

2006 COMPREHENSIVE PLAN APPENDICES

INVENTORY AND ANALYSIS

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Newcastle's population gradually grew in the early 1800s and peaked in the years before the Civil War (Figure A-1). An exodus from rural areas in general began after the Civil War and industrialization attracted workers to the cities and made possible large-scale farming in the Midwest. Not until the 1970s – and continuing to this day – did rural areas begin to see significant growth. Map 1 shows housing in Newcastle as of 2002.

Figure A-1. Newcastle Historic Population Change

Source: US Census

By 2000, there were 1,748 year-round residents in our town. This ended two decades of significant growth. Between 1980 and 2000, Newcastle's population grew by more than 40% (521 residents).

Recent trends suggest that the vast majority – if not all – of our town's population increase has been the result of new people moving into the community. In the 1990s, The Maine Department of Human Services estimated that Newcastle did not grow naturally (the number of births to Newcastle residents did not exceed the number of deaths of Newcastle residents). In other words, all of our growth has been the result of new residents moving into town from elsewhere.

This trend was identified in our current Comprehensive Plan. Between 1980 and 1988, an estimated 13 new residents were the result of natural increase. This compared to 214 new residents that were the result of residents moving to Newcastle from elsewhere.

Compared with surrounding communities, Newcastle has been one of the faster growing in the region. Newcastle grew by 13% between 1990 and 2000, which was slower than Alna and tied with Damariscotta (Table A-1). Newcastle grew faster than Nobleboro, Edgecomb and LincolnCounty and grew significantly faster than the state as a whole.

Table A-1. Relative Population Change, 1980 - 2000

	1980	% Change, 1980 – 90	1990	% Change, 1990 - 00	2000
Alna	425	34%	571	18%	675
Newcastle	1,227	26%	1,543	13%	1,748
Damariscotta	1,493	22%	1,816	13%	2,044
Nobleboro	1,154	27%	1,461	11%	1,629
LincolnCounty	25,691	19%	30,457	11%	33,683
Edgecomb	841	18%	996	10%	1,093
Maine	1,124,660	9%	1,227,928	4%	1,274,923

Source: US Census

Steady growth is projected to continue through 2015. The Maine State Planning Office projects that our town will have 2,050 residents in 2015 (Figure A-2). This represents a growth rate similar to the 13% we grew in the 1990s, although the rate of growth is projected to decrease slightly towards 2015.

Figure A-2. Newcastle Population Change, 1970 to 2015

Source: US Census, State Planning Office

SEASONAL POPULATION

Newcastle has a significant seasonal population. In 2000, the US Census identified 121 housing units that were used seasonally (or 14% of the 880 total units in Newcastle). The region's recreational opportunities create a tremendous seasonal attraction for daytrips, vacations, and seasonal living. Our town breaks this seasonal population into three categories:

- **Seasonal Residents.** Seasonal residents are those that live in the community for five, seven, or nine months of the year. These residents function as year-round residents when they are in town – working, shopping, using town facilities and services, and generally participating in the community as year-round residents. While no accurate count of this population is available, their importance as members of the community cannot be underestimated.
- **Summer Visitors.** Summer visitors are dedicated visitors that enjoy the amenities of the region nearly every weekend and for extended vacations. These residents are dedicated to the community, but often work elsewhere and therefore don't have the time to fully immerse themselves in the community. Many of these residents are candidates to become seasonal residents once they retire.
- **Tourists.** This population is made up by vacationers and day-trippers that visit our community primarily between Memorial Day and Labor Day. This population typically rents accommodations, although a significant number of this population fills the empty bedrooms of relatives and friends of year-round residents.

On in-season weekends, we estimate that this seasonal population can add 1,000 people to the community. During special occasions, this population can increase even further. Many town facilities and services must be designed to meet this demand.

POPULATION BY TYPE

The Census classifies population in one of two categories – group quarters population and household population.

- The ***group quarters population*** includes those living in nursing homes, college dormitories, correctional facilities, and the like. In 2000, the Census identified 30 residents living in

group quarters in Newcastle. These were likely the residents of Lincoln Home and Mobius House.

This population is not projected to grow significantly, although some growth is expected due to the attractiveness of the region for retirees and the presence of two health care centers in nearby Damariscotta and Boothbay.

- The vast majority of Newcastle's residents are considered by the Census to be the **household population**. More than 98% of the town's residents lived in households (1,718 of 1,748 in 2000).

This household population lived in 724 households. On average, each household in Newcastle had 2.37 residents. This average size is the same as LincolnCounty and the state as a whole.

The Census classifies the household population as either a family household or a non-family household:

- *Family households* include all those with two or more related residents living together. More than two-thirds of the households in Newcastle are family households (493 out of 724 total households). Of these 493 family households, 207 were families with households with children less than 18 years of age. These family households averaged 2.86 persons.
- *Non-family households* include all 1-person households and those with two or more unrelated persons living together. Of the 231 non-family households, 191 were 1-person households (half of which were occupied by persons over 65 years). These 1-person households account for 26% of all the households in Newcastle. Newcastle's non-family household population closely matches those of LincolnCounty and the state.

Household sizes have been steadily decreasing. In 1980, the average size of a Newcastle household was 2.59 persons. By 2000, it had reached 2.36 persons (Figure A-3).

This trend towards smaller households is not unique to Newcastle. Household sizes have been decreasing nationwide for the last 40 years. Several reasons account for this trend, including a trend towards single-person and smaller households in the Baby Boom generation, the increased longevity of seniors, an increase in divorce rates, and the trend for younger couples to wait longer before starting families.

Figure A-3. Average Household Size

Source: US Census, Newcastle Comp Plan Committee Projection

This decline in average household size is projected to continue, although at a slower rate. By 2010, we project Newcastle's average household size will have reached 2.20 persons.

The implication of this trend towards smaller households is that it will take a larger number of housing units to house the same population. In other words, even if Newcastle’s population stays the same between 2000 and 2010 (1,748 persons), we project a need for an additional 116 occupied housing units in town.

Finally, Newcastle’s households tend to be occupied by homeowners. Of the 724 households in Newcastle, only 15% are occupied by renters – the remaining 85% are occupied by owners. Statewide, approximately 30% of the households are occupied by renters.

Owner-occupied housing units tend to have larger average household sizes. In 2000, owner-occupied houses averaged 2.44 persons per household, while renter-occupied houses averaged 2.06 persons per household.

AGE

Newcastle’s population is relatively old. In 2000, the median age of Newcastle residents was 44.8 years. This was higher than the medians for LincolnCounty (42.6 years) and the state as a whole (38.6 years).

Nearly 28% of our population is under 25 years of age (TableA-2). Those between 25 and 44 account for 23% of the town. Another 31% is between 45 and 64 years, and those over 65 account for 19%.

Table A-2. Age Profile, 2000

	Newcastle	LincolnCounty	Maine
Less than 25 years	28%	28%	32%
25 to 44 years	23%	26%	29%
45 to 64 years	31%	28%	25%
Over 64 years	19%	18%	14%
Total	100%	100%	100%

Source: US Census

Newcastle’s population has not grown consistently across all ages. Between 1990 and 2000, there was a net loss of 5 residents under 45 years of age, and a net gain of 244 residents aged 45 and over (Table A-3). Significant decreases were observed in the number of residents under 5 years and the number of residents 25 to 34 years. Large increases were observed in the number of residents 45 to 54 years, 55 to 64 years, and 75 to 84 years.

Table A-3. Newcastle Age Change, '90 – '00

	1990	2000	% Change
Under 5 years	94	74	-21%
5 to 14	211	236	12%
15 to 24	158	174	10%
25 to 34	194	139	-28%
35 to 44	228	257	8%
45 to 54	209	327	56%
55 to 64	144	212	47%
65 to 74	135	151	12%
75 to 84	87	123	41%
Over 84 years	49	55	12%
Total	1,509	1,748	16%

Source: US Census

The decrease in the population under 44 years suggests that younger families have not been moving to Newcastle in significant numbers. The increase in population over 45 years is in part explained by the aging of the large baby boom generation (aged 35 to 54 in the 2000 US Census).

The trend towards an older population is projected to continue as the baby boom generation grows older and young families have difficulty affording housing in Newcastle.

EDUCATION

Newcastle residents are well educated. In 2000, 91% of the residents over 24 years had at least a high school diploma, and 45% of the residents had at least a college degree (Table A-4).

Table A-4. Education Attainment (25+ years), 2000

	Newcastle	LincolnCounty	Maine
No High School Diploma	9%	12%	15%
High School Graduate	45%	55%	55%
College Degree	28%	24%	22%
Advanced Degree	17%	10%	8%
Total	100%	100%	100%

Source: US Census

Residents in Newcastle have attained a higher level of formal education than residents in the county and state as a whole. Significantly more Newcastle residents have at least a college degree, and Newcastle residents are less likely to not have a high school diploma.

In recent decades, there has been a steady trend towards better-educated populations. This trend is projected to continue in the future.

OCCUPATION

Of the employed residents that are over 16 years old, approximately 40% worked in managerial/professional positions in 2000. About one-quarter of the employed population worked in sales/office occupations, and another 12% worked in service occupations (Table A-5). Approximately one-quarter of those employed in Newcastle worked in more traditional blue-collar positions (construction, maintenance, production, transportation, and material moving). Slightly more than 1% reported natural resource jobs were their primary occupation (forestry, farming, and fishing).

Table A-5. Occupation (16+ years), 2000

	Newcastle	LincolnCounty	Maine
Managerial, professional	39%	32%	32%
Service	12%	15%	15%
Sales, office	25%	22%	26%
Farming, forestry, fishing	1%	5%	2%
Construction, maintenance, etc	11%	13%	10%
Production, transportation, etc	11%	13%	15%
Total	100%	100%	100%

Source: US Census

Newcastle residents are more likely to be employed in managerial/professional occupations than the county or the state as a whole. Natural resource-based jobs are more common in the county than in Newcastle, and in general the more traditional blue-collar jobs are more common in the county and the state.

The small number of residents employed in natural resource-based occupations is partly due to the seasonal nature of these jobs – many working the land or on the water have other primary sources of income.

Comparisons with previous US Census data are difficult because the US Census changed its occupation definitions for the 2000 Census. Casual observation suggests that there are slightly more residents in professional/managerial jobs and slightly fewer residents in blue-collar jobs than there were in 1990.

INCOMES

In general, Newcastle residents have higher incomes. In 1999, Newcastle's median household income reached \$43,000. Approximately one-quarter of the households earned less than \$25,000, and one-third earned between \$25,000 and \$50,000. Nearly 20% of the households earned between \$50,000 and \$100,000. More than 10% earned more than \$100,000.

Table A-6. Household Income in 1999

	Newcastle	LincolnCounty	Maine
Less than \$15,000	11%	15%	18%
\$15,000 to \$25,000	14%	15%	15%
\$25,000 to \$35,000	14%	15%	14%
\$35,000 to \$50,000	19%	21%	18%
\$50,000 to \$75,000	20%	18%	19%
\$75,000 to \$100,000	9%	8%	8%
More than \$100,000	12%	8%	6%
Median Household Income	\$43,000	\$38,686	\$37,420

Source: US Census

Compared with the county and state, Newcastle residents had high incomes. While relatively the same number of households earned between \$15,000 and \$75,000, significantly fewer Newcastle households earned less than \$15,000 and significantly more households earned more than \$100,000. Newcastle's median income was almost \$5,000 higher than that for the county and state as whole.

It follows that Newcastle had fewer households living in poverty status than LincolnCounty and Maine. In 2000, fewer than 125 individuals lived below poverty level in Newcastle. This represented 7% of the town's total population. Of these, more than 20% were under 18 years, and approximately 25% were over 65 years.

In comparison, LincolnCounty had 10% and Maine had 11% of their populations below poverty level in 2000. In general, the county and the state had larger numbers of children below the poverty level and fewer elderly below the poverty level than Newcastle.

The number of families receiving aid to children has stayed the same in the last few years in Newcastle but has risen 14% in LincolnCounty and risen about 9% in the whole state.

ISSUES AND IMPLICATIONS

1. Moderating population growth, but decreases in average household size hide the amount of housing unit growth that will be needed to house the year-round population.
2. Seasonal population has a significant impact on the town's resources.
3. Changing age profile might suggest a change in the type of services the community needs.
4. Well-educated residents tend to have higher standards for their children's educations, and therefore could demand more services in the school system.
5. Number of school-aged children has not increased at the same rate as the general population. This trend is projected to continue.

A house or apartment is more than just a shelter. It represents security, privacy, health, community, and all the other things we associate with "home". It is a basic necessity of life. Many argue that safe, affordable housing is a right that all Americans should enjoy.

Unfortunately, that is not always the case. Rising housing costs can create affordable housing challenges for all Newcastle residents, and can have far reaching effects. It can affect the town's ability to attract business. It can determine whether the people who serve the community can afford to live in the community. It can determine whether families remain in Newcastle from one generation to the next.

This chapter examines the supply and conditions of housing in Newcastle, considers its affordability and relations to local incomes, and analyzes its availability, especially for lower income households.

HOUSING STOCK

In 2000, Newcastle had 880 housing units. This represents a 17% increase in housing units from 1990 to 2000 (Table B-1). Since 1970, the number of housing units in Newcastle has increased by more than two-thirds. Housing unit growth has been relatively constant – the growth rates for the 1970s, 1980s, and 1990s range between 17% and 22%.

Table B-1. Housing Unit Change, 1970 to 2000

	1970	1980	1990	2000	% change 90-00
Bristol	1,360	1,657	1,800	2,290	27%
Nobleboro	519	651	892	1,092	22%
Alna	166	214	264	315	19%
LincolnCounty	11,702	14,977	17,538	20,849	19%
So. Bristol	588	735	790	932	18%
Jefferson	747	961	1,219	1,427	17%
Newcastle	524	617	755	880	17%
Damariscotta	640	848	1,010	1,151	14%
Edgecomb	318	431	518	572	10%
Wiscasset	760	1,074	1,561	1,612	3%

Source: US Census

Compared with other communities in the region, Newcastle's growth has been moderate. While the number of housing units in Newcastle grew by 17% in the 1990s, those in Bristol grew by 27%, Nobleboro by 22%, and LincolnCounty as a whole grew by 19% (Table B-1). Generally, the larger and more established communities of Wiscasset, Damariscotta, and Newcastle grew

slower than the county average, while smaller interior and coastal communities added housing units at a faster rate.

The Midcoast region, like the state as a whole, is heavily oriented towards seasonal tourism for its livelihood. In that respect, understanding seasonal changes in populations and the demands that the changing population places on municipal services is critical for planning.

In 2000, Newcastle had 121 seasonal housing units (Table B-2). This represented 14% of the town's entire housing stock. Between 1990 and 2000, seasonal housing grew faster than the growth rate for the town's entire housing stock (21% to 17%).

Table B-2. Seasonal Housing Units, 1990 - 2000

Community	1990	2000	% of Total Units, 2000	% Change 90-00
Wiscasset	16	55	2%	243%
Bristol	730	1,027	45%	41%
Alna	28	37	12%	32%
LincolnCounty	4,686	5,860	28%	25%
Nobleboro	303	377	35%	24%
Newcastle	100	121	14%	21%
So. Bristol	419	502	54%	20%
Damariscotta	135	158	14%	17%
Edgecomb	82	89	16%	9%
Jefferson	418	435	30%	4%

Source: US Census

Compared with other communities in the region, Newcastle has a modest amount of seasonal housing (Table B-2). Communities near the ocean and on large lakes tended to have larger amounts of seasonal housing, such as Bristol (45% seasonal), South Bristol (54%), and Nobleboro (35%).

Newcastle housing is primarily single-family units. In 2000, 87% of all housing units were single-family units, 6% were multifamily units, and 7% were mobile homes. These percentages have changed little in 30 years, although the number of mobile homes has increased modestly and the number of multi-family units has decreased modestly. This distribution of housing type is very similar to the region as a whole.

AGE OF HOUSING STOCK

Newcastle's housing stock is relatively old (Table B-3). Nearly 40% of the housing units were built before 1940. Another 28% were built between 1940 and 1980. The remaining one-third of the units were built since 1980.

Table B-3. Age of Housing Units

	Newcastle	% of Total	% in LincolnCounty
1990 to 2000	163	19%	17%
1980 to 1990	136	16%	18%
1970 to 1980	90	10%	14%
1960 to 1970	53	6%	7%
1940 to 1960	105	12%	10%
Pre-1940	329	38%	34%
Total	876	100%	100%

Source: US Census

HOUSING VALUE

In 1970, the median value of a housing unit in Newcastle was \$14,700. In 1980 this figure had increased to \$45,900. In 1990 it had reached \$119,000. By 2000, the median value of a housing unit in Newcastle had reached \$132,100.

Table B-4. Housing Value

	1980	1990	2000
Newcastle	\$45,900	\$119,000	\$132,100
LincolnCounty	\$42,800	\$103,000	\$119,900
Newcastle as % of LincolnCounty	107%	116%	110%
State of Maine	\$37,900	\$87,400	\$98,700
Newcastle as % of State of Maine	121%	136%	134%

Source: US Census

Newcastle's housing is more expensive than housing in the county or state as a whole. In 2000, Newcastle's median housing unit cost one-third more than that of the state as a whole, and 10% more than those in LincolnCounty. These percentages have remained relatively constant throughout the past two decades.

AFFORDABILITY ANALYSIS

The Maine State Housing Authority calculates its own affordability index based on whether a community's median household income can afford to purchase that community's median housing unit.

Using this analysis, Newcastle’s median housing unit (which cost \$190,000 in 2003) would be affordable to a household that made \$66,928 per year (Table B-5). Newcastle’s median household income in 2003 is estimated to be \$46,964, or roughly \$20,000 lower than would be needed to buy the median home in the community.

Newcastle is not an affordable community according to MSHA’s affordability index. In 2003, Newcastle had a 0.70 index rating (an affordability index of 1.0 or greater indicates that a community is affordable). This is considered to be less affordable than LincolnCounty (0.74) and the state as a whole (0.81).

