

Appendix C

INVENTORY AND ANALYSIS

Comprehensive Plan Update

Town of Brunswick, Maine

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Introduction

The Town of Brunswick's *1993 Comprehensive Plan* includes detailed inventories of the Town's natural resources and built-environment. This appendix updates those inventories and serves as the foundation for this Comprehensive Plan Update.

These inventories were completed in December 2004. Since they were completed, the Department of Defense announced the closing of the Naval Air Station, Brunswick. Most of the information remains relevant to Brunswick's future. As the planning for the reuse of the Naval Air Station Brunswick continues, the population and housing projections in this inventory should be updated.

The following eleven sections summarize the relevant inventory and background information from the 1993 Comprehensive Plan, the other studies that have been conducted since the Plan was adopted, and the demographic and development studies. In addition, the summaries fill in the gaps where necessary data was out-of-date or not covered in the other work. The summaries are intended to provide an overview of the key aspects of the topic that relate to the future of the community.

The Town of Brunswick conducted two mini-studies as part of the update process to provide information on recent demographic and development trends in Brunswick.

- Appendix A is a detailed analysis of the population and demographic trends of the community and the region.
- Appendix B is a detailed analysis of development trends and patterns between 1990 and 2004.

In addition, the Town of Brunswick has completed a large number of major planning studies that provide extensive information about the town, its natural and scenic resources, and its built-environment and community facilities. These studies include:

- *1997 Downtown Master Development Plan* – This project inventoried existing infrastructure and recommended infrastructure improvements to Intown Brunswick.
- *1998 Cook's Corner Master Plan* – This study included a detailed analysis of the community's vision for Cooks Corner, and recommended steps to create a more pedestrian-oriented village using the existing infrastructure of the area.
- *2000 Mall Study* – This included a detailed analysis of demands on the Mall and recommendations for improvements and uses to keep the Mall vibrant in the future.
- *2001 Facilities Study* – The facilities study was a detailed analysis of existing town facilities, town services, and town needs..

- **2001 Downtown Brunswick Parking Study** – This project evaluated parking demand and supply in Downtown, and inventoried residential and nonresidential space in Intown Brunswick. The Town subsequently updated the space inventory in 2005 to track occupancy changes in the downtown area.
- **2002 Parks, Recreation, and Open Space Plan** – This study includes a detailed inventory of the community’s recreation facilities, parks, and natural and open space resources including agricultural and forestry land and scenic resources.
- **2003 Brunswick Housing Study** – This study includes a detailed market analysis of housing supply/demand and affordability in Brunswick and the region.
- **2003 Rural Brunswick Smart Growth Strategy** – This project included a detailed inventory of the community’s unfragmented, forested wildlife habitat and wildlife travel corridors as well as a strategy for managing these resources.

Note: This analysis of Brunswick's population and demographic characteristics was prepared before the closure of Naval Air Station Brunswick was announced. Therefore, projections about future population growth will need to be re-evaluated as part of the process of planning for the closure of the Base and the reuse/redevelopment of the site. – May, 2006

Population and Demographics

Communities change. Change is easy to recognize when it is fast or large in scale. Change is more difficult to detect when it is subtle. Both types of change can have lasting impacts on our community, and it is important that we understand the trends creating change so that we can provide adequate facilities and services to the entire community.

Population and Demographic Profile

In 2000, Brunswick's population reached 21,172 year-round residents. More than 90% of these residents lived in housing units throughout town. The remaining 10% lived in various group quarters (dormitories, assisted living facilities, and military barracks). Compared with many towns in the region, this is a relatively large group-quarters population. Our town has a very small seasonal population.

Our population is not spread evenly across town. Group quarters populations live entirely in the more urban areas of Brunswick, and more than half of the household population lives in the denser Downtown and its fringes. The Pleasant Hill and West Brunswick areas have the lowest population densities.

The median age of our residents is 35.5 years. The age cohorts are evenly

Current Reports and Documents

- The *Population and Demographics Analysis* was prepared for the Open Space, Parks, and Recreation Task Force in 2002 and then updated by the Brunswick Comprehensive Plan Update Committee in 2004 (see Appendix B). This analysis demographic and development trends affecting the community. It also projects the town's population and housing growth.
- The *Brunswick Development Profile* was prepared by the Brunswick Comprehensive Plan Update Committee in 2004 (see Appendix A). This report details development patterns in residential and nonresidential development between 1990 and 2004.

distributed into quarters. One-quarter of the town is 18 years and under. Another quarter is between 19 and 35 years old (driven largely by Bowdoin College and the Naval Air Station). The Baby Boom generation (those born between 1945 and 1965) account for another quarter. And one-quarter is older than 55 years.

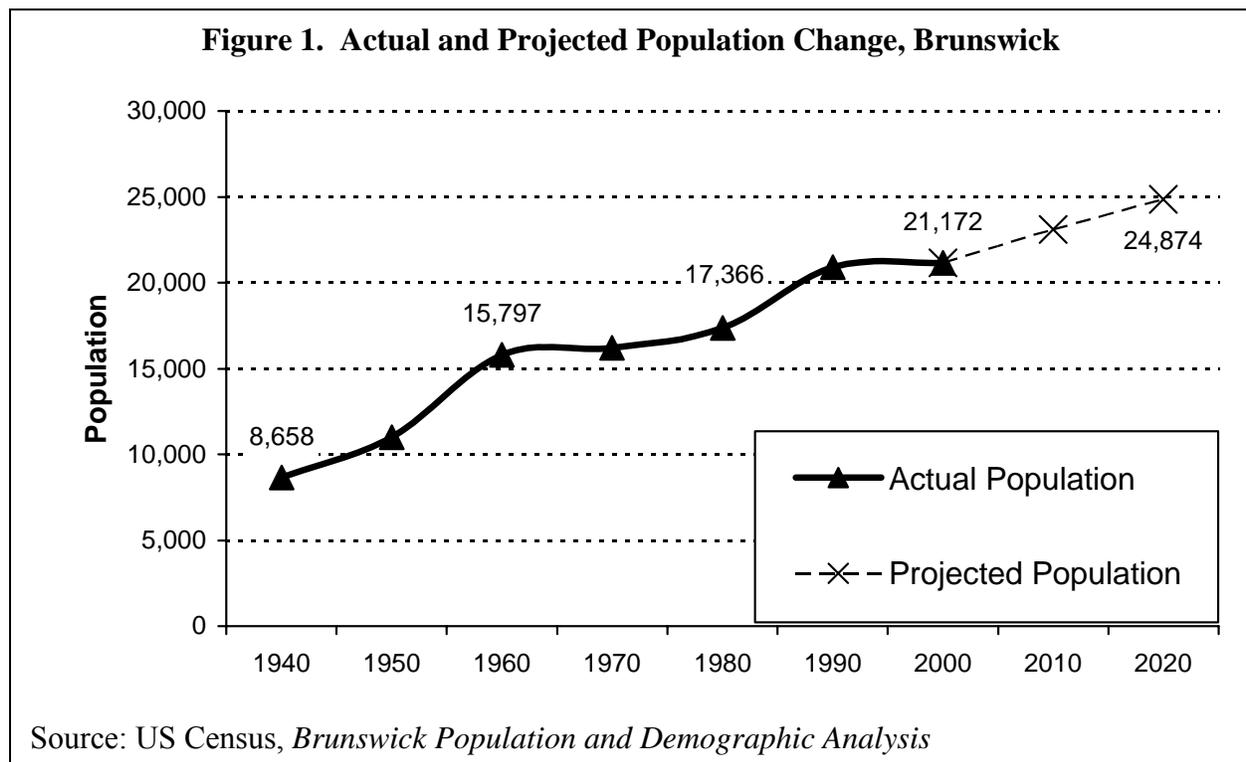
Brunswick residents are largely white collar workers. Two out of every five employed residents more than 24 years old are professionals or managers, and another one-quarter work in sales or office positions. Service jobs account for 16% of the town’s workforce. The more traditional blue collar jobs – construction, maintenance, production, and transportation – account for 17% of our town’s workforce. Farming, forestry, and fishing account for less than 1% of the workforce.

Compared with the rest of Cumberland County and the state as a whole, our town’s residents are more likely to be white collar.

In 1999, the median household in our town earned \$40,000. This was modestly higher than the state as a whole, but less than the rest of Cumberland County.

Population and Demographic Trends

Brunswick’s population is projected to keep growing at a rate that is faster than our growth rate in the 1990s. By 2020, our population is projected to reach nearly 25,000. Many factors influence this projection, the largest of which are the number of new housing units built, the average number of people in each housing unit, and the size of our group quarters population.



- The ***number of new housing units built*** each year in Brunswick continues to grow. In the early 1990s we averaged less than 50 new housing units each year. In the early 2000s, we grew by more than 100 new units per year.
- The ***number of people living in each household*** in our town is decreasing. In 1960, 3.30 persons lived in each household. By 2000, this statistic had dropped to 2.34 persons. By 2020, this is projected to fall further to 2.22 persons. Because the number of persons in each unit is decreasing, modest increases in population hides even larger increases in residential development.

For example, between 1990 and 2000 our household population increased by fewer than 100 while more than 500 housing units were built. While this trend towards declining household sizes is occurring nation-wide, Brunswick's increasing role as a retirement community is exerting additional downward pressure on the average number of persons in each housing unit. In addition, the increasing cost of housing has discouraged younger families (which tend to be larger households) from moving into the community.

- The ***group quarters population*** is changing and is not growing as fast as the household population. Military personnel living in barracks at the Naval Air Station Brunswick is decreasing while students at Bowdoin College and seniors in assisted living situations are increasing. Between 1970 and 1990, our household population grew by more than 30% while the group quarters population increased by less than 12%.

Surrounding communities are growing faster than we are. In 1970, Brunswick accounted for 31% of the region's population. By 2000, this statistic had fallen to 27%. The availability of land and low purchase costs are projected to continue driving most of the region's growth to the more rural communities. By 2015, Brunswick is projected to have just 26% of the region's population.

This same dynamic is occurring with our community as well. Populations in rural parts of Brunswick are growing much quicker than the more urban areas.

- Between 1990 and 2000, 145 new housing units were added in the urban areas of town. Because the average household size has been decreasing (and exacerbated by the movement of seniors closer to the town's services), this translated into a net loss of 650 residents in these areas.
- Between 1990 and 2000, 381 new housing units were built in the more rural areas of town. Young families with children are more likely to live in these areas of the community, which helped to offset the decreases in average household size. Therefore, these 381 new housing units translated into 711 additional residents in the rural areas of town.

Our town's residents are growing older. Between 1970 and 2000, our median age increased from 24 years to 36 years. Between 1970 and 2000, our community lost 437 residents below the age of 18 and added 1,900 residents over the age of 64. This trend is not unique to our community, but is exacerbated by our role as an attractive community to seniors and the high

cost of housing – especially to younger families. Despite the presence of Bowdoin College and the Naval Air Station, the trend towards an older population is likely to continue.

The number of families in town has remained steady, while the number of people living alone has increased dramatically. In 2000, families accounted for 63% of the households in town. This statistic fell from 1990, when families accounted for 67% of the households (the actual number of families remained stable). At the same time, the number of one-person households increased from 27% to 31% of all households. The number of one-person elderly households increased by 20%, or 175 people.

Our town's residents are completing more education and are more likely to work in white collar jobs than in the past. Residents are increasingly likely to have graduated from high school and college than ever before. Increases in the number of residents working in professional, management, office, sales, and service jobs are growing quickly, while manufacturing jobs in particular are steadily decreasing.

While households in our town earn more than the state as a whole, our household earnings have not been steadily increasing. After adjusting for inflation to 1999 dollars, our town's median household income peaked in 1989 at \$43,000 and fell back to \$40,000 in 1999. At the same time, the number of lower income households in our town has decreased and the number of moderate income households has increased.

Issues

1. Populations in outlying areas have been growing much more rapidly than populations in more urban areas. This pattern of residential development and population migration could affect where the demand for facilities is located and what types of services are provided by the Town.
2. Projections suggest that Brunswick's household population will continue to grow modestly. Much of this growth will likely be located in more rural areas of the community.
3. Household sizes are projected to continue declining. If this occurs, residential development will have to increase at a faster rate than the town's population growth just to maintain the same household population. Where and how should this residential development be accommodated?
4. People living in group quarters are a significant part of the Town's population. Different types of group quarters' populations place different demands on the Town. How should the Town plan for the changes in the group quarters population and what types of services and/or facilities should it provide?
5. The percent of the town's population that is older than 62 years is projected to continue growing. How will this impact the Town and the need for services? How should additional growth in senior housing and/or facilities be addressed? Should growth in this population be encouraged?

6. As surrounding communities continue to grow rapidly, Brunswick's role as the region's service center will likely expand. This could bring with it added benefits (business, recreation, etc) as well as costs (traffic congestion and safety).
7. The potential change of mission for Naval Air Station Brunswick could have a large impact on the character and health of the community. Its mission could be expanded, or the base could close altogether. Closing Naval Air Station Brunswick would have a significant impact on the community as well as the entire region. How should the Town plan for this potential change?
8. The community's median household income is consistently above the state's median household income. While the 1990s experienced a modest decline relative to the state, Brunswick's incomes remain strong. What does this mean in terms of being able to provide the services desired by the community?
9. The number of children has remained relatively stable but has been spreading out across the landscape. What are the implications of this for schools, recreation, etc.?
10. Given the trend toward an older population with more seniors and fewer children, how will the town have to adjust to ensure that adequate services are provided to all of its residents? In addition, what will be the housing needs of this older population?

Local Economy

Since Europeans first settled our shores in 1628, we have been a service center. At various times our economies strength came from fur trading, shipping, manufacturing, farming, defense, and education. Today, the diversity of our economy and the services it provides to residents and businesses are crucial to the health of the entire region.

Employment and Service Center

Brunswick is a service center. Our economy meets most of the local needs of residents and businesses as well as the regional banking, health care, education, arts/entertainment, manufacturing, and business/professional service needs from Edgecomb to Richmond to Pownal.

One-third of the jobs in the region are located in Brunswick, as are two-thirds of all taxable sales. More than 800 individual businesses are located in town, as is one of the state's largest clusters of nonprofit organizations.

There are an estimated 16,000 jobs located in our town. Of these, 3,000 are entrepreneurs, 4,400 are active-duty military personnel, and the remaining 8,500 are wage and salary jobs.

Of the 8,500 jobs in Brunswick reported by the Maine Department of Labor, two-thirds are private sector jobs, 15% are nonprofit sector jobs, and 12% are jobs with various government agencies.

Between 1994 and 2003, the number of wage and salary jobs in Brunswick decreased by 160, or less than 2%. This rate of change is impressive considering the replacement that must have occurred after large employment decreases in the region's defense-oriented jobs in the 1990s.

The rest of the labor market area has been adding jobs faster than Brunswick in the last decade. In 1994, our town accounted

Current Reports and Documents

- *An Economic Development Analysis* was prepared for this update by the Brunswick Economic Development Corporation. This report was updated in 2004, and includes detailed discussions of the sectors of our town's economy.
- *An Economic Development Action Plan* was created by the Merrymeeting Council of Governments to help coordinate regional economic development activity.
- Brunswick's *Downtown Parking Study* has a detailed inventory of the types of businesses that are located in the downtown and how much space each business type occupies. This database has been updated by the Planning Department for this Comprehensive Plan Update.
- The *Cook's Corner Master Plan* details how this area can become a more vibrant economic center.
- *2004 Report to Defense Base Closure and Realignment Commission* describes the economic impact the base has on the region as well as the infrastructure available in Brunswick to support the base.

for 26% of the jobs in the region, and by 2003 this had fallen to 25%.

The type of jobs available in our town has changed dramatically. Manufacturing lost almost 400 jobs and now account for 10% of the labor force (down from 16%). Similarly, retail declined to 15% of the jobs available. These jobs were replaced by those in arts/food/accommodations (600 new jobs), health care (200 new jobs), and professional/management/administration.

Unemployment Rate

Our town's unemployment rate – the number of residents without jobs that are actively searching for work – has been slowly rising from a low of 2.7% in 2000 to 3.5% in 2003. Brunswick's unemployment rate is generally lower than the rest of the Bath-Brunswick Labor Market Area, but higher than Cumberland County as a whole.

This low unemployment rate has meant that while the town's economy grew, it has increasingly relied on workers from other areas to fill new positions. In addition, new employees in the Brunswick region have had to compete with the growing retirement community for new housing.

Employed Labor Force Trends

A profile of Brunswick's employed residents creates a picture what types of jobs our neighbors seek.

According to the 2000 Census, Brunswick residents are largely white collar workers. Two out of every five employed residents are professionals or managers, and another one-quarter work in sales or office positions. Service jobs account for 16% of the local workforce. The more traditional blue collar jobs – construction, maintenance, production, and transportation – account for 17% of our town's workforce. Farming, forestry, and fishing account for less than 1% of the local workforce.

While direct comparison between the 1990 Census and the 2000 Census is difficult (due to definition changes), the data suggest that our residents are more white collar than they were in 1990. Service, sales, and manager/professional occupations increased, while the blue collar and natural resource occupations decreased.

