropriate, place funds in reserve accounts for anticipated major capital improvements.	Selectmen, Budget Committee, Town Meeting As needed Immediate & ongoing
	Develop a Capital Improvement (spending) Program in order to implement the Capital Investment Plan	Selectmen, Budget Committee Minimal 2011
	Review and update as necessary the Capital Investment Plan and Capital Improvement (spending) Program biennially.	Selectmen, Budget Committee Minimal 2012, 2014, etc.
	Explore opportunities to work with other communities to share facilities and capital investments in order to save costs and improve efficiencies.	Selectmen Minimal 2011 and ongoing
Explore the availability of grants in order to assist in the funding of capital improvements	Whenever capital improvements are contemplated, explore the availability of grants from federal, state, and private sources.	Town officials, as appropriate Minimal Immediate and ongoing
Direct at least 75 percent of growth-related capital investments into defined (see chapter 19) growth areas.	See text on page 256. School backup power and ballfield ramp into southern growth area; water access in or near either the southern or northern growth areas. Walpole playground in or near northern growth area.	Selectmen, Town Meeting Minimal to plan See table 18.10
Attempt to reduce the tax burden by staying within LD 1 limits.	Continue to keep municipal appropriations within the LD 1 limit.	Selectmen, Budget Committee -0- 2011 and thereafter
	Keep school appropriations as low as reasonable, with the understanding that the citizens desire to spend what is necessary to keep the elementary school open and a top-notch school.	School Board -0- 2011 and thereafter

Chapter 19 — Future Land Use

Every part of this soil is sacred in the estimation of my people.

~ Chief Seattle (c.1780-June 7, 1866)¹⁴

Future land use, as proposed in this chapter, represents the will of the citizens of South Bristol as expressed at the two visioning meetings and in response to the mail survey, and as discussed in detail in chapter 2. The people’s expressed desire to “keep the town the way it is” – a maritime village with a largely rural countryside – emerged as the vision of and hope for the Town’s future, a vision shared by the vast majority of the people.

19.1 – Background

The peoples’ vision was supported by striking statistics, with fully sixty three percent of the hundreds of respondents to the mail survey favoring town-wide zoning and only twenty seven percent opposing it. These results show a widespread acceptance of the reality that preserving what makes South Bristol special cannot simply remain a matter of hope. Rather, it requires the enactment of ordinances designed to protect South Bristol’s special qualities for future generations while avoiding the imposition of unreasonable restrictions on the rights of property owners.

This Comprehensive Plan proposes orderly growth and development while encouraging the preservation of areas crucial to maintaining the Town’s rural character. It also encourages the protection of important habitats and watersheds, and seeks to secure for future generations opportunities for traditional renewable resource-based economic and recreational activity. By doing so, the plan is faithful to the expression of public will resulting from the visioning sessions and mail survey. It is also consistent with the

legislative goal of Maine’s comprehensive planning process, which according to Richert (2005) is:

To encourage orderly growth and development in appropriate areas of each community and region, while protecting the State’s rural character, making efficient use of public services and preventing development sprawl.

The adoption of this plan will be only the first step in a continuing process. In and of itself, an adopted comprehensive plan has no regulatory power and is, in effect, *only the people’s “wish list” for the future*. Those wishes can become reality only if, after the plan is adopted, the people also adopt land use ordinances designed to implement the Plan. It is at that point in the process that proposed ordinance terms will be debated and ultimately enacted; and it is only then that the Planning Board can be given the authority and necessary tools to fulfill the people’s desires. It is critical that our Town completes the process of ordinance adoption so that the collective vision for the future may become a reality.

14. Speech of Chief Seattle of the Duwamish Tribe, delivered before the governor of Washington Territory in 1854 at the new town which had been named in the chief’s honor. Quoted in Hughes, J. Donald; *American Indian Ecology*; El Paso; Texas Western Press; 1983; p. 129.

19.2 – Current Absence of Land Use Tools

At present, most (80.7 percent) of South Bristol's acreage is beyond the Planning Board's jurisdiction. Except for plumbing (septic system) permits, new construction or excavation now requires no municipal permit unless the activity is situated within the shoreland zone or is a proposed multi-lot subdivision. Development along State Route 129 and Harrington Road requires a curb cut permit from Maine DOT for driveway or road access.

South Bristol's ordinances which bear on land use are its Shoreland Zoning, Subdivision, and Flood Plain Management ordinances. The Shoreland Zoning Ordinance applies only to activity taking place in an area within 250 feet of a body of water. The Subdivision Control Ordinance has no application unless a project involves three or more lots and thus constitutes a subdivision as defined by state law. The Town's Flood Plain Management Ordinance applies only to flood plain areas (FEMA, 1990) and does not materially expand the limited Planning Board jurisdiction conferred by the Shoreland Zoning

Ordinance. All other construction and excavation throughout the Town is at present unregulated and beyond the Planning Board's jurisdiction. Until this is addressed, it will be virtually impossible to ensure that South Bristol remains rural.

In South Bristol, projects not subject to any of the existing ordinances have constituted the vast majority of construction activity in both past and recent years. Most of this activity has consisted of residential construction, with respect to which there are presently no regulations regarding road frontage, lot size, set-backs, height restrictions, screening, sidelines, emergency vehicle access, storm water management, and similar requirements normally found in municipal ordinances.

There are restrictions set by Maine statute as well as rules on building on steep slopes of greater than 20 percent; rules which are in the process of change. In addition, there are State plumbing permit requirements and in some cases other DEP rules.

19.3 – Recent Development Patterns

South Bristol's development patterns have evolved both from the Town's history and from its unique geography. The Town lays along a 12 mile long peninsula with nearly 69 miles of coastline. State Route 129 runs north and south along its entire length and is the Town's main travel corridor.

Early settlers were attracted to the area by the availability of land and its easy access to and from the sea. They were engaged primarily in subsistence farming and trade and characteristically built their homes near the roadside or the shore. Early populations were relatively small and roadside homesteads were set far apart. Open agricultural fields and timber lots

often occupied the large spaces between them. When the Town's economic base shifted from farming to fishing after the War of 1812, it impacted this rural settlement pattern north of Rutherford Island. As farming subsided, most agricultural fields were allowed to return to forest and these large, undeveloped spaces remained intact. At the same time, development intensified at South Bristol's village and on Rutherford Island, because of their proximity to the Gut and its marine-related activities. More complete discussions of how the Town's development patterns evolved are contained in chapters 8 and 12.

To a large extent, the Town's early settlement

pattern remains today. One's visual impression of South Bristol's rural appearance results primarily from the forests, fields and viewscapes which can be seen along the length of Route 129, as well as from several of the Town's early roads, such as Harrington and Clarks Cove. This rural appearance is now threatened by increasing and highly visible roadside development, particularly

along the Route 129 corridor north of the Four Corners intersection.

Chapter 12 details the historical and more recent development trends in Town. Appendix H lists in detail building in the 1997 through 2006 decade, as shown on Map 13.

19.4 – Analysis and Key Issues

There are four separate development issues now at work in South Bristol.

Waterfront Development

The earliest development on South Bristol's shores was commercial in nature. Later development was largely residential in nature which first took the form of vacation cottages which began to appear around the end of the 19th century. Residential waterfront development has continued with increasing intensity to the present day. Today's waterfront residences are typically built as year-round homes even though they may be occupied on a seasonal basis. A typical waterfront home (except on Rutherford Island) is accessed by means of long gravel driveway or private road beginning at Route 129 or along some other town road.

Proceeding south along Route 129 from the Town's northern boundary with Bristol, gravel driveways and roads run west to the shores of the Damariscotta River. Shortly after passing south of the Four Corners intersection, waterfront driveways and roads also begin running east to Johns Bay. This pattern continues to the Village. On the northern portion of Rutherford Island waterfront development intensifies, with access to salt water available from both Route 129 and from the other island roads.

Except for a significant renovation of the Coveside marina by a group of seasonal residents, there has been little new commercial development

on the waterfront in recent years. Instead, the Town has seen a decline of active facilities such as the Gamage Shipyard and Eugley's Wharf. As noted below, the Committee believes that the retention of working waterfront sites, along with preserving the opportunity for establishing new sites, is important to the future of South Bristol.

One means of retaining existing working waterfront sites would be to identify existing working waterfront sites and water access sites and then designate or create zones in a town ordinance at these sites to preserve their continued traditional uses.

Even though the pressures on waterfront land have continued to intensify over the years, development along the shore has had a limited visual impact on the Town's rural appearance. This is due to a variety of factors. Waterfront homes are largely invisible from the Town's roads and are often located on larger parcels than one might find in the case of roadside homes. Further, construction in the shoreland zone is subject to the requirements of the Town's Shoreland Zoning Ordinance with regard to size, setback, and vegetation management. Also, significant segments of the Town's shoreline have been protected from development by conservation easements donated by landowners to local land trusts. Most of these easements are held by the Damariscotta River Association, with an additional few being held by the Pemaquid Watershed Association and the State of Maine.

Although shoreland homes have limited visual impact on the Town's rural appearance, the Committee believes that the Town should incorporate in a future land use ordinance a requirement that contiguous, undeveloped waterfront parcels, where possible, be required to share a common driveway from a town road until the common driveway divides into separate access to each home site. Because waterfront driveways often transit long stretches of forested land, such a provision would lessen storm water erosion and the fragmentation of open land and wildlife habitat.

Village Development

Development in the village area at the Gut, both on the mainland and on northern Rutherford Island, is in general more highly concentrated than in other areas of Town. This greater density is consistent with the Town's historical development pattern. On the north side of the Village along Route 129, there are also opportunities for future development. Like the village, this area is convenient to the town library and to the South Bristol Elementary School. It is also close to the only concentration of commercial activity in Town. The Committee proposes designating this area as suitable to accommodate some future growth.

Roadside Development

The greatest visual threat to the rural appearance of South Bristol is roadside development, particularly in the area north of the Four Corners intersection along the Route 129 corridor. In this area, which comprises nearly half of the Town's peninsular length, new homes are gradually filling in previously undeveloped spaces between the older homesteads, thus gradually giving the landscape a more suburban look. Harrington and Clarks Cove roads are also vulnerable to the same threat, although not to the same extent as is now present along the northern portion of Route 129. These roads contain some of the Town's oldest farms and homes, as well as

some of its most significant rural view-sheds.

South of Four Corners to the Village, new development along Route 129 has thus far been somewhat more limited than to the north. One possible reason is that new homes have been set further back from the roadway where, because the peninsula narrows in width in this area, they can be nearer to the waters of the Damariscotta River to the west and Johns Bay and its coves to the east. Another possible reason is that property tends to be more expensive in the area south of Four Corners.

Visual impact of roadside development can be reduced by maintaining existing vegetative cover and barriers, requiring setbacks, and by encouraging the use of shared driveways. Smaller lot size and frontage requirements could be used as incentives.

The viewsapes from public roads of South Bristol are ones of rural settings with a maritime village at the Gut. From the water, the viewsapes include blends of working and maritime water activities in addition to the general rural setting of the shoreline. Tree tops meeting the sky are the universal attributes of South Bristol viewsapes. Tall structures (e.g., communications towers, wind mill towers, etc.) that extend above the tree line are significant threats to the viewsapes.

To protect these rural and maritime viewsapes, criteria for tall structure development should be established to avoid materially altering the views from public roads or the water. Maintenance and operational criteria should also be established to protect health, safety and viewsapes of residents. Encroachment upon the viewsapes should be offset by improved safety and communication within Town. In the case of cell phone towers, this could be accomplished by mandating that any tower have multiple carriers contracted for tower occupancy prior to the tower being permitted. Upon completion of the useful operational activity as may have been the basis for permitting, tall structures should be removed

unless an alternative allowable use is in the permitting process.

Habitat and Watershed Development

In recent years, the area north of the Four Corners intersection and east of Route 129 has seen subdivisions which could signify the beginning of a fragmentation process with the potential for destroying what the Committee considers to be critical rural areas. These areas have a history of recreational use and selective forestry. They also contain deer wintering yards and support not only large populations of deer, but also a small population of moose, and multiple populations of smaller vertebrates. In addition, they provide habitat for wild turkeys, partridge and other game birds and are important as transient habitat for numbers of migratory bird species.

The elevated portions of this area are also the source of important watersheds located in both South Bristol and in the neighboring town of Bristol. To enhance the protection of habitat and watershed quality, the Town is encouraged to identify a liaison to work with Bristol on future land use and development along our mutual border. This Plan refers to these areas (see Map 12) as the Forest North and Forest Central sectors of Town; and the Committee considers their maintenance as unfragmented habitat blocks to be a priority. Any future development should be directed away from these areas or, at a minimum should be subject to a Conservation Subdivision (a/k/a Open Space) Ordinance whereby the Planning Board and developer work cooperatively to insure that development in these areas will result in preserving a maximum amount of contiguous open space and in creating a minimum adverse impact on the environment.

Water Supply

Because of increasing concern regarding water supply, we recommend on page 285 this be included in a future Land Use Ordinance.

Conservation Subdivisions

Conservation subdivisions are best described by Randall Arendt, considered by some to be the guru of such planning. In a paper (Arendt, 2006) he described the approach:

This is primarily a design approach for conserving existing natural and cultural resources, although a limited amount of active recreation is permissible (such as ballfields and neighborhood). Subdivisions where the majority of open space is taken up by a golf course do not meet this basic criterion.

Conservation subdivisions are generally "density-neutral", meaning that the overall number of dwellings built is not different from that done in conventional developments. Small density bonuses are sometimes granted in return for dedicating some or all of the conservation land for public access or use, for endowing permanent maintenance of the open space, or for providing workforce housing.

Conservation subdivisions are specifically designed around each site's most significant natural and cultural resources, with their open space networks being the first element to be "green-linked" in the design process. This open space includes all of the "Primary Conservation Areas" (inherently unbuildable wetlands, floodplains, and steep slopes), plus 30-80% of the remaining unconstrained land, depending upon zoning densities and infrastructure availability.

Arendt also points out that residences sited within a conservation subdivision characteristically sell for higher prices than comparable residences elsewhere. This is because, as a result of the design process, they are sited to take advantage of the most attractive natural features of the land – features which have been permanently protected by virtue of conservation easements granted as part of the conservation subdivision approval process. While this might not appeal to the public at large, it does speak the language of developers and builders.

19.5 – Town Sectors

South Bristol is more than 12 miles long, with State Route 129 running north and south along virtually its entire length, except for Inner Heron and the eastern islands. The southernmost 2 miles of State Route 129 continue onto Rutherford Island, a concentrated residential area, after crossing the state-maintained bridge spanning the Gut – a salt water reach connecting the Damariscotta River to the west with Johns Bay to the east. The Village Sector and its environs comprise the only true village in Town, but it is a village without town water supply or sewer service and will likely remain so for the foreseeable future.

Over one-half of the Town's north-south length – south of an imaginary east-west line running through Four Corners – is surrounded by salt water. The area to the north of the line is known as the Walpole section of Town. East of State Route 129, Walpole contains large, unfragmented blocks of elevated forest land bounded by State Route 130 on the north, by Harrington Road on the south, and extending east into Bristol. These blocks of forest, which are identified as the Forest North and Forest Central sectors, are separated by Split Rock Road, a rustic road with minimal development, which runs east from Route 129 to Route 130 in Bristol. In combination, these blocks of forest contain almost 3,000 acres of critical wildlife habitat in South Bristol; and are contiguous to even larger blocks of open land located in Bristol.

Much of this land is elevated and is the source of the Upper Pond, and of Wiley and Orr's Meadow brooks in South Bristol. Orr's Meadow Brook follows a winding course, running under Route 129 and then flowing into Clark's Cove Pond, also known as the Mill Pond or Ice Pond.¹⁵

15. Clarks Cove Pond is a 29.9 acre fresh water impoundment, just short of the 30 acre minimum needed to be classified as a great pond by the State.

The contiguous land located in Bristol to the east of the South Bristol town line is the upland area of the large Little Falls Brook watershed. The Committee has identified Clarks Cove Pond as a potentially important source of alternative fresh water supply for South Bristol which may be needed if subsurface water supply proves inadequate to meet future needs.

Using state and federal databases, as well as substantial local history and knowledge, the Committee has identified seventeen sectors of land encompassing all of South Bristol, including the Forest North, Forest Central, Village, and Clarks Cove Pond sectors referred to above. The sectors were identified by their respective development patterns, by their appearance and history, by the view-sheds they contain, and by their natural and cultural values and resources. (Naming is by the Committee and intended to be descriptive.) Doing so has enabled the Committee to formulate and recommend this future land use plan which incorporates a variety of proposed land uses and protection measures appropriate to preserving the important features unique to each of the sectors.

The sectors with their salient characteristics are detailed in appendix L and shown on Map 12. Roughly from north to south, the sectors are:

- Walpole North
- Forest North (extends into Bristol)
- Walpole Center
- Forest Central (extends into Bristol)
- Clarks Cove Pond
- Marine Research
- Clarks Cove Historical
- Old Agriculture
- Harrington Road Historical (extends into Bristol)
- North Branch
- East Branch (extends into Bristol)
- The Coves
- The Village

- Rutherford Island North
- Rutherford Island South
- Inner Heron Island
- Eastern Islands

The sector analysis was undertaken to allow the Comprehensive Planning Committee to better understand what the Town's desire to remain "the way that it is," means in real world terms and to assist the Committee in designating possible

growth and rural areas as required by Maine's Comprehensive Planning and Land Use Regulation Act (M.R.S.A. 30-A § 4312 (3-A)).

To encourage orderly growth and development in appropriate areas of each community and region while protecting the State's rural character, making efficient use of public services and preventing development sprawl.

19.6 – Designating Growth and Rural Areas

In general, possible growth areas should be able to satisfy the following criteria as suggested by Richert (2005, p. 212-3).

- Having, or being able to obtain, public facilities and services.
- Having natural characteristics suitable for development.
- Being large enough to accommodate the expected growth (in South Bristol, 45-50 housing units) over the next ten years and to allow the market to function.
- Being large enough to accommodate a variety of types of housing such as single family houses, condos, and multi family units.
- Being limited to a size and configuration that encourages compact rather than sprawling development.

There is no area in South Bristol which meets all of the above criteria for a suitable growth area. South Bristol has no municipal water supply and no municipal sewerage disposal system. There is no public transportation available in the Town other than those in and from Damariscotta as discussed on page 187. It is not likely that public services such as town water supply or town sewers can or will be provided in the near future as a matter of physical and economic reality.

Given the long, narrow peninsular shape of the Town, the proximity of so much of its land to salt water, and the common desire to maintain its rural appearance, there are no town areas that

can, in and of themselves, satisfy the criteria of being large enough (1) to accommodate ten years of expected growth, (2) to accommodate a variety of types of housing, or (3) that would encourage compact rather than sprawling development. Although the Forest North and Forest Central sectors in Walpole are large, relatively undeveloped areas which might arguably satisfy the size (but not the services) criteria for a growth area, these sectors constitute critical rural areas because of their environmental importance as watershed sources and wildlife habitat.

By contrast, virtually the entire town of South Bristol – with the exception of the Rutherford Island, Village, and lower portion of the Coves sectors – has the appearance of a rural area. Richert (2005, p. 134) suggests a number of criteria which can be used to differentiate between village, suburban, and rural styles. The following differentiate much of South Bristol as rural.

- Contains large intact tracts of undeveloped land.
- Has relatively few homes in proportion to land area with land used primarily for woodlands, farming, related industry, and unbroken wildlife habitat.
- Has unimproved ways connecting to rural (local) and other public roads.
- Contains expanses of undeveloped land.
- Has some wide open spaces often used informally by the public for recreation.

- Has residents whose livelihood is often related to the land or sea and who are otherwise dependent on automobiles.
- Has no municipal public utilities.

Under Maine’s statutory requirements for comprehensive plans, South Bristol could argue that it is not required to identify areas for residential, commercial, or industrial growth because, under the Comprehensive Planning and Land Use Regulation Act (M.R.S.A.30-A §4326 (3-A):

A municipality or multi municipal region is not required to identify growth areas within the municipality or multi municipal region for residential, commercial or industrial growth if it demonstrates . . . [i]t is not possible to accommodate future residential, commercial or industrial growth within the municipality or multi municipal region because of severe physical limitations, including, without limitation, the lack of adequate water supply and sewage disposal services, very shallow soils or limitations imposed by protected natural resources;

All of the above limitations arguably apply to virtually all of South Bristol’s land area.

Constraints to development, consequential to both natural resources (soil conditions, etc.) and property status (municipal ownership, land trust

ownership, etc.) are set forth in detail in appendix M. These constraints make certain areas of Town ineligible for future growth.

However, the Committee unanimously felt that proposing a Future Land Use Plan which failed to direct future growth would be inconsistent with maintaining our rural character and would represent an avoidance of its responsibility to the townspeople to “keep South Bristol the way it is.”

A possible tool for encouraging development in the designated growth areas and away from the critical resource areas is the use of transfer of development rights (TDR). This would allow the right to develop land which the Town wishes to preserve as undeveloped to be sold permanently by the owner of that land. The rights would be purchased by a developer, in a growth area, and then the developer would be allowed to develop (build houses) at a greater density than would otherwise be allowed. This would mean that house lots smaller than one acre (the current Subdivision and Shoreland Zoning ordinance requirements) would be allowed. Geology (see chapters 3 and 4 and Map 2) may significantly affect this.

19.7 – Projected Growth

Based on a consistent population growth rate of less than one percent per year over the past 20 years (see chapter 5), the Committee projects that some 45-50 new residential units on 50-75 acres might be added to the current total over the next decade. Most commercial growth would likely be included in this number since past history suggests that most commercial growth in Town will be “cottage” type businesses which are operated out of or near individual residences. Applications for major subdivisions might dramatically alter this projection, but only if one treats lots in an

approved subdivision as containing a structure which has not yet been built.

It is not uncommon for subdivisions in the region to take many years before all of the approved lots are built upon. The majority of the lots in the two subdivisions created in South Bristol in the past decade (Meetinghouse Estates and Coveside) have yet to be built upon. Another consideration is that half of the housing units in Town are seasonal, a condition which is continuing.