In the last several years, Newcastle’s housing has become less affordable. In 2001, Newcastle’s affordability index was 0.84. In 2002, it had dropped to 0.79. And by 2003, it had reached 0.70. The reason for this decline has been a combination of a median household income that was adjusted downward in 2002 as well as a large increase in the price of the median housing unit in 2003.

Table B-5. Affordability Summary, 2003

Geography	2003 Median Income	2003 Median Home Value	Home Value that is Affordable for the Median Income**	Affordability Index
Boothbay Housing Market*	\$41,776	\$235,000	\$129,021	0.55
Newcastle	\$46,964	\$190,000	\$133,325	0.70
LincolnCounty	\$41,601	\$169,000	\$124,562	0.74
Maine	\$41,645	\$150,000	\$121,532	0.81

Source: MaineState Housing Authority

Note: an affordability index greater than 1.0 indicates that a community is affordable.

* Boothbay Housing Market Area includes Boothbay, BoothbayHarbor, Bristol, South Bristol, Monhegan, Bremen, Damariscotta, Newcastle, and Nobleboro

** This is the calculated value of the home that could be afforded by a household earning the median income.

ISSUES AND IMPLICATIONS

1. Location of most new housing has not been in the growth districts. New housing has been split between seasonal housing along ocean and lake shores and full time residences in outlying areas as infill has been hard to do in the town centers.
2. Housing in Newcastle is not affordable to the family earning an average wage. It is important to provide the ability for everyone to have some form of housing in Newcastle.

3. Almost all housing in Newcastle is single dwelling units. Very few multiple dwelling units are available. Multiple dwelling units are generally less expensive and are one way to create denser development in the growth districts.
4. There is very little housing for the elderly in an area where good health care is available. With the multiple levels of health care available at the Miles complex, it would make sense to allow more housing for the elderly.
5. Very few modular or mobile homes exist in Newcastle.

The ability to understand changes in the town's economy and how those changes will impact the town's character, job opportunities, and its existing economy are critical to making policy decisions about the town's future. This chapter inventories the local labor force, commuting patterns, and the regional job market and identifies trends that will affect our future economy.

NEWCASTLE LABOR FORCE

Our town has a steadily growing labor force and very low unemployment rate.

In 2003, the Maine Department of Labor estimated that Newcastle had 1,140 residents participating in the labor force (Figure C-1). The size of our labor force is near its highest level of the last decade. Since 1993, Newcastle's labor force has increased by 24% (224 residents).

With the exception of a modest decrease after the 1993 recession, the size of our labor force has been gradually increasing.

Figure C-1. Newcastle Labor Force and Unemployment

Source: Maine Department of Labor

Our unemployment rate was 2.1% in 2003 (Figure C-1). With the exception of the recession in the early 1990s, the town's unemployment rate has generally remained below 3.0%.

Figure C-2. Seasonal Employment and Unemployment Change, 2000 - 2003
(figure unavailable)

Source: Maine Department of Labor

But Newcastle's economy is seasonal in nature and these average labor force statistics hide the large swings in our town's annual economic cycle (Figure C-2). The employed labor force routinely swings between the seasons by as many as 300 employees (25% of total employed labor force). Similarly, the unemployment rate swings from a high of above 3% to below 1% in the summer months.

While our economy relies heavily on seasonal activities, it is not as reliant on seasonal activity as other communities in the region. Generally, the unemployment rate in Newcastle does not fluctuate as wildly as unemployment rates in communities closer to the ocean.

Newcastle is located in the Boothbay Harbor Labor Market Area (LMA)¹[1], see Map 2. Between 1992 and 2002, Newcastle's labor force grew quicker than the surrounding LMA, and its unemployment rate generally matched that of the LMA.

COMMUTING PATTERNS FOR NEWCASTLE RESIDENTS

In 2000, the average employed resident (excludes home-based occupations) spent 22.2 minutes getting to work. This was slightly lower than the average time for commuters in LincolnCounty as a whole (23.2 minutes). This commuting time for Newcastle residents has not changed since 1990 (22.0 minutes).

In 2000, approximately one-half of Newcastle's labor force commuted to either Newcastle or Damariscotta, and the other half commuted to towns along the Route 1 corridor.

Approximately 30% of Newcastle's labor force worked in Newcastle. Nearly 10% of our labor force worked at home – a very large number compared with LincolnCounty and the state as a whole. The remaining 20% commuted to work.

Nearly 20% of our labor force commuted to Damariscotta for employment.

The remaining one-half of our labor force commuted primarily to towns in the Route 1 corridor. Approximately 18% commute to towns north and east of Newcastle, including Waldoboro, Nobleboro, Boothbay, Bristol, and Rockland. Another 8% commute south of Newcastle to Bath, Brunswick, and Edgecomb. Augusta accounts for 4% of Newcastle's labor force. The remaining labor force commutes in relatively small numbers throughout Lincoln, Knox, Waldo, Kennebec, Androscoggin, and CumberlandCounties.

Since 1990, a significantly larger number of our town's labor force stayed in Newcastle. In 1990, 22% of the labor force worked in Newcastle. By 2000, this had increased to 29% (153 workers in 1990 to 255 workers in 2000).

Meanwhile, Damariscotta's share of Newcastle's labor force decreased from 27% in 1990 to 19% in 2000. Both Bath and Wiscasset experienced decreases, as Bath Iron Works and Maine Yankee drastically cut their workforces. These decreases were compensated by broad increases elsewhere throughout the Route 1 corridor.

¹[1] The Maine Department of Labor defines a Labor Market Area as “an economically integrated geographical unit within which workers may readily change jobs without changing their place of residence.” The Boothbay Harbor Labor Market Area includes the communities of Newcastle, Damariscotta, BoothbayHarbor, Boothbay, Bremen, Bristol, Monhegan, Nobleboro, South Bristol, and Southport.

NEWCASTLE EMPLOYMENT PROFILE

Newcastle's economy is dominated by jobs in two sectors²[2]:

- **Trade, transportation, and utilities jobs** include wholesale, retail, and warehousing occupations. This sector of the local economy accounted for approximately 33% of the total covered jobs.
- **Education and health service jobs** include employers such as Lincoln Academy and Knox-Waldo-Lincoln Home Health Care. This sector of the local economy accounted for approximately 40% of the total covered jobs in Newcastle.

Table C-1. Wage and Salary Employment, 2002

	Boothbay	
	LMA	Maine
Forestry/Farming/Fishing	1%	0%
Construction	7%	5%
Manufacturing	7%	10%
Trade/Transport./Utilities	22%	21%
Information	2%	2%
Finance	4%	6%
Profess./Busn. Services	8%	8%
Education/Health Serv.	25%	18%
Leisure/Hospitality	17%	8%
Other Services	6%	3%
Government	2%	18%
Total	100%	100%

Source: Maine Department of Labor

Because Newcastle's local economy is relatively small, much of the remaining sectors of the economy's statistics are suppressed (to protect the identity and operations of individual companies).

²[2]The Maine Department of Labor reports on the number of covered jobs in a community. Covered jobs include all those employed by organizations that are required to pay workers compensation insurance through the MEMIC program. This includes all businesses with more than one employee. This generally excludes entrepreneurs, home-occupations, and military personnel.

However, information on the Boothbay Harbor LMA identified significantly more jobs in the leisure/hospitality and the education/health services sectors of the economy than did the state as a whole. Government in the regional economy was very small compared with the state.

Major employers in Newcastle include:

- LincolnAcademy – more than 50 employees
- Newcastle-Chrysler Plymouth – more than 20 employees
- Lincoln Home – more than 20 employees
- LincolnCounty News – more than 20 employees
- Knox-Waldo-Lincoln Home Health Care – more than 20 employees

RETAIL SALES

Retail sales in the Damariscotta region have been increasing modestly. The Maine State Planning Office reports that there was \$305,766,000 in retail sales in 2003. This is an increase from \$286,858,000 recorded in 1999.

ISSUES AND IMPLICATIONS

1. The inventory data is indicative of a seasonal influence on Newcastle's job market. Although not as severe compared to other towns (such as Boothbay), the seasonal decline affects approximately 25% of Newcastle's workforce.
2. The job market in Newcastle is sparse compared to its neighbor, the town of Damariscotta. The leading employer is education, thus the lack of other job opportunities results in a town that is property tax driven.
3. The lack of business expansion, keeping with the town's character, does little to provide the funds for the preservation of Newcastle's pristine wetlands. The town's elected officials must explore expansion of the job market and preservation of non-renewable resources.
4. There is a strong possibility that a large, national chain retail business will wish to locate in Newcastle. What would be the economic effect of locating a large chain retail establishment in Newcastle in terms of types and numbers of jobs, competition with local businesses, housing, traffic, small town character and quality of life? Visioning sessions and the town survey both generated strong statements from townsfolk that they did not want to see big box retail development in town, or in the region.

Transportation networks connect Newcastle residents with each other as well as the rest of the world. Newcastle's transportation network is more dependent on automobiles than other communities but the planned extension of passenger rail service to Rockland and existing intercity bus service provide alternatives unavailable to most other Lincoln County communities.

Understanding the extent of the transportation network, trends in its use, and how it could be impacted by changing development patterns is crucial when planning for Newcastle's future.

VEHICULAR TRAFFIC

Vehicles traveling on the town's road network are the principal mode of transportation in Newcastle. This network consists of 53.51 miles of paved and gravel public roads. There are also a substantial number of private roads that serve mostly seasonal shorefront properties and residential developments. The public roadway network is presented in Map 3 and Table D-1.

- **Arterial roadways** account for 5.83 miles of this network. These roadways are defined by the Maine Department of Transportation (MDOT) as a travel route that carries high speed, long distance traffic. Route 1 in Newcastle is a federal arterial highway.
- **Major collector roadways** account for 5.66 miles of the transportation network. These roadways are defined by MDOT as highways that provide connections between arterials and local roads. These include Bunker Hill Road, Mills Road, Pond Road and the Route 1B portion of Main Street.
- **Minor collector roadways** account for 14.35 miles in Newcastle. MDOT classifies these as roads that provide connections between major collector roads and local roads. These include Jones Woods Road, Ridge Road, River Road, Sheepscot Road, Academy Hill Road, Road 1582, which connects River Road to Route 1, and the balance of Main Street.
- **Local roads** account for the remaining 27.67 miles in Newcastle. These roads provide connections between collectors, neighborhoods, and rural lands. In Newcastle, this includes 4.56 miles of gravel roads that are maintained by the Town.

Table D-1. Newcastle Road Network

Name	Function	Length (miles)	Winter Maint (miles)	Paved (miles)	Gravel (miles)	Condition
US Route 1	Prin arterial	5.83		5.83		
Academy Hill Road	min collect.	1.66		1.66		
Austin Road/Ridge Road		0.35	0.35	0.35		
Bunker Hill Road (Route 213)	maj collect.	1.88		1.88		
Chase Farm Road		0.21	0.21	0.21		
Cochran Road		0.85	0.85	0.85		
Cross Street		0.08	0.08	0.08		
Glidden Street		0.51	0.51	0.51		
East Old County Road		1.79	1.79	1.12	0.67	
Happy Valley Road		0.93	0.60	0.12	0.48	
Hassan Avenue		0.99	0.65		0.65	
High Street		0.12	0.12	0.12		
Hillcrest Road		0.06	0.06	0.06		
Hopkins Hill Road		0.51	0.30	0.30		
Indian Trail		1.53	0.34	0.22	0.12	
Island Road		1.10	0.90	0.70	0.20	
Jones Woods R. (Rt 194,/215)	min collect.	3.39	3.39	3.39		
Kavanagh Road		1.26	0.34	0.34		
Lewis Hill Road		1.16	1.16	1.16		
Liberty Street		0.19	0.19	0.19		
Lynch Road		1.63	1.63	1.63		
Main Street (Route 1B)	maj collect.	0.18	0.18	0.18		
Main Street	min collect.	0.21	0.21	0.21		
Mills Road (Route 215)	maj collect.	1.86	1.86	1.86		
North Dyer Neck Road		1.38	1.38	0.55	0.83	
North Newcastle Road		3.08	3.08	3.08		
Pleasant Street		0.15	0.15	0.15		
Pond Road (Route 215)	maj collect.	1.74	1.74	1.74		
Pump Street		0.12	0.12	0.12		
Road 1582 (access to Rt 1)	min collect.	0.21		0.21		
Ridge Road (Route 215)	min collect.	1.44	1.44	1.44		
River Road	min collect.	4.11	4.11	4.11		
Robinson Road		0.16	0.16		0.16	
Sheepscot Road	min collect.	3.33	3.33	3.33		
Sherman Lake Fire Lane		0.20	0.10	0.10		
South Dyer Neck Road		2.30	1.80	0.60	1.20	
St. Patrick's Access Road		0.29	0.29			
Station Road		1.36	1.36	1.36		
Stewart Street		0.17	0.17	0.17		
Stonebridge Circle		0.55	0.55	0.55		
The King's Highway		0.78	0.78	0.78		
Timber Lane		0.63	0.63	0.63		
West Hamlet Road		1.48	1.15	1.15		
West Old County Road		1.75	1.15	0.90	0.25	
Totals		53.51	39.21	43.94	4.56	

The Town of Newcastle maintains 43.94 miles of paved roads and 4.56 miles of gravel roads. The Town's maintenance responsibilities will increase in the future as new residential development continues to expand onto heretofore discontinued roads. Such development will also lead to capital expenses as gravel roads are widened and improved to accommodate the initial stage of development and then paved as traffic volumes intensify.

Road Maintenance and Capital Costs

Thirty percent of Newcastle's road mileage (16.32 miles out of a total of 53.51 miles) consists of federal or state highways and an additional 18 percent (9.52 miles) are state aid roads. This is an unusually high percentage for Lincoln County and is beneficial to the community in several ways. First, these roads represent the most direct travel corridors both within the community and between neighboring towns and, therefore, accommodate most vehicular traffic, including a very high proportion of truck traffic. This tends to reduce traffic on town roads. Second, summer maintenance and capital improvements for these roads are primarily the responsibility of the state rather than the town.

The principal sources of truck traffic outside of the Route 1 corridor in Lincoln County appear to be associated with gravel operations, forestry, construction, and commerce. There are extensive gravel operations in neighboring Whitefield and the most direct truck route from Whitefield to Route 1 is Sheepscot Road. The posting within the past several years of the Sheepscot Village Bridge has prevented most gravel trucks from using this route and much of this traffic has been redirected to the Route 194/215 corridor. With the planned replacement of this bridge and the general increase in construction activity in the mid-coast area, gravel truck traffic on Sheepscot Road will likely increase and the town can anticipate deterioration of the road in the future.

Gravel trucks from pits in Jefferson generally use the Route 213/215 corridor to get to Route 1. The volume of this traffic will continue to reflect the pattern of growth in the mid-coast economy.

Other town roads, including some with gravel surfaces, have experienced significant increases in traffic due to dispersed development. These include East and West Old County Roads, both ends of Hassan Avenue, North and South Dyer Neck Roads and West Hamlet Road. Perhaps thirty or more years ago, significant portions of these roads appeared to have been discontinued by the town or the county or existed as little more than woods roads. However, residential development since that time has forced the town to improve road surfaces and/or increase maintenance responsibilities. While the current level of development on these roads is low, there is much remaining undeveloped road frontage that could support many more homes without further municipal review. In addition, it appears that each of these roads could be further extended to create even more frontage for development, again increasing town maintenance responsibilities. It should be pointed out that because these are or will be town roads, they must be suitable not only for typical residential traffic but also for emergency vehicles and school buses. This type of traffic requires suitable base and subbase, adequate width and a year round travel surface.

The MDOT Six-Year Plan identifies long-term plans for improvements to federal, state and state-aid roads. In addition, MDOT's Biennial Transportation Improvement Program (BTIP) identifies projects that will be implemented during the current two-year budget period.

At this time, the only highway project in the Six-Year Plan is the reconstruction of Route 1B. In fact, that portion of Route 1B in Newcastle (Main Street) is included in the BTIP. The BTIP also includes resurfacing of Route 1 in Newcastle. Projects that were considered but not included in the Six-Year Plan due to funding constraints were improvements to Routes 213 and 215.

MDOT will rebuild existing roads as funds are available. However, its top priority will continue to be its pavement preventive maintenance (PPM) program. The condition of a well-paved road tends to be stable for the first 5-10 years. Then, as cracks form and water gets into pavement and base, the rate of deterioration quickens. The PPM program focuses on applying lighter, less expensive pavement treatments earlier and more frequently in a pavement's life, thereby avoiding the point at which the pavement quickly deteriorates and the cost of repair accelerates.

Many of Newcastle's roads wind through rural landscapes and reflect the historic patterns of development in the community. Roads such as Sheepscot Road, North Newcastle Road, River Road, Bunker Hill Road, both Old County Roads, both Dyer Neck Roads and West Hamlet Road, among others, are particularly attractive and represent both visual and functional assets to the community. As these roads are rebuilt or improved to accommodate modern, higher speed, large trucks and cars, some of these important visual attributes may be lost. Context-sensitive design is a technique often used to ensure that as roads are brought up to modern standards, the character of the existing roads is not diminished.

In addition to the MDOT plans, Newcastle has a road improvement plan of its own, which is presented updated yearly.

Traffic Volumes and Patterns of Use

Table D-2 presents MDOT Average Annual Daily Traffic (AADT) counts completed between 1995 and 2000 within Newcastle. With the exception of Lynch Road, all roads counted showed increases in traffic between 1995 and 2000. In particular, Lewis Hill Road, Bunker Hill Road, Pond Road and Jones Woods Road had increases of at least 23% during this 5-year period. While Main Street and Station Road traffic counts are only available for 1995-1997, the increases in traffic volume during this period are even more significant.