Brunswick residents largely mirror the occupation profile of residents in Cumberland County. Notable differences in finance/insurance/real estate (more in the Cumberland County) and the arts/entertainment/education/health/social science/public administration (more in Brunswick).

The number of manufacturing jobs is down. Also down was the retail sector, signifying more the way retail sales service is provided as opposed to a decline in the retail industry. Increases were seen in the educational, health field, finance and insurance areas, and other professional services and public administration.

One of the largest increases is in the area of arts, entertainment and recreation services. All of these growth areas suggest a shift into the service center/creative economy mode and away from traditional manufacturing.

Major Employers

Only 3 of our 14 major employers in Brunswick are manufacturing businesses. The rest provide services to a variety of customers from education to finance to construction. Healthcare totals more than 1,000 jobs in our two hospitals and retail employers total 750 jobs.

Employer	Industry Sector	Average Employees
Bath Iron Works	Manufacturing	1,100
Naval Air Station, Brunswick (civilian)	Military	817
Bowdoin College	Education	742
Mid Coast Health Services	Healthcare	702
Town of Brunswick	Government	655
L.L. Bean	Retail	387
Parkview Hospital	Healthcare	366
MBNA	Finance	350
Wal-Mart	Retail	264
Cooper Industries (Arrowhart)	Manufacturing	200
Hannaford Bros	Retail	192
Downeast Energy	Construction, Business	175
Shaw's	Retail	130
Brunswick Publishing	Manufacturing	128
Source: BEDC		

The recently completed *2004 Report to Defense Base Closure and Realignment Commission* by the NAS Brunswick Task Force details the economic impact the base has on the region. In addition to the civilian labor force mentioned in the table above, currently nearly 4,500 military personnel are stationed at the air station. In 2004, the base contributed more than \$330 million to the region's economy, including \$147 million in salaries and \$62 million in construction contracts. In addition, there is a significant military retiree presence in the region that are benefit from the base's resources.

Taxable Retail Sales

Brunswick as a whole is a service center, and there are three distinct economic areas within the community that each fulfills a different need.

- Cooks Corner is a large, regional commercial center that services a market of up to 100,000 people. It is many larger big-box stores, chain stores, hotel/motel accommodations, healthcare services, and a range of other businesses that support the Naval Air Station.

- Downtown Brunswick is a traditional town center. Most of the businesses are pedestrian-oriented, and provide entertainment, food, and specialty retail in smaller stores. There is also a significant amount of office space in the downtown.
- Outer Pleasant Street is a more traditional strip center that has many chain stores and automobile dealerships.

In 2003, there were more than \$340 million in taxable sales in our community. General merchandise accounted for 30%, auto/transport (22%), building supply (15%), restaurant/lodging (13%), food store (8%), and other retail (11%) of total sales.

Since 1999, total taxable sales have increased by 14% - higher than the consumer price index's increase of 11%. Building supply and other retail sales increased by more than 40% each, while restaurant and food stores sales declined by 5% and 2%, respectively.

Brunswick accounts for two-thirds of the region's taxable sales. Brunswick's share of the region's sales have declined modestly, from 65% in 1999 to 64% in 2003. This decline is likely to continue as surrounding communities increase their amount of taxable sales, especially the regional center that is developing in Topsham. However, recent expansion of larger retail sales operations in Brunswick might lessen the impact of this trend.

Overall, Brunswick businesses dominate many of the taxable sales categories. Brunswick has nearly 90% of the region's general merchandise sales, 70% of building supply and other retail sales, and more than 50% of auto/transportation and restaurant sales. Food store sales in Brunswick account for almost half of the region's sales, and lodging sales in town account for 40% of the region.

Taxable retail sales do not vary much from season to season. While the 1st quarter (January to March) is consistently slower, the remaining quarters are relatively consistent. This stands in stark contrast to the seasonal economies that exist further up the Midcoast and highlights our town's role as a service center for the neighboring year-round communities.

Commuting Patterns

In 2000, more than one-third of the jobs in Brunswick were filled by Brunswick residents. Commuters tend to travel to Brunswick from surrounding communities (Topsham, Bath, Harpswell), Portland, and towns to our north and east.

On the other hand, one-half of Brunswick's employed residents work in town. Nearly 11% work in Bath and 4% work in Topsham. The rest tend to commute to the south for work, including Portland (6%), Freeport (5%), South Portland (2%), and Falmouth (1%).

Economic Development Organizations

Numerous organizations promote business retention and development in our town and the region. The Brunswick Economic Development Corporation, Midcoast Council for Business Development and Planning, Bath-Brunswick Region Chamber of Commerce, and the Brunswick Downtown Association assist with everything from planning to development to retention to advocacy to technical support. In the past, these organizations have worked well together on a wide range of issues, and there is increasingly more regional cooperation with economic development organizations from neighboring communities.

Issues

1. Brunswick is a service center. As such, our town's economy must fulfill the local needs of our residents as well as the needs of residents in the surrounding region. This creates benefits and costs to the town. Our challenge is to ensure that the benefits of being a service center outweigh the costs.
2. The largest trend in the region's economy is diversification. Employee reductions at Bath Iron Works and the Naval Air Station Brunswick have reduced the dependence the region has on these major employers. These lost jobs are being replaced by jobs in health care and other services. This diversification will help stabilize the region's long term stability.
3. Despite this diversification, the health of a large part of the region's economy is still tied to national security (Bath Iron Works, Naval Air Station Brunswick). As the Department of Defense continues to realign its forces to a post-Cold War world, future employment at these job centers is uncertain.
4. Much of the town's sense of character is tied to the distinct economic roles fulfilled by Cooks Corner, the Downtown, and Outer Pleasant Street. Our town must work hard to ensure that these roles remain distinct. Of particular concern is the health of the retail environment in the Downtown.
5. The Brunswick region is a center for senior and elderly services. Amenities in the area include two hospitals, rural lifestyle, and quick access to urban areas and the coast. The success of The Highlands in Topsham and Thornton Oaks in Brunswick has spawned numerous smaller senior-living developments in the area. This growing critical mass projects creates many economic opportunities in the region.
6. Our town has one of the largest concentrations of jobs in creative industries, including education, art, entertainment, and creative professional positions. The impact by these jobs on our economy and quality of life is hard to quantify, but even harder to overestimate.
7. While the amount of taxable retail sales in Brunswick remains strong, our share in the region is decreasing. This is largely the result of the growing strength of other retail opportunities in the region, most notably the Topsham Fair Mall. Recent redevelopment projects in Brunswick will help slow this decrease down, but outlying communities will continue to increase their retail sales faster than those in our town.

8. When Brunswick residents commute out of town to work, they tend to head to jobs closer to Portland. Meanwhile, those commuting into Brunswick to work tend to come from communities to the north.

Housing

A home, rented or owned, is more than a roof over one's head. Place of residence guarantees basic rights like public education and a place to vote. It is a place of family. It gathers friends. It is a repository of memories. It is the building block of our community.

Housing Profile

Brunswick is a population center. In the 2000 Census, our town had 8,720 housing units. This is twice as many units than in any surrounding community. The majority of these units are located in the more urban areas of the Downtown and East Brunswick. These areas account for more than half of the housing units in the community. (For more detailed discussion, see *Population and Demographic Analysis*).

As a population and economic center, our town has a relatively large number of rental housing units (one-third of occupied units). While Bath has a larger percentage of rental units (45%), most surrounding communities have fewer than 25% of their homes occupied by renters.

The majority of the housing units in Brunswick are single-family units. Of the 8,720 housing units, 56% were single-family, while 28% were duplexes or multi-family units, and another 16% were mobile homes. Our town has a larger percentage of mobile homes, duplexes, and multi-family units than the state as a whole.

The condition of housing in Brunswick is very good. According to the 2000 Census, only 2% of the housing stock by 2000 lacked adequate indoor plumbing, and despite the relatively old housing stock, crowding is not a large concern.

Not all of Brunswick's residents live in housing units. Assisted living facilities, military barracks, dormitories, and other facilities house approximately 10% of our

Current Reports and Documents

- The *Brunswick Housing Study* was prepared by the Brunswick Community Housing Coalition in 2003. Identified trends in the region, focused on trends in the affordability of housing, proposed policies and recommended actions that have been adopted by the Town Council.
- The *Population and Demographics Analysis* was prepared for the Open Space, Parks, and Recreation Task Force in 2002 and then updated by the Brunswick Comprehensive Plan Update Committee in 2004 (see Appendix B). Identifies demographic and development trends affecting the community.
- The *Housing Facts for Brunswick Report* is updated annually by the Maine State Housing Authority. Details housing trends and figures for Brunswick, the region, and the state.
- The *Brunswick Development Profile* was prepared by the Brunswick Comprehensive Plan Update Committee in 2004 (see Appendix A). This report details development patterns in residential and nonresidential development between 1990 and 2004.

town's population.

Housing Trends

The pace of residential development in Brunswick has been increasing rapidly. While the 1980s were a period of rapid growth, much of the 1990s was a period of modest growth. Between 1990 and 2000, our town's housing stock increased by 523 units (or 6%). This rate of growth was faster than the state as a whole, but slower than the rest of Cumberland County.

However, much of this growth occurred in the late 1990s, and the increasing rate of growth has continued since the turn of the century. In the early 1990s, an average of fewer than 50 units were built each year. Since 2000, more than 100 units have been built each year. This rate of housing unit growth is projected to continue.

By 2004, there were an estimated 9,170 housing units in our town. This increased rate of development is projected to continue. By 2010, the number of units is projected to reach 9,545, and then reach 10,545 by 2020. For more detailed discussion, see *Population and Demographic Analysis* (see Appendix B) and *Brunswick Development Profile* (see Appendix A).

Not all neighborhoods in our town are growing at the same rate. Between 2000 and 2010, the more urban areas of the town (Downtown, Downtown Fringe, and Cooks Corner) are projected to grow by 6% while the more rural areas of town are projected to grow by more than 25%.

Housing Affordability

Affordability is becoming a greater issue for residents in our town. After a decade of moderate increases, housing costs have increased dramatically – both for home owners and renters. More than one-in-three of the renters and one-in-six of the homeowners pay more than a third of their income to housing costs – a common threshold for housing to be considered affordable.

An Action Plan for Housing in Brunswick: 2003 examined affordability in detail. Their findings suggest that:

- Housing values are increasing rapidly, and new housing values are well out of the range of the median home-buyer.
- Rents are becoming more costly.
- Five-in-six young families in Brunswick's housing market area look elsewhere to buy their first home.
- The number of homeless seeking shelter has doubled between 2000 and 2002.
- The number of elderly residents has increased, and is projected to continue increasing.

In addition, the Maine State Housing Authority calculates an affordability index based on whether a community's median household income can afford to purchase that community's median housing unit. Using this analysis, Brunswick's median housing unit (which was valued at 167,000 in 2002) would be affordable to a household that made \$60,500. Brunswick's median household income in 2002 was \$43,000. Therefore, MSHA does not consider Brunswick to be affordable.

Using this same analysis, Brunswick is considered to be less affordable than Cumberland County, the Bath/Brunswick Housing Market, and the state as a whole. (*For more detailed discussion, see **Housing Facts for Brunswick.***)

Subsidized Housing

Brunswick is a regional center for various subsidized housing opportunities. Currently, 775 subsidized/affordable housing units are available in our town. Of these, 481 are projected-based and operated by the Brunswick Housing Authority.

Land Use Management

Brunswick relies on a detailed land use ordinance to help manage residential development throughout our community. Densities (units per acre) are at their lowest in the more rural areas (Coastal Protection district, Farm and Forest district). Allowable densities increase with proximity to the Downtown (residential districts) and are at their highest in the Town Center and Town Residential districts.

Development hooked into public water and public sewer can be built at higher densities than those not connected to the system. The service areas for these public utilities generally follow the Growth/Rural boundary established in the land use management ordinance.

The type of housing allowed in the various districts increases with proximity to the more urban areas. Dense multi-unit developments are allowed in the growth areas, while the rural areas place more limitations on the type of development allowed there.

Issues

1. Our town is a regional educational, economic, housing, and service center. These centers tend to attract a wide range of individuals with a wide range of needs. From Bowdoin College to the Naval Air Station to the cluster of health care facilities, Brunswick will always need to provide a wide range of housing options for its residents.
2. Partly due to its relatively older housing stock and partly due to its role as a regional center, our town has a relatively large number of rental housing units. Rental housing allows for more flexibility meeting the needs of the economy and adds to our community's diversity.
3. The pace of residential development in our town is increasing, especially in more rural areas of the community. Special attention to this development can help ensure that the new development complements our community's character rather than erases it.
4. As the median age of Brunswick residents increases, the demand for senior housing is projected to increase.

5. The more urban areas of our community have a significant amount of infrastructure and services than can accommodate new residential development. Yet, in some cases our land use management program discourages residential development in these areas and encourages it in the more rural areas of town.
6. Affordability is a growing concern for most of our town's residents. The lack of affordable housing can dramatically change the composition of our community. Affordability is also a regional concern, and the Town of Brunswick has not worked closely with neighboring communities in the past to address this issue.

Transportation

While transportation in Brunswick is predominantly vehicular, there are a variety of transportation options and issues in our community.

Vehicular Transportation

There are more than 150 miles of roads in our town. The types of roads (from interstate highway to private dirt road) vary as much as their uses (cargo transportation, commuting, local travel). The major road classifications include:

- *Arterial roads* are high speed travel corridors used largely by regional traffic. Examples in our town include Route 1, Interstate-95, and Route 123. These roads total more than 13 miles.
- *Collector roads* include the major local roads that move vehicles from the local road network to arterials. Examples of these roads in Brunswick include Bath Road, River Road, and Old Portland Road. These roads total 27 miles.
- *Local roads* are intended for low speed, local transportation. In 2004, this classification totaled 107 miles, including 5.8 miles of new roads accepted since 1993. These new roads are largely in residential developments.

Traffic volumes on our town's major roads are very high. More than 28,000 trips daily pass the churches on Pleasant Street, and nearly as many use Mill Street in the Downtown. More than 23,000 vehicles pass the Lower Mall on Maine Street. I-295 has more than 20,000 average trips per day, of which approximately 10,000 get off onto Outer Pleasant Street. Nearly 18,000 vehicles use Bath Road each day, and approximately 17,000 cross the Frank Wood Bridge into Topsham. Between

Current Reports and Documents

- The *Transportation Section* of this Comprehensive Plan Update details each aspect of the town's transportation network as well as the transportation issues throughout the community.
- The *Parks, Recreation, and Open Space Plan* details the existing pedestrian, bicycle, and trail networks throughout our community.
 - See *2002 Bicycle and Pedestrian Improvements Plan*
- The *2002 Town of Brunswick Sidewalk Inventory Rating* details the location of every sidewalk in town and rates its condition.
- Brunswick's *Downtown Parking Study* has a detailed inventory of the types of businesses that are located in the downtown and how much space each business type occupies. This database has been updated by the Planning Department for this Comprehensive Plan Update.
- The *Cook's Corner Master Plan* was created over the course of several years and details the transportation improvements that can be made to decrease traffic congestion and increase pedestrian safety.

11,000 and 13,000 travel Route 1 along the Androscoggin River..

These volumes have largely been increasing. The I-295 interchange had on average 3,000 more vehicles per day in 2002 than in 1998. Pleasant Street, Maine Street, and Bath Road’s traffic volumes have increased steadily. Traffic volumes along Route 1 and at the Frank Wood Bridge have decreased significantly, largely the result of the Coastal Connector diverting this traffic.

Local traffic and commuter traffic is increasingly looking for alternatives to the congestion on the primary transportation network. McKeen Street, Merepoint Road, and Middle Bay Road are increasingly being used to get around Downtown. The Naval Air Station has moved its commercial entrance to Harpswell Road permanently, which requires deliveries to traverse Downtown in order to reach Harpswell Road. These added heavy vehicles could strain the condition of the road network.

Cooks Corner continues to develop commercially, especially the corridor along Bath Road. All of the traffic to this corridor must pass through the crossroads, which has put enormous strain on the intersection. This area is a pedestrian “no mans land,” but the Cooks Corner Master Plan and the Cooks Corner design standards spell out how it can be made more pedestrian friendly as the area is redeveloped.

Traffic safety is monitored by the Brunswick Police Department. The department considers Cooks Corner and Maine Street in the Downtown as the two most dangerous sections of the transportation network. Between 2002 and 2003 the number of crashes reported to the department increased by 100 and is on pace to increase even more between 2003 and 2004.