19.8 – Future Land Use Rationale

The rationale of this Plan is to keep South Bristol a maritime village set in a rural countryside, which is what the majority of the citizens wants. The Committee believes that doing so involves not only preserving the Town's traditional appearance, but also, and possibly more important, preserving those values and opportunities which made the Town what it has been – more than just a residential, bedroom, or vacation community. Over the years, South Bristol's residents have engaged in subsistence farming, cash crop agriculture, animal husbandry, brick making, trade, timber harvesting and lumber milling, ice harvesting, boat building, fishing, tourism, and vacation rentals. All of this economic activity requires the necessary open space and natural resources to support it; and a number of these resource based industries have a very real and immediate future.

Local agriculture, both in South Bristol and the region – particularly organic farming – has expanded dramatically in recent years and local farmers have a ready market for their products at Yellowfront Grocery, the Rising Tide Cooperative, and at Hannaford Supermarket, all in Damariscotta. Locally grown foods are generally better and less expensive, because their cost to the consumer does not include the cost of transportation over long distances. This area also has a ready market for forest-related products. Tourism and vacation rentals have been staples of the local economy for more than a century and at their core depend on maintaining the natural beauty of the Town. Maintaining small herds of llamas, alpacas, buffalo, unique species of sheep and cattle, and deer have also become regional growth industries.

The problem faced by the Committee was how to maintain the village and rural countryside while at the same time accommodating both projected residential growth and preserving open space, recreational, and renewable resource-based economic opportunities for the future. Implicit in

the notion of protecting the rural countryside was the notion of keeping critical rural areas intact because of their importance as wildlife habitat, fresh water supply, and recreational land.

The Committee concluded the best solution to accommodating most of the projected residential growth was to designate three growth areas.

The Village sector (Map 12) includes both sides of the Gut and is capable of modest expansion on the mainland. To the north, separated by two preserves and other land permanently restricted from development, is an area bordered by the restricted land to its south, Bradstreet Cove to the north, and Seal Cove and Johns Bay to the west and east. This area is suitable for growth, and by its proximity to the village is in some ways a continuation of the traditional village. These two growth areas could accommodate more than 60 percent of the Town's projected residential growth of 45-50 units over a decade.

Encouraging development in the above two areas is consistent with retaining the town's village with a rural countryside appearance. The village area includes the Town's elementary school and its public library. Given South Bristol's absence of municipal public utilities, concentrating development in any area of Town presents potential issues of adequate water supply and septic capacity.

Although remote, it might be possible to create a fresh water reservoir or a town well field; and a sewerage treatment plant to serve the needs of a more highly concentrated village. The Committee has also determined that tying in to the Boothbay Region Water District or building a desalinization facility in the Gut area are viable alternatives to meeting possible future fresh water needs.

The Committee has also identified a third growth area suitable for accommodating

residential growth without creating a materially adverse impact on the area itself or on the Town's rural appearance. That area is the Walpole North sector and is situated north of Walpole Meetinghouse Road on the east and west sides of State Route 129 and north of a line intersecting the shoreline of Wiley Cove on the Damariscotta River. In this area there are already more than 25 lots potentially suitable for residential development on which little development has as yet taken place. The Walpole North sector is suitable for some future growth because of its relative proximity to Damariscotta (3.3 miles) and to all of the services available in that town.

In order to encourage growth in the three designated growth areas and discourage it elsewhere, a number of methods might be employed. The proposed Land Use Ordinance should include the requirement of town-wide building permits. If legal, a lower price could be placed on building permits in the growth areas. Permitting should be streamlined in the growth areas, to the point where the Code Enforcement Officer grants those permits unless the proposed construction involves the shoreland zone. Away from the shoreland zone, the Planning Board would only get involved if the CEO requires its guidance.

To this end, the Town must provide the necessary training, tools, and support to enable the CEO to carry out the permitting and enforcement duties.

The Town's historically rural appearance outside of the village area is currently being threatened by concentrated and highly visible roadside development. While such development has not yet reached the point of no return, it may soon do so unless controlled and regulated by performance standards set forth in a land use ordinance. Among the Town's rural sectors most impacted by this development are, from north to south, Forest North, Forest Central, Walpole Center, Clark's Cove Historical, Harrington Road Historical, Old Agriculture, and the Coves

sectors. In particular, State Route 129, Clarks Cove, and Harrington roads are scenic corridors, and contain rural vistas and historic structures. In the case of Harrington Road, these features continue into Bristol where Harrington Road continues to State Route 130.

The large, relatively intact habitat blocks designated as the Forest North, Forest Central, and Clarks Cove Pond sectors have particular importance as watersheds, wildlife habitat, and open space and are considered by the Comprehensive Planning Committee to be critical rural areas. The Committee strongly recommends that the Town explore the possibility of either acquiring ownership of these sectors as public lands or of acquiring conservation easements on them. To the extent that future development is permitted in these areas, it should be closely controlled by a Conservation Subdivision Ordinance whereby the Planning Board would work with the developer in designing any subdivision in order to minimize its impact on the land.

Recreational and open space opportunities are important aspects of future land use in South Bristol. These uses have occurred for decades on many private land holdings. Two important tax exempt holdings dedicated to education and recreation are the Wawenock Golf Club and the University of Maine's Darling Marine Center (including McGuire Point). In keeping with the Town's intent to maintain its rural character materially unchanged, the Town desires a mechanism to keep these two parcels in a complementary use.

The Darling Center has a significant waterfront facility as part of its teaching and research facilities which could possibly provide an opportunity for future public waterfront and water-access ramp development for Town residents. These opportunities would be in the Town's interest and would be consistent with the public's desires.

The Committee recommends the Town position itself to acquire the right of first refusal or option to purchase those lands, particularly if there is any chance of either being put up for sale. In addition, the Town is encouraged by the Committee to designate Wawenock Golf Club and the Darling Center (including McGuire Point but excluding the developed waterfront) as open space and recreational zones.

The balance of the Town's land sectors as enumerated above and in appendix L are largely rural in appearance. Given current trends, they can be expected to receive some portion of the Town's anticipated development over the next 10 years. However, since the will of the townspeople is to maintain the rural appearance of these areas, it will be necessary to pass a Land Use Ordinance which contains sufficient performance standards regarding minimum road frontage, shared

driveways, minimum setbacks, and required vegetative screens in order to insure that these areas continue to retain as much as possible of their traditionally rural appearance.

Marine resources along the shoreline are particularly threatened as shoreline development continues and existing development ages. Maricultural operations near the shore have been impacted in the past due to poorly maintained/failed septic tank and leach-field systems draining wastewater into the Damariscotta River. Such impacts can be prevented through well maintained septic systems or replacement with new systems. The committee recommends the Town consider adopting a system requiring all wastewater disposal systems be licensed and periodically re-licensed based on conformity with maintenance and operating standards.

19.9 – Land Use Areas

This Plan proposes creating seven land use areas within South Bristol: three growth areas, three critical resource areas, and a rural area comprising the remainder of the Town. There is no necessity for a transition area.

Also proposed are two small commercial districts. Both are in the shoreland zone. In the Shoreland Zoning Ordinance they are referred to as commercial areas, areas with which our two proposed commercial districts generally conform.

To a considerable extent, each of the areas and districts as defined reflect historical conditions and patterns of use. All are shown on Map 16 (Future Land Use).

In no case will any significant municipal capital investments be required to support the proposed land uses.

Growth Areas

The Northern and Southern growth areas

encompass two of the four areas in Town where concentrated residential growth has occurred during the past two decades. (See Map 13.) The other two areas of recent growth are the Mears Cove Subdivision and Rutherford Island.

Inasmuch as the people's vision is to keep South Bristol a rural community and relatively unchanged in appearance, these growth areas were defined as they are already suitable for growth, have adequate available space, and would avoid major development in relatively undeveloped forested land and open areas.

The **Northern Growth Area** has the advantage of being but three miles from Damariscotta, the nearest regional service center. In addition, it is the closest part of Town to out-of-town employment opportunities. The Meetinghouse Estates subdivision still has several unbuilt upon house lots available.

The **Southern Growth Area** is in essence an extension of the traditional village around the Gut. Growth there has been slow but steady over the years, with a good part of the residential construction being in-fill. Traditional village services and amenities – the elementary school, the library, convenience stores, and employment in maritime industries – are already nearby. Two preserves, Library and Tracy, are just south of the growth area providing recreational opportunities as does the playground at the school.

The **Village Growth Area** has adequate space available for moderate growth, including one open land parcel of over 13 acres. Moderate building in the traditional village area, so long as the soil can handle the septic systems and adequate water is available, would enhance the traditional maritime village appearance. Like the Southern Growth Area, traditional village amenities and recreational areas are close by.

With no municipal public utilities and none anticipated, such services or their expansion are not a consideration in locating growth areas. As is true throughout South Bristol, residential building of necessity requires a good well and land capable of supporting a septic system. We have not heard of any problems of note in either of the three growth areas.

South Bristol requires in the Shoreland Zoning and Subdivision ordinances a minimum of one acre per residential unit. We do not anticipate this changing. There are opportunities in the growth

Table 19.1 – Proposed land use areas and districts

Area/District	Type	Acres
Northern Growth Area	Growth	276
Southern Growth Area	Growth	476
Village Growth Area	Growth	105
Forest North Critical Resource Area	Critical resource	1241
Forest Central Critical Res. Area	Critical resource	518
Clarks Cove Pond Critical Res. Area	Critical resource	420
Rural Area	Rural	5326
Gut Commercial District	Commercial	33
Christmas Cove Commercial District	Commercial	2

areas for cluster housing, and in this Plan we have proposed that a conservation subdivision ordinance be enacted.

In the past there has been little interest in Town for building multi-unit structures and we do not anticipate this changing. Table 13.5 on page 160 indicates that in 2000 there were two duplex and 13 multi-family housing units in Town. We believe that the multi-family housing units represent those housing extended families.

Existing houses vary from those built in the 1700s to quite modern, and all seem to fit well together as part of the Town’s character. A few mobile homes are present. Construction over the last two or three decades in some cases replicates older styles, in other cases is of typical current styles. There is no need to prescribe architectural styles or standards. This Plan does propose a building ordinance which will be directed primarily at minimum safety and efficiency standards.

All three of the growth areas are bisected by State Route 129, the Town’s major road which runs north-south from the Bristol border to the Atlantic Ocean. (See Map 16, Future Land Use.) State maintained, Route 129 in its current configuration will be adequate for all expected traffic. There are also adequate town roads in the three areas; we see no need for any new town roads; new development might result in new private roads.

The Committee does not envision any infrastructure investments, other than maybe a road sign and post or two, to support the growth areas.

Critical Resource Areas

The three designated critical resource areas (CRA) encompass the three largest unfragmented habitat blocks of land in South Bristol, and are shown on Map 12 with the same sector names. All are in Walpole, the

northern part of Town. They provide critical wildlife habitat and have traditionally been used by the public for hunting and outdoor recreation.

The **Forest North CRA** and **Forest Central CRA** contain the headwaters of brooks draining into both Bristol and South Bristol. **Clarks Cove Pond CRA** contains the only large (29.9 acre) body of fresh water in Town. Were these three areas to be broken up and developed, the vision of South Bristol remaining a rural town would be forever erased.

Forest North and Forest Central are separated by Split Rock Road, narrow and with very little development along its borders with the two areas. Although we mapped these areas as sectors using a 500 ft buffer around roads, in fact the forest comes right up to Split Rock Road making the two sectors almost as one so far as wildlife is concerned. The two areas of unfragmented forest extend well into Bristol. We propose that the borders of these two critical resource areas come closer to Split Rock Road, probably to within a hundred yards. Currently, the forest is in most cases within a hundred feet of the road.

The Clarks Cove Pond CRA (sector), except for the restrictions contained in the Shoreland Zoning Ordinance, would be relatively easy to develop, depriving the Town of a unique resource which provides recreational fresh water fishing in both the pond and Orr's Meadow Brook which feeds it, and a habitat for migratory birds.

We suggest that the proposed Land Use Ordinance contain language and incentives to discourage additional development in these three critical resource areas.

Rural Area

The remainder of South Bristol, the area outside of the six areas described above, has been classified as rural; a single **Rural Area**. Except for the commercial maritime activity along the Gut and the restaurant and marina on the shore of Christmas Cove, the description of most of the

Town as rural is appropriate. An occasional commercial activity does not detract from that.

The retention of the overall rural appearance – and the reality as rural – of South Bristol is in perfect accord with the people's vision for the future.

Although there are commercial activities scattered throughout Town, they do not detract from the rural appearance. The commercial activities on the Gut are appropriate for a village on the waterfront of a small coastal Maine town.

Significant additional commercial activity at the Gut is unlikely in the near future due to the lack of available land.

We propose that a land use ordinance include criteria for the creation of new commercial activities in the Rural Area and provisions for the Planning Board to make appropriate decisions before granting permits.

Throughout the Rural Area there is adequate land for scattered, but not concentrated, residential and commercial development. As stated earlier, we recommend that the land use ordinance require visual buffers and set-backs in order that the Town's rural appearance not be changed.

As noted above regarding the three growth areas, the Town's road system – State, local, and private – with routine maintenance will be adequate for all envisioned growth.

Commercial Districts

Two small commercial districts are defined within the rural area. As noted above, they generally conform to the commercial areas of the Shoreland Zoning Ordinance.

The commercial areas on both sides of the Gut are considered a commercial district within the Rural Area. Those areas are classified in the Shoreland Zoning Ordinance as "general development", as is a small area at Christmas Cove. The Christmas Cove area, the second

proposed commercial district, is relatively small. Defining these two areas as commercial will ensure that they remain commercial rather than become residential, which would change the nature of the Town to one without any defined maritime commercial areas.

Both of these commercial districts should be restricted to those activities requiring direct access to tidal waters, such as the fisheries and marine services.

The Gut Commercial District is bordered by residential shorefront development to both the east

and west on both shores of the Gut. The areas inland from the district are residential. Should at any time additional contiguous commercial activity become possible by conversion of residential area there, the commercial district should be expanded.

Likewise, the Christmas Cove Commercial District is bordered by residences, and commercial expansion is unlikely, but should be similarly managed as at the Gut.

Current uses in these two districts should be grand-fathered in any future land use ordinance.

19.10 – Compatibility With Regional Context

This Plan’s rationale is fully compatible with the context and history of the region. Town residents have since the 1960s looked to Damariscotta to provide the vast majority of needed goods and services; they neither expect nor desire shopping centers to be located in Town. The same is largely true with regard to employment opportunities in that many town residents are employed in Damariscotta or in the general vicinity of the Route 1 corridor. Further, if implemented both in the immediate future and beyond, this Plan will enhance local employment opportunities by encouraging the maintenance of undeveloped land and the open spaces necessary to support future commerce based on the continued existence of renewable natural resources.

South Bristol’s only land boundary is with Bristol. Across the Damariscotta River it borders Newcastle, Edgecomb, and Boothbay. The river

is a shared resource, and whenever a matter of a lease for an aquaculture permit arises, South Bristol is usually a party to the process. As for Bristol to the east, the shared unfragmented habitat blocks must be managed by both towns, and to that end we propose in the policies and strategies of this chapter that South Bristol and Bristol engage in a dialogue to work together to protect those valuable resources.

The only current regional planning effort is the Gateway 1 project, stretching from Brunswick along US Route 1 to Stockton Springs. This project is being led by the Maine Department of Transportation. Although not directly affecting South Bristol, towns away from Route 1 are invited to join the project. We discussed this on page 144 in chapter 11 and in chapter 14, and recommended joining the effort in strategies there.

19.11 – Conditions and Trends

At present, the Town has no dimensional standards regarding lot sizes, other than in the shoreland zone where residential lots must be one acre minimum with 150 frontage on the tidal shore and 200 feet on non-tidal shore. These frontage minimums increase to 200 feet and 300 feet respectively for industrial, commercial, and governmental uses. There are no minimum frontage requirements for marine related commercial uses in the commercial district, but non-marine related uses in tidal areas of the commercial district require a 200 foot minimum. The town’s Shoreland Zoning Ordinance is currently (2010) being amended. The only other land use ordinances are a Subdivision Control Ordinance and a Flood Plain Management Ordinance, both of which conform with minimum state standards.

Constraints to development based on

geological conditions and hydrology are shown on Map 2 and are summarized in appendix M. These conditions are discussed at length in chapters 3 and 4. Potential constraints based on natural resources are discussed in chapter 6 and shown on Maps 5 and 14. Those based on the presence of historical and archeological resources are discussed in chapter 8 and are shown on Map 9. Map 14 shows numerous restrictions and potential restrictions to development categorized by severity.

The Committee estimates that the residential growth projected in this chapter and also population growth projected in chapter 5 would utilize approximately 50 to 75 acres of the Town’s unconstrained land over the next decade.

References

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Federal Emergency Management Agency (FEMA); 1990; South Bristol Flood Insurance Rate Map (FIRM); Available at South Bristol town office.

Gateway 1; <http://www.gateway1.org/> Current information available at this URL.

Richert, Evan, and Sylvia Most; 2005; *Comprehensive Planning: A manual for Maine communities*; Augusta, Maine; Maine State Planning Office.

Future Land Use Policies and Strategies

The goal of South Bristol in planning for future land use should be to support orderly growth while seeking to preserve the essential characteristics of the Town – the characteristics which along with its citizens define South Bristol. The citizens have stated clearly that they wish to see the maritime activities and rural nature preserved.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Encourage development in the designated growth areas	Establish efficient permitting procedures, especially in growth areas.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Include in the land use ordinance an efficient method of processing permits for the growth areas, and continue to follow expedited procedures in the Shoreland Zone and elsewhere in Town.	
	Create fair and efficient permitting procedures, with appropriate fees. Establish streamlined permitting procedures in the growth areas.	
	Provide the Code Enforcement officer with the necessary training, tools, and support necessary to carry out his duties and enforce land use regulations. Ensure that the CEO is certified in accordance with MRS 30-A § 4451.	Selectmen \$500 per year 2011 and thereafter
Prevent roadside sprawl	Adopt a land use ordinance containing Planning Board permit requirements for all new residential and commercial development.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Adopt minimum road frontage requirements for new construction along State Rout 129 ; and along Clarks Cove, Harrington, Carl Bailey, and Ridge roads.	
Reduce the visual impact of roadside development	Adopt minimum setback requirements for parcels with roadside frontage.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Adopt minimum requirements for vegetative screening for parcels with roadside frontage.	
	For new construction, grant the Planning Board discretion to require common driveways to serve abutting lots.	
Establish efficient permitting procedures	Allow the CEO to issue most building permits in the growth areas, outside of the shoreland zone,	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect critical rural areas and Prime Agricultural Soils	Designate the Forest North, Forest Central, and Clarks Cove Pond sectors (Map 12) as resource protection zones.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Limit non-residential development in critical rural areas to natural resource based businesses, nature tourism and outdoor recreation businesses, and home occupations.	
	Consider making available Transfer of Development Rights to discourage development in the Forest North, Forest Central, and Clarks Cove Pond sectors (Map 12).	To be addressed in chapter 20. See page 286 for discussion and possible completion date.
	Enact a Conservation Subdivision (a/k/a Open Space) Ordinance to regulate any permissible development in critical rural areas and in areas containing Prime Agricultural Soils.	To be included in a future conservation subdivision ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
	Encourage the expenditure of Town funds to acquire lands or easements on lands within the Forest North, Forest Central, and Clarks Cove Pond sectors (Map 12).	Selectmen and Town Meeting TBD 2011 and beyond
Conserve and protect open space	Designate Wawenock Golf Club lands (currently tax exempt) as open space and recreational zones in any new land use ordinance.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Designate Darling Marine Center lands except for the developed waterfront as zones reserved for education, research, and recreation in any land use ordinance.	
	Acquire a right of first refusal or option to purchase both the Wawenock Golf Club and Darling Marine Center properties, to be exercisable in the event of a proposed sale or transfer of either property.	Selectmen TBD 2011 and beyond
Engage the town of Bristol	Appoint a member of the Planning Board as Municipal Liaison Officer.	Selectmen -0- 2011
	Initiate dialogue with Bristol town officials about protecting the value of areas of common interest to both towns, particularly the Bristol lands abutting South Bristol's eastern land boundary, and along the Harrington and Split Rock road corridors.	Selectmen -0- 2011

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Encourage agriculture and forestry	Allow agriculture and forestry as permitted uses in any residential zone created by any new land use ordinance.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Include “right to farm,” “right to harvest,” and “right to raise” (animals) provisions in residential zones created by any new land use ordinance to protect these traditionally rural uses from nuisance suits.	
Encourage the protection of Working Waterfront	Designate current marine-related uses which include water frontage or waterfront access as zones permanently reserved for such uses in the town’s future land use ordinances.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Acquire with town funds at least one waterfront parcel, and access thereto, for recreational and commercial uses to be apportioned, regulated, and managed by the Town.	See chapter 10 on page 132. Also, see discussion in chapters 10 and 15.
	Designate the waterfront areas of the Darling Marine Center and McGuire Point (presently tax exempt), together with access thereto, as an area reserved for future marine-related commercial use and for future recreational use.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
Protect marine resources	Initiate a system requiring that all wastewater disposal systems be licensed and periodically re-licensed based on their conformity with maintenance and operating standards appearing in the Town’s new building ordinance. This is permitted by M.R.S.A. 30-A §4211 (1).	To be included in a future building ordinance. See chapter 20 on page 285 for anticipated cost and completion date.
Increase public waterfront access	Acquire with town funds one or more waterfront parcels, together with access to those parcels, for use by all of the Town’s residents.	See chapter 10 on page 132. Also, see discussion in chapters 10 and 15.
	Acquire a right of first refusal or option to acquire the waterfront area of the Darling Marine Center for future use by the Town’s residents, with such right or option to be exercisable in the event of any proposed sale or transfer of the property.	Selectmen TBD 2011 and beyond
Regulate mining, quarrying, and other sub-surface extraction	Require permits for mining and excavation projects including gravel extraction.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.
	Make all such projects subject to site specific performance standards to be applied by the Planning Board prior to approving a permit.	
	Grant to the Planning Board jurisdiction to require permit applicants to restore the sites to a visually and environmentally acceptably condition.	

