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EXECUTIVE SUMMARY

VISION: WHERE WE WANT TO GO

Planning would be a fruitless exercise without a clear idea of the kind of place citizens want Brewer to be in the next 5, 10 or 20 years. Planning must start with a vision. Only then can we determine how close or how far away our community is from being the kind of place we want it to be, and what we need to do to move in the right direction.

At a series of four “Speak-Out Brewer” meetings convened in 1994, about 175 local officials, residents, and business people discussed their ideas about what they value about Brewer and what would make it a better place to live, work, or own a business. Participants agreed:

1. They most value Brewer’s “small town” character and friendliness, school system, neighborhoods, and convenient location. Many believe the City would be a better place if it had high paying jobs, more recreational facilities and pathways, less citizen apathy, better road maintenance, an expanded tax base, an improved waterfront, and a better visual appearance. They see obstacles to such progress: high taxes; a stagnant tax base; and a lack of team effort, leadership, vision, planning, and positive attitude.
2. Residential neighborhoods are appreciated for their friendly, quiet, safe, convenient, and attractive qualities. Still, many citizens want better road maintenance, fewer cars and trucks and slower traffic, improved pedestrian safety and sidewalks, and more recreational facilities and pathways in their neighborhoods.

In response, this Plan establishes the following overarching Vision for our city:

Brewer can capitalize on the economic opportunity made possible by its urban location and access to an excellent highway network, and at the same time maintain and enhance its small town quality of life -- safe and quiet residential neighborhoods, good schools, river and neighborhood parks and paths, a friendly atmosphere, distinct rural and developed areas, and an affordable tax rate.

FINDINGS: WHERE WE ARE NOW

In determining how Brewer can best stimulate its economy and still possess the qualities citizens most value, the Comprehensive Planning Committee examined past and present conditions and trends, emerging problems and opportunities, and obstacles to moving in this desired direction. The major findings of this analysis are as follows:

Population

1. Brewer has had three periods of growth -- 1830 to 1850, 1880 to 1910, and 1950 to 1960. Though Brewer's population has been steady since 1960, its internal structure is changing as the proportion of older people grows. Brewer now has a relatively high proportion of residents over 65.
2. Brewer is a "middle income" community, but still one in five Brewer children is growing up in poverty.

Natural Resources

1. Steep-sided drainage areas, wetlands, and a high incidence of clay (hydric) soils inhibit development in many parts of Brewer. Rural woodlands and fields have important water quality, visual, recreational, and wildlife values, though little commercial value. Limiting development densities in rural areas can avoid the need for costly public sewer and water extensions.
2. Citizens place great importance on the City's urban trees. Neighborhood pride and concern over the lack of landscaping in commercial areas suggest that beautification can help restore residents' enjoyment of their City streets.
3. The shoreline of the Penobscot River is important to wildlife, fisheries, and recreation. Many citizens wish to see it upgraded.
4. Control of surface water runoff from developed areas is important to maintaining water quality. Increased vigilance and attention to enforcement is needed to ensure that this happens.

Economic Development

1. Brewer is an employment center for the region, with a diversified and healthy employment base.
2. Manufacturing employment is stable, and doing better than in surrounding communities. However, the best prospects for future employment growth are recycling, wholesale distribution and trade, business services, back office telecommunications operations, high tech business, and retail outlets.
3. Brewer's retail sector is losing ground in higher-priced goods such as clothing and cars, but holding its own in "convenience" shopping for food and hardware supplies. With Marden's locating in Brewer, potential exists for building up "outlet center" sales.

Housing

1. Brewer's housing stock is relatively old, but in good physical condition. It is expected to grow at only a very modest rate -- 30 units a year.
2. Brewer has 337 apartments with some kind of subsidy. This is a higher proportion than the region. Still, over 300 Brewer renters pay more than a third of their income for housing.

Historic and Visual Resources

1. Many residents think Brewer's visual appearance needs improvement, especially on Wilson Street, the Penobscot River waterfront, Main Street, and at pockets of neglected properties found throughout the City.
2. Caring for the visual appearance of entryways along major highways is particularly important to establishing a positive image for Brewer; so is protecting views of the river from Main Street.
3. Few reminders of Brewer's rich history remain, though some buildings and archaeological sites are noteworthy.

Land Use

1. In the last 30 years, Brewer has gained a mix of land use development, particularly commercial enterprises. During the same period, the City became more spread-out and dependent on car and truck access, all to the detriment of the waterfront and downtown. This will continue unless growth, especially commercial uses, is directed to and concentrated in the most appropriate locations.
2. Residential growth has spread out along rural roads. Much of Brewer's "backland" has remained undeveloped because of natural conditions and lack of access, not because of zoning, which is inadequate to protect natural and open space values.
3. Most significant environmentally sensitive areas are confined to stream valleys, and to the major wetlands in the east and southeast. These areas are not well protected.

Public Services

1. Most City buildings are over 40 years old and have not been renovated or expanded to meet current needs. The schools and public works facility are the least adequate and in the poorest condition. Because the core of the City has spread east, the location of the public safety building does not provide the same rapid and cost effective response it once did. Brewer has no facility with adequate capacity to function as a community center and sports arena.

2. Brewer's commitment to excellence in education is recognized and appreciated by residents. Continued community support will be critical to helping Brewer youth successfully prepare to be productive workers and effective citizens.
3. Residents give high marks to most public services. Planning is needed, though, to ensure places for long term disposal of sludge and demolition debris; to prevent wild swings in property taxes caused by deferred maintenance; to provide more places to walk and bike; to make greater use of the Penobscot shoreland; and to improve Wilson and Main Streets. Brewer also needs another varsity-sized ballfield and new tennis courts.
4. Brewer has plenty of public water supply to accommodate growth, but the combined sanitary sewer and stormwater system is in need of considerable capital investment. Encouraging growth to locate in the "urban" parts of the City can spread the cost of these improvements over more users, and thus lessen the impact on sewer and water rates.
5. Seasonal and daily changes in traffic volumes on regional routes, along with heavy truck traffic, conflict with residential character and local traffic flows.

Fiscal

1. From 1985 to 1992 Brewer's property tax base grew, while its property tax rates declined; from 1992 to 1994 the tax base declined and tax rates increased.
2. From 1990 to 1994, property tax increases accounted for only 15% of the increase in local residential bills; sewer, water, and electricity increases accounted for the bulk of the increase. If state government had maintained its share of support for Brewer services since 1987, the average Brewer homeowner's property tax bill would be over \$200 lower. The current property tax rate is about average for cities of comparable age and size.
3. Brewer's ability to fund needed capital improvements by assuming future debt is directly dependent upon its ability to attract new economic development.

THE PLAN: HOW WE GET WHERE WE WANT TO GO

To achieve its Vision, Brewer recognizes it must strive to:

1. retain and enhance its most valued assets;
2. govern with foresight, leadership, and civility;
3. support high quality public services with a relatively stable tax rate and an expanding tax base (2% commercial/industrial expansion per year);
4. nurture growth of the local economy and expect business to support and respect community values in return;
5. promote a caring and active citizenry;
6. plan and enhance centers of activity;

7. beautify the City;
8. make streets safe and control traffic; and
9. provide ready access to parks and pathways from neighborhoods.

Some of the most important steps Brewer plans to take to achieve these goals are highlighted below:

1. Implementation of this Plan will go a long way toward ensuring Brewer is a place governed with foresight, leadership, and civility. A citizen committee will monitor and report on its implementation to ensure progress and accountability.
2. To support the level of services Brewer citizens expect from our local government without skyrocketing tax rates we must first grow our economy. To do this, Brewer will:
 - a. develop a marketing strategy focusing on recycling, wholesale trade and distribution, high tech industries, back office, and outlet store businesses;
 - b. revise zoning districts to provide magnet areas for these activities in the Wilson Street, downtown riverfront, and airport areas;
 - c. prepare a master plan for Wilson Street and the riverfront to make sure this area has the infrastructure needed to support growth, and improvements to its appearance and function that will make it a place of which Brewer can be proud;
 - d. explore the feasibility of wetland banking in areas targeted for economic development to improve their development potential; and
 - e. revise land use ordinances so they are friendlier and easier to use to facilitate development in areas designated for economic development without forsaking environmental and community values.
3. To retain and enhance the vitality and appeal of in-town neighborhoods, Brewer will:
 - a. develop neighborhood trails and bikeways, and improve sidewalks;
 - b. maintain zoning and land use ordinance provisions that avoid encroachment from incompatible uses;
 - c. help rehabilitate older and historic housing as grant opportunities allow;
 - d. work on reducing traffic impacts especially from heavy trucks;
 - e. expand the urban street tree program; and
 - f. improve public transit.

4. To support high quality public services with a relatively stable tax rate Brewer plans to:
 - a. provide annual fiscal analysis and capital improvements planning;
 - b. continue strong support for public education and upgrade schools;
 - c. institute an on-going pavement management program;
 - d. develop a master plan for improving public facilities;
 - e. develop a conceptual plan for a community center and ice sports arena; and
 - f. develop contingency plans for demolition debris and sludge disposal.

5. To enhance enjoyment and protection of natural resources, such as the Penobscot Riverfront, and retain rural character, Brewer will:
 - a. develop public “pathways” along the Penobscot river shore and the old rail line to Calais, and greenbelts and neighborhood trails along feeder streams in conjunction with a new land trust and willing landowners;
 - b. maintain and enhance existing land use requirements that protect the environment and natural resources at the same time they are made more user-friendly;
 - c. continue working to separate stormwater from the sewage treatment system;
 - d. discourage sprawl in rural areas by enhancing in-town neighborhood amenities and encouraging cluster development in rural areas; and
 - e. continue to maintain progressively more “rural” dimensional and density zoning requirements the further zoning districts are located from the core of the city.

INTRODUCTION

PURPOSE AND AUTHORITY:

This document is a statement of policy about the kind of community citizens and business people wish Brewer to be in the years ahead; and how the City intends to get there. It provides specific direction for City actions over the next five years.

The Comprehensive Plan includes a Future Land Use Plan and policies and strategies that provide the legal basis and direction for revising the City's land use ordinances. If Brewer's ordinances are ever challenged, the courts will look to the Comprehensive Plan to insure that policy has been clearly and fairly established.

It also includes a Capital Improvements Plan to enable the City to finance needed capital expenditures in a predictable and reasonable manner over the next five years. It includes an Open Space and Trails Plan to provide direction for enhancing opportunities for the public to enjoy the outdoors and conserve sensitive natural resources. Finally, it establishes priorities and a timetable for undertaking the strategies needed to implement the entire Comprehensive Plan, and a Comprehensive Plan Review Committee to oversee its implementation over the next five years.

The Plan has also been written to meet state requirements for local Growth Management Programs. This will ensure the City is in compliance with state laws and is eligible for state grants and services that are contingent upon growth management planning.

PREVIOUS LAND USE PLAN:

Brewer last prepared a comprehensive plan in 1970, with the assistance of Hans Klunder. This twenty five year old plan no longer provides the legal underpinning needed to sustain City ordinances. It is no longer useful for planning the City's infrastructure and economic development. It is uninformed by what the people of Brewer presently want for the City's future.

PLANNING PROCESS:

Initial work on the Comprehensive Plan began in late 1993 when the City Council appointed the Comprehensive Planning Committee composed of city officials, staff, citizens, and business people. The Committee contracted for help in preparing the Plan from H. Dominie, Inc. of Readfield, Maine; and Market Decisions and Land and Water Associates, both of Hallowell,

Maine, with financial assistance from the Department of Economic and Community Development.

The Committee's next step was to hold three public meetings better to understand the kind of city and neighborhoods people want for Brewer. Four "Speak-Out Brewer" meetings were held in June and July. One was held for each of the following three groups: city boards and district trustees, residents, and business people. The results of these meetings, see Appendix 1, were presented at the fourth and final meeting to which everyone was invited. The Committee articulated the community consensus derived from the "Speak-Out Brewer" meetings into "Brewer's Vision," included as Section A, Part II, of the Comprehensive Plan.

Guided by the vision statement, the Committee then broke into three subcommittees (natural resources, public services, and economic development and housing) to develop findings, goals, policies, and strategies for their topic issues. The full Committee edited the work of the subcommittees and presented the results for community review, along with options for future land use and open space and trails and a Capital Improvements Strategy.

Two public meetings were held in April 1995 to review the preliminary plan. The issues raised at these meetings and the changes that were made to the plan in response are summarized in Appendix 4.

PARTS OF THE PLAN:

The plan is divided into two parts. Part I includes the facts and analyses that led the Committee to recommend the measures specified in the second part of the plan. Part II contains the vision statements, goals, policies, plans, and implementation strategies of the Plan. These initiatives will serve as the blueprint for follow-up action by the City Council, Planning Board, staff, and other city boards and committees charged with implementing the plan.

PART I: FINDINGS (BACKGROUND INFORMATION)

A. POPULATION

The following is a summary of key population trends which have relevance to comprehensive planning in Brewer.

Finding 1

BREWER HAS HAD THREE POPULATION GROWTH SPURTS IN ITS HISTORY, THE LATEST IN THE 1950'S.

For most of its history, Brewer has had a relatively stable population. However there were three periods of rapid growth, each of which set the tone and pattern for the half-century which followed.

First period of growth -- the small manufacturers of 1830-1850. Brewer was incorporated in 1812. At the time it was a small farming community of about 1,000 people. So it remained for the next thirty years. But then, from 1830 to 1850, Brewer's population grew by one and a half times, from 1,078 to 2,628. This was the time of the establishment of small manufacturing industries in Brewer which were to dominate the City's history throughout the 19th century -- shipbuilding, brick-making, lumber, and leather tanning.

Second period of growth -- ice and paper in 1880-1910. For the rest of the 1800's, Brewer's population grew slowly, reaching 3,170 in 1880. In the 1880's there was a boom in the ice cutting industry. The ice harvest on the Penobscot increased tenfold, and 1,300 men were employed. In the 1890's a new and more enduring industry opened in Brewer -- paper making. Eastern Manufacturing opened, and soon employed more than 500 men and women.

At that time workers did not have the option of living in the countryside and commuting to the job (as is the case today with companies like Lemforder). So the people moved to Brewer instead. And the City's population grew to 5,667 by 1910.

Third period of growth -- the post-war 1950's boom. Again, through much of the 1900's, Brewer's population fluctuated around 6,000 people. But after World War II Brewer, and the Bangor area, boomed. A major impetus was the establishment of the Dow Air Force base in Bangor as a key component of the Strategic Air Command. Brewer's population in this period grew by a third, from 6,862 in 1950 to 9,009 in 1960.

Finding 2

SINCE 1960, BREWER'S POPULATION LEVEL HAS REMAINED UNCHANGED.

The numbers tell the story succinctly:

Table 1
BREWER'S RECENT POPULATION CHANGE
U.S. Census

<u>Year</u>	<u>Brewer Population</u>
1960	9,009
1970	9,300
1980	9,017
1990	9,021

In fact Brewer did better in this period than Bangor, whose population fell from 38,912 to 33,181. The rapid growth in the 1950's came to a halt in the 60's, as the Bangor area became one of the first in the nation to experience "defense conversion" -- the closing of Dow Air Force Base.

The Dow Base was soon converted to civilian use, and is looked to today as a model of how defense conversion is supposed to work. But the economic revival in Greater Bangor no longer "automatically" included Brewer, or even Bangor itself. With the automobile, people were spreading out -- first in their houses, then stores would follow, and finally industries. Greater Bangor increased in population in the 1980's, but not Brewer. The lack of suitable land for development is one of the reasons for Brewer's lack of growth.

Table 2
POPULATION CHANGES
U.S. Census

	<u>1980 population</u>	<u>1990 population</u>	<u>Increase</u>	<u>Percent</u>
Bangor	31,643	33,181	1,538	4.8%
Brewer	9,017	9,021	4	0.0%
Greater Bangor	85,786	91,153	5,367	6.3%
Maine	1,124,655	1,227,928	103,273	9.2%

Brewer is dependent upon the Bangor region for its own economic success. But it is not, as the above numbers indicate, an automatic beneficiary.

Finding 3

EVEN WITH A STEADY POPULATION, BREWER EXPERIENCED SOME HOUSING GROWTH IN THE 1980'S DUE TO SMALLER HOUSEHOLD SIZE.

The average number of people living in a household has been shrinking nationally for the past thirty years. The reasons are many: declining birth rates, increased popularity of the "singles" lifestyle, more divorces, more elderly people living on their own.

In Brewer shrinking household size caused a growth of 37 households a year in the 1980's, even though population didn't change at all.

Brewer's household size is now below that of the Bangor region (2.50) and the state (2.56). Household size is expected to continue to decline in the future, but at a much slower rate. It is not expected to be a major contributor to housing growth in the future.

Table 3
BREWER HOUSEHOLDS
U.S. Census

	<u>1980</u>	<u>1990</u>	<u>Change</u>	<u>Percent</u>
Households	3,253	3,619	366	11.3%
Household size	2.72	2.46	-0.26	-9.6%

Finding 4
THE BREWER POPULATION IS AGING IN PLACE.

"Aging in place" is the expression used to characterize a frequently-encountered phenomenon -- that even when few people move into or out of a community, the community may still change its character dramatically due to the fact that the population is aging.

Brewer, typical of a community with a stable population trend, has little housing turnover. Five out of six Brewer residents either didn't move at all, or made purely a local move (within Penobscot County) between 1985 and 1990.

But the existing population is growing older. The median age of Brewer residents in 1980 was 32.8. In 1990 it was 35.2.

Table 4
 PERCENT OF POPULATION BY AGE
 BREWER, GREATER BANGOR, AND MAINE
 U.S. Census

GROUP	AGE	BREWER PEOPLE	% OF BREWER PEOPLE	% OF GREATER BANGOR PEOPLE	% OF MAINE PEOPLE
SCHOOL AGE	UNDER 18	2,094	23.2%	22.5%	25.2%
YOUTH	18 TO 24	893	9.2%	16.5%	10.1%
YOUNG ADULT	25 TO 34	1,563	17.3%	16.6%	16.7%
MIDDLE AGE	35 TO 54	2,265	25.1%	24.5%	25.8%
PRE-RETIREE	55 TO 64	949	10.5%	8.3%	8.8%
RETIREE	65 TO 74	719	8.0%	6.4%	7.4%
FRAIL	75 OR OLDER	598	6.6%	5.2%	5.9%
MEDIAN AGE			35.2 yrs	31.6 yrs	33.9 yrs

One in four Brewer residents (25.1%) is over age 55. This is much higher than the regional average (19.9%). It is even higher than the state average (22.1%), despite the fact that state figures include such retirement communities as Kennebunkport and Camden.

An aging population implies a growth in vulnerable populations. This is the case in Brewer as well.

Table 5
INDICATORS OF AGING POPULATION
U.S. Census

GROUP	BREWER PEOPLE	% OF BREWER PEOPLE	% OF GREATER BANGOR PEOPLE	% OF MAINE PEOPLE
Live in nursing home	107	1.2%	0.7%	0.8%
Widowed	647	8.9%	6.8%	7.6%
Disabled, over 65	221	18.1%		

There is also a significant number of younger people in Brewer with disabilities of some sort. Of the population age 16 to 64, 599 report some kind of work disability, or 10.3% of that age group. About two hundred in this age range (3.4%) report having a mobility or personal care limitation. Though these numbers are high, they are not out of line with state-wide averages for disability.

Finding 5

BREWER HAS A SLIGHTLY HIGH PROPORTION OF WOMEN WHO HEAD THEIR OWN HOUSEHOLDS.

This too is a group which tends to be vulnerable to social and economic problems. Part of the reason for a high proportion of female-headed families is simply the age of the population -- women live longer than men. But there is also a slightly higher proportion of female-headed households with children living in Brewer. It may be that some of the less expensive housing -- the same older apartments and homes which seem to attract young 25-34 year-olds (see Table 4 above) -- is also an affordable option for women who are divorced or separated with children.

Table 6
FAMILY LIVING PATTERNS
U.S. Census

	% OF BREWER PEOPLE WHO	% OF GREATER BANGOR PEOPLE WHO	% OF MAINE PEOPLE WHO
Live in families	69.6%	67.0%	70.6%
-- married couple	55.1%	53.5%	58.1%
-- with kids	24.2%	25.3%	28.0%
-- female-headed	12.0%	10.8%	9.5%
-- with kids	7.8%	7.3%	6.4%
Female - divorced or separated	7.3%	6.6%	5.9%

Finding 6
BREWER IS A "MIDDLE INCOME" COMMUNITY.

Brewer is a middle class city. Its median and per capita incomes are slightly higher than Penobscot County and Maine, and slightly lower than the U.S. (see Table 7).

Brewer has fewer of the "very poor," those with incomes below \$5,000, than the county or state or nation. However it has a higher proportion of households with incomes between \$5,000 and \$15,000.

Table 7
 INCOME IN BREWER, PENOBSCOT COUNTY, MAINE, AND U.S., 1989
 Source: U.S. Census

	BREWER	PENOB CTY	MAINE	U.S.
Median household income	\$28,065	\$26,654	\$27,896	\$30,097
Brewer %	100%	105%	101%	93%
Per capita income	\$13,941	\$12,187	\$12,954	\$14,396
Brewer %	100%	114%	108%	97%
Below \$5,000	4.0%	5.7%	5.0%	6.2%
\$5,000 to \$14,999	20.7%	20.4%	19.8%	18.0%
\$15,000 to \$34,999	36.9%	38.0%	37.6%	33.4%
\$35,000 to \$49,999	19.5%	18.7%	19.3%	17.9%
\$50,000 to \$99,999	15.9%	14.9%	15.8%	20.1%
Over \$100,000	3.1%	2.3%	2.5%	4.4%

Finding 7

EVEN THOUGH BREWER IS A MIDDLE CLASS COMMUNITY, MORE THAN ONE IN FIVE BREWER CHILDREN GROW UP IN POVERTY.

The rate of poverty for all families in Brewer is 8.6%. But the rate of poverty for families with children is roughly double -- or 15.5%. And the rate of poverty for families headed by a single woman with children is 50.0%!

These patterns lead to the unusual situation in which one in five children under the age of five are living in households below the poverty level. Without some help, these children will be more vulnerable to health and behavior problems in the schools, and more susceptible to creating social problems in the community at a later age.

Table 8
PERSONS UNDER POVERTY BY AGE IN BREWER, 1989
Source: U.S. Census

	All Persons	Under Poverty	Percent
Under age 5	594	128	21.8%
Age 5 to 17	1,451	231	15.8%
Age 18 to 64	5,609	419	7.5%
Age 65 or more	1,218	133	10.9%
TOTAL	8,891	930	10.5%

Finding 8
IN THE ABSENCE OF DRAMATIC CHANGES IN THE REGION'S ECONOMY, BREWER'S POPULATION CAN BE EXPECTED TO BE STABLE IN THE YEARS AHEAD.

The Maine Department of Human Services projects a population increase of fewer than 2,000 people for Penobscot County between now and the turn of the century. Maine State Planning Office projections indicate that economic growth will be slow in Maine, and particularly in eastern and northern Maine, during this same period.

There has been no recent change in the long-term trend of the population in metropolitan areas redistributing itself away from the center cities and out towards suburbs and rural areas.

With a slow-moving economy, and no change in the trend towards decentralization in the Greater Bangor region, Brewer can at best expect modest population growth in the years ahead. Assuming that the current rate of housing construction continues at about 30 units a year, and household size continues to decline modestly, Brewer is projected to have a population of about 9,350 in the year 2004 -- up about 300 from today. However if housing construction does not continue at this rate, Brewer could have a level or even slightly declining population in the years ahead.

Finding 9
CONSIDERATIONS FOR THE BREWER COMPREHENSIVE PLAN

There are no explicit goals regarding population for the Brewer Comprehensive Plan. The Committee sees no need to either explicitly encourage or discourage population growth.

However the facts in this section raise certain issues which should be kept in mind in framing the policies for subsequent sections of the plan. These issues include:

Issue 1 -- PROMOTING A SENSE OF COMMUNITY AMONG BREWER CITIZENS.

Many of the demographic and economic facts recounted above contribute to a fragmentation of the sense of community in Brewer. Only a minority of residents work and live in Brewer. Only a minority have children in the schools -- and among these many are poor. Then there is another significant and growing minority of elderly, who live on fixed incomes and find property tax expenses burdensome.

This kind of demographic profile can create property tax fights over schools and taxes. It can result in a lack of leadership and community concern among business leaders (most of whom probably live in another community).