January 1999 – March 2004

Location	# Accidents	# Injuries
Route 1	398	148
Bath Road	744	263
Gurnet Road	235	102
Harpswell Road	126	42
Maine Street	635	182
Mill Street	160	58
Pleasant Street	695	224
River Road	114	34
Source: Brunswick Police Department		

Several traffic improvement projects have been identified by the town and the DOT. The following table identifies the location of these potential improvements, the likely outcome of study, and other issues:

Location	Study/date	Likely outcome	Comments/issues
Route 1 N. from Freeport where it meets I-295 off ramp	MDOT studying in 2004	MDOT makes improvement	
River Road Bridge over I-295		In MDOT's 6-year plan	What are they doing to the bridge?
Mill Street	2002 Mill Street Streetscape Project	Improvements included in CIP	
Maine St and Route 1 westbound	MDOT looking into whether left turns could be allowed		1999 Gorrill Palmer study concluded left turns with no light would be ok
Frank Wood Bridge		In MDOT's 6-year plan	What are they doing to the bridge?
Maine Street		Downtown signal improvements planned	
Bath Rd. and Maine St.	MDOT studying in 2004		
McKeen and Maine	Date of study? Roundabout studied	No action planned	Roundabout would be expensive and use land; traffic signal not approved by Town Council
Bath Road		MDOT building 3 rd lane at Bowdoin Pines	
Cooks Corner	Cooks Corner Master Plan, 1998 Proposes perimeter road		
Bath Road between Thomas Pt. Rd. and Old Bath Road	Gorrill-Palmer studying in 2004 to improve traffic flow	Improvements will be made and paid for with impact fees	
All around town	Road standards zoning changes	Adoption by Town Council	Will require growth area streets to be interconnected and have sidewalks and bike facilities

Parking, especially in the downtown area, has been a perpetual concern in Brunswick. Since the last comprehensive plan, several improvements have been made including expanded facilities, improved signage, parking restrictions adjusted, and a comprehensive parking analysis completed.

The 2001 Downtown Parking Study identified 4,200 private and public parking spaces in the Downtown. Three-quarters of these are private and the rest are provided in a mix of on-street and off-street public parking. Utilization is approximately 50%, although areas closer to Maine Street are more heavily utilized than those around Federal and Union Streets.

Bicycle and Pedestrian Facilities

Brunswick has a large number of bicycle and pedestrian facilities, and the ability to get around town without a car has long been important to our residents. In fact, the 2000 Census suggests that 12% of those living and working in Brunswick walk to work, which is three times the national average. Our town has also been designated a “Bike Friendly Community” by the League of American Bicyclists.

The Brunswick Bicycle and Pedestrian Advisory Committee created a plan in 1998 (updated in 2004) that provides a template for on-going improvements to the town’s bicycle and pedestrian networks.

The town has made many investments in recent years to make its streets and public places safer for biking and walking. Probably the most visible improvement is the Androscoggin River Bike Path, opened in 1998. A detailed inventory of the town’s bicycle and pedestrian can be found in the *Parks, Recreation, and Open Space Report* and the *Bicycle and Pedestrian Plan*.

Public Transit

We have no local public transit services in town. However, there are a variety of regional transit alternatives.

Coastal Trans is the primary provider of transportation to people who otherwise are not able or cannot afford to get around. They run ten buses out of both Brunswick and Rockland and operate on a reservation basis largely serving people through contracts with Medicaid and Department of Health Services. Public clients can pay a fare of \$0.35/mile for transportation.

Inter-city private and subsidized buses and vans run by the Regional Transit Program (RTP) that serve Bath Iron Works workers as well as those commuting to Portland and Augusta. There is a designated Park’n Ride lot for carpooling at the Topsham Fair Mall.

Regular commercial bus service between Maine cities and Boston is provided by Concord Trailways and Vermont Transit. Limos and taxis provide rides around town, the region, and to the airport.

A 1999 Cumberland County Commuter Bus Study recommended implementing Bath/Brunswick commuter bus express service. The study projects ridership and operating costs under different service scenarios. It also recommends promoting the use of Park’n Ride lots.

During 2003-2004 fifteen local organizations joined together as the Mid-Coast Collaborative for Access to Transportation to assess available resources and consumer needs for transportation for

seniors, people with disabilities and people with limited financial resources in Brunswick and Topsham. From the surveys of service providers and users, the report makes recommendations for providing an attractive public transit service.

Rail

We have several rail lines in Brunswick, totaling about twelve miles of track which connect to Portland, Lewiston, Augusta and Bath/Rockland. In summer/fall 2004 a weekend excursion train ran between Brunswick and Rockland. There is also occasional freight use. Talk continues about extending the route of Amtrak's Boston to Portland Downeaster train. In anticipation of the return of passenger train service the town purchased the Maine Street station site in 1998. The excursion trains have been loading from a temporary rail platform on state-owned land on Cedar St. behind Hannaford.

Airports

Commercial air service is absent, although the Naval Air Station is the size of a large regional airport. The potential closing of the Naval Air Station could open up the reuse potential of the facility to private businesses.

Water Transportation

While there is only private water transportation in Brunswick, the town maintains several water access points throughout the community. For more information, see the *Parks, Recreation, and Open Space Plan*.

Issues

1. Brunswick is a crossroads. New development, both in Brunswick and in surrounding communities, will add new demand to our transportation network. What steps can the Town of Brunswick take to mitigate the effect of the growing demand?
2. The Cooks Corner Master Plan envisions transforming this major crossroads to an integrated commercial and residential destination to mitigate traffic problems. The Town of Brunswick will have to be creative and work with developers to realize this vision.
3. Brunswick has made numerous investments to improve the convenience and safety of pedestrians and cyclists. Continuing to make such improvements enhances the desirability of Brunswick as a place to live and may help mitigate traffic congestion.
4. What is the Town's responsibility to provide transportation services for people who cannot afford it or are not capable of moving on their own. This issue can be very expensive, but it helps to maintain the diversity of our community. Collaboration with surrounding communities could be an opportunity to provide this service efficiently.

5. Finding parking in Downtown Brunswick can be challenging for visitors, business owners, and residents. This can be an even greater concern in the winter months. The Downtown Parking Study includes many recommendations that could improve parking efficiency and/or reallocate parking demand.

Public Utilities

Within the denser areas of Brunswick, public water and sewer service are available. For the rest of the town outside of these areas, water generation and sewage disposal are an individual responsibility. This chapter provides an overview of the public water and sewer services in the more built up areas of Brunswick.

Brunswick-Topsham Water District

Municipal water in Brunswick is provided by the Brunswick and Topsham Water District. The District was established in 1903 and serves both Topsham and Brunswick. The District is directed by a 6-member Board of Trustees, with 4 members appointed by the Brunswick Town Council and 2 members appointed by the Topsham Board of Selectmen. All appointments are for 3 year terms with 2 terms expiring each year.

The District is a self-supporting organization procuring its operating funds from user fees. The District's charter area includes the geographical boundaries of Topsham and Brunswick.

The District's source of supply is from groundwater with several wells and/or well fields located at various locations:

- Off of Jordan Avenue in Brunswick are 160 2.5" wells approximately 20 to 26 feet deep with a current pumping capacity of 950 gallons per minute (1.37 million gallons per day). The quality of the water pumped from this well is very good – it requires minimal treatment to adjust the water's Ph levels. Chlorine and fluoride are added for public safety and corrosion inhibitor is added to maintain the water distribution system.
- At Williams Farm in Brunswick is a 12" well with a current pumping capacity of 450 gallons per minute (0.65 MGD). The water quality from this well is excellent – no water quality treatment is needed at all. Chlorine and fluoride are added for public safety and corrosion inhibitor is added to maintain the water distribution system.
- Two wells are located at Taylor Farm in Brunswick. One is a 12" well 156 feet deep with a pumping capacity of 1,000 gallons per minute (1.43 MGD). The other is an 8" well 108 feet deep with a capacity of 400 gallons per minute (0.57 MGD). An ion exchange treatment for these wells is improves water quality by removing trace amounts of iron and manganese. Chlorine and fluoride are added for public safety and corrosion inhibitor is added to maintain the water distribution system.
- At Jackson Station in Topsham is an 18" well with a pumping capacity of 2,500 gallons per minute (3.57 MGD). The water from this well is treated for trace amounts of iron and manganese. Chlorine and fluoride are added for public safety and corrosion inhibitor is added to maintain the water distribution system.

As some of these wells are getting old, the District is in the process of development a backup and replacement well system. This involves replacing the existing pump at the Taylor Station with a new pump capable of producing 3.0 MGD and developing a backup well at the Jackson Station capable of producing 10.0 MGD.

A study completed in the early 1990s suggests that the large sand and gravel aquifer supplying the Jackson, Taylor, and Williams wells has an estimated safe yield of 12.4 MGD. Pumping capacity from this aquifer along totals 4.8 MGD, or approximately one-third of the aquifer's safe yield.

According to an Aquifer Protection Study completed in 1986, the aquifers serving the District wells are recharges from direct precipitation, from an adjacent permeable material, or from induced infiltration from the Androscoggin River. The Androscoggin River is the largest and most reliable source of recharge to the District.

The District has an interconnecting line with the Bath Water District for mutual emergency use.

The District closely monitors and provides comments as necessary on proposed new drinking water rules by state and federal regulators. Although these new regulations have not been finalized, there is broad professional consensus that at least some new regulations will affect the Water District and its cost to supply customers with potable water in the near future. Since federal funding is not available for these improvements, the burden of these improvements will be borne by District ratepayers.

Once water has been drawn into the wells and brought to the surface, the District moves the water into water tanks for storage. Three water tanks store a combined 6,300,000 gallons, or enough for three days of normal demand.

- A steel standpipe off of the River Road in Brunswick is the oldest of the three structures. The standpipe or water tower was constructed in 1939. It is 103 feet tall and 40 feet in diameter. These dimensions create a storage capacity of 900,000 gallons. This tower was resurfaced inside and out in the early 1990s.
- A new concrete storage tank is located off of the Church Road in Brunswick. It was built in 1988 and while it only measures 40 feet high, it is 112 feet in diameter (creating storage for 3,000,000 gallons).
- A concrete storage tank off of Oak Street in Topsham was built in the early 1900s. This tank measures 100 feet in diameter and is 43 feet high and holds 2,500,000 gallons.

The District's distribution network consists of 105 miles of water mains ranging in size from 1" to 20". These mains typically run underneath roadways and deliver the water from the storage tanks to each user's water service line. Because much of the distribution network is built in sandy soils, the system is in excellent condition.

Approximately 6,300 service lines supply water from the mains to the customer's home or business and another 600 fire hydrants are connected to the mains.

Because the system is pressured by gravity, there is an elevation limit to how high water will flow to homes and businesses. Using the existing infrastructure, the effective limit is 150 feet above sea level. These physical barriers in the west of town include Rocky Hill, Oak Hill, and Deep Cut.

In 2002, the District's water consumption averages 2.14 MGD. This fluctuates on a seasonal basis, as the seasonal demand for water typically increased in the summer. Daily water demand peaks in the early morning hours and tapers off throughout the day.

In 1994, the District completed a hydrogeologic study that suggested areas around the wells be preserved from the adverse impacts of certain land uses that can be detrimental to water quality. Both Brunswick and Topsham responded by creating wellhead protection zones to help protect the quality of the public water system.

Brunswick's aquifer protection zones get progressively stricter with travel time to the wellheads. One of the two aquifer protection zones is located between Durham Road, Bracket Roads, the Interstate, and the river. The other is in the area of Jordan Road, Bath Road, and the river.

Expansions to the public water system are built to the specifications of the Water District and paid for by the developer requesting access to the system. The developer then deeds the expansion to the District for operation and maintenance.

Brunswick Sewer District

While wastewater collection services go back well into the previous century, the Brunswick Sewer District has existed as a wastewater utility since its original charter was approved by the state legislature in 1948. The District is governed by a 5-person Board of Trustees, appointed by the Town Council.

The District's service boundaries match the Town's growth-rural boundary, and most of the properties within the service area have access to the sewer system. There are four sections of the service area that do not have ready access to the sewer system. These include Portland Street (Route 1 south of Pleasant Street), the Fox Run property between Outer Pleasant Street and Interstate 95, Cook's Corner, and the neighborhoods around the High School.

The sewer collection system includes approximately 50 miles of gravity and pressure mains. Seventeen pump stations located throughout the district pump sewer to the Jordan Avenue treatment center. All of the storm sewers were separated from the sanitary sewers in the 1950s, so there are no concerns about overboard discharge from CSOs during storm events.

The wastewater treatment plant provides primary and secondary treatment. The system was designed to handle an average of 3.85 million gallons per day (mgd). Currently, an average of

2.5 to 3.0 mgd pass through the system. The system can handle up to 11.1 mgd in peak flow for short periods of time before the system is overwhelmed.

Highest daily volumes generally occur in the spring when the water table is high (which encourages infiltration) and lowest during the summer and fall.

In addition to wastewater from the district, Brunswick Sewer District also has contract agreements with the Town of Topsham and the Naval Air Station to receive and treat their wastes. These users pay a fee depending on the volume of waste they generate.

The Brunswick Sewer District also provides treatment for pumped septic system waste from septic tanks in Brunswick, Harpswell, and Topsham. While the volume of these wastes is relatively low, these wastes are much more concentrated than the waste that comes through the collection system.

Primary treatment removes most of the sludge in the wastewater. Secondary treatment removes additional sludge and treats the wastewater so that it meets the discharge requirements determined by the Department of Environmental Protection and the United States Environmental Protection Agency. The wastewater is discharged into the Androscoggin River.

The sludge that is collected during the treatment processes is stored, thickened chemically and mechanically, and treated again before being shipped out for land application or disposal at a secure landfill. The District creates more than 2,500 wet tons of class B sludge annually.

The District has an ongoing program to upgrade sewer mains when needed. Parts of the system are more than 200 years old, and replacing these components can significantly decrease the amount of infiltration into the system, thereby offsetting increased amounts of demand placed on the system by new development.

The District is on schedule to pay off its debt burden by 2010.

Issues

1. A large portion of our community still relies on on-site septic systems. These systems are prone to failure and can be a source of pollution to our community's marine and natural resources.
2. Expanding public water and sewer services into unserved areas can be a very valuable growth management tool. Are there any criteria under which the Town of Brunswick should subsidize the cost of these expansions?
3. While the Brunswick Sewer District has space capacity at its facilities, long-term planning requires that the District consider expanding its treatment capacity. Initial estimates suggest that a 5.4 mgd expansion will cost approximately \$8 million. This expansion could be timed to coincide with the retirement of existing debt in the year 2010.

Public Facilities and Services

Our town is a service center. We offer a range of facilities and services to meet the varied needs of our community. This chapter provides a summary of the public facilities and services available to the community.

General Government

The Municipal Building on Federal Street is the heart of the town's government. It was constructed in the early 1970s and was expanded in 1984. The following departments and offices are located in this building:

- The Town Manager's office,
- Town Clerk and Elections Office,
- Assessing Department,
- Planning and Development Department (including Codes Enforcement), and
- Finance Department.

These offices and departments provide all of the general administrative needs of our town's government.

As the level of service provided by the town has increased, the space available in the Municipal Building has become inadequate. The Human Services Department was moved off site because of the lack of adequate space, as were the community meeting facilities. Storage for general operations is very limited – many of the town's records are located at a different location because there is not adequate space in the Municipal Building.

Other concerns, including deteriorating physical conditions, indoor air quality

Current Reports and Documents

- The *Brunswick Facility Study* completed by SMRT inventories available space for Town operations as well as the demand for this space, and also includes a re-use analysis of the Old Brunswick High School for municipal purposes.
- Workbook for Planning Committee, Capital Improvement Plan
- The *Brunswick School Department* report was prepared by the School Department for the Comprehensive Plan Review Committee in 2004.
- A *Site Location Analysis* was completed in 2003 to provide solutions for the town's public safety needs. This analysis includes detailed inventories of demands placed on public safety services, the quality of services provided, and trends that will affect the provision of services in the future.
- Mitchell Ross Associates completed a study in 2002 on the *Proposed New Fire Stations: Headquarters and Cooks Corner*. This study includes a financial analysis of the proposed public safety buildings, as well as detailed specifications on the new buildings.
- The *Town of Brunswick Capital Improvement Planning Workbook* in 2003 evaluates the Town's financial capacity for new capital improvement projects and summarizes past capital improvement projects.

concerns, and inadequate parking facilities, also hamper the government's operations at this site.

Recently, there has been much discussion about possible alternatives to moving the general government to a different facility with more appropriate space. Suggestions have included the Old High School, the Times Record Building on Industry Way, a new Town Hall at Maine Street Station, and rehabilitating and expanding the existing municipal building.

Police Department

The Police Department provides 24-hour police protection to our town. Its station is in the basement of the Municipal Building, a space it has occupied since 1984 when the building was expanded and renovated.

The Department has a total of 51 employees. Of these, 35 are sworn police officers, nine are communications officers, and the balance are non-sworn special enforcement positions (animal control and parking enforcement) and staff support positions. Personnel policies allow the department to retain a highly skilled and educated work force.

The Department has 18 vehicles. In addition to the 6 marked cruisers are 2 trucks (animal control and marine warden), 2 school resource vehicles, a D.A.R.E. vehicle, 2 detective vehicles, 3 administrative vehicles, a mobile command center, a parking safety vehicle, an equipment trailer, and an air-boat.

The Department handles approximately 28,000 calls for service each year. Of these service calls, approximately 1,100 are motor vehicle accidents, 1,400 are arrests, 1,400 are offense reports, 1,700 are Emergency Medical Service calls, and 2,400 are fire response calls. As our community has grown and developed, this number has increased and is projected to continue increasing in the future.

Due to increases in the number of personnel in the department and its mission, the space in the Municipal Building has become severely overcrowded. According to a recent facilities study by the town, the department occupies dangerous work spaces that are not conducive to police operations. Storage for department equipment is severely limited, and indoor air quality is a concern. Parking space for the department's cruisers is limited.