Policy	Implementation strategy	Responsible entity
		Estimated cost
		Completion date
Protect the rural/maritime viewscales	Establish criteria for development that will not materially alter the rural and maritime viewscales from public roads and the water.	Towers will be addressed in chapter 20. See page 286 for discussion and possible ordinance enactment.
	Establish operational and maintenance criteria for tall structures to protect the health, safety, and viewscales of residents.	
	Require the dismantling of tall structures when they are no longer being used for their intended purpose or another allowed use.	
Permit non-conforming uses which predate ordinance enactment	Include a provision in any new land use ordinance that pre-existing, non-conforming uses are “grand fathered” and may continue unless abandoned or expanded.	To be included in a future land use ordinance. See chapter 20 on page 284 for anticipated cost and completion date.

Chapter 20 — Bringing the Plan to Life

*Things may come to those who wait,
but only the things left by those who hustle.*

~ Abraham Lincoln (1809-1865)

Nothing will come about by itself as a result of the citizens of South Bristol adopting this Comprehensive Plan at Town Meeting. As we wrote in the introduction, “This Comprehensive Plan is the people’s vision for the future of South Bristol and, in and of itself, *has no regulatory power.*”

It remains for the Town to make the final decisions on which of the proposed actions will be undertaken, when, and in what manner. Those decisions we, the Comprehensive Planning Committee, leave to you, our fellow citizens. We place the result of six years of careful work and study into your capable hands.

20.1 – The Path to Plan Adoption – and Beyond

This Comprehensive Plan is a collection of steps proposed to be taken during the next ten years and embodies ideas from many different people and sources. The overriding theme is to carry out the goal often stated by the citizens – “Keep the Town the way it is.” *Doing nothing is not an option.*

The adoption process will start when the Comprehensive Planning Committee votes that in its best judgement the plan is complete.

At that point a number of copies of the Plan will be printed, provided to town officials, and made available for public review. The Committee will schedule an informational meeting and advertise it. At the same time an informational brochure will be mailed to every property owner in Town.

About a month later the Committee will hold the public informational meeting where the people can discuss the plan, have questions answered, and let the Committee know of any perceived problems.

After making any necessary adjustments to the Plan, it will be submitted to the Maine State Planning Office (SPO) for its review as to

whether it is complete and whether it is consistent with Maine’s Growth Management Act.

If any inconsistencies are found, the Committee will make the necessary changes and resubmit the Plan for final State approval.

The next step will be a hearing as required by state law in order to assure that the townspeople are familiar with the Plan’s contents. Although changes are permissible at this point, they are unlikely since they would probably have been addressed at the earlier informational meeting.

Then a town meeting will be called to adopt the Plan. At the town meeting the Plan, by state law, cannot be amended – only voted up or down.

At that point the work will have just begun and ***nothing will have changed*** except for South Bristol having an adopted comprehensive plan consistent with Maine’s Growth Management Act.

Then the process of Bringing the Plan to Life can start. Strategies large and small can be implemented. Ordinances can be crafted and enacted. People can become involved. The work necessary to “Keep the Town the way it is” can start.

It will be up to the citizens of South Bristol to make desired changes and enact those ordinances which they deem necessary. Along with that will be citizens working with the Board of Selectmen and the Planning Board to support their work

The completion dates for implementing the various strategies through the plan are the suggestions of the Comprehensive Planning Committee, based on what is considered a doable schedule and the available resources, particularly the people who will be involved and their available time.

Many people will have the opportunity to be part of the implementation. Those directly involved in town government will have roles to play. Volunteers for various tasks will be needed from time to time. Everyone who would like to help will have the chance.

South Bristol is a small town with a limited governmental structure. The visioning meetings and mail survey responses said that the people like it that way. But, the small size of town government poses the question, “Who will keep an eye on the plan, keep track of progress, and periodically report to the people on the status of progress?”

To this end, we propose that a Comprehensive Plan Advisory Committee of seven members shall be appointed by Town Meeting, South Bristol’s legislative body. The committee shall be made up of one Selectman, one member of the Planning Board, and five citizens who are not full-time Town officers. Except for the members from the Selectmen and Planning Board, they shall serve staggered terms of three years with no limit on succession. The members from the Board of Selectmen and Planning Board shall be appointed by those Boards, and may be replaced at the will of those Boards. Upon being convened by one of the citizen members and electing a secretary, the chair shall be elected from the citizen members and terms drawn by lot. The committee shall serve without compensation.

FROM GOALS TO ACCOMPLISHMENTS

Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity. Gen. George S. Patton, Jr.

This Plan contains many goals; mostly at the ends of the chapters, stated just above the policies and strategies. In each case there are numerous policies, which are themselves more specific goals.

Associated with each policy the Committee has outlined one or more strategies appropriate to carrying out the policy.

In the rightmost policy and strategy columns we have suggested an entity to be responsible for implementing the strategy – for devising the necessary tactics and, using those tactics, carrying out (or implementing) the strategy.

The Committee does not feel that it is within its mandate to specify how those people charged with implementing pieces of this Comprehensive Plan will carry out their work. The Committee should not attempt to micro-manage the work of those who follow.

The Plan tells people *what* we, in our best judgment, propose to be done to achieve the vision of the townspeople. We leave the details to others and expect to be surprised by their ingenuity in doing good work for South Bristol.

It will be important that the members of the Comprehensive Plan Advisory Committee be familiar with the entire contents of this Comprehensive Plan

An important duty of this committee will be to monitor policy implementation progress and write a report for the Town Report each year. This will keep the plan and planning in the public’s eye. The Advisory Committee shall be available to assist and advise town officials whenever asked.

A comprehensive plan should be a dynamic – not static – document. Over the decade of the Plan’s life there may be changes in South Bristol which need to be addressed by amending the Plan, although this should not occur frequently.

A comprehensive plan by Maine law sunsets twelve years after its adoption, and is required by

statute to be completely reviewed five years after adoption. Both the five year review and the planning for a new Plan after ten years could be initiated by or taken care of by the Advisory Committee with the assistance of the Selectmen and Planning Board.

Given the detail of the currently-proposed-for-adoption Comprehensive Plan, future work may be much less of a chore than the recent six year

project.

There are numerous instances in the plan where the responsibility is “A volunteer committee” to be appointed. In some of these cases, the Advisory Committee might handle the projects; in others the Advisory Committee could suggest a committee to be appointed by the Board of Selectmen or Planning Board.

20.2 – Many Small Tasks

Throughout this Comprehensive Plan there are many strategies, some significant, some rather minor. All of them are the result of the research and deliberations of the Comprehensive Planning Committee. Each is included since the Committee felt that they were worthy of consideration by the Town.

Many of the proposals are relatively minor, both in cost and changes to South Bristol. Each was considered to have potential for making a positive and desired change or necessary to keep the Town the way it is. Others are significant in both the potential for change, and in some cases the cost.

Accomplishing the various tasks and reaching goals will not happen overnight, nor even in a year or two. We recognize that South Bristol has limited resources when it comes to people becoming involved in municipal work and activities. But South Bristol also has a history of its citizens – both year-round and seasonal – pitching in when there are jobs to be done. Sometimes all that is needed is asking them to help.

The town has a very talented population with many skills. Many people, by their nature, are eager for a chance to share their skills and knowledge, and proud to have the opportunity.

Some examples of voluntarily helping without

being asked are a lifetime resident donating land for a new cemetery when burial space was almost exhausted, roadside trash pick-up to keep the Town looking neat, a retired doctor giving an annual seminar for the medical first responders, a seasonal resident bequeathing one third of her estate to the Town, a private fund raising effort to pay for a significant portion of the cost of the new school gymnasium, and ordinary people doing ordinary things, “Just because it might help.”

The Comprehensive Planning Committee came into being after a small notice was published in the *Lincoln County News* by the Planning Board. About ten people showed up at the organizational meeting and an *ad hoc* committee was formed, to be guided by the Planning Board. The Plan you are reading is the result.

The important thing is that we, the Committee, present the ideas for consideration by our fellow citizens, and leave it up to them to make the final decisions.

The consequences of the work of the Comprehensive Planning Committee will, after the citizens adopt this Plan, be in the capable hands of those citizens.

There are many instances in this Plan where we suggest a committee be appointed, usually by either the Board of Selectmen or the Planning Board. In some instances we suggest that the

responsibility for implementing a strategy should be the responsibility of another official, for example the Harbor Master or the Code Enforcement Officer. In one case, we recommend that the committee appointment be by the voters at Town Meeting.

Another approach would be for one or more citizens to decide that they have interest and talents appropriate for a suggested task. There would be nothing wrong with them getting together, coming up with a plan, and approaching the Town for its concurrence that they are the right people to do the work. In some instances, it might even be a committee of one.

It is important that seemingly minor, but in reality important, suggestions not be brushed

aside – simply because they are perceived as small matters. Each can be important to the future of South Bristol and carrying out the people’s expressed desire to “Keep the Town the way it is.”

We anticipate that the Board of Selectmen, the Planning Board, and other town officials will familiarize themselves with the strategies for which we propose they take responsibility. From there, they can figure out how best to approach each task. The Comprehensive Plan Advisory Committee will be available to lend whatever assistance is requested.

It will be appropriate for those working on tasks from this Plan to keep the Advisory Committee updated on actions and progress.

20.3 – Ordinances and Actions

Throughout this Comprehensive Plan mention is made of items to be included in new ordinances. These are the most far reaching proposals in the Plan. The proposed ordinances are (1) Future Land Use, (2) Building, and (3) Conservation Subdivision. In addition the Plan proposes a minor change to the Subdivision Ordinance in the matter of supporting affordable housing insofar as it might be possible in South Bristol.

Creating and adopting these ordinances is specifically covered in this chapter.

We include matters of proposed and updated ordinances here, rather than in earlier chapters, in order to consolidate the sometimes scattered references and details into one place. In particular, the associated costs cannot be reasonably allocated to a single item or feature of an ordinance.

Since creating a new ordinance is a major undertaking, it is reasonable at the outset to attempt to cover as much of the ground as

possible. On the other hand, it is reasonable to defer some points to a later time when a need arises and address those points with amendments.

Land Use Ordinance

The first question in the mail survey was, “Would you be in favor of town-wide zoning?” By a better than two to one margin, the people said yes – at almost the exact same rate by both year-round and seasonal residents. The third most popular idea from the first visioning meeting was, “Zoning could be our friend – used to address the highest concerns, not clotheslines.” At the second visioning meeting the number two idea was, “Develop town-wide land use plan.” Land use planning and ordinances were mentioned several times in the more popular ideas from both visioning meetings.

We propose that a reasonably comprehensive Land Use Ordinance be developed and adopted within two years of the adoption of this Plan. The Planning Board would have principal responsibility with support from other town

officials and the citizens.

The benefits would be many. It would become a tool for guiding growth, helpful for reducing sprawl, a means for implementing town-wide building permits for non-trivial construction projects, and provide the Board of Assessors with updated information.

The ordinance must not be excessively restricted regarding what a landowner can do with his or her land. It must not address such matters of individual choice as clotheslines, parking an RV or boat in the driveway, or keeping the lawn mowed.

As discussed in chapter 4 (Water Resources), adequate fresh water from wells is a critical concern in South Bristol. To this end, we recommend that water supply be considered in all Planning Board deliberations regarding land use. It is likely that in order to make intelligent decisions, the Board will at some point have to commission and fund a new professional survey of the water supply situation, particularly on Rutherford Island, but likely for the entire Town.

Building Ordinance

A town-wide building ordinance is mentioned in several places in the plan. It was not the subject of a question in the mail survey, but was mentioned at visioning meetings in the context of requiring town-wide building permits. Maine will impose a state-wide building code by statute sometime in 2010. Towns with a population of less than 2000 will be exempt (at least for now) so it will not immediately affect South Bristol. A suggestion from the first visioning meeting was, "Town-wide building permits to fund affordable housing in some way." (See appendix A.)

We *do not* propose that South Bristol adopt the state-wide building code. We do propose a very limited ordinance to address only those matters appropriate for and important to South Bristol.

The primary areas of concern are safety and,

as is appropriate for these times, energy efficiency. It was suggested in chapter 7 (Hazard Mitigation) and chapter 9 (Agriculture and Forestry) that clearing highly flammable dry tinder away from buildings could promote fire safety for homes in the case of woods fires. The ordinance should include this as a strong encouragement. For buildings close to the shore, it could address resistance to hurricane force winds, breaking seas, and storm tossed rocks.

Many safety considerations such as for chimneys, electrical, plumbing, and smoke alarms are already covered in various State statutes and rules and so do not need to be considered here, except possibly by reference.

The building ordinance must not preclude the construction of what was once the typical cottage with unsheathed inside walls, and probably should include wording specifically permitting such construction.

Conservation Subdivision Ordinance

This ordinance, also known as "open space", would require development in areas which are critical habitat or which are desired to be kept rural to use conservation subdivision techniques, whereby the Planning Board and developer work cooperatively to insure that development in these areas will result in preserving a maximum amount of contiguous open space and in creating a minimum adverse impact on the environment.

A conservation subdivision (see sidebar on page 265) starts with a reasonably large area of usually open or forested land (some of which might be un-build-able), creates concentrated building lots (possibly smaller than would otherwise be allowed), and permanently encumbers the contiguous unbuild-upon area as never to be developed. The overall result is density neutral. (For example, rather than dividing 30 acres into six five-acre lots, six one-acre building lots could be created and 24 acres of land remain open in perpetuity).

Minor actions

As discussed in chapter 13 (Housing), the current *Subdivision Ordinance* should be amended to require that one affordable housing unit be built for every nine market priced housing units (ten percent of total).

South Bristol's *Shoreland Zoning Ordinance* is currently (2010) being updated to conform to state requirements.

In chapter 11 and elsewhere we addressed the matter of *tall structures*, essentially cell phone towers. This was addressed in the mail survey (appendix C, ques. 7) where the people favored a restrictive ordinance by better than 3:1. Although there is at this time no sign of a plan to build one, the Town must be prepared to act should a situation arise. In 2008 there was serious talk of such a tower in Walpole, but nothing materialized.

Across the Damariscotta River to the west and to the east in Bristol there are cell phone tower facilities with considerable space available for additional carriers.

We recommend that the Selectmen be prepared. The usual municipal reaction is to immediately enact a six month moratorium in order to allow an ordinance to be adopted. An alternative approach would be to address the matter in a new land use ordinance.

Chapter 19 on page 268 addresses the use of

transfer of development rights (TDR) as a land use tool to encourage development away from critical resource areas and into growth areas. We feel that the Planning Board should keep this tool in mind and if deemed worthwhile, work to create and adopt an ordinance.

In chapter 14 (Transportation) there were mentions of a possible *highway ordinance* to address such matters as controlling curb cuts (for safe sight distances) and to formalize reimbursement to the Town for road damage resulting from construction activities. The ordinance might also address construction of private roads and their acceptance as public roads.

At this time, such an ordinance does not appear to be necessary, but the Selectmen in their roles as Road Commissioners should remain aware of a possible future need for such an ordinance. In the meantime, they might want to consider written rules which would formalize current practices such as requiring reimbursement to the Town for damage to roads resulting from construction activity.

In anticipation of eventually creating a *waterfront access facility* for boat launch and recreational use, we recommend that the Planning Board draft at least the rules for acceptable use so that they will be available when working with neighbors of potential sites. A complete ordinance can be created and adopted after a site is found and its design completed.

20.4 – Keeping Track of the Plan

Rather than only the mandatory five-year evaluation required by the State, we propose a more-or-less continuous evaluation process. The Comprehensive Plan Advisory Committee would have overall monitoring responsibility, with various officials responsible for their assigned strategies. We see the Advisory Committee's role as keeping an eye on things, and being a resource.

With input from those doing the work, the Committee can have a continuously updated picture of where things stand. It would be appropriate for the Committee to meet quarterly, and at other times if necessary.

Periodically, either annually or biannually, the Advisory Committee will evaluate the following measures of progress:

- The degree to which Future Land Use Plan strategies have been implemented.
- The percent of Town growth-related capital investments which have been directed to growth areas.
- The location and amount of new

development in relation to the Town's designated growth, rural, and critical resource areas.

- The amount of critical resource areas protected through acquisition, easements, and other measures.

The above evaluation measures, with assignment of responsibility, are required by the State to be included in all comprehensive plans.

In order to keep the Comprehensive Plan in the public's eyes, the Committee should prepare a one page report each year for South Bristol's Annual Town Report. We suggest a more extensive report be mailed to all of the taxpayers and made generally available each even numbered year.

Once the Plan is adopted by the voters, copies of the adopted Plan will be available to the public at various locations, and will be available for sale in both hard copy and digital form.

20.5 – Resources Required

The most critical resource which will be needed to Bring the Plan to Life will be time and effort from people. We expect that much of this will be volunteer effort and that townspeople will generously lend their expertise.

But some dollars will also be needed, as shown with strategies at the end of each chapter.

For this chapter's strategies, much of the work will fall to the Planning Board, with some involvement by the Board of Selectmen.

The Committee has to the best of its ability estimated the costs of creating the three proposed new ordinances. Part of the costs will be for retaining counsel. Adoption of the new ordinances will be legally possible only after South Bristol adopts this Comprehensive Plan.

Costs involved with implementing the many other strategies are in most cases minor and easily covered in annual Town budgets.

Bringing the Plan to Life Policies and Strategies

In order to carry out the various strategies of this Plan, and eventually implement the proposed new ordinances and keep track of progress, the following strategies will be necessary.

Policy	Implementation strategy	Responsible entity
		Estimated cost Completion date
Monitor Plan implementation progress	An independent committee, the Comprehensive Plan Advisory Committee, shall be appointed within two months of adoption of this plan and charged with periodic review of the comprehensive plan, monitoring progress at implementing policies and strategies, and advising town officials and citizens. The committee shall serve without compensation.	Town Meeting \$300 per year 2010 – committee to be appointed within 2 months of plan adoption or at next annual town meeting
Inform officials and citizens	Review comprehensive plan implementation progress every three months.	Comprehensive Plan Advisory Committee -0- Immediate and ongoing
	Report annually to the citizens regarding implementation progress.	Comprehensive Plan Advisory Committee Include in Town Report 2011 and annually
	Every two years, mail a report to all citizens reporting on the status of the Comprehensive Plan	Comprehensive Plan Advisory Committee \$1000 every other year 2012, 2014, 2016, etc.
Adopt a Land Use Ordinance	Draft a town-wide Land Use Ordinance taking into account the ideas set out in this Plan and by the people at the visioning meetings and in mail survey responses.	Planning Board \$5000 2013 or sooner
	Adopt the Land Use Ordinance	Town Meeting \$200 2013
Adopt a Building Ordinance	Draft a town-wide Building Ordinance taking into account the ideas set out in this Plan and by the people at the visioning meetings and in mail survey responses.	Planning Board \$3000 2014
	Adopt the Building Ordinance	Town Meeting \$200 2014
Adopt a Conservation Subdivision Ordinance	Draft a Conservation Subdivision Ordinance taking into account the ideas set out in this Plan .	Planning Board \$1500 2015
	Adopt the Conservation Subdivision Ordinance.	Town Meeting \$200 2015

Policy	Implementation strategy	<u>Responsible entity</u> <u>Estimated cost</u> <u>Completion date</u>
Be prepared to regulate tall structures (towers)	At this time the Committee sees no immediate need for an ordinance for this matter, but the Selectmen and Planning Board should keep abreast of any local developments (see text). This could be covered in a new land use ordinance.	<u>Selectmen and Planning Board</u> <u>TBD</u> <u>Immediate and ongoing</u>
Acquire an understanding of transfer of development rights	As the Planning Board designs a new land use ordinance and becomes involved with all town-wide land use and permitting, consider the possible value to South Bristol of allowing transfer of development rights.	<u>Planning Board</u> <u>Minimal</u> <u>Immediate and ongoing</u>
Improve management of roads where necessary	If more formal policies for road management become necessary, consider written policies or a highway ordinance. See discussion and strategies in chapter 14.	<u>Road Commissioners</u> <u>TBD</u> <u>2012 and beyond</u>
Create waterfront facility use policies and rules	Draft an acceptable use policy to assist the process of finding and acquiring suitable land for the facility.	<u>Planning Board</u> <u>\$500</u> <u>Immediate</u>
Update the existing subdivision ordinance in order to encourage affordable housing	Amend the Subdivision Ordinance to require ten percent affordable housing in major developments.	<u>Planning Board</u> <u>\$1000</u> <u>Next update, but not later than 2013</u>
Update the existing subdivision ordinance in order to protect scenic views	Amend the Subdivision Ordinance to add a scenic view protection provision. See page 75.	

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Appendix A – First Visioning Meeting

The June 28, 2003 visioning meeting was held at the Elementary School gym in order to give the South Bristol community the opportunity to participate in the development of a revised Comprehensive Plan. Below are the subjects raised at that meeting which the participants selected as the most important. A complete list of subjects discussed appears in *Report of Citizens' Input* which supplements this Comprehensive Plan.