City government in Brewer is limited in its ability to address such issues, which in large part are the result of broader demographic trends. But where possible, city policies should contribute to a greater understanding and interaction between different age and social groups in Brewer.

Some examples include town centers and riverfront parks which bring people together, programs which bring school students and senior citizens together for learning or service, town budget processes which encourage dialogue and consensus-building, or town fairs and similar events.

Issue 2 -- MAKING BREWER AN EASIER CITY TO LIVE IN FOR THE ELDERLY.

An older population needs shopping areas and downtowns which are very "walkable," and easy to navigate. Buildings need to be designed to consider access for the elderly. Health services in the home, such as meals-on-wheels and homemaker service, also are important.

Brewer had its last burst of growth in the 1950's, a time when communities were laid out to serve the needs of young families with cars and children. The 1950's suburban pattern is still dominant in Brewer today. But though many people remain in Brewer from the 1950's, they are now at a very different age, and have very different needs.

Areas of particular concern regard include poor accessibility at the City Hall and the City Auditorium, and difficult walking intersections in commercial areas.

The comprehensive plan must address how the community's existing pattern can be adapted to meet the needs of the elderly.

Issue 3 -- PROMOTING ECONOMIC GROWTH IN BREWER.

Given the limitations on suitable land and the slow regional growth overall, it is not realistic to expect significant population growth in Brewer in the future. Nor is it necessarily desirable, since more people may require higher taxes for services.

However it is realistic to aim for further economic growth in Brewer. Brewer is already an employment center for the region, particularly for surrounding communities to the south, west, and east. Economic growth may also provide the resources needed to resolve some of the community conflicts noted above, i.e., to enable Brewer to serve children and families with high-quality schools and services, without increasing taxes on the elderly.

Strategies for promoting growth will be proposed in a later section.

B. NATURAL RESOURCES

This section describes Brewer's land, biological and water resources. It is these resources, the soils, plant and wildlife, and abundant wetlands, that provide a backdrop to life in Brewer. They also have intrinsic value themselves and shape the City's economy, future growth and development patterns, the quality-of-life and other aspects of daily living.

Residents seem to take Brewer's natural resources for granted. In the visioning process very few issues centered on natural resources. All the same, many expressed an interest in retaining rural character and they appreciate the opportunities the undeveloped parts of the City provide for recreation. Many residents also recognize the value and importance of the Penobscot River and waterfront.

1. LAND RESOURCES

Topography

Finding 1

BREWER'S STEEP-SIDED DRAINAGE AREAS AS WELL AS FLAT, WET AREAS PLACE CONSTRAINTS ON DEVELOPMENT

Brewer's eighteen square miles of area (10,106 acres) is relatively flat with few high hills. The predominant topographical features are the fairly steep sided brooks (Eaton, Felts and Sedgeunkedunk) and the steep slopes north of downtown on the Penobscot riverbanks, these +15% slopes are unsuitable for development. Elevations range from 35 ft above sea level to 225 ft.

The City contains some 7,300 acres of land with slopes of less than 15%; however, many of the flattest areas are poorly drained, wet and unsuitable for development. About 70% of Brewer is relatively flat, but, because of the high incidence of forested and other wetlands, little development has been permitted, or is indeed practical, in these areas. As it is, development has occurred on the flat-to-gently-sloping land and not on the steeper sided valleys.

Finding 2

BREWER'S NATURAL GEOGRAPHY CREATES SOME OPPORTUNITIES FOR CONSERVATION

There are an estimated 1000 acres of steep (+15%) sloping land in Brewer. This largely undeveloped land, much of which is within the Shoreland Zone, is stabilized by forest cover which prevents erosion and filters and cleanses run-off before it enters the adjacent brooks, or the Penobscot. There is good reason to conserve these forested, steep-sided corridors and to limit clearing, cutting and/or extensive development within them.

Finding 3

THE WATERSHEDS OF BREWER ARE SMALL AND MANAGEABLE

A watershed is an area of land defined by a common drainage system or basin. All the rainfall or snow melt that drains into Felt Brook, for example, is within the Felt Brook watershed. The boundaries of any watershed are the ridges that surround it.

Knowledge of watersheds is essential to understanding flooding potential, erosion sources and the control or prevention of "non-point source" pollution and sedimentation -- that is pollution from building sites, herbicides, oil spills and the like.

There are five small watersheds in Brewer (see Map 1), four of which extend beyond the City limits. The table below describes them:

Table 9
BREWER WATERSHED AREAS

Watershed Name	Approx. Area Within City
1. Eaton Brook	1,950 acres
2. Felt Brook	4,450 acres
3. Penobscot River	2,250 acres
4. Sedgeunkedunk Stream	1,240 acres
5. Fields Pond	300 acres

Notes: Numbers are rounded. Fields Pond drains into Sedgeunkedunk Stream.
Source: Measured from USGS topographical maps.

The Eaton Brook watershed extends east into Holden. Most of the Felt Brook watershed is within Brewer, while the so-called Penobscot watershed (which is really a series of very small streams that empty directly into the Penobscot, under Main Street, in the urban area) is wholly within the City. Only a small part of the Fields Pond watershed falls within Brewer and the same is true of the Sedgeunkedunk watershed. (See Map 2)

Given the relatively small size of all of these watersheds they can be managed and monitored fairly easily with the cooperation of the surrounding towns. The key to clean water and sedimentation prevention is erosion control and good, on-site management practices, so that non-point pollution is minimized. Cooperative agreements between towns within the same watershed can help achieve this.

Of course up-stream pollution that empties into the Penobscot from within its huge watershed is also a concern for Brewer. This issue is addressed later in this section.

Map 1 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 01 page 23.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Map 2 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 02 page 24.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Soils

Finding 1

THE HIGH PERCENTAGE OF WET (HYDRIC) SOILS INHIBITS DEVELOPMENT AND PREVENTS SEPTIC SYSTEM CONSTRUCTION IN MANY LOCATIONS IN BREWER.

Three major types of soils overlie Brewer's bedrock: outwash, found in rather large bodies along the Penobscot River; marine silts and clays, which are present in the central plain area and are by far the most widespread deposits; and tills, which are found in the hilly areas. Minor alluvial materials are found along the three streams which flow across the City to the Penobscot, and two moderate-sized muck and peat deposits are present, one in the northern and one in the southern part of the City.

Altogether there are twelve soil types or units in Brewer, all of which have different characteristics. Table 10 describes the predominant soil types and their suitability ratings. The widespread silts and clays place serious limitations on land capability in Brewer. Septic systems cannot function in clay soils, nor in much of the till-covered areas. In addition, Clay 2, which is the most widespread unit in town, has water tables at or very close to the surface, making it undesirable for home sites. For the most part, artificial drainage cannot improve the situation, and the placing of layers of coarse-grained fill would be required as a remedial measure. However, this is expensive and not advisable on lands only marginally suited to development. A further limitation to construction on clay soils is the low bearing strength of these materials, although proper foundation design can accommodate these conditions.

Only two types of surficial deposits, Outwash 1 and Till 1, together making up about 15 percent of the City's area, are suited to septic system installation according to the 1970 Comprehensive Plan report. However, the well drained sand and gravel outwash material is also suitable for mining, for construction, and as a high yielding water source, so development there should be carefully considered. The Till 1 material (Bangor and Plaisted type soils) is scattered in moderate sized areas throughout the eastern half of the City. It is most abundant near the central eastern and southern boundaries. According to a 1990 report (by the Responsible Growth for Maine Committee) Brewer's soils can be categorized thus:

- 2,604 acres (25.7%) are hydric (wet) soils, by Soil Conservation Service definition;
- 4,597 acres (45.5%) contain "significant" hydric soils; and
- 2,623 acres (26.0%) are upland soils with no significant hydric soils. (see Map 3)

Map 3

Map 3 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 03 page 26.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Table 10 uses the new SCS “Soil Potential Index” (SPI) to rate soil types for septic systems. It is clear that Brewer has few soils suitable for septic systems, and even those soils that are suitable have limitations that make system installation expensive.

Table 10
 BREWER: PREDOMINANT SOIL TYPES AND
 SUITABILITY FOR SEPTIC SYSTEMS

Symbol	Soil Name	Suitability *	Soil Index**
Bu	Buxton	P	± 70
Su	Suffield	P	± 75
Bx	Buxton/Scantic	P	± 70
Sc	Scantic	NP	± 0
MsC	Monarda/Burnham	NP	± 0
Pr	Plaisted	NP	± 70
Tk	Thorndike	P	± 0
MrB	Monarda/Burnham	MB	± 0
Bo	Biddeford	NP	± 0

Note: * P = Permitted; NP = Not Permitted; MB = May Be Permitted according to the State Plumbing Code.

** The Soil Potential Index is established by the SCS. Any SPI between 60 and 84 is considered

Source: Soil Potential Ratings for Low Density Development in Penobscot County Soil & Water Conservation District.

Medium which m

It is evident that soils characteristics have played a part in shaping land use in Brewer. Development has occurred where the municipal sewer lines are located in an area centered on downtown and adjacent neighborhoods. Rural development is sparse given adverse soils conditions for septic systems.

Finding 2

BREWER HAS A LIMITED AMOUNT OF PRIME FARMLAND; THESE SOILS HAVE BEEN MAPPED BY THE SOIL CONSERVATION SERVICE

In September 1979 the SCS and PVRPC prepared an "important farmlands" map of Brewer showing all prime farmland and farmlands of Statewide importance. They identified 1,290 acres of prime land (13.2% of the total land area of Brewer) (see Map 4) and 510 acres (5.2%) of land of Statewide importance, for a total of 1,800 acres (18.4%).

This land is not necessarily in farm production today. Those prime soils to the west are on the fringe of urbanizing areas (in South Brewer) or on steeper, forested slopes (along Felts Brook). The prime soils on the eastern side of the City do coincide with open fields to a certain degree. Some, however, lie to the north and south of Wilson Street where there will probably be pressure to develop them for non-agricultural uses. (Map 4 shows the location of prime farmland soils in Brewer.)

Map 4

Map 4 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 04 page 28.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Forestry

Finding 1

VERY LITTLE OF BREWER'S OVER 5,000 ACRES OF FOREST IS UNDER ACTIVE MANAGEMENT AND THERE ARE FEW INCENTIVES TO ENCOURAGE SMALL WOODLOT MANAGEMENT.

Land cover types have been periodically surveyed in Brewer and the trends in the amount of forest land are clearly evident. Table 11 below shows that the amount of cleared land between 1958 and 1985 was reduced by over 2,300 acres while the amount of wooded (forested) land increased by over 1,400 acres. Much of this is field reverting to forest and the evidence shows this trend continues today.

The 1985 figure of 5,220 acres of forest land represents almost 52% of the City's land area. (see Map 5) When cleared land is added, some 6,690 acres fall into "open space" category. Thus, between 1958 and 1985, while the overall amount of open space has gone down, the net amount of forest land has increased. Estimates of forest cover for December 1989 show a slight decrease, from 4,666 acres to 5,166 acres (or 5,218 acres if scrub forest land is added).

Table 11
FIELD AND FOREST LAND COVER (1958-1989)

	1959 ¹		1969 ²		1985 ³		1989 ⁴	
Wooded (forested) land	3,797 ac.	37%	3,797 ac.	37%	5,220 ac.	52%	4,466 ac.	45%
Cleared (field & scrub) land	3,836 ac.	38%	3,677 ac.	36%	1,470 ac.	15%	1,023 ac.	10%
Totals	7,633 ac.	76%	7,474 ac.	74%	6,690 ac.	66%	5,506 ac.	55%

- Sources:
- ¹ 1959 Brewer Comprehensive Plan
 - ² 1970 Brewer Comprehensive Plan
 - ³ Based on measurements by Tom Kurth, City Planner.
 - ⁴ Based on measurements by LandForms using 12/89 aerial photography. Note the forested

One measure of the extent to which forest land is actively managed can be provided by the number of individuals in Brewer who have prepared a forest management plan under the Tree Growth Tax Law provisions. Only three landowners in Brewer have such plans and only 110.3 acres ($\pm 2.1\%$) is registered under this law.

The reasons for this low participation rate are probably diverse, but clearly there is a reluctance by woodland owners to commit their land to long term forestry use.

Map 5

Map 5 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 05 page 30.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

An analysis of 1989 aerial photography of the City by the Maine Forest Service (MFS) indicates that there has been limited, active, selective cutting and no recent clear cuts. According to the Maine Forest Service District forester, most of the forested land in the City of Brewer is the result of the abandonment of agricultural fields earlier in this century. Most of this land is covered with “pioneer” species of trees such as birch, poplar, and cherry. In some areas, more shade tolerant softwoods such as spruce and fir are coming in under the shade of the hardwoods. Some more shade tolerant hardwoods such as maple are also present.

The forested land in the north of the City bordered by Route 9, the Day Road, and the Clewleyville Road in Eddington appears to have continually been forested land and is not a result of agricultural abandonment. Pine, spruce, hemlock and more shade tolerant hardwoods such as sugar maple and beech are present in these areas.

The brooks and streams in the City have significant forested wetlands associated with them. Species in these wetlands include alders, spruce, fir, red maple, tamarack, and a variety of woody shrubs significant to wildlife.

Finding 2

APPROXIMATELY HALF OF THE FOREST LAND IS IN RESIDENTIAL ZONING DISTRICTS; THE OTHER HALF IS WITHIN THE FORESTRY AND AGRICULTURE DISTRICT; THESE AND OTHER FACTORS ARE DISINCENTIVES TO INVESTMENTS IN LONG-TERM FOREST MANAGEMENT.

The fact that about half of the forest land is in the LDR, MDR 1 and HDR zoning districts, where lot sizes tend to be smaller than in the rural area, and where the possibility of selling the land for development is ever present, does not bode well for the future of the forest. Where management could occur, however, access and steep slopes are also a problem.

In the rural area where lots are larger, they average ± 35 acres, there are better opportunities for management but, again, few incentives. Economic returns are low (the value of standing timber on one acre will vary from \$100 to \$400 depending on species, age, quality, etc.) and the value as developed land is many times higher; average house lots in rural Brewer are 2 to 3 acres in size. Further, taxes may exceed the value of the timber growth and the favorable economics of large scale logging operations is not there.

Finding 3

THE FORESTS OF BREWER PROVIDE CLEAN WATER AND WILDLIFE HABITAT, ENHANCE THE RURAL CHARACTER, PROVIDE OPPORTUNITIES FOR RECREATION AND HELP IMPROVE AIR QUALITY.

Clean Water. Forests play an important part in the water cycle. They absorb runoff and control sedimentation; they filter out pollutants and protect water supplies and they help replenish groundwater supplies. The Eaton, Felt and Sedgeunkedunk watersheds in Brewer and adjoining towns are well forested and serve these important functions.

Wildlife Habitat. Brewer's woodlands provide habitat for upland game and non-game species of wildlife. A few softwood stands are used as deer wintering areas and the forested wetlands are home to reptiles and amphibians. Forested stream banks provide wildlife travel corridors, known as riparian zones, while also shading the streams themselves; this creates good fisheries habitat.

Rural Character. Wooded areas throughout Brewer bring a sense of tranquillity to the scene; they help define "rural character" and are visually attractive. In the built-up areas of the City, street trees enhance neighborhood character and are valued by the residents.

Recreation. Despite the fact that most forest land is privately owned, Brewer residents still enjoy access to this land for hunting and snowmobiling, and to a lesser extent, hiking and cross-country skiing. Citizens responding to the visioning questions stated that recreational access to the countryside was important to them.

Air Quality. Forests play an important role in maintaining air quality. They filter air-borne dust and serve as carbon dioxide "sinks", by extracting CO₂ from the atmosphere and converting it into growth. Deforestation has the reverse effect and may contribute to global warming.

Finding 4

THE FOREST CONTAINS A MIX OF HARD AND SOFTWOOD SPECIES AND A MIX OF AGE CLASSES; A SIGNIFICANT AMOUNT OF THE YOUNG GROWTH IS IN OLD FARM FIELDS THAT ARE REVERTING TO FOREST.

Although little information on the overall mix of forest types in Brewer is available, it is instructive to know that 53% of the managed forest is softwood, 30% hardwood and 27% mixed growth. The predominant species are sugar maple, beech and white birch (hard woods) and white pine, spruce and balsam fir (softwoods). The percentage of young, medium-aged and mature trees is not known, however, since well over 1000 acres of field has reverted to forest during the last 20 years, a significant proportion of the forest is young and of low value.

The forest has potential for growth and increased value, especially if it is well managed, located on good soils and on sizable parcels. A review of tax maps in those parts of town with substantial tree cover shows that the average large parcel contains about 35 acres, barely enough for small, part-time, tree farming. It is not known if there are any Christmas tree farms in Brewer. There appear to be about 200 acres of planted (plantation) trees.

Finding 5

CURRENT ZONING, SUBDIVISION AND OTHER REGULATIONS IN BREWER PROVIDE LITTLE PROTECTION FOR FOREST LAND.

Although shoreland zoning regulations and some of the provisions of the State's Natural Resources Protection Act (NRPA) limit cutting in shoreland areas and deeryards, Federal, State and local laws offer little protection for forest lands. In fact, large lot residential/rural zoning

can cause the slow, cumulative, demise of forest land which, when subdivided, becomes impossible to manage economically.

Finding 6

BREWER OWNS ABOUT 470 ACRES OF LAND, MUCH OF WHICH IS FORESTED BUT NONE OF WHICH IS ACTIVELY MANAGED.

City-owned land parcels comprise about 470 acres, much of which is wooded. The largest single wooded parcel is adjacent to the old, now closed, landfill; it contains about 257 acres. Another ±55 acres is located within the 65 acre Oak Hill Cemetery lot. Neither of these is actively managed for wood production. The remaining parcels are all too small for use as commercially viable woodlots.

Finding 7

BREWER HAS VALUABLE, ATTRACTIVE, URBAN STREET TREES; THE POSITIVE IMPACT OF THESE TREES COULD BE EXPANDED THROUGHOUT TOWN

Brewer's February 1994 "Brewer Community Forest Management Plan" inventories street trees and recommends specific actions to maintain and improve these assets while also expanding the City's entire street tree program. What follows are highlights from this recent study.

- There are 3,175 trees on 57.3 miles of street right-of-way (R.O.W.) and 1,562 "potential" planting sites.
- Generally, the streets of Brewer are tree-lined; in addition to their intrinsic beauty, these trees reduce air pollution, lower utility bills for heating and cooling, help settle out and trap pollutants, reduce heat and glare, absorb carbon dioxide, reduce noise, support wildlife diversity, and increase property values.
- The inventory was completed in early December, and the City Planner compiled the data by section. A total of 3,175 trees were counted, 3,036 trees were evaluated. Norway maple was the most common species (22%) followed by several species of spruce (13%) and pine and red maple (8% each). The maples as a genus account for 44% of the total composition. Figure 1 summarizes the City-wide composition data.

pie chart from page 3

- Residential streets are lined with beautiful healthy trees, providing a sense of unity and continuity as well as shade, screening, and other benefits.
- Use trees to soften the harshness of the commercial strip on Wilson Street.
- Emphasize arterials such as Main Street, State Street, Wilson Street, Parkway South, and Eastern Avenue with tree planting.
- Use trees to emphasize special features and key nodes such as City Hall, the entrance to Indian Trail Park, and the corners of connecting streets.
- Make the industrial park a more attractive place to work and locate a business.
- Improve Indian Trail Park through planting.
- Improve the health of the trees in Brewer's cemeteries.
- Evaluate the benefits of a tree ordinance, a tree warden, and regulations promulgated for the protection of public trees.
- A healthy diverse urban forest, community support and assistance in its maintenance.

Agriculture

Finding 1

AGRICULTURE DOES NOT PLAY AN IMPORTANT ECONOMIC ROLE IN BREWER AND CONTINUES TO DECLINE IN IMPORTANCE.

There is little information on agriculture in Brewer but it is clear that agricultural land availability is steadily declining. For example, in 1959 there were 3,836 acres of cleared land; in 1989 there were about 1,022 acres, a 72.5% decline.

According to the City Assessor only one farm is registered under the Farm and Open Space Law and that farm has only 10 acres in Brewer.

The fields that do exist are mowed for hay production; there is no evidence of corn crops, vegetable (such as potatoes) or livestock production. Further, there is only one market garden. Brewer's declining agricultural base mirrors that of many other Maine towns, particularly those near larger cities that serve as bedroom communities. Agriculture has been in decline throughout this century and 37,000 acres in Maine have been taken out of production in the last 10 years alone. Small scale operations are seldom profitable and development pressure also has contributed to the demise of farming. As the value of farmland for development rises, taxes escalate and reduce the profitability of agriculture. Then, as farm land is broken up and farmers give up, critical farm support services also fail. It is a cycle that has repeated itself throughout New England and will most likely continue in Brewer, unless a strong effort to assist farmers is made.

Finding 2

ABOUT 18.4% OF THE CITY'S LAND AREA CONTAINS SOILS CLASSIFIED AS PRIME OR IMPORTANT; MOST OF THESE SOILS OCCUR ALONG FELTS AND EATON BROOKS AND IS NOT ACTIVELY FARMED.

Soils best suited for agriculture (i.e. prime soils and soils of Statewide importance) in Brewer are: Suffield, Buxton and Dixmont. These soils are particularly good for corn silage, hay and pasture. Map 4 shows the general location of the prime soils and, as is evident when these are overlaid on Map 5 which shows fields under active production in 1989, there is not a good correlation. Prime agricultural soils support fields, development and forests in Brewer today, not just farming.

It should be noted, however, that Brewer residents appreciate the open space and rural character that these fields provide, yet it is also clear that there are no real incentives to keep these visual, quality-of-life assets. The Forestry and Agriculture zone, as presently constituted, may support these activities in name only, while actually helping cause the demise of these open-space assets.

Sand and Gravel

Finding 1

SAND AND GRAVEL DEPOSITS SUITABLE FOR MINING ARE UNCOMMON IN BREWER; THE PRINCIPAL LOCATIONS OF THESE DEPOSITS ARE ALONG THE PENOBSCOT RIVER, NORTH AND SOUTH OF DOWNTOWN.

Map 6 shows significant sand and gravel aquifers in Brewer, as mapped by the Maine Geological Survey. One of the two aquifers stretches along 1 3/4 miles of the river bank, from North Brewer southward. The other underlies much of the Eastern Fine Paper Mill site. Gravel extraction on the latter site is impractical and the same is probably true for the deposits to the north since most of the area contains residential development and is not easy to access. Old, defunct gravel pits exist next to City Hall and off North Main across from Parkway North Street. They are of no real economic value. The two main aquifers are more valuable as developed land and possibly as a groundwater source; for these reasons it is inadvisable to mine them commercially.

Map 6

Map 6 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 06 page 36.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

2. BIOLOGICAL RESOURCES

This section of the plan discusses wildlife and the inland fishery, marine resources and valuable plant species in Brewer. Significant wildlife and plant habitats, land and water areas that support valuable species, can be lost to development. The discussion below describes Brewer's biological resources and their value.

Wildlife

Finding 1

BREWER CONTAINS SMALL CONCENTRATIONS OF SIGNIFICANT FISH AND WILDLIFE HABITAT AS WELL AS LARGE AMOUNTS OF FIELD, FOREST, WETLAND AND WATER THAT SUPPORT A DIVERSITY OF OTHER FISH AND WILDLIFE. THESE AREAS ARE IMPORTANT FOR THEIR SCIENTIFIC, EDUCATIONAL AND PSYCHOLOGICAL VALUE AND THEY ALSO HAVE ECONOMIC VALUE, BUT THEIR FUTURE IS NOT CERTAIN.

Deer Winter Concentration Areas

In 1989 the district game warden reported that, during times of deep snow, deer concentrate in two locations in the northern part of the City, in the sheltered parts of Eaton and Felt Brooks about 3000 feet south of North Main Street. These are areas where water is close to stands of softwood and mixed wood. (see Map 7) The Eaton Brook area (#040519) is a mapped "significant deer wintering area"; without adequate wintering areas or yards deer mortality can be as high as 35% in a severe winter.