Table D-2. MDOT Average Annual Daily Traffic (AADT) counts

Road	Description	AADT 1995	AADT 1996	AADT 1997	AADT 2000	% Change 95-97	% Change 95-00	% Change 97-00
Main Street	S/O Mills Road	12,950		12,830		-1		
River Road	SW/O Main Street	8,870		9,090	9,840	2	11	8
US 1 SB off ramp	E/O Mills Road	440		430	500	-2	14	16
US 1	W/O Road 1582	12,190		12,190		0		
US 1	E/O	12,020						
US 1	NE/O US IB off ramp	6,630		6,630		0		
US 1 NB on ramp	NE/O Mills Road	410		470	530	15	29	13
US 1	E/O Sheepscot Road			12,120	12,950			7
US 1	NE/O Station Road	10,780		10,710	11,590	-1	8	8
US 1	at Nobleboro TL	6,800		7,220		6		
US 1	NE/O Mills Road (Route 215)		7,130					
River Road	SW/O Road 1582	1,420			1,570		11	
Sheepscot Road	NW/O US 1	1,270		1,250		-2		
Station road	N/O US 1	130		240		85		
Main Street	NW/O Mills Road	3,000		4,180		39		
Lewis Hill Road	N/O US 1	100		130	130	30	30	0
Lynch Road	S/O US 1	230		220	170	-4	-23	-23
North Newcastle Road	SW/O Jones Woods Road (Route 194)	400		430	450	8	13	5
Jones Woods Road (Route 194)	NW/O North Newcastle Road	680		690	720	1	6	4
Bunker Hill Road (Route 213)	NE/O Jones woods Road (Route 215)	700		790	860	13	23	9
Mills Road	NE/O Main Street	3,310		3,520	3,840	6	16	9
Pond Road (Route 215)	S/O Bunker Hill Road (Route 213)	1,680		2,040	2,160	21	29	6
Jones Woods Road (Route 215)	W/O Bunker Hill Road (Route 213)	1,260		1,530	1,580	21	25	3
Pond Road (Route 215)	S/O Austin Road	1,570			2,420		54	

Main Street in the downtown is the busiest traffic corridor in Newcastle. With the exception of Route 1, the next busiest traffic corridor is Main Street/River Road in the vicinity of the Route 1 access. Main Street west of Mills Road and Mills Road just above Main Street also have high AADT counts. This data reflects Newcastle's close association with Route 1 as well as the vibrant business and institutional components of the downtown villages of both Newcastle and Damariscotta. With the previously mentioned posting of the Sheepscot Village bridge, there has been a substantial shift in truck traffic from Sheepscot Road to the Route 194/215 corridor although this shift would not have been picked up in the 1995-2002 traffic counts.

Regardless of the reasons for the traffic growth, roads in the community will continue to experience additional vehicle use in the future. This is an important component of any municipal road improvement program. All of the roads listed in Table 15 are paved but some may need wider travel ways, better base or drainage improvements in order to accommodate additional traffic.

Dangerous Intersections and Roads

MDOT identifies high crash locations. All accidents that result in more than \$1,000 in property damage and/or an injury/death are analyzed on a rolling three-year period. Any location that experiences 8 or more accidents in the three-year period or that has a Critical Rate Factor^{3[3]} (CRF) of 1.0 or higher is considered a high crash location.

Table D-3 presents DOT accident data. The intersection of Mills Road and Main Street has the greatest number of accidents and highest CRF in the community. This intersection will be rebuilt as part of the Route 1B project.

Table D-3. High Crash Locations

Road 1	Road 2	Accidents 00-02	CRF 00-02
Main Street	Mills Road	15	2.62
Mills Road	Route 1 On-Ramp	7	1.44
Pond Road	Between West Hamlet Road and Academy Hill Road	8	1.14
Mills Road	South of Route 1 On-Ramp	1	1.12

Source: MDOT

Other dangerous intersections in Newcastle include Mills Road at the Route 1 on-ramp and Pond Road between West Hamlet Road and Academy Hill Road. Though not on the list, residents frequently mention the intersection of Sheepsfoot Road and Route 1 as another dangerous intersection.

Access Management

MDOT has adopted an Access Management Rule that controls the development of driveways and entrances on all state and state-aid roads. A driveway is an access that serves up to 5 dwelling units or other uses that generate less than 50 vehicle trips per day while an entrance includes anything that exceeds these driveway thresholds.

These standards are higher for Route 1, which is considered a “retrograde mobility” arterial, and include minimum spacing between entrances and, potentially, the use of shared accesses. Standards for entrances are generally higher than for driveways and may include paving and enhanced drainage requirements. In addition, there is a prohibition on the siting of public facilities, including schools, state municipal facilities, etc., on mobility arterials with a speed limit greater than 45 mph, which includes the entire portion of Route 1 in Newcastle.

Because the Access Management Rule is primarily intended to ensure safe use of and access to roadways, towns are encouraged to adopt similar standards for development on municipal roads. Minimum sight distance requirements, drainage improvements, and width standards, are just as

^{3[3]} The critical rate factor is a statistical measure that compares accident frequency at a location with similar locations throughout the state.

important for the safe use of local roads as for state highways. Some of Newcastle's municipal roads, including Indian Trail, Island Road, Station Road, Lewis Hill Road, North Dyer Neck Road, West Hamlet Road and the east and West old County Roads, have horizontal and vertical curves that limit visibility of driveways. A minimum sight distance standard for all new driveways would go far in improving safety on town roads in the future.

Traffic Control Devices

The only traffic control devices employed in Newcastle are stop signs at all intersections. MDOT has not indicated the need to install additional traffic control devices within the community.

Bridges

Table D-4 lists bridges in Newcastle. Each bridge has a sufficiency rating, which reflects functionality (width and weight capacity) and structural condition, among other criteria. With the exception of the NeckBridge on Dyers Neck Road and the MillBridge on Lynch Road, all of the bridges are owned by the state. MDOT is planning to replace the SheepscootBridge in SheepscootVillage in 2005-6 due to poor substructure condition and inadequate width. The bridge is currently posted and heavy trucks are prohibited. DyersBridge on West Old County Road is also proposed for replacement in the current BTIP.

Sherman's Overpass spans the MDOT railroad tracks near the terminus of Trail's End Road. It is owned by the state and the superstructure was recently replaced. It has a low sufficiency rating of 18.0 due to width and low load capacity but since it services only one home, it currently provides a reasonable level of service. The town-owned MillBridge on Lynch Road has a sufficiency rating of 27.8 due to the poor condition of the substructure and deck. The bridge was replaced in 2005.

Part of the dam underneath the existing Route 1 Bridge over the MarshRiver, which created ShermanLake, washed out during a heavy rainstorm in September of 2005. Discussions about the repair of the dam, recreating the fresh-water lake, or renovation of the dam system to allow the tidal flow of the MarshRiver to feed the salt marsh is under way. As the support system for the bridge will be affected by these discussions, the MDOT is involved in the decision-making.

Table D-4. Bridge Inventory

Name	Location	Feature Spanned	Owner	Year built	Structure Condition ¹	Last inspection	Sufficiency Rating ²
Ramp A	Route 1	Ramp A	State	1961	7	2003	80.1
GliddenPointBridge	Route 1	DamariscottaRiver	State	1961	7	2002	82.1
Route 215	Route 1	Route 215	State	1959	6-7	2003	63.8
Main Street Overpass	Route 1	Main Street	State	1961	7	2003	61.5
DyersBridge	Old County Road	SheepscotRiver	State	1948	5-7	2001	49.9
DamariscottaRiverBridge	Route 1B	SheepscotRiver	State	1952	6	2001	65.5
Sherman's Overpass	Trail's End Road	MDOT Railroad	State		4-6	2003	18.0
MeadowBrookBridge	Route 215	Deer Meadow Brook	State	1931	6-7	2002	63.9
MarshRiverBridge	Route 1	MarshRiver	State	1962	6-7	2001	78.0
NorthNewcastleBridge	Route 194	DyerRiver	State	1955	5-6	2001	63.9
SheepscotBridge	SheepscotVillage	SheepscotRiver	State	1948	4-6	2001	34.0
New Bridge	Route 215	DamariscottaRiver	State	1957	7	2003	78.3
NeckBridge	Dyers Neck Road	DyerRiver	Town	1988	8	2002	82.6
MillBridge	Lynch Road	Dyer Creek	Town		4-5	2002	27.8

Data Reported by MaineDOTBridge Maintenance Division January 8, 2004

¹ Structure Condition ratings from 0-9 with 9 representing the best condition.

² Sufficiency Rating reflects functionality, structural condition, water analysis

Traditional Village Development and Street Layout

Historically, Newcastle consisted of a number of outlying villages anchored by the more developed village of Newcastle, which lay across the DamariscottaRiver from Damariscotta. These villages included Damariscotta Mills, North Newcastle, SheepscotVillage, East Newcastle and South Newcastle. Damariscotta Mills, East Newcastle and SheepscotVillage were relatively densely developed with a dozen or so structures each by the 1950's while South Newcastle was much more rural with about a half-dozen homes during the same time period. For the most part, these villages are intact with most new development situated on the outskirts. North Newcastle has always been an agricultural area with a more functional than traditional village pattern of development. Development along town roads was mostly associated with agricultural and low density residential land uses.

Since 1970, with the exception of several new subdivisions along Academy Hill Road, most new development has dispersed along town roads in a typical sprawl pattern. Indeed, as previously noted, a number of new homes have been constructed along previously discontinued roads and

the town has been forced to upgrade these roads and assume maintenance responsibilities. A better approach may be to designate growth areas in the general vicinity of the historic villages so as to reinforce the traditional pattern of development and avoid the appearance of sprawl in the community's rural areas.

PEDESTRIAN FACILITIES

Sidewalks provide safe passage for pedestrians in the Town of Newcastle. Sidewalks have been built in the downtown and along Academy Hill road to the school. Another section extends from the NewcastleMainStreetPark to the town office along River Road.

A section that has been neglected and is near a cited accident-prone area, exists between the NewcastlePark and the Newcastle/Damariscotta Bridge. This area needs a sidewalk to provide pedestrians safe passage to the Damariscotta area from the NewcastlePark section.

PUBLIC TRANSPORTATION

There is no fixed route public bus system that serves Newcastle. Coastal Trans, Inc. (CTI) is a private, non-profit corporation that provides demand response services to Newcastle residents. CTI uses volunteer drivers whenever possible to reduce transportation costs. These drivers use their own vehicles to transport program-qualified people needing non-emergency transportation.

Concord Trailways operates two daily north- and two southbound bus routes in the mid-coast area that connect into the nationwide intercity bus system. The nearest bus stop is in Damariscotta. SaltBay Taxi and Courier service provides local taxi and delivery service.

AIRPORTS

There are no general aviation airports in Newcastle. Airports that serve the Newcastle residents include the MaineStateAirport in Augusta and the WiscassetAirport, the KnoxCountyRegionalAirport, the Portland International Jetport and BangorInternationalAirport. The Augusta, Bangor, KnoxCounty and Portland airports offer scheduled air service. Various improvements are planned at these airports as part of MDOT's Six-Year Plan.

RAILROAD FACILITIES AND RAIL SERVICE

Map 3 shows the location of the state's Rockland Branch Railroad as it crosses Newcastle. As part of MDOT's Six-Year Plan, it is completing planned improvements to the Rockland Branch so that passenger rail service can be extended to Rockland. The Department is planning a passenger rail station in Newcastle, which may be located in the vicinity of Depot Street. This location is just north of Main Street and would be convenient for Newcastle residents.

Should the station be located on Depot Street, the town may need to address the adequacy of parking facilities for rail users as well as the suitability of sidewalks for passengers wishing to shop or visit in downtown Newcastle or Damariscotta. In addition, that there may be some

demand for more retail and service floor area, which may require an examination of existing zoning provisions.

Most of the Rockland Branch right of way is within or adjacent to wetlands and water resources or within very rural areas lacking public water or sewer services or road access. These conditions make it unlikely that rail-dependent industrial or distribution uses will be able to make effective use of the railroad in Newcastle.

PORTS AND HARBORS

The Town of Newcastle shares access to the Damariscotta River at the Town Landing in the parking lot in Damariscotta, just over the Newcastle/Damariscotta Bridge. There are dedicated parking spaces for truck/trailer combinations and a ramp for boat launching. The ramp is only usable from half to full tide, limiting its usefulness.

SCENIC BYWAYS AND SPECIAL VIEWS

Newcastle is privileged to be located in an area with many scenic views from major thoroughfares through the town. Many residents have indicated the importance of maintaining the rural feel of the views from these roads. The following vistas and areas are particularly noted:

- The view from Rte. 1, from the main exit ramp and the River Road across the Damariscotta River to the Town of Damariscotta.
- The views from Rte. 1 north over Sherman Lake and south over the Marsh River.
- The views from Rte. 1 on both sides from the Mills Road overpass to the Damariscotta Town line.
- The views along Rtes. 213-215 along Damariscotta Lake.
- The views along Rte. 194 over the Dyer River valley and fields at “Cowshit Corner”.
- Around Sheepscot Village, views from Sheepscot Road, the Sheepscot Bridge and North Newcastle Road over the Dyer and Sheepscot Rivers.
- View of Marsh River Bog Preserve from Rte. 1.
- Views of marshland from various sections of East and West Old County Road.
- Views of Deer Meadow Brook and marshes from Rte. 215.
- Views of the Damariscotta River and Great Salt Bay from Rte. 1 and Mills Road (Rte. 215).
- Views of the alewife stream and fishery in Damariscotta Mills on Rte. 215.
- View north across Damariscotta Lake from Rte. 215, including eagle nest.

CORRIDOR PLANNING

A number of state highways connect Newcastle with its neighbors. These are shown on Map 3 and include:

Route 1 (Wiscasset, Edgecomb, Damariscotta, Nobleboro and Waldoboro)

Route 1B (Damariscotta)

Route 194 (Alna, Whitefield and Pittston)

Route 213 (Jefferson)

Route 215 (Nobleboro, Jefferson and Pittston)

Many of these towns share similar issues and concerns along these corridors and several are in the process of preparing comprehensive plans. It would be beneficial for these communities to jointly discuss issues such as road safety, speed limits and community character.

In addition, MDOT's new Gateway 1 effort has brought together towns along the important Route 1 corridor from Brunswick to Belfast to discuss common problems and seek common solutions. Newcastle has appointed a Town Response Committee and is actively participating in the process.

REGIONAL TRANSPORTATION ADVISORY COMMITTEE

Newcastle is one of 72 communities in MDOT Region 5, which includes all of Lincoln, Knox and Sagadahoc Counties, all of Waldo County except Burnham, Unity and Troy, and Brunswick and Harpswell from Cumberland County. The Region 5 Regional Transportation Advisory Committee (RTAC) is an advisory committee to MDOT with the charge of providing input into the transportation planning process. Members represent diverse interests, including environmental, business, municipal, state, alternative modes of transportation and general public interests

RTAC 5's Plan for the Greater Mid-Coast Region has number of recommendations to MDOT that may affect Newcastle. They include:

- Continue to evaluate posted speed limits and adjust as necessary
- Encourage alternative scenic loops
- Recommend using Maine Turnpike tolls to improve roads affected by secondary traffic from the turnpike
- Provide MDOT technical assistance to bridge structures less than 20 feet in length that are not on state or state-aid roads
- Give high priority to arterial highway improvements
- Identify gravel truck routes and increase priority within the major collector program
- Continue the Rural Road Initiative that provides towns with a 2/3 match
- Consider expanding the state bridge program in the future
- Encourage towns to plan because unplanned land use can affect the functionality of roads and the longevity of road improvements
- Encourage Context Sensitive Design that is based on consistent decision-making, environmental consciousness; protection of human and natural environment and encouragement of citizen input, collaboration and consensus building
- Continue to evaluate all state bridges for potential public access to water

- Work with towns to address the community impacts of highway projects
- Encourage transportation and its land use impacts to be a strong component of comprehensive plans
- Continue corridor rehabilitation of the Rockland Branch with an emphasis on improving design speeds
- Explore opportunities for attracting new shippers and consider supporting improvements such as loading platforms if such public investments facilitate freight growth
- Eliminate grade crossings wherever possible on the Rockland Branch
- Encourage the formation of rail corridor committees to promote the development and improvement of passenger rail service
- Encourage towns to incorporate access management into their local ordinances
- Address transportation-related impacts to the Sheepscot River salmon habitat
- Work to decrease the weight limit on state roads to 80,000 pounds, which is the same as on the Maine Turnpike

ISSUES AND IMPLICATIONS

1. Increased traffic, especially large vehicle traffic, through Damariscotta Mills and Sheepscot Village are already changing the quality of life in these areas. The Town should continue to seek ways to reroute or discourage increases in traffic in these sensitive areas.
2. Continuing residential development on unimproved gravel roads could become a major financial issue for the town if improvement and maintenance of these roads is required in the future.
3. Increases in the number of driveways through increased residential development along town roads will continue to decrease the safety of these roads. Consider incorporating application of some or all of the state's access management rules on town owned roads.
4. The cited accident-prone intersection of Main Street and Mills Road points to the need for constructive safety change. Much of the traffic and grouping of automobiles can be avoided by implementing some or all of the following:
 - A. Traffic to Rte. 1 South could be reduced by building an on ramp (by Louis Doe's Hardware Store) from Rte. 215.
 - B. Traffic from Rte. 1 North bound for Rte. 215 could avoid the intersection by having an off ramp from Rte.1 to Rte. 215 (in the same general location of the Southbound on-ramp from Rte. 215 to Rte. 1.).
 - C. Better traffic control at the Mills Rd./ Main Street intersection can be had with the installation of a stoplight.
 - D. Enforcing of the speed limits on the Business Rte. 1 off ramp will increase safety and eliminate the tendency for vehicles to bunch up at the dangerous intersection.

Within the denser areas surrounding Newcastle and Damariscotta villages, public water and sewer services are available. For the rest of town outside of this area, water generation and septic disposal are an individual responsibility. This chapter provides an overview of this area's water and sewer utilities, as well as its communications infrastructure.

PUBLIC WATER SERVICE

Nearly one-third of Newcastle residents receive their water from the Great Salt Bay Sanitary District (GSBSD), which is a quasi-municipal water system that serves the Newcastle village and business districts in the community. GSBSD maintains a public water service area of approximately 600 families, 200 of which are located in Newcastle village. In addition, the Kavanaugh Water Company provides water to fourteen households in the Damariscotta Mills area of Newcastle.