Topic	Subject of Concern
Natural Resources	Keep taxes low so people do not have to sell their land & subdivide
Outdoor Recreation Opportunities	Bike/walking path (130 to the end of So. Bristol)
Town Growth & Development	Zoning could be our friend – used to address the highest concerns, not clotheslines
Marine Resource Industries	Designate land use – zones tax policy – taxed at/for current use
Town Growth & Development	Keeping school going
Affordable Housing	Town-wide building permits to fund affordable housing in some way
Outdoor Recreation Opportunities	Sand Cove (town purchase it)
Town Growth & Development	Land use plan to preserve what we like – direct growth
Town Growth & Development	Affordable housing
Agriculture & Forest Resources	Comprehensive Plan enacted should require selectmen to enact a land use ordinance
Marine Resource Industries	Better water access for private launches & lobstermen
Agriculture & Forest Resources	Land use planning
Marine Resource Industries	Review future land waterfront use
Marine Resource Industries	Boat launching site for public
Economic Climate	Protect maritime industry
Marine Resource Industries	Maintain fishing industry – keep young people involved (state regs. Inhibit)
Affordable Housing	Need zoning that allows creativity & positive space use – not too restrictive
Agriculture & Forest Resources	Inventory natural resources: Protected land, update water uses, unique ecological value
Economic Climate	Jobs are key and need for more/younger population
Economic Climate	Evaluate opportunities to encourage existing businesses to stay (through incentives)
Outdoor Recreation Opportunities	Comprehensive Plan should include roads widening objective with a funding plan
Agriculture & Forest Resources	Recreational usage
Outdoor Recreation Opportunities	Comprehensive Plan should support course expansion through a grant or loan
Outdoor Recreation Opportunities	Leash law enforced (dog trauma)
Town Growth & Development	Land use ordinance beyond shoreland
Water Quality & Quantity	Assessment of water quality & quantity
Youth	Sidewalks
Youth	Crosswalks
Youth	Boat free fishing spot

Appendix B — Second Visioning Meeting

The November 18, 2003 visioning meeting was the second of two held in order to give the entire South Bristol community, particularly those unable to attend the June visioning meeting, the opportunity to participate in the development of a revised Comprehensive Plan. Below are the subjects raised at that meeting which the participants selected as the most important. A complete list of subjects discussed appears in *Report of Citizens' Input* which supplements this Comprehensive Plan.

Topic	Subject of Concern
Natural, Agriculture & Forest Resources	Maintain character of town
Town Growth & Development	Develop town wide land use plan
Town Govt. & Ordinances	Keep our local school
Natural, Agriculture & Forest Resources	Fisherman protection for a place to fish from
Natural, Agriculture & Forest Resources	Zoning to restrict building regarding water supply
Town Govt. & Ordinances	A town web page to conduct business & email for responses
Marine Resource Industry & Water Quality/Quantity	Darling Center provide the town use of their launch ramp
Natural, Agriculture & Forest Resources	Town to buy tracts of land for "green acres"
Public Facilities & Outdoor Recreation Opportunities	Public boat ramp & picnic spot
Public Facilities & Outdoor Recreation Opportunities	Walking, biking on shoulders of roads
Town Govt. & Ordinances	Zoning that is not too restrictive but manages what the town wants
Historic & Archaeological Resources	Identify then maintain historical places
Public Facilities & Outdoor Recreation Opportunities	Bike path – tarred shoulder
Natural, Agriculture & Forest Resources	Town to promote composting and recycling
Town Govt. & Ordinances	Town is managed just fine the way it is; we are envied by other towns
Town Govt. & Ordinances	Make public boat ramp for South Bristol residents
Historic & Archaeological Resources	Save S Road school (the Roosevelt School); kids go up & have a real class there
Natural, Agriculture & Forest Resources	Keep town vistas as pristine as possible
Town Govt. & Ordinances	We need a public boat ramp in town
Public Facilities & Outdoor Recreation Opportunities	Public access to water
Public Facilities & Outdoor Recreation Opportunities	Walking, sidewalk

Appendix C — Mail Survey Results

Results from all 354 returns from the November, 2003 survey

Below are the 38 questions from the survey distributed to everyone in South Bristol, both full-time and part-time residents. Alongside the questions are the legends for the check boxes for each question, the counts of boxes checked, and the percentages for each of the counts. Many surveys included remarks written to the various questions. Those remarks along with all of the answers for questions 31, 32, and 33 as well as general comments from the end of the survey are included in *Report of Citizens' Input* which supplements this Comprehensive Plan.

See the notes at the end of this appendix for information on the tabulation of the returns.

1.	Would you be in favor of town-wide zoning?	Yes 218 63 %	No 95 27 %	No opinion 34 10 %
2.	Do you support control of “urban sprawl”? [Urban sprawl is a consequence of, among other things, relatively large lot sizes for all residential construction, resulting in sprawling development in formerly rural areas.]	Yes 203 59 %	No 89 26 %	No opinion 54 16 %
3.	Should permits be required town-wide for all building construction?	Yes 229 65 %	No 104 30 %	No opinion 19 5 %
4.	Should South Bristol enact a bedrock blasting ordinance?	Yes 130 37 %	No 82 23 %	No opinion 138 39 %
5.	Should South Bristol have a shoreland zoning ordinance which is more restrictive than that which is required by Maine law?	Yes 96 27 %	No 220 63 %	No opinion 35 10 %
6.	Should the Town of South Bristol require that the holder of a franchise to provide cable television service provide that service on <u>all</u> public roads in Town, rather than the limited area where such service is now provided?	Yes 208 59 %	No 76 21 %	No opinion 70 20 %
7.	Should an ordinance be enacted which would control any construction of cell phone towers within South Bristol?	Yes 242 69 %	No 76 22 %	No opinion 33 9 %
8.	Would you like the Town to have an Internet site which will provide Town information and where you will be able to conduct business such as paying taxes, applying for permits, registering motor vehicles, purchasing hunting and fishing licenses, and communicate with Town officials?	Yes 183 52 %	No 100 28 %	No opinion 68 19 %
9.	Should the Town create reserve funds so that major capital expenditures can be accomplished without borrowing?	Yes 212 61 %	No 82 24 %	No opinion 54 16 %

10.	Should the Town of South Bristol fund affordable housing?	Yes 90 26%	No 194 55%	No opinion 66 19%
11.	Do you own rental housing units?	Seasonal 29	Year-round 12	
12.	Should South Bristol continue to operate it's own elementary school, or should it join with one or more other towns in a consolidated school? [We received a large number of comments on this question and the next. They will be passed on to the School Board]	Continue the Elementary School 225 65% Join a consolidated school 62 18% Other – please explain below 2 1% No opinion 55 16%		
13.	Should the Town pursue the establishment of a regional <u>public</u> high school?	Yes 68 19%	No 194 55%	No opinion 89 25%
14.	Would you support the creation of economic development zones(s) in order to enhance the local economy? [An economic development zone is an area where incentives such as tax concessions are provided in order to encourage businesses of a specified type (e.g. marine biology, computer software) to locate and expand.]	Yes 128 36%	No 166 47%	No opinion 58 16%
15.	Since the median age of the residents of South Bristol is near the highest in Maine, would you favor the Town actively working to attract younger people to settle here?	Yes 142 40%	No 123 35%	No opinion 86 25%
16.	Do you feel that there are sufficient services available in South Bristol and the surrounding area to satisfy the needs of older residents?	Yes 234 66%	No 45 13%	No opinion 73 21%
17.	Are you employed, and if so where are you employed? (Please include self employment.)	Employment: In South Bristol 38 12% Outside of S. B. 119 36% Seeking 3 1% Not seeking 16 5% Retired 153 47%		
18.	Do you feel that fire protective services in South Bristol are adequate?	Yes 287 82%	No 16 5%	No opinion 48 14%
19.	Do you feel that emergency medical services available to South Bristol residents are adequate?	Yes 276 79%	No 18 5%	No opinion 55 16%

20.	Do the law enforcement services available in South Bristol (Lincoln County Sheriff’s Department and Maine State Police) meet your needs?	Yes 263 76%	No 39 11%	No opinion 46 13%
21.	Should the Town of South Bristol provide access to the water by acquiring land and building a public boat launch?	Yes 187 53%	No 130 37%	No opinion 34 10%
22.	Should the Town own and maintain a public landing for the <u>exclusive</u> use of commercial fishermen?	Yes 78 22%	No 187 54%	No opinion 83 24%
23.	Should there be sidewalks alongside the road between the Rutherford Library and Union Church?	Yes 120 34%	No 173 49%	No opinion 58 17%
24.	Should the Town develop and implement a plan for accommodating pedestrians and bicycle riders on all public roads?	Yes 128 37%	No 176 50%	No opinion 45 13%
25.	Should there be town funded recreation programs for all ages?	Yes 62 18%	No 205 58%	No opinion 86 24%
26.	Would you be in favor of the town providing public facilities such as more parking and rest rooms in the village area?	Yes 97 28%	No 203 58%	No opinion 50 14%
27.	Should the town provide a pump out facility for boat holding tanks?	Yes 103 29%	No 169 48%	No opinion 79 23%
28.	Would you be in favor of eliminating all overboard sewage discharges?	Yes 238 68%	No 75 21%	No opinion 39 11%
29.	What is your water supply? [Several responses noted multiple supplies.]	Drilled well 288 95% Cistern 11 4%		Dug well 30 1%
30.	Have you experienced any problems with your water supply since January, 2000 ? (We would appreciate details of any water supply problems.) [343 responses; 12 with no answer, 6 with multiple answers, 5 with only remarks. See notes at the end of this appendix.]	No problems 292 88% Yes, contamination. 16 5%		Yes, ran dry. 23 7%

31. What do you like most about South Bristol?
[293 surveys included remarks here. See note 3.]
32. What place in South Bristol is most special to you and why?
[257 surveys included remarks here. See note 3.]
33. What is the most pressing local issue or problem facing the Town?
[252 surveys included remarks here. See note 3.]
34. Are you a full time or a part time resident of South Bristol?
[348 responses; 14 with no answer, 2 with multiple answers, 4 with only comments]
- | | | |
|--|-----|-----|
| Full time resident. | 162 | 49% |
| Part time, permanent residence is elsewhere. | 172 | 51% |
35. What is the age of the person(s) answering this survey? This will help us determine which issues are important to various age groups.
[342 responses; 11 with no answer, 11 with multiple answers, 1 with only a comment]
- | | | | | | |
|----------|----|-----|----------|-----|-----|
| Under 30 | 4 | 1% | 30 to 45 | 34 | 10% |
| 46 to 60 | 96 | 29% | Over 60 | 197 | 60% |
36. What is the approximate annual income of your household?
[352 responses; 80 with no answer (very good for this sort of a question), 1 with multiple answers, 1 with only a comment]
- | | | |
|------------------------|----|-----|
| Under \$25,000 | 31 | 11% |
| \$25,000 to \$50,000 | 67 | 25% |
| \$50,000 to \$100,000 | 99 | 36% |
| \$100,000 to \$200,000 | 46 | 17% |
| Over \$200,000 | 29 | 11% |
37. In which part of our town do you live?
[349 responses; 20 with no answer, 4 with multiple answers, 1 with only a comment]
- | | | |
|--|-----|-----|
| Above Four Corners | 88 | 27% |
| From Four Corners to the Elementary School | 89 | 27% |
| South of the Elementary School | 152 | 46% |

38.	What is the approximate amount of your annual South Bristol real estate tax?	Under \$600 32 10%
	[351 responses; 28 with no answer, 3 with only comments]	\$600 to \$1100 75 23%
	<i>The break points for this question were originally intended to be quartile points for real estate parcels containing residential housing. Due to the unavailability of the necessary data, the quartile points of all real estate tax bills based on a statistical sample were used. The lowest (under \$600) quartile includes much undeveloped land. Were undeveloped land not included, the break points would have been different, probably resulting in a more even distribution of the responses.</i>	\$1100 to \$2100 108 33%
		Over \$2100 108 33%

Notes:

1. Percentages may not add to 100% due to rounding.
2. For the remarks and notes on water problems (Question 30) see *Report of Citizens' Input*.
3. The answers to questions 31, 32, and 33, remarks written to other questions, and comments written at the end of the survey are included in *Report of Citizens' Input* which supplements this Comprehensive Plan.
4. For questions where "No opinion" was an answer option, questions with no answer checked were counted as "No opinion." In no case did this significantly affect percentages.
5. Surveys were received until the end of May, 2004.

Appendix D — “Geo-facts” for the Town of South Bristol, Maine

(Derived from GIS data – percentage is with respect to total land area,
or total number of dwellings as appropriate.)

Town area including islands	13.12 sq miles (8397 acres)
Maximum N-S length	12.4 miles
Maximum E-W length	2.8 miles
Town boundary	74.34 miles
Coastline	68.85 miles (92.6% of town boundary)
Highest elevation	240 ft above sea level (1500 ft north of Split Rock Road on town boundary with Bristol)
Perennial streams	8 (4.57 miles)
Intermittent streams	18 (7.08 miles)
Median bedrock water well depth (from Gerber 1991)	155 ft.
Median bedrock water well yield (from Gerber 1991)	5 gpm
Median depth to bedrock	5 ft.
USDA Prime Farmland Soils	994 acres (11.8%)
Farmland Soils of Statewide Importance	2216 acres (26.4%)
Area of 250 ft. shoreland zone	1607 acres (19.1%)
Freshwater ponds	64 totaling 55 acres (0.7%)
Wetlands (palustrine, aka feshwater)	83 totaling 274 acres (3.3%)
Wetlands (estuarine, aka tidal, and marine)	174 totaling 718 acres
Mudflats (by DMR 1977)	487 acres
Softshell clam habitat (by DMR 1977)	440 Acres
Blue mussels habitat (by DMR 1977)	57 acres
Sea scallops habitat (by DMR 1977)	988 acres
Tree growth	18 Parcels 889 acfes (10.6%)
Open space	4 parcels 206 acres (2.5%)
Public preserves	11 totaling 288 acres (3.4%)
Conservation easements	21 totaling 460 acres (5.5%)
Town owned property (Municipal)	11 totaling 13.4 acres (0.2%)
Tax parcels as of April 2006	1476

(Residential dwelling Geo-facts on next page)

Residential dwelling "Geo-facts"

Residential dwellings as of March, 2006:	983 total
Dwellings within the 250 ft. shoreland zone:	458 (46.5%)
Dwellings within the 75 ft. shoreland zone	101 (10.3%)
Dwellings within the 75-250 ft. area of the shoreland zone	357 (36.3%)
Dwellings on the mainland:	639 (65.0%)
Dwellings north of McClintocks Hill	332 (33.8%)
Dwellings between McClintocks Hill and the Gut	310 (31.6%)
Dwellings on Rutherford Island	344 (35.0%)
Dwellings within 500 ft. of a public road	691 (70.4%)
Dwellings within 250 ft. of a public road	543 (55.4%)
Dwellings within 200 ft. of a public road	480 (48.9%)
Dwellings within 100 ft. of a public road	276 (28.4%)
Dwellings known to be built before 1900 (Warner, 2006)	154 (15.7%)

Appendix E — Maine Land Cover Categories

This appendix supplements table 3.3 in chapter 3 and Map 3.

Abstract:

MELCD is a land cover map for Maine primarily derived from Landsat Thematic Mapper 5 and 7 imagery, from the years 1999-2001. This imagery constitutes the basis for the National Land Cover Dataset (NLCD 2001) and the NOAA Coastal Change Analysis Program (C-CAP). This land cover map was refined to the State of Maine requirements using SPOT 5 panchromatic imagery from 2004. The Landsat imagery used was for three seasons: early spring (leaf-off), summer, and early fall (senescence) and was collected with a spatial resolution of 30 m. The SPOT 5 panchromatic imagery was collected at a spatial resolution of 5 m during the spring and summer months of 2004. The map was developed in two distinct stages, the first stage was the development of a state wide land cover data set consistent with the NOAA-CAP land cover map. The second stage was: a) the update to 2004 conditions, b) a refinement of the classification system to Maine specific classes and, c) a refinement of the spatial boundaries to create a polygon map based on 5 m imagery.

Purpose:

Quantify land cover features boundaries at a 5 meter spatial resolution over the State of Maine.

Supplemental Information:

Image analysis techniques used in production of the map were a combination of supervised classification using Classification and Regression Tree (CART) algorithms and spatial modeling. The use of three Landsat image dates provided the ability to discriminate specific elements of the landscape. For example; the spring imagery was useful for the classification of wetlands and the separation of conifers and broadleaf species and the fall imagery was useful for the discrimination of broadleaf species. After the creation of the NOAA C-CAP base map, Sanborn used image segmentation to refine the spatial boundaries of the land cover classes, using a merge of the Landsat leaf on imagery and the SPOT 5 imagery. The segments produced by this process were labeled using automated methods to build the final Maine land cover dataset (MeLCD). After the completion of the classification, the map was extensively reviewed by Sanborn analysts and specific classes were modeled and edited by hand to remove class confusion.

Range of Dates/Times:

Beginning Date: 4/1995

Ending Date: 10/2004

Source:

Originator: Maine Library of Geographic Information (MLGI), Maine Department of Environmental Protection (MEDEP), Maine Department of Inland Fisheries and Wildlife (MEIFW), Maine Department of Transportation (MEDOT), Maine Department of Health and Human Services, Drinking Water Program (MEDHSDWP) and the Maine State Planning Office (MESPO) with the Maine GIS Executive Council (GISEC), U.S. Geological Survey (USGS), National Oceanographic and Atmospheric Administration (NOAA), Space Imaging (SI), and Sanborn

Published by: The Maine Office of Geographic Information Systems (MEGIS)

Explanation of the Maine Land Cover Categories

Land Cover Category	Description	Characteristics
2 Developed High Intensity	Includes highly developed areas where people reside or work in high numbers. Impervious surfaces account for 80 to 100 percent of the total cover.	Characteristic land cover features: Large commercial/industrial complexes and associated parking, commercial strip development, large barns, hangars, interstate highways, and runways.
3 Developed Medium Intensity	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50 to 79 percent of the total cover.	Characteristic land cover features: Small buildings such as single family housing units, farm outbuildings, and large sheds.
4 Developed Low Intensity	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 21 to 49 percent of total cover.	Characteristic land cover features: Same as Medium Intensity Developed with the addition of streets and roads with associated trees and grasses. If roads or portions of roads are present in the imagery they are represented as this class in the final land cover product.
5 Developed Open Space	Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover.	Characteristic land cover features: Parks, lawns, athletic fields, golf courses, and natural grasses occurring around airports and industrial sites.
6 Cultivated Land	Areas used for the production of annual crops. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled.	Characteristic land cover features: Crops (corn, soybeans, vegetables, tobacco, and cotton), orchards, nurseries, and vineyards.
7 Pasture/Hay	Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle and not tilled. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.	Characteristic land cover features: Crops such as alfalfa, hay, and winter wheat.
8 Grassland/Herbaceous	Areas dominated by grammanoid or herbaceous vegetation, generally greater than 80 percent of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.	Characteristic land cover features: Prairies, meadows, fallow fields, clear-cuts with natural grasses, and undeveloped lands with naturally occurring grasses.
9 Deciduous Forest	Areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.	Characteristic species: Maples (<i>Acer</i>), Hickory (<i>Carya</i>), Oaks (<i>Quercus</i>), and Aspen (<i>Populus tremuloides</i>).

Land Cover Category	Description	Characteristics
10 Evergreen Forest	Areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year. Canopy is never without green foliage	Characteristic species: Longleaf pine (<i>Pinus palustris</i>), slash pine (<i>Pinus ellioti</i>), shortleaf pine (<i>Pinus echinta</i>), loblolly pine (<i>Pinus taeda</i>), and other southern yellow (<i>Picea</i>); various spruces and balsam fir (<i>Abies balsamea</i>); white pine (<i>Pinus strobus</i>), red pine (<i>Pinus resinosa</i>), and jack pine (<i>Pinus banksiana</i>); hemlock (<i>Tsuga canadensis</i>); and such western species as Douglas-fir (<i>Pseudotsuga menziesii</i>), redwood (<i>Sequoia sempervirens</i>), ponderosa pine (<i>Pinus monticola</i>), Sitka spruce (<i>Picea sitchensis</i>), Engelmann spruce (<i>Picea engelmanni</i>), western red cedar (<i>Thuja plicata</i>), and western hemlock (<i>Tsuga heterophylla</i>).
11 Mixed Forest	Areas dominated by trees generally greater than 5 meters tall, and greater than 20 percent of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover.	
12 Scrub-Shrub	Areas dominated by shrubs less than 5 meters tall with shrub canopy typically greater than 20 percent of total vegetation. This class includes tree shrubs, young trees in an early successional stage, or trees stunted from environmental conditions.	Characteristic species: Those listed in 9 and 10 as well as chaparral species such as chamise (<i>Adenostoma fasciculatum</i>), chaparral honeysuckle (<i>Lonicera interrupta</i>), scrub oak (<i>Quercus beberidifolia</i>), sagebrush (<i>artemisia tridentate</i>), and manzanita (<i>Arctostaphylos spp.</i>).
13 Forested Wetland	Includes all tidal and nontidal wetlands dominated by woody vegetation greater than or equal to 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Total vegetation coverage is greater than 20 percent.	Characteristic species: Tupelo (<i>Nyssa</i>), Cottonwoods (<i>Populus deltoids</i>), Bald Cypress (<i>Taxodium distichum</i>), American elm (<i>Ulmus Americana</i>), Ash (<i>Fraxinus</i>), and Tamarack

Land Cover Category	Description	Characteristics
15 Wetlands	Palustrine Scrub-Shrub, Palustrine Emergent, Estuarine Scrub-Shrub, Estuarine Emergent Palustrine Scrub-Shrub-	Characteristic species: Alders (<i>Alnus spp.</i>), willows (<i>Salix spp.</i>), buttonbush (<i>Cephalanthus occidentalis</i>), red osier dogwood (<i>Cornus stolonifera</i>), honeycup (<i>Zenobia pulverenta</i>), spirea (<i>Spiraea douglassii</i>), bog birch (<i>Betula pumila</i>), and young trees such as red maple (<i>Acer rubrum</i>) and black spruce (<i>Picea mariana</i>).
	Palustrine Emergent Wetland	Characteristic species: Cattails (<i>Typha spp.</i>), sedges (<i>Carex spp.</i>), bulrushes (<i>Scirpus spp.</i>), rushes (<i>Juncus spp.</i>), saw grass (<i>Cladium jamaicaense</i>), and reed (<i>Phragmites australis</i>).
	Estuarine Scrub-Shrub Wetland	Characteristic species: Sea-myrtle (<i>Baccharis halimifolia</i>) and marsh elder (<i>Iva frutescens</i>).
	Estuarine Emergent Wetland	Characteristic species: Cordgrass (<i>Spartina spp.</i>), needlerush (<i>Juncus roemerianus</i>), narrow leaved cattail (<i>Typha angustifolia</i>), southern wild rice (<i>Zizaniopsis miliacea</i>), common pickleweed (<i>Salicornia virginica</i>), sea blite (<i>Suaeda californica</i>), and arrow grass (<i>Triglochin maritimum</i>).
16 Road/Runway	Developed High Intensity Sub-type includes some of Maine's major highways and most airports with paved runways.	
19 Unconsolidated Shore	Unconsolidated material such as silt, sand, or gravel that is subject to inundation and redistribution due to the action of water. Characterized by substrates lacking vegetation except for pioneering plants that become established during brief periods when growing conditions are favorable. Erosion and deposition by waves and currents produce a number of landforms representing this class.	Characteristic land cover features: Beaches, bars, and flats.
20 Bare Land (rock/sand/clay)	Barren areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits, and other accumulations of earth material. Generally, vegetation accounts for less than 10 percent of total cover.	Characteristic land cover features: Quarries, strip mines, gravel pits, dunes, beaches above the high-water line, sandy areas other than beaches, deserts and arid riverbeds, and exposed rock.
21 Open Water	All areas of open water, generally with less than 25 percent cover of vegetation or soil.	Characteristic land cover features: Lakes, rivers, reservoirs, streams, ponds, and ocean.