Inland Wetlands

Both the Department of Inland Fisheries and Wildlife (IF&W) and the Department of Environmental Protection (DEP) have identified valuable wetland habitat in Brewer. Wetlands 60 through 66 (see Map 7) are freshwater wetlands identified by the Maine Geological Survey, according to DEP criteria. IF&W records show two other important wetland areas; one is north of wetland 60 on Eaton Brook and the other is in the southeast corner of the City between wetlands 65 and 66. IF&W's most recent mapping (June 94) of "significant wildlife habitat" shows just two waterfowl and wading bird habitats: the so-called Railroad Marsh (MDIFW #050339) and the Wiswell Road Marsh (MDIFW #050340) both of which have a "moderate" rating in terms of habitat value. IF&W recommends the following standards should apply in and around moderate value wetlands:

- don't allow draining, filling or waste disposal;
- riparian habitat within 250 ft. should be protected from development; and
- no alteration to the landscape should occur within the first 100 feet of riparian habitat and timber harvesting within the next 150 ft should be limited.

Map 7

Map 7 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 07 page 39.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Finding 2

BREWER HAS ONE BALD EAGLE NEST SITE THAT IS DESIGNATED AS "ESSENTIAL" WILDLIFE HABITAT BY THE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE

Bald eagle nesting site (MDIFW #BE199A) is located on City owned land at the mouth of Eaton Brook, on the Penobscot. The aerie (nest) itself is in a magnificent white pine stand. The site is an officially mapped and adopted "essential habitat" comprising 125.6 acres (i.e., a circle with a radius of 1,320 ft. centered on the nest). This does not mean activities within a quarter mile of the nest are subject to restrictions in order to minimize disturbance. However, IF&W recommends that local organizations undertake voluntary efforts to protect the resource, possibly with conservation easements. There are about 45 structures, mostly homes, within a 1/4 mile of the nest. At present the planning board is committed to notifying Inland Fisheries and Wildlife if any significant projects are planned for this area and seeking their advice.

Finding 3

THE SHORELINE OF THE PENOBSCOT RIVER CONTAINS AREAS WHERE WILDLIFE CONCENTRATIONS ARE LIKELY TO OCCUR

The entire Penobscot adjacent to Brewer is identified as a "Class C coastal wildlife concentration area" as well as a "Class A river segment." These ratings are due, in part to the influx of bald eagles during the fall, winter and spring months -- but specifically in mid-winter when ice cover limits foraging opportunities.

In IF&W's view, the maintenance of "undisturbed shoreline adjacent to the river is essential to the continued value of this area to eagles." Of course much of the shoreline is already developed. IF&W has identified three focal points for wintering eagles in Brewer:

1. shoreline adjacent to the mouth of Segeunkedunk stream;
2. shoreline adjacent to the mouth of Felt Brook; and
3. shoreline from the mouth of Eaton Brook north to Eddington Bend.

The Department's guidelines for these types of Class C areas are:

- provide 100 ft. buffers inland from the high water mark;
- do not alter more than 25% of adjacent intertidal lands; and
- water oriented uses such as marinas and recreation can be allowed as well as light industry.

Class C areas are wildlife areas that are important at the local level because they support moderate species abundance or diversity.

The Inland Fishery

Finding 1

THE INLAND FISHERY IN BREWER IS NOT OF PARTICULAR STATE-WIDE OR REGIONAL SIGNIFICANCE BUT IS LOCALLY IMPORTANT.

According to the IF&W fisheries biologists there is not a "significant" fishery in the three principal streams. Some trout are found in Eaton and Felt Brooks and the natural wetlands on these streams are important to water quality. There also may be sea-run trout on these two streams. A few sea-run salmon and a handful of spawning salmon have been found in Sedgeunkedunk Stream below the dam.

Finding 2

THE VEGETATED AND FORESTED SHORES OF THE MAIN STREAMS IN BREWER SHADE AND COOL THEIR WATERS, PROVIDE VALUABLE HABITAT AND IMPORTANT WILDLIFE CORRIDORS.

The riparian zone along the shoreline of Eaton, Felt and Sedgeunkedunk Stream provides vital habitat for many species. Destruction of this fragile plant community could negatively impact shore and stream inhabitants.

The Marine Fishery

Finding 1

THE PENOBSCOT RIVER IN BREWER IS A VITAL HABITAT FOR THE SEA-RUN FISH THAT INHABIT ITS WATERS. THESE FISH SPECIES HAVE COMMERCIAL, RECREATIONAL AND SCIENTIFIC VALUE.

The Department of Marine Resources, Anadromous Fish Division, has the following to say about this valuable resource: "The lower Penobscot serves as a migratory pathway, spawning, nursery, and feeding area for a variety of anadromous (sea-run) fish species including Atlantic salmon, alewife, blueback herring, American shad, Atlantic and shortnose sturgeon, striped bass, sea lamprey, rainbow smelt and brook trout. Estuarial commercial and sport fisheries exist for rainbow smelt from November through May. This species is found throughout the Penobscot estuary up to the Bangor Dam. Spawning areas include the main Penobscot River at Bangor, including the Bangor pool, and the brooks and streams which enter the river below the dam. Striped bass migrate into marine waters from the Hudson River and Chesapeake Bay spawning areas. These fish provide important recreational fishing opportunities in the Penobscot in the entire river downstream of the Veazie Dam. The alewife is a commercial species used principally as bait for the lobster fishery. This species is commercially harvested in Souadabscook Stream in Hampden; Sedgeunkedunk Stream in Brewer; and in the main stem of the Penobscot below Old Town. Management needs of these species include maintenance of access to spawning areas, protection of spawning habitat, maintenance of clean water, and

provisions for public access to Penobscot River waters to allow for utilization of these important fishery resources."

Finding 2

THE PRESIDENTIAL SALMON POOL BELOW THE OLD BANGOR DAM IS RENOWNED FOR ITS SALMON FISHERY. IT IS A HISTORICALLY AND SYMBOLICALLY UNIQUE FISHING AREA.

The first salmon caught each season at the Presidential Salmon Pool is traditionally sent to the White House for the President. Throughout the ages this particularly rocky location has had special significance for Native Americans and the settlers that followed. In fact, "Penobscot" is derived from Penawaabskeag - the Place of the Shiny Rocks. Historic records show that before dams were constructed salmon traveled the entire length of the Penobscot; the annual run was estimated at 75,000 adult fish.

Finding 3

THE PENOBSCOT RIVER WATERS AND TIDAL FLATS IN THE VICINITY OF BREWER DO NOT PROVIDE A MARINE ENVIRONMENT SUITABLE FOR SHELLFISH, WORMS OR SOFT SHELL CLAMS.

Although Brewer and Bangor are located at head-of-tide, the mix of salt and fresh water does not provide an environment suited to shellfish and other similar marine species.

Unique Natural Areas

Finding 1

BREWER HAS NO KNOWN RARE PLANTS, NATURAL COMMUNITIES, REGISTERED CRITICAL AREAS OR OTHER NATURAL FEATURES OF SPECIAL CONCERN.

According to Natural Areas Program (NAP) there is no record of any rare natural features in Brewer. However, the City has not been systematically inventoried for rare features and is encouraged to do so, advises the NAP. It should be noted that tidal flats with a freshwater interface may be especially sensitive areas.

3. WATER RESOURCES

Water sustains life. Clean water is essential to Brewer's inhabitants, its economy and its natural resources. This section describes the city's surface waters, groundwater and possible threats to water quality.

Surface Water

Finding 1

SURFACE WATERS WITHIN, AND BEYOND, THE CITY LIMITS ARE VITAL TO ALL ASPECTS OF LIFE IN BREWER.

The Penobscot River Watershed. Brewer's surface waters all flow into the Penobscot; they are part of an enormous, 8,570 square mile drainage area that encompasses much of central Maine. River and estuary meet in Brewer where tidal fluctuations are about 6.5 feet. Brewer's surface water streams contribute clean water to the Penobscot but storm drains in the built-up, developed sections of the City pick up pollutants, such as phosphorus, from streets, lawns, parking lots and other sources and dump them in the Penobscot estuary during times of peak runoff. Efforts are now underway to separate storm flows from the sewage flow and to encourage on-site stormwater retention ponds. Upstream sources, however, contribute more, including dioxins from paper mills. Map 8 illustrates the extent of the Penobscot watershed and shows the major dams on the river and its tributaries.

Hatcase Pond Watershed. Hatcase Pond provides Brewer's water. The pond lies over 10 miles due east of downtown in Dedham (see Map 9). It has a surface water area of 164 acres, a drainage area of 2.84 square miles and an estimated safe yield of 2 million gallons/day. Water quality is good and quantities are considered plentiful, at least to the year 2025. According to a 1978 Maine Geological Survey report, the pond watershed is fairly well protected and most of the shoreline is owned by the Mountainy Pond Club. This was confirmed when the Water District obtained an exemption from required federal filtration rules because landowners in the immediate watershed agreed to comply with standards that protect water quality.

Fields Pond Watershed. Fields Pond in Orrington is the only lake in the greater Brewer area with its watershed partly within the City limits. Only 7.8% of the drainage is within Brewer and that part, in the southeast corner of the City is undeveloped, roadless and swampy; little, if any further protection of this part of the pond's watershed appears needed.

Map 8

Map 8 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 08 page 44.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Map 9

Map 9 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 09 page 45.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Finding 2

ALL OF THE CITY'S SURFACE WATERS - FROM THE PENOBSCOT TO THE SMALLEST WETLAND, INTERMITTENT STREAM AND DRAINAGE WAY - PLAY A ROLE IN MAINTAINING WATER QUALITY, AS DO ADJACENT SHORELANDS.

The preceding discussions on **Topography and Inland Wetlands** addressed the importance of the City's watersheds, stream corridors and wetlands in terms of their value to wildlife and water quality. The wetlands are particularly important in this regard because they act as natural filters and storage reservoirs in times of heavy rain or snow melt. Maine Geological Survey reports show seven, plus 10 acre freshwater wetlands in Brewer (numbers 60 through 66) (see Map 7). Numbers 61 and 62 are wooded swamps. All of these wetlands are protected under the City's shoreland zoning, including adjacent areas.

Mapping by the Department of the Interior, U.S. Fish and Wildlife Service, under their National Wetlands Inventory (NWI) work, shows a far greater number of wetlands, as they define them. Map 10 shows all of these wetlands which include emergent, forested and scrub/shrub type vegetation. They cover above 1,125 acres. These wetlands place severe constraints on development and are subject to regulation by the U.S. Army Corps of Engineers. No alterations, fill or other work is permitted without a permit.

Floodplains: The main floodplains in Brewer are found along the Penobscot, Eaton Brook and upper Felts Brook. They are not extensive and, unlike in some areas, do not serve as agricultural lands. Brewer has a Flood Plain District based on the Federal Emergency Management Agency (FEMA) maps and model ordinance. Property owners within the flood zone (the so-called 100 year flood zone) qualify for federally insured flood insurance. With the breaching of the Bangor Water Works Dam, the number of structures subject to flooding has increased slightly; however, a 1990 Corps study determined that structural measures to protect these homes was not justifiable.

Map 11 shows the extent of the 100 year flood plain. The most extensive areas subject to flooding are on the Penobscot between Eaton and Felts Brooks and at the east end of Wilson Street on Felts Brook.

Finding 3

CERTAIN LAND USES AND DEVELOPMENT ACTIVITIES CAN CONTRIBUTE TO THE POLLUTION AND SEDIMENTATION OF BREWER'S SURFACE WATERS.

Improperly managed land use activities can cause soil erosion, sedimentation and/or the contamination of the water from chemicals, nutrients or other pollutants. Fertilizers, auto exhaust, septic systems and animal waste can contribute contaminants to surface waters which, in turn, affect wildlife and the fishery.

Map 10

Map 10 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 10 page 47.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Map 11

Map 11 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 11 page 48.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Unfortunately adequate disposal options for hazardous household chemicals, used, oil, radiator fluid and similar liquids are not widely available and more public education is needed to alert residents and businesses of the ill effect of these substances.

Groundwater

Finding 1

ALTHOUGH MOST OF BREWER RELIES ON THE MUNICIPAL WATER SUPPLY, SMALL GROUNDWATER YIELDS ARE AVAILABLE FOR DOMESTIC SUPPLY IN SOME PARTS OF TOWN. HIGH YIELDS MAY BE AVAILABLE FROM THE OUTWASH DEPOSITS (AQUIFERS) ALONG THE PENOBSCOT.

Small amounts of groundwater from bedrock (drilled) wells is available throughout Brewer. The average yield is 6 gallons/minute (GPM) but the range is from 0.5 GPM to 100 GPM. Eighty percent of the wells yield less than 10 GPM. Average well depth is 100 feet. The potential for high yields, for public and/or industrial use, from the sand and gravel aquifers shown on Map 6, is good, according to the Maine Geological Survey, however it is questionable if these sources can serve as significant water supply sources. If too much water were drawn from them there is a danger of saltwater intrusion. Further, in the southwest of the City, industrial contaminants may be present underground.

Finding 2

DEVELOPMENT, ABANDONED DUMPS AND THE STORAGE OF SOME MATERIALS AND LIQUID POSE POTENTIAL THREATS TO BREWERS GROUNDWATER SUPPLIES.

Old gasoline tanks, oil storage areas, junk piles, salt storage sheds and impervious, paved surfaces all can contribute to groundwater pollution. The principal threats to groundwater in Brewer are:

Old industrial sites along the river	unknown hazards
Residential	nitrates/reduced recharge
Commercial/Industrial	chemical/petroleum storage
Roads and Parking Lots	salt and other pollutants/and reduced recharge
Waste Disposal.....	chemical leaching

The extent of this contamination in Brewer is not known.

C. ECONOMIC DEVELOPMENT

"Future employment opportunities in Brewer seem virtually unlimited." So the authors of Brewer's last Comprehensive Plan gushed in 1970.

It turned out that their optimism was well-founded. The 1970's and 1980's were periods of strong growth in the Maine economy. Brewer, for example, while not gaining any population, nearly doubled its jobs (from 2,600 to 5,000) in the 1970 to 1990 period.

It was a time when local officials could resort to the "Field of Dreams" approach to industrial park development -- "If you build it they will come" -- and it probably would work out.

Today the environment for economic development in Brewer is very different. Then the regional economies of Maine and New Brunswick were strong; now they are weak. Then Brewer had a modern commercial and retail infrastructure; now it is aging. Then manufacturing, one of Brewer's traditional strengths, was expanding; now it is not. Today business services are the major growth sector -- and at present Brewer is not very competitive for such business.

Yet Brewer has enduring assets. It has a first-class location, with excellent highway access to Canada, the coast, the airport, and to the Bangor metropolitan area. It has good schools, and is adjacent to a major hospital and university. It has the river. It has history.

Brewer will have to make the most of these advantages to compete for economic development in the future. It is a matter of "working smart," of choosing one's niche, of enhancing the community's attractiveness, and of marketing aggressively.

The analysis in this section is designed to help Brewer citizens begin to think through this process.

Finding 1 BREWER HAS A DIVERSIFIED EMPLOYMENT BASE.

Brewer begins with a solid base. As was noted in the population section, Brewer is an employment center for the region. It has more jobs than workers, and is thus a net "importer" of labor.

Unlike many other small Maine communities, which rise and fall with the success of one dominant industry, Brewer has a diversified economy. It is stronger than average in manufacturing, in transportation/utilities, in wholesale trade, in retail trade, in services, and in construction (see Table 12).

Table 12
 1993 ANNUAL AVERAGE PRIVATE EMPLOYMENT IN BREWER
 Source: Maine Department of Labor, jobs covered by unemployment insurance

SECTOR	NUMBER OF FIRMS	COVERED EMPLOYMENT	PERCENT	LOCATION QUOTIENT (see note)
Construction	36	181	3.7%	1.2
Manufacturing	11	881	18.2%	1.3
Transportation/utilities	14	416	8.6%	2.6
Wholesale trade	39	597	12.4%	3.5
Retail trade	103	1,358	28.1%	1.7
Finance, insurance, real estate (FIRE)	15	68	1.4%	0.4
Services	110	1,334	27.6%	1.4
TOTAL	328	4,834	100.0%	1.3

* A "location quotient" is a measure of industry concentration. A value of 1.0 is considered average for a Maine community of Brewer's size. A value less than 1.0 means that there are fewer jobs in that sector in Brewer than expected. A value greater than 1.0 means there are more jobs than expected, and thus that Brewer has a "competitive advantage."

Wholesale trade is Brewer's strongest sector. Location and highway access provide the competitive advantage here, as in the transportation sector. Retail trade and services provide the most jobs, however.

Finding 2
BREWER'S MANUFACTURING BASE IS RELATIVELY STABLE.

As is happening in other Maine communities, the role of manufacturing in Brewer's economy is getting smaller. Twenty four years ago Brewer had 1,400 manufacturing workers -- half of its work force. Today it has between 800 and 900 -- less than 20% of the work force.

The jobs have changed -- from textiles to auto parts. Productivity has changed. Those 1400 workers produced \$30 million in goods in 1967; today about half that number produces about five times the value of product (\$145 million -- not adjusted for inflation).

In the recent recession many Maine manufacturers reduced output and payrolls. Brewer has not been immune from this trend, but has weathered the storm better than most. While Bangor and

the rest of Penobscot County lost over 1,100 manufacturing jobs between 1990 and 1992, Brewer lost only 13 (see Table 13). The average worker's salary remains higher in Brewer than in Bangor as well. The diversity of Brewer's manufacturing base contributes to this good record.

Table 13
 VALUE OF MANUFACTURING OUTPUT, 1990-1992
 Source: Census of Maine Manufacturers, Department of Labor

		1990	1992	Change	%
BREWER	Value/product	\$ 150.5	\$ 145.2	(\$ 5.3)	(3.5%)
	Average wage	\$26,949	\$29,522	\$2,573	9.5%
	Jobs	852	839	(13)	(1.5%)
BANGOR	Value/product	\$ 222.4	\$ 249.2	\$ 26.7	12.0%
	Average wage	\$23,931	\$25,530	\$1,599	6.7%
	Jobs	2,011	1,702	(309)	(15.4%)
REST OF COUNTY	Value/product	\$1,177.5	\$ 997.7	(\$179.8)	(15.3%)
	Average wage	\$30,355	\$30,219	(\$ 136)	(0.4%)
	Jobs	8,448	7,272	(1,176)	(13.9%)
TOTAL PENOBSCOT COUNTY	Value/product	\$1,550.4	\$1,392.0	(\$158.4)	(10.2%)
	Average wage	\$26,504	\$27,101	\$ 597	2.3%
	Jobs	11,311	9,813	(1,176)	(13.2%)

Finding 3
INDUSTRIAL PARK SPACE IS WIDELY AVAILABLE IN THE REGION.

According to the Eastern Maine Development Corporation, there are 16 industrial parks already in operation in the Greater Bangor region, with about 1100 acres occupied and 700 vacant (40% vacancy rate).

Brewer's existing industrial parks are largely filled, with only a few available lots here and there. A new park for Brewer is in the process of being approved by the DEP. It is 33 acres, and will open up 13 new lots of 1 to 2 and ½ acres for small manufacturers and distributors.

Finding 4

RECYCLING, WHOLESALE TRADE AND TRUCKING, BUSINESS SERVICES, RETAIL OUTLETS, AND BACK OFFICE/TELECOMMUNICATIONS ARE THE MOST PROMISING SECTORS FOR BREWER'S FUTURE GROWTH.

Brewer's traditional strength is **manufacturing**, and this is always a major focus for its economic development efforts. But in the medium-term future the Maine State Planning Office forecasts virtually a zero rate of manufacturing job growth for Maine (see Table 14). This means that competition for manufacturing expansions will be very difficult -- and the competitors will not just be in Maine, but in the southern United States and overseas. Given the fact that manufacturing is not expected to grow, and that abundant industrial park acreage already available in the region (including new space in Brewer), there does not appear to be a demand for a new "general purpose" industrial park or speculative building.

Nevertheless there may be certain targeted manufacturing sectors where Brewer holds a competitive advantage. Market Decisions did a report last year for the Maine Waste Management Agency (Recycling and the Maine Economy) which pointed out that 600 manufacturing jobs had been created in Maine in **recycling** in the past five years, and that the number is expected to double in the next five years. Brewer is conveniently located next door to the PERC plant in Orrington, which is a "natural resource base" for a variety of recycled materials. It already has a successful recycling company, BFI, which has prospects for expansion. Further, the Maine state government offers special corporate income tax credits of up to 30% for investments in recycling equipment. A targeted marketing effort -- particularly focused on clean, high-tech businesses -- could pay dividends. The current and soon-to-be-available industrial park land are well-suited for access to PERC and I-395.

Wholesale trade and trucking are projected to grow at a faster rate -- 1% to 1.5% per year. Brewer already enjoys a strong wholesale trade/distribution presence. City officials should be alert to exploit opportunities in this area as they come along. Again, its current industrial park land is well-suited to small distribution businesses.

One issue to watch is the disposition of the Canadian Pacific line which crosses Maine from New Brunswick; it was threatened with closure last year, and as of this writing the recovery proposal is foundering. If it does close, it will force an upgrading of the Route 9 Airline Road, and will create a significant increase of Canadian-US truck traffic through Brewer. While this will create traffic congestion side-effects which are undesirable and must be managed, on the other hand it will also create the opportunity for **new distribution facilities and services related to Canadian-US traffic**. Depending upon how the traffic is planned for, such facilities may require a different location than the existing industrial park.

Retail trade is expected to grow between 1% and 1.5% a year as well. This area is subject to special comments in the sections which follow.

Table 14
MAINE EMPLOYMENT OUTLOOK IN SELECTED SECTORS
 Source: Maine State Planning Office Long Range Economic Forecast, December 1993

	SECTOR	Annual change 1992-2005
MANUFACTURING	PAPER	0.0%
	MISCELLANEOUS	0.4%
DISTRIBUTION	TRUCKING	1.0%
	WHOLESALE TRADE	1.4%
RETAIL	GENERAL RETAIL	1.2%
	RESTAURANTS	1.5%
SERVICES	BUSINESS SERVICES	3.0%
	MEDICAL SERVICES	1.9%
	PROFESSIONAL SERVICES	2.8%

Business services are projected to be the fastest growing in Maine -- between two and three percent a year. There may be a potential for some "back office" telecommunications operations in Brewer to complement the financial and medical industries centered in Bangor, or even to serve more distant Maine firms in the same manner as the recent L.L. Bean's proposal in Hampden and the MBNA expansion in Orono. Such operations require ample parking, good access from highways, an available labor force, up-to-date fiber optic telephone cables, and an attractive setting. Brewer has a nearby labor force; New England Telephone indicates it has the capability to provide fiber optic cable to any new significant user in Brewer; but Brewer's available industrial land does not provide the most attractive setting. A better location might be at the outer end of Wilson Street, near the I-395 exit; but this would require extending sewer and water lines further down the road.

In summary, the economy in Maine is growing again, but only very slowly. Scatter-shot economic development efforts will not be effective in the new market conditions. Brewer will have to choose those economic sectors which are growing, and in which it has the greatest comparative advantages, in order to be successful.

Finding 5

BREWER'S RETAIL SECTOR IS LOSING GROUND.

Over one-quarter of Brewer's jobs are in the retail sector. Yet this sector is losing ground. From 1986 to 1993 retail sales in absolute dollar terms stood still in Brewer at a level of \$90 million. When inflation is factored in, this is an actual decline in sales (see Table 16). In terms of market share (the proportion of Bangor-Brewer sales which take place in Brewer), Brewer's position declined by 4% over the period.

Retail products are divided into two types for market analysis purposes -- *convenience* goods and *comparison* goods. Convenience goods are typically low-value items, like food and household products, which people shop nearby for. Comparison goods are typically higher-value items -- like cars, televisions, nice clothes -- for which people will drive further distances, and shop in a variety of stores, before purchasing.

What is happening in Brewer is that it is retaining its retail strength in convenience goods, but losing it in comparison goods.

The food sector, for example, has retained and even slightly strengthened its market share in the 1986 to 1993 period. However the automobile and general merchandise sectors have declined by a third, and the specialty retail sector almost in half (see Table 15 below).

This is not surprising, given the development of the Bangor Mall. However the competition was already being lost before the Mall developed; a survey taken for the 1970 Brewer Comprehensive Plan showed that even then a majority of Brewer residents preferred to shop in Bangor for clothes, furniture, and cars.

A recent boon to Brewer has been the opening of a new Marden's store on Wilson Avenue. This was a "serendipitous" event, not the result of any careful market study, but the consequence of an available inexpensive building and aggressive City officials. The Marden's store is already bringing new shopping and traffic to Brewer. There is new interest among abutters in taking advantage by opening up convenience food stores. However Brewer already has many such stores.