The water supply for the GSBSD is pumped from Little Pond in Damariscotta to a standpipe on Academy Hill. The 651-acre watershed surrounding Little Pond includes an 80-acre natural pond, 15 acres of manmade ponds, 35 acres of recreational area, roads and a maintenance area.

There it is treated with chlorine phosphate and sodium fluoride. The water then flows downhill through the delivery system to users on Academy Hill, as far north as Cross Street, and south to the River Road and Pleasant street. In 2000, approximately 125,000 gallons per day was used by residents of both communities. Map 4 shows the current extent of the public water and sewer service.

The original infrastructure was installed in 1896. Since purchasing the water company in 1994, GSBSD has replaced over a mile of inadequate water mains in the Village districts. This has resulted in greater fire protection due to the increase size of the main as well as better water quality. Old mains that require constant maintenance exist on Pleasant Street, Glidden Street, and on the River Road (in the vicinity of the fire station).

Water quality is excellent and meets all of the requirements of the Safe Drinking Water Act. Service area expansion is anticipated, as are upgrades and an annual maintenance program. GSBSD does not foresee any major issue that will impact the district in the coming decade.

PUBLIC SEWER SERVICE

The GSBSD provides sewage treatment services to the majority of Newcastle village, in addition to large areas of Damariscotta, see Map 4. In 2004 the average daily flow for the entire system was approximately 140,000 gallons per day.

GSBSD has a secondary treatment plant with a lagoon system. The facility was constructed in 1986. This system has a design capacity of 268,000 gallons per day.

Plans for future sewage expansion in Newcastle are indeterminate at this time. However the District has prepared for expansion at the treatment facility by establishing a reserve account funded by impact fees for the purpose of building new lagoons.

Private septic companies operate in Newcastle. Newcastle provides facilities at the old town dump on Route 215 for spreading the winter storage of liquid waste from private septic systems in Newcastle. Expansion of this area is being discussed.

COMMUNICATIONS

Adelphia Cable Company, Tidewater Telephone Company, and several cellular telephone companies serve the town. Within these systems several internet service providers exist. There is a countywide 911 emergency notification system. The system is fully operational and local addresses have been assigned to each residential unit.

An emergency communications system is networked through the county in Wiscasset. The system is managed by the Lincoln County Emergency Management Department and staffed by the Sheriff's department.

ISSUES AND IMPLICATIONS

1. The corporate structure of the GSBSD does not allow the company to take on additional debt to finance expansions of the system. While there is some current expansion room, planning for more dense village districts would be enhanced by expansions of the system through planning and bonding for the costs.

TOWN BUILDINGS

The Town has recently completed the construction of a new firehouse and medium size meeting area. It has also purchased another building to replace the Town office. The firehouse and town office are on a contiguous piece of property on River Road. The town is planning on building a new town office.

The town owns 88 acres of land on 9 parcels. The list below identifies these parcels by type of use and acreage.

Land Use	Location	Acres
Capped Land Fill	Route 215	25
Woodlands	Route 215	46
Sludge Spreading	Route 215	5
Sand Storage/Old Land Fill	Mills Road	4
Recreation		
ROW to Damariscotta River	Glidden Street	0.1
ROW to Damariscotta River	River Road	0.75
Town Landing	Dam. Mills	0.05
Play Ground	Sheepscot	6
Municipal Office/Fire Station	River Road	1
Taniscot Building	Bus. Route 1	0.26
Sheepscot Fire House	Sheepscot Road	0.1
Total		88.26 acres

SOLID WASTE

Solid waste disposal from Newcastle is handled at the Nobleboro transfer station. This transfer station is owned and operated by the Nobleboro/Jefferson Council of Governments which contracts with the town of Newcastle to accept waste. This site accepts household refuse, building materials, minor hazardous waste such as batteries and oil. The site recycles cardboard, newspaper, wastepaper, recyclable plastic, glass, tin cans, and metal. In 2004 the town authorized spending of \$109,000.00 to operate and transfer waste from the Nobleboro site.

The town does not have a hazardous waste disposal site.

POLICE PROTECTION

Newcastle has no town police force. Police protection is supplied by the Lincoln County Sheriff's office in Wiscasset and by the Maine State Police. Newcastle is taxed by the County for police protection. Last year's assessment was \$303,000.00. This assessment provides local patrol and jail facilities.

CODE ENFORCEMENT AND PLUMBING INSPECTION

Code enforcement and plumbing inspection is done by a single certified individual. Approximately 137 permits were issued in 2003. These permits range from home occupations, demolition through plumbing permits. The code enforcement officer received \$7,040.00 for his services to the town in 2003.

FIRE PROTECTION

The fire company is an all-volunteer fire department that operates from a new firehouse on the River Road. The fire company also maintains the firehouse in Sheepscot and a historical site in the Newcastle business district. The fire company answered 106 calls in 2003. The company received a \$52,000 grant from the Federal emergency management agency in 2003 to purchase breathing apparatus and related equipment. The company has plans to purchase a new truck. Each volunteer member has a full set of turn out gear.

The department's major equipment includes:

- One 1000 gpm pumper
- Two pumpers with 750 gpm pumps
- One pumper with 250 gpm capacity
- A tanker, with 2300 gallon tank
- One jeep woods vehicle
- A 12.5 kw generator on a 4 wheel trailer
- One utility vehicle

Communications is maintained by a base radio with two remotes, 7 mobile radios, 6 portable radios, 19 monitors, 20 pagers and 12 fire phones.

Fire company meetings are held on the first and third Tuesday of each month and each meeting includes some training and gear checkout. Formal courses on fire fighting technique are offered on a regular basis.

Firefighting equipment must be replaced on a regular basis to ensure the health, safety, and welfare of the community.

The fire department feels that fire-fighting capacity in Newcastle needs to be upgraded by requiring all developments to install adequate road access for fire vehicles with turnarounds and fire ponds within the vicinity for single-family development and on site for subdivisions. Also, adequate water sources must be identified.

EMERGENCY MEDICAL SERVICE

LincolnCounty ambulance provides services to Newcastle as well as to five surrounding communities. The ambulance service responded to 2,393 calls in 2,003. This was an increase of 51 calls from the year before. The fire department and the ambulance service work together on emergency calls. The ambulance service maintains a first responder service for automobile accidents and household emergencies. The ambulance service also provides community training, medical coverage the public functions, and a special request program.

HEALTH CARE

MilesMemorialHospital and its various affiliates (all governed through the Miles Development Foundation) comprise the major medical facilities serving Newcastle and LincolnCounty. Most of the Miles facility, including the hospital, is located in Damariscotta. Two units, the BayviewMedicalBuilding and the Safeharbor Substance abuse clinics are located in Newcastle. The Hospital has had several expansions in the last ten years. It employs over eight hundred individuals, including 75 Newcastle residents. The hospital offers long-term elderly care facilities and day care for the elderly. One of the assisted living centers is Coves Edge in Damariscotta.

The Lincoln Home on River Road in Newcastle offers assisted living and unassisted apartments for elderly individuals. This home expanded to a 32-bed facility in 2002.

The MobiusCenter in Newcastle offers supervised care for adults with special needs. It houses about six adults.

CULTURAL RESOURCES

Newcastle is supported by the Historical Society and the Skidompha Library.

The Skidompha Library is in Damariscotta and receives annual Newcastle town support. It has had a recent renovation which completed its five-year expansion plan. It was originally built in 1803. Most of the old structure has been replaced with new construction. It has a collection of over 24,000 books. It supplements the books with electronic, magazine and newspaper subscriptions. The library is always looking for volunteers and local financial support to help finance its operations. The Library is open 38 hours per week, Monday through Friday 10-5 and 10-1 on Saturdays.

In 2003, the Skidompha Library asked for and the town of Newcastle provided an appropriation of \$12,000, as detailed in the 2003 Town of Newcastle Annual Report. The amount is the same as the 2001 and 2002 Town of Newcastle appropriations.

The Newcastle Historical Society meets on a regular basis at the Taniscot building in Newcastle. The building houses the Newcastle Fire Department's antique fire engine and a historic exhibit.

EDUCATION

The Town of Newcastle does not directly operate any schools. The elementary school is operated by the GreatSaltBayCommunitySchool District which includes Newcastle, Bremen, and Damariscotta. The school board is made up of nine elected members, three from each town. The secondary school students are tuition to area schools, primarily to LincolnAcademy, a private secondary school located in Newcastle.

GreatSaltBayCommunitySchool

GreatSaltBay community school is located in Damariscotta. The original building was built in 1978 and expanded in 2000 and now has thirty-one classrooms. The building is valued at \$3,000,000 and has around \$400,000 in furnishings. Debt on the new structure will be paid off in 2010.

LincolnAcademy

Located on Academy Hill, this facility comprises several permanent buildings, a temporary structure, outside athletic facilities, and parking.

The Academy has just completed the construction of a new cafeteria, parking lot and renovated parts of the main school building. There are future plans to continue with building projects. The school wants to expand its library and science facilities in the next three years. Work has begun on a new science facility.

In the last 10years enrollment has increased from 450 to 611 students. As is happening across the state, enrollment had been projected to decline in the last few years, but has unexpectedly continued to rise. Predictions of future enrollment are therefore uncertain.

CEMETERIES

At least thirty-six cemeteries have been identified in Newcastle. Most are old and private with the oldest dating back to 1758. The private cemeteries tend to have limited space or even no more space available. Pine Knoll on Hopkins Hill is the only public cemetery that has space available. The Catholic Church has expanded its burial facilities. Below is an inventory of cemeteries. A recent book published by the Newcastle Historic Society "Cemeteries in Newcastle, Maine 1758 to 2004" has listings of all of the persons buried in each cemetery.

Newcastle's cemeteries include:

- St. Patrick's
- Booth
- Hussey
- Glidden Street
- Pine Knoll
- OldCongoChurch

- Hopkins
- Barstow-Bailey-Farley
- Old Bailey
- Glidden
- Capt. A. E. Dodge's Farm
- Frances Perkins' Farm
- Dodge
- Gutek
- Lynch
- Davidson
- South Newcastle
- Malcolm
- Old Dunton
- Lincoln
- Jones-York
- Jones-Bartlett
- Hatch-Hunt
- Whitehouse
- Hatch
- Nash
- Hall
- Perkins Graveyard
- Perkins (John)
- Sheepscoot
- Follansbee
- Cunningham
- Old Pinkham Yard
- Campbell
- Averill
- Zeller

ISSUES AND IMPLICATIONS

1. The town has a number of facilities with multiple uses. A master plan of municipal facilities should be created.
2. Many town services are common to the surrounding communities. A regional effort to provide common services should be initiated.

Land use in Newcastle has been guided since 1970 by Comprehensive Planning approved by the town. The first Comprehensive Plan was approved by Newcastle in a 1970 town meeting long before the idea had become popular, showing significant forward thinking by the townspeople over many years. The second Comprehensive Plan approved by the town in 1991 built on the first plan and expanded the role of planning as a means of guiding growth in town. Current land use ordinances in Newcastle are guided by the 1991 Comprehensive Plan and regulated by the Land Use Ordinance adopted in 1997. The Land Use Ordinance follows the town policy set forward in the 1991 Comprehensive Plan very well with only a few notable exceptions. The Land Use Ordinance is comprised of a site plan review, residential growth limits, a subdivision ordinance, a floodplain management, a design review ordinance, a mobile home park ordinance, a shoreland zone ordinance, erosion, sedimentation control and storm water management, zone definitions, district standards and general performance standards. The town is divided into nine zones, Rural, Shoreland A, Shoreland B, Village Residential, Village Business, Light Industrial Route 1, Commercial, Maritime Activities, and Resource Protection. There is also a wildlife habitat overlay district. The official Land Use District Map and Shoreland Zoning Overlay, March, 1997 are at the Town Hall. The information is also attached to this document in Appendix D, Maps 5, 6 and 7.

EXISTING LAND USE

Topography. Newcastle is a longish, thin series of ridges running NE-SW, separated by valleys often filled with rivers, streams, marshes and wetlands. The roads mostly go northeast-southwest, following the ridges or valleys, but a couple of east-west cross roads cross the ridges and low wetter areas. Routes 215 & 194 cross in the north and Route 1 and Sheepscot Road which form a “Y” shaped cross road in the south. The result is a few centers of population on the edges, mostly next to the adjacent towns reached by bridges, where villages have grown up around the bridge traffic rather than in a ‘center’. All three villages of any size are generally small and mostly spread out. There are not real centers where shops are clustered. Most of the business and residential areas are strung out along the roads. Even near the village of Newcastle much of the commerce is spread out north and south of the ‘center’ and the residential area besides the prime ‘Great American Neighborhood’ along Glidden Street, is spread out along River Road, Mills Road and especially Academy Hill Road, where our few larger subdivisions are found. Houses are strung like beads on a string along the roads, businesses are also strung along Route 1 like larger beads or are a short distance away on Main St. (Business route 1), River Road or Mills Road, where our one industrial facility, Lincoln County Publishing, is found. The two smaller villages of Damariscotta Mills and Sheepscot are diffuse residential areas with hardly any businesses.

Commercial/Retail/Industrial. The real business areas are in a short one-mile section along Route 1 and in Damariscotta Village. Damariscotta and Newcastle are called the Twin Villages, but they are very different in size and drawing power for business. Without question Damariscotta is the principal shopping area and serves the entire Damariscotta-Newcastle area, the possible exceptions being South Newcastle and Sheepscot which are more oriented toward Wiscasset. Damariscotta-Newcastle really comprises a small service center for the region, which is proving attractive to larger retail businesses.

Agriculture. Except for tree growth areas, most agriculture is disappearing, the Russell and Straw farms being notable exceptions (see Map 8). Nearly 40 percent of the land in Newcastle is in tree growth and vulnerable to development since the cost of removing land from the Tree Growth Program is minimal in relation to the profit to be made from selling lots. Subdivisions can be expected to appear in greater number as the bottleneck in Wiscasset and the wave of growth from Greater Portland continues to roll up Route 1.

Mining. Except for 6 inactive gravel pits scattered along the periphery of town, there is little mining and it has minimal impact on the town. A much bigger issue are the extensive gravel pits north of town and the truck traffic they generate carrying gravel down the roads to the two peninsulas south of the Twin Villages.

Large Undeveloped Tracts. Large areas exist between the roads where growth would be possible if roads were put in. These are a great challenge but also a great opportunity. Large areas on either side of Academy Hill Road and nearby offer areas for expansion of residential development, with the possibility of incorporating small, local business centers to serve their neighborhoods. Since these areas are close to the Newcastle-Damariscotta service center, development here would have less impact on school bussing and traffic to shopping and even commuting to Greater Portland than in other areas of town.

Newcastle is a town of many facets from bustling business Route 1 to upscale shorefront and intown properties and businesses to serene, rural landscapes where people still make all or a part of their living from the natural resources in the rural and marine environments. How do we sustain both in light of inevitable growth pressure moving up the coast? The one stable, sure thing about how the town will react to growth pressure is that the town will change in response to that pressure. It's how we hope to guide that change that this Plan is all about.

ANALYSIS

The town has responded to a questionnaire put out by the Committee asking what the important issues confronting the town are and how to resolve them. The town has participated in two visioning sessions put on by the Committee to formulate the townspeople's ideas for the future. All of this information has been incorporated into the revised land use goals and policy for the town. The following is a short list of the highlighted issues from these sources: Character of the town centers, Route 1 traffic, safety and development, Rural nature and/or flavor of town maintained, reasonable commercial development for enhancing jobs and helping the tax base, don't change anything in a radical way, keep the essence of the town intact.

This Comprehensive Plan continues from ideas expressed in the first two plans, maintaining most of the ideals and mechanisms from them. The zones currently in place will not significantly change. There are some changes to the definitions of these zones, some overlay districts have been created and some incentives have been built into the Comprehensive Plan that convey current thinking in terms of how to control sprawl and guide growth in directions that will not be anathema to what we hold dear in the long run.

New ordinances called for in this update of the plan will provide greater restrictions of access and egress to major highways, more control on the types of and locations for businesses moving into the area, a considered economic incentive to stimulate economic growth and convincing guides to residential development in every zone in town. The prime effort for

residential development is to allow and encourage infill within town centers and to continue to allow, but guide, development outside these centers in order to discourage expensive sprawl, encourage walking distance residential town centers and preserve open space without seriously impacting the financial well being of the landowners. No small feat.

ISSUES AND IMPLICATIONS

1. Commercial growth in town has been minimal and the proposed light industry park identified in the 1991 CP has not materialized. This update of the Plan recommends the creation of a TIF, or tax incremental financing program in Newcastle that will actively promote economic growth. The Plan further recommends that this program create a zone for such activity and that a dollar amount be studied and set along with guidelines to encourage new business, or expansion of local business within the zone. Reasonable limits to this growth should be built into this plan, but the town should become proactive in promoting economic well being. Such limits should include square foot size limits to prohibit big box merchandising.
2. The current zoning rules for the mixed residential/commercial districts do not allow very much infill to create high-density housing. The Plan recommends changes in the setback and lot size requirements in high-density housing districts to allow appropriate infill to occur, a major goal in combating sprawl. One of the requirements of this change is that the public utilities of sewer and water be extended to allow this to occur throughout the range of the high-density housing districts.
3. The current Land Use Ordinance does not recognize the importance of wildlife habitat and the wildlife landscape requirements for various species, including deer wintering areas. The most important wildlife corridor in Newcastle runs North-South, just west of the ridge dividing the DamariscottaRiver and SheepscotRiver watersheds, namely the Deer Meadow Brook Corridor. Local landowners have long recognized the importance of that corridor and have kept it as back land and used it primarily for forestry and recreation purposes. Indeed, most of the land in that corridor is registered in the State tree growth program. The 1970 Comprehensive Plan recognized the value of that corridor. This Plan calls for the town to work with local landowners to formulate an agreement to protect that corridor by developing alternative development schemes for the land so that the landowners do not lose value for their land. In addition, the Plan proposes adding the Deer Meadow Brook to the 250' resource protection zone already protecting much of Newcastle's important water resources.