Current plans are to move the Police Department into the newly acquired Times Record building on Industry Road. The space available to the department would expand from the current 6,000 square feet to between 20,000 and 25,000 square feet. This amount of space would satisfy the department's needs for the near future.

The Police Department is relatively small for a town the size of Brunswick. According to the Federal Bureau of Investigations, a New England town the size of our town should have 1.8 sworn officers for every 1,000 residents. The department currently has 1.6 officers per 1,000 residents.

Demands on the department are exacerbated because of our town's role as a service center. Tourists, commuters, night life, health care facilities, regional retail stores – the number of reasons for people to travel to or through our town are numerous, and the Police Department provides public safety services to all.

Continued residential and commercial development will continue to increase the demands on the department.

Finally, the Navy is turning over 400 to 500 housing units to a private management company. Once this happens, the Police Department will be in charge of public safety for these housing units (this service used to be provided by the Department of Defense). By early 2005, an additional 1,500 residents will need public safety services from the Police Department.

Fire Department (and EMS)

The Brunswick Fire Department provides 24-hour fire and emergency medical services to the entire community. The fire station was built in 1919 and is located on Town Hall Place.

The department operates with a combination of 27 firefighters, 1 support person, and 30 on-call firefighters that respond to emergencies on an as-needed basis.

The Fire Station is too small and outdated for a modern fire department. The station was originally built for horse-drawn firefighting apparatus, and despite upgrades, the department has outgrown its space. Some apparatus are stored outside and the ladder truck cannot be replaced because a new truck would be too large for the station. Storage space is in short supply – some equipment has to be stored outside and has been vandalized in the past – and the living quarters are inadequate. The fire station is not ADA compliant.

Apparatus include three active engines, one ladder, one tanker, three rescue ambulances, three special-use cars, two brush trucks, a hazardous material trailer, a boat, and two vintage fire fighting apparatus.

Response times to service calls varies throughout town. The closest thing to a national standard on response times is to have an 8-minute response time to 90% of life-threatening calls. In Brunswick, 90% of the calls have a 9-minute response time, which is considered good. East Brunswick has the longest response times in the community, and is an area that is experiencing significant residential development and large-scale commercial development.

In the 2003 calendar year, the department had nearly 3,000 service calls. Of these, 28% were for fire services and 72% were for emergency medical services. Types of calls ranged from structure fires (52) to vehicle fires (18) to rescue assistance-extraction (206) to hazardous conditions (132). More than 160 of the calls were false alarms, the vast majority of which were not malicious. The department has mutual aid agreements with surrounding communities, and in 2003 it responded to 24 mutual aid calls (it received approximately the same number of assists from surrounding communities).

The number of calls the department receives each year has increased steadily since 1992. In that year, there were under 500 fire and other non-EMS calls. By 2003, this had increased to 846 calls. Data suggests there has been a steady increase in the number of calls for most of the last decade.

The number of service calls on the fire department is projected to continue in the future. Recent trends suggest that we are asking more of our fire department – the 0.023 service calls per Brunswick resident in 1992 has steadily increased to 0.040 service calls per Brunswick residents. The number of EMS calls has increased from 0.041 calls per resident in 1992 to 0.100 calls per resident in 2003. On top of these increasing per-capita call rates has been an increasing population. These two trends are projected to continue, which suggests that the number of service calls per year is going to continue to increase.

The department also provides emergency medical service to the entire community. In the 2003 calendar year, EMS services received more than 1,700 service calls. In the 03-04 budget year there were 2,108 service calls. For these, the town was reimbursed more than \$700,000.

Fire service to the community is generally good. Those in the downtown area have excellent response times, while those in the more rural areas have good response times. Response times to East Brunswick and Cooks Corner are not as good for the type and volumes of fire services that must be provided to these areas.

To address the service issues in East Brunswick and the poor space at the fire station, the town has examined several solutions. One of these includes a public safety substation on town-owned land in Cooks Corner. Discussions about potential solutions to these issues are continuing in the community.

Brunswick School Department

Our public education system is administered by the Brunswick School Department. The policy making body of the Department is the Brunswick School Board. This Board has nine members.

Public school is provided to all students from Kindergarten to 12th grade. There are currently 3,300 students in our town, of which approximately 180 are tuition students from neighboring communities. Enrollment projections suggest there will be between 2,900 and 3,300 students enrolled in our schools by 2017. For a community our size, this is an impressive retention of school enrollments.

The School Department operates six schools. Detailed analysis of each school and its role in the department's future plans are addressed in the *Brunswick School Department* report for the Comprehensive Plan Update Committee.

- Coffin Elementary School was built in 1955 and has approximately 450 students. Portable classrooms are used because of the overcrowding of the rest of the facility. The long-range plan for Coffin School aims to reduce this school population to 350 students in grades K – 5.

- Hawthorne Elementary School was built in 1893 as the original Brunswick High School. It has approximately 190 students in grades K – 2. The buildings many physical shortcomings have led the School Department to recommend its closing in the long range plan to be reused for other educational or municipal uses.
- Jordan Acres Elementary School was built in 1972 and has approximately 490 students in grades K – 5. Portable classrooms on site help ease the overcrowding burden.
- Longfellow Elementary School was built in 1924, but has had additions as recently as 1998. Overcrowding at the school is a concern. The school serves students in grades K – 5.
- Brunswick Junior High School serves grades 6, 7, and 8. This school shares space with the Coffin Elementary School, and with the Bus Garage, Facilities Office, and Food Service. Congestion around the facility is an issue, as is overcrowding in the classrooms (the Department currently relies on several portable classrooms to create enough space).
- The Brunswick High School was built in 1995 for grades 9 – 12. There is adequate space to meet the needs of the School Department for the foreseeable future. Current enrollments of 1,137 students (including tuition students) is below the school’s designed capacity of 1,200.

Brunswick students perform well compared to the rest of the state. Overall Maine Education Assessment results in 2004 are at or above the state averages for each grade level (except Grade 11 writing). High school SAT scores are consistently above state averages and national averages. Graduation rates are higher than state averages and dropout rates are lower than surrounding schools and the state as a whole.

District-wide, the Brunswick School Department has relatively low per-pupil operating costs. In the 02-03 school year, the department spent \$6,266 per pupil. This was below the \$7,088 spent per pupil by the median school, and considerably lower than Bath (\$8,500), Freeport (\$8,000), and S.A.D. 75 (includes Harpswell, Topsham, Bowdoinham, Bowdoin) (\$7,250).

The Brunswick School Department report to the Comprehensive Plan Review Committee in 2004 contains a long range plan for the school system. Major expenditures in the future include a new 500 student elementary school, renovations and additions to Coffin, Longfellow, and Jordan Acres elementary schools, and additions and renovations to the Brunswick Junior High School. The space provided by the new elementary school would allow the department to close the Hawthorne Elementary School and provide it for other education or municipal uses.

Recreation Department

The Recreation Building does not meet standards for any of its assigned uses. The day care program is operated in space that is below grade, office space is limited, and the gymnasium

does not meet functional standards for many of its intended uses. The building is not fully ADA compliant. Parking for staff and the public is very difficult to find.

The People Plus Center is located on Maine Street across from the First Congregational Church. The buildings that comprise the People Plus Center is an old church and rectory. Space demands limit the type and range of programming that can be offered, and parking and access are major issues.

Public Works Department

The Public Works Department is located on Industry Way. The garage is worn and damaged from heavy use, is not ADA compliant, and has only an estimated 30% of the recommended space it needs to operate. The adjacent recycling center is also worn out and has insufficient space. The parking lot for these two buildings is rutted and needs resurfacing.

Facility Needs

In the last 10 years, Brunswick has spent more than \$45,000,000 on capital improvements to its facilities. Education expenses account for nearly one-half of this total, most of which went for the new High School built in 1995. Public works expenditures on improving roads and sidewalks and purchasing new equipment have accounted for 29% of the total (\$13,000,000). Recreation expenses (Androscoggin Bike Path, Coffin Pond Chlorination System, Sawyer Park, etc) accounted for 7% (\$3,000,000). Public safety (3%), economic development (2%), and general government (less than 1%) totaled \$2,400,000. Other expenses totaled \$6,000,000, which includes the Curtis Memorial Library, underground storage tank removal, and other projects.

Issues

1. The Town of Brunswick has conducted several studies to determine what to do with the space needs of its public facilities. On the one hand, the Town has significant overcapacity at the Times Record building and Old High School. On the other hand, existing facilities at Town Hall are overutilized.
2. The potential closing of Naval Air Station Brunswick could be an opportunity for the Town to fill some of its public facility needs and wants. At the same time, the Town still has significant overcapacity now, and adding new facilities will have to be examined thoroughly.
3. As the demographic composition of our community's population changes, the types of demands placed on our public facilities and services is changing. How can the public facilities and services react to and anticipate the changing type of demand?

Recreation

Our town's recreation needs are met by an impressive range of public and private resources. The Town provides a variety of recreation programs and facilities open to everyone in the community. The Naval Air Station and Bowdoin College have facilities and programs available to those who work or study there. Private recreation facilities are available where the market makes their operation feasible.

Refer to our town's recently completed *Parks, Recreation, and Open Space Report* for a more detailed inventory of our town's recreation resources.

Public Recreation Resources

Our town's residents have a variety of public recreation facilities available. The Recreation Department sponsors organized team sports, individual sports, education programs, field trips, nursery school, and a range of other activities for all residents. The School Department provides organized sports and recreation programs for students from Kindergarten through secondary school. The People Plus Center is expanding its services to provide opportunities to residents of all ages.

The Town of Brunswick operates a variety of recreation facilities throughout the community:

- *Outdoor recreation facilities* include parks, ball fields, courts, gardens, a swimming hole, and playgrounds. These facilities tend to be centered in the more developed areas in Brunswick's Downtown.
- *Trails and bicycle/pedestrian facilities* are spread throughout our town. These range from sidewalks (which total more than 32 miles and are clustered in developed areas), to the Androscoggin bike path, to the College-Commons-Bay trail, to numerous other less-formal trail systems. While public access to much

Current Reports and Documents

- The *Parks Recreation, and Open Space Report* is a comprehensive study that includes inventories, a public opinion survey, and an implementation strategy. Topics addressed include:
 - Water Access Subcommittee Report
 - Trails & Greenways Subcommittee Report
 - Parks, Playgrounds, Outdoor Athletics & Community Gardens Subcommittee Report
 - Indoor Recreation Facilities Subcommittee Report
 - Indoor Recreation Facilities Analysis
- The *Town of Brunswick Facilities Study* (2001) by SMRT details the public indoor recreation facilities in Brunswick.
- The *Mall Management Plan* (2000) studies how the Lower and Upper Malls are used and details strategies that can maintain their health in the future.
- The *Shore Access Report* (1995) details all of the legal public access points to water bodies in our town.

of this networks is guaranteed, the trail network is dramatically larger when those using private trails is included.

- *Indoor recreation facilities* include the Brunswick Recreation Center, Brunswick School Department (six school buildings), the Old Brunswick High School, People Plus Center (technically a nonprofit but funded by the Town), and the Brunswick Naval Air Station (access is limited to Department of Defense personnel)
- *Water access points* in our town are spread from the upper reaches of the Androscoggin River to Wharton Point on Mere Bay. Of the 39 known access points, 12 have established legal access for the public. For more detail, see the 1995 Shore Access Report and the 2002 Public Water Access Inventory. In total, there are five sites where tailored-access is available, although several of these are limited by tides and/or poor ramp conditions. A public boat ramp is being built on Mere Point by the State that will have all-tide access to northern Casco Bay.

For a detailed inventory on all of these facilities, see the recently completed *Parks, Recreation, and Open Space Report*.

Brunswick's Recreation Department oversees the coordination of these activities and maintains our outdoor recreation resources and recreation center.

Recreation Committee oversees the activities of the Recreation Department. In addition, there are several other community organizations that support recreation programs (Rotary Club, Little League, People Plus Center, etc).

Trails and Pedestrian Connections

Trail and pedestrian connections are important components of our town's recreation facilities. These are located on both public and private land. For more information on these facilities, see the Transportation summary of this plan, the *Brunswick Bicycle and Pedestrian Plan*, and the *Town of Brunswick Sidewalk Inventory Rating*.

Water Access Points

The *Public Water Access Inventory* in the *Parks, Recreation, and Open Space* report describes all 12 public access points to water bodies in town. These include five access points for trailored boats, and the rest for pedestrian/canoe/kayak access. The Shore Access Report in 1995 inventoried these sites, but also identified many historic access points to water bodies where the public's right of way is in dispute.

Brunswick Naval Air Station

The Naval Air Station has several recreation facilities available to active duty personnel, their families, and retired service personnel. Some guest usage is allowed, but only if accompanied by

military personnel. Their sports and recreation facilities include a fieldhouse, recreation mall, fitness center, rental/hobby shop, golf course, courts, playgrounds, and other outdoor facilities.

Bowdoin College

Bowdoin's recreation facilities are available to students, staff, and faculty. Limited public access is available to some of Bowdoin's facilities. These facilities include Pickard Theater, Dayton Arena, Greason Pool, Farley Fieldhouse, Morrell Gym/Sargent Gym, the squash building, and the Watson Fitness Center.

Private Recreation Resources

There is a large number of private recreation facilities in and around our town. These include several indoor fitness centers (fitness, aquatic facilities, tennis, and other racquet sports), an indoor skating rink, an indoor ice arena, golf courses, studios (dance, martial arts, gymnastics, etc), indoor soccer, arts and crafts, and the performing arts.

There are two YMCA's in communities surrounding Brunswick. The Bath YMCA is a new facility and includes an indoor pool, gym, track, weight and cardio fitness center, racquetball court, and multi-purpose classrooms. The Casco Bay YMCA in Freeport is also new and has an indoor pool, teen center, wellness center, childcare area, and an outdoor court facility. An estimated 5% of the membership of the Casco Bay YMCA are Brunswick residents.

Issues

1. As our town continues to grow and change, the recreation needs of the community will continue to change.
2. The demand for indoor recreation space is high, especially in the gymnasiums. This demand is projected to remain high.
3. The People Plus Center as recently expanded its mission beyond seniors to the entire community. The amount of space available at this facility is limited.
4. Indoor and outdoor recreation facilities at the Naval Air Station and Bowdoin College provide limited access for organized recreation opportunities by the Town or the School Department.
5. Community recreation space east of Cooks Corner does not exist, despite this area's fast growth and the location of many families in this section of town.
6. Impact fees for new developments can skip the recreation component of the program if they donate conservation land – often a less expensive alternative for the developer and of no help with the town's need for recreation facilities.

7. Athletic fields are currently being used to the limit. There is not enough space during certain times of the year, and there is not enough time to rest fields to ensure optimum playing conditions.
8. Brunswick has leased land owned by other organizations and provided public recreation areas on the leased land. Owners of some of this land can decide to discontinue the leases, which will deprive the town of some recreation facilities.
9. Some facilities are not adequately maintained, ranging from landscaping improvements to playgrounds not meeting the Standard Consumer Safety Performance Specifications.
10. Bicycle linkages throughout the community are not adequate or consistent.
11. Links between trail networks often cross property that will likely be developed. The Brunswick Planning Board has limited ability to encourage trail allowances
12. Public use of private land has been traditional for decades, but many landowners are expressing concerns about allowing public access to their private land. Restricting this public access is their right. Are there ways the Town of Brunswick could help mitigate this conflict and help retain access to the landscape?
13. Despite miles of waterfront, Brunswick residents have limited access to the shore for swimming, fishing, canoeing, kayaking, etc. As the interests of waterfront landowners have changed over time, many of what were traditional water access points have been lost. This trend is likely to continue. In addition, several of our current water access points need physical improvements and/or additional parking. Not all of these access points are ADA accessible.

Agricultural, Forest, and Open Space

Natural resources were once the foundation of our town's economic and social structure. While that has long passed, they still retain an important role in our community's character.

Agricultural Resources

Agriculture always has played a central role in the life of Brunswick, so much so it seems that chroniclers of town life seldom refer to it except in passing. Hard data is hard to come by – it's as if farming was so prevalent and so basic that the activity didn't warrant comment. The large farms that to this day dominate our rural landscape are testament to this component of our history.

In the 1950s and 1960s, agriculture in Brunswick began to decline as it did in many rural Maine towns. In 1950, there were an estimated 50 working farms. By 2002, this had declined to close to 10 working farms. Rising land values, fewer markets for local products, and competition from around the globe have conspired to pinch our local farms.

Today, farms in our town sell a wide range of products, from vegetables to meats to dairy products to hay to horticultural plants. These products are largely sold within Maine, but many of the products – especially meats – are sold throughout New England.

There is a limited correlation between the soils which are ranked as prime agricultural and the actual sites of working farms. Indeed a large percentage of the best soils for croplands in underneath the developed areas of town. It is unlikely that a large percentage of new farmland is going to be created from the forests, and the town will likely continue to see a net loss of farmland.