The Marden's store already has a Dexter shoe outlet next door. This forms the core of what could be an outlet retail center, which currently doesn't exist in Greater Bangor. From the broader point of view, this would be more beneficial to Brewer, since it would give it a retail toe-hold to general merchandise businesses with a regional draw. For an outlet center to develop, however, the City would have to pro-actively promote it. This would mean zoning the area appropriately, providing pedestrian links between the different stores, providing landscaping and visual cues to the public that this is a special area, etc.

Table 15
STATUS OF BREWER'S RETAIL SECTORS
 Source: Maine State Planning Office, Taxable sales data

		1993			1986		
		Sales (mill\$)	Market Share*	Loc Quot	Sales (mill\$)	Market Share	Loc Quot
strong, stable	Food	\$15.7	27.1%	2	\$ 9.8	26.4%	2
once strong losing position	Auto	\$27.3	14.2%	1.9	\$37.8	20.3%	2.9
	General Mdse	\$18.1	7.7%	1.4	\$16.8	11.1%	1.8
	Restrt/ Lodging	\$13.3	13.0%	1.3	\$10.7	15.1%	1.6
	Other Retail	\$ 8.5	11.7%	1.2	\$ 8.6	20.0%	1.7
stable	Building Supply	\$ 7.3	9.1%	0.9	\$ 6.4	8.5%	0.8
	TOTAL	\$90.2	12.2%	1.5	\$90.3	16.0%	1.9

* Market share is defined as Brewer's proportion of the total sales in the cities of Bangor and Brewer.

While the lodging business is moving its center of gravity over to Bangor, fast-food restaurant business in Brewer is growing. Recent additions include Kentucky Fried Chicken and Taco Bell. These provide benefits to the City's tax base, but require careful planning in order to minimize traffic disruptions and maintain a visually attractive and unified appearance.

In the long run, the auto business will probably disappear, as will higher-end general merchandising. There is no economic foundation for these businesses any more in Brewer. Specialty retail stores may be able to re-establish a niche along Main Street and the River, but it would have to be part of a much larger overall economic renewal program.

Brewer will not have a lot of time to debate these questions. Early figures from the recent recovery show that Brewer is not bouncing back at the same pace as Bangor or the state as a whole. From 1991 to 1993 Maine gained 13% in retail sales, Bangor gained 15%, and Brewer lost 13% (see table below). This is not solely a result of the loss of Canadian trade, for Bangor has lost this trade as well. Autos, general merchandise, and specialty retail all lost 2 to 6 percentage points of market share to Bangor in this two year period alone.

Table 16
THE ACCELERATING DECLINE OF BREWER'S COMPETITIVE POSITION
 Source: Maine State Planning Office

	1991	1993	Change	%	91 MkSh	93 MkSh	Chnge MkSh
Food store	\$ 14.4	\$ 15.7	+\$ 1.3	+8.9%	27.7%	27.1%	- 0.7%
Auto	\$ 30.6	\$ 27.3	- \$ 3.3	- 10.8%	20.4%	14.2%	- 6.2%
General merch	\$ 27.7	\$ 18.1	- \$ 9.6	- 34.6%	12.8%	7.7%	- 5.1%
Rst/lodgng	\$ 15.0	\$ 13.2	- \$ 1.8	- 11.9%	14.8%	12.9%	- 1.9%
Other retail	\$ 9.6	\$ 8.5	- \$ 1.1	- 11.0%	14.1%	11.7%	- 2.4%
Bldg supply	\$ 6.2	\$ 7.3	+\$ 1.1	+18.0%	7.4%	9.1%	+1.7%
TOTAL	\$103.5	\$ 90.2	- \$13.3	- 12.8%	15.4%	12.2%	- 3.3%
BANGOR	\$567.2	\$650.9	+\$83.7	+14.8%	84.6%	87.8%	+3.3%
MAINE				+13.0%			

Finding 6
BREWER IS AN EMPLOYMENT HUB FOR THE REGION.

Brewer is a "net importer" of jobs. Over five hundred more people come into Brewer to work, than leave Brewer to work elsewhere.

In another perspective Brewer can be seen as a way station in the broader regional economy. The jobs in Brewer are filled by people who live further in the hinterlands; meanwhile Brewer residents themselves go to work in Bangor.

Half of Brewer workers commute to Bangor to work. Half of the workers in Brewer come from communities other than Brewer or Bangor.

Still, the Bangor-Brewer connection is strong. Eighty percent of Brewer residents work in either Bangor or Brewer. Fifty percent of Brewer workers come from either Bangor or Brewer.

One lesson from all of this is that Brewer is indeed part of the regional economy. Bangor's success at creating jobs directly benefits Brewer. Brewer's success directly benefits surrounding towns. All of this argues strongly for regional economic development efforts.

Table 17
 COMMUTING PATTERNS IN BREWER, 1990
 Source: U.S. Census

	Brewer residents work in...	%	Brewer workers are from...	%	Net flow of commuters to/from Brewer
Brewer	1,377	31%	1,377	27%	0
Bangor	2,193	49%	1,147	23%	(1,046)
Orono/east	317	7%	464	6%	147
Bucksport/south	158	4%	424	8%	266
Ellsworth/south	50	1%	457	9%	407
Hampden/west	95	2%	337	7%	242
Other	209	5%	498	10%	289
TOTAL	4,451	100%	5,019	100%	568

Finding 7
BREWER NEEDS TO PROMOTE A POSITIVE BUSINESS IMAGE.

For the most part a plan must rely on established facts and figures. But there is another issue of importance to Brewer's future economic development prospects which is not easily quantified. That is Brewer's image.

The old image of Brewer as a city unfriendly to business is disappearing, but has not gone completely. The problems Brewer has in its regional image can be assumed to be the same as those raised at the Comprehensive Plan Committee's public meetings: a perception of a difficult political environment, a lack of local government support for business, and a need for sprucing up and beautifying the community. There has been a change in the attitude of city government about business in recent years, and engineers and consultants who help make business location decisions are aware of what is going on. Still that message needs to get out to the wider community.

Whatever economic strategy is developed to attract new businesses and retail sales, the issue of improving the public image of Brewer must be among its tasks.

D. HOUSING

This section describes the cost and condition of Brewer's housing stock.

Finding 1
BREWER HAS A RELATIVELY OLD HOUSING STOCK.

The median age of a Brewer house is about 40 years old. This is about 7 years older than the median Maine house -- and Maine, in turn, has an older stock generally than the nation.

For every decade between 1950 and 1990 Brewer has had a fairly consistent rate of construction -- between 45 and 57 houses per year. Maine has not been so consistent, with low growth rates in the 1950's and high ones in the 1980's. Consequently Brewer's proportion of 1950's housing is higher than Maine's, and its proportion of 1980's housing is lower.

Older housing is located in South Brewer and near Main Street along the river. Newer housing is located more to the interior, along Eastern Avenue, and to the north along Main Street.

Table 18
 AGE OF HOUSING, BREWER AND MAINE, 1990
 Source: U.S. Census

YEAR BUILT	BREWER	%	MAINE %
1939 or earlier	1,462	38.7%	34.9%
1940's	256	6.8%	6.6%
1950's	525	13.9%	8.5%
1960's	445	11.8%	9.7%
1970's	568	15.0%	20.0%
1980's	524	13.9%	20.2%
TOTAL	3,780	100.0%	100.0%
MEDIAN YEAR BUILT	1953		1960

Finding 2
EVEN THOUGH BREWER'S HOUSING IS OLD, IT IS IN RELATIVELY GOOD SHAPE.

Older housing like that in the City of Brewer tends to have more problems with maintenance, energy efficiency, electrical and plumbing failures, and general deterioration.

While little solid comparative data is available on the subject of housing condition, the information which does exist suggests that Brewer's housing is in pretty good shape. In 1990 Brewer had a lower percentage of housing without plumbing or overcrowded than the rest of Maine.

The data appears to indicate that there is little outright "substandard" housing in Brewer. However this by no means eliminates the possibility that there are widespread problems with deterioration. There simply is no Census data which addresses the issue.

Table 19
 INDICATORS OF HOUSING CONDITIONS, 1990
 U.S. Census

INDICATOR	BREWER	%	MAINE %
Lack complete plumbing	17	0.4%	1.6%
Lack complete kitchen	5	0.1%	
No bedrooms	38	1.0%	
No heat	0	0.0%	
Overcrowded, owner	11	0.5%	1.4%
Overcrowded, renter	20	1.5%	2.5%

Finding 3
BREWER'S HOUSING COSTS ARE CLUSTERED AROUND MIDDLE RANGES.

Earlier it was noted that Brewer's population clusters around the middle income ranges. Therefore it isn't surprising that Brewer's housing values and rents cluster around middle ranges as well. There are few very inexpensive, and few very expensive, homes and apartments in Brewer.

Half of all homes in Brewer were valued, in 1990, within a narrow \$37,000 band -- from \$64,400 to \$101,900. By contrast, for Maine as a whole, the band between the first and third quartile of values was \$62,000 (\$60,100 to \$123,300). Similarly, half of Brewer's contract rents ranged in a band between \$265 and \$444.

Table 20
 HOUSING COSTS, 1990
 Source: U.S. Census

	BREWER	GREATER BANGOR	MAINE
Median home value	\$82,863	\$80,322	\$87,442
Less than \$50,000	10.4%	13.8%	17.4%
\$50,000 to \$99,999	63.5%	60.2%	44.3%
\$100,000 to \$149,999	20.7%	18.1%	23.0%
\$150,000 or more	5.4%	7.9%	15.3%
Median contract rent	\$355	\$359	\$358
Under \$300	34.5%	35.4%	38.9%
\$300 to \$399	30.6%	28.3%	24.8%
\$400 to \$499	22.3%	22.4%	18.1%
\$500 or more	12.6%	13.9%	18.2%

**Finding 4
BREWER HAS MORE 2-9 UNIT STRUCTURES, FEWER MOBILE HOMES THAN AVERAGE.**

Most of Brewer's housing, like Maine's, is in single family homes. But Brewer has a lower proportion of city-like apartments (over 10 units), and a lower proportion of rural mobile homes, than the rest of the state. On the other hand, Brewer has more two to four family units. Many of these are older homes converted to apartment use.

The fact that Brewer has a low proportion of mobile homes does not necessarily reflect our affordability problem. Subsequent findings show that there is a relatively ample supply of housing in Brewer for people of all income ranges. However it does present an issue of choice. For some elderly and young families in particular, there may be a preference for low-cost mobile home ownership rather than apartment or condominium life. For these people, Brewer offers very few options. Other urban communities nearby offer comparatively more opportunity for mobile home ownership. For instance, mobile homes comprise 8.55% of Bangor's housing stock and 10.49% of Old Town's housing stock.

Table 21
TYPES OF HOUSING STRUCTURES
Source: U.S. Census

HOUSING UNITS IN...	BREWER	%	GRTR BNGR	MAINE
Total	3,780	100%	100%	100%
1 unit, detached	2,203	58%	53%	65%
1 unit, attached	30	1%	2%	2%
2 unit	509	14%	9%	6%
3 or 4 unit	565	15%	12%	6%
5 to 9 unit	241	6%	8%	5%
10 to 19 unit	87	2%	3%	2%
20 to 49 unit	25	1%	2%	1%
50 or more unit	0	0%	1%	1%
Mobile home	120	3%	12%	12%

Finding 5
BREWER HAS A LOW VACANCY RATE IN ITS HOUSING.

Brewer has a lower vacancy rate than the state or county. This is a sign that, despite Brewer's low rate of population growth, it still has a healthy rate of housing demand.

However the vacancy rate is not evenly distributed across all homes in Brewer. Older housing and multi-family housing have higher vacancy rates -- 12.5% for 1940's-era housing, and 7.9% for 2-9 unit structures. In other words, older homes converted to apartments are experiencing much higher vacancies.

Table 22
 VACANCY RATES, 1990
 Source: U.S. Census

	BREWER	%	GTR BNGR	MAINE
Total units	3,780	--	--	--
Seasonal	8	0.2%	2.1%	15.0%
Year-round units	3,772	--	--	--
Owner occupied	2,318	64.1%	63.1%	70.5%
Renter occupied	1,301	35.9%	36.9%	29.5%
Vacant available	108	2.9%	3.8%	4.4%
Vacant for sale	--	0.8%	1.3%*	1.8%
Vacant for rent	--	5.2%	7.2%*	8.4%

* *Penobscot County*

Finding 6

BREWER HAS A BALANCED SUPPLY OF SUBSIDIZED RENTAL HOUSING.

Brewer has 337 government-subsidized apartments at present. Under construction is the Ellen M. Leach "congregate" housing for the elderly, 30 subsidized units under the management of the local Housing Authority. In these the tenant pays 30% of his or her income, and the government pays the remainder up to a "fair market rent" for the landlord or local authority.

The housing which exists offers a reasonable balance between public housing apartments and assistance in private apartments (Section 8), and between elderly and family housing.

Table 23
 SUBSIDIZED RENTAL HOUSING IN BREWER, 1994
 Source: Brewer Housing Authority

	TYPE	ELDERLY	FAMILY	TOTAL
P	Charles Dartnell Apts	32	0	32
U	Norumbega Park	0	32	32
B	The Heritage	50	0	50
L	Gerald Robertson Apt	0	20	20
I	Scatter site	0	20	20
C	Subtotal	82	72	154
S	Existing Certificates	38	61	99
E	Vouchers	11	23	34
C	MSHA - existing	19	16	35
T	Moderate Rehab	4	3	7
0	Dirigo School (SR)	8	0	8
8	Subtotal	80	103	183
	TOTAL	162	175	337
In Const	Ellen M. Leach	30	0	30

Finding 7

BREWER HAS A HIGHER PROPORTION OF SUBSIDIZED HOUSING THAN ITS NEIGHBORS, BUT THERE ARE STILL MANY BREWER FAMILIES PAYING OVER A THIRD OF THEIR INCOME FOR HOUSING.

Are there too many subsidized apartments in Brewer? Or are there not enough?

There are three ways to look at the question. The first is to compare Brewer to the county and state. As a general rule Brewer would not want a proportion of subsidized housing significantly out of line with neighboring communities. According to this test, Brewer has a moderately high proportion of subsidized housing.

Table 24
PROPORTION OF HOUSING IN SUBSIDIZED RENTALS, 1994
Sources: Tables 5 and 6, U.S. Census

	Brewer	Penobscot County	Maine
Percent of renter-occupied units	28.2%	26.1%	23.3%
Percent of all year-round units	9.7%	7.9%	6.4%

A second way to look at it is consider how much of Brewer's need is being met. According to the 1990 Census, about one in six Brewer households pays more than 35% of its income for housing costs. Among renters, the proportion is one in four -- meaning that well over 300 Brewer families are still paying over a third of their income for housing, despite the housing subsidies which already exist. Even though this is lower than the Maine average, still, according to the test of absolute need, additional Brewer residents would benefit if more housing subsidies were made available.

Table 25
BREWER HOUSEHOLDS PAYING 35% OR MORE OF INCOME FOR HOUSING
Source: U.S. Census

	Brewer	Maine
Percent of all owners	11.1%	13.2%
Percent of all renters	24.1%	31.1%

One way to address the need without changing the character of the community is to make even greater use of Section 8 subsidies in existing housing. This program achieves multiple goals: it helps families pay for decent housing, it helps landlords get a cash flow that allows repairs to be made, it provides property taxes to the City, and provides nicer appearing housing for the neighbors.

A third way to look at the question is to consider the affordability of Brewer's housing stock relative to the incomes of Brewer families. The Maine Department of Economic and Community Development has defined affordable home sales prices and rents for households of very low, low, and moderate incomes for the Greater Bangor area. Using this guideline, the following picture of Brewer housing affordability emerges:

Table 26
HOUSING AFFORDABILITY IN BREWER, 1994
Source: DECD, Market Decisions

Income Group	1994 Brewer Incomes	% of Brewer households	Affordable home	% of Brewer homes	Affordable rent	% of Brewer rents
Very Low Income	\$0 to \$17,550	26.5%	Under \$36,800	2%	Under \$340	35%
Low Income	\$17,551 to \$28,080	18.5%	Under \$67,000	32%	Under \$610	95%
Moderate Income	\$28,081 to \$52,650	34.8%	Under \$131,000	82%	Under \$1,180	100%

By this measure, the major gap for low income families in Brewer is the inability of very low income families to purchase a home. A greater use of Maine State Housing Authority first-time buyer low-interest mortgages can help some of this group move up to homeownership.

Finding 8
BREWER HAS HAD MODEST HOUSING GROWTH IN THE 1990'S.

Average annual housing growth in the 1990's has been about half of the normal post-war rate for Brewer -- about 23 a year, compared to 40 to 60 a year in the earlier period.

Table 27
 ANNUAL HOUSING CHANGES IN BREWER, 1990 TO 1994
 Source: Brewer Planning Department

	1-unit	2-9 unit	10+ unit	Mobile Home	Total
1990 Census	2,203	1,345	112	120	3,780
ADDITIONS					
1990	15	8	0	0	23
1991	21	0	0	0	21
1992	12	21	0	0	33
1993	11	0	0	0	11
1994 (to September)	14	0	30	0	44
Subtotal	73	29	30	0	132
SUBTRACTIONS					
1990	2	5	0	0	7
1991	0	0	0	0	0
1992	1	8	0	0	9
1993	0	0	0	0	0
1994 (to June)	0	0	0	0	0
Subtotal	3	13	0	0	16
NET CHANGE	70	16	30	0	116
NEW TOTAL, 1994	2,273	1,361	142	120	3,896

Finding 9
BREWER'S HOUSING IS EXPECTED TO CONTINUE TO GROW AT A MODEST RATE.

Market Decisions, Inc., estimates that housing demand in Brewer will grow at a rate of about 30 units a year during the 1990's. This is slightly higher than the early 1990's rate, and can be expected due to the economic recovery and due to the ample supply of buildable lots in subdivisions in Brewer. However it is not as high a rate as in the 1980's, due both to the slower economy and changing demographics.

Table 28
PROJECTED POPULATION AND HOUSING IN BREWER
 Sources: Census (1990), Claritas (household size for 1994/99), and Market Decisions

	1990	1994	1999	2004	Change 94-04
Population	9,021	9,029	9,062	9,354	325
Households	3,619	3,728	3,872	4,016	287
Household Size	2.46	2.39	2.31	2.30	
Housing Units	3,780	3,896	4,046	4,196	300

Finding 10

HOUSING PRICES BOTTOMED OUT IN 1992 AND ARE NOW FAIRLY LEVEL.

After peaking in 1990, home sale prices declined for two years before stabilizing in 1993. Lower interest rates and the end of the recession helped end the decline. Today rising interest rates are again slowing the market.

Even so, the volume of sales activity remains low, at only half the level of the 1980's.

First quintile* prices show how the lower end of the housing market is faring. Generally lower end housing has increased at a slightly faster pace than middle-range housing.

No information is available on changes in rent levels since 1990. A review of newspaper ads indicates that rents are generally in the \$350 to \$500 range in 1994 -- about \$35 to \$50 higher than in 1990. This is better than a 10% increase in rental costs, about double the rate of owner inflation. However the difference can be explained, at least in part, by the increase in sewer and water costs, which are absorbed by the homeowner in the one case (and reflected in lower home prices), and the landlord in the other (and reflected in higher rents).

Table 29
HOME SALE PRICES IN BREWER, 1985 TO 1993
Source: Real Estate Transfer Tax records, City of Brewer

YEAR	# OF SALES	MEDIAN	1ST QUINTILE
1993	87	\$83,000	\$65,400
1992	86	\$76,000	\$63,000
1991	95	\$78,000	\$63,000
1990	100	\$79,500	\$62,200
1989	113	\$77,750	\$59,960
1988	159	\$65,000	\$48,800
1987	159	\$63,250	\$45,500
1986	209	\$57,000	\$42,500
1985	142	\$50,000	\$37,000
Avg Annual change		6.9%	7.4%

* *The first quintile home is defined as the most expensive of the bottom fifth of home prices.*

E. HISTORIC AND VISUAL RESOURCES

1. HISTORIC AND ARCHAEOLOGICAL RESOURCES

Historical and Archaeological Resources

From the earliest times, until the advent of the automobile settlement in Brewer centered on the river. This section provides a brief overview of the major places and structures that have been the backdrop to important events in the lives of those who have lived and toiled along Brewer's waterfront.

Finding 1

UP TO SEVEN PREHISTORIC SITES HAVE BEEN IDENTIFIED ALONG THE BANKS OF THE PENOBSCOT, ALL NORTH OF DOWNTOWN.

Native Americans have lived, camped, hunted and fished along the river at numerous sites and there are many tales of the Penobscots' and Abenakis' exploits in the area. Documented evidence of their settlements, however, is sparse. The Maine Historic Preservation Commission (MHPC) has had the lower banks of the Penobscot, in Brewer surveyed, in a preliminary fashion, but recommends further survey, inventory and analysis.

To date, two different sources have recorded up to seven "archaeological sites" on the river. The "Atlas of Coastal Maine's Archaeological Sites" notes:

- A) a site just north of the mouth of Felts Brook on the river;
- B) a site just north of the mouth of Eaton Brook on the river;
- C) a site just south of the mouth of Eaton Brook on the river; and
- D) a site midway between sites A and B.

Information from the MHPC corroborates with the above in that they recognize sites A, B, and D, but not site C. They also list a site within the Eaton Brook inlet, east of the outlet, as well as two high bluff sites closer to downtown (just north of the rail bridge). The more northerly of these two bluff sites is on what is now known as Indian Trail Park. No "historic archaeological sites" are listed in MHPC's records.

Finding 2

THERE ARE ONLY TWO HISTORIC PLACES/BUILDINGS LISTED IN THE STATE'S INVENTORY OF SIGNIFICANT STRUCTURES IN BREWER.

The only two significant historic buildings in Brewer listed by MHPC are:

- the Penobscot Salmon Club and Pool, off North Main Street, on the river and
- the Daniel Sargent House, at 613 South Main Street.

Given Brewer's rich history and especially its famous son, Joshua L. Chamberlain, the City should embark on, at least, a reconnaissance level survey of its architectural (and other) historic resources so that these pieces of its past are recorded and appreciated.

Finding 3

THERE IS LITTLE PHYSICAL EVIDENCE OF BREWER'S 19TH CENTURY HEYDAYS WHEN SHIPBUILDING, ICE HARVESTING, BRICK MAKING AND LUMBER MILLING WERE VITAL WATERFRONT INDUSTRIES.

The special significance of the river and the resources along its banks is well illustrated in "A Pictorial History of Brewer, Maine," published in 1976. Yet, today there is little to show of this proud history, and none of the old shipyards, brickyards, ice houses, or mill sites can be readily identified. A few notes from that History make the point:

- Between 1849 and 1919, 163 barques, brigs, schooner, sloops and ships were built in shipyards like Barbour's, Charles Cooper & Co., Joseph Oakes & Son, Dunning, and others.
- In 1870, Brewer's 18 brickyards employed 126 "hands" and made over 11.25 million bricks; the brickyards flourished because of the excellent brick clays found near good wharfage on the riverfront. The brick industry thrived from before 1850 until about 1919.
- In 1883, the "Mining and Industrial Journal" reported that there were four very large mills, running on steam, on the waterfront. They noted the existence of a planing and box mill, house finishing mills, brush manufacturers, a molding mill and the Dirigo Steam Mill which manufactured long lumber, clapboards, shingles, lathes, pickets and fish flakings. (As early as 1836, the "Niles Register" reported 200 sawmills within a few miles of Bangor manufacturing 1,500,000 feet of boards daily!).
- Between 1879 and the turn of the century, some 13 ice companies operated huge ice houses on the Penobscot in Brewer. Up to half a million tons were harvested on the Penobscot annually and, at the eight of the trade a cargo of 2,000 tons was not infrequent.
- In 1889, the Eastern Manufacturing Company (now Eastern Fine) was organized for the purpose of building a pulp mill at Sargent Point. Constructed on the site of a number of sawmills, Eastern Manufacturing expanded steadily for the next 30 years under F.W. Ayer's and John Sullivan's leadership. Today, the mill is the only vestige of Brewer's once crowded working waterfront.

Finding 4**THE BREWER HISTORICAL SOCIETY BELIEVES THAT THE CITY SHOULD RECOGNIZE THE HISTORICAL IMPORTANCE OF THE FOLLOWING PUBLIC BUILDINGS.**

Following is a preliminary listing of structures and sites in Brewer that the Historical Society believes to be of significance.