FUTURELAND USE PLAN

The nine land use districts currently in place in Newcastle will remain in effect in the proposed land use plan. The current wildlife habitat overlay district and the Shoreland Zone will also remain and there is an additional overlay district for high-density development. The Plan

recommends some definition changes to the districts and a possible boundary shift for the light industry Route 1 district.

The nine proposed districts and the type and scale of development intended to be included within each district are as follows. See Maps 5 to 10.

Rural District R

The Rural District R encompasses most of the town of Newcastle north of Route 1 and the Sheepscot Road. The western end of the southern boundary leaves the Sheepscot Road and runs northwest from the intersection of the Sheepscot Road and Deer Meadow Brook. The eastern end of the southern boundary follows parallel to the Academy Hill Road and then angles northwest to the southern end of Damariscotta Lake. Currently permitted uses are dwellings, including mobile homes, apartments and condominiums up to six dwelling units per building, community buildings, public utilities and public recreation facilities. Also permitted are camping areas, agricultural uses, sale of farm produce, forest management and timber harvesting, accessory buildings and uses and home occupations. Minimum lot size is one acre, minimum road frontage is 100 feet, minimum front yard setback is 30 feet and side yard setback is 15 feet. Maximum building height is 3 stories, or 40 feet. Special exceptions include professional offices, retail and service establishments, light manufacturing, medium manufacturing and mobile home parks. Manufacturing setbacks are 50 feet front, side and rear with an additional 10 feet setback for each 1000 square feet of building area over 2000, up to a maximum of 150-foot setback. Along Route 1, the setback is 200 feet from the centerline of route 1 for building and parking. Additional restrictions are listed in the LUO.

This Plan will change Rural District R to include greater pressure for open space development for subdivision, with clustering of housing near the road and keeping the back land for open space. Incentives for such development might be to reduce the minimum size of house lots to reduce costs. Greater limits on manufacturing in the Rural District will be used to push for more use of the light industrial Route 1 district and more incentives offered for keeping land in agriculture and forest management.

Shoreland District A

Shoreland District A comprises the majority of the town of Newcastle south of Route 1 and the Sheepscot Road and includes the wedge of land south of boundary line running northwest from the intersection of the Sheepscot Road and Deer Meadow Brook. It also encompasses the land between Dyer River and the Sheepscot River north to Route 194 with some exceptions at the north end. Permitted uses include dwellings, excluding mobile homes, condominiums with a limit of six units per building, agricultural, forest management and timber harvesting, accessory buildings and uses, home occupations, community buildings public utilities and public recreational facilities. Minimum lots are two acres, minimum road frontage is 200 feet, minimum front yard setback is 30 feet, and minimum side and rear yard setback is 50 feet. Also, maximum building height is three stories, or 40 feet. There are no special exceptions in the District. Other restrictions are listed in the LUO.

There are few changes to recommend for the Shoreland District A other than to encourage the use of open space development for subdivisions with houses clustered near the road and the back land maintained as open space. Incentives for such development might be reducing the minimum lot size within the clustered housing to reduce costs. Greater incentives might be offered for keeping land in agriculture and forest management.

Shoreland District B

The Shoreland District B extends along the shore of Great Salt Bay to the Mills and includes the land between the Mills Road and the Academy Hill Road north of the Village Residential District as well as a strip of land on the west side of the Academy Hill Road. The western boundary of Shoreland District B leaves the Academy Hill Road at Timber Lane and then follows the power line northwest, continuing to the West Hamlet Road just west of the southern end of Damariscotta Lake. Permitted uses in Shoreland District B include all those from Shoreland District A plus apartment buildings with a maximum of six dwelling units per building.

Changes are recommended for Shoreland District B, as the entire District will fall in the proposed High Density Development Overlay District. Currently, minimum lot size is 1 acre, minimum road frontage is 100 feet, minimum front yard setback is 30 feet, and minimum side and rear yard setback is 15 feet. Also maximum building height is three stories, or 40 feet. See High Density Development Overlay for recommended changes to these limits. There are no special exceptions in Shoreland District B. Incentives for preserving open space will apply to this district.

Village Residential District

The Village Residential District is the area immediately surrounding the town center of Newcastle and is a patchwork with the Village Business District. Permitted uses include Dwellings, apartment buildings or condominiums with a maximum of 6 units, home occupations, agriculture, community buildings, public utilities and public recreation facilities. Minimum lot size is 20,000 square feet (10,000 square feet if on public sewer), minimum road frontage is 100 feet, minimum front yard setback is 30 feet and side yard setback is 15 feet. Maximum building height is three stories, or 40 feet. However, virtually all of Village Residential will be in the High Density Development Overlay District, thus lot size, front and side setbacks will be considerably less. See the High Density Development Overlay District description below.

Village Business District

The Village Business District is the area along the major roads in the Newcastle Village and along the water. Permitted uses include Dwellings, apartment buildings or condominiums with a maximum of 6 units, home occupations, agriculture, community buildings, public utilities and public recreation facilities, retail and service establishments, professional offices, and transient lodging. Minimum lot size is 10,000 square feet, minimum front yard setback is 30 feet and side yard setback is 15 feet. Maximum building height is three stories, or 40 feet. However, virtually all of Village Business District will be in the High Density Development Overlay District, thus lot size, front and side setbacks will be considerably less. See the High Density Development Overlay District description below.

Commercial District C

The Commercial District is 2,000 feet southwesterly of, and 2,500 feet northwesterly of, Sheepscot Road along Route 1, 1,000 feet deep on the south and 500 feet deep on the north of the right of way. No change is recommended except to encourage small mall-like areas where

several businesses share a common T-junction road off Route 1. Incentives for such development might be reducing the minimum lot size within clustered businesses to reduce costs

Light Industrial Route 1 District

Light Industrial Route 1 District R-LI is on the southeasterly side of Route 1 to a depth of 200 feet from the edge of the right of way for a distance of 3,500 feet northeasterly from Lynch Road. Light manufacturing, retail and service establishments and Professional Office are allowed. No changes are recommended for the district except that it is proposed to extend the district to include the area north of Route 1 between Lewis Hill Road, Route 1, Sheepscot Road and the railroad tracks, see Map 10. This change would encourage the possibility of direct access to the railroad for businesses. The TIF district might be placed in this area, at least in part.

Marine Activities District

The Maritime Activity district is that part of the Village Business District that is located on the southerly side of Main Street along the Damariscotta River shore from the Park to the Damariscotta River Bridge, and also on the river side of Pleasant Street, at Map 11, Lots 40 and 40-A. All uses that are functionally water dependent uses are permitted, except heavy manufacturing. Use standards are the same as those in Rural R and for professional offices, retail and service establishments, light manufacturing and medium manufacturing, the additional use standards of the Light Industrial Route 1 District apply. Lot size, front and side setbacks will change for areas designated as being part of the High Density Development Overlay District.

Resource Protection District

The Resource Protection District is that part of the town that is located in any part of the shoreland zone as identified on the shoreland zoning map, or elsewhere which contains endangered species as identified by the Department of Fisheries and Wildlife or unique natural sites as identified on the zoning map at the Town Hall. Within this zone, forest management practices consistent with state harvesting regulations are permitted. Special exception may allow uses permitted in Rural R and Commercial District C.

Wildlife Habitat Overlay District

The Wildlife Habitat Overlay District, is an overlay district in other districts that is a D-2 or D-3 deer yard area or other significant wildlife habitat identified by the Department of Inland Fisheries and Wildlife. Uses that would be permitted or special exception uses in that district if it were not for the Wildlife Habitat Overlay District are allowed, provided that in addition to the district's requirements, the proposed use has been reviewed by the Maine Department of Inland Fisheries and Wildlife, and wildlife management recommendations have been delivered to the landowner. Timber harvesting shall be a special exception, to be allowed if consistent with State harvesting regulations and the resource protection standards within the shoreland district, or to deviate from those standards, the written plan of a Department of Inland Fisheries and Wildlife biologist.

Shoreland Zone

The shoreland zone is defined as all land areas and structures within two hundred fifty (250) feet, horizontal distance, of the normal high water line of any great pond, river or saltwater body; within two hundred fifty (250) feet, horizontal distance of the upland edge of a coastal or

freshwater wetland; and within seventy-five (75) feet, horizontal distance, of the normal high water line of a stream. The Newcastle Land Use code devotes twenty-four (24) pages to defining the purposes of the Shoreland Zone and what restrictions apply. Most of these restrictions are mandated by the state and will not substantially change in the new Plan. The Plan proposes to increase the shoreland zone to 250 feet for the entire length of Deer Meadow Brook to provide consistency of protection to that wildlife corridor, see Map 7.

High Density Development Overlay

The High Density Development Overlay District will include the Village Business and Village Waterfront and Village Residential districts and will continue some distance North and South of town along the Mills Road and Academy Hill Road to the North and the River Road to the South. This Overlay District will also surround the village areas of Sheepscot and Damariscotta Mills. The proposed shape and size of each of these overlay areas is shown on Map 9. Only areas within these boundaries that are NOT resource protection or other of the State's critical natural resources, including wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas and other unique natural areas shall be eligible for high density development. All development in this district shall be subject to all applicable state and federal natural resource regulations. In particular the eligible district should not contain areas of: eagle nesting, deer wintering, wading bird and waterfowl habitat along the Damariscotta River and Great Salt Bay as well as the Beginning with Habitat Focus Area on the Sheepscot River. The proposed shape and size of each of these critical habitat areas is shown on Map 11.

This overlay district will allow higher density housing through infill and a smaller minimum lot size. Recommended minimum lot size will be some fraction of the current minimum, perhaps down to 5000 square feet on sewer in Village Residential and down to the size of the building in Village Business. Minimum road frontage, minimum front yard setback and minimum side and rear yard setback will also become a fraction of current values, possibly down to building width road frontage and no front or side setbacks in Village Business. Road frontage and setbacks would be greater in Village Residential and greater still in Shoreland B and Rural sections of the High Density Development District Overlay, but much reduced from current values. Also maximum building height would remain three stories, or 40 feet. Extended water and sewer service in the Newcastle town area should facilitate this growth. Development of neighborhoods and a pedestrian-based lifestyle will be encouraged as well as mixed small (convenience shop) commercial and residential areas.

Tax Increment Financing District (TIF)

The Tax Increment Financing District is planned to aid certain types of desirable but less economically feasible development. The zone is proposed to include the Light Industry Route 1 District, the Commercial Route 1 District and the High-Density Development Overlay District. The purpose is to encourage larger scale development projects, multi housing, many lot subdivisions, commercial and light industrial 'malls' or multi business 'parks' sharing a common access road with a 'T' junction to Route 1. Projects would request partial tax shelter and the 'incremental' increase in tax revenue over previous taxation would be dedicated to paying off loans to do infrastructure such as roads, sewer extensions, common, multiunit, septic treatment fields, perhaps on common land owned in association, and where 'back' land would be perpetually preserved and kept wild with trails for residents to enjoy. There would be no loss of

taxes to the town and after the TIF period was over there would be increased taxes from the increased value of the property.

Opportunities for recreation abound in Newcastle. The region is famous for its sport fishing, sailing, hiking and scenic viewing opportunities.

The Dodge Point Reservation is a heavily used state park located on River Road that provides popular walking trails and has a dock allowing access to the Damariscotta River estuary.

The Damariscotta River Association (DRA) manages the Sherman Marsh Preserve, accessed from the Lynch Road, which has a trail into the peninsula that juts into Sherman Marsh. There is an access point at the Sherman Marsh Rest Stop, managed by the Department of Conservation that allows access for canoes and kayaks to both Sherman Marsh and the Marsh River. The rest stop also has picnic tables, grills, public restrooms and a dog run for the public.

In Damariscotta Mills, the DRA, in collaboration with other environmental groups including the Damariscotta Lake Watershed Association (DLWA), maintains walking trails and informational kiosks at the alewife run between Great Salt Bay and Damariscotta Lake. When the fish run in springtime, the public can walk along the trail and watch the fish massed in the series of rocky switchbacks that let the fish climb from the ocean to the lake for spawning. Also in the Mills is the Damariscotta Lake Beach with a small beach but no parking facilities.

The DRA's Salt Bay Farm Heritage Center is located on Belvedere Road in Damariscotta, and has extensive trails through meadow, marsh, pond, estuarine shore and woods ecosystems. The Glidden Point Salt Bay Trail system starts opposite Lincoln County Publishing Co. on Mills Road, Newcastle, and extends to the end of Glidden Point with a 3-mile loop.

The trails and parking lot on DRA's new Marsh River Bog, on Route 1 across from River Road are in the process of being established. This preserve includes a bog.

The Sheepscot Valley Conservation Association (SVCA) maintains hiking trails on the Griggs Preserve in South Newcastle on the Sheepscot River, accessed off of Station Road. Future hiking trails will be located on the former Marsh River Estates subdivision on the Marsh River, a tributary of the Sheepscot River, accessed from Osprey Point Road off Route 1. Hunting, fishing and hiking as well as other day uses are allowed at both properties. As these and other access sites are created and as their use increases, additional parking facilities at these access points may have to be made for safety reasons.

The Sheepscot Reversing Falls in Sheepscot is popular for canoes and kayaks where boaters run the standing waves formed at the natural ledge in the river at the turn of the tides.

The Town of Newcastle has a right of way access to the Damariscotta River off Glidden Street and on the River Road. The Damariscotta-Newcastle Town Landing is located in the Damariscotta Town Parking Lot on the Damariscotta River. It has an asphalt ramp suitable for the launching of any trailerable boat, and is open to the general public. Another boat ramp is located on Damariscotta Lake, just north of the town line in Jefferson on Rte 215.

There is a town park adjacent to the Second Congregational Church on Business Route 1 with flowerbeds, seats and a memorial. A playground and community building on Sheepscot Road in Sheepscot called the Harriet Bird Playground offers a baseball field, basketball net and parking for 50 cars.

Several areas in town offer opportunities for hunting, snowshoeing, cross country skiing and wildlife viewing. The southern end of Damariscotta Lake is known for its bald eagle nest and access to the lake for ice fishing. Access to Great Salt Bay on Belvedere Road, Nobleboro, is a popular spot for ice fishing.

The Lincoln Academy has many recreational resources that are available for use when not in use by the school. These include hiking and ski trails, soccer and baseball fields and the gymnasium and cafeteria for rent for large town gatherings such as the town meeting.

Residents of Newcastle have access to other facilities including the YMCA's in Damariscotta and Boothbay, the Community Center in Wiscasset and the new Teen Center in Damariscotta.

In addition to these public sites, approximately forty percent of the land in Newcastle is under some form of easement or current use tax program status, such as the tree growth program, that lends itself to recreation. Parcels in the tree growth current use taxation category dominate this category. Residents have generally allowed hunting on these properties and many, especially in the Deer Meadow Brook area, have snowmobile trails used by the neighbors.

ISSUES AND IMPLICATIONS

1. Newcastle residents have access to a wide array of recreational opportunities. However, with an increase in population and residential development in the future, demand will increase as access to privately owned lands may decrease.
2. The Town has been asked by several groups to expand the amount of sidewalks in the town. Sidewalks now connect to Lincoln Academy, to the town office/fire station and along Mills Road a short distance. Extension beyond Lincoln Academy on Academy Road and continuing Mills Road to the Post Office would be a good investment to improve the walkability of the town.
3. With the increased use of the town landing and the new small marina at the new Newcastle Shores development, septage disposal from boats becomes an increasing problem. The Town should investigate working with Damariscotta to install a pump-out station at the town landing.

Ancient shell middens (discarded oyster shell and other domestic waste) in Newcastle, particularly on the tip of Glidden Point, show that human habitation dates back as far as 4000 BC; the original middens, including those in Damariscotta across the river, were estimated to be among the largest accumulation of shells in the world. Abenaki Indians occupied the area from Bangor to Saco from 4000 BC on. The earliest European settlement was during the 1640's, possibly earlier in Sheepscot. Farming people settled in Sheepscot as well as in what became Newcastle Village. The villages were sacked and burned, in 1675, and the settlers driven off, during King Phillips War. Some returned but were driven off again in 1689, none returning until 1725.

In 1730, peace was renewed temporarily and rapid settlement occurred. Villages grew rapidly at the Damariscotta Mills and Sheepscot. Abundant supply of timber fueled growth and a lumber mill was established at the Mills. The area was plagued with Indian wars until 1759. In 1753 the District of Newcastle, with a population of 454, was incorporated; it was named in honor of the Duke of Newcastle, the king's secretary and a friend of the colonists. Seven years later Lincoln County was established; at that time it included all of Maine (then part of Massachusetts) except York and Cumberland Counties. The county seat was in Pownalboro. Newcastle became a town in 1775.

The period of 1760 to 1860 was the most expansive in the Town's history. The lumber trade and shipbuilding, begun in 1765, drove the growth. The first bridge was built across the Sheepscot River in 1794. Three years later the Damariscotta was bridged at the site of the present Newcastle Village, which was the least developed of the three villages in town.

The General Court of Massachusetts chartered Lincoln Academy in 1801. The first Academy building was on the River Road, where a continuation of the old Sheepscot Road, beyond the present Route 1, joined it. It burned 1828 and the present structure was erected in 1829 at the present location. Newcastle's first grade school was built in 1803 in Sheepscot and operated until 1944. These early schools showed that the Town recognized the need for education at an early date.

The oldest Catholic church in New England is St. Patrick's Church, which was dedicated at Damariscotta Mills in 1808. The bell in the church tower was cast by Revere and Sons in Boston in 1818. The oldest Protestant church in Newcastle, dated 1825, is in Sheepscot.

The prosperity enjoyed during this era of shipbuilding and lumbering lasted until the 1900's. With many Newcastle men involved with the war 1914-1918 and the gradual decline of the clipper ships combined with the advent of the steamship, many of the numerous shipyards along the River were forced out of business.

During this same period it was discovered that the banks of the Sheepscot and Damariscotta Rivers were composed of the blue clay which was ideally suited for the making of

soft brick. Soon there developed brickyards whose products were shipped to all parts of the eastern seaboard. Up to 5,000 cords of wood a year were consumed in making bricks; nearly every tree in the area was cut down by 1900. Eventually, a financial disaster forced nearly all the yards to close.