Land Cover Category	Description	Characteristics
22 Blueberry Field	This type is composed of agricultural fields dominated by the production of low-bush blueberries. Multiple structural forms include: burned field, pruned field, early season with leaves, and late season with leaves and fruit set (Yardborough, 1996). This type is most common in eastern Maine and occurs primarily on acidic gravel soils.	
23 Clear-Cut	This type includes areas harvested from forest with greater than 90% canopy cover removal and expected to regenerate into forest. This class is structurally similar to Crops/Ground with minimal biomass present, but the satellite imagery or other data indicated that the areas were previously forested.	Characterization conditional: Forest loss must have occurred after 1995.
24 Light Partial Cut	This type is composed of forestland where less than 50% of the overstory canopy has been removed through harvesting. Harvesting may have occurred previously. May include improvement thinning, light shelterwood and light selection harvests.	Characterization conditional: Forest loss must have occurred after 1995.
25 Heavy Partial Cut	This type includes forestland where greater than 50% of the overstory canopy has been removed through harvesting. Harvesting may have occurred previously. May include heavy shelter wood and heavy selection harvests.	Characterization conditional: Forest loss must have occurred after 1995.
26 Forest Regeneration	Forested areas previously harvested that have begun to regenerate to forest are included in this type. Seedling to sapling sized trees are expected, possibly with some residual trees present. Species present will vary based on the original site composition, harvesting techniques and site disturbance, and the presence of advance regeneration at the time of harvesting. These sites will return to mature forests.	Characterization conditional: Forest loss and subsequent re-growth must have occurred after 1995.
27 Alpine/Tundra	Treeless cover beyond the latitudinal limit of the boreal forest in poleward regions and above the elevation range of the boreal forest in high mountains. In the United States, tundra occurs primarily in Alaska, several areas of the western high mountain ranges, and isolated enclaves in the high mountains of New England and northern New York.	

Appendix F — Occupations of Employed South Bristol Civilian Population 16 Years and Over in 2000

Occupations of employed South Bristol civilian population 16 years and over in 2000

Employment category	Male	Female	Total
Management, professional, and related occupations:	66	76	142
Management, business, and financial operations occupations:	34	21	55
Management occupations, except farmers and farm managers	16	14	30
Farmers and farm managers	7	3	10
Business and financial operations occupations:	11	4	15
Business operations specialists	9	1	10
Financial specialists	2	3	5
Professional and related occupations:	32	55	87
Computer and mathematical occupations	0	4	4
Architecture and engineering occupations:	8	2	10
Architects, surveyors, cartographers, and engineers	6	2	8
Drafters, engineering, and mapping technicians	2	0	2
Life, physical, and social science occupations	4	1	5
Community and social services occupations	3	6	9
Legal occupations	2	0	2
Education, training, and library occupations	13	27	40
Arts, design, entertainment, sports, and media occupations	2	7	9
Healthcare practitioners and technical occupations:	0	8	8
Health diagnosing and treating practitioners and technical occupations	0	6	6
Health technologists and technicians	0	2	2
Service occupations:	14	35	49
Healthcare support occupations	2	6	8
Protective service occupations:	5	0	5
Fire fighting, prevention, and law enforcement workers, including supervisors	3	0	3
Other protective service workers, including supervisors	2	0	2

Occupations of employed South Bristol civilian population 16 years and over in 2000

Employment category	Male	Female	Total
Food preparation and serving related occupations	0	6	6
Building and grounds cleaning and maintenance occupations	7	11	18
Personal care and service occupations	0	12	12
Sales and office occupations:	29	58	87
Sales and related occupations	25	28	53
Office and administrative support occupations	4	30	34
Farming, fishing, and forestry occupations	42	3	45
Construction, extraction, and maintenance occupations:	51	0	51
Construction and extraction occupations:	44	0	44
Supervisors, construction and extraction workers	0	0	0
Construction trades workers	44	0	44
Extraction workers	0	0	0
Installation, maintenance, and repair occupations	7	0	7
Production, transportation, and material moving occupations:	35	10	45
Production occupations	11	4	15
Transportation and material moving occupations:	24	6	30
Supervisors, transportation and material moving workers	0	0	0
Aircraft and traffic control occupations	0	0	0
Motor vehicle operators	16	0	16
Rail, water and other transportation occupations	8	4	12
Material moving workers	0	2	2
Totals	237	182	419

Source: U.S. Census (SF 3) [P 50]

Note: In each case where the category name ends with a colon (:), it is further broken down in lines immediately below. Lines ending in colons summarize the details below.

Appendix G — Industry by Class of Employed South Bristol Civilian Population 16 Years and Over in 2000

Employment class	South Bristol		Lincoln County		Maine	
	Count	Percent	Count	Percent	Count	Percent
All classes except agriculture, forestry, fishing & hunting, and mining: TOTALS	361	86.2%	15,153	93.6%	607,924	97.4%
Private for-profit wage and salary workers:						
Employee of private company	173	41.3%	8,098	50.0%	383,980	61.5%
Self employed in own <u>incorporated</u> business	20	4.8%	647	4.0%	18,041	2.9%
Employed in private not-for-profit business	46	11.0%	1,576	9.7%	63,453	10.2%
Local government workers	33	7.9%	1,456	9.0%	47,354	7.6%
State government workers	12	2.9%	755	4.7%	26,234	4.2%
Federal government workers	4	1.0%	376	2.3%	16,394	2.6%
Self employed in own <u>not incorporated</u> business	71	16.9%	2,189	13.5%	51,105	8.2%
Unpaid family workers	2	0.5%	56	0.3%	1,363	0.2%
Agriculture, forestry, fishing & hunting, and mining: TOTALS	58	13.8%	1,044	6.4%	16,087	2.6%
Private for-profit wage and salary workers:						
Employee of private company	11	2.6%	174	1.1%	6,965	1.1%
Self employed in own <u>incorporated</u> business	2	0.5%	122	0.8%	1,205	0.2%
Employed in private not-for-profit business	0	0.0%	39	0.2%	150	0.0%
Local government workers	0	0.0%	0	0.0%	35	0.0%
State government workers	0	0.0%	8	0.0%	300	0.0%
Federal government workers	0	0.0%	0	0.0%	71	0.0%
Self employed in own <u>not incorporated</u> business	45	10.7%	678	4.2%	7,048	1.1%
Unpaid family workers	0	0.0%	23	0.1%	313	0.1%
Total of all workers age 16 and over	419	100%	16,197	100%	624,011	100%

Source: U.S. Census SF3 [P51]

Notes: Sexes have been aggregated by the Comprehensive Planning Committee. Likewise the agriculture, forestry, fishing and hunting and the mining categories have been aggregated as the mining category is not statistically significant for the data as presented. (In total, mining employs only 362 people in Maine.)

Appendix H — Structures Built, 1997 through 2006

This table details so far as can be determined all structures built in the ten-year period from January 1997 through December 2006. Since South Bristol does not require building permits except in the shoreland zone, no definitive records of town-wide construction exist. In order to construct this appendix the Comprehensive Planning Committee relied on town reports, the April 1, 2007 tax maps, and a review of assessment records.

This ten year period was used because South Bristol reassessed all properties in 2007, hence comparisons of valuations for tax purposes would not have been possible if a later period were used. Before re-evaluation, assessments were at or below 70 percent of fair market value, particularly for waterfront property.

Location (Latitude)	Tax Map	Tax Lot	Valuation (\$1000)		Structures built		Location interval totals				
			See note Jan-'97	Dec-'06	Year Round	Seasonal	Year-round		Seasonal		Valuation Increase (\$1000)
							Nbr	% of total	Nbr	% of total	
Outer Thrumcap Island											
	1				0	0					
	2				0	0					
	3				0	0					
	4				0	0					
	5				0	0					
	6				0	0					
	7				0	0					
	8	12	403.5	648.1	1						
		35A	275.3	425.7	1						
	9	4	245.4	393.0		1					
		18C	229.0	961.1		1					
		29	99.4	237.8		1					
		35B	113.6	565.5		1					
	10				0	0					
Birch Island	Outer Thrumcap Island to Birch Island totals						2	1.6%	4	3.2%	1,865.0
	11	34a	145.5	283.1	1						
	12	10	124.2	240.5		1					
		15	214.2	414.8		1					
		30	47.1	334.0	1						
		31	72.2	658.4		1					
	13	18A	64.7	274.5		1					
	14	4	35.5	225.0		1					
		4A	35.4	184.5		1					
		15	68.4	201.0	1						

Location (Latitude)	Tax Map	Tax Lot	Valuation (\$1000)				Structures built		Location interval totals			
			See note Jan-'97	Dec-'06	Year Round	Seasonal	Year-round		Seasonal		Valuation Increase (\$1000)	
							Nbr	% of total	Nbr	% of total		
	15	1B	14.0	232.7		1						
		1D	14.0	297.5	1							
		1I	15.0	190.5	1							
		10	350.6	611.7		1						
		11	183.4	634.3		1						
	16	23B	35.2	224.2	1							
	17	49	166.2	427.0	1							
		50	135.7	413.0		1						
		75	192.4	266.5	1							
		80	100.1	355.4	1							
		84	87.2	313.6		1						
		86	81.9	274.1		1						
	18	2D	39.4	193.7		1						
		4	286.2	1181.4		1						
		11	146.4	434.2	1							
South Bristol Village Birch Island to South Bristol Village totals							10	8.1%	14	11.3%	6,210.7	
	19				0	0						
	20	2	157.4	795.3		1						
		2C	213.8	829.2	1							
		4A	201.9	492.4	1							
		5B	83.1	349.3	1							
		12B	28.5	134.6		1						
		28	816.8	1931.8		1						
		41	19.2	85.1	1							
	21	1A	548.5	1141.9		1						
		22A	428.1	1262.5	1							
		22D	175.5	445.8		1						
		22E	177.4	455.8	1							
		25	118.5	412.6		1						
	22	5L	59.3	104.8		1						
		11	86.2	226.1	1							
		13	252.7	641.1		1						
		20	144.9	500.7		1						
		25A	106.0	298.3		1						
		38B	130.7	309.2		1						
		38C	58.5	149.8		1						
		38-2	196.0	572.9	1							

APPENDIX H

Location (Latitude)	Tax Map	Tax Lot					Location interval totals					
			Valuation (\$1000)		Structures built		Year-round		Seasonal		Valuation Increase (\$1000)	
			See note Jan-'97	Dec-'06	Year Round	Seasonal	Nbr	% of total	Nbr	% of total		
	23	3	1003.7	1596.5	1							
	24	25	202.7	588.1	1							
		34	72.1	203.3		1						
		38	1472.0	1927.2	1							
	25	4C	109.5	389.7	1							
		9	256.1	510.0	1							
	26				0	0						
Farrin's Pond	South Bristol Village to Farrin's Pond totals						13	10.5%	13	10.5%	9,234.9	
	27	8E	21.5	124.0	1							
		9E	14.0	183.1	1							
		9F	21.3	102.3	1							
		13C-1	160.5	418.3		1						
		42B	33.0	110.5	1							
		42C	21.0	83.5	1							
		42D	30.0	85.3	1							
		48	39.0	118.9	1							
		48G	34.9	169.9	1							
		48H	34.5	110.7	1							
		48J	30.0	81.8	1							
		64	24.2	78.5		1						
		67A	42.0	157.7	1							
		68D	31.5	178.4	1							
		68F	28.1	102.3	1							
	28	13B	21.9	167.9	1							
	29	2B	93.9	186.7	1							
		2C	70.5	129.8	1							
		2E	31.4	108.8	1							
		2F	26.3	72.3	1							
		3B	31.0	95.2	1							
		8E	25.8	208.1	1							
		9A	8.8	93.2		1						
		10A	48.9	68.9	1							
		18-7	117.4	496.7	1							
		18-8	124.1	718.0	1							
		18-9	19.0	265.4		1						
		18-13	15.0	280.1	1							
		18-15	15.0	297.4	1							

Location (Latitude)	Tax Map	Tax Lot	Valuation (\$1000)				Structures built		Location interval totals			
			See note Jan-'97	Dec-'06	Year Round	Seasonal	Year-round		Seasonal		Valuation Increase (\$1000)	
							Nbr	% of total	Nbr	% of total		
	(29)	18-16	16.6	347.1	1							
		18-17	16.4	219.8	1							
		18-18	15.1	225.4	1							
		18-20	15.2	205.0	1							
		18-21	15.2	263.2	1							
		18-22	15.2	305.9	1							
		18-24	15.5	349.1	1							
		18-25	16.0	344.0	1							
		18-31	14.6	334.1	1							
		18-33	14.4	268.6	1							
		23B	58.4	332.1	1							
		23C	20.4	118.0	1							
		25B	31.3	153.8	1							
		39B	36.7	104.4	1							
		47C	32.0	82.5	1							
Split Rock Road		Farrin's Pond to Split Rock Road totals						40	32.3%	4	3.2%	7,399.2
	30	11B	178.0	387.0		1						
		16	148.6	1156.6	1							
		20B	66.6	196.1	1							
		21A	199.4	774.4	1							
		24A	191.2	250.8	1							
		32	259.8	458.7	1							
		34A	32.0	73.1	1							
		35	596.0	785.9	1							
	31	6G	96.5	725.6	1							
		6H	98.4	467.6		1						
		6L	28.6	314.9		1						
		6N	37.0	347.8	1							
		6T	30.4	178.5	1							
		9A	32.4	101.1		1						
		10A	23.0	137.4	1							
		10B	23.0	318.3		1						
		10C	23.0	247.0	1							
		10D	32.0	220.1	1							
		10E	22.8	164.5	1							
		10N	23.2	257.5	1							
		11	28.6	92.9		1						

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Location (Latitude)	Tax Map	Tax Lot	Valuation (\$1000)		Structures built		Location interval totals						
			See note Jan-'97	Dec-'06	Year Round	Seasonal	Year-round		Seasonal		Valuation Increase (\$1000)		
							Nbr	% of total	Nbr	% of total			
	(31)	12A	30.8	123.6	1								
		18	205.6	515.2	1								
		25	42.5	183.6	1								
Town line							Split Rock Road to town line totals		18	14.5%	6	4.8%	6,028.8
totals			15137.1	45875.7	83	41	83	66.9%	41	33.1%	30,738.6		
Net valuation increase as of 4-1-2007: \$30,738,600													
Total structures built:						124							

Sources: South Bristol Town Report 1997-1998 property valuations; South Bristol Town Report 2006 - 2007 property valuations; South Bristol April 1, 2007 Tax Maps; South Bristol assessing record cards; and Comprehensive Plan map 13.

Notes: There was a 5% telephone quality check. Seasonal status of each new structure was determined using the town tax bill mailing addresses on file as of March 7, 2008. Addresses in South Bristol, Walpole, Damariscotta, Newcastle, Bristol, New Harbor, Nobleboro, Waldoboro, and Wiscasset were considered to indicate "in town" ownership and so the properties were considered to be non-seasonal. It is known that a few seasonal residents use their local (summer) mail addresses as address of record for mailing tax bills. We believe that our classification of year-round versus seasonal status of new construction is reasonably correct.

Jan-'97 valuation: In cases where the lot was created after January 1997, the valuation shown is that of the unimproved land after the lot was created and before any improvements or construction.

Appendix I — South Bristol Public Roads

This appendix lists all of the public roads in South Bristol with available data on each. It should be noted that some of the public roads turn into private roads beyond the public portion. All public roads connect to one or more other public roads – there are no public roads isolated from the public road network. The conditions are based primarily on visual observations by the Comprehensive Planning Committee. See appendix J for a list of private roads.

Road Name	Length (miles)	Town Maint.	Town Plowed	Paved miles	Gravel miles	Condition	Last Paved	Comments
Burma Road	0.18	0.18	0.18	0.18		Fair-Good	2000	One lane wide; 0.11 gravel section beyond pavement private.
Carl Bailey Road	0.86	0.86	0.86	0.86		Excel'nt	2004	Narrow, 2004 pavement overlay with no work on base; poor sight distances; minimal snow storage space.
CCIA Road	0.05	0.05	0.05	0.05		Fair		
Clarks Cove Road	2.72	2.72	2.72	2.72		Fair-Good	1995 2003	Pavement stress cracks in new section; culvert cover cracks; rebuilt near Town Hall; Ridge Road to 129 poorer. Views: Pond and river.
Coveside Road	0.58	0.58	0.58	0.58		Good	1997	Pavement holding up better than some other roads. Views: Christmas Cove
East Side Road	0.28	0.28	0.00	0.28		Excel'nt	2001	Short sight dist.; narrow; not plowed. Views: Johns Bay, Atlantic Ocean
Fellows Point Road	0.07	0.07	0.07		0.07	Fair-Good		Poor drainage; no turnaround Views: River and harbor.
Harrington Road Notes a, b, c	0.93		0.93	0.93		Poor-Fair	Un-known	Some pavement sags; stress cracks, base movement; gravel shoulders. Views: Johns River by town line.
Hill Road	0.10	0.10	0.10	0.10		Fair-Good	1997	No turnaround; 0.09 gravel section beyond pavement private.
Ledge Hill Road	0.09	0.09	0.09	0.09		Fair	Un-known	Question whether section beyond pavement has been abandoned.
McFarland Cove Road	0.48	0.48	0.48	0.48		Fair-Good	2000	Cracked culvert cover; little drainage; some pavement, shoulder deterioration; sight distances; skim coat only in 2000.
Middle Road	0.74	0.74	0.74	0.74		Fair-Good	1995 2007	Base and pavement wear. Part of road paved 2007.
Old Barn Road	0.17	0.17	0.17	0.17		Poor	un-known	Old pavement very poor; significant truck use; base; drainage; width.
Prescott Road	0.15	0.15	0.15	0.15		Good	2001	Narrow. Views: Christmas Cove.
Ridge Road	0.86	0.86	0.86	0.86		Fair-Good	1999	Pavement cracking; 1.5 lanes; good shoulders; drainage.
Roderick Road	0.41	0.41	0.41	0.41		Fair-Good	1998	Narrow; 0.30 gravel section beyond pavement is private. Views: Damariscotta River.

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Road Name	Length (miles)	Town Maint.	Town Plowed	Paved miles	Gravel miles	Condition	Last Paved	Comments
S Road	1.55	1.55	1.55	1.55		Good-Excel'nt	2000 2003	0.56 mi. paved 2000; 1.00 mi. paved 2003; 2000 section shows wear; limited drainage; some cracks in 2003 section due to residential construction; very narrow near far end. Views: Seal Cove
Sand Cove Road	0.17	0.17	0.05	0.17		Fair-Excel'nt	2001	Pavement excellent; 0.13 gravel section beyond pavement is private; winter plowing only to Sand Cove. Views: River and islands.
Shipleigh Road	0.38	0.38	0.38	0.38		Poor - Fair	2001	1.5 lanes wide; lower end 1.0 lane wide and cracked.
Shipyards Road	0.39	0.39	0.39	0.39		Poor-Good	1998 2001	0.19 mi. paved in 1998, mostly poor cond.; 0.20 mi. paved in 2001 good except wear at boatyard; 1.5 lanes to Burma Road, 1 lane beyond. Views: Working waterfront.
Split Rock Road	1.22	1.22	1.22	1.22		Fair	1997	Pavement checking; 1 to 1.5 lanes wide; several significant frost heaves.
Sproul Road	0.58	0.58	0.58	0.58		Fair	1999	Some pavement deterioration; poor sight distance.
State Route 129 (State portion) Notes b, c, d	10.10		10.10	10.10		Good-Excel'nt	2008	Some paved shoulders – rest are gravel. Views: Village and harbor.
State Route 129 (Town portion) Note b	1.35	1.35	1.35	1.35		Good	2002	Good condition; some pavement cracks. Views: Christmas Cove, Johns Bay
Sunset Loop	0.18	0.18	0.18	0.18		Poor	Unknown	Poor pavement surface, drainage, and base; limited use. Views: Damariscotta River.
Thompson Inn Road	0.20	0.20	0.20	0.20		Good	1998 2001	0.12 mi. gravel section beyond pavement is private. Views: Village and harbor.
Walpole Meeting-house Road	0.57	0.57	0.57	0.57		Excel'nt	2004	Realigned at west end 2004; new housing development.
West Side Road	1.03	1.03	1.03	1.03		Fair-Good	2007	Culverts 2002; pavement and base fair. Views: River and Boothbay.
Totals:	26.39	15.36	25.99	26.32	0.07			

Sources: MeDOT; MeGIS; town records; Comprehensive Planning Committee.

Notes: a: minor collector road;

b: subject to access rules of MeDOT;

c: Harrington Road and State Route 129 from the northern town line to Union Church are maintained by MeDOT except for winter plowing and sanding. Total MeDOT maintained length is 11.03 miles.

d: Major collector road.

Appendix J — South Bristol Private Roads

This appendix lists all of the private roads in South Bristol with available data on each. Note that some of these private roads are extensions beyond the end of a public road. See appendix I for a list of public roads.