- First Congregational Church (behind City Hall)
- Second Congregational Church (south Brewer)
- Methodist Church (Main Street)
- St. Theresa's Catholic Church
- Brewer Savings Bank
- Danforth's Hardware Store?
- Holyoke Square?
- Cemeteries?

2. VISUAL RESOURCES

Introduction

Community image is a complex concept. It's the sum of people's perceptions, experiences, stories, and attitudes about a community. It involves physical appearance and pride, as well as economic, social, environmental, and political conditions. It's what we see and feel about the place we call home. It's also how outsiders view our community. Outsider's impressions shaped by personal experience, heresay, or the media can be quite different from our own.

This section of the plan considers the physical appearance of Brewer and how it influences, and has the power to strengthen, Brewer's image and community pride. It is important to note that taking steps to improve physical appearance does not have to mean discrimination against economic or ethnic status; conformity of architecture or building materials, size, and color; or an attempt to preclude development or lock a place in a nostalgic view of the past. Rather, it can produce diversity, vitality, and creativity. But it will require public and private commitment to change.

Finding 1:

BREWER'S PRIMARY VISUAL ASSET IS THE RIVER.

The Penobscot River is the preeminent focal point and natural feature of Brewer. No high hills, lakes, ponds, or other rivers vie for attention; in fact, the landscape in the rest of the city is quite unremarkable by comparison. By bringing greater attention to the Penobscot, Brewer can use the power of the river to strengthen community identity and psychological well-being.

Most Maine communities with urban or village waterfronts have at least one well defined space for public assembly and celebration and for creation of an attractive and natural transition between urban core and water. Brewer has none that entirely fills the bill. Eastern Park (known to some as the South Main Street Playground) or Indian Trail Park are wonderful places but they are limited by their size, location, and parking capacity. They are more conducive to informal use, neighborhood gatherings and open spaces, or being one of several sites for a community-wide event.

The beginnings of community space exist in the Chamberlain Bridge to the Penobscot Bridge. Already the Harborside Restaurant has created a privately owned "public space" for its customers by restoring grass and trees to the riverfront and places to sit just south of the Chamberlain Bridge. A landscaped area and small park will create a more welcome entryway from Bangor when the Penobscot Bridge (1911 Iron Bridge) is replaced. The bridge project will widen the North Main and State Street intersection and remove the Christmas house whose location and mass currently provide a sense of scale and enclosure for the roadway and river. In consolation for this loss, the opportunity will exist to create a public monument, if not a park, on the portion of this high ground that will remain.

A drive along a river can provide a memorable and high quality visual experience. Brewer's Main Street traces the course of the river and its history and offers some fine river views, period architecture, and open space. The drive from the Orrington to Eddington town line also offers a wonderful sense of dynamic change from: the urban setting of South Brewer -- to the more open area in the vicinity of I-395 and the Penobscot Rocks Commemorative Area -- then back again to urban character between the Chamberlain and Penobscot Bridges -- and finally reverting to the wooded low density character of North Brewer where one can catch glimpses of the river. These positive elements tend to get lost, however, in the strip development, vacant or derelict lots and buildings, and hodgepodge of uses, building styles, and setbacks, and lack of common purpose, cohesiveness, and organization of landmarks in the urbanized areas.

The future of Main Street is especially important because it is the "public side" of Brewer where many outsiders form their opinions of the city. At either end where Brewer meets Eddington and Orrington, Main Street extends Brewer's welcome mat to visitors who will form their first or everyday impressions from what they see at these gateways to the city. The bridge entryways have the same critical importance.

More and more, people want to reconnect with the natural features that define their heritage and nurture physical and psychological well-being. Brewer has great potential to use the river and its tributaries to accomplish this, in large measure an opportunity created by past decline in the economic importance of the river. The city has created several parks, parklets, and turn-outs along Main Street in recent years to enable people to view the river. The Joint Bangor-Brewer Harbor Study of 1990 also recommended the development of a walkway from the Veteran's Remembrance Bridge to the Chamberlain Bridge and another from Indian Trail Park to the Bangor Dam. The steep slopes, wooded character, and rapids of the latter stretch offer a highly scenic setting for the informal paths that now exist, and Bangor is trying to protect the natural character of its side as well. Bangor has also taken many steps to upgrade and improve the view for Brewer from its urban waterfront between the Chamberlain and Penobscot Bridges.

Finding 2:

WILSON STREET IS ANOTHER PROMINENT PLACE WHERE BREWER'S VISUAL IMAGE AND COMMUNITY IDENTITY ARE CONVEYED.

Brewer is not alone in its search for a positive image for its primary commercial area. Market forces and the automobile have conspired in almost every community with an urban core in Maine to create strip development along regional highways with high traffic volumes. Left without a viable downtown, Brewer is faced with the challenge of imposing a sense of visual order, sanity, and cohesiveness on Wilson Street.

Today, Wilson Street includes an eclectic array of land uses, signs, traffic signals and lights, overhead wires, utility poles, radio towers, and building styles and architectural elements. Some features of the strip that evoke a negative visual response include the following:

1. Building masses and heights and parking expanses do not create a comfortable human scale or sense of enclosure in relation to the street;
2. Expansive areas of pavement and buildings are unrelieved by carefully placed open spaces and tree plantings. The setting shouts "INDOOR USE ONLY" with no parks or pedestrian spaces provided to entice shoppers and visitors to linger awhile and give relief to workers on break;
3. Few establishments have left green space between their parking lots, buildings and the road to soften the "streetscape";
4. Not only are signs numerous and large, but the biggest ones are not "tied to the ground" with proportional amounts and massing of green space;
5. Commercial and directional signs, overhead wires, utility poles, and traffic lights and signals clutter, compete, and confuse people;
6. The route is an almost seamless, chaotic strip. No visually commanding landmarks or discrete blocks of green space have been planned to orient one, rest the eye, or visually cue one to pedestrian crossings and different sections of the strip;
7. No civic feature or amenity tells people that this is a place in which Brewer takes an interest and pride. No public system of signs, sidewalks, or other streetside feature has been installed to unify this center of Brewer's commercial activity; and
8. Abandoned buildings and signs and trailers used to store merchandise are unattractive and conspicuous.

Opportunities for positive change exist, however, aside from the obvious streetside improvements that could be made. A few follow:

1. Views of Bangor could be a focal point for a park on the western side of the Twin City Plaza Shopping Center. Such green spaces would be especially effective near motels and restaurants, places with large work forces, and where pedestrian walks, bikeways, and open space corridor crossings are planned.
2. The street could be zoned into three or more "zones" offering different kinds of shopping or business development. Vacant buildings and undeveloped and landscaped land could be strategically used to demarcate and infill these areas to give a sense of separation and integrity to different parts of the street. This would help to establish a sense of order, both visually and psychologically.
3. The mostly undeveloped and wet land in the vicinity of the outer I-395 interchange could be left primarily as open space or pockets of tree-screened development in upland areas

to create a rural transition from Holden and sense of surprise as one comes west over the hill and gets the first view of the strip.

Finding 3:

THE CITY’S ENTRYWAYS ARE ALSO CRITICAL TO FORMING PEOPLE’S IMPRESSIONS OF BREWER.

Motorists enter Brewer from one of six entryways: they cross one of the three bridges over the Penobscot, come down the Airline from Eddington, west on Wilson Street from Holden, or up South Main from Orrington. Most of these entryways are not particularly visually appealing and, at times, some have been quite the opposite, sporting “mini pink refrigerators”, derelict buildings, and public spaces such as roads designed more for efficiency than establishing civic pride.

Finding 4:

RESIDENTS AND BUSINESS PEOPLE CARE GREATLY ABOUT THE VISUAL APPEARANCE OF BREWER.

Speak Out Brewer results show a strong interest in improving Brewer's visual appearance. Of the 103 people who attended, the following number registered their opinions on the city's visual image:

<u>Question</u>	<u>Number</u>
What would make life in Brewer better?	
a. Improve visual appearance, plant trees, bury utilities	20
What changes would you like to see in neighborhoods?	
a. More trees, green	25
b. Building and yard improvements	27
What changes would you like to see in commercial shopping areas?	
a. Spruce-up, beautify, facelift	49
What changes would you like to see along the riverfront?	
a. Clean-up	31
What changes would you like to see in rural areas?	
a. Keep rural, open space	18

F. LAND USE

This section explains how Brewer has developed. It focuses on how the City has grown and on the patterns of land use that have occurred over the last 30 years. By looking at, and understanding, these trends and the City's zoning districts, Brewer will be better prepared to shape future land use decisions and achieve its vision for an improved quality-of-life.

Finding 1

BREWER HAS CHANGED FROM A CITY THAT WAS SHAPED BY ITS NATURAL RESOURCE BASED INDUSTRIES -- BRICK, ICE, LUMBER AND PAPER -- TO A MORE RESIDENTIAL TOWN WITH A DIVERSITY OF COMMERCE AND INDUSTRY THAT BENEFITS FROM BREWER'S CENTRAL LOCATION.

Brewer's early growth is concisely summarized in the following piece from James Vickery's "A Pictorial History of Brewer, Maine", 1976.

"Two centuries ago what is now the City of Brewer was a scattered settlement known as New Worcester named for that Massachusetts town from which came Col. John Brewer. Brewer came here in 1771 and built his house and mill. Hostilities of the Revolutionary War caused most families to abandon their homes and return to their former abodes. In 1783 and 1784 the settlement was resumed. The present site of Brewer was a part of Orrington, but in 1812 Brewer was incorporated as a town. Between this time and 1850 it remained a small village, rural in appearance. After mid-century, Brewer grew rapidly; industries such as shipbuilding, saw mills, and brick making attracted people here, as well as overflow of the populace from Bangor. It had its first free public high school in 1873. The construction of the Eastern Manufacturing Co. attracted more families. In 1889 Brewer became a city. During the next fifty years the city prospered although the brick, lumber, and ice industries declined, and the city changed from one of industry to a more residential community. After World War II, motels, shopping centers, and suburbia appeared. In 1970 Brewer was a city of 9300 inhabitants."

Finding 2

SINCE THE 1960'S A SUBSTANTIAL AMOUNT OF DEVELOPMENT HAS OCCURRED ON THE EDGES OF BREWER'S SEWERED AREA AND ALONG MAJOR RURAL ROADS. THE CITY HAS BECOME MORE SPREAD OUT.

Between 1960 and 1990 residential growth has ranged from 7% to 16% per decade. The highest rate (almost 16%) occurred in the 1970s. Since the 60's more of this growth has occurred away from downtown, particularly on north North Main Street, Day Road, Eastern Avenue and the Wiswell Road. Nonetheless "suburban" growth on the edges of the built-up, sewered, part of the City has also occurred: subdivisions were built out and apartments and elderly housing projects were constructed. This filling out of the edges has occurred primarily north and east of Washington Street and east of Parkway South.

These broad growth trends are illustrated in Map 12 which shows the predominant areas of expansion since 1958.

Map 12 also shows that much of Brewer's commercial/retail (strip) development on Wilson Street was in place by 1970. The diagrams on the following page illustrate this more clearly and indicates that these land uses have intensified all along Wilson Street over a 20 year period.

The growth of Brewer's manufacturing base and regional service function is also reflected in Map 12. The shaded area between Wilson and I395, along the railroad tracks and in and around the industrial park, grew in response to the City's positive efforts to attract such uses and the good access the Parkway South/I395 interchange provides to the New England wide inter-state road system.

Finding 3

A LITTLE OVER ONE FOURTH OF BREWER'S LAND AREA IS DEVELOPED LAND. THIS IS AN INCREASE OF SOME 300% SINCE 1959.

Table 30 below displays information on land use trends in Brewer since 1959. Although these figures come from diverse sources they provide a rough picture of trends. Clearly there has been a large increase in developed land -- from 825 acres (8.2% of Brewer) in 1959, to 2,680 acres (26.6%) in 1989 -- all during a 30 year period that saw no real population growth.

Map 12

Map 12 may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Map 12 page 83.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Diagram of growth on Wilson St.

Diagram may be found by following the link attached [here](#) . Or by clicking on the shortcut below.



Shortcut to Growth of Wilson St page 84.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Table 30
Brewer Land Use Trends (1959 to 1989)

Land Use Category	1959 (acres)	1968 (acres)	1978 (acres)	1989 (acres)
Residential	497	814	1,250	1400
Commercial	39	120	300	620
Manufacturing	114	135	90	140
Public/Semi-public	175	181	270	520
Sub-Total	825 (8.2%)	1,250 (12.4%)	1,910 (18.9%)	2,680 (26.6%)
Transportation *	1,200	1,300	1,400	1,900
Field and Forest **	7,633	7,474	6,690	5,506
Total ***	9,658	10,024	10,000	10,086

Sources: 1959; James W. Sewall, Comp. Plan
 1968; Hans Klunder Assoc., Inc., Comp. Plan
 1978; PVRPC Aerial Photography and Ground Observation
 1989; James W. Sewall Aerial Photography and City of Brewer Planning Dept.
 * numbers based on planning standards for street and rail rights-of-way
 ** see Natural Resources section of this plan
 *** totals vary but approximate Brewer's 10,106 total acres

Finding 4
BREWER'S EXISTING ZONING DISTRICTS MIRROR EXISTING USES IN THE BUILT-UP, SEWERED, AREAS BUT DO NOT ADDRESS OR PROTECT NATURAL RESOURCE, FORESTRY AND OPEN SPACE VALUES.

Brewer has 13 zoning districts, seven of which are residential; two are business related and two are industrial while the remaining two are the forest and agriculture and shoreland zoning districts.

The residential districts allow for a range of housing densities from 1 acre/dwelling unit in the LDR (lower density residential) district to about 10 units/acre in the HDR district. Within these districts a wide variety of other, non-residential uses are permitted. Table 31 highlights the range of uses permitted within these seven districts.

The location of these residential districts fits the general pattern advocated in the 1970 Comprehensive Plan but at very different densities. The 1970 plan recommended 5 acres/unit as a low density figure, three d.u.'s/acre as the medium and 10 d.u.'s/acre as the high density designation. As Table B shows, today "low" density is 1½ acres/d.u. (The present residential density in Brewer's Forestry and Agriculture district is just 2 acres/d.u.)

Table 31
Features of Brewer's Residential Zoning Districts

District	Type of Housing	Density ¹ sq. ft./d.u.	Other Permitted Uses
LDR	s.f.	40,000 to 60,000	Nursing homes, hospitals, offices, home occupations, four unit multi-family
MDR-1	s.f.	15,000 to 40,000	Schools, P.U.D.s, churches, daycare ²
MDR-2	s.f. & 2f	7,000 to 40,000	Schools, P.U.D.s, churches, nursing homes ²
MDR-3	s.f. & 2f	7,000 to 40,000	Schools, P.U.D.s, churches, 3 & 4 family dwellings
HDR	s.f. & 2 & 3f	3,900/family	Home occupations, P.U.D.s, schools, multi-family, churches
HDR-2	s.f. & 2 & 3f	up to 8 d.u./acre	Nursing homes, home occupations, P.U.D.s, multi-family, churches
Manuf. Hsg.		depends	(this is an <u>overlay</u> district)

¹ first figure is density if on sewer and water; second figure applies if lot served by on-site septic system.

² small offices of less than 3,000 sq. ft. are allowed as a conditional use.

The zoning ordinance prefaces the standards for each district with a "purpose" statement. One of the purposes of the LDR district is to "promote the appropriate development of open space." Given the small lots permitted, it's clear that the density provision is at odds with the purpose of the district. Further, the linear nature of the district disregards natural resource issues. All of the other residential (R) districts are intended to be tied into municipal water and sewer service, however, if the LDR district received much growth on small lots and there were septic system failures, the sewer system would have to be extended. The HDR-2 district, however, has as its

purpose "to provide for . . . residential uses in urban fringe areas in proximity to a wide variety of services." This district is located parallel to, and north of the Wilson Road GB district.

The business districts comprise the convenience business (CB) and general business (GB) districts. The three CB districts are located on S. Main next to Eastern Fine Paper, between Main and the waterfront (downtown) and on North Main, north of Silk Street. The one GB district encompasses most of Wilson Street. It is a 2,000 ft. wide strip that is almost 2 miles long.

A broad array of land uses are permitted in the CD district -- from residences to apartments to stores, banks, restaurants, offices and hotels; it is a truly mixed-use district appropriate for the downtown area. The minimum lot size (for non-residences) is 2,000 sq. ft. The primary purpose of the GB district is to support highway oriented commercial business. Car sales, retail stores, banks, offices, restaurants, motel and hotels are all permitted, but residences are not permitted.

The industrial district (IND) is intended to provide for industry and warehousing in a campus-like setting. Banks, offices and restaurants are also permitted. The minimum lot size allowed is 30,000 sq. ft. Brewer's industrial zone extends from the Penobscot waterfront eastward, in a narrow band south of I395, along the railroad line. The zone is almost 2 miles long with its western end mostly developed as the Brewer industrial park.

The City's IND-2 district is just that area around the Brewer airport and armory. It is intended for aviation and warehousing. Minimum lot size is 1 acre.

The purpose of the forest and agriculture (F & A) district is . . . "limited to agriculture, forestry and other open space land uses; to prevent premature development of land; to retain areas for non-intensive uses; to prevent development where it would be a burden on the City; and retain areas for open space."

Permitted uses include: single family homes (on ±2 acre lots), farms, nurseries, stables and radio or TV towers. There are four F & A areas totalling about 2,600 acres; this represents about 26% of Brewer's land area, however, much of this cannot be developed because of poor soil conditions. About 970 acres is in the southeast corner of town while the remainder is in the northern third of the town.

In addition to the above 13 districts, Brewer has a shoreland zoning protection (SZP) district which comprises three subdistricts:

- A - the resource protection district;
- B - the stream protection district; and
- C - the overlay protection district.

Under "A" all areas within 250 ft. of a high or moderate value wetland, certain flood plains, steep slopes (+20%) and "Class C" wintering bald eagle sites are protected; most structures are prohibited. Under "B" all land within 75 ft. of Eaton and Felts Brooks and Sedgeunkedunk

Stream is similarly protected. In the "overlay" district, which extends 250 ft. inland from the shores of the Penobscot, and 75 ft. from most large streams, the regulations for the overlaid district apply.

Together these three sub-districts provide some protection to some areas. Wetlands identified in the national wetland inventory (NWI) and deer wintering areas, are not protected by shoreland zoning and neither are the smaller intermittent streams that flow directly into the Penobscot.

Map 13

Map 13 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 13 page 89.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Map 14

Map 14 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 14 page 90.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Finding 5

A SIGNIFICANT PORTION OF BREWER'S "BACKLAND" IS UNDEVELOPED BECAUSE OF SOIL CONDITIONS, LACK OF ACCESS, THE SHAPE OF THE LOTS AND THE EXISTENCE OF LARGE OWNERSHIPS.

Examination of Brewer's tax maps, historical tax maps and the natural resource maps in this plan shows that a combination of factors, other than zoning, have caused large areas to remain undeveloped. Map 4 indicates where these six areas are. Table 32 below lists the areas shown on Map 13 and describes the main causes for the lack of development.

Table 32

Area	Reasons for Lack of Development
I	<ul style="list-style-type: none"> - no access other than from N. Main or Eastern - large, but long, very narrow "spaghetti" lots - ± 70% is marginal soils; no sewer service - difficult terrain in vicinity of Felts Brook
II	<ul style="list-style-type: none"> - distance to year-round roads - only a handful large lots (± 9 lots) - ± 60% is marginal soils; difficult to extend sewer - severe slopes on Eaton Brook
III	<ul style="list-style-type: none"> - poor access and poor soils on ± 40% of area - just 8 large lots - large areas of wetland
IV	<ul style="list-style-type: none"> - lack of access from Wilson and Eastern Ave. - only 6 owners - extensive area of flood plain along Eaton Brook - extensive wetlands and some poor soil - no sewer service - utility R.O.W. through part of area
V	<ul style="list-style-type: none"> - rail line and I395 block access from north - extensive poor soils - extensive wetlands of high value - two utility lines cross area - no sewer service
VI	<ul style="list-style-type: none"> - only access is from north, from Wiswell Road - only 50% of area is poor soil - contains many wetlands - no sewer service

A comparison between the city's current zoning map and Map 13 (Major Undeveloped Areas) is instructive. Areas II, III and VI on Map 4 coincide with the F&A zones on the zoning map. Part of area I also coincides with an F&A zone, however much of it does not; and areas IV and V are within an LDR zone. If the purpose of the F&A zone is to conserve open space, the areas it covers should be re-examined. It appears that more of Brewer should be zoned for low density/open space uses than is zoned now.

Finding 6

THE PENOBSCOT RIVER AND SHORELAND, ONCE DOWNTOWN BREWER'S TRANSPORTATION ARTERY, WORKING WATERFRONT AND KEY ECONOMIC BASE IS NOW A BACK DOOR THAT IS UNDER-UTILIZED AND A DETRIMENT TO ECONOMIC DEVELOPMENT IN THE DOWNTOWN AND ELSEWHERE. CONVERSELY, THE UNDEVELOPED PORTIONS OF THE PENOBSCOT HAVE GREAT SCENIC, CONSERVATION AND HISTORIC VALUE.

The Penobscot, the reason for Brewer being, has a checkered past. At one time it was a vital fishery and source of quality ice; it has also served as a shipbuilding and lumber center, and an open sewer. Now it is being cleaned up. Fish are returning and the river's potential for recreation and wildlife, and as a source of pride to the Brewer/Bangor area is being recognized.

Unfortunately much of the area on the river between the I395 bridge and the Chamberlain Bridge has been degraded; the extent of hydrocarbon and lead pollution there is unknown. Some areas are vacant and many structures are in poor condition. The City public works garage is also in this area but should be moved. The polluted areas can be capped and vented and made redevelopable but there are obvious costs associated with this, some of which may be recoverable through Maine's Department of Environmental Protection.

Nonetheless, the area is central, accessible and on a river that is an asset. The redevelopment potential of the area is demonstrated by the successful restaurant and park on the river at the corner of the chamberlain Bridge and Main Street. Other Maine communities have successfully revitalized once blighted riverfront property and Brewer can do the same -- but it will take planning, commitment and research. The establishment of a viable, bustling, downtown, on the river could do much to reinvigorate the City and reshape its image, especially if visual and actual public access to and along, the river is provided.

Further, there is strong public support for a mix of new uses along this 0.6 mile stretch of riverfront. The "speak out Brewer" meetings showed residents support: parks, planned development, marinas, residential uses and walking/bike trails along the river.

North of City Hall the amount of riverbank development lessens and, because of an active interest in acquiring key parcels for conservation purposes, there are now both public and private opportunities to conserve substantial portions of the river bank for public recreation use and/or conservation. This type of conservation makes sense since much of this corridor is undevelopable because of the steep slopes or flood plain conditions; further the river bank serves as a wildlife corridor.

Finding 7

BREWER HAS NO CLOSE-KNIT, TRADITIONAL, WALKING, DOWNTOWN. PUBLIC BUILDINGS AND RETAIL USES ARE WIDELY SPREAD OUT AND DO NOT ENCOURAGE THE CREATION OF A VILLAGE OR CITY CENTER.

The age of the automobile has been an asset and a liability for Brewer. Good auto access has helped Wilson Street grow as a strip commercial shopping center and has helped make Brewer's industrial park areas viable. But this emphasis on automobile (and poor decisions about the location of public buildings) has led to the downtown's demise.

Whereas a traditional downtown contains important public and private buildings and public spaces, all within easy walking distance of each other, this is not the case in Brewer. It is a City with strong, attractive neighborhoods but no real center. The redevelopment of the waterfront could help change this -- if there is strong support for an identifiable "heart" to the community.

Finding 8

THE MOST ENVIRONMENTALLY SENSITIVE AREAS OF BREWER (I.E. AREAS OF STEEP SLOPES, FLOOD PLAINS, VALUABLE WETLANDS AND SPECIAL WILDLIFE AREAS) ARE, BY AND LARGE, CONFINED TO THE STREAM VALLEYS AND LOW-LYING, FLAT AREAS IN THE EAST AND SOUTHEAST OF TOWN.

Map 14 records areas that impose important constraints on any development. There are three levels of constraint show; the constraints are based on the natural resource data recorded in the section on natural resources, in this plan. Any land area that is mapped as:

- significant or important for wildlife or
- a State protected wetland or
- a Nationally designated wetland or
- a 100- year flood plain

was considered worthy of protection and is shown on Map 14. Where two of these resource values occur in the same place the maps shows a shaded area; where three or more values occur a dark tone is shown (The darker the shading the more valuable the area.)