Another industry was the Higgins Iron Foundries at Damariscotta Mills which enjoyed considerable business at this time. Evidence of the era was to be seen in the ornamental iron fences that surround some cemeteries and used to stand in front of the old Dixon House (formerly part of the Skidompha Library until the new building was built). Previously it stood at the foot of Academy Hill Road at the Austin/Gentherner house.

The first train arrived in Newcastle on July 17, 1871. The Town was served by the Knox and Lincoln Railroad until the Maine Central Railroad took over in 1890. Although communication with the larger cities became easier, the railroads created tremendous financial burden to the towns because the purchasing of railroad bonds was a prerequisite to the establishment of a railroad system. Many students from distant towns on the rail system traveled to Lincoln Academy each week. Passenger train service from Bath to Rockland was discontinued in 1959. In 2002 the rails were upgraded by the state, which took over the ownership of the system and renewed rail passenger service (summer, seasonal) began in 2004.

Toward the close of the 1800's many modern improvements came to Newcastle. The Taniscot Fire Company was organized in 1876, water works were installed in 1897, an electric light company was formed in 1906 and a steel, overhead truss bridge was built across the Damariscotta River in 1905. It was replaced by the present bridge in 1952. By 1873 there were post offices in Newcastle Village, Sheepscoot, North and South Newcastle, the earliest being opened in the Village in 1795. In about 1890, fifteen separate schools were in operation. The system of district schools continued until the formation of the School Unions in 1918.

The Maine Historic Preservation Commission lists Inventory Data for Municipal Growth Management Plans: Newcastle. The inventory data as of September, 2002 is as follows:

Resource: Prehistoric Archaeological Sites: by Arthur Spiess

31 sites consisting of: #'s 26.9 and 26.60 in Sheepscoot Village near the Reversing Falls; 26.1, 26.19, 26.20, 26.21, and 26.22 at the oyster shell midden near the Route 1 crossing of the Damariscotta River; and various other sites which are all shell middens located on the banks of the Damariscotta River between Little Point and the southern town boundary.

The following are listed in the National Register of Historic Places, site 16.168 at Dodge Point; Site 26.01, the Glidden Midden; and sites 26.15, 26.20, 26.22, 26.27, 26.48, 26.49, and 26.50 in the Damariscotta Shell Midden Historic District.

Resource: Historic Archaeological Sites: by Leon Cranmer

ME 307-001 Sheepscoot Farms Site (ca. 1640-1689), English Settlement

ME 307-002 Coggeshall Garrison Site (ca. 1726 on), English Garrison House

ME 307-003 Dodge Upper Cove Brickyard Sites (19th-century), American Brickyard

ME 307-004 Brickyard Site (19th-century), American Brickyard

ME 307-005 Currier Site (ca. 1800), American Homestead

ME 307-006 Hale Site (ca. 1740-1780), Anglo-American Domestic
ME 307-007 John Ward House Site (by 1757), Anglo-American Garrison House
ME 307-008 Winslow House Site (by 1757), Anglo-American Garrison House
ME 307-009 Capt. Nickels House Site (by 1757), Anglo-American Garrison House
ME 307-010 Dodge Point Brickyard, American Brickyard
ME 307-011 Throckmorton Retaining Wall, American Retaining Wall
ME 307-012 Shipyard, American Shipyard
ME 307-013 Perkins Point North Brickyard, American Brickyard
ME 307-014 Day Mark Brickyard, American Brickyard
ME 307-015 Kunkel Brickyard, American Brickyard
ME 307-016 NewcastleCenter Shipyard, American Shipyard
ME 307-017 Hale Brickyard, American Brickyard
ME 307-018 Bryant's Brickyard, American Brickyard
ME 307-019 Dam, American Dam
ME 307-020 Hollenberg Dump, American Dump
ME 307-021 Newcastle Dump, American Dump
ME 307-022 House, Unidentified Domestic
ME 307-023 Jack's Point Sawmill, American Sawmill
ME 307-024 Quay, Unidentified Quay
ME 307-025 Quay, Unidentified Quay
ME 307-026 Quay, Unidentified Quay
ME 307-027 Dodge Point Quay, American Quay
ME 307-028 Anne Hilton, Native American Contact
ME 307-030 Walter Phillips Homestead #2, Anglo-American Homestead
ME 307-032 William Vaughan Garrison, Anglo-American Garrison House
ME 307-033 Hopkins?, Anglo-American Domestic
ME 307-035 Walter Phillips Homestead #1, Angl-American Homestead
ME 307-036 Johnny Orr, Anglo-American Outbuilding?
ME 307-037 Unnamed Cellar, American Domestic
ME 307-038 Cellar Hole #2, Anglo-American Domestic

Resource: Historic Buildings/Structures/Objects: by Kirk Mohny

St. Patrick's Catholic Church
Governor Kavanaugh House
Glidden-Austin Block
St. Andrew's Church
Sheepscot Historic District (Part of)
Second Congregational Church
Anne Hilton Site (Prehistoric Archaeology)

The above named properties are currently listed in the National Register of Historic Places.

Historic Buildings of NewcastleMaine not on the National Register of Historic Places:

<u>Glidden House</u>	<u>1760</u>
<u>Nickels House</u>	<u>1760's</u>
<u>GliddenMansion</u>	<u>1890's</u>
<u>Hussey House</u>	<u>1850's</u>
<u>Taniscot Fire Engine House</u>	<u>1877</u>

Archeological investigations have discovered the locations of 18th century businesses and homes in town and in 2005, an extensive dig revealed the location of Walter Phillips' home, built in the 1640's. Other studies have shown Native American occupation sites at various places in town. Two partially discontinued roads in town follow the paths of "Indian Carrying Places" between the DamariscottaRiver, the Mills area and the MarshRiver.

An active historical society now meets monthly in the historic Old Taniscot building.

Current regulations in Newcastle seem adequate to preserve cultural resources. The Land Use Ordinance prohibits issuance of a permit for any land surface disturbance on any lot for which there are reasonable grounds from physical or historical evidence that the requested action would disturb historic or prehistoric human habitation of archaeological significance. Archeological surveys can be required, conditional permits to protect resources can be issued. The LUO also has a Design Review section to protect historical buildings and the growth that may occur near them; this protects the present character of three historic areas of Newcastle. Continued use is encouraged and demolition and removal are discouraged, inappropriate alterations of buildings of historic value are prohibited. For example, an archeological site was required to be excavated when Austin Road was rerouted over an IndianVillage site. Also, a mound near the St. Patrick's church parking lot was placed off limits of the project.

ISSUES AND IMPLICATIONS

1. There is an opportunity to preserve the old train station off Academy Hill road, especially with the improvements in the rail line from Portland to Rockland.
2. As time passes, the significant places, people and events that make up the history of the town of Newcastle can become lost without continued education about the town history and safeguarding of our historical treasures. The efforts and activities of the Newcastle Historical Society should be encouraged.
3. With an increase in development rate, it is important to ensure that archeological sites are not destroyed during new construction.

The rural beauty of Newcastle is dependant on its natural resources. Bounded on the east by Damariscotta Lake and River, and on the west by the Sheepscot River, the town is laced by tributaries of those river systems. Outside of the village, much of the town is wooded, with fields, surface waters and wetlands providing openings for scenic vistas.

By the mid-1800's, most of the original woodlands in this area had been cleared for agricultural purposes; but with farming in decline, the woods are returning. As development has taken place primarily along the major roads and around attractive water bodies, there are still areas of the town in large, undeveloped blocks that have high value for wildlife, recreation and scenery.

The State's Beginning with Habitat program has provided data showing the distribution of important significant wildlife habitat area which is shown on Map 11.

Topography and Watersheds

Long rolling ridges and numerous rivers and streams define the character of Newcastle's terrain. The ridges run in an east-northeast to west-southwest orientation as a result of tectonic folding and glaciation, with elevations generally between 50 and 200 feet. The town can be roughly described as four ridges and four waterways.

The westernmost waterway and western boundary of the town is the tidal Sheepscot River. It is not much above sea level at the southern boundary; and less than 10 feet above sea level where it swings west away from the boundary near the northern end of town. The western-most ridge separates the Sheepscot River from the Dyer, a small very meandering stream with extensive floodplains, originating in the town of Jefferson to the north. After the Dyer enters the Sheepscot in Sheepscot Village, the ridge continues, broken by the Marsh River system, to the southeast corner of town.

The second ridge divides the Dyer and Marsh Rivers from Deer Meadow Brook, which enters town from Jefferson and merges with the Marsh River just north of Sherman Lake and Route One. Marsh River is a short tidal stream meandering through marshlands to the Sheepscot River. The Sheepscot, Marsh, Dyer, Deer Meadow Brook and Sherman Marsh form a watershed that drains about 90 percent of Newcastle.

The third ridge claims the highest point of land in town: Hunt's Hill in northern Newcastle at an elevation of 351 feet. This ridge is obvious at the north and south ends of town, but is broken in many places by valleys that carry water west to the Sheepscot. The fourth ridge crosses into town from Nobleboro at Damariscotta Mills, forming the southern boundary of Damariscotta Lake, and continues south along the Damariscotta River.

The eastern boundary of Newcastle is formed by the Damariscotta River and Damariscotta Lake. The lake, 50 feet above sea level and about 7,320 acres, lies in the towns of Newcastle,

Nobleboro and Jefferson. The lake ends at a dam in Damariscotta Mills, Newcastle, with a small hydropower plant and a steep, rocky stream with an old but working fish ladder built out of rock from the streambed. Great Salt Bay, a broad, shallow, tidal 524 acres, (512 of which is a Marine Protection Area) spreads out between the villages of Damariscotta Mills and Newcastle. Below the village, the navigable part of the river begins, with typical marine activities and scenery. The watershed for the Damariscotta system is a narrow strip along the eastern edge of the town. Newcastle's watersheds and their drainage pattern is depicted on a map from the 1991 Newcastle Comprehensive Plan (Map 12).

The former Sherman Lake, 212 acres, on the southern boundary, was the second largest lake before the retaining dam forming it washed out in the fall of 2005. It will remain a tidal estuary, with the name changed to Sherman Marsh. Several much smaller ponds are scattered around the town.

GEOLOGY: SOILS, BEDROCK AND GROUNDWATER

Soils

Soils in Newcastle cover a broad range of characteristics. At the higher elevations, soils tend to be shallower over bedrock, while soils more susceptible to seasonal high water occur at low elevations. Village and residential development has located on soil generally dry with depth-to-bedrock greater than 6 feet. Newcastle Village is the exception, with several areas of ledge at or near the surface.

Soils of prime agricultural and statewide significance are considered to be a limited strategic resource by the State. They can be found at lower elevations and are well accessed by the existing road network. Many areas are currently farmed or located on lands devoted to tree-growth. These soils are at great risk of permanently losing their potential for agricultural use due to pressure from residential development. Development has taken place primarily at the more moderate elevations where soil conditions favor waste disposal, and close to existing roads.

Soil types in Newcastle are shown on three maps from the Maine Geological Survey, Dept of Conservation. They are: the Reconnaissance Surficial Geology of the Damariscotta Quadrangle, Maine, (Wiscasset and Bristol Quadrangles similarly named), are available at the Newcastle Town Hall and are a part of this plan. The soil types show where soils that are suitable for residential leach fields and for farming are located. They also show where mineral deposits such as sand and gravel are located and give an indication of aquifer locations. A second element of soil description is how deep they go. Overburden thickness maps for the Bath 30 x 60-minute Quadrangle and the Augusta 30 x 60-minute Quadrangle have been provided by the Maine Geological Survey and are available at the Newcastle Town Hall and are a part of this plan. Overburden thickness shows depth to bedrock, again indicating where adequate soils exist for residential septic systems and also the extent of mineral deposits in the town.

Slopes

Soil stability is addressed by looking at soil type, slope and to some extent, vegetative cover. If the slope is too steep for the soil type, excessive erosion and landslide danger may exist. The state Geological survey has identified about 24 additional portions of the shore of the estuary where the banks have areas of “Steep to gently sloping bluff mostly covered by shrubs with a few bare spots. Bent and tilting trees may be present.”. The state recommends that these areas, identified on maps given to Newcastle by the State Planning Office, be added to the portions of shoreland zoned as Resource Protection on the town Shoreland Districts map. The maps are in two series, called: Coastal Bluffs Damariscotta Quadrangle, Maine, (Wiscasset and Bristol Quadrangles similarly named) and Coastal Landslide Hazard Damariscotta Quadrangle (Wiscasset and Bristol Quadrangles similarly named). They are available at the NewcastleTown Hall and are a part of this plan.

Bedrock

Bedrock geology shows the types of rock strata that exist in Newcastle and their location. Maps of the bedrock geology were supplied by the Maine Geological Survey. Newcastle is covered by three maps: Reconnaissance Bedrock Geology of the Damariscotta Quadrangle, Maine, (Wiscasset and Bristol Quadrangles similarly named). Knowing the type of bedrock is important for such things as water hardness from well water and the possible occurrence of Radon gas in well water as Radon is contained in only a few types of rock. These maps are a part of this plan and are available at the NewcastleTown Hall.

Groundwater

Groundwater availability and flow rates in Newcastle are mapped by recording bedrock well depths and yields as they are drilled, tested and reported to the state. This information has been provided to Newcastle by the Maine Geological Survey in two map series, Bedrock Well Depths in the Bath (and Augusta) 30 x 60-minute Quadrangle(s) and Bedrock Well Yields in the Bath (and Augusta) 30 x 60-minute Quadrangle(s). Combined, they show where adequate well water can be obtained in Newcastle and as importantly, where it can not. These maps are a part of this plan and are available at the NewcastleTown Hall.

Another source of groundwater is an aquifer, or water contained in the overburden. Maps showing the boundaries for aquifers in Newcastle were provided by the Maine Geological Survey and are titled: Significant Sand and Gravel Aquifers for the Damariscotta Quadrangle, Maine (Wiscasset and Bristol Quadrangles similarly named). These maps are a part of this plan and are available at the NewcastleTown Hall. Aquifers can be significant sources of groundwater, but they are fragile in terms of the possibility of pollutants spilled on the ground and in terms of interrupted flow through mining, or other soil disturbance. Knowing the locations of aquifers will allow Newcastle to consider them when deciding whether or not to approve development and/or use in these locations.

The maps for the soils, slopes, bedrock, aquifers and bedrock water, while produced by the Maine Geological Survey, were provided through the Beginning with Habitat Program at the Maine State Planning Office.

SURFACE WATERS AND WETLANDS

Threats to Fresh-water Bodies include nutrient and silt-bearing runoff as a result of development of the uplands, changes in water level and flow, timber harvesting practices and invasive species. Over-development is the greatest threat along the shores, with its attendant reduction of water quality, scenery and serenity, and wildlife habitat.

The pressure for residential development along the shores is high, and threatens wildlife habitat value and scenic value from the land and from the water. Development also brings increased pollution from roads and driveways, lawns and gardens and septic systems. Development, including building of roads, parking areas and walking trails or other impermeable areas on slopes greater than 15%, especially those adjacent to waterways is of particular concern.

Lakes and ponds are most sensitive to pollution. DamariscottaLake is listed by the state as highly endangered by pollution caused by stormwater run off. Phosphorus levels are unacceptably high, due to stormwater runoff from roads, lawns and fields, and malfunctioning septic systems. Water clarity and dissolved oxygen decrease significantly in warm weather. When polluting nutrients exceed a critical level, lakes become eutrophic. Algae increase dramatically (algal blooms), causing scummy, smelly water and lowering dissolved oxygen so that fish are killed. Rotting algae, other plants and fish add to the fertile stew, in a vicious cycle. The lake becomes unattractive so that property values (and thus tax revenues) plummet. Businesses that depend on the lake to any extent are also negatively affected.

The Damariscotta Lake Watershed Association monitors DamariscottaLake and works with landowners to resolve erosion and other types of pollution. It is critical that development around lakes be limited to prevent overwhelming phosphorus levels.

Invasive aquatic plants may be an even greater risk to Newcastle's lakes. Eurasian milfoil, which is present in all states and Canadian Provinces in the northeast, and hydrilla, which is in Pickerel Pond in Limerick, Maine, are the two immediate threats, though several other species have the potential for spreading to Maine. Once invasive plants become established in a water body, they are usually impossible to eradicate; and the damage to aesthetics, boating and swimming, fish and all other native life is devastating. . The state cannot spend the money necessary to police all boat landings to prevent introduction of invasive plants. Trained volunteers are the only line of defense at present.

The two Rivers, Sheepscot and Damariscotta, and DamariscottaLake, are outstanding natural resources. They have strong recreational, scenic, and commercial value.

DamariscottaRiver

The DamariscottaRiver is navigable below the village. Above the village, a short section of narrows opens into GreatSaltBay. This broad, shallow, tidal area of 524 acres spreads out between the villages of Damariscotta Mills and Newcastle is of such great ecological importance that in 2000, 512 acres of it were designated a Marine Protection Area. In winter the Bay is the site of a large village of smelt shanties. The anadromous alewives and rainbow smelt migrate up the river to spawn in DamariscottaLake and its tributaries. The alewife migration in May, along with the fishing birds that utilize it, is an outstanding public attraction at the Damariscotta Mills Fish Ladder, between the towns of Newcastle and Nobleboro. The viewing areas of the historic natural-stone fish ladder and alewife fishery are deteriorating at this time, and steps are being taken by the towns of Nobleboro and Newcastle, the DamariscottaRiver and Damariscotta Lake Watershed Associations, and other entities, to preserve and enhance that opportunity for fish, birds and public alike.

DamariscottaLake

DamariscottaLake lies above the fish ladder; it is about 10 miles long north to south with three somewhat separated sections. It is 4,625 acres in size and is up to 114 feet deep. There is quite a diversity of fish, many fishermen, some cottage development and a state park and beach at the north end. About 1/10 of the shoreline is in Newcastle. The Damariscotta Lake Watershed Association has an active program to limit nutrient input, particularly phosphorous, under way. Camp roads have been identified as the major source of phosphorous. Surveys and education programs, grants for remediation and other activities are directed at public awareness of the problem and the steps to control it. See more on phosphorous below.