Road name	Length miles	Road name	Length miles	Road name	Length miles
Adams Way	0.39	Harvey Drive	0.09	Pitcher Road	0.20
Alice Norwood Road	0.20	High Island Passage	1.02	Plummer Point Road	0.74
Anodyne Road	0.06	Hill Road *	0.09	Point Priscilla Road	0.24
Appletree Drive	0.20	Holly Berry Lane	0.07	Poole Lane	0.16
Araho Drive	0.37	Holmes Road	0.67	Poole's Landing	0.09
Atlantic Avenue	0.22	Homer Run	0.25	Poseidon Lane	0.57
Bear Cove Way	0.08	Hooks Lobster Pd Road	0.08	Prentiss Cove Road	0.54
Bittersweet Landing Lane	0.13	Hunters Landing Road	0.21	Priv Drive	0.14
Blueberry Lane	0.06	Ingraham Lane	0.10	Ricky Lane	0.13
Boot Hill Road	0.08	Ira Darling Road	0.80	River Bend Lane	0.58
Bradstreet Lane	0.09	John Gay Road	0.63	Roderick Road *	0.30
Brant Road	0.23	Johns Bay Road	0.42	Ross Lane	0.13
Breezy Point Lane	0.08	Jones Point Road	0.58	Sand Cove Road *	0.13
Brickyard Farm Road	0.39	Kelsey Drive	0.68	Scotch Mist Drive	0.09
Burma Road *	0.11	Kings Cove Lane	0.22	Seal Cove Road	0.10
By-Water Lane	0.21	Kunkle Lane	0.09	Sloop Nellie Road	0.27
Captain Smith Way	0.09	Landing Way	0.14	Spring Street	0.15
Cooper Way	0.10	Ledge Hill Road – see note	0.00	Stegna Road	0.04
Cottlesbrook Road	0.42	Little Harbor Road	0.06	Stone Ridge Road	0.08
Coverhill Lane	0.14	Long Cove Lane	0.16	Stowaway Lane	0.11
Double Dolphin Way	0.54	Loon Lane	0.20	Sunset Ridge Road	0.22
East Branch Road	1.24	Louise Lane	0.14	Texas Road	0.79
Easy Street	0.11	Lupine Lane	0.12	Thomas Lane	0.08
Edward Lane	0.17	Midnight Sun Road	0.56	Thompson Inn Road *	0.12
Elliot's Cove Lane	0.03	Miles Road	0.87	Thread of Life Road	0.07
Emery Cove Road	0.19	Mook Farm Road	0.27	Tidewater Way	0.44
Fairhaven Road	0.27	Mudfog Lane	0.08	Tin Pan Alley	0.09
Fiddlers Lane	0.08	Neptune Drive	0.13	Treasure Point Road	0.15
Fitch Cove Road	0.20	Northwest Passage	0.07	Valiant Lady Lane	0.08
Four Winds Drive	0.07	Oak Grove Road	0.07	Wade Point Road	0.18
Fox Hill Road	0.56	Oak Ridge Road	0.16	Wabanaki Trail	0.19
French Lane	0.10	Old Boathouse Road	0.13	Wawenock Drive	0.10
Gamage Drive	0.07	Old Sled Road	0.07	Western Light Drive	0.04
Garber Drive	0.18	Orchard Road	0.32	Wild Duck Drive	0.28
Gaul Drive	0.17	Osprey Drive	0.15	Will Alley Road	0.14
Glidden Ledge Road	0.58	Peace Drive	0.03	Windigo Lane	0.27
Good Day Drive	0.03	Peters Island Road	0.23	Windsong Way	0.21
Goudy Pasture Road	0.11	Phyllis Lane	0.05	Winks Way	0.06
Half Moon Cove Road	0.45	Pine Bluff Lane	0.22	Winterberry Lane	0.14
* Private section only				Total Private Miles	27.47

Sources: MeDOT; MeGIS; town records; Comprehensive Planning Committee.

Note: The legal status of Ledge Hill Road beyond the pavement end is unknown.

Appendix K — South Bristol Road and Bridge Maintenance

This appendix lists maintenance in recent years on public roads in South Bristol except for state maintained roads (State Route 129 and Harrington Road). It does not include winter plowing and sanding which runs about \$115,000 each winter.

Road	Year	Work Done	Cost	Est. Life	Comments
Burma Road	2000	Re-paved	\$8,000	10	
Carl Bailey Road	2004	Re-paved	\$33,000	10	
CCIA Road	2001	Re-paved	\$6,000	10	
Clarks Cove Road	1995	Re-paved	\$50,000	10	Partly paid by UMO
	2003	Guard Rocks	\$6,000		
Clark Cove Road Bridge	2006	Rip rap/barriers	\$4,871		
	Annually	Bridge planks	\$100	5	Planks replaced as necessary
Coveside Road	1997	Re-paved	\$20,000	10	
	2005	Ditching	\$195		
	2006	Culvert	Un-known		Work done by subdivision developer
East Side Road See note	1994/01?	Re-paved	\$60,000	10	
	2005	Ditching	\$430		
Fellows Point Road	Annually	Grading	\$200		Gravel road. Road to be discontinued
Hill Road	1997	Re-paved	\$5,000	10	
McFarland Cove Road	2000	Re-paved	\$25,000	10	
Middle Road	1995	Re-paved	\$25,000	10	
Old Barn Road	Annually	Grading	\$500	30	Gravel road that gets heavy truck usage (\$15,000??)
Prescott Road	2001	Re-paved	\$8,000	15	
Ridge Road	1999	Re-paved	\$15,000	10	
	1999	Culverts	\$600		
Roderick Road	1998	Re-paved	\$9,000	10	
	2005	Culvert repair	\$799		
S Road	2002/3	Re-paved	\$52,000	10	
	2003	Brush Removal	\$500		
	2005	Culvert/Wright's	\$560		
		Ditching	\$521		
Sand Cove Road	2001	Re-paved	\$7,000	15	
Shipyards Road	1998/01?	Re-paved	\$8,000	10	
	2005	Culvert	\$1,560		
	2006	Guard rails	\$740		
Split Rock Road	1997	Re-paved	\$18,000	10	
Sproul Road	1999	Re-paved	\$15,000	10	
	1999	Brush removal	\$1,000		

Road	Year	Work Done	Cost	Est. Life	Comments
Sunset Loop	2006	Re-paved	\$10,000		
Thompson Inn Road	1998/01?	Re-paved	\$10,000	10	
Town Office Driveway	2000	Constructed	\$13,000	20	
Walpole Fire Station	2005	Paved Apron	\$3,700		
Walpole Meetinghouse Road	2004	West end rebuilt & realigned	\$30,000	10	Work was done by developer of subdivision
West Side Road	1995	Re-paved	\$30,000	10	
	2002	Culverts	\$600		
	2005	Ditching	\$1,705		
	2006	Culvert / Mills	\$2,515		

Sources: Town records; Lincoln County Planner.

Notes: Minor maintenance, patching, roadside mowing, etc. are not shown.

Before about 1995, East Side Road was the name of what is now named State Route 129 south of Union Church to the branch of Shipley Road straight ahead, Sand Cove Road to the right, and East Side Road to the left.

Appendix L — Sectors

Listed here are the sectors, ordered roughly from north to south, which comprise the South Bristol land mass and the important features of each. See page 266 for how the sectors were delineated. The sectors are shown on map 12. Many of the historical references are discussed at length in chapter 8.

1. Walpole North

- residences from 1783 to present
- river-front residential development
- Walpole Meetinghouse (1772)
(on National Register of Historic Places)
- recent inland residential subdivision
- light commercial (hairstylist, Walpole Barn gift shop)
- historic shipping landing and current town dock
- agriculture (large domestic animals – horses)
- aquaculture

2. Forest North (extends into Bristol)

- large intact, undeveloped block of woodland habitat
- highest elevations in Town
- headwaters for Little Falls, Wiley, and Orr's Meadow brooks
- moose, deer, other mammals
- migratory and upland birds
- continues into undeveloped land in Bristol

3. Walpole Center

- Post Office
- Town sand and salt shed
- residences from 1778 to present
- former Gladstone School house (now a residence)
- golf course
- boat building
- agricultural (vegetable farming; maple syrup; large domestic animals such as horses, cows, goats; apple orchards)
- river front residential development
- aquaculture
- limited commercial activity (B & B and campground)

4. Forest Central (extends into Bristol)

- deer yards
- large intact, undeveloped block of woodland habitat
- moose, deer, other mammals
- upland and migratory birds
- continues into undeveloped land in Bristol

5. Clarks Cove Pond

- undeveloped habitat block
- largest body of fresh water in Town
- bass and brown trout fishery in pond
- brook trout in Orr's Meadow Brook
- wildlife habitat, including deer and other mammals
- migratory and upland bird habitat

6. Marine Research

- Darling Marine Center (University of Maine)
- world-renowned center for marine biological research
- visiting international scholars
- graduate teaching to Ph.D. level
- post-doctoral research projects

7. Clarks Cove Historical

- oldest houses in town (ca 1751)
- Town Hall (Centennial Hall, 1876), later a two-room school, now houses Walpole Fire Station (see page 99)
- first lumber and grist mills in town (only stone foundations remain)
- scenic views (e.g., river, pond, open fields, wooded areas)
- aquaculture (first aquaculture in Maine)
- working waterfront
- marine wetland/wading shorebirds
- agriculture (horses and rabbits)
- new Town Office

8. Old Agriculture

- residences from 1749
- Sproul Homestead (*on National Register*)
- open, mowed fields
- former dairy farm
- low residential development
- land in tree growth and open space

9. Harrington Road Historical (extends into Bristol)

- historic houses from 1780s
- rural, low density residential
- agricultural resources
- scenic views
- deer wintering margins
- old foundations
- unexcavated archeological sites
- original farmsteads
- high value soils
- abuts large blocks of forest habitat
- values continue into Bristol
- continues east to Harrington Meetinghouse (1772) and McKinley School (1857) – both in Bristol

10. North Branch

- marine resources
- loons, black ducks, eagles
- quiet, intact waterfront
- tidal habitat
- deer yards
- high percentage of easement protected property
- experimental aquaculture site

11. East Branch (extends into Bristol)

- marine resources
- experimental aquaculture site
- mooring area
- highly scenic
- protected easements

12. The Coves

- classic cove waterfronts
- protected anchorages
- highly scenic; tidal rapids
(continued next column)

12. The Coves (continued)

- tidal habitat
- boat building
- S Road (Roosevelt) schoolhouse (ca 1860), now restored
- Thompson Ice House (*National Register*)
- seasonal residential cluster
- public preserves; open space

13. The Village

- working waterfront
- the Gut – one of most protected anchorages on the Maine coast
- commercial village; Post Office
- highly scenic
- residential, closely spaced houses
- traditional wooden small boat building
- marine services; launch ramp (fee)
- swing bridge providing routine and emergency access to Rutherford Island

14. Rutherford Island North

- fire station and Fire Department HQ
- highly residential
- highly scenic
- Miles Estate and tower
- town float on the Gut

15. Rutherford Island South

- highly scenic
- seasonal recreational boating
- seasonal residential and commercial
- some year-round residential
- town float, plus private water access

16. Inner Heron Island

- summer colony developed 1884 to 1939
- post office and store, closed since 1940s

17. Eastern Islands

- marine bird nesting habitat
- protected roseate tern nesting site
- negligible development
- Emily Means house (*on National Register*)
- lobster research area
- Thread of Life thoroughfare

Appendix M – Constraints to Development

Numerous factors may constrain development in specific areas of Town. Many of these are lot specific, many are based on geology; others on the status of property ownership.

Natural Resource Based Constraints

Item	Variable	Constraint Level	
		Severe	Moderate
Topography	> 15% slope	✓	
Depth to water table	Very poorly drained soils (< 1 ft to water table)		✓
	Poorly drained soils (< 1 ft to water table)		✓
	Somewhat poorly drained soils (1 to 3 ft to water table)		✓
Prime farmland	Prime farmland soil present		✓
Farmland soils	Farmland soils of statewide importance present		✓
Risk of erosion	Highly erodible soil conditions present		✓
Hydric soils	All hydric	✓	
	Partially hydric	✓	
Septage suitability	Soils not suitable for septage (Gerber 1991)		✓
Rock outcrop	Significant rock outcrop present		✓
Freshwater Wetlands	Wetland and 100 ft buffer	✓	
	101 to 250 ft buffer		✓
Coastal Wetlands	> 10 acres with 250 ft buffer		✓
Ponds	< 10 acres with 100 ft buffer	✓	
	> 10 acres with 250 ft buffer	✓	
Streams	With 100 ft buffer	✓	
Coastal waters	< 75 ft from high water mark (Shoreland Zone)	✓	
	75 to 250 ft from high water mark (Shoreland Zone)		✓
Wellhead protection	Buffer around public water wells		✓
Habitat	Deer wintering areas – significant		✓
	Inland waterfowl and wading bird habitat – significant		✓
	Bald eagle nesting site	✓	

Property Status Constraints

Item	Variable	Constraint Level	
		Severe	Moderate
Town Owned	Parks, preserves, etc	✓	
	Cemeteries	✓	
	All other municipal property - schools, town offices, fire stations, library, buildings, meeting house		✓
Land Trusts	Nature Preserves	✓	
	Conservation Easements	✓	
Tree Growth	Parcels or parts of parcels in tree growth		✓
Open Space	Parcels or parts of parcels in open space		✓
Working Waterfront	Parcels in working waterfront		✓

Note: There are important additional factors which must be considered as constraints to development:

- Blocks of undeveloped land, greater than 100 acres in size, which are shown on Map 12 and also on map 16 (Future Land Use).
- Archeological sites as shown on Map 9 (Areas of Historic and Prehistoric Value).
- Recommended residential density (i.e., number of acres per dwelling) based on soil recharge conditions (Gerber 1991; see ch. 4 reference page) and shown on Map 2 (Soil and Slopes Constraints).

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2010 Comprehensive Plan

South Bristol, Maine

Volume II

The Maps

The Comprehensive Plan Team

Town of South Bristol, Maine

2010

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The entire contents of this Comprehensive Plan are in the public domain

When referenced a citation would be appreciated

Copies are available in printed and digital (CD) format
from the Town of South Bristol.

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Introduction to the Maps

The maps included here were prepared using graphic information system (GIS) software, specifically ArcGIS 9.2 and 9.3.1. The data presented are largely from online sources and much of it is available from the Maine Office of GIS. Only minor changes have been made to the publicly available data, e.g. moving part of a watershed boundary, updating a small road segment, correcting a place name spelling. Considerable data were not available online and had to be specifically requested, e.g. overboard discharge permits and mooring locations in which cases we created the map layers.

Important data were contributed by various town of South Bristol sources including annual reports, harbor master, local historians, libraries, data in the 1992 comprehensive plan, and members of the Committee. The property parcels shape file was created for us from South Bristol tax maps using grant money made available by the Lincoln County Planning Office. While the property boundaries are suitable for use at this scale they should not be interpreted as legal parcel boundaries.

All of the maps for this Comprehensive Plan were created and edited by two members of the Committee, without utilizing outside organizations.

Many layers of data were considered for use in the maps. We have documented each layer used, and many which were checked out but found to be inappropriate for use herein. The Committee would be happy to make that documentation available to anyone interested.

The maps are non-regulatory and intended for planning purposes only. The horizontal positional accuracy of all source data is generally +/- 40 feet. Furthermore, the maps should not be enlarged or reduced and used at scales other than the original scale of 1:24,000. This is the scale of much data available on line and the scale of the 7.5 minute USGS topographic maps.

Most of the maps have the features “clipped” 0.5 miles out from the South Bristol town line. This allows significant features such as roads, streams, and watersheds to be shown as they continue into other towns. We have done this in consideration that South Bristol is part of the region.

So far as we know, most data represented on each of the maps is the latest available. On a few occasions, we have used earlier data as more appropriate or representative, such as the new buildings shown on map 13. In the lower right corner of each map is shown the latest date of significant editing.

We recognize that we have been working in a constantly changing regulatory environment. The maps were created conforming to regulations in effect when the maps were created, and in a few cases we have updated them to conform to newer regulations. Some regulatory changes have had little or no effect. An example is the restriction to building on steep slopes. When the maps were drawn, the restriction was for building on slopes steeper than 15 percent; it is now 20 percent. An analysis found that there is no discernable difference on the maps between the two slopes so we chose to leave the maps unchanged.

Along the margins of each map are ticks representing one minute of latitude or longitude.

We must state the often repeated admonition of, “not to be used for navigation.” In addition, as noted on many of the maps, the demarcation of public to private roads in some cases may be approximate.

As final caveat, *absolutely nothing on these maps is regulatory, nor will adoption of the Plan make it regulatory.*

Old Houses South Bristol Maine Comprehensive Plan Map 1

69°35'W 69°34'W 69°33'W 69°32'W

44°0'N 43°59'N 43°58'N 43°57'N 43°56'N 43°55'N 43°54'N 43°53'N 43°52'N 43°51'N 43°50'N 43°49'N

44°0'N 43°59'N 43°58'N 43°57'N 43°56'N 43°55'N 43°54'N 43°53'N 43°52'N 43°51'N 43°50'N 43°49'N



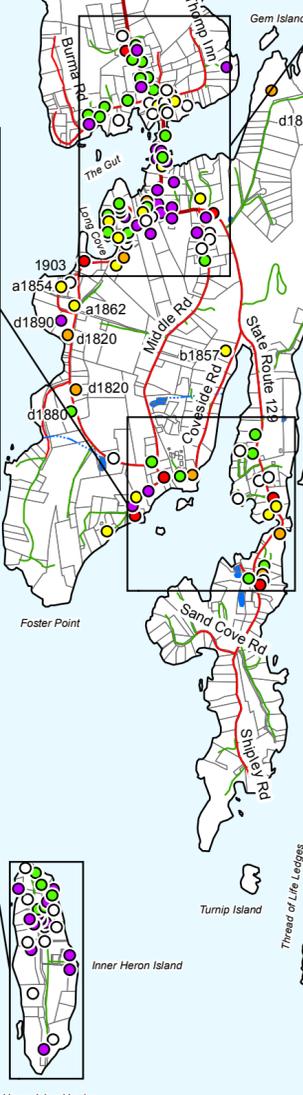
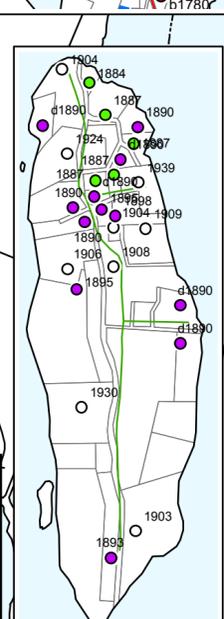
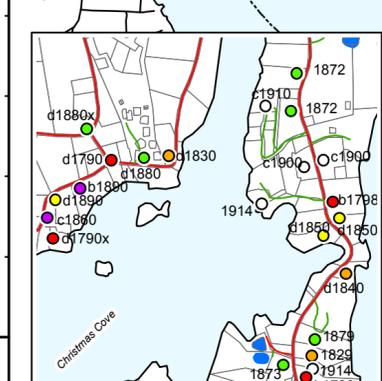
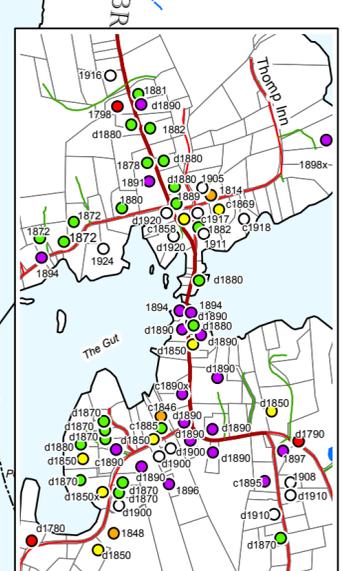
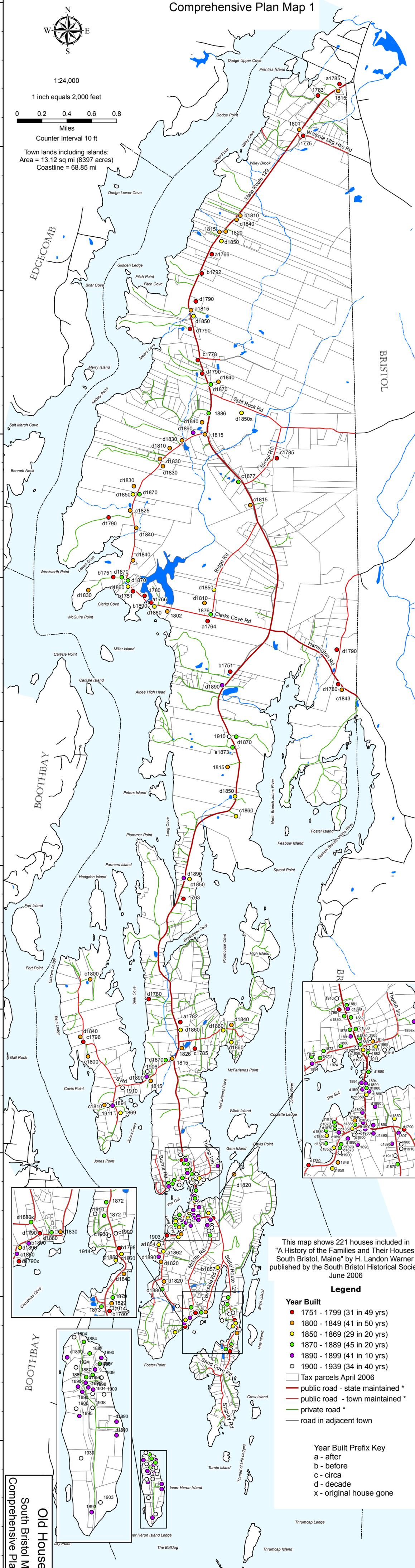
1:24,000

1 inch equals 2,000 feet



Counter Interval 10 ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi



This map shows 221 houses included in "A History of the Families and Their Houses: South Bristol, Maine" by H. Landon Warner published by the South Bristol Historical Society June 2006

Legend

- Year Built**
- 1751 - 1799 (31 in 49 yrs)
 - 1800 - 1849 (41 in 50 yrs)
 - 1850 - 1869 (29 in 20 yrs)
 - 1870 - 1889 (45 in 20 yrs)
 - 1890 - 1899 (41 in 10 yrs)
 - 1900 - 1939 (34 in 40 yrs)
- Tax parcels April 2006
- public road - state maintained *
 - public road - town maintained *
 - private road *
 - road in adjacent town

Year Built Prefix Key

- a - after
- b - before
- c - circa
- d - decade
- x - original house gone

Data Sources:
MEGIS, MDOT, SVCA, SBHS
UTM 19N NAD83
August 10, 2007

Old Houses
 South Bristol Maine
 Comprehensive Plan Map 1

69°35'W 69°34'W 69°33'W 69°32'W

69°35'0"W

Soil and Slope Constraints

South Bristol Maine

Comprehensive Plan Map 2

44°0'0"N

44°0'0"N



1:24,000

1 inch = 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

EDGECOMB

NEWCASTLE

BRISTOL

BOOTHBAY

BRISTOL

BOOTHBAY

43°55'0"N

43°55'0"N

43°50'0"N

43°50'0"N

Soil and Slope Constraints
South Bristol Maine
Comprehensive Plan Map 2

69°35'0"W

Legend

- Recommended residential density based soil recharge conditions in drought**
- 1 Acre per dwelling (9.5%)
 - 2 Acres per dwelling (15.0%)
 - 4 Acres per dwelling (53.7%)
 - 8 Acres per dwelling (19.7%)
 - Not suitable for septicage (2.0%)
- Hydric Soils**
- All hydric
 - Partially hydric
- Depth to water table**
- < 1 ft Very poorly drained
 - < 1 ft Poorly drained
 - 1 to 3 ft Somewhat poorly drained
- Potential for erosion**
- Highly erodible land
- Coastal bluff hazards**
- landslide site (5)
 - landslide risk area (2)
 - potential landslide area (23)
 - depth to bedrock, ft (128)
 - bedrock outcrop (71)
 - perennial stream (8)
 - intermittent stream (18)
 - pond
 - public road - state maintained *
 - public road - town maintained *
 - private road *
 - road in adjacent town

Recommended Residential density data come from "Ground Water Resource Evaluation and Management Plan", South Bristol, Maine April 1991 by Robert G. Gerber, Inc. Note this map is based on general soil associations and detailed soil surveys on a specific site may reveal different local conditions.