Clearly, the areas in most need of protection are:

- along Eaton Brook primarily in the valley itself; and
- along Felts Brook, in the valley and particularly in the flat, low-lying, wet areas north and south of the Wilson Road/I395 intersection, and south of the Wiswell Road in the southeast corner of Brewer.

Finding 9

LAND USE AND DEVELOPMENT DECISIONS IN BREWER ARE SUBJECT TO VARIOUS ORDINANCE PROVISIONS DESIGNED TO INSURE APPROPRIATE USE OF THE LAND, TRAFFIC SAFETY, NATURAL RESOURCE PROTECTION AND A "WHOLESOME" ENVIRONMENT. THESE FIVE ORDINANCES ESTABLISH DETAILED INSTRUCTIONS, STANDARDS AND RULES THAT APPEAR ONEROUS, HOWEVER, THEY APPEAR TO BE NO MORE, OR LESS, COMPLEX THAN MOST SUCH ORDINANCES IN MAINE TOWNS SIMILAR TO BREWER.

It is difficult to craft ordinances that prevent irresponsible development and encourage responsible development, or to construct ordinances that allow for flexibility and predictability, or to promote quality development without imposing too much regulation. Brewer has struggled with these dilemmas and will probably continue to do so.

Brewer has the following land use ordinances:

- zoning ordinance (which incorporates shoreland zoning);
- subdivision ordinance;
- road and street ordinance;
- mobile home park and camping park ordinance; and
- a sign ordinance.

The planning board has responsibility for overseeing all of these, but the last, the sign ordinance, which is overseen by the Code Enforcement Officer.

The Zoning Ordinance

Brewer's 13 districts have already been described; other features of the ordinance include:

- 65 "special regulations" that apply to specific uses in specific districts ;
- general regulations that spell out height, parking and other performance requirements;
- site plan review provisions; these are presently being amended so that all projects that affect over 5,000 sq. ft. of land are evaluated; currently, any shoreland zoning project is subject to site plan review (question: Are the review requirements too onerous for some and too lax for others?)
- planned unit development; this concept allows for more flexibility (e.g., smaller lot sizes) in return for more open space; the choice to use this procedure is up to the applicant; a few have used this approach, more should be encouraged to use it through incentives and/or bonus provisions;

- contract zoning is a useful tool if it is not abused and contains too many loopholes; Brewer's contract zoning appears to work effectively: it gives the City some leverage and allows the Board to deal with odd, non-conforming situations.

The Subdivision Ordinance

As is common, Brewer has different procedures to review major and minor subdivisions. In other respects the ordinance is conventional. (It was drafted in 1979 and has been amended 19 times.) Much of the ordinance deals with date and submission requirements and road and sewer specifications. It appears weak regarding the specific criteria or standards the planning board might use to evaluate a submission. For example:

- there are no traffic impact requirements; and
- no documentation is required to prove sufficient water supply.

Finally, the ordinance is unimaginative. For example, incentives to urge cluster development and encourage more open space are needed, and consideration should be given to requiring a cluster approach in some areas.

Road and Street Ordinances

When new streets are proposed they must meet the requirements of this ordinance. The standards are pretty "standard" although waivers can be granted for good cause. Some of the provisions could be made less stringent -- in exchange for the developer making beneficial changes to his/her subdivision, for example. The City might also consider adding highway access management provisions to this ordinance (or to the site plan review requirements) so as to assure better traffic flow and safety on major public roads.

The Mobile Home Park and Camping Park Ordinance

Mobile home parks are allowed in the LDR district provided the park is at least 10 acres in size and the density is at least 1 d.u./40,000 sq. ft. (Note: this is contrary to State Law which allows higher densities). Mobile home parks are also permitted in the high density residential area along the Pierce Road. The ordinance provisions stipulate review by both the planning board and the council and two public hearings are required. Other provisions in the ordinance deal with yard, open space, garbage, sewage disposal, streets, landscaping, etc. standards. Overall the mobile home park provisions appear more onerous than other City planning provisions; this brings up questions of equity. The camping park provisions are unremarkable.

Today there are just two mobile home parks in Brewer; both are on the south side of Day Road in an LDR district. Little such park development has occurred and it is questionable if more should be encouraged in this area. This is an inappropriate area for parks since no public sewer is available.

Sign Ordinance

When the ordinance "general provisions" state that it applies . . . "presumptively for matter (sic) concerning, affecting or relating to the erection, construction, or maintenance of signs erected or to be erected . . ." it's a clue this is somewhat of a dinosaur ordinance. Further, a drive down Wilson St. suggests that the ordinance has done nothing to make signs pleasant to view or comprehend. Serious consideration should be given to revising the entire ordinance.

G. PUBLIC SERVICES

1. CITY BUILDINGS

Introduction

The findings below consider the physical condition and adequacy of space of the buildings owned by the City of Brewer and the Brewer High School District Trustees (see Map 15). The first finding provides a comparative overview of all buildings. Findings 2 through 4 consider just the schools.

A “first-cut” analysis, summarized in Table 33, was conducted by the Assistant City Manager and Code Enforcement Officer on an informal basis. They inspected all of the buildings and grounds. In the case of schools, they interviewed custodial personnel instead of making a personal inspection of school interiors.

At the same time, the Brewer High School District Trustees hired an architectural consultant to provide an exhaustive analysis of the condition and capacity of the schools. This study was undertaken independently, and before the comprehensive planning process was initiated, because of the significant architectural and spatial shortcomings of many of the schools. The Trustee’s findings about schools correspond in general with the ratings given by the Assistant City Manager and Code Enforcement Officer. The school analysis differs, however, in providing an in-depth analysis of how existing buildings meet current and projected needs of the educational programs provided by the school system. City-owned buildings could benefit from such an analysis.

The Brewer High School District was created by an act of the state legislature in 1925 to provide bonding capacity and authority for the “purpose of erecting, equipping, and maintaining a high school”. Additional powers were conveyed to enable the district to “purchase land and to erect, equip and maintain one or more grammar schools, a junior high school (middle school), a high school and a vocational school”. Over the years, the district, governed by 5 elected trustees from Brewer, have built all of the city’s schools with the exception of the Pendleton School for which the city needed no financial help.

Finding 1:

MOST CITY BUILDINGS ARE OVER 40 YEARS OLD AND HAVE NOT BEEN RENOVATED OR EXPANDED TO MEET CURRENT NEEDS.

Only the Library, Wastewater Treatment Plant, Public Works Facility, High School, and Capri Street School are under 40 years old and, of these, all but the Library were built over 30 years ago.

Map 15

Map 15 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 15 page 98.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Table 33 contains a comparative rating of the general condition and adequacy of city buildings. In regard to condition, only one city building, the Wastewater Treatment Plant, achieved a relatively high score: 69 out of 80 points. Five received relatively low scores: State Street School (41 points) and the Public Works Facility (45), followed by two other elementary schools each with 49 points, and the high school with 51 points.

In regard to adequacy of space, only two buildings received a score over 50 points: the Parks and Recreation Auditorium (54) and Pendleton Street School (52). None received high marks. The library has only limited meeting space. The public safety building lacks space and has only limited facilities for physical fitness and relaxation. Meetings in the city hall Council Chamber sometimes need to be adjourned to alternate locations when too many people attend. This can discourage people from participating in their government as well as annoy everyone involved. The public works building, city hall, and auditorium are outmoded. Public works does not have enough space to keep all of its equipment out of the weather; office space is extremely tight; and the building has deteriorated significantly.

All city buildings require work to some extent to bring them into compliance with the Americans with Disabilities Act. The City's current policy is to require all new development to comply with requirements and to bring existing city facilities into compliance as each is scheduled for renovation. The Assistant City Manager is working on a plan for compliance that must be available by January 1, 1995, according to federal requirements.

Until renovations have been completed, the city is trying to make it possible for people's needs to be met without physical changes. For instance, this past year, handicap accessible bathrooms were created on the first floor of the auditorium and the lower bathrooms are scheduled for similar improvements in 1995. A sign is being posted to alert people to ask for help in getting non-fiction adult books from the balcony of the library which is not accessible.

City Hall already has some accommodations for persons with disabilities. It is accessible by wheel chair from the lower entrance and equipped with a chair lift for those with business or a job on the upper floor. The upper entrance doors of City Hall have thumb latches which are difficult for those with arthritis or weak hands, but a sign directs people with disabilities to use the lower door. Some problems remain: the parking lot is very dark at night which is a hindrance to even those without disabilities; and in winter during snow storms, it is difficult to get around or across the snowbank that separates the sidewalk from the street. In the latter case, the snowbank is generally cleared away after storms have abated and a thorough clean-up has occurred.

Overall, the Public Works Facility (74 out of 160 points) and State Street School (76) appear from this informal, first-cut analysis in the worst condition and least adequate to meet current needs.

CITY OF BREWER

ASSESSMENT OF THE ADEQUACY AND CONDITION OF CITY-OWNED BUILDINGS

FACILITY	TAX MAP NO.	----- AGE -----		----- SIZE -----	
		Original	Renovations/ Expansions	Building (Sq. Ft)	Grounds (Acres)
City Hall/ Library	M 29/L 130	57 Years 29 Years	None	4,593 4,400	.5 0.0
Public Safety	M 28/L 47	44 Years	36 Years ago	9,397	.36
Parks & Recreation	M 31/L 21	56 Years	None	11,203	8.9
Public Works	M 28/L 186	39 Years	34 Years ago	10,638	1.32
Wastewater	M 51/L 4	30 Years	Current	N/A	11.3
High School	M 13/L 36	36 Years	None	105,789	31.0
Middle School	M 31/L 38	46 Years	None	6,624	3.75
Washington St. Sch.	M 34/L 56	44 Years	None	18,497	8.30
Pendleton St. Sch.	M 42/L 1	44 Years	None	15,374	13.4
Capri St. School	M 44/L 13	32 Years	None	10,528	6.75
State St. School	M 31/L 49	46 Years	5 Years ago	31,902	7.0

**CITY OF BREWER
ASSESSMENT OF THE ADEQUACY AND CONDITION OF CITY-OWNED BUILDINGS**

ADEQUACY OF SPACE									
FACILITY	OFFICE SPACE	MEETING SPACE	STORAGE AREA	DISPLAY AREA	RECREATIONAL FACILITIES	GROUND	PARKING	DISABILITIES ACCESS	GRAND TOTAL
City Hall/ Library	4	4	3	6	2	8	8	6	100
Public Safety	5	6	3	7	4	7	4	5	99
Auditorium	5	8	5	7	8	8	7	7	114
Public Works	4	3	3	3	1	3	5	7	74
Wastewater	8	7	7	8	2	7	6	3	117
High School	4	6	3	7	8	7	7	4	97
Middle Sch.	4	6	3	6	6	8	1	8	97
Wash. Street	3	6	4	6	6	8	5	5	92
Pendleton St	4	6	3	7	8	9	8	7	101
Capri St. Sc	3	5	4	7	7	8	6	8	99
State St. Sc	3	2	3	6	6	8	5	2	76

Rated on a scale of 1 (very poor) to 10 (excellent)

Date Revised 11/1/94

CITY OF BREWER

ASSESSMENT OF THE ADEQUACY AND CONDITION OF CITY-OWNED BUILDINGS

----- CONDITION OF FACILITY -----									
FACILITY	STRUC-TURAL	ROOF	HEAT/VENT	ELEC-TRICAL	PLUMBING	GROUND	SAFETY	APPEARANCE	SUB-TOTAL
City Hall/ Library	8	7	7	7	7	8	8	7	59
Public Safety	8	8	7	7	8	5	8	7	58
Auditorium	7	8	7	8	8	6	8	7	59
Public Works	7	8	5	7	8	4	4	2	45
Wastewater	9	9	8	9	9	8	8	9	69
High School	5	4	4	7	8	7	8	8	51
Middle School	9	8	6	5	4	8	8	7	55
Washington St	3	3	7	5	7	8	8	8	49
Pendleton St.	5	5	3	6	6	8	8	8	49
Capri St. Sch	8	8	3	8	8	8	8	8	51
State St. Sch	4	4	5	4	4	8	7	5	41

Rated on a scale of 1 (ver poor) o 10 (excellent)

Finding 2:

SUBSTANDARD PHYSICAL AND SPATIAL LIMITATIONS OF THE HIGH SCHOOL COMPROMISE THE QUALITY OF EDUCATION AND MAY CAUSE THE PROPORTION OF TUITION STUDENTS, AND THE SUBSTANTIAL REVENUES THEY CONTRIBUTE, TO DECLINE, THUS FURTHER COMPROMISING THE EDUCATIONAL EXPERIENCE FOR BREWER AND TUITION STUDENTS ALIKE.

The high school was built in 1958. Additions in 1962, 1964, 1967, and 1970 provided more classroom space, a shop, and music wing. Enrollment is currently at 831 students, about half tuitioned from other communities. The population is expected to peak in 1996-97 at 877 and settle in at about 860 students around the year 2000.

Because of the age of the school and the quality of materials used in its construction, the school needs substantial architectural and mechanical rehabilitation. For example, plywood exterior walls take in moisture and windows leak. The electrical service is below code and the school does not meet very many Americans with Disabilities Act (ADA) requirements.

Space is cramped as well, providing about 20% less space than minimum state standards recommend. The school needs additional or better space for science laboratories, library, special education, guidance, computer and other technology education, auditorium, gymnasium, locker rooms, art, kitchen, cafeteria, and teacher and department offices. Many rooms and areas have been adapted to accommodate uses such as computer instruction for which they were never designed. Others lack sufficient space. For instance, the library can hold only about half the volumes considered necessary to support student learning.

Brewer has done a good job educating high school students despite the condition of the school. And it has been fortunate to attract as many tuition students as it has to help financially support this level of learning. But changing global and technological conditions require a level of sophistication and physical support the present school does not have. Unless improvements are made, Brewer high school students may fall behind or seek education elsewhere.

Finding 3:

THE MIDDLE SCHOOL IS NOT GENERALLY IN AS BAD SHAPE AS THE HIGH SCHOOL, BUT HAS SERIOUS PROBLEMS NEVERTHELESS.

The Middle School was the first project undertaken by the Brewer High School District Trustees. Constructed as a high school in 1926, a shop and home economics addition expanded the building by about a third in 1974. Enrollment in grades 6 through 8 currently stands at 341 and is projected to peak at 351 in 1997-98. By the year 2000, it will return to about its present level, based upon the present size of elementary school grades.

Structurally the middle school needs some work, but not as much as the high school. In fact, structurally it is the best among Brewer schools. But its mechanical system is considered the worst among all schools, and it has poorly constructed windows. It fails also to meet many Americans With Disabilities Act requirements, and also needs some electrical renovation.

In regard to space, it is about 15% smaller than state standards recommend. Many deficiencies are the same as those of the high school; it needs more and better space for science labs, library, locker rooms, special education, speech, physical therapy, conference rooms, and migrant education.

Finding 4:

ELEMENTARY SCHOOLS ARE OLD AND OUTMODED TOO. THIS IS ESPECIALLY A CONCERN AT YOUNGER GRADE LEVELS BECAUSE THE QUALITY OF EARLY LEARNING ESTABLISHES THE FOUNDATION FOR PROGRESSING WELL IN HIGHER GRADES AND LIFELONG.

State Street and Washington Street Schools are the oldest of the four elementary schools. They serve the upper grades while Capri Street and Pendleton Street Schools accommodate the younger grades. Enrollment currently is about 709 students for all schools. It is expected to grow at a moderate pace reaching 744 students by 1999-2000.

Table 34: Elementary School Spatial Capacity and Needs

	Year Built	Grades Served	Current Space (sq. ft.)	Additional Space Needed (sq. ft.)
Capri Street	1962	D-1	10,461	12,936
Pendleton St.	1957	K-3	16,000	9,874
Washington St.	1950	2-4	18,600	8,400
State St.	1947	4-5	16,500	12,900

In addition to architectural and mechanical deficiencies, the schools fail to meet minimum state standards for space. None have multi-purpose rooms, cafeterias, libraries, gifted and talented rooms, computer labs, or storage space, to name only some deficiencies. All lack classroom space to some degree, which is especially important in lower grades, along with class size and teacher-pupil ratios.

2. EDUCATION

Introduction

A well educated citizenry and job force are essential for Maine in general and Brewer citizens in particular to participate successfully in the evolving global economy and political world. People need to be prepared for life-long learning, job flexibility, and effective communication and team work.

Finding 1:

THE STATED MISSION OF BREWER SCHOOLS IS TO PROVIDE THE HIGHEST QUALITY EDUCATION, MEETING THE INDIVIDUAL NEEDS OF STUDENTS IN A SAFE AND HEALTHY ENVIRONMENT.

Brewer is committed to equipping its youth and adults with the skills and attitudes they'll need to be life-long learners and responsible citizens.

Each year, the Administrative Team for the K-12 schools updates its mission statement and sets annual goals. Each school principal then works with his or her staff in developing individual teaching goals for the year. Goals and objectives for each level of learning are developed by interschool curriculum teams. Every year, teams update the curriculum for one subject so that all subjects are updated on a rotating schedule every 7-8 years. While expectations for learning outcomes are uniform among schools, teachers have flexibility in the way they achieve these goals and are provided considerable training to support their professional growth.

Brewer and Bangor School Systems collaborate in providing after hours classes for adults and summer school for high school students. Brewer contracts with Bangor for adult education programs offered at Bangor High School, paying a per capita fee for residents who participate.

Brewer hosts classes for high school students from both school systems. The only drawback to this reciprocal arrangement is the setting for adult classes: Brewer adults taking courses in Bangor miss the opportunity to see what their own schools are like.

Finding 2:

THIS COMMITMENT TO EXCELLENCE IS RECOGNIZED AND APPRECIATED BY BREWER CITIZENS.

Speak-Out Brewer participants put schools at the top of the list when asked what they most value about their city. Several stressed the importance of continued community support and high expectations for Brewer's educational system, especially as the population ages and fewer people have children in the schools. These results are similar to those from a 1988 public opinion poll conducted for Brewer by the University of Maine in which 30% of the respondents rated Brewer schools as "excellent" and 37% rated them as "good".

Finding 3:

CHANGES IN TECHNOLOGY HAVE ALREADY INFLUENCED THE PROPORTION OF GRADUATES GOING ON TO HIGHER EDUCATION.

In former days, Maine's youth could graduate from high school, especially in mill towns, and get a job they could expect to keep forever if they worked diligently. Today, many entry level jobs at the mills and other major employers require a mastery of technology and other skills and knowledge that usually only further education can provide. One can see the influence of this change in the percent of Brewer graduates going on to higher education. As recently as 1980, only 42.3% went on to college and vocational and other 2-year degree programs. In 1993, almost 68% of the class did so, a much higher rate than the state wide average of 58%.

Finding 4:

BREWER HAS TAKEN STEPS TO PREPARE STUDENTS BETTER FOR HITTING THE GROUND RUNNING WHEN THEY ENTER HIGHER EDUCATION OR THE JOB FORCE.

A variety of options exist for students who want to push their preparation for the job market or higher education as far as they can while in high school. Brewer's philosophy is to set the bar as high as any student wants to go -- offering a diversity of programs depending upon individual needs and career goals.

Students aspiring to go on to college can join the Advanced Placement Program, a national program sponsored by The College Board and available to schools around the world. Brewer High School offers 12 classes a year using the program's national curriculum and testing system. A few of these classes are taught collaboratively with the University of Maine. Juniors and seniors can elect to take as many courses as they can manage along with their regular classes. Based upon end-of-year test results, students are eligible for waivers at participating colleges and universities for classes they have already taken in high school. With such credits behind them, they can move through college more quickly or concentrate on their majors more keenly than otherwise would be the case. While students pay for the standardized tests administered at Brewer High School, and in some cases, the text books used in class, they or their parents can save money in the long run with fewer college credits to accrue and pay for later.

Brewer has had remarkable results with the Advanced Placement Program. Brewer students consistently test among the highest in the state including private schools, earning the highest per capita test scores last year.

Students desiring a more technical career path can participate in classes offered at the United Technology Center, Region IV, which serves seven public high schools in the area. This school and other vocational schools in Maine have made great strides in adapting their curricula to train students for existing and evolving job opportunities. Juniors and seniors enrolled in the program spend part of their school day at the Technology Center, earning high school credits for their time. This training makes students more competitive in the job market. It can also build confidence and higher academic standing, giving them a passport for college.

Yet another program is aimed at students wanting to work during their high school years. The COOP Program enables students with jobs meeting certain criteria to leave school early each day to work. These students also receive training in a special class taught in the high school to hone their "work force skills", such as interviewing and communicating effectively, to sharpen their performance and competitive edge when they graduate. They, too, earn confidence and credit, in addition to their paychecks.

High school students are not the only beneficiaries of Brewer's efforts to enhance people's knowledge and confidence. The City's special programs are outstanding. Employers know they can attract employees from abroad with the assurance that their children will receive the extra help they may need in school - in a second language or a special setting. The School District also assists employers and families in helping spouses find educational and social opportunities to adjust to life in this community and country.

Finding 5:

BREWER HAS SCORED AT OR SLIGHTLY BETTER THAN THE STATE AVERAGE ON MAINE EDUCATIONAL ASSESSMENT TESTS SINCE THEY WERE INSTITUTED IN 1985.

Maine began a state-wide program for testing 4th, 8th, and 11th graders in 1985 in response to public concern about the quality of education in the state's, and indeed the nation's, schools. People wanted to have some means of determining whether students are receiving the kind of knowledge and skills they need to successfully participate in the emerging global economy and community.

Grade 4 scores, shown in Table 35 for 1987-88 and 1993-94, provide an example of how Brewer students have fared on these tests over time. Annual test scores can vary widely depending upon the academic strengths of the students comprising any given class. The years chosen for this comparison, however, reflect classes that are fairly representative of the school system and not years when students as a whole were particularly outstanding or academically challenged.

The scores show two noteworthy facts. First, the state mean scores have risen over time. The second and most important point is that Brewer's scores have risen as well, following the state mean. Brewer's scores have risen despite the fact that the socio-economic composition of the community has been shifting toward a decreasing share of higher income households. Still, Brewer scores well in comparison with other Maine communities with similar socio-economic composition, as represented in the "comparison band" scores.

Table 35: Comparison of 4th Grade MEA Scores

4th Grade Subject	1986-87	1993-94
Reading		
District Mean Score	240	285
State Mean Score	240	280
Comparison Band Mean	220-275	250-290
Writing		
District Mean Score	235	295
State Mean Score	250	260
Comparison Band Mean	235-290	237-275
Math		
District Mean Score	250	270
State Mean Score	250	285
Comparison Band Mean	235-295	255-300
Science		
District Mean Score	245	260
State Mean Score	245	280
Comparison Band Mean	240-295	235-275
Social Studies		
District Mean Score	240	280
State Mean Score	240	260
Comparison Band Mean	225-285	235-275
Humanities		
District Mean Score	260	280
State Mean Score	260	275
Comparison Band Mean	235-290	245-285

Finding 6:

BREWER CONSIDERS EXTRACURRICULAR ACTIVITIES IMPORTANT TO ENGENDERING STRONG COMMUNITY PRIDE AND DEVELOPING WELL-ROUNDED STUDENTS WHO FOCUS ON POSITIVE RATHER THAN ANTISOCIAL BEHAVIOR.

The days when sports and other extracurricular activities stood equal among educational priorities expired when public revenues began to shrink dramatically and the quality of public education came into question. Extracurricular activities in Maine schools have been cutback considerably as a result. Still, Brewer has managed to maintain sports teams through part-time coaching appointments and other cost-cutting measures, and has done likewise with the drama society, music association, and other after-school activities. Other community programs have helped fill the gaps. The Recreation Department offers many excellent programs as mentioned

elsewhere, and the Police Department sponsors athletic leagues. All of these kind of activities help broaden young persons' social skills and provide positive outlets for their energies.

3. PUBLIC SAFETY

Introduction

Brewer enjoys the best of both worlds. It is small enough to be relatively crime free compared with big cities, yet large enough to support its own professional police and fire departments.

Finding 1:

BREWER PROVIDES FULL-TIME PROFESSIONAL FIRE AND POLICE PROTECTION.