Control of the lake level has been problematic for many years. Operation of the dam is the responsibility of the owner of the power plant, under regulation by the Federal Energy Commission and Maine Department of Marine Resources. The right amount of water flow is mandated in the fishway for the spring alewife run, and the turbines are not allowed to operate during the fall downward migration of juvenile fish. In addition, it is required that the dam be operated so that water levels remain between mandated levels. Over the years, the allowed high water limit has gradually increased, and under different ownerships, noncompliance has been frequent due in part to antiquated equipment and lack of preventive measures in response to forecasts of heavy rain. Increasingly high water, together with wave action and ice pulling away at the shores, causes erosion and subsequent pollution. In addition, flood levels cause significant property damage by undermining and felling trees, flooding roads, lawns, basements, and septic systems, and destroying floats and landings.

The lake, which is marginal for salmonids, has been stocked with fish by the Department of Inland Fish and Wildlife. Stocking rates have been: Every recent year with 2000 full yearling 12" brown trout, every three years with 600 spring yearling 6-8" lake trout, every three years

with 500 salmon, every year with 500 brook trout full yearling size, primarily for ice fishing. The IF&W does creel surveys, interviews with fisherman, primarily ice fishermen (seldom in summer), on hours spent, catch number and size etc. They also do gill netting in summer to estimate size and numbers of stocked fish and to determine forage base, which are generally smelt or small alewives.

Stocking is not done in streams: the DyerRiver is too warm and Deer Meadow Brook is too warm in some sections and not stocked.

SheepscotRiver

The SheepscotRiver is navigable by canoe, kayak and small boats through all of its length in Newcastle and is navigable by larger boats below the fixed railroad and automobile bridges in Wiscasset. The River is very popular with kayakers who traverse the ReversingFalls in SheepscotVillage as standing waves are formed on the natural constriction at both turns of the tide.

The river is home to two federally endangered species, the Bald Eagle and the wild Atlantic Salmon. There are two eagle nests on the river in Newcastle and another in DamariscottaLake. Atlantic salmon habitat for nesting and rearing appears just north of the Newcastle border, but the wetlands and water quality of the SheepscotRiver in Newcastle are still important for these fish as they traverse the town in their spring exodus to the ocean and their fall return, several years later, to the fresh water upstream to spawn. The “smolts” migrating south are counted yearly by National Marine Fisheries Service personnel in the smolt traps at Head Tide in Alna and have shown increasing numbers in recent years.

In the northern section of town, several rare plants are seen on the muddy banks of the river including Spongy arrowhead (*Sagittaria calycina*), estuary bur marigold (*Bidens hyperborea*), Parker’s pipewort (*Eriocaulon pakeri*), mudwort and (*Limosella australis*), horned pondweed. The globally uncommon floater mussel (*Alasmidonta varicose*) has been found above the dam at Head Tide in Alna, and may be present in the Newcastle part of the river.

The brackish marsh complex formed by MarshRiver and the lower end of Deer Meadow Brook provides very important large areas of marsh/grassland. The MarshRiver is home to one of the northernmost Native American Oyster beds. The rare salt marsh false foxglove (*Agalinis maritime*), and Salt Marsh Sharp-Tailed Sparrow (*Ammodramus caudacutus*) occur here and Nelson’s Sharp-Tailed Sparrow (*Ammodramus nelsoni*), an uncommon bird in Maine, is also found here. Part of this habitat has recently been protected from development to ensure these species may continue to thrive. Access for the public has also been preserved for the future on the ReachwoodPeninsula and the SVCA’s new Marsh River Preserve to open in 2006. The former ShermanLake has been returned to the MarshRiver saltmarsh system.

The DyerRiver is a dramatically convoluted small stream meandering through a broad floodplain of marsh grass and cattail. For much of its length it is important waterfowl and wading bird habitat, and the rare Salt Marsh Sharp-Tailed Sparrow (*Ammodramus caudacutus*) has been found in the lower portion of the watershed.

The entire SheepscotRiver, MarshRiver and DyerRiver area in Newcastle has been identified by the State of Maine as the SheepscotRiver Focus Area of Ecological Significance. Focus areas are of statewide significance given their unusual biological richness and are intended to provide an important planning tool to support strategic land conservation efforts. The SheepscotRiver Focus Area is currently eligible to receive Landowner Incentive Program (LIP) funding to help finance land acquisition and habitat enhancement.

MARINE RESOURCES

Docking, Anchorages and Moorings

The only harbor space in Newcastle is the combined facility with Damariscotta, which is a basin south of the Business Route 1 bridge and of the Damariscotta parking lot. Funded by the state, the high- to mid-tide launch ramp and town floats allowing boats to 10' draft, serve both small commercial and recreational interests. A private marina just east of the bridge serves about a dozen boats including some aquaculture boats and some up-weller aquaculture apparatus. A new marina with 25 slips is located at NewcastleShores (just west of the bridge), it will have mainly recreational use. The town's mooring area extends nearly a mile down river and has about 70 moorings, 15 owned by Riverside Boat company (1/2 mile downriver from the town landing) for boats launched from the yard and for transient boats for a fee, 3 to 4 for commercial fishing boats and about 50 for private recreational use; a total of about 75 recreational boats can be expected. Source: Harbormaster. There is no sanitary pump-out; few boats are lived on but currently the town landing has the highest fecal coliform count in the whole River. Installing a sanitary pump-out at the town dock must become a priority.

Traditional Shellfishing and Worming areas

The marine shore of Newcastle has the following marine species that are harvested: alewives, smelts, American Eels, soft shell clams, and marine worms. The tidal flats are important for wildfowl. The benthic habitat in Great Salt Bay (GSB) is protected from all but scientific interference by being declared the first Marine Protected Area in Maine by unanimous vote of the legislature. In winter the Bay is the site of a large village of smelt shanties. For bacterial approval levels see below.

Soft shell clams are dug in the conditionally approved inter-tidal areas of the Damariscotta and SheepscotRivers. Marine worms are harvested in the SheepscotRiver, especially south of the Reversing Falls and in the DamariscottaRiver primarily south of the town (business Route 1 bridge).

Commercial Fishing Facilities

There is an alewife run on the SheepscotRiver but there is no commercial take of alewives in the Sheepscot in Newcastle. Further up the river at Alna Head Tide and at Cooper's Mills in Whitefield, a limited harvest is allowed to the owner of the license, including providing for the entitled widows. An alewife fishery exists at the head of GreatSaltBay at the outlet of DamariscottaLake. Jointly owned and managed by Newcastle and Nobleboro, and protected by

state legislation since 1807, the alewife fishery nearly disappeared about 10 years ago. A moratorium on the taking of alewives for about 9 years, except for the legal requirement to supply a few bushels to entitled widows, has led to a revival of the run. Refurbishment of the rock built fish ladder is planned. Restoration of the collapsed fish smoke house is planned, as an educational facility.

A large quantity of clams and marine worms are landed at the Damariscotta town landing each year.

Aquaculture

Currently there are only two aquaculture leases on the Sheepscot River in Newcastle, located in the Marsh River area near Cunningham's Island. The leases are for American and European Oyster. In the Damariscotta River, Newcastle has seven aquaculture leases for shellfish growing within the town boundaries. More importantly, in the whole Damariscotta River, all within a half-mile of Newcastle, are eighteen leases, over thirty-eight percent of the shellfish leases in all of Maine. Newcastle has fifteen percent of all the leases, see table J-1. In area, nearly twenty-one percent of the shellfish lease acreage in the entire state is in the Damariscotta River (half of that is in Newcastle waters). Eighty percent of all oysters grown in Maine are from the Damariscotta River. This means that we have a large number of eggs in one basket; any disease that gets established here could have a devastating effect, both on the Maine aquaculture industry and on the local economy. Some aquaculture people, one living in Newcastle, have suggested that the river is close to carrying capacity and that adding more leases might be a mistake. Currently American and European Oyster, Soft Shell Clams, Surf Clams, Sea Scallops, Bay Scallops, Razor Clams, Blue Mussels, Quahogs and even Atlantic Salmon are licensed for cultivation; the American Oyster is the main species actually grown.

Table J-1

NAME	RIVER	TOWN	ACRES	Lease ends	Location
Pemaquid Oyst Co.	Damariscotta	Damariscotta	2.0	2006	Goose rocks
Pemaquid Oyst Co.	Damariscotta	Damariscotta	5.4	2011	Goose rocks
Pemaquid Oyst Co.	Damariscotta	Damariscotta	0.2	2013	Schooner Landing
Dodge cove Marine Farm	Damariscotta	Damariscotta	2.0	2004	Hog Is
Dodge cove Marine Farm	Damariscotta	Damariscotta	7.0	2012	Hog Is
Sheldon Co.	Damariscotta	Damariscotta	5.0	2013	Above Rt 1 Br.
Pemaquid Oyst Co.	Damariscotta	Damariscotta	3.5	2013	Goose Rocks
Glidden Pt. Oyster Co.	Damariscotta	Edgecomb	5.0	2010	Dodge lower cove
Pemaquid Oyst Co.	Damariscotta	Newcastle	1.8	2013	w. of hog is
Associated Sea Farms	Damariscotta	Newcastle	23.8	2010	n. of PERKINS PT
Glidden Pt. Oyster Co.	Damariscotta	Newcastle	2.3	2013	Bryant cove
Hog Is shellfish	Damariscotta	Newcastle	6.0	2004	NE of perkins pt
Mook sea farm	Damariscotta	Newcastle	4.8	2006	E. of little pt
Mook sea arm	Damariscotta	Newcastle	8.8	2008	mid riv. Little pt
Maine Oyster Co.	Damariscotta	Newcastle	1.0	2003	Goose Rocks
Abandoned Farm	Damariscotta	So. Bristol	5.0	2004	Clarks cove
Abandoned Farm	Damariscotta	So. Bristol	15.0	2011	Clarks cove
Glidden Pt. Oyster Co.	Damariscotta	So. Bristol	2.4	2003	w. of Pretiss is
DMC, Univ. of Maine	Damariscotta	Walpole	0.6	2012	Wentworth Pt
Total number in Maine = 47		Total Acres:	487.5		
Total in DamariscottaRiver = 18		Total acres:	101.6		
Total in Newcastle waters = 7		Total acres:	48.5		

Water Quality

The Sheepscot Valley Conservation Association has monitored water quality above SheepscotVillage in the Sheepscot and DyerRivers for temperature, salinity and dissolved oxygen. South of Sheepscot Village, testing is performed by the state Department of Marine Resources. The DyerRiver is listed as one of the state's TMDL rivers, meaning that it does not attain water quality standards commensurate with its water quality classification. The state Department of Environmental Protection is currently writing the TMDL (Total Maximum Daily Load) report. SVCA testing has confirmed bacteria readings higher than standards for several years and they will be cooperating with state TMDL authors to look for potential sources in the watershed.

The SheepscotRiver at SheepscotVillage shows good water quality though just upstream of the Newcastle border in Alna, tests indicate another bacterial problem to be investigated in the future.

Flowing into the MarshRiver is Deer Meadow Brook, which flows north to south through the center of Newcastle. The Corridor has long been valued and defended by Newcastle residents for

its wildness and beauty. Large, undeveloped blocks of land are of critical importance for wildlife, particularly large mammals, predatory mammals and birds, some songbirds and turtles. The Deer Meadow Brook watershed is largely undeveloped and has been recognized as important habitat by the Maine Natural Areas Program and by the US Fish and Wildlife Gulf of Maine analysis. Almost entirely forested, and composed of rolling hills, deer wintering yards and wading bird and waterfowl habitat, the Deer Meadow Brook watershed is at the center of a 16,200 acre undeveloped wildlife corridor, broken only by Sheepscot Road to the south and Jones Woods Road (Route 215) to the north, it stretches 16 miles from Route 1 in Newcastle to Route 32 in Jefferson. Two attempts by Central Maine Power Company to run power lines through the corridor were halted by public opposition. However, development steadily encroaches into the area from the roads around and through it.

Water quality of the Damariscotta River estuary system is monitored by the Damariscotta River Association's Tide Water Watch committee, which collects water for analysis by the state Department of Marine Resources. Most of Newcastle's salt-water shoreline has low levels of fecal coliform (FC) bacteria and is designated conditionally approved for shellfish harvesting by the Department of Marine Resources. The Damariscotta above the Business Route 1 Bridge including the larger portion of Great Salt Bay is designated as prohibited for shellfishing except in the small bay ('Narrows Bay') just north of the bridge, which is conditionally approved. However much of the shore of Great Salt Bay and the shore of Damariscotta just across from Newcastle has high to very high levels of FC and is classified as Prohibited. Actual collection of water samples is done by DMR personnel in areas usually high in FC. The Tide Water Watch and DMR have tried repeatedly but unsuccessfully to trace the source of the pollution. For 5 years the levels were steadily rising but now seem to be decreasing to the levels of 2-3 years ago, but are still high.

The town of Newcastle, through its former first selectman Phil Wright, successfully wrote grants to remove all Over-Board Discharges (state licensed discharge of chlorine treated liquid effluent from septic tanks when there is insufficient soil for adequate leaching fields) from the town. As a result, nearly the whole shore south of the village is open for shellfish digging and aquaculture. The exception is a short section near the sewer outlet by the Damariscotta town landing; the bacterial counts in this municipal effluent are carefully tested and are very low in FC. The source of the FC in the river is still a mystery.

Control of Phosphorous levels in Lakes

The state of Maine has measured the phosphorous (P) content and likeliness for getting property-value-destroying blooms of algae (table J-2). Damariscotta Lake and Sherman Lake (a man made lake create by the damming of a tidal marsh area) are listed with the state as 'most at risk for the effects of development' of a bloom, technically the eutrophication or enrichment by the presence of too many nutrients, specifically by P. Development or continuing detrimental use such as by camp roads that are not diverted to vegetated areas but drain directly and rapidly to a lake, have the potential to input enough P to a lake that excessive growth or 'bloom' will occur.

Table: J 2. Phosphorous Control in LakeWatersheds, NewcastleMaine

Watershed	Water Quality As established By MDEP	Protection Level (MDEP)	Phosphorous Coefficient (1)	Acceptable increase in phosphorous	Future area to be developed (2)	Per Acre phosphorous Allocation (3)
Damariscotta Lake (South Basin)	moderate/ sensitive	high	21.75 ppb	0.75 ppb	1,140 acres	0.057 lbs/ac/yr
ShermanLake	moderate/ sensitive	medium	13.40	1.00 ppb	1,748 acres	0.031 lbs/ac/yr

- (1) Amount of P, if exported from watershed will produce a 1 ppb increase in the lake's P concentration (lbs/ppb/yr).
 (2) Part of undeveloped acreage likely to be developed in next 50 years.
 (3) Amount of P each developed acre can export without water quality deteriorating to the point that property values are likely to decrease.

Lake watersheds should receive special protection to reduce development each year to levels that will not result in serious deterioration in lake quality, and hence property values. The state has developed model ordinances to address this problem. Newcastle should adopt the state suggested rules to limit development to acceptable levels.

SCENIC AREAS

1. Sheepscot system watershed
 - a. views from Rte. 1 of Sherman Marsh/Estuary to the south and the MarshRiver/Deer Meadow Brook complex and Reachwood Preserve to the north.
 - b. In Sheepscot Village, the views from the bridge up and down the Sheepscot River, and the view up the DyerRiver.
 - c. views from the SheepscotRiver, Sherman Marsh/Estuary and MarshRiver
 - d. farm fields in North Newcastle
 - e. Deer Meadow Brook and marshes from Rte. 213
 - f. trails and discontinued, publicly accessible town 'roads' in the Deer Meadow Brook corridor
2. DamariscottaRiver watershed
 - a. Dodge Point
 - b. view of village, River and Damariscotta from overlook on Rte. 1 bypass, off ramp and River Road.
 - c. views of the River and GreatSaltBay from Rte. 1 and Mills Road
 - d. the alewife stream and fishery in Damariscotta Mills, including fishing birds and view of eagle nest from the island
 - e. views from the River and GreatSaltBay
 - f. the Heritage Trail from Rte 213 to the middens
3. DamariscottaLake
 - a. views of shore from the DamariscottaLake
 - b. view north across DamariscottaLake from Rte. 213, including eagle nest

ANALYSIS

Newcastle waterfront and waters seem to meet the need of a declining fishing industry and a growing aquaculture industry. Suggestions in the 1991 Comprehensive Plan that the town might need to expand the docking area to meet industry needs were forgotten or ignored when the Newcastle Shore location came up for sale; perhaps its price tag was too much for the town or officials felt the need had disappeared. With the sale to private ownership, the last piece of property that might have been used for an expanded town landing has disappeared.

Newcastle has abided by the state's Mandatory Shoreland Zoning act, though the previously used 100' no-disturbance setback has been reduced to the state minimum of 75' from the normal high water mark. The town's waters seem clean, except for the high fecal choliform levels at several testing stations on GreatSaltBay as noted above.