Current Reports and Documents

- The Parks Recreation and Open Space Report studied our town's farms and forests in detail. For more detail, see the
 - Farmland Subcommittee Report
 - Woodlands Subcommittee Report
 - Community Forest and Street Trees Subcommittee Report
- *A Farmland Preservation Case Study: Brunswick* was prepared by Kristin Awsumb. This case study inventory the history of farming in our town and details various preservation tools available to protect valuable farmland.
- *Farmland and Forestland* was prepared by Joan Hoppe of Brunswick for the 1994 Comprehensive Plan. This report is a history and comprehensive inventory of the farms and forests in our community.
- *Town Woodlot Report* was prepared for the Conservation Commission by Woodlot Associates. This report inventories each woodlot parcel owned by the Town.
- *Scenic Inventory, Brunswick Maine* was created as a component of the Parks, Recreation, and Open Space plan. This report is a detailed inventory of scenic areas and gateways in our community.

Forest Resources

The majority of the land area in Brunswick is forested. The Town has an interest in the health of this forest on two levels. First, the Town owns seven woodland parcels that are managed by the Conservation Commission. Second, the rest of the community is heavily forested and this forest provides important wildlife habitat and forestry opportunities for many private landowners in town.

Our town's seven woodland parcels are managed by the Conservation Commission. These parcels are spread throughout the community and include:

- Cox Pinnacle parcel, West Brunswick
- Senter parcel, interior parcel off of Durham Road and Bagatelle Lane
- Kennedy parcel, interior parcel adjacent to Interstate 95
- Pleasant Hill Road Landfill parcel, Pleasant Hill Road
- Haywood Lane parcels, two interior parcels adjacent to Twin Echo development in West Brunswick
- Coombs Road parcel, East Brunswick adjacent to Naval Air Station
- Androscoggin Islands between Topsham and Brunswick

Privately-owned forests provide economic opportunity, wildlife protection, and recreation opportunities across town. Forests cover more than 16,000 acres in town.

Open Space and Scenic Resources

Our town's landscape is characterized by a variety of scenic views. These range from working farms to deep forests to historic buildings to traditional neighborhoods, streetscapes, and gateways. These resources have been catalogued in the *Scenic Inventory, Brunswick Maine*.

Current Use Taxation

Landowners in our town rely on three voluntary tax programs in order to reduce their property tax obligation and help keep areas of Brunswick as a working farm, working forest, or open space. Lands that are enrolled in the programs are assessed for their current use, as opposed to their potential fair market value for more intensive uses. The property owners receive a reduced tax bill from the Town so long as they are enrolled in the program. If they remove their land from the program, they might have to pay a penalty so that the Town recoups some of the lost tax revenue.

In 2004, more than 1,400 acres were enrolled in the Farmland Tax Program, 1,500 acres were enrolled in the Tree Growth Program, and 1,600 acres were enrolled in the Open Space Program. Participation in the program has generally been increasing – the number of parcels enrolled and the total acreage enrolled as farmland and forestland has steadily increased between 1994 and 2004.

Between 2000 and 2004 the amount of Open Space enrolled in the program declined by 300 acres. In general a few larger parcels were removed from the program and were replaced by an equal number of smaller parcels.

Right-to-Farm Ordinance

Brunswick has adopted a Right-To-Farm Ordinance. This ordinance mimics the state's Right To Farm law (Title 17, section 2805) that seeks to protect farm operations from nuisance claims.

Issues

1. Residential development, which is projected to continue at a rapid pace, can threaten the scenic character of the more rural areas of our community.
2. Rising land values increase the financial equity many rural landowners have invested in their property.
3. The Town of Brunswick is rich with working farms, forests, and landscapes. These add immeasurable value to the community. Keeping these farms and forests working is the most efficient way to preserve the community's rural areas. At the same time, unless there is a new generation of farmers that are willing and able to purchase farms in Brunswick, the long-term protection of these resources cannot be assured. What can the Town of Brunswick do to support these working farms and forests?

Natural Resources

Our community's natural resources are both widespread and finite. Topography, soils, water resources, wetlands, open spaces, and wildlife create a rich tapestry that falls from the ridges in West Brunswick to the peninsulas reaching into Casco Bay. Recent development patterns have threatened the health of these natural resources.

For more information on the town's natural resources, refer to the many studies and reports that have been compiled on this subject identified below.

Topography

All of the rock underlying our town is millions of years old. Large folds in these rocks – the peaks of which include the ridges in West Brunswick and the peninsulas that reach into the bay – were exposed during the last ice age. As the glaciers retreated 10,000 years ago, a large, flat outwash plain deposited sand and gravel across the central portion of Brunswick.

This outwash plain is the aquifer for the public water system in our community and is mined for sand and gravel in many locations in Brunswick and Topsham. The supply of water in this aquifer far exceeds demand – a resource that could become of regional importance in the future. These alluvial deposits are also mined for sand and gravel in many locations in Brunswick and Topsham.

Soils

There are two major soil associations in our town.

One is the Suffield-Buxton-Hollis, found on the eastern and western border areas of the town and along the frontage on the bays. These soils are related to marine deposits on gentle lower slopes and glacial till on the ridges in the western areas of town. These soils are particularly suitable for farming and tree growth. Their residential use is limited by slow and very slow permeability and shallowness to bedrock – which affects subsurface sewage disposal.

The second association, the Windsor-Hinckley-Deerfield, occurs in the central portion of the town. This originated from the relatively flat outwash deposits of

Current Reports and Documents

- The *Flora and Fauna Subcommittee Report* contains a detailed inventory of locally and regionally significant biological features.
- *2002 Parks, Recreation, and Open Space Plan* – This study includes a detailed inventory of the community's recreation facilities, parks, and natural and open space resources including agricultural and forestry land and scenic resources.
- *2003 Rural Brunswick Smart Growth Strategy* – This project included a detailed inventory of the community's unfragmented, forested wildlife habitat and wildlife travel corridors as well as a strategy for managing these resources.

marine and alluvial origin. These soils are suited for tree growth, but not as well suited for farming. Ground water contamination is of particular concern on these soils because of the high water table and good permeability of the soil.

Surface Water

While being largely surrounded by surface water, there is very little surface water that is entirely within the borders of our town. The Androscoggin River is our northern boundary, the New Meadows River is our western boundary, and Casco Bay to the south. Beyond these water surfaces, there are numerous smaller farm ponds, flooded gravel pits, and impoundments in the community, however there are no great ponds (10 acres or larger).

There are four larger watersheds in our community:

- The Androscoggin watershed extends along the northerly border of the community. Simpson Brook and a number of unnamed streams flow northerly into the Androscoggin. In this watershed is most of the town's public water supply and aquifer protection districts. Land use in the watershed varies from farm and forest to industrial and commercial. A mixture of on-site wastewater disposal and public sewer serve this watershed.
- The Royal River watershed flows south out of West Brunswick and into Freeport. Approximately 2.5 square miles of watershed, including Collins Brook and numerous smaller tributaries, flow into the Royal River. Land use in the watershed is forest and residential with on-site wastewater disposal.
- The New Meadows watershed is very narrow and is characterized by numerous rocky outcroppings. Land use in the watershed is largely residential and uses on-site wastewater disposal.
- A large portion of Brunswick drains directly to the Bays in relatively small streams, including Mill Stream, Kelsey Brook, Bunganuc Brook, Miller Creek, and Mere Brook. The lower portions of these streams tend to be tidal. Land use in this watershed is forest, farm, and residential. Most of the areas rely on on-site wastewater disposal.

The most productive ecosystems in our community are the estuarine systems that are located where streams and the oceans meet. These estuaries are very valuable for both ecological and economic reasons. The quality of the freshwater entering the bays can have enormous impacts on the ecological and economic health of our shellfishing flats. Merrymeeting Bay is one of the nation's more significant breeding grounds for fisheries and a haven for migrating birds.

Other potential threats to surface water include:

- An old municipal landfill in Bunganuc Stream's watershed,

- Rapid residential development – especially that which has on-site wastewater disposal and is on marginal soils or near a water body,
- The New Meadows Lake, which has a slow turnover rate that creates more opportunities for eutrophication,
- The active municipal landfill on Graham Road, although its discharges are closely monitored,
- The unnamed stream that overlies the aquifer that provides most of the town’s public drinking water has Interstate 95 in its watershed. A spill along the Interstate could affect this source of drinking water.
- While the Androscoggin River’s water quality is degraded before it reaches Brunswick, our community has a responsibility to protect this water body for communities downstream of us.

Ground Water

Our town is underlain by two types of aquifers. Sand and gravel aquifers, underneath the more developed portions of the community, largely supply the public water system in Brunswick and Topsham. Bedrock aquifers, which account for most of the individual water supply systems in the community, are generally located in the more rural areas of the community.

The aquifer protection overlay zone protects the quality and quantity of the town’s public water supply by regulating the land uses that could affect the resources. One APZ is located west of Interstate 95, and the other is in the Jordan Avenue neighborhood. Each APZ has two levels of protection. A higher level of protection is required for land uses within 200 days of travel time from the public wells, and a lower level of protection exists in the rest of each aquifer.

Threats to groundwater fall into five categories:

- Underground tanks are located throughout the community and were identified in detail in the *1994 Comprehensive Plan*. These typically stored oil, gas, kerosene, or other products and could leak their contents into the water supply.
- Floor drains collect water and spilled substances and discharge to soil, groundwater, or septic systems. These sites have been identified by the Maine Department of Environmental Protection.
- Hazardous waste generators are businesses or other activities whose actions produce hazardous waste. These businesses range from hospitals to manufacturers and are required to register with the Maine Department of Environmental Protection.
- Overboard discharges include septic systems that discharge directly into surface waters.

- Miscellaneous potential threats include active and inactive landfills, dumps, junkyards, inappropriate agricultural practices and road maintenance, clearing on steep slopes, and other types of pollutant discharges.

Wetlands

Wetlands are transitional areas between open water and dry land. Such areas include fresh and saltwater marshes, swamps, and wet meadows.

Wetlands provide many benefits to our town, including sediment retention, floodflow alteration, plant and animal habitat, finfish and shellfish habitat, and educational/cultural benefits. The Maine Natural Areas Program characterizes wetlands based on these five values to determine which ones are highest in value.

Our town has several high value wetlands, most of which are located along our southern shore at the head of the bays and estuaries, along the New Meadows River, and the tidal stretches of the Androscoggin River. Wetlands in West Brunswick are generally of moderate to low value, although there are some wetlands that are moderate-high value wetlands.

Wetlands are some of the most important and vulnerable natural resources in the community. Land use activities such as draining, clearing, filling, and waste disposal can significantly alter or destroy the value of these wetlands.

Wetlands are currently protected by our town's Natural Resource Protection Zone. This zone regulates land use activities within 250 feet of coastal and upland wetlands which were identified as moderate of high value by the Maine Department of Inland Fisheries and Wildlife. Wetlands under 1 acre in size are not included in the NRPZ.

Vernal Pools

Vernal pools are typically smaller than wetlands, although some vernal pools are large enough to be protected by Maine's Natural Resource Protection Act. These pools are typically created as winter runoff and spring rains collect in depressions in the landscape. Often the collection of water has dried up by summer or fall.

Despite its temporary nature, these vernal pools are important habitat for wood frogs, salamanders, shrimp, and many threatened or endangered species.

Vernal pools have been mapped in Brunswick, but there are no explicit protections for these habitats from changes in land use.

Hazard Areas

Hazard areas are those portions of the town that are subject to natural hazards which can potentially cause damage to structures, or conditions which present major difficulties to the sighting of structures. These areas include:

- Areas subject to sea level rise, which is projected to rise several inches over the next century. Bluffs (increased erosion) and coastal marshes (migrating inland) are the areas most threatened by sea level rise.
- Steep slopes tend to be susceptible to erosion and are difficult areas in which to site roads and/or buildings. Steep slopes are often characterized by thin soils over bedrock, and these soils can erode quickly once exposed and create sedimentation problems downstream.
- Floodplains are areas susceptible to severe flooding. Existing structures and facilities located within the areas mapped are vulnerable to flood events, most recently in 1987.

Significant Wildlife Habitats

Our town has a range of important wildlife and habitats. Some of these areas are large and represent typical forests in our region. Others are small and have unique characteristics that are seldom replicated anywhere else.

- *Deer wintering areas* typically consist of softwood or mixed forests which have a winter use by deer. In Brunswick, these areas may only be used in winters with exceptionally heavy snowfall, but during those years they may be critical for deer survival.
- *Unfragmented habitat blocks* are large forested areas with little or no human disturbance. These blocks are essential for maintaining a diverse wildlife population. The health and diversity of these blocks typically increases with the size of the block. Development can fragment these blocks and reduce their value. As blocks disappear, not only are we left with a suite of species indistinguishable from those in suburban communities, but we lose a part of who we are as well.

The Town's planning staff identified and mapped fifteen unfragmented habitat blocks containing 7,300 acres based on April 2001 aerial photography (ranging from 165 acres to more than 1,700 acres). Some blocks extend into surrounding communities. These blocks are geographically dispersed throughout the rural areas of the community.

- *Wildlife travel corridors* are essential to connect blocks of unfragmented lands together, thereby expanding the effective size, health, diversity, and stability of our wildlife resources when once on the verge of being isolated. Town staff refined the location of the wildlife corridors throughout our community's rural areas. For more information, see ***Brunswick Rural Smart Growth***.
- *Riparian corridors*, which include the wooded parcels that border streams that meander through our community, are important travel corridors for wildlife and are important wildlife habitats all by themselves. The Conservation Commission, with the assistance of Town staff, have identified the most important riparian corridors in the ***Parks, Recreation, and Open Space Report***.

- Town staff have identified and mapped several rare natural communities in our town. These include pitch pine barrens/woodlands, sandplain grasslands, and hemlock pocket swamps.
 - Pitch pine - heath barrens are supported by very sandy soils and provide habitat for many rare plants and butterflies. The Town Commons is an example of this habitat and is actively being managed to preserve this important natural community.
 - Sandplain grasslands support several rare plant and animal communities, and are located throughout our town. The Upland Sandpiper (threatened) and Grasshopper Sparrow (endangered) have both been documented on the runway apron of the Naval Air Station and several other species are in decline across the northeast as older farm fields are converted to development.
 - Hemlock-hardwood pocket swamps are rare in our community, but have been documented in Western Brunswick. These areas support a wide range of species, including many species dependent on vernal pools.

Significant Wildlife Species

Several significant species have been identified in our town. Some of these are listed and of statewide importance, while others are locally important. For more information, see the *Flora and Fauna Subcommittee Report*.

Significant fauna include three listed species (Upland Sandpiper, Grasshopper Sparrow, and Bald Eagle). These have been documented by the Inland Fisheries and Wildlife and their natural habitats are protected by the Endangered Species Act. Cooper's Hawk, Northern Goshawk, eastern meadowlark, and vesper sparrows are birds of special concern. Amphibians of special concern include northern leopard frog, and four-toed salamander. In addition, there are several watch list species that occur throughout the region and likely depend on habitats in our town.

Significant flora include unicorn root, estuarine beggar ticks, river bulrush, upright bindweed, sea-beach sedge, dry land sedge, clothed sedge, American chestnut, pitseed goosefoot, marsh orach, showy lady's slipper, spike-rush, wild honeysuckle, trumpet honeysuckle, climbing hempweed, sassafras, and southern sea-blite.

Mapped Resources

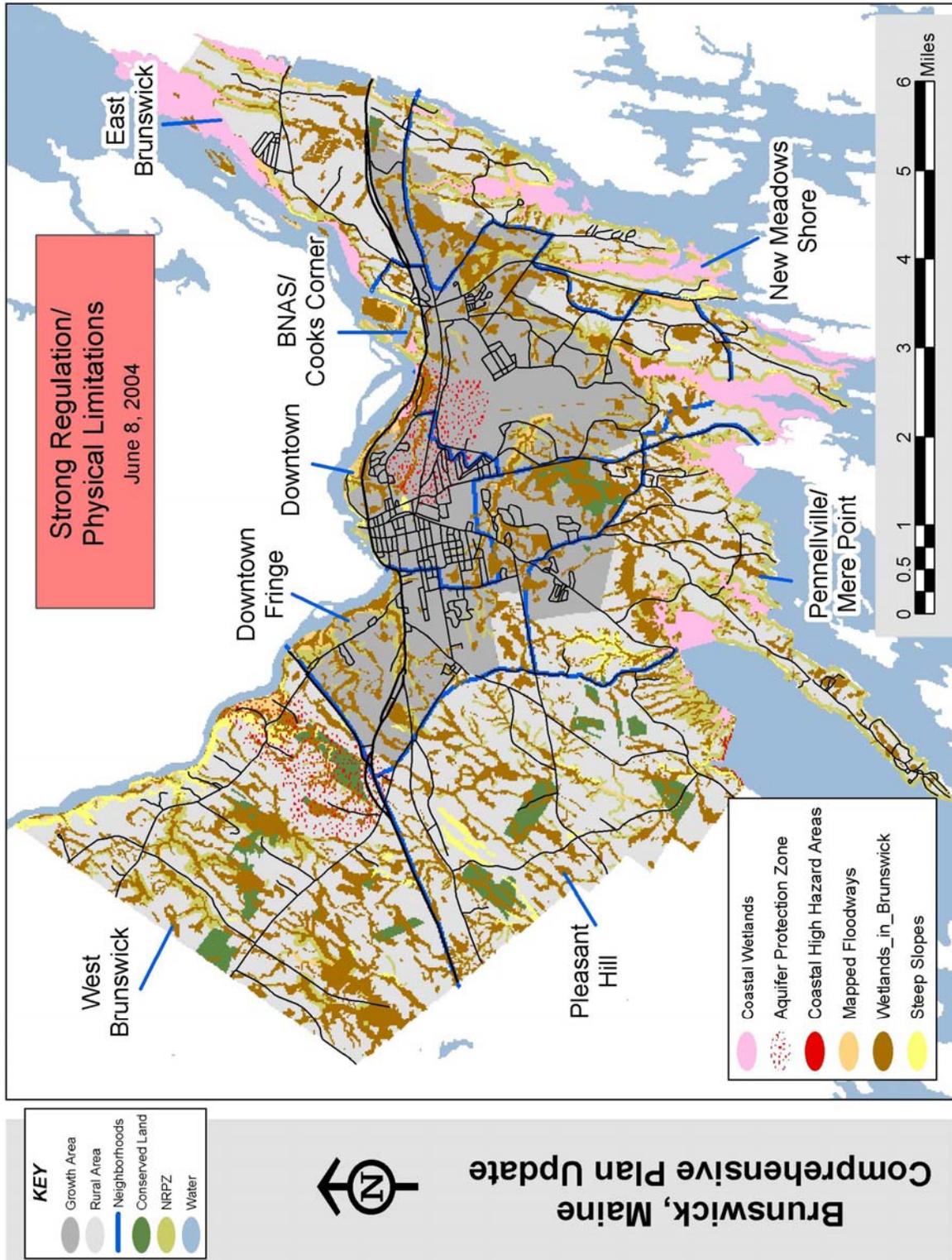
The Town of Brunswick has created a series of natural resource maps that illustrate the levels of protection for various natural resources. This series of maps are displayed on the following pages. More detailed versions of these maps are available at Town Hall.