The Police and Fire Departments share quarters on South Main Street (see Map 15). Fifteen officers and a secretary provide police coverage. Another fifteen full-time professionals and a secretary, backed by 20 call fire fighters, comprise the Fire Department. Their shared dispatch service also provides coverage for Holden, Orrington, and Eddington for fire fighting, Holden and Eddington for rescue service, and Orrington for ambulance service. Brewer contracts with a local ambulance Service in Bangor which has a substation in Brewer just east of Parkway South on Wilson Street. See Appendix 2 for a list of capital equipment.

Finding 2:

BREWER RESIDENTS SEEM WELL-SATISFIED WITH THEIR POLICE AND FIRE SERVICES.

After the quality of schools and small size, Brewer's safe and relatively crime-free character was most valued by people attending the Speak-Out Brewer meetings. A 1988 University of Maine public opinion poll of Brewer found the same thing. Eighty five percent of respondents rated police and fire protection as excellent or good.

Finding 3:

COMPARED WITH OTHER US CITIES AND STATES, BREWER AND MAINE ARE RELATIVELY SAFE.

Maine is a great place to live. In 1990, our state ranked 7th in the nation among states with the lowest rates of total crimes, and 3rd among states with the lowest rates of violent crimes. And Brewer is relatively safe compared with other urban areas in Maine. Brewer had a crime rate of 29.79 crimes per 1000 population in 1993 compared with 37.67, the average for Maine's urban areas, and 36.23, the average for urban areas in Penobscot County. This represents a substantial drop from Brewer's rate in 1989 of 38.43 crimes per 1000 population. Most crimes in Brewer tend to be larceny (76%) followed by burglary (17%), Brewer Police tend to be relatively successful in solving crimes. Brewer had a clearance rate of 20.9 in 1993 compared with 29.5 and 27.6 respectively for the state and county.

Finding 3:

THE LOCATION OF THE PUBLIC SAFETY BUILDING ON SOUTH MAIN STREET DOES NOT PROVIDE THE SAME RAPID AND COST EFFECTIVE RESPONSE IT ONCE DID. THIS IS A CRITICAL CONCERN.

When the Police, Fire Department, and former municipal court took over the South Main Street building, they enjoyed a central location within Brewer's most heavily developed core. Over time, however, development has shifted east of Main Street, and the trend is expected to continue. In five to ten years, this may necessitate relocating the public safety building closer to major arteries in the vicinity of State and Wilson Streets and Parkway South to provide more rapid response. The problem is aggravated by Guilford's freight service three times a day on the railroad line. Because trains do not run on a predictable schedule, they can restrict fire fighters from two thirds of the city if a fire occurs while trains are coming through.

Finding 4:

MUTUAL AID AGREEMENTS BENEFIT BREWER, ESPECIALLY IN RURAL AREAS.

Brewer has agreements with Orrington, Eddington, Hampden, Holden, and Bangor to help one another out in fighting fires when the equipment or manpower of the town in which a fire occurs is insufficient. For Brewer, this help is especially beneficial for fighting fires in rural areas. Since water mains and distribution lines serve mainly only the built up portion of Brewer, most rural areas do not have fire hydrants. But Brewer can call Holden and any of the other communities with a mutual aid agreement to ensure enough tankers are available to provide water or to relay/shuttle water from hydrants in nearby areas.

Finding 5:

BREWER HAS CHOSEN HIGHER QUALITY POLICE PROTECTION WITH FULL TIME OFFICERS RATHER THAN RESERVISTS .

Because it is difficult to schedule shifts to rotate staff and equitably distribute overtime duty, policing costs are somewhat higher than in communities such as Winslow where reserve officers are called upon for weekend and night shifts. The higher cost, however, is offset by the higher quality of service provided by full-time staff with academy training. Reservists need only 2 weeks of training while Brewer's academy graduates receive 12 intensive weeks.

Finding 6:

FIRE PROTECTION IS GOOD, BUT STAFFING SHORTFALLS MAKE FIGHTING FIRES SOMETIMES DIFFICULT.

Brewer enjoys an ISO (Insurance Services Office, Inc.) rating of 4. This rating is from a private office that advises insurance companies about the ability of fire departments to respond and effectively fight fires. The rating system is based upon a scale of 1 to 10, with 1 being the best and 10 the worst rating given.

Allstate Insurance Company's interpretation of the rating system provides an example of how the industry uses the system. Allstate rates are best for property in communities with a score of 1 to 3. They are not significantly higher, however, for communities with a rating of 4 to 6. This means that insurance rates for Brewer households and businesses would not benefit greatly if the score was elevated to 3 or better. In other words, the increase in taxes to raise the score would equal more than the value gained in reduced insurance rates.

Brewer's good score, however, does not mean that the department is adequately staffed at all times. At present, the department operates with 1 captain and 3 fire fighters on duty most days. The captain is responsible for taking command during fires, sizing up the situation, ensuring safety, and controlling the scene. Because of these duties, he or she is not available to drive and operate vehicles, except during extreme circumstances. This leaves the fire fighters solely responsible for driving and operating vehicles. This can present a problem when fire fighters take time off, or 5 out of 7 nights when only 2 are on duty. Standard professional practice is to send 2 pumpers and a ladder truck to a fire. When only fire fighters are available, only two vehicles can be driven to the scene to support the call fire fighters who respond. In rescue situations, only one vehicle can be dispatched as 2 people are needed to accompany and operate each rescue vehicle. Any initiative to increase response capacity, however, must be balanced with the high cost of staff.

4. PUBLIC WATER SUPPLY

Finding 1:

ALMOST 70% OF BREWER HOUSEHOLDS RELY UPON PUBLIC WATER SUPPLY. THIS SUPPLY HAS SUFFICIENT CAPACITY TO MEET PROJECTED RESIDENTIAL DEMAND THROUGH 2005 AND BEYOND. IT IS MORE DIFFICULT TO PREDICT CAPACITY FOR COMMERCIAL AND INDUSTRIAL DEMAND SINCE THESE USES HAVE HIGHLY VARIABLE WATER SUPPLY NEEDS.

The Brewer Water District was incorporated in 1945 following its authorization by the Maine Legislature and a local referendum. By eminent domain it took over the service area and mains of the old Penobscot Water Company which had served North Main Street and South Brewer and was suffering from poor quality water from Chemo Pond and low water pressure.

Hatcase Pond was designated as the source of supply for the new district. This pristine, 164 acre pond is primarily located in Dedham in Hancock County, although its northern extremity brushes Eddington. It is located off the South Road to the east of East Holden and Route 46.

The District serves customers in three communities as follows:

Community	-----Number of Customers (Meters)-----				No. of Hydrants		
	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Governmental</u>	<u>Public</u>	<u>Private</u>	
Brewer	2599	304	5	48	294	3	Holden
Eddington	3	0	0	0	3	0	
Orrington	30	0	0	0	0	0	
Total	2893	304	5	48	313	3	
Total customers/meters:	3563						
Total hydrants:	316						

Hatcase Pond has a safe yield of 3 million gallons of water a day with a total storage capacity of 650 million gallons of storage. At present, customers use about 1,100,000 gallons a day with about 90% for residential purposes. Industrial use is heaviest during the summer. A district study conducted in 1984 projected demand to rise to 1,900,000 gallons a day by the year 2005. This is only about 60% of the 3.2 million gallons a day pumping capacity of the system so a good reserve exists. Much of the projected increase is based upon the large number of multi-family units built in recent decades.

The system is inter-connected with the Bangor Water District system which provides mutual aid back-up under emergency conditions.

Finding 2:

THE DISTRIBUTION SYSTEM HAS BEEN GREATLY IMPROVED AND WATER PRESSURE IS GOOD.

Ninety percent of the 104,948 foot transmission line carrying water from Hatcase Pond to the city line was constructed after 1950. The older portion was purchased from the Penobscot Water Company.

The District also has 219,909 feet of distribution mains around city. About three fifths have been constructed since 1950; the remainder range in age from 44 to 84 years old. The District also has two steel welded standpipes, located in Brewer, that hold a total reserve of 2,115,000 gallons. The first standpipe was built in 1950, followed by the second in 1967.

The overall condition of the hydraulic capacity of the system was studied in 1984. Acting on study recommendations, the District completed a new pump station in 1987 that can deliver 3.2 million gallons a day. The District also added 875,000 gallons of storage on its transmission lines and 22,000 feet of twenty inch water mains. Now the city has three main entrances instead of one into the city so water pressure is very good with the exception of the Sherwood Forest area where internal plumbing limits full use of pressure available at the customer service meter (40 gpm). Currently, the District has plans to install another 21,500 feet of sixteen inch transmission main to reduce water leakage in the system from 15-20 percent to less than 5 percent. Controlling leakage from the system is the only conservation measure the district has ever had to implement. Since it uses no more than about 28% of the safe yield of the pond it has never had any incentive to conduct public education efforts to encourage customers to conserve water through installing water saving devices or changing water use practices.

Map 16 shows the area of the city served by public water. It coincides with the part of the city served by public sewer.

Finding 3:

THE QUALITY OF THE SUPPLY IS VERY GOOD AND A SWITCH TO TREATMENT BY OZONATION WILL ENSURE IT IS VIRTUALLY FREE OF VIRUSES AND GIARDIA CYSTS.

The water of Hatcase Pond is so good that it was exempt from filtration under the reauthorization of the Safe Drinking Water Act of 1986 which mandated stringent upgrade of the nation's public water treatment plants. In order to obtain the exemption, the District had to obtain agreements from landowners in the three square mile watershed that they would comply with all applicable local, state, and federal laws protecting water quality.

Map 16

Map 16 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 16 page 115.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

The District also had to construct an ozone disinfection plant which, when grant monies are authorized by Congress, will be in operation by December of 1995, replacing chlorine as the primary disinfectant. Sodium hydroxide and calgon C-4 will replace hydrated lime for pH control and hydrofluoric acid will replace sodium fluoride. The end result will be increased certainty that the water is virtually free of viruses and giardia cysts. The new plant will require the addition of two new personnel to operate it.

Together, the new treatment plant and transmission line planned to curb leakage are estimated to cost \$6.9 million. The District plans to use a \$4,165,000 loan from the Farmers Home Administration, along with an outright grant of \$2.8 million from the same agency. Rate payers will fund the payment on the loan in a projected 54% rate increase. This compares very favorably with districts that have been required to go to filtration because of poor water quality. Currently the base rate in Brewer is \$27.30 for 900 cubic feet of water, paid quarterly, with 3 steps in a sliding scale that lowers rates for higher levels of water consumption.

While the federal requirements that initiated treatment improvements to public water supplies were critical for some, they have not been considered appropriate for all supplies in the country across the board. For this reason, Congress is considering an amendment to federal law that will result in greater flexibility, basing requirements upon the specific needs of individual water supplies rather than generalities.

Finding 4:

THE QUALITY OF HATCASE POND IS PROTECTED FROM POTENTIAL DEGRADATION FROM IMPROPER LAND USE BY AGREEMENTS WITH LANDOWNERS AND OWNERSHIP.

The most enduring way to control land is ownership. The Brewer Water District owns two relatively small parcels at the north and south ends of the pond and is in the process of purchasing another 233 acres in the vicinity of the intake at the north end. The Mountain Pond Club, owns much of the remaining portion of the watershed, about 75%, including most of the of shoreline on the east and west sides of the pond and hemmed in by the mountain. Fortunately, the interests of the association, owning the land for protection of members' private camp lots on Mountain Pond, is compatible with interests of the district. While the club did not agree to give the district the right of first refusal if it ever sells the land in the Hatcase Pond Watershed, it has agreed, with the other few landowners in the watershed which include five camp lot owners, to abide by all local, state, and federal land use regulations to minimize water quality degradation.

5. PUBLIC WORKS

Finding 1:

BREWER PROVIDES A FULL RANGE OF PUBLIC WORKS SERVICES.

The Public Works Department is responsible for operating the landfill, maintaining city sewers and storm drains, maintaining and snowplowing local roads, designing construction projects, and overseeing contractual construction projects. Department staff total 26: 15 work outside, 4 are mechanics, 2 are engineering technicians, and 5 have administrative duties.

Finding 2:

MUCH OF THE DEPARTMENT'S HEAVY EQUIPMENT IS NEARING THE END OF ITS USEFUL LIFE.

The Department owns about 80 pieces of heavy equipment. Most was purchased in the early 1980s or late 1970s. This means some pieces are nearing the end of their useful life of 10 to 15 years. Others, built to last longer with routine maintenance, can be held onto much longer at a savings to the city. The relative condition and age of this equipment is summarized in Appendix 2.

Finding 3:

THE PUBLIC WORKS BUILDING IS OUTMODED AND THE SITE IS TOO SMALL FOR EFFICIENT OPERATIONS.

While the building and grounds are small, the Department makes good use of available space at its South Main site (see Map 15). Materials and some equipment are stored at the landfill site, but this does not provide easy and quick response to the heavily developed portions of town where most maintenance and construction occur.

Some suggestions have been made over the years about where a new facility should be located. These include locations along I-395, near Wilson Street, off Maple Street, the Industrial Park, and even at the landfill. To be appropriate, such a site must be at least 6 to 7 acres large compared with the 2-acre site now used.

Finding 4:

THE CITY ENGINEER IS VERY HELPFUL TO THE PLANNING BOARD AND TOWN PLANNER IN ASSISTING IN THE REVIEW OF DEVELOPMENT PROPOSALS, BUT NO MECHANISM EXISTS FOR OBTAINING HIS OR HER ASSISTANCE IN THE INSPECTION OF ROADS AND OTHER REQUIREMENTS DURING CONSTRUCTION.

In-house technical assistance from the city engineer pays off with improved plans for new roads and stormwater controls. He tries to visit most Planning Board-approved projects during construction to ensure they are built to specification and permit conditions, or, if plan changes need to be made during construction to respond to site conditions, to ensure they will create no

problems. These informal inspections are important but not always possible due to work load. No formal provision exists in the permitting process to require such inspections.

Finding 5:

CITIZENS ARE GENERALLY SATISFIED WITH THEIR PUBLIC WORKS DEPARTMENT BUT WANT IMPROVED ROAD AND STREET MAINTENANCE.

As mentioned in a later finding on Transportation, citizens attending Speak-Out Brewer meetings registered some concern about the condition of roads. In regard to what would make life in Brewer's neighborhoods better, "improved roads" was mentioned most frequently. This same result was found also in a 1987 poll conducted by Northeast Research for Brewer. This latter poll, however, expressed strong support for other Department of Public Works responsibilities such as trash pick-up and snow removal. Ninety one percent of the respondents rated trash pick-up service as excellent or good, the highest rating among city services in the poll; snowplowing was rated as good by a plurality although 1 in three rated it as fair or poor.

6. RECREATION AND PUBLIC ACCESS

Finding 1:

BREWER'S READY ACCESS TO A DIVERSITY OF RECREATIONAL AND CULTURAL OPPORTUNITIES OF STATE SIGNIFICANCE IS AN ASSET.

Within a relatively short drive, Brewer residents have a multitude of choices for recreation and enjoyment of cultural events throughout the seasons. Proximity to both outdoor and cultural activities is frequently stated as a primary determinant in a Maine location by residents and chief executive officers alike. Brewer can use its location as an asset.

People who enjoy the outdoors can walk, boat, canoe, hike, bike, hunt, fish, ice fish, ice boat, sightsee, rock climb, golf, swim, camp, ski, slide, skate, observe nature, snowmobile, and enjoy many more activities in Maine's premier settings. For example, major ski facilities such as Sugarloaf are approximately 2 hours away; Acadia National Park, only an hour and a half away, offers hikers, bikers, campers, boaters, and sightseers a variety of coastal activities; and closer to home Kenduskeag Stream and the Penobscot River are both available for boating, kayaking, fishing, white water rafting, and other water sports. Several swimming areas, public and private, are also available, within 1 hour of Brewer. These include Swan Lake State Park in Swanville and Jenkins Beach on Green Lake in Ellsworth. The Bangor-Brewer YWCA and YMCA are just across the river in Bangor. The YWCA offers two pools and a large day care program.

Brewer residents can also attend plays, lectures, exhibits, and concerts nearby at the University of Maine at Orono. The Brewer Hometown Band, Bangor Symphony, Bangor Band, and the Penobscot Theater are also available for enrichment.

Finding 2:

MANY LOCAL FACILITIES ARE AVAILABLE FOR SPORTS, ALTHOUGH SOME NEEDS ARE NOT FULLY MET.

Brewer's organized sports currently include field hockey, ice hockey, baseball, basketball, football, and soccer. The city also has an outdoor track, tennis courts, and swimming pool at the locations listed on Table 36 and Map 17. The track, known as the Corey DeBeck Morelli Memorial Field, is a popular place for runners and walkers, during daytime and evening under the lights. It is a source of pride for Brewer. In unfavorable weather, indoor walking at the auditorium is popular. Youth ball fields are well distributed and well maintained. A new outdoor basketball facility has been constructed at Sunset Park off Parkway South.

The lack of a varsity (regulation-size) ball field for the 13 and up youth baseball program is a critical deficiency. Eight Brewer teams now rely upon the high school field, when available for hosting league games, and Doyle softball field for practice. A larger field than Doyle is needed for safety reasons, and to provide more time for practice and games. Maine's Bureau of Parks and Recreation suggests a standard of .16 baseball fields for every 1000 people in a community. For Brewer, this amounts to just under 1.5 fields. A location for a new field in Brewer was considered a few years ago at the high school but ledge proved a costly obstacle.

Lighting the existing high school field or converting Doyle Field from softball to baseball would help fill the void, but the latter idea would only shift the problem to another segment of citizens.

Table 36: Outdoor Parks, Playgrounds, and School Recreation Facilities in Brewer

Map Key	Park/Playground/School	Pool	Ball Field	Track	Basketball	Playground	Tennis Courts	Picnic Tables	Water Access	Scenic View
1	Creative Playground	out door				x		x		
2	Eastern Park					x		x	x	x
3	Fling Street				half	x		x		
4	Indian Trail							x	x	x
5	Capri Street School		S			x				
6	State Street School					x				
7	Washington Street School		B			x				
8	Pendleton Street School		S/FH	x	half	x				
9	Boat Landing							x	Launch	x
10	School Street					x				
11	High School		S/B				x			
12	Sunset Park				full					
13	Auditorium		M		full					

Ballfield legend: S (soccer), B (baseball), SB (softball), FH (field hockey), M (multi-purpose: football, soccer, field hockey, and softball)

Facilities for indoor hockey and ice skating are also insufficient. Now hockey programs and skaters must rent UMO's Alford Arena or the Sawyer Arena in Bangor or skate outdoors which is highly weather dependent. Another arena was available on the Penobscot Reservation until 1992-93 but was transformed into a high stakes bingo establishment. High ice rental and transportation costs explain why ice hockey is the most expensive organized sport offered at the high school. A group of local people has formed a non-profit corporation, Penobscot Valley Ice Sports, Inc., to explore the feasibility of constructing an ice arena in Brewer. They believe Brewer could become a major focus for the sport in the Greater Bangor area.

Brewer's tennis courts are also deficient. The ones at the high school are in need of a major overhaul. Some people also believe that Brewer could use an indoor swimming facility, although no consensus exists on this issue because of the availability of pools at the Bangor-Brewer YWCA and YMCA.

Finding 3:**BREWER'S PARKS ARE WELL DISTRIBUTED, WELL MAINTAINED, AND ACCESSIBLE TO MOST NEIGHBORHOODS, BUT PEOPLE WANT MORE.**

Brewer's parks and playgrounds, while not large, are dispersed fairly well. They are especially amenable to the recreation needs of children. Map 17 also shows Brewer's neighborhoods. Looking at these neighborhoods in relation to the location of parks and playgrounds, one gets a sense of how accessible each facility is to surrounding neighborhoods as described below:

1. Creative Playground, Capri Street School, Indian Trail Park and Washington Street School, are most easily accessible to the Washington Street area;
2. Eastern Park and Pendleton Street School and Memorial Field Track are closest to the South Main Neighborhood, and relatively convenient to people from Parkway South, especially those living closest to the Parkway;
3. School Street Playground and Fling Street Tot Lot are handiest to the Downtown area; and
5. The Boat Landing serves the Riverside North area, although it really isn't a neighborhood park in the broadest sense.

While these parks and playgrounds are most accessible from surrounding neighborhood, anyone is free to drive or bike to them. All provide parking. Many people attending "Speak-Out Brewer" meetings, however, said they want more parks and recreation facilities near where they live. It is interesting to note that several of these residents come from areas already best served such as South Main Street and the Washington Street areas.

Brewer's rural areas and Parkway South neighborhoods have no playgrounds or parks of their own. Riverside North has nothing beyond the boat launch facility. The Downtown area will enjoy a small riverfront park in conjunction with reconstruction of the Penobscot Bridge in the near future.

Finding 4:**SOME PRIVATE FACILITIES IN BREWER ARE AVAILABLE FOR OUTDOOR RECREATION.**

The Pine Hill Golf Course located on the Brewer Lake Road is open to the public. The Penobscot Salmon Club and Penobscot County Conservation Association also open their lands on the Penobscot River adjacent to the river's salmon pools to the public, providing people use the area responsibly. The Holden-Eddington Snowmobile Club maintains some trails in Brewer. The locations of these facilities are also shown on Map 17.

Finding 5:**THE PENOBSCOT RIVERFRONT IS IMPORTANT TO BREWER'S IDENTITY AND QUALITY OF LIFE.**

Over the years, Brewer has created several places where people can enjoy views of the river from the road or stop and use picnic areas, playground equipment, a boat launch, and green space. Eastern Park and Indian Trail Park are the two primary focal points. North Brewer hosts a boat launch and roadside pull-out off North Main near Hillside Boulevard. The Kiwanis Club commissioned the Penobscot Rocks Commemorative Area just north of the Veteran's Remembrance Bridge. South Brewer also enjoys a roadside pullout area and landscaped "parklet", both near Elmwood Street.

The Conservation Commission is currently working with the Kiwanis Club on a plan to enhance use of Indian Trail Park. The Club has selected this park as a major project in 1994. Additional improvements under consideration include: an exercise trail, wild flower garden, and possibly a water fall or fountain. A local committee is also working with MDOT to provide access and beautify the riverfront and street where the new Penobscot Bridge will touch down on the Brewer side.

Many other improvements along the riverfront were recommended by The Joint Bangor-Brewer Harbor Study in 1990 to promote better access, harbor management, use of vacant parcels, and visual quality. Figure 1 shows the access plan recommended by the study. While the Russian Landing is no longer a viable opportunity, the Conservation Pond at the Penobscot County Conservation Association land just below the Bangor Dam still is. The study also recommended a walkway linking the small parks along the river. The proposed route spans from the Joshua Chamberlain Bridge to the Veteran's Remembrance Bridge; and from Indian Trail Park to the Bangor Dam. Some people do park at the church near the Eddington line and walk along the river.

The joint study also noted sites where the water can be reached at low tide, such as the one just north of the Penobscot Bridge where water-dependent uses such as boat launch facility or marina might be feasible. It also proposed a joint mooring plan for the area between the Penobscot and Chamberlain Bridges but falling interest in mooring and docking space has dissipated the need for Brewer to take action on this issue, at least at present.

Finding 6:**BREWER'S PARKS AND RECREATION DEPARTMENT ADDS CONSIDERABLY TO BREWER'S SENSE OF COMMUNITY.**

Working in tandem with local schools, the Parks and Recreation Department makes it possible to offer area youth and adults a diverse range of services and activities such as after-school

Map 17

Map 17 may be found by following the link attached here. Or by clicking on the shortcut below.



Shortcut to Map 17 page 123.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

programs, a center for older citizens, dances offered to the community, along with soccer, baseball, and swimming programs and sports clinics.

Finding 7:

RESIDENTS DESIRE MORE PLACES WHERE THEY CAN TAKE LONG WALKS OR RIDE THEIR BIKES IN NATURAL SETTINGS, ALONG THE RIVERFRONT OR NEAR BREWER'S, STREAMS, FIELDS, OR WOODED AREAS.

"Speak-Out Brewer" participants indicated a strong interest in having more opportunities for walking and biking in natural settings, especially with easy access from their neighborhoods. The only outdoor trail for walking or biking in Brewer is the informal path from Indian Trail Park to the Bangor Dam. This route offers Brewer's most outstanding scenery, but it is not long enough for those who want a brisk walk or bike ride.