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

Data Sources: MEGIS, SBPC '92, USDA UTM 19N NAD83

So Bristol Comp Plan Committee
September 21, 2010

69°35'0"W

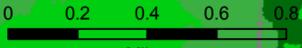
69°35'0"W

Land Cover South Bristol Maine Comprehensive Plan Map 3



1:24,000

1 inch equals 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N

44°0'0"N

43°55'0"N

43°55'0"N

43°55'0"N

43°55'0"N

69°35'0"W

EDGECOMB

NEWCASTLE

BRISTOL

BOOTHBAY

BRISTOL

BOOTHBAY

Caution - imprecise
See text on p. 18

Land Cover
South Bristol Maine
Comprehensive Plan Map 3

Legend	
[Dark Brown]	2 Developed, High Intensity
[Medium Brown]	3 Developed, Medium Intensity
[Light Brown]	4 Developed, Low Intensity
[Olive Green]	5 Developed, Open Space
[Orange]	6 Cultivated Crops
[Tan]	7 Pasture/Hay
[Light Green]	8 Grassland/Herbaceous
[Medium Green]	9 Deciduous Forest
[Dark Green]	10 Evergreen Forest
[Light Green]	11 Mixed Forest
[Medium Green]	12 Scrub/Shrub
[Teal]	13 Wetland Forest
[Light Blue]	15 Wetlands
[Grey]	16 Road/Runway
[Red]	19 Unconsolidated Shore
[Light Tan]	20 Bare Ground
[Blue]	21 Open Water
[Dark Red]	22 Blueberry Field
[Brown]	23 Recent Clearcut
[Light Green]	24 Light Partial Cut
[Dark Green]	25 Heavy Partial Cut
[Yellow]	26 Regenerating Forest
[Light Brown]	27 Alpine

The MELCD land cover map was primarily derived from Landsat Thematic Mapper 5 and 7 imagery, from the years 1999-2001 for the entire state. Not all 23 categories of land cover are present within the extent of this South Bristol area map. This raster based image has a spatial resolution of 5m.

UTM 19N NAD83
March 6, 2006

69°35'0"W

Water Resources South Bristol Maine Comprehensive Plan Map 4



1:24,000

1 inch = 2,000 feet

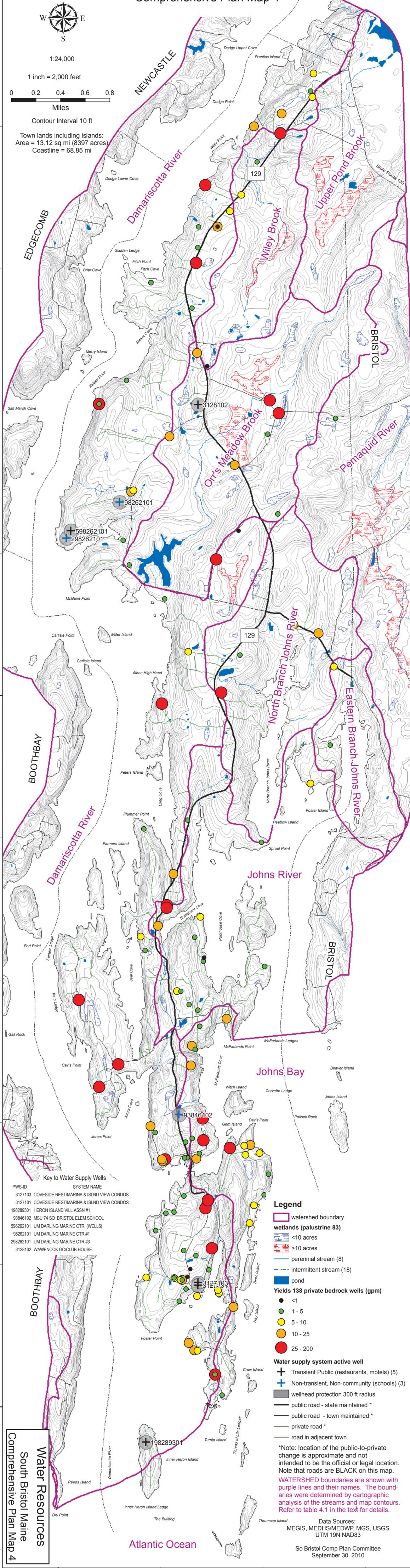


Contour Interval 10 ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N
43°55'0"N
43°50'0"N

44°0'0"N
43°55'0"N
43°50'0"N



Key to Water Supply Wells

PWS-ID	SYSTEM NAME
3127103	COVESIDE REST/MARINA & ISLND VIEW CONDOS
3127101	COVESIDE REST/MARINA & ISLND VIEW CONDOS
198289301	HERON ISLAND VILL ASSN #1
93846102	MSU 74 SO BRISTOL ELEM SCHOOL
598262101	UM DARLING MARINE CTR (WELL6)
98262101	UM DARLING MARINE CTR #1
298262101	UM DARLING MARINE CTR #3
3128102	WAVENOCK GC/CLUB HOUSE

Legend

- watershed boundary
- wetlands (palustrine 83)
- <10 acres
- >10 acres
- perennial stream (8)
- intermittent stream (18)
- pond
- Yields 138 private bedrock wells (gpm)**
- <1
- 1 - 5
- 5 - 10
- 10 - 25
- 25 - 200
- Water supply system active well**
- + Transient Public (restaurants, motels) (5)
- + Non-transient, Non-community (schools) (3)
- wellhead protection 300 ft radius
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town

*Note: location of the public-to-private change is approximate and not intended to be the official or legal location. Note that roads are BLACK on this map.

WATERSHED boundaries are shown with purple lines and their names. The boundaries were determined by cartographic analysis of the streams and map contours. Refer to table 4.1 in the text for details.

Data Sources:
MEGIS, MEDHS/MEDWP, MGS, USGS
UTM 19N NAD83

So Bristol Comp Plan Committee
September 30, 2010

Water Resources
South Bristol Maine
Comprehensive Plan Map 4

69°35'0"W

69°35'0"W

Natural Resources South Bristol Maine Comprehensive Plan Map 5

44°0'0"N



1:24,000

1 inch = 2,000 feet



Contour Interval 10 ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

43°55'0"N

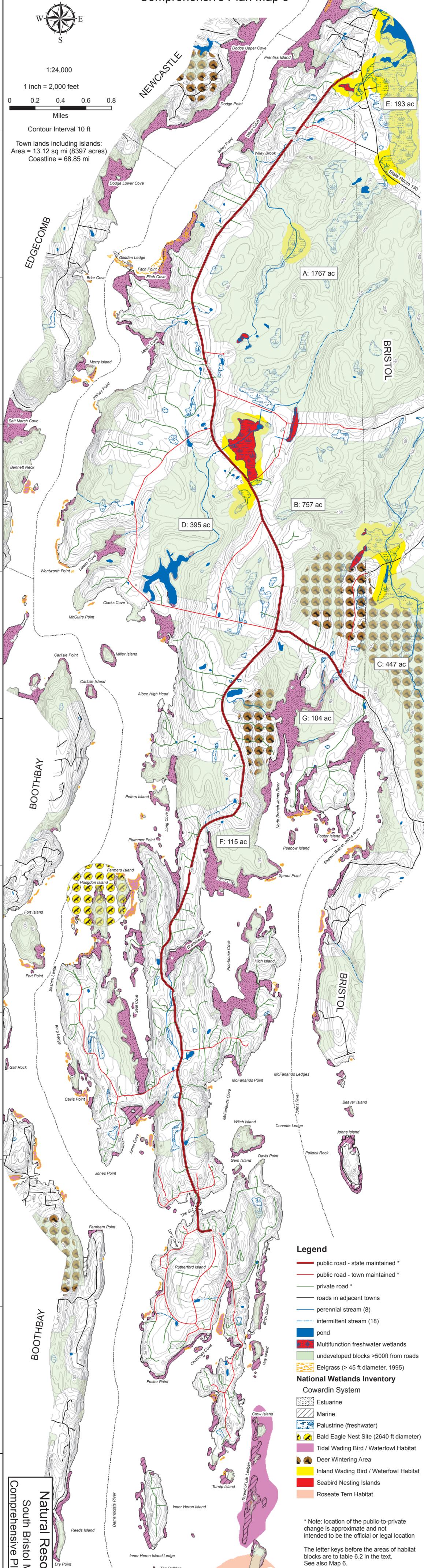
43°55'0"N

43°55'0"N

44°0'0"N

43°55'0"N

43°55'0"N



Legend

- public road - state maintained *
 - public road - town maintained *
 - private road *
 - roads in adjacent towns
 - perennial stream (8)
 - intermittent stream (18)
 - pond
 - Multifunction freshwater wetlands
 - undeveloped blocks >500ft from roads
 - Eelgrass (> 45 ft diameter, 1995)
- ### National Wetlands Inventory
- Cowardin System
- Estuarine
 - Marine
 - Palustrine (freshwater)
 - Bald Eagle Nest Site (2640 ft diameter)
 - Tidal Wading Bird / Waterfowl Habitat
 - Deer Wintering Area
 - Inland Wading Bird / Waterfowl Habitat
 - Seabird Nesting Islands
 - Roseate Tern Habitat

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

The letter keys before the areas of habitat blocks are to table 6.2 in the text. See also Map 6.

Data Sources: MEGIS, MDIFW, SPO
UTM 19N NAD83

So Bristol
September 22, 2010

Natural Resources
South Bristol Maine
Comprehensive Plan Map 5

69°35'0"W

69°35'0"W

Unfragmented Habitat Blocks

South Bristol Maine

Comprehensive Plan Map 6

44°0'0"N

44°0'0"N



1:24,000

1 inch = 2,000 feet



43°55'0"N

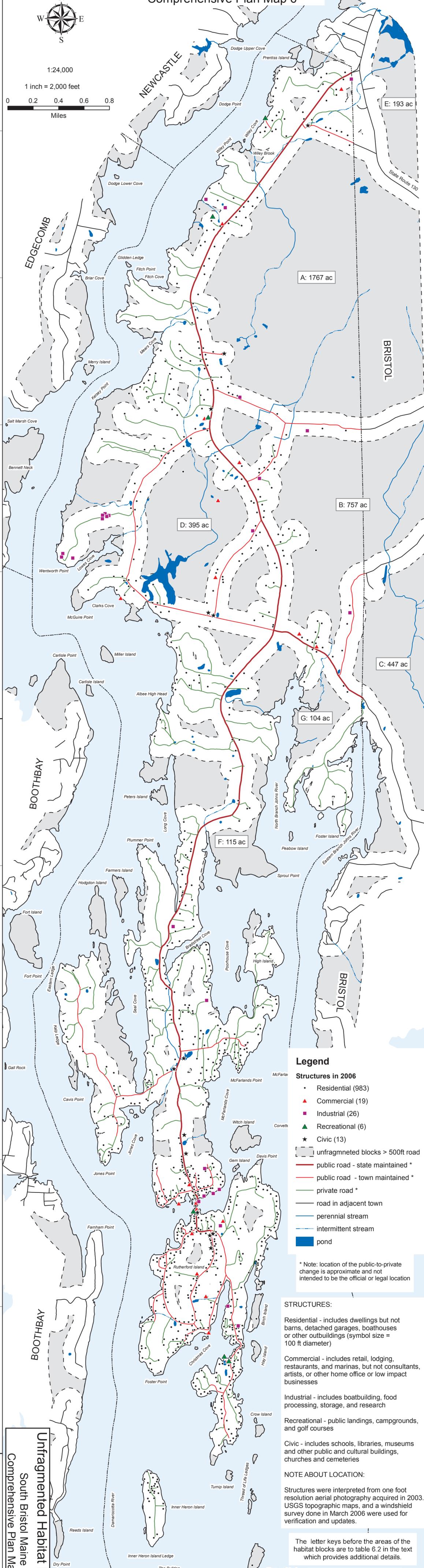
43°55'0"N

43°50'0"N

43°50'0"N

Unfragmented Habitat Blocks
South Bristol Maine
Comprehensive Plan Map 6

69°35'0"W



Legend

Structures in 2006

- Residential (983)
- ▲ Commercial (19)
- Industrial (26)
- ▲ Recreational (6)
- ★ Civic (13)
- ▭ unfragmented blocks > 500ft road
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- perennial stream
- intermittent stream
- pond

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

STRUCTURES:

- Residential - includes dwellings but not barns, detached garages, boathouses or other outbuildings (symbol size = 100 ft diameter)
- Commercial - includes retail, lodging, restaurants, and marinas, but not consultants, artists, or other home office or low impact businesses
- Industrial - includes boatbuilding, food processing, storage, and research
- Recreational - public landings, campgrounds, and golf courses
- Civic - includes schools, libraries, museums and other public and cultural buildings, churches and cemeteries

NOTE ABOUT LOCATION:

Structures were interpreted from one foot resolution aerial photography acquired in 2003. USGS topographic maps, and a windshield survey done in March 2006 for verification and updates.

The letter keys before the areas of the habitat blocks are to table 6.2 in the text which provides additional details.

Data Sources: MEGIS MDIFW
UTM 19N NAD83

So Bristol Comp Plan Committee
September 22, 2010

69°35'0"W

Recreation and Historical Information

South Bristol Maine Comprehensive Plan Map 7



1:24,000

1 inch = 2,000 feet



Contour Interval 10ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85mi

44°0'0"N

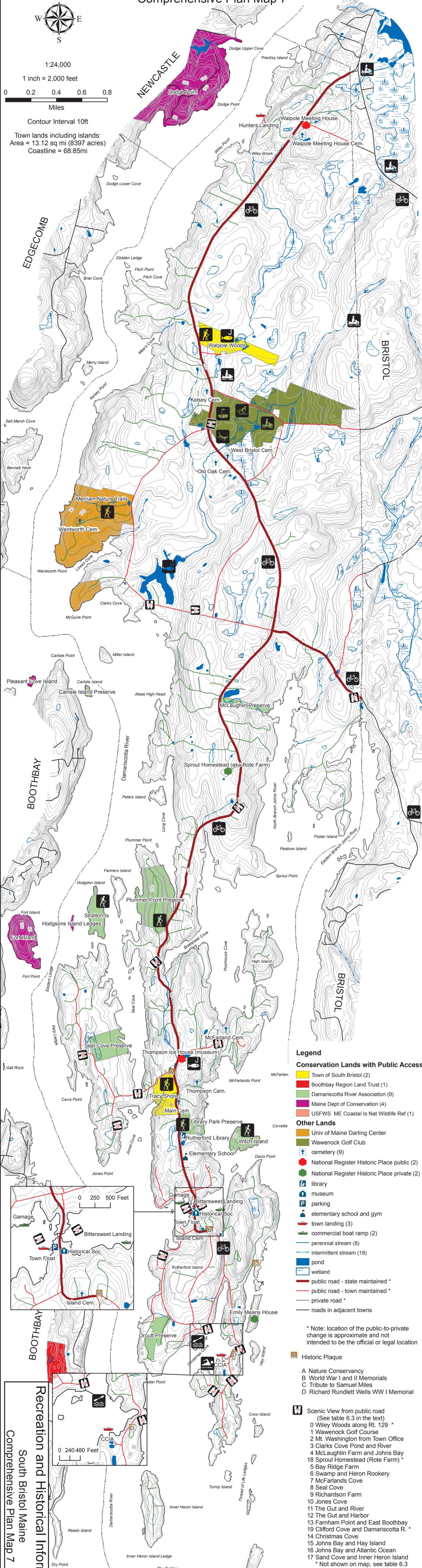
43°55'0"N

43°50'0"N

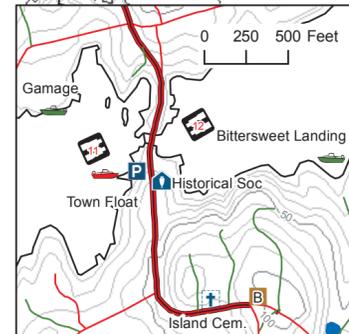
44°0'0"N

43°55'0"N

43°50'0"N



- Legend**
- Conservation Lands with Public Access**
- Town of South Bristol (2)
 - Boothbay Region Land Trust (1)
 - Damariscotta River Association (9)
 - Maine Dept of Conservation (4)
 - USFWS ME Coastal Is Nat Wildlife Ref (1)
- Other Lands**
- Univ of Maine Darling Center
 - Wawenock Golf Club
 - cemetery (9)
 - National Register Historic Place public (2)
 - National Register Historic Place private (2)
 - library
 - museum
 - parking
 - elementary school and gym
 - town landing (3)
 - commercial boat ramp (2)
 - perennial stream (8)
 - intermittent stream (18)
 - pond
 - wetland
 - public road - state maintained *
 - public road - town maintained *
 - private road *
 - roads in adjacent towns
- * Note: location of the public-to-private change is approximate and not intended to be the official or legal location
- A** Historic Plaque
- A Nature Conservancy
 - B World War I and II Memorials
 - C Tribute to Samuel Miles
 - D Richard Rundlett Wells WW I Memorial
- Scenic View from public road**
(See table 6.3 in the text)
- 0 Wiley Woods along Rt. 129 *
 - 1 Wawenock Golf Course
 - 2 Mt. Washington from Town Office
 - 3 Clarks Cove Pond and River
 - 4 McLaughlin Farm and Johns Bay
 - 18 Sproul Homestead (Rote Farm) *
 - 5 Bay Ridge Farm
 - 6 Swamp and Heron Rookery
 - 7 McFarlands Cove
 - 8 Seal Cove
 - 9 Richardson Farm
 - 10 Jones Cove
 - 11 The Gut and River
 - 12 The Gut and Harbor
 - 13 Farnham Point and East Boothbay
 - 19 Clifford Cove and Damariscotta R. *
 - 14 Christmas Cove
 - 15 Johns Bay and Hay Island
 - 16 Johns Cove and Inner Heron Island
 - 17 Sand Cove and Inner Heron Island
 - * Not shown on map, see table 6.3



Recreation and Historical Information
South Bristol Maine
Comprehensive Plan Map 7

Data Sources: MEGIS, SBPC '92, DRA, MIF&W
UTM 19N NAD83

So Bristol Comp Plan Committee
September 30, 2010

69°35'0"W

69°35'0"W

Hurricane Surge Inundation at Mean High Tide

South Bristol Maine

Comprehensive Plan Map 8

44°0'0"N

44°0'0"N



1:24,000

1 inch = 2,000 feet



Contour Interval 10 ft

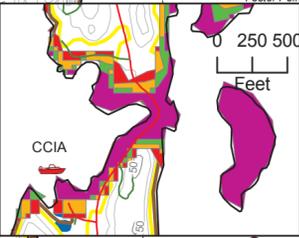
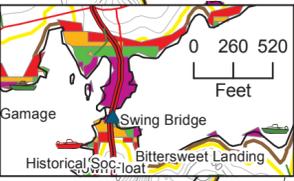
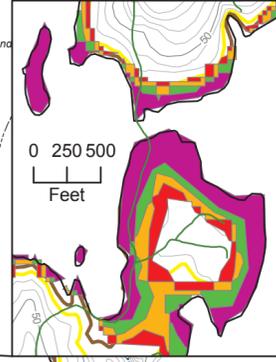
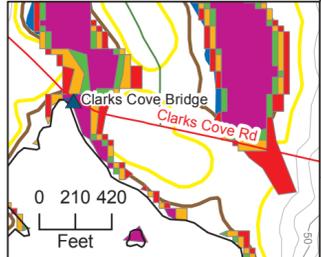
Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

EDGECOMB

NEWCASTLE

BRISTOL

BOOTHBAY



Legend

- bridge (2)
- fire station (2)
- library
- post office (2)
- elementary school
- town office
- town landing (3)
- commercial boat ramp (2)
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- perennial stream (8)
- intermittent stream (18)

Hurricane Surge Inundation, mean high tide

- saffir/simpson scale category**
- 4 131-155 mph max. sustained wind
 - 3 111-130 mph
 - 2 96-110 mph
 - 1 74-95 mph
- Sea Rise**
- 10 ft
 - 20 ft
 - pond

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

(inset map) Areas where evacuation roads will flood at hurricane category 1 and above, thereby potentially isolating residents

Data Sources: MEGIS, USACE, SBCP '92
UTM 19N NAD83

So Bristol Comp Plan Committee
March 4, 2007

69°35'0"W

43°55'0"N

43°55'0"N

Hurricane Surge Inundation Mean High Tide
South Bristol Maine
Comprehensive Plan Map 8

69°35'0"W

Areas of Historical and/or Prehistoric Value

South Bristol Maine Comprehensive Plan Map 9



1:24,000

1 inch = 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N

44°0'0"N

43°55'0"N

43°55'0"N

43°50'0"N

43°50'0"N

EDGECOMB

NEWCASTLE

BRISTOL

BRISTOL

BOOTHBAY

BOOTHBAY

Areas of Historical and/or Prehistoric Value
South Bristol Maine
Comprehensive Plan Map 9

Legend

- documented historical value
- sensitive areas
- tax parcels April 2006
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- perennial stream (8)
- intermittent stream (18)
- pond

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

Sensitive areas are areas of potential historical value that have not yet been surveyed by a professional archaeologist.