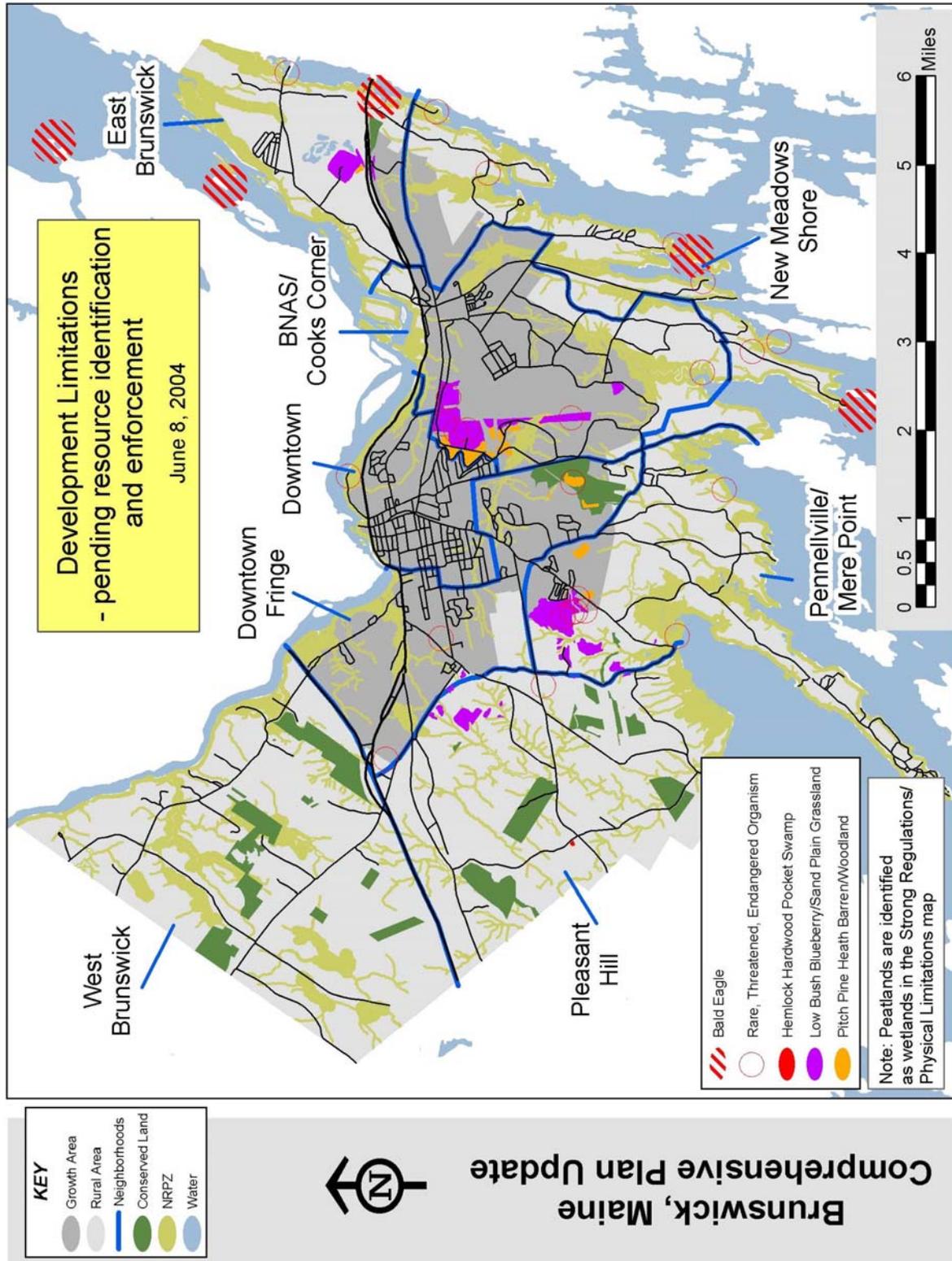
Development Limitations of Resources

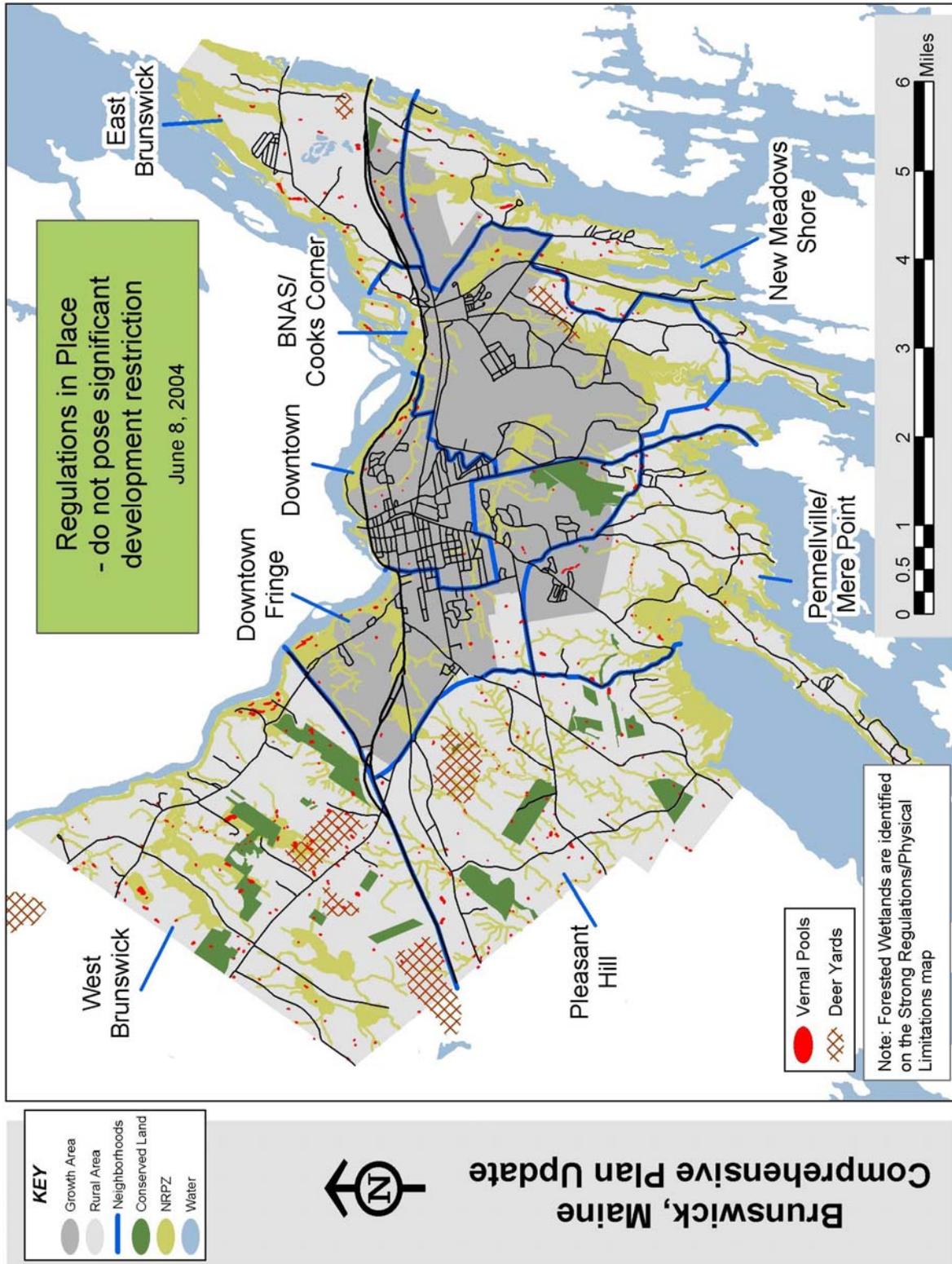
RESOURCE	LOCAL	STATE	FEDERAL	COMMENT
Non-forested Freshwater Wetland (>10 acres)	NRPZ	NRPA, potentially Wetland of Special Significance	Joint NRPA review	
Coastal Wetland	MDEP Shoreland Zoning Guidelines	NRPA Wetland of Special Significance	Joint NRPA review	Most towns require 75-foot setback, Brunswick requires 125-foot setback
Floodplains	NRPZ	NRPA	FEMA	
Steep Slopes	NRPZ	Best Management Practices; Site Law NAEER standard	None	
Streams	NRPA Definition & Setback	NRPA Definition & Setback	NRPA Definition	
Aquifer	APZ Zone 1	Site Law NAEER standard	None	
Peatlands	Treated as forested wetland; when identified are considered under 411.2 Preservation of Natural Features	NRPA Wetland of Special Significance	Joint NRPA review	
Rare, Threatened, Endangered Organism	411.2 Preservation of Natural Features; 411.10 Aesthetic, Cultural and Natural Values	IF&W Significant Wildlife Habitat and/or Essential Habitat; MNAP Rare Plants (only advisory); Site Law NAEER standard ¹	USFWS Endangered Species Act	Only species on list published by the agencies, or areas mapped by the agencies receive protection.
Rare, Threatened, or Endangered Community	411.2 Preservation of Natural Features; 411.10 Aesthetic, Cultural and Natural Values	NRPA if S1 or S2 community in a wetland, MNAP advisory only under Site Review; Site Law NAEER standard	None	
Forested Wetland (non-shoreland zone)	Subtract from density calculation; 411.2 Preservation of Natural Features	NRPA Regulate impacts over 4,300 sq ft	Joint NRPA review through USACOE	
Vernal Pools	Treated as forested wetland; when identified are considered under 411.2 Preservation of Natural Features	NRPA Regulate impacts over 4,300 sq ft unless in mapped Significant Wildlife Habitat or Shoreland Zone	May be considered "Special Aquatic Site" if identified	No clear cut regulations at any level.
Aquifer	APZ Zone 1A and Zone 2	Site Law NAEER standard	None	
Deer Yards	411.2 Preservation of Natural Features; 411.10 Aesthetic, Cultural and Natural Values	NRPA if in wetland; IF&W; Site Law NAEER standard	None	
Habitat Blocks and Corridors	Rural Brunswick Smart Growth	Site Law NAEER standard	None	Regulatory details to be worked out Summer 2004
Commercial Farms	None	None	None	
Commercial Forest Lands	None	None	None	
Trails	None	None	None	
Water Access Points	None	None	None	
Cemetaries	None	None	None	
Scenic Vantage Points	None	None	None	

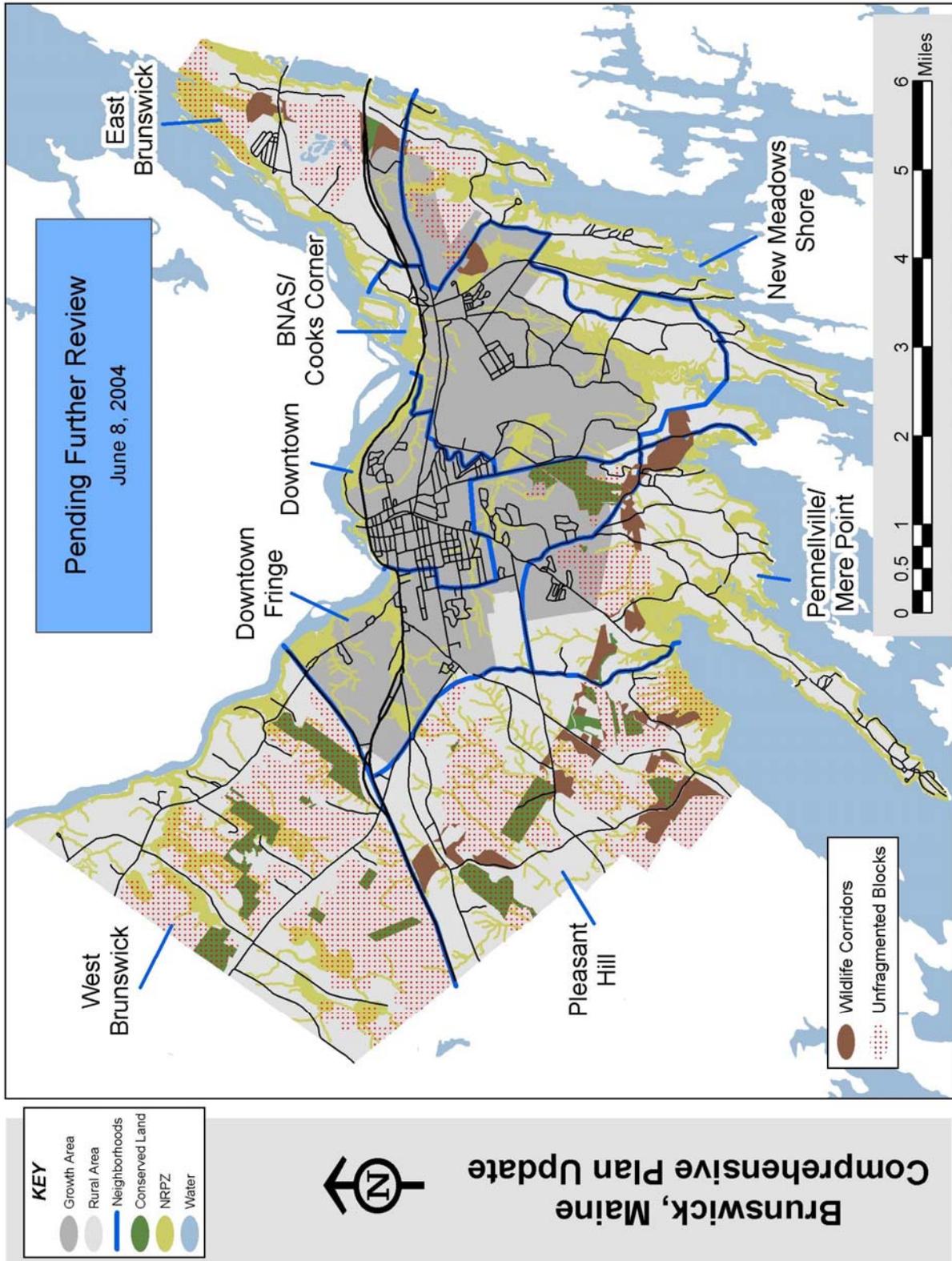
- Strong regulations and physical limitations for development
- Development limitations if regulations are enforced and resources are properly identified in the field
- Regulations in place, but do not pose significant development restriction
- Pending Further Review
- No Limitations