ISSUES AND IMPLICATIONS

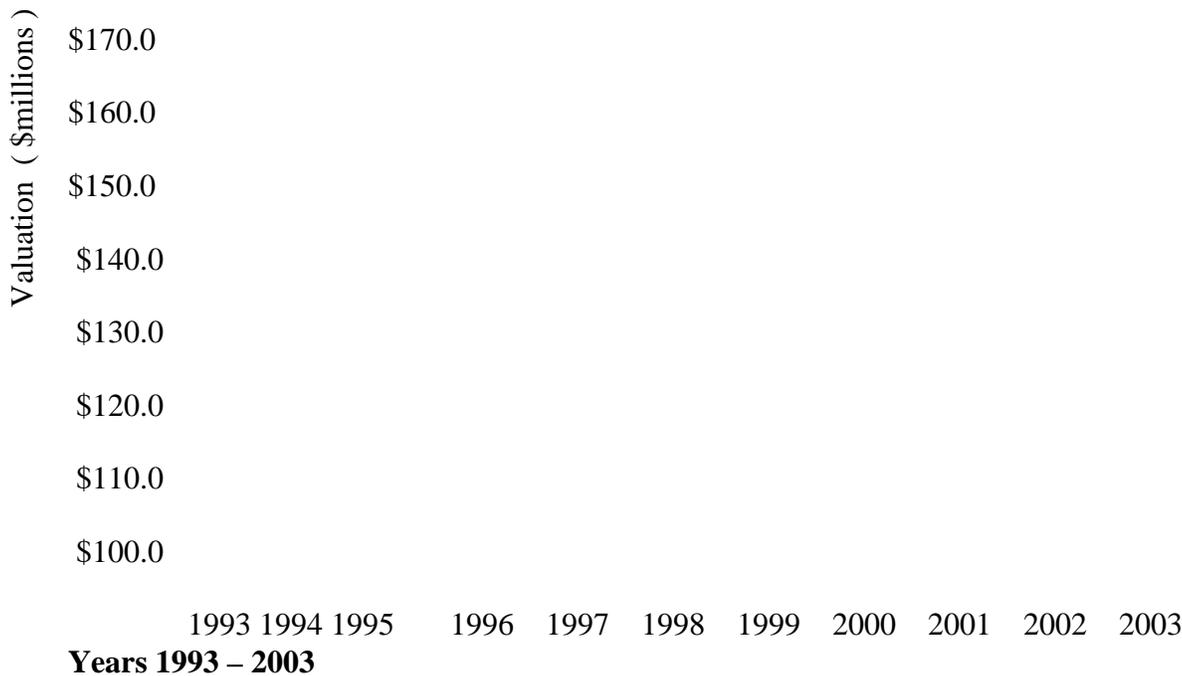
1. Topographic ridges create a series of largely independent drainage systems.
2. Phosphorous runoff from development and poorly maintained camp roads could lead to eutrophication and algae blooms in lake systems, causing obnoxious odors and decreasing property values and therefore the tax base.
3. Overdevelopment along the shoreline of lakes and rivers results in decreased water quality and results in reducing wildlife habitat, scenery and serenity. Development should be monitored closely to ensure use of Best Management Practices during construction and design.
4. Bacterial 'blooms' could close down the aquaculture industry, as happened in 1989. Continued concern about bacterial sources is needed and the town should support local groups and the state in efforts to monitor and remove sources.
5. The town should require that private roads be built and maintained according to "Best Management Practices" as defined by Maine Department of Environmental Protection.
6. The problems of DamariscottaLake dam control affect property and environmental values and need to be addressed by the Town of Newcastle.

Understanding Newcastle’s fiscal posture is crucial when planning for community growth and changing needs. This section examines Newcastle’s fiscal capacity and its ability to fund new and existing programs, services and facilities.

Assessed Valuation, Commitment and Tax Rate

Examining *assessed valuations* provided one manner of tracking the fiscal health of the community. Assessed valuations are inclusive of all lands, buildings and personal property. Further, they comprise the basis from which local taxes are levied. A rising valuation is a sign of fiscal strength allowing the town to levy smaller tax rates to raise necessary funds.

Figure 1. Newcastle Assessed Valuations*, 1993 – 2003



*Valuation Figures are actual Town of Newcastle valuation figures taken from the Annual Fiscal Year Town of Newcastle Reports. One mil equals \$1.00 for every \$1000 in assessed valuation.

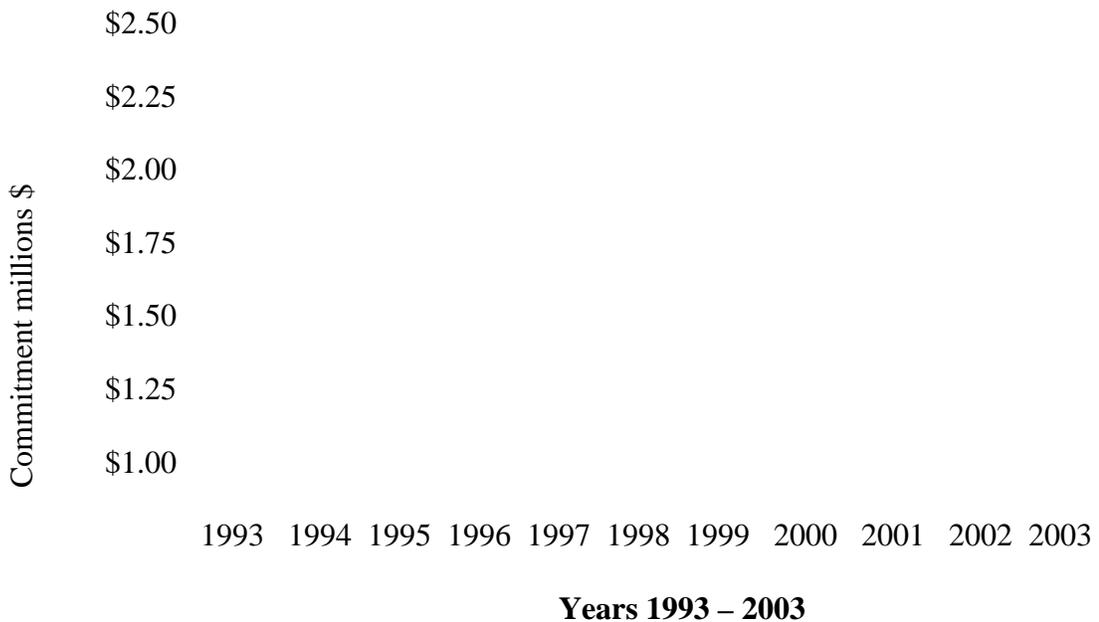
In 2003 Newcastle’s assessed valuation rose to \$164.3 million dollars. This represents an increase of \$35.7 million compared to the assessed valuation of 1993. Figure 1 shows that assessed valuations decreased from 1995 to 1998 where it averaged \$126.8 million dollars. The assessed valuations from 1999 to 2002 averaged \$134.2 million, an increase of approximately 6%. The year 2003 represented a 20% change in one year over the assessed valuation of 2002.

A growing tax base (resulting from the increase in assessed valuation) increases the amount of taxes collected for a given tax rate. The tax rate (measured in mils - \$1.00 for every \$1000.00 of assessed valuation) was reduced from 2002 to 2003 by 2.7 mils. The decrease represented a 16.56% change. This is perfectly understandable since the assessed valuation represented an increase of over 20%, thus the larger tax rate was not needed.

Local commitment is the total amount of property taxes collected to fund local government. Table 1 lists Valuation, Tax Rate and Commitment for the years from 1993 to 2003.

Figure 2 addresses the local commitment adjusted for inflation often referred to as Consumer Price Index (CPI) or Cost of Living.

Figure 2. Local Commitment and Commitment Adjusted for Inflation



Source: Annual Town of Newcastle Reports Source: MaineState Planning Office

There was a slight increase in commitment during the 1990's but it took a leap upward in 2003. There was increase of approximately 27% in commitment from 2000 to 2003 (from \$2.1 million in 2000 to \$2.7 million in 2003).

To keep up with the increases in commitment, the *tax rate* in Newcastle has dramatically increased in recent years. The tax rate reflects how much of the local valuation is committed in property taxes each year. In 2003 Newcastle's local tax rate was 16.3 mils (a mil is the number of dollars in property tax paid for each \$1,000 in assessed valuation⁴[1]). The percent change in the tax rate since 1993 to 2003 has been 59.8%. Table 1 illustrates the annual tax rates coupled with the local valuations comprising the local commitment (valuation multiplied by tax rate yields commitment). As both the assessed valuation and tax rate increased rapidly from 2001 to 2003, the commitment jumped \$605,992 dollars. In comparison to neighboring communities, Newcastle's tax rate has increased significantly in recent years, and a comparison with neighboring communities suggests the town tax rate is

above average for Lincoln County (Table 2). The full value tax rate is the proper tool used to adjust for local valuation discrepancies between or among communities².

The Lincoln County Average Full Value Tax Rate is for 2003 is equal to 10.04 mils. Newcastle is slightly above the Lincoln County average (2.7 mils) having a Full Value Tax Rate of 12.74 mils.

Note: full value tax rates do not account for differences in services and facilities. For example, larger and more urban communities tend to have more programs and facilities, thereby increasing the cost of total government. Of course, more rural communities lean toward having less programs and facilities. Some exceptions do include towns with small populations with significantly high valuations such as Boothbay and Boothbay Harbor. These towns have relatively small year-round populations. However, the towns have miles of coastline, which promote the higher valuations.

REVENUES

Local property taxes (commitment) represented the largest source of revenue for the town of Newcastle in 2003. Approximately 25% of the total revenue, listed in the Town of Newcastle Annual Report for Fiscal 1993, came from sources other than property taxes (Table 3). Since 1996 the total annual revenues have increased by \$1,325,961.

Taxes are inclusive of both property tax and excise tax and comprise the largest single source of revenues (84%) for the town of Newcastle. Local property taxes accounted for \$2.67 million in

4. A tax rate of 16.3 mils means that a property will be taxed \$16.30 for every \$1,000 in assessed value. At this tax rate, a property assessed at \$200,000 would pay an annual tax of \$3,260.

2. Local assessed valuations reflect full market of property taken only for the years the town completed a full revaluation. There may be significant differences in neighboring communities in the reported of two properties that in fact have the same market value. Because the State disburses aid to communities based in part on their assessed valuation, the State annually adjusts these valuations to account for market fluctuations. The resulting valuation is often called the **Full Value** and offers the best basis for comparison between or among communities.

2003 (76%), while excise tax was responsible for \$281,619 (8%). Total tax revenue increased by \$1+ million or 55% change from 1996 to 2003. The percent change of 55% is slightly larger than the budgeted percent change of 51%. This suggests that revenues from total taxes exceeded the budgeted expectation by approximately 4%. The taxes appear to have grown more than the anticipated budget from 1996 to 2003.

State Reimbursement is inclusive of the revenues returned to the Town based on sales tax revenue sharing funds and property tax assistance programs. This revenue accounted for \$209,358 (6%) of the total revenues for the Town in 2003. State reimbursements have increased from \$62,187 in 1996 to \$209,358 in 2003 representing a large increase of over 200%.

Education revenues transferred to Newcastle for 2003 amounted to \$173,186 (or 5% of total revenue). Education revenues have gone from \$71,466 in 1996 to \$173,186 in 2003. The total education revenue has more than doubled from 1996 to 2003.

Protection revenues are inclusive of fees, grants and other funds provided to The Town of Newcastle for its public safety services. Between 1996 and 2003 Protection revenues have decreased from \$7,688 to \$4,373 (a percent decrease of 43%).

Other revenues include the areas of health/sanitation, highways/bridges, code enforcement, and recreation/publicity. The 1996 revenue amounted to \$68,511 whereas the other revenue stream amounted to \$94,478 in 2003 (an increase of 38% change). The change is representative of 2% of the total 2003 revenue. Although the increase from 1996 to 2003 is significant, this revenue stream represents a relatively small amount of the total. Further, the revenues realized from the aforementioned areas (cited as *other*) are highly volatile and likely to fluctuate greatly.

Transfers result from monies being moved between or among accounts to accommodate changes in operations requiring funds. Transfers have decreased (32% change) from 1996 to 2003.

Unclassified revenues result from other town operations. Only 2% of the total 2003 revenue resulted from revenues that were *not classified*.

EXPENDITURES

In 2003, The Town of Newcastle spent more than \$3.3 million to provide services and facilities to its citizens. This represents an increase of \$1.2 million between 1996 and 2003.

Education expenses pay for the Town's public and private schools located within the Administrative District. The 2003 expenses totaled more than \$2.2 million. This represented slightly more than two thirds of the Town's total expenses. Since 1996 the percent change in education expenses have equaled 63%.

General government is inclusive of the expenses in the day-to-day operations of local government including: tax collection, selectmen, insurance, assessing services, and clerical

services. In 2003, these services amounted to \$215,623, 6% of the total annual expenditures. Since 1996 the expenditures have a percent change of 51%.

Health and sanitation expenditures are inclusive of costs incurred by The Great Salt Bay Sanitary District and the Transfer Station. The health and sanitation expense has lowered by a 29% change in 2003 relative to 1996.

Highways/Bridges expenditures are necessary to maintain and improve the Town's road network. In 2003, operating cost totaled \$292,960, or 9% of Newcastle's total expenditures. In 2000, highways/bridges experienced an expenditure of \$695,602. The inordinately high amount was due to the following: general roads, \$547,856; snow removal, \$111,129; improvements, \$25,500; Academy Hill construction loan, \$11,117. General roads sector accounted for 79% of the annual expense.

Protection is inclusive of all public safety expenses for the Town. In 2003, protection expenses totaled \$164,431.23, or 5% of all expenses. Protection expenses can vary widely and are primarily dependent on the needs of the fire department. Expenses, from 1996 to 1999 inclusive, were all in the area of \$100,000. In 2000 protection expenditures rose to more than \$500,000 in support a new fire station. This commitment was followed in 2001, 2002 and 2003 in the sum of approximately \$300,000. These expenses are expected to decline after 2003.

Special assessment incurs costs associated with additional assessments and corrections thereof in the Town. In 2003, 5% of the total expenditure amounting to \$169,241 was accredited to this sector. Special assessments have grown by a 73% change from 1996 to 2003.

Recreation and publicity includes expenditures for special Town announcements, parks and other recreational areas throughout Newcastle. Recreation and publicity represents the single largest increase in expense since 1996. An increase of more than six times has taken place from the 1996 expenditure of \$11,990 to the 2003 expense of \$86,834. It is expected that future expenditures will not be as high as the 2003 expense.

Code enforcement expenditure has almost doubled since 1996 from \$8,203 to \$16,356 in 2003. There were 84 code enforcement and 46 plumbing permits issued in 1996. 2003 had 84 code enforcement and 54 plumbing permits issued. The reasons for the differences in expenses have not to date been given. In all fairness, it must be pointed out that the total expenditure for 2003 is less than 1% of the total expenses incurred.

Not classified expenditures include ancillary expenses incurred in the general operation of the Town of Newcastle. The 2003 amount expended was approximately 1% of the total Town expenses for the year.

Long-Term Debt

Like many other like communities, the Town of Newcastle has relied on long-term debt as a way to finance some of its long-term capital improvement projects. The 2003 total long-term debt

totals \$318,787.57. The debt is comprised of three notes to The Damariscotta Bank and Trust as shown in table 5.

Long term debt has had an 89% increase from 1996 to 2003, from \$168,934.52 to \$318,787.57. Increases can be attributed to projects such as the new fire station and support equipment.

ISSUES AND IMPLICATIONS

1. The inventoried data suggests a lack of town tax requirement planning. A change of 86% in the mill rate from 1993 to 2002 and nearly 60% change from 1993 to 2003 demonstrate the inconsistencies. Such variations in mill rates are indicative of the need for better management of town monetary policy.
2. The lack of a proper expansion of the tax base has left the average property owner (real estate and personal) in Newcastle with little hope for tax relief.
3. Further, there is little hope that a true fund for the protection of Newcastle's ecological treasures may be established if policies are not changed. The need for integration of town management and proper financial planning is the primary issue in the establishment of a proper town of Newcastle fiscal capacity.

Results of Town Survey

2004 COMPREHENSIVE PLAN SURVEY

ANALYSIS and SUMMARY

On January 20, 2004, approximately 1,600 comprehensive plan surveys were sent out. A survey was sent to every mailing address in Newcastle (business and residential). In addition, a survey was sent to every property owner that does not live in Newcastle. Extra copies of the survey were made available at Town Hall.

Over 300 surveys had been returned (response rate of 20%). Quality of life issues that had broad support included Newcastle's rural character, concern about the quality of the environment, and that the town is a beautiful and safe place to live. There was strong support for conserving open areas, farmlands, scenic views, and water quality. Small business development and traffic safety on Route 1 were also important.

The following sheets contain a preliminary analysis of the survey results.

SUMMARY OF NEWCASTLETOWN OPINION SURVEY, JANUARY, 2004

In January, 2004, the Newcastle Comprehensive Plan Review Committee solicited the opinions of the townspeople through a survey. The survey included questions related to broad categories of (a) quality of life, (b) economy, (c) environment, (d) land use, (e) housing, (f) services and (g) finances. About 20% of the townspeople returned the surveys, an excellent response to the 1600 surveys sent out.

The highlights of the responses are as follows, with a complete listing of the questions and average scores below. The respondents identified "small town environment, a safe place to live, a sense of rural character, natural beauty of the area" and "respect for the environment" as very important issues concerning quality of life. The top economic issues were promoting small business and safety on route 1. Under land use, developing roads was deemed to be not important. Conservation of open spaces, wooded areas, farmland, protection of water bodies, wetlands and groundwater were all considered to be important, as was the preservation of scenic places. For Housing, encouraging affordable housing, senior citizen housing and starter homes were important issues, but committing town finances for them was not. Services such as fire protection, police protection, ambulance services, road maintenance, snow plowing and schools were important to respondents and they were satisfied with hospitals, doctors, churches, transfer station, town office services and the library. For questions concerning town finances, the overall opinion of the respondents was that town spending should remain about the same.

Survey Results:

The respondents rated the importance of each question from 1 to 5 and the summarized results may be categorized as follows: 1 to 2, not important; 2 to 3, marginally important, 3 to 4 important and 4 to 5 very important. Many comments were added by the responders and these will be included in the final report as will any further surveys received.

(This appendix not available)

Results of Visioning Sessions

(see Additional Files – Visioning)

Maps and Figures

Maps of current land use districts are presented here for aid in understanding this plan, however the official map of districts is maintained in the Town Office.

Map 1	Housing as of 2002
Map 2	Boothbay Harbor Labor Market Area
Map 3	Transportation Systems
Map 4	Public Water and Sewer Lines
Map 5	Current Zoning Districts
Map 6	Current Overlay Zones
Map 7	Current Shoreland Zones and Proposed Deer Meadow Brook Addition
Map 8	Current Land Use
Map 9	Proposed High-Density Village Growth Districts
Map 10	Proposed and Current Commercial and Light Industrial Zones
Map 11	Significant Wildlife Habitat Areas

(see Additional Files – Maps)

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