52 prehistoric archaeological sites have been surveyed: most are shell middens.

28 historical archaeological sites from the 18th, 19th, and 20th centuries have been surveyed and include: brickyards, brig/schooner/steamer wrecks, ice works, grist mills, shipyards, and quays.

Research to date has focused on the coastal areas. Future surveys are necessary to document the inland agricultural, residential, and industrial sites related to early Euro-American settlement of the Town.

Important Note:
Information shown here is a general summary. The Maine Historic Preservation Commission, (207) 287-2132, should be notified prior to any action by the town Planning Board regarding subdivision plans, construction, or other ground disturbing activity within documented archaeological sites or prehistoric and historic sensitive areas.

Data Sources: MEGIS, MHPC
UTM 19N NAD83

So Bristol Comp Plan Committee
August 23, 2007

69°35'0"W

69°35'0"W

Farmland Soils South Bristol Maine Comprehensive Plan Map 10



1:24,000

1 inch = 2,000 feet



Contour Interval 10 ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N

44°0'0"N

43°55'0"N

43°55'0"N

43°55'0"N

43°55'0"N

EDGECOMB

NEWCASTLE

BRISTOL

BOOTHBAY

BRISTOL

BOOTHBAY

Legend

farmland soils

-  prime farmland soils
-  farmland soils of statewide importance
-  forested farmland soils *

Structures in 2006

-  Residential (981)
-  Commercial (19)
-  Industrial (25)
-  Recreational (6)
-  Civic (13)
-  Tax Parcel
-  perennial stream (8)
-  intermittent stream (18)
-  pond

Farmland Classification of soils is from the USDA's Natural Resources Conservation Service National Soil Information System

* Three forest categories are merged here (deciduous, mixed, and evergreen). They come from a statewide land cover dataset derived primarily from Landsat Thematic Mapper 5 and 7 imagery, from the years 1999-2001 (MELCD). It is a raster based land cover and has a spatial resolution of 5m.

prime farmland soils 994 ac
farmland soils of statewide importance 2216 ac
total farmland soils 3210 ac (38.2% of town)
forested farmland soils 2176 ac (67.8%)

Data Sources: MEGIS,
UTM 19N NAD83

So Bristol Comp Plan Committee
June 25, 2007

Farmland Soils
South Bristol Maine
Comprehensive Plan Map 10

69°35'0"W

69°35'0"W

Marine Resources South Bristol Maine Comprehensive Plan Map 11



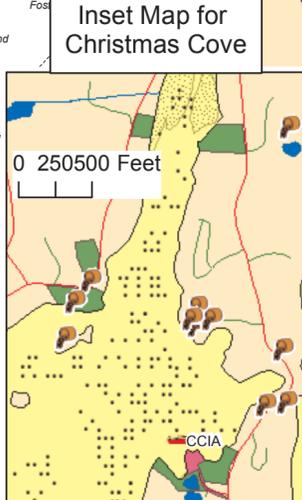
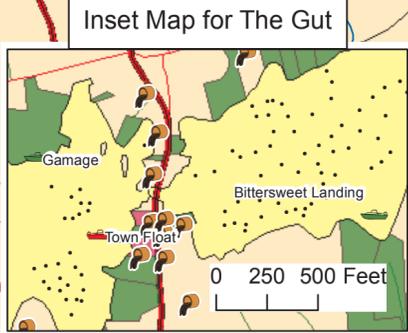
1:24,000

1 inch = 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

ID	Type	Town	Leasee	Acreage	Expires
FISC CD4	Shellfish	South Bristol	Damariscove Seafood	15.0	05/20/2011
FISC CD3	Shellfish	South Bristol	Damariscove Seafood	1.0	12/1/2014
DARL LW	Shellfish	South Bristol	U of M Darling Marine Center	0.57	08/1/2012
SBSF NH2	Shellfish	South Bristol	Sea Bounty Sea Farm	0.92	1/28/2014
GPOC WP	Shellfish	South Bristol	Glidden Point Oyster Company	2.36	5/24/2013
RWAL DP	Experimental	Newcastle	Robert Wallace	2.0	6/15/2007
2005 07	Limited Purpose	Newcastle	Fred Haverly	0.01	12/31/2005
2005 26	Limited Purpose	Newcastle	Mark Desmeules	0.01	12/31/2005
GPOC DL	Shellfish	Edgecomb	Glidden Point Oyster Company	5.0	3/1/2010
2005 17	Limited Purpose	Edgecomb	Amber Tonry	0.01	12/31/2005



- Legend**
- Fecal coliform sample sites (27) (2006)
 - overboard discharge permit (54 - Aug, 2005)
 - Mooring [1]
 - Aquaculture Lease [2]**
 - shellfish
 - experimental
 - limited purpose
 - Worm Flats 2005**
 - blood worms
 - sand worms
 - mud flat
 - Areas closed for shellfish harvesting 2005**
 - Prohibited
 - molluscan shellfish habitat 1977**
 - softshell clams, blue mussels, and sea scallops
 - waterfront (public commercial use)**
 - public access(3)
 - private access(39)
 - public road - state maintained [3]
 - public road - town maintained [3]
 - private road [3]
 - road in adjacent town

Notes:
[1] 598 moorings as of May 2005. Symbol is 50 ft across.
[2] Location is approximate. We understand that all leases showing expired dates have since been renewed.
[3] The public-to-private change is approximate and not intended to be the official or legal location

Data Sources:
MEGIS, SB Harbormaster,
MEDMR, MEDEP, NOAA
UTM 19N NAD83

So Bristol Comp Plan Committee
October 1, 2010

Marine Resources
 South Bristol Maine
 Comprehensive Plan Map 11

69°35'0"W

44°0'0"N

44°0'0"N

43°55'0"N

43°55'0"N

43°50'0"N

43°50'0"N

69°35'0"W

44°0'0"N

43°55'0"N

43°50'0"N



1:24,000

1 inch = 2,000 feet



Sectors

South Bristol Maine

Comprehensive Plan Map 12

44°0'0"N

43°55'0"N

43°50'0"N



Legend

- sectors
- undeveloped habitat blocks
- ponds

Structures in 2006

- Residential (981)
- Commercial (18)
- Industrial (26)
- Recreational (6)
- Civic (13)

public road - state maintained *

public road - town maintained *

private road *

road in adjacent town

perennial stream

intermittent stream

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

SECTORS:

The sectors as delineated on this map are intended to take into account historical and current conditions. They were initially mapped as an aid for the work of the Comprehensive Planning Committee.

Each sector has unique characteristics which are detailed in appendix L of this Plan. It is important that many of the characteristics define the history and current character of South Bristol, characteristics which the people wish to preserve.

The sectors and their characteristics have been taken into account in the process of designating future land use areas.

Sectors

South Bristol Maine

Comprehensive Plan Map 12

Data Sources: MEGIS MDFW
So Bristol Comp Plan Committee
UTM 19N NAD83

So Bristol Comp Plan Committee
October 6, 2010

69°35'0"W

69°35'0"W

44°0'0"N

Tax Parcels and Structures Highlighting New Construction

South Bristol Maine Comprehensive Plan Map 13



1:24,000

1 inch = 2,000 feet

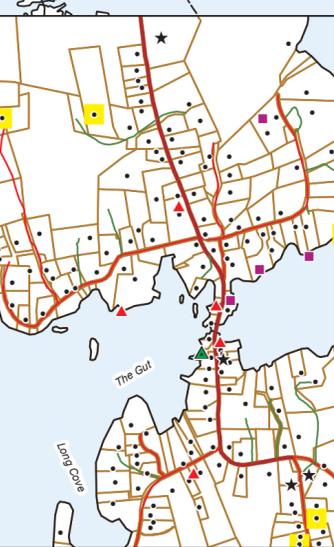


Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N

43°55'0"N

43°50'0"N



Legend

Structures in 2006

- Residential (984)
- ▲ Commercial (18)
- Industrial (26)
- ▲ Recreational (6)
- ★ Civic (13)
- new Jan 97 - Dec 06 (122)
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- Tax Parcels April 2006
- perennial stream
- intermittent stream
- pond

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

TAX PARCELS:
Boundaries are as of April 2006 and are approximate. For more current and detailed information see the tax maps in the Town Office.

STRUCTURES:

Residential - includes dwellings but not barns, detached garages, boathouses or other outbuildings (symbol size = 100 ft diameter)

Commercial - includes retail, restaurants, and marinas, but not consult, artists, or other home office or low impact businesses

Industrial - includes boatbuilding, food processing, storage, and research

Recreational - public landings, campgrounds, and golf courses

Civic - public schools, libraries, museums, and other public and cultural buildings, churches and cemeteries

NOTE ABOUT LOCATION:

Structures were interpreted from one ft resolution aerial photography acquired in 2003. USGS topographic maps and a windshield survey done in March 2006 were used for verification and updates.

The cases off by short distances, usually less than 100 ft due to the perspectives of the aerial photos.

NEW CONSTRUCTION:

The highlighted new construction is detailed in appendix H of the Comprehensive Plan.

Data Sources:
MEGIS, MDIFW, SVCA
So Bristol Comp Plan Comm
UTM 19N NAD83

So Bristol Comp Plan Committee
April 8, 2008

**Tax Parcels and Structures
Highlighting New Construction**
 South Bristol Maine
 Comprehensive Plan Map 13

69°35'0"W

44°0'0"N

43°55'0"N

43°50'0"N

69°35'0"W

Constraints to Development

South Bristol Maine

Comprehensive Plan Map 14

44°0'0"N



1:24,000

1 inch = 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

Undeveloped blocks of land 500 feet away from development and improved roads as defined by the MDIFW and MDOC "Beginning with Habitat Program". (Note: some blocks extend into Bristol)

Restricted Development Area - includes lands permanently and legally protected from development and lands with severe natural resource or environmental constraints.

- Slopes >20%
- Hydic and partially hydric soils
- Freshwater wetlands w 100 ft buffer
- Ponds < 10 ac w 100 ft buffer*
- Ponds > 10 ac w 250 ft buffer*
- Streams with 100 ft buffer
- Shoreland zone 0 to 75 ft
- Bald eagle nesting site*
- Town parks
- Cemeteries
- Land trust nature preserves
- Land trust conservation easements
- * As of 2010 these restrictions are subject to change.

Area of Special Condition - includes lands with moderate constraints on development and/or restrictive ordinances requiring permits.

- Very poorly drained soils (<1ft to wt)
- Poorly drained soils (<1ft to wt)
- Somewhat poorly drained soils (1 to 3 ft to wt)
- Prime farmland soils
- Farmland soils of statewide importance
- Highly erodible soils
- Soils not suitable for septage (Gerber 1991)
- Rock outcrop
- Freshwater wetland buffer 100 to 250 ft
- Coastal wetlands >10 ac w 250 ft buffer
- Shoreland zone 75 to 250 ft
- Wellhead protection buffer around public water wells
- Deer wintering area *
- Inland waterfowl and wading bird habitat *
- Municipal property
- Tree growth parcels
- Open space parcels
- * "Significant Wildlife Habitat" by MDIFW under Natural Resources Protection Act

Area of Fewer Constraints - includes lands with limited or few constraints to development

Unfragmented Blocks

Data Sources: MEGIS, SBCEP '92, DRA, MDIFW, SB Annual Reports UTM 19N NAD83

So Bristol Comp Plan Committee October 6, 2010

Constraints to Development
South Bristol Maine
Comprehensive Plan Map 14

69°35'0"W

43°50'0"N

43°50'0"N

43°55'0"N

44°0'0"N

69°35'0"W

Transportation and Key Features South Bristol Maine Comprehensive Plan Map 15



1:24,000

1 inch = 2,000 feet



Contour Interval 10 ft

Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

44°0'0"N

43°55'0"N

43°50'0"N

69°35'0"W

44°0'0"N

43°55'0"N

43°50'0"N

Legend

Traffic Accidents 2000-2005

- fixed object (21)
- speed (16)
- deer (13)
- turning movement (9)
- T - tree (12)
- W - winter road conditions (10)
- bridge (2)
- building (2)
- cemetery (9)
- elementary school
- fire station (2)
- library
- museum (3)
- parking
- post office (2)
- town office
- town landing (3)
- commercial boat ramp (2)
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- perennial stream (8)
- intermittent stream (18)
- pond

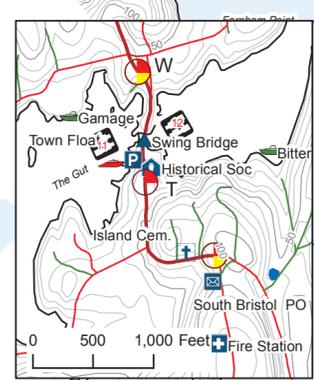
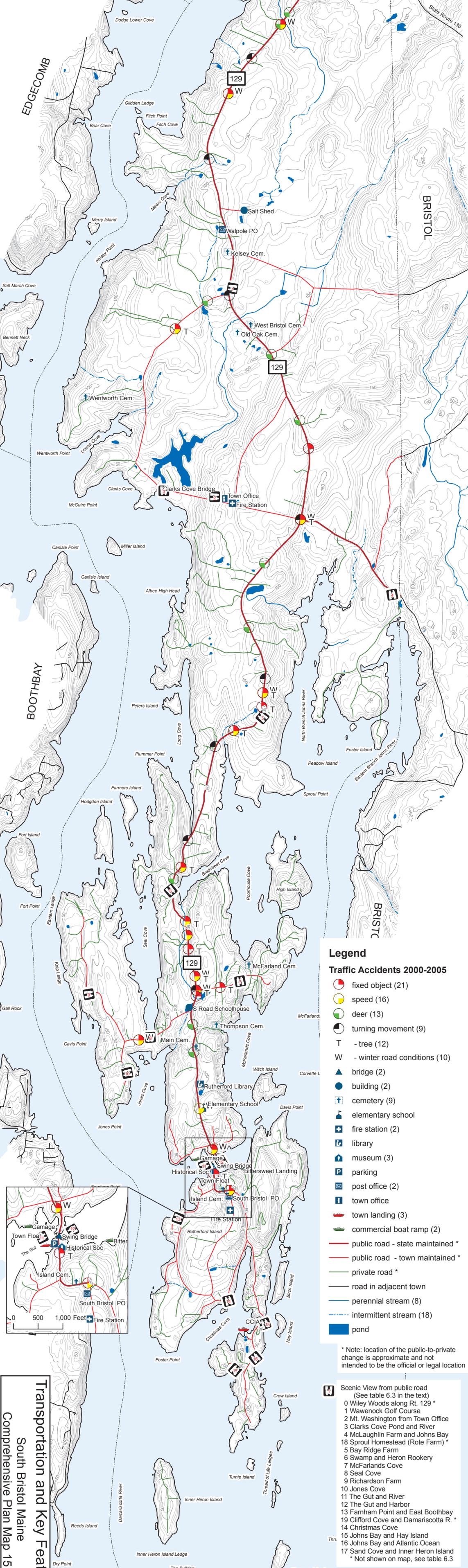
* Note: location of the public-to-private change is approximate and not intended to be the official or legal location



- Scenic View from public road
(See table 6.3 in the text)
- 0 Wiley Woods along Rt. 129 *
 - 1 Wawenock Golf Course
 - 2 Mt. Washington from Town Office
 - 3 Clarks Cove Pond and Town Office
 - 4 McLaughlin Farm and Johns Bay
 - 18 Sproul Homestead (Rote Farm) *
 - 5 Bay Ridge Farm
 - 6 Swamp and Haver Rookery
 - 7 McFarlands Cove
 - 8 Seal Cove
 - 9 Richardson Farm
 - 10 Jones Cove
 - 11 The Gut and River
 - 12 The Gut and Harbor
 - 13 Farnham Point and East Boothbay
 - 19 Clifford Cove and Damariscotta R. *
 - 14 Christmas Cove
 - 15 Johns Bay and Atlantic Ocean
 - 16 Johns Bay and Hay Island
 - 17 Sand Cove and Inner Heron Island
- * Not shown on map, see table 6.3

Data Sources: MEGIS, MDOT, SBCP '92
UTM 19N NAD83

So Bristol Comp Plan Committee
September 30, 2010



Transportation and Key Features
South Bristol Maine
Comprehensive Plan Map 15

69°35'0"W

Future Land Use South Bristol Maine Comprehensive Plan Map 16

44°0'0"N

44°0'0"N



1:24,000

1 inch = 2,000 feet



Town lands including islands:
Area = 13.12 sq mi (8397 acres)
Coastline = 68.85 mi

NEWCASTLE

EDGECOMB

BRISTOL

BOOTHBAY

BRISTOL

BOOTHBAY

BRISTOL

43°55'0"N

43°55'0"N

43°55'0"N

43°55'0"N

69°35'0"W

43°50'0"N

Future Land Use
South Bristol Maine
Comprehensive Plan Map 16

This map is not regulatory nor will it become regulatory upon adoption of the Comprehensive Plan

This unbroken forest continues into Bristol

This inbroken forest continues into Bristol

Legend

Structures in 2006 (see map 13)

- Residential (983)
- ▲ Commercial (19)
- Industrial (26)
- ▲ Recreational (6)
- ★ Civic (13)
- public road - state maintained *
- public road - town maintained *
- private road *
- road in adjacent town
- perennial stream
- intermittent stream
- pond
- Rural Area (1)
- Growth Areas (3)
- Critical Resource Areas (3)
- Commercial Districts (2)

* Note: location of the public-to-private change is approximate and not intended to be the official or legal location

Notes to the areas:
Except for the growth and critical resource areas (CRAs) and the commercial districts, the remainder of the Town is a Rural Area.

All preserves, restrictive easements, etc. are in the rural area. See map 7.

Chapter 19 of the text discusses each of these areas and the rationale for designating them. Table 19.1 in the text lists each of the areas.

LAND USE AREAS:

- Rural area -- 5326 acres (63% of Town)
- Northern Growth Area -- 276 acres
- Southern Growth Area -- 476 acres
- Village Growth Area -- 105 acres
- Total growth areas -- 857 (10% of Town)
- Forest North CRA -- 1241 acres
- Forest Central CRA -- 518 acres
- Clarks Cove Pond CRA -- 420 acres
- Total crit res areas -- 2179 acres (26% of Town)
- Gut Commercial District -- 33 acres
- Christmas Cove Commercial District -- 2 acres
- Total comm dist -- 35 acres (0.5% of Town)

Data Sources: MEGIS MDIFW
So Bristol Comp Plan Committee
UTM 19N NAD83

So Bristol Comp Plan Committee
October 7, 2010

Gut Commercial District

Christmas Cove Commercial District

Southern Growth Area

Village Growth Area

Northern Growth Area

Forest North Critical Resource Area

Forest Central Critical Resource Area

Clarks Cove Pond Critical Resource Area

Dodge Upper Cove

Dodge Point

Wiley Cove

Wiley Brook

Wiley Point

Dodge Lower Cove

Glidden Ledge

Fitch Point

Fitch Cove

Briar Cove

Merry Island

Mear's Cove

Kelley Point

Salt Marsh Cove

Bennett Neck

Wentworth Point

Loves Cove

Clarks Cove

McGuire Point

Carlisle Point

Miller Island

Carlisle Island

Albee High Head

Peters Island

Long Cove

Plummer Point

Farmers Island

Hodgdon Island

Fort Island

Fort Point

Eastern Ledge

Kelp Ledge

Gall Rock

Cavis Point

Jones Cove

Jones Point

Farnham Pair

Inner Heron Island

Christmas Cove

Foster Point

Reeds Island

Damariscotta River

Dry Point

Inner Heron Island Ledge

The Bulldog

Turnip Island

Thread of Life Ledges

Thrumcap Island

McFarlands Point

McFarlands Point

Witch Island

Corvette

Gem Island

Davis Point

Birch Island

Hay Island

Crow Island

Inner Heron Island

Inner Heron Island Ledge

The Bulldog

Turnip Island

Thread of Life Ledges

Thrumcap Island

Thrumcap Island

Thrumcap Island

Thrumcap Island

State Route 130

North Branch Johns River

Peabow Island

Sproul Point

Foster Island

Eastern Branch Johns River

Peabow Island

Sproul Point

Foster Island

Eastern Branch Johns River

Peabow Island

Sproul Point

Foster Island

Eastern Branch Johns River

Peabow Island

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Eastern Branch Johns River

Peabow Island

Sproul Point

Foster Island

Eastern Branch Johns River

Peabow Island

Sproul Point

Foster Island

Eastern Branch Johns River

Peabow Island