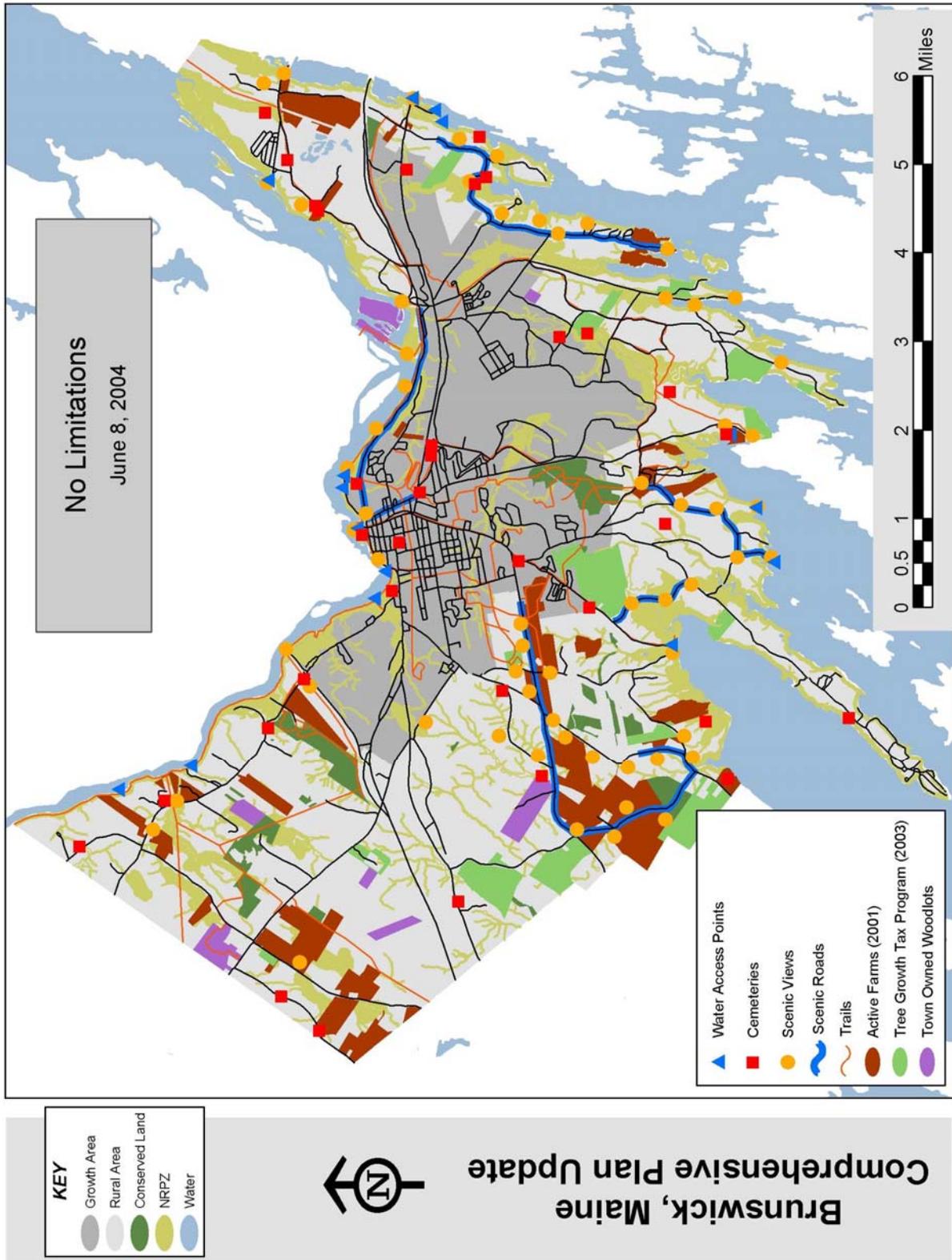
¹ The Town of Brunswick has been determined to have Site Law review capacity which raises the threshold for MDEP involvement.











Issues

1. Soils in our town, especially the sandy soils in the central part of the town, are vulnerable to ground water pollution. These soils are also the source of Brunswick and Topsham's drinking water. The aquifer protection zone is designed to protect this important resource, but chronic low level and acute threats persist.
2. Brunswick has one of the longest coastlines in the state – we are surrounded by water bodies on three sides. Despite this, there are relatively few water bodies that are entirely within our town's borders. Therefore, the protection of our town's water resources depends on cooperation with surrounding communities.
3. The Town of Brunswick employs a natural resources planner. Continuation of this position helps ensure that the public is fully aware of the extent of our community's valuable habitats and gives the Planning Department the resources to craft creative solutions to pressing environmental issues.
4. Naval Air Station Brunswick is home to rare and endangered species. If NASB were to be closed by the Department of Defense and subsequently redeveloped, the redevelopment must consider the health of these species' habitat.

Marine Resources

Brunswick is a waterfront community. We are virtually surrounded by water – the Androscoggin to the north, the New Meadows to the east, and Casco Bay to the south. These waterbodies, while not commonly associated with Brunswick, support a wide range of recreation, economic activity, and wildlife habitat. Preserving the viability of these water resources is important to our community.

Our water resources can be grouped in three categories.

- **The Bays** of Maquoit, Merepoint and Middle form our southern coastline. All three bays are shallow with extensive mudflats that make some of the best shellfishing beds in the state of Maine. With the exception of the tidal flats and adjacent marshes, the other shores are either rock or ledge and rise steeply from the high water mark.

Three quarters of Maquoit Bay is within our borders (Freeport has the rest). Merepoint Bay and Upper Middle Bay are shared with the Town of Harpswell.

Fresh water arrives into the bays by way of numerous streams, brooks and creeks, accounting for the rather convoluted nature of the upper marsh zones. The Bays' watersheds cover most of Brunswick and only modestly extend into neighboring Freeport.

The Bays' shorelines are generally susceptible to erosion caused by a mixture of wave action, abutting land uses, and potentially sea level rise. Managing erosion must walk a fine line between starving the mudflats of slumped material while not allowing too much turbidity from rapid erosion.

- The **New Meadows** system forms our eastern boundary with West Bath. This system of a tidal inlet (the New Meadows River) and brackish lake (New Meadows Lake) is approximately 4 miles long and is surrounded by waterfront residences.

Recent Studies

- The *Annual Shellfish Management Review* is prepared by the Town every year. It includes detailed statistics on licenses and the state of the clam flats.
- The *Water Access Subcommittee Report* contains a detailed inventory of all of the water access points in Brunswick.
- **2002 Parks, Recreation, and Open Space Plan** – This study includes a detailed inventory of the community's recreation facilities, parks, and natural and open space resources including agricultural and forestry land and scenic resources.
- **2003 Rural Brunswick Smart Growth Strategy** – This project included a detailed inventory of the community's unfragmented, forested wildlife habitat and wildlife travel corridors as well as a strategy for managing these resources.

The New Meadows lake was separated from the rest of the New Meadows River in 1937 with the construction of an approach causeway, bridge and spillway on former Route 1. The lake has a drainage area of only 1.6 square miles in both Brunswick and West Bath. Its maximum depth is 30 feet, but most of the lake is considerably shallower. The northern basin has been plagued with eutrophication (too many nutrients), but the southern basin does not have these odor problems.

- The ***Androscoggin River*** is our "window" on a 3,460 square mile watershed that extends into New Hampshire as well as Merymeeting Bay. Brunswick borders 12 miles of the river – half below the Florida Light & Power dam and half above it. The river is the third largest river that empties into the coastal waters of Maine. From its headwaters at Lake Umbagog, N.H. the river falls an average of 7.7 feet per mile along its 161 mile long course to tide water at Brunswick.

Marine Resources

Our marine resources include shellfish, marine worms, crab/lobster, and fish.

Between 1997 and 2002, Brunswick's commercial softshell clam landings averaged 585,000 pounds of shellstock. Only three towns in the state had higher averages – Harpswell, Machiasport, and Waldoboro.

In recent years, Brunswick has had a rapidly expanding catch. In 2002, more than 1,000,000 pounds of shellstock were harvested on Brunswick's flats. The seeding of the flats and the absence of closures helped keep this harvest so high.

Brunswick limits the number of licenses to harvest shellfish in the community. Eighty-five commercial licenses are allocated for a cost ranging from \$50 to \$400. Two types of recreational licenses are available for recreation use with no limit on the number of licenses available for residents of Brunswick. Town-issued shellfish licenses have been decreased in recent years, by the Marine Resources Committee, from 105 in 1987 to 72 in 1991. Decreases are due to overharvesting and expanded pollution closure areas.

Brunswick marine warden patrols the use of the shellfish flats, and occasionally closes sections of the flats for seeding and due to red tides.

No statistics are available for the amount of fish that are taken from Brunswick's waters, but the Department of Marine Resources keeps track of the number of marine resource licenses by town of residence. In general, the number of commercial fishers from Brunswick has declined steadily from 1998 to 2002. The number of dealers has decreased from 40 to 25 in five years, while the number of harvesters has declined from 334 to 252. While the number of lobster traps has decreased from more than 31,000 in 1998 to 26,000 in 2000, it has rebounded to more than 27,000 by 2002.

The Department of Marine Resources issued 300 licenses in 1989 with 137 for lobster and crab, 97 for shellfish, 93 for commercial fishing, and 24 for non commercial scalloping. The

remainder of the licenses were issued for scallop boats, seaweed and mussels harvesting and worm digging.

Maquoit Bay has historically been recognized as one of the most productive shellfish areas in the State of Maine with an annual harvest in recent years of \$1 million. In 1990, due to pollution and environmental stress, this figure plummeted 80% to \$200,000.

Most clams are found northerly and easterly of Bunganuc Point, except for the lower mid-portion of the bay where quahogs and mussels are found in limited abundance.

Clams can be a barometer of the health of marine resources. Two decades ago, the health of the clam flats in the Bays was in increasingly vulnerable condition. As recently as 1990, pollution and environmental stresses had caused the clam flats to lose 80% of their harvest. Nowadays, these harvests are increasingly in better condition.

Brunswick has maintained a shellfish management program since 1964. The program accelerated in 1976. Working with the State Department of Marine Resources, a total of hundreds of bushels of clams are transplanted from the Thomas Point Beach conservation area to Brunswick and surrounding towns. Towns as far away as Scarborough receive clams from Brunswick.

The New Meadows and Androscoggin River

Clean water in the New Meadows River depends on the combined efforts of West Bath, Harpswell and even Bath. Mackerel, stripped bass, bluefish, flounder, alewives, smelts, even lobster and crab are fished there. Seals can be seen observing the view of the shore from the river.

In 1973, a 5 year aquaculture study of the New Meadows Lake was completed. The results of the investigation showed promise for oyster culture. Eutrophication in New Meadows Lake contributed to a serious foam problem in the upper New Meadows River. The foam is a detraction for local marinas operating in the area.

The Androscoggin River has been the focus of an Anadromous Fish Restoration Project since 1983. As part of CMP's hydropower program, a fishway and viewing room were constructed on the River and a total of 20 species have been observed by the Town's Marine Resource personnel. Alewives total 601 fish in 1983 and had reached 95,483 by 1990. Atlantic Salmon have risen from 94 in 1984 to 185 in 1990.

Recreation

Brunswick has steadily worked to increase the number of public access points to the town's waterways. The Androscoggin River Bike Path, the College, Commons, Bay trail, and other efforts underscore this effort. More recently, the Department of Inland Fisheries and Wildlife has undertaken an all-tide boat launch on Mere Point.

A detailed inventory of the town's access points was completed by the Parks, Recreation, and Open Space Task Force.

Private boating facilities are found on the New Meadows River and in Middle Bay. Paul's Marina and the New Meadows Marina are heavily used and at capacity. Many of the facilities in the region – in Freeport, Falmouth, and Yarmouth – are at capacity.

Pollution

There are 4 basic sources of pollution to Brunswick fresh and saltwater resources. They are:

- ***Freshwater runoff*** enters the bays from a number of streams, creeks, and tributaries, the largest being Bunganuc Brook in Maquoit Bay. The brook drains the western section of Brunswick including the old town dump. Bunganuc has been suggested as a major source of ammonia and fecal coliform levels as high as 600+/100ml.

BNAS, while making every effort to comply with EPA regulations, may be a source of pollution to the Harpswell Cove area. All stormwater and surface run-off from the airstrip is discharged into this watershed. BNAS and the Town of Brunswick have much to gain by joining efforts to identify and resolve any run-off problems that could pollute coastal waters.

Bowdoin College has been heavily involved with studies of Maquoit Bay. They have identified Miller Creek, Wharton Point streams draining the Rossmore Road area and agricultural activity on the southern side of Middle Bay Road as potential sources of pollution.

In Middle Bay Cove there is considerable agricultural activity at Dyers Corner as well as horticultural and commercial greenhouse activity.

- ***Overboard discharges*** are another form of pollution. In 1986 the Town Council prohibited overboard discharges in Brunswick. Existing systems may remain in place so long as they comply with all State regulations. In 1987 and 1988 State laws were passed outlawing new overboard discharges and providing for the removal of all existing systems as State bond money becomes available.

The Town has taken steps to reduce overboard discharges. (In 1988, using State and Federal grant monies, the Town began a project to replace the majority of its overboard systems. This project, located at the head of Merepoint, will use private and EPA funds to install a series of seven cluster septic systems for 33 owners. The project is a demonstration project and was to be completed in the early summer of 1992.)

- ***Leaching*** comes from a variety of sources. Brunswick has mapped all known underground fuel tanks, and other potential hazardous waste sites. The BNAS has

identified several known sites of hazardous waste leakages. A plan is now in process to monitor and clean-up these sites.

- The overboard discharge by *commercial and recreational boaters* of any substance into ocean waters is regulated by the US. Coast Guard. In anchorage, discharges of concern are: sewage from on-board toilets, and fuel and oil discharged through bilge pumps. Overboard toilets have been outlawed, and all vessels must have holding tanks for sewage. However, there is still threat from "live aboard" vessels that have filled their holding tanks and are forced to discharge overboard. Accurate knowledge of how many vessels are operating in the way in Brunswick is lacking.

Fuel and oil come from both bilge and outboard motor operation. Pollution of this kind varies with the size of engines, boat maintenance and the conscientiousness of owners when changing engine fluids. Both types of pollution need more specialized study to determine their impact on Brunswick's waters.

CHRONOLOGY OF BRUNSWICK'S COMMITMENT TO "THE BAYS"

Year	Action
1947	Committee established, transplant seed quahogs to Casco Bay. Established Casco Bay Shellfish Management Council (area communities)
1950s	Clam Committee formally arm of Town Council. Worked with state to establish State Conservation area at Thomas Point for seed management plan. Closed to commercial fishermen
1964	Surveyed Pollution points at Mere Point; worked with Codes Enforcement for rest of Town.
1976	Hired Marine Resource Warden. Commitment to management and enforcement became part of Town Budget. Began harvest and conservation program which is practiced today.
1980s	Established reciprocating management program with Harpswell, West Bath and Phippsburg. Includes cooperative transplanting and enforcement.
1982	Comprehensive Plan called for improved programs to protect marine environment.
1986	Established Overboard Discharge prohibitor
1986	Purchased airboat to improve management and enforcement.
1988	Town applies for and is awarded \$10,000 coastal zone grant. With 5,000 local match, work has begun on a "Comprehensive Plan for Middle Bay and Maquoit Bay".
1988	Town Manager appoints the "Bays Committee".
1989	Bays Committee completes "Maquoit and Middle Bays Comprehensive Plan Revision: part I Issues and Recommendations and Part II Inventory and Assessment". Recommendations include: establishment of a Coastal Watershed Protection Zone that would address minimum lot size, mandatory clustering, setbacks, impermeable surface coverage, and stormwater run-off. Also recommended further study on nutrient loading capacity of the Bays to determine optimum density of the watershed area.
1990	Town applies for and is awarded 205J Water Quality Grant to continue the Bays Committee work. The final product is to be an ordinance based on the recommendations of the plan revision. The grant amount is \$13,880. Town wide

	commitment is high for the project as evidenced by a \$1000 private match from the concerned citizens for the Bays Environment as well as a \$1000 anonymous donation. Town matches \$500.00
1991	Bays Committee completes the final draft of a Coastal Watershed Zone recommending a 5 acre minimum lot size, no direct discharge of stormwater from development and an open space incentive development option. Planning Board approves Final Draft. Bays Committee begins public education and input on proposed ordinance
1992	Bays Committee completes Homeowners Manuel for residents of the CPZ. The Manuel is a simple, explanation about the CPZ and how those who live in the bays watershed can help protect Marine Resources
1992	Town wins NOAA award for its outstanding efforts to protect coastal waters. The Bays Committee travels to Washington D.C. to accept the award
1993	Town receives \$35,000 grant from EPZ through the Casco Bay Estuary Program to develop a pilot wastewater management district program

Issues

1. There is a critical need to continue to update and refine the Town's shellfish management program to continue more consistent and optimum use of the Town and region's shellfish resources. These resources produce important jobs and income for the area. In a time of economic downturn, this "self-employment" opportunity becomes critical.
2. Because eelgrass is a barometer of conditions in coastal waters, Brunswick should work to establish a program to monitor and assess eelgrass growth in Brunswick embayments.
3. Environmental stress is increased by some fishing methods (ie mussel dragging) and gear. More information is needed to assess the impact on Brunswick waters.
4. A rise in sea level and intertidal habitat from higher global water temperatures will bring about ecological changes in habitat and waters. Shellfish growth may be improved. New bluff erosion may begin. Valuable land can be lost as a result of this erosion with concurrent siltation of both salt and freshwater. Such erosion may be beneficial to some intertidal species. Also, warm water species, such as quahogs, may increase in abundance. Rising sea levels, seaward migrations of sediments and current changes may create inhospitable environments for some species, and better environments for others.
5. The community should consider improving its data base on bluff erosion rates.
6. Development in the watershed is sedimenting upland streams and tributaries. The Town is losing freshwater habitat through poor construction practices and ignorance of proper sedimentation and erosion control methods.
7. The Androscoggin River and Merrymeeting Bay are untapped resources for fishing, recreation and boating. With improved water quality we could improve these uses and assure clean water for industrial uses.

8. The nutrient loading in our Bays (and all other coastal waters) could be increased by irresponsible development and land use in the watershed. These nutrients may stress coastal ecosystems and result in algal blooms, oxygen and light deprivation that subsequently kills shellfish and other marine life. The increase in impervious surfaces and runoff from development in the watershed could cause the streams, tributaries and groundwater to receive additional salt, sand, fertilizers, herbicides, and petrochemicals among others.
9. Non-point source pollution includes improper use of fertilizers and pesticides. There is a direct correlation between shellfish closures and fecal coliform levels. More work should be done to determine where fecal coliforms are coming from and to eliminate their presence so that additional shellfish areas can be opened.

Historic and Archaeological Resources

History is central to our town's identity. Historic and archaeological resources are a common foundation for our community and serve as benchmarks for our future. The value these resources provide to our community's livability and economy is difficult to understate.

Historic Settlement Chronology

Native Americans were the first inhabitants of the Pejepscot region, which includes Brunswick, Topsham, and Harpswell. They used the region's many waterways as transportation corridors – that they left numerous archaeological sites along our waterways should be no surprise. While it is difficult to 'see' these sites the same way we see historic buildings, a properly excavated archaeological site will speak volumes about our town's earliest residents.

Europeans settled along the shores of the Androscoggin in 1628. The Androscoggin and Kennebec Rivers were the region's first highways to the interior, and became lively avenues for a burgeoning trade. Fort Andros was built along the falls near the current Maine Street location to facilitate this trade.

Brunswick was incorporated in 1739 and has been an employment center ever since. Fur trading, shipbuilding, and shipping were the town's first economic engines, and the power of the Androscoggin Falls powered the textile mills in the 19th and 20th centuries. In the second half of the 20th century, Bowdoin College, health care facilities, and the defense industry drove the region's economy.

Prehistoric Archaeological Sites

The Maine Historic Preservation Commission has identified 33 known prehistoric archaeological sites in Brunswick. Prehistoric refers to those sites predating European settlement. Of these sites, 25 may be eligible for the National Register of Historic Places – the nation's official list of places worthy of preservation.

In addition to these sites, the Maine Historic Preservation Commission has identified several areas that are likely to produce additional archaeological resources. These areas are located along Androscoggin River near Cooks Corner and north of Old Bath Road, and along the waterfront areas of

Current Reports and Documents

- The *1993 Brunswick Comprehensive Plan Update* contains a detailed history of our community since European settlement. Relevant parts from this plan have been excerpted and included in the appendix.
- The *Parks, Recreation, and Open Space Plan* details our community's historic cemeteries throughout the community.
- The Pejepscot Historic Society maintains many of the town's archives and artifacts, and operates three museums. More information can be found on their website at www.curtislibrary.com/pejepscot.htm.

Mere Point Bay and Middle Bay. These waterfront areas have not been professionally surveyed.

Historic Archaeological Sites

The Maine Historic Preservation Commission has identified nine sites in Brunswick that are historic archaeological sites – or archaeological sites that post-date European settlement. A comprehensive professional survey has not been completed for these sites:

Site	Type	Date
Wharton	farmstead	17 th century
Thomas Stevens	trading post	17 th century
Pejepscot Settlement	English settlement	17 th and 18 th centuries
Maquoit Fort	English fort	17 th and 18 th centuries
Reverend Woodside House	domestic site	18 th century
Humphrey’s Shipyard	shipyard	19 th century
“Swanville Raymond”	shipwreck	19 th century
Unidentified cellar hole	Domestic site	19 th and 20 th century
“Kanawha”	shipwreck	20 th century

Source: Maine Historic Preservation Commission

Historic Buildings, Sites, and Districts

There are 10 historic buildings and three historic districts in our town that are registered with the National Register of Historic Places – a program run by the United States Department of the Interior that recognizes historic sites of national significance. These sites include:

Site	Location	Period of Importance	Year Listed
Massachusetts Hall	Bowdoin College	18 th to 19 th century	1971
John Dunlap House	Oak Street	18 th to 19 th centuries	1979
First Parish Church	Maine Street	mid-19 th century	1969
Henry Boody House	Maine Street	19 th century	1975
Richardson House	Lincoln Street	mid-19 th century	1974
St. Paul’s Episcopal Church	Pleasant Street	mid-19 th century	1978
Harriet Beecher Stowe House	Federal Street	mid-19 th century	1966
Parker Cleaveland House	Federal Street	N/A	2000
Crystal Spring Farm	Pleasant Hill Road	N/A	2004
Androscoggin Swinging Bridge	Downtown Brunswick	N/A	2004
Pennelville Historic District		18 th to 19 th centuries	1985
Lincoln Street Historic District		18 th to 19 th centuries	1976
Federal Street Historic District		18 th to 20 th centuries	1976

N/A – not available

Source: United States Department of the Interior, National Park Service

In addition to occasional federal and state grant money for preservation efforts, one benefit of National Register status includes special consideration when federal money is spent on a project that affects the property or district.

Most of the historic buildings on the list are located in Brunswick's downtown area. These buildings' historic settings are not threatened by new development – largely because their surroundings have already been developed.

The Lincoln Street Historic District and the Federal Street Historic District largely fall under the purview of the Village Review Board. This Board reviews all development and renovation in Brunswick's downtown to ensure the historic accuracy of the proposed changes. Development that does not satisfy the Board's standards can be refused a building permit. The Bowdoin College portion of the Federal Street Historic District is not part of the Town's Village Review District.

Development in the Pennellville Historic District falls under the purview of the Planning Board. If a subdivision occurs in this historic district, the Planning Board will review the project and could determine whether historic considerations should be required. If future development changes the original character of this historic district, the area's listing on the register of historic places could be revoked.

Historic and Archaeological Protection Efforts

Brunswick's *Planning Board* reviews every subdivision and development that needs a site plan review in town. The subdivision ordinance includes provisions to encourage the protection of historic and archaeological resources. In addition, the Town's site plan review ordinance requires that a Phase I survey be completed on all developments reviewed by the Planning Board. When a proposed development is located in an area of archaeological resource potential, the Planning Board can ask for a more detailed survey.

Brunswick's *Village Review Board* has the authority to monitor the external appearance of structures in the Village Review District. The Board places an emphasis on ensuring new construction reflects the traditional patterns that exist in the village and ensuring that new construction meets design standards to ensure that the downtown remains an attractive and vibrant.

The *Pejepscot Historic Society* is very active in the community. The society has ongoing education programs, three museums, and extensive archives and collections of the town's artifacts. The society maintains an archive that details the history of each historic building in Brunswick's downtown.

Issues

1. Brunswick's rapid pace of development could threaten historic and archaeological resources, especially those in more rural areas that have not been professionally surveyed.
2. The Village Review District encompasses much of the downtown, but ends abruptly without including areas that are widely considered to be integral to the Downtown (Maine Street along the Mall, Bowdoin College, and Pleasant Street). The areas are widely recognized as an integral part of the downtown, and could benefit from a consistent set of development criteria.
3. The Lincoln Street and Federal Street Historic Districts largely fall under the purview of the Village Review Board. These districts have been built-out, and new development is not a threat to their viability. The Pennelville Historic District could be threatened by new development. If new development damages the historic integrity of the neighborhood, then the District's status could be revoked.
4. Despite Brunswick's large number of historic resources, it has not leveraged outside assistance with the preservation of historic resources well. Other communities are using the Certified Local Government program sponsored by the Maine Historic Preservation Commission to maximize its efforts to protect historic and resources.

Fiscal Capacity

Understanding our town’s ability to fund new and ongoing projects is crucial when planning for the community’s growth and changing needs. This section examines Brunswick’s fiscal capacity and its ability to fund new and existing services and facilities.

Commitment, Assessed Valuation, and Tax Rate

Commitment, or the amount of property taxes levied to fund local government, has been steadily growing. In 2004, the Town collected more than \$26,000,000 in property taxes. This is 60% more property tax revenue than was collected in 1994. However, after adjusting for inflation¹ the increase in commitment is a more modest 31%.

Assessed valuations are the basis on which local property taxes are raised. Examining assessed valuations is one way to track the fiscal health of the community. A rising valuation is a sign of fiscal strength – smaller tax rates are needed to raise a given sum of money.

In 2004, our town’s assessed valuation had reach \$1,195,041,700, an increase of \$91,000,000 since our last revaluation in 2000. The largest increases in assessed valuation have been in 2003 and 2004 as new development dramatically increased the tax base.

Current Reports and Documents

- Town of Brunswick Adopted Budget for Fiscal Year 2004 – 2005.
- Town of Brunswick Capital Improvement Plan for Fiscal Years Ending 2005 – 2009.

Year	Assessed Valuation	Tax Rate (mils)	Commitment	Commitment % increase
1994	\$879,158,700	18.25	\$16,044,665	not applicable
1995	\$894,075,100	18.90	\$16,898,019	5.3%
1996	\$915,482,200	19.40	\$17,760,355	5.1%
1997	\$927,127,500	20.00	\$18,542,550	4.4%
1998	\$919,975,600	20.90	\$19,227,490	3.7%
1999	\$932,545,800	21.20	\$19,769,971	2.8%
2000	\$1,103,868,200	18.80	\$20,752,722	5.0%
2001	\$1,108,939,600	20.50	\$22,733,274	9.5%
2002	\$1,122,861,200	21.00	\$23,580,085	3.7%
2003	\$1,160,064,950	21.50	\$24,941,415	5.8%
2004	\$1,195,041,700	21.90	\$26,171,413	4.9%

Source: Town of Brunswick, Assessing Department

¹ Using the Consumer Price Index for urban consumers, which is a common index for Maine wages, rentals, and price contracts. This data is published by the Maine State Planning Office.

The Tax Rate is the levy placed on taxable property (assessed value) in order to raise the amount of commitment approved annually in the Town Budget. The tax rate is expressed in mils (the number of dollars a property owner owes for every \$1,000 in assessed value)².

Our town's tax rate has steadily increased. Between 1994 and 1999, the tax rate increased by between 1% and 5% each year. Between 2000 and 2001 the tax rate increased by 9%, and since then has increased by about 2.5% per year.

Revenues

Local taxes were the largest source of revenue for our Town in 2003, but nearly 40% of the \$44,421,000 in total revenues came from other sources. Since 1999, total revenues have increased by 22%.

Taxes, which include both property taxes and excise taxes, are the single largest source of revenue, accounting for 60% of total revenue. Tax revenue totaled nearly \$27,000,000 in 2003. Tax revenue increased by 23% since 1999.

Intergovernmental revenue includes state revenue sharing funds, education funding, and a variety of other grants and funding programs. These revenue streams accounted for 32% of 2003 revenues (the majority of which comes through school funding assistance). Since 1999, intergovernmental revenue has increased by 15%.

Charges for services include revenue from public works, ambulance, and public safety services rendered. These accounted for 5% of revenues in 2003. Since 1999, these revenues have increased by more than 70%.

Licenses, fees, and permits include revenues from building permits, registrations, and dog licenses. In 2003, these accounted for nearly \$300,000, or less than 1% of total revenues. These revenues have increased by 14% since 1999.

Investment income includes proceeds made by the town on its investments. In 2003, this totaled approximately \$100,000, or less than 1% of total revenue. Since 1999, investment income has increased by more than 50%.

Other revenue includes revenues not classified above. In 2003, these revenues accounted for 2% of total revenues. Since 1999 other revenues have increased by 85%.

In the last decade, the burden of funding local government has shifted toward local taxes. Local taxes paid 57% of total revenues in 1991, and now pay 60%. Intergovernmental transfers have decreased relative to total revenue from 34% in 1991 to 32% in 2003.

² A tax rate of 21.90 means that a property will be taxed \$21.90 for every \$1,000 in assessed value. At this tax rate, a property valued at \$200,000 will have to pay \$4,380 in property taxes each year.

Expenditures

In 2003, Brunswick spent \$41,774,764 to provide services and facilities for its citizens. This is nearly \$6,000,000 more than in 1999, or an increase of 14%.

Education expenses pay for our public school system. These expenses totaled \$26,581,005 in 2003, or nearly two-thirds of the town's entire budget. (Note that in 2003, more than \$11,000,000 of these expenses were offset by state and federal school subsidies, tuitions, and other revenues). Since 1999, education expenses have increased by 15%.

Public safety includes police services, fire protection, and ambulance services. In 2003, these expenses total \$4,343,672, or 10% of all expenditures. Since 1999, public safety expenditures have increased by more than 27%.

General government expenditures pay to administer the local government, including administration, tax collection, assessing, and insurance. In 2003, these expenses amounted to \$3,537,848, or 8% of expenditures. This represents an increase of 26% since 1999.

Public works pays to maintain our roadways and sidewalks and run the landfill and recycling centers. In 2003, these expenses totaled \$2,814,828, or 7% of total expenses. Since 1999, public works expenditures have decreased by 7%.

Debt service expenditures totaled \$1,289,650 in 2003. (Note that this excludes debt service on education facilities, which are accounted for under education). This accounted for 3% of all expenses. Since 1999, debt service has more than tripled.

Human service expenditures include general assistance, health services, library service, and funding for the People Plus Center. In 2003, these expenses totaled \$1,048,351, or 3% of expenses. Since 1999, these expenses have increased by more than 40%.

Recreation expenses totaled \$763,087 in 2003. This accounted for 2% of all expenses. Since 1999, recreation expenses have increased by 25%.

Unclassified expenses includes funding to maintain the Old High School, cemeteries, and a range of other services. In 2003, these expenses totaled \$1,396,323, or 3%. Since 1999, these expenses have decreased by 25%.

County taxes totaled just under \$1,000,000 in 2003.

Tax Increment Financing

Tax increment financing (TIF) is a tool used by communities to promote economic development. Since 1977, the state has allowed communities to exclude the added valuation of economic development projects from the community's assessed valuation, so long as the sheltered property taxes garnered from the new development are used for economic development purposes. This

allows the community to maintain its level of intergovernmental funding (much of which is based on the assessed valuation of the community).

Brunswick has two active TIFs. The first one is on Bath Road and extends from the Super 8 motel to the Harding Plant. The sheltered revenue from this TIF is used to finance a bond whose proceeds paid for a sewer extension to service new economic development. The sewer extension has allowed several new developments to be created along Bath Road, including Walmart and the Midcoast Hospital.

The second TIF is used to finance a bond whose proceeds built the Brunswick Technologies, Inc. building in the Industrial Park. The bond capitalized the Brunswick Development Corporation (a quasi-governmental entity) to build the new structure.

Long Term Debt

The Town of Brunswick is currently financing two long term bonds. The first is a general obligation bond that was floated in 2000. The Town pays \$980,000 annually to finance this bond. The expansion of the Curtis Memorial Library accounts for most of this bond, but it also paid for road improvements, the improvements to the wood and masonry landfill, improvements made in the Downtown, and other causes. This bond is projected to be paid off by 2010.

The second long-term bond was for the new High School. This bond will be paid off in 2013 and, for budget purposes, is accounted for in Education Expenses.

The Town of Brunswick has a AA rating for long-term debt, the second highest rating available. This is a measure of the Town's fiscal health and allows it to finance long-term debt at good interest rates.

Capital Improvement Plan

By town charter, Brunswick is required to have a Capital Improvement Plan (CIP) that is updated annually. The CIP helps prioritize major capital expenditures and formalize the decision-making process.

In the Capital Improvement Plan for Fiscal Years Ending in 2005 to 2009, the town is projected to spend nearly \$48,000,000 on capital improvements. The largest items in this plan are \$15,000,000 in new education facilities and \$6,000,000 for a new fire station and substation. Other items include technology upgrades, road improvements, maintenance equipment, and land protection efforts.

It is projected that three-quarters of these capital improvements – or \$34,385,000 – will be bonded. General fund accounts are projected to pay for nearly \$10,000,000 of these improvements. The State of Maine, enterprise fund revenues, impacts fees, and other sources will pay for the remaining improvements.

Issues

1. The Town of Brunswick has not revalued property recently. The recent rapid increase in real estate values has created an opportunity for the Town to revalue to ensure that all landowners are paying their fair share of the property tax burden.
2. The Town has increasingly assessed fees for services (such as building permit applications, ambulance services, and landfill fees). In these cases, the fees are directly related to a service that is provided by the town. The Town should consider more fee-based services where appropriate (for example, a pay-per-bag residential trash removal system).
3. The Town has used Tax Increment Financing to facilitate development in the community. The Bath Road TIF has already fulfilled its mission – to pay for the utility extensions in the corridor to accommodate new development. The Town could restructure this TIF in order to free up acreage that could be used elsewhere in the community for TIFs.
4. Several of the Town’s impact fees have unintended consequences. For example, the recreation impact fee might discourage development within the growth zone and encourage it in rural areas. The Town should reexamine the impact fee structures to ensure they effectively support the stated goals and policies of this comprehensive plan.
5. The Town of Brunswick is in a strong position vis-à-vis long-term debt. However, upcoming investments (schools, fire stations, town hall, police station, etc) in addition to the uncertainty about the potential closing of the Naval Air Station Brunswick requires that the Town issue new debt prudently.