Opportunities exist for adding additional paths that, with undeveloped city lands, landowner cooperation, and easements, could eventually link to create a "green space" pathway network. The Calais Branch railroad tracks currently are not used, and the state lacks suitable prospects for reestablishing service, according to a draft of the long range intermodal transportation plan being developed for BACTS by consultants Maine Tomorrow. If abandoned, this route has considerable potential for a regional pedestrian/cross-county skiing/bikeway connecting Brewer with Phillips Lake and Green Lake in Dedham. The rail line crosses Wilson Street and Green Point Road. Any return to active rail use or abandonment to recreation would require the city to consider how to create safe crossings. The rail line could link up with the riverfront walkway through a connection along Felts Brook. The City also owns some undeveloped land that could be used for places to walk and bike (see Map 17). One of these parcels, located between Rotherdale and Canterbury Streets is a place where a circular exercise trail could be developed.

7. SOLID WASTE

Finding 1:

BREWER IS RECYCLING 29.6% OF ITS MUNICIPAL WASTE AND IS TAKING STEPS TO REACH THE STATE'S RECYCLING GOAL OF 35%.

The State of Maine's solid waste policy is to produce as few wastes as possible, recycle or reuse as much as possible, and dispose of the rest in the most environmentally benign and inexpensive manner. The state's goal is to recycle 50% of its wastes by the end of 1994. Of this amount, 35% must be recycled by municipalities. For Brewer, this means recycling 2,900 tons of the 8,253 tons of municipal solid waste estimated to have been produced in 1994.

Brewer has not yet attained the state's recycling goal. In 1992, Brewer recycled 27% through voluntary efforts, but the rate dropped to 24.4% in 1993 -- only 1,257 tons. Since only about 25% of Brewer's municipal solid waste is residential (another 25% comes from spring and fall clean-up), significant gains can only come from commercial, industrial, and institutional sources. For instance, 1200 tons of Brewer's waste stream is corrugated cardboard produced in quantity by the dozens of retail stores on Wilson Street.

Brewer has increased its recycling rate by 5% to 29.6% in 1994. The city has contracted with a private concern for residential curb-side pick up of recyclable materials beginning in October. The first month of Brewer Curbside produced approximately 16 tons of collectibles and the amount is expected to rise at least for the first four months of the program when it should level off. Private contractors are also assisting Brewer businesses to increase the overall rate by providing containers for recycling cardboard and high grade office paper and making regular pick-ups. These wastes typically comprise about half of the commercial waste stream. Unfortunately, without a lot of effort, it would be difficult to keep track of each business in Brewer to determine how much additional waste is actually being recycled (or could be) beyond the corrugated cardboard and office paper.

Brewer also encourages composting and prohibits the disposal of compostable materials. The city picks up leaves, grass clippings, and wood for chipping curbside during spring and fall clean-ups, and composts them at the former landfill site. Residents are then encouraged to take the compost home for use in their gardens.

White goods are placed in a dumpster in order that the freon coolant can be removed and disposed of in an environmentally safe way. The cost of the service is usually covered by the value of the recyclable material gained. Tires are collected at the landfill and recycled. The city pays about \$40 to \$60 a ton to get rid of them.

Additional gains could also come from improving the way that disposable materials are handled at the demolition debris landfill. If a person were available to ensure that wood and metal are separated for recycling before disposal of demolition debris, another 2% increase in the rate might be achieved. No decision has been made to try this approach. To make substantially greater long term gains, Brewer may have to consider stronger approaches such as mandatory

recycling (especially of wood and metal products from demolition debris) or pay by the bag disposal.

In the meantime, because Brewer is making a good faith effort to move toward compliance, it will not be penalized and will not have to pay "no reasonable progress fees" assessed by the state. The city must officially submit its "reasonable progress plan" to the state by December 1 to be exempt from the \$1.50 per ton disposal fee that will be assessed communities which do not continue to look for and make additional gains each year toward the 35% goal.

Finding 2:

BREWER CONTRACTS WITH PRIVATE CONTRACTORS FOR CURB-SIDE PICK-UP AND TRANSPORT OF DISPOSABLE RESIDENTIAL WASTES TO PERC IN ORRINGTON. LOCAL BUSINESSES CONTRACT WITH COMMERCIAL HAULERS ON THEIR OWN.

Currently, Brewer has a charter agreement with PERC (a waste energy facility) guaranteeing that Brewer will dispose of 9000 tons annually over the 30 year life of the facility. The cost per ton, currently \$45, and adjusted each quarter. Since the amount of residential wastes has been declining with recycling gains, Brewer lets other organizations fill its guaranteed capacity. The need to find other generators to fill Brewer's quota could be looked at as a problem, especially if greater recycling gains are achieved, or it could be looked at as a modest advantage in marketing the city as a good location for businesses that need additional disposal capacity.

Finding 3:

DISPOSAL SPACE FOR DEMOLITION DEBRIS IS LIMITED AND NEEDS TO BE USED JUDICIOUSLY.

The only disposal facility remaining in Brewer is the city's demolition debris landfill, licensed by DEP with a capacity of 100,000 cubic yards. The 3.7 acre site also accepts wastes from Orrington, Eddington, Holden, and Dedham. Haulers pay \$45 a ton for the service. The life of the landfill will depend upon how well recyclable materials are separated before disposal. Initially, city officials thought the landfill would last 3-5 years, but experience now shows it may not be filled for ten years. Its useful life can be extended even more if haulers are required to separate wood, metal, and white goods from their loads at the point of pick-up or at the facility and if fees are at least equal to those imposed with other nearby facilities such as the one Bangor operates.

Finding 4:

THE SANITARY LANDFILL HAS BEEN CLOSED BUT POTENTIAL EXISTS FOR USING SOME OF THE ASSOCIATED LAND FOR PUBLIC FACILITIES OR ECONOMIC DEVELOPMENT.

Filled to capacity, Brewer's sanitary landfill was closed in January of 1993 at a cost of \$1 million. The 20 acre landfill is part of a 200 acre site off the Elm Street Road (see Map 15). Another 10 acres is used for public works storage, the demolition debris landfill, and associated areas for tires, composting and white goods. This leaves approximately 56 acres suitable for development, excluding wetland areas. The site is abutted by a 100 acre piece of privately owned land, also partially suitable for development. No study has been made of the potential market value, potential use, and development suitability of these properties.

The remote character of this area makes it highly suitable for uses requiring, and potentially even needing, low visibility. For this reason, some people have suggested the possibility of locating a new public works facility on the site. Others have suggested its use for wetlands banking or recreation. While the site's large size makes it attractive for expanding city facilities, its remote location may be a detriment when considering efficiency and trying to discourage land use sprawl.

8. TRANSPORTATION

Introduction

Ready access to Maine's highway system is one of Brewer's foremost assets. At the same time, the city's location at the hub of regional routes brings heavy traffic which is fast, noisy, dangerous, and a barrier to local pedestrian and vehicular traffic among neighborhoods and activity centers. On the positive side, high traffic volumes also bring considerable economic exposure. These conflicts require long term strategies if Brewer is to realize its twin vision of achieving economic advantage and maintaining and enhancing its small town quality of life.

As part of the federally-designated Bangor metropolitan area, Brewer participates in a planning process known as Bangor Area Comprehensive Transportation Study, BACTS. This organization provides guidance to the Maine Department of Transportation (MDOT) about needed transportation improvements in the six participating communities, including Bangor, Brewer, Old Town, Orono, Veazie, and Hampden. Much of the information in this section is taken from studies commissioned by this organization or the Maine Department of Transportation.

Finding 1:

ANNUAL AVERAGE DAILY TRAFFIC COUNTS AT BREWER'S TOWN BOUNDARIES HAVE INCREASED AT A RATE OF ABOUT 4-7% A YEAR OVER THE LAST QUARTER CENTURY.

The rate of change in traffic volumes at town lines and river crossings, along with key intersections in Brewer, confirms local perceptions about traffic increases on major roadways (see Map 18 and Table 37). The increase in traffic is not from population growth -- which only increased 0.2% in Brewer and its surrounding communities between 1970 and 1990. Instead, greater affluence and two-income families has increased the number of cars on the road, and more and more tourists drive through on their way to the coast, Canada, or Maine's back woods. Anecdotal evidence suggest also that the mix of vehicle types has changed as well with a greater proportion of trucks on the road.

Finding 2:

SEASONAL AND DAILY FLUCTUATIONS IN TRAFFIC VOLUMES ON REGIONAL ROUTES, ALONG WITH HEAVY TRUCK TRAFFIC, CONFLICT WITH THE RESIDENTIAL CHARACTER AND LOCAL TRAFFIC FLOWS OF BREWER.

Two out of five participants attending the "Speak-Out Brewer" meetings cited concerns about traffic and pedestrian safety in their neighborhoods. This is not surprising since most of Brewer's residential development is concentrated along or within a mile of Routes 9, 15, US 1A, 178, or I-395. Several neighborhoods are separated from one another by cordons of traffic during peak travel times of the day. Easing into or through lines of traffic by car or on foot can be maddening at certain locations. Listening to the noise and smelling the odors from this traffic detracts from people's satisfaction with their neighborhoods and property values.

Map 18

Map 18 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 18 page 129.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Table 37: Changes in Average Annual Daily Traffic Volumes (Source: MDOT)

Location	Location No.*	1967	1992	1993	Annual Change (%)
TOWN LINE					
US1A Holden	1	5,855		16,200	6.8
Route 9 Eddington	2	3,295		7,630	5.06
Route 15 Orrington	3	4,740	10,280		4.68
RIVER CROSSINGS					
State St. Bridge (Penobscot River)	4	19,760		18,230	-0.3
Chamberlain Bridge	5	11,825		19,060	2.35
Veteran's Remembrance Bridge	6	Not Built	22,340		
Total Crossings		31,585		59,630	3.42
MAJOR INTERSECTIONS					
Wilson St./Parkway South	7	13,015		19,870	2.03
No. Main/State St.	8	8,325	13,880		2.67
So. Main/Wilson St.	9	13,765	15,700		0.56
* See Map 19					

Residents specifically mentioned North (Routes 9 and 178) and South Main Street (Route 15), State Street (Business 1A), Wilson Street (1A), Eastern Avenue, and Washington Street as problem areas. The first four routes number among Brewer's 14 arterial miles. All but South Main Street south of I-395 are now classified as part of the "National Highway System", the type of travel route classified as the most important in the state and country. Eastern Avenue and Washington Street are part of the community's 4.7 miles of collector road system, serving as feeders to the more heavily traveled state highways.

<u>Arterial Miles</u>	<u>Collector Miles</u>	<u>Local Miles</u>	<u>Total Length</u>
14.08	4.71	41.11	59.90

for April 1993 show that traffic peaks at either 3:00 or 4:00 in the afternoon depending upon a route's primary use: shopping destination (inner Wilson Street) or commuter route (most other

routes). Smaller peaks occur at either 11:00 AM or 7:00 AM for the same reason. No information is available to contrast seasonal differences in traffic volumes, but they appear greater during the summer tourism season.

Some Speak-Out Brewer participants mentioned the need for traffic lights, blinking lights, lowered speed limits, and other means of slowing vehicles down. Others called for traffic cones in crosswalks, crossing lights, and more sidewalks. The State Street end of Eastern Avenue was specifically mentioned in this regard. A few expressed concern for the lack of enforcement of the City's noise ordinance with regard to motorcycles.

**Finding 3:
MDOT ACCIDENT REPORTS CONFIRM RESIDENTS' CONCERNS ABOUT HIGH ACCIDENT LOCATIONS.**

Nine locations in Brewer had more than eight accidents in a three year study and critical rate factors over 1.00, two measures DOT uses to identify hazard areas (see Table 38 and Map 18). The critical rate is the number of times the actual number of accidents exceeds the expected number based upon a factor of statewide averages. The State Street and Eastern Avenue intersection is a left-turn location; the State Street and Route 9 and Acme Road intersections are traffic lights.

An analysis of pedestrian-vehicle related accidents by BACTS indicates that pedestrian violations and driver inattention are the most common reasons for such accidents.

Table 38: High Accident Intersections and Roadway Segments, 1990-1992 (Source: MDOT)

Location	Intersection or Segment	Total Accidents	Critical Rate Factor
A	N Main: State to Holyoke	15	2.23
B	Intersection: Rte. 1A Bus/Rte. 9	38	1.10
C	Intersection: Rte. 1A Bus/Eastern	11	1.38
D	Intersection: Rte. 1A Chamberlain	9	1.07
E	Intersection: Rte. 1A/Acme Rd.	8	1.09
F	Wilson St: Green Pt. Rd. to Rudman	11	3.06
G	Wilson St. Clisham to Parkway S.	20	1.13
H	Wilson St: Chamberlain to Parkway S.	10	1.7
I	Parkway South: Wilson St to I-395	31	1.77

Finding 4:

TRUCK TRAFFIC IS A PARTICULAR CONCERN.

Truck traffic is a major concern for people living on Main Street and those navigating Wilson Street. Because Brewer is located at the hub of the region's traffic, many heavy trucks (3-axle single unit or larger) pass through. And because of weight restrictions on I-395, more trucks travel Main Street than would otherwise be the case. Many of these trucks use South Main Street to reach the PERC solid waste incinerator facility in Orrington. Some emit unpleasant odors from the wastes they carry, possibly contributing to reduced property values in an area that has made considerable strides upgrading its image in recent years. Others, about 360 a day according to a 1992 MDOT existing conditions study of Route 46, travel North Main toward the "Airline" to Canada and parts of Washington County. During good weather, about 250 a day use Wilson Street (1A) to reach East Holden where Route 46 provides a less traveled link to the Airline.

Table 39: Percent of Traffic That Is Trucks
(Source: MDOT, RT 46 study)

Route	1983	1987	1990
9	9.9	11.6	9.11
1A	NA	8	9.5

MDOT, in an April 20, 1994 public meeting hand-out describing plans for the proposed replacement of the Penobscot River Bridge, estimated that heavy truck traffic crossing the river accounts for approximately 1,700 trucks per day. Of this amount, agency staff estimate that only about 60 heavy vehicles would use this bridge if it could carry legal loads. Work is planned to begin in 1995 on the replacement of the Penobscot River Bridge. This project has been under consideration at least since 1973 when the consulting firm of Fay Spoffard recommended its reconstruction, along with a third bridge which has since been built (Veterans Remembrance Bridge). Reconstruction or demolition is imperative since the bridge is considered unsafe, having been rated a 2 on a scale of 100 by state engineers. The bridge is presently closed to heavy vehicles because of its poor condition. MDOT studies anticipate that reconstruction is not expected to change traffic volumes or patterns to any significant degree.

Finding 5:

IMPROVING TRAFFIC CONDITIONS ON WILSON STREET IS CRITICAL.

Nowhere in the city is traffic more aggravating for city residents and others than on Wilson Street, with the exception of the truck traffic on Main Street mentioned previously. Wilson Street has evolved into Brewer's primary shopping area at the same time that it serves as a major link for the region's traffic flow. While the construction of I-395 relieved some traffic, 15,000 to 20,000 vehicles a day on average still funnel through carrying commuters, tourists, and local residents.

Peak travel time occurs between 3:00 and 4:00 PM. Peak time for turning into driveways concentrates around 12:00 noon. A proliferation of curb cuts, signs, intersections, and turning, weaving, and fast moving traffic produce confusion, accidents, and other difficulties for motorists and pedestrians. The visual impact of an almost continuous curb cut, lack of landscaping, and confusing signs contributes to the frustration people feel for this area.

The city contracted for a planning study with consulting engineers DeLuca-Hoffman to add a center turning lane and other traffic improvements to Wilson Street as part of its 1993 Work Plan. The study recommended:

1. overhead lane use signing,
2. 3 lanes with the center lane reserved for 2-way, left-turning traffic,
3. realignment of a portion, and
4. consolidation, realignment, and restriction of curb cuts through site plan review process.

Public hearings on the study generated a mixed reaction because of the recommendation to limit curb cuts. MDOT is surveying the project this summer and plans to make the improvements within its current Transportation Improvement Plan.

The city has submitted a grant proposal for upgrading sidewalks and landscaping on Wilson Street. The opportunity also exists to create a bikeway along Wilson Street with connections to Brewer's residential areas. While a bikeway will not decrease traffic flows substantially, According to consulting engineers of DeLuca-Hoffman, Inc., it would help create, along with other proposed improvements, a positive attitude for upgrading the image, function, and economic viability of this area. The question of where a bikeway should be located in relation to the right of way has not yet been considered.

All of the planned improvements to Wilson Street promise positive change. But they will not by themselves be enough to change the overall image of the street or its functioning. More thought is needed to create a positive future for the street. More thought is needed to take greater economic advantage of its high traffic exposure while creating a more pleasing human environment.

Impediments to developing the areas of Elm Street and Wiswell Road will also still remain because any trucking or high volume vehicle use traffic will still have to use Wilson Street (or North Main) to get to I-395 or the Airline unless some alternative route is provided. The possibility of a parallel road located to the north or south of Wilson and/or adding an interchange at Green Point Road has been discussed to avoid funneling traffic from future economic development onto Wilson Street. Such a potential bypass, however, needs to be weighed against the need for reserving precious buildable land for productive uses rather than pavement; and the fact that neither bypass route is well suited to either pavement or development because of considerable wetlands and ledge. An interchange also does not appear viable at this time because of the relatively low traffic volumes it would serve compared with cost.

Finding 6

THE SURFACES OF BREWER ROADS HAVE DETERIORATED OVER THE PAST 5-7 YEARS.

The city conducted a systematic and objective inventory of road conditions using Maine Department of Transportation criteria about 5-7 years ago, but has not updated it for lack of support for a long range capital budget for road construction and maintenance. BACTS conducted a similar study of road conditions in 1990 and plans to update it in 1994. Until more definitive information becomes available, the City Public Works Director estimates that about 25% of the 54 miles of the roads maintained by the city are in excellent to good condition. He rates the remaining 75% fair to poor, pointing out that some vary considerably in quality along their length. He also noted that about 50% of the state mileage is in good condition, with South Main, Wilson, and South Main Streets needing the most attention of those state roads in fair to poor condition. The state has South Main scheduled for a heavy overlay.

Pavement has a life cycle of 15 to 20 years. At this rate, the city needs to pave about 2.7 miles a year at a minimum to keep them in good shape and avoid spending considerably more money for reconstruction. For the past five years, the city has paved 3.2 miles a year on average. At this rate, a complete rotation will be made in 17 years.

Some roads are in such bad condition that they need to be ground up and rebuilt. For instance, part of the Day Road had to be rebuilt in 1994 because it had been neglected for too long. Knowing that many roads will need to be torn up when the sewer and storm drains are separated, the Public Work Department's strategy is to upgrade each after the sewer work is completed.

The City has not kept up with maintenance and upgrading in the last several years as a budget tightening measure. (See "Fiscal Capacity".)

A 1987 survey of Brewer residents by Northeast Research of Orono found that 37% rated road maintenance as fair or poor, and a majority was in favor of spending the necessary funds to improve them. The recent "Speak-Out Brewer" meetings raised similar dissatisfaction with the condition of city streets in people's neighborhoods. Canterbury Road was cited for poor drainage, a condition probably present in many of the older subdivisions created before adequate storm water management requirements were instituted. Some people speculate that dissatisfaction with local roads is due to increased expectations rather than deteriorating conditions. It will be interesting to compare conditions in 1990 and 1994 when BACTS updates its assessment of Brewer's road conditions to determine the actual condition of the roads.

Finding 7

BREWER WANTS ITS PUBLIC TRANSPORTATION SYSTEM TO BE MORE CONSUMER-ORIENTED WITH MORE HOURS AND AT CRITICAL TIMES SUCH AS AFTER SCHOOL.

The City of Bangor has operated a public bus system serving Bangor, Brewer, Veazie, Orrington, and Old Town since 1983. Brewer pays "The Bus" for providing Brewer daily service with the exception of Sunday. Brewer and the other communities provide the local share to match 50% federal and 10% state subsidies.

Small buses with a capacity of 18 passengers make two loop trips, switching on the half hour. The first travels south on South Main and swings up Parkway South and Wilson on the return. The second goes up North Main to Parkway North, then swings up Chamberlain and returns on State Street.

Ridership has expanded considerably since 1989, doubling from 14,083 Brewer passengers to 28,975 in 1993. This is especially noteworthy because overall ridership on the system has declined.

Participants at the fourth "Speak-Out Brewer" meeting expressed interest in expanding the availability of public transportation to more parts of the city with more and better hours. This will be especially important as the population ages.

Public transportation is also provided one day a week by Penquis CAP through "Project Ride". This program is engaged four other days a week, however, in its primary mission of picking up people in vans and buses and driving them to medical appointments.

Finding 8:

PEOPLE WANT AN INTERCONNECTING SYSTEM OF SIDEWALKS AND BIKEWAYS.

Speak-Out Brewer participants also indicated a need for more sidewalks and bikeways linking neighborhoods with other parts of the city. Having developed as a small city in earlier times when people had less access to automobiles, Brewer has over 20 miles of sidewalks as shown on Map 19. The sidewalks haven't changed much since then, but their condition has deteriorated over the years. In addition, the sidewalks were laid out to serve only the neighborhoods for which they were planned. They frequently do not interconnect with one another and major activity centers in the city and no master plan is available to help the Planning Board in determining where new development should be required to provide additional ones. Existing sidewalks also lack curb ramps. This latter drawback is especially a problem for the people who are disabled in the community, and a particular hazard on the Penobscot River bridges.

Map 19

Map 19 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 19 page 136.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

In 1994, the Public Works Department paved 3-4 miles of existing sidewalks and hopes to upgrade a similar amount each year. The City also submitted a grant application to upgrade sidewalks on Wilson Street from Pierce Road to Chamberlain Road. DeLuca-Hoffman has been studying the condition of Brewer's sidewalks as part of a regional BACTS plan for pedestrian and bicycle mobility. Map 20 on the previous page shows the portions of the regional bicycle and pedestrian routes that are recommended for Brewer. A portion of this regional network will be provided when Wilson Street is upgraded.

Finding 9:

THE MAINE DEPARTMENT OF TRANSPORTATION IS CURRENTLY CONSIDERING USING THE EASTERN BALLFIELD PARKING LOT AS A PARK AND RIDE FACILITY.

Park and Ride lots are places where people can either park their cars and car pool with others or ride their bikes the remaining distance to their destinations. MDOT recently asked the Planning Board for information about potential park and ride facilities in Brewer. The BACTS Advisory Committee recommends that such facilities be located in close proximity to major retail centers, day care facilities, and major intersections.

The Planning Board responded that existing parking lots in Brewer are not used to full capacity and so no new construction is warranted. It identified 6 parking lots in Brewer that appear to have some use as informal park and ride lots. These are shown on Map 20.

The Board suggested that a park and ride facility should be strategically located to serve carpoolers commuting to work at the Bucksport mill. It cautioned, however, that strong marketing incentives are needed to convince the 88% of the Brewer, Eddington, Holden, and Orrington area workers who drive alone that car pooling, van pooling, or public transit is a better way of getting to work. For instance, limiting increases in highway capacity, charging tolls for travel on major commuter routes (where feasible), or offering financial rewards to workers who carpool can stimulate use of other modes of transportation.

Finding 10:

BREWER HAS READY ACCESS TO GOOD COMMERCIAL AIR SERVICE, BUT RAIL AND WATER TRANSPORT HAVE DECLINED CONSIDERABLY OVER THE YEARS.

Brewer relies upon the Bangor International Airport for air transportation. Brewer's highway system makes the connection relatively easy and a good location for businesses that depend upon air travel or freight.

Maine Central Railroad, owned by Guilford Transportation Industries, crosses the Penobscot River into Brewer where a branch line extends down to the mill at Bucksport. The line to Bucksport carries freight three times a day through Brewer. A second branch, known as the

Map 20

Map 4 may be found by following the link attached [here](#). Or by clicking on the shortcut below.



Shortcut to Map 20 page 138.lnk

The complete map listing may be found at: N: Common-on-Brewer/Maps/Comp Plan

Calais Branch and now owned by the State, extends from Brewer to Calais. It currently is not used, and the state lacks suitable prospects for reestablishing service, according to the draft long range intermodal transportation plan being developed for BACTS by consultants Maine Tomorrow. If abandoned, this route has considerable potential for a regional pedestrian/cross-county skiing/bikeway connecting Brewer with Phillips Lake and Green Lake in Dedham. The rail line crosses Wilson Street and Green Point Road. Any plan to return to active rail use or abandonment to recreation would have to consider how to create safe crossings.

Passenger rail service is currently unavailable in the Bangor area, but according to the BACTS study, one may become possible in the future if a Portland to Boston connection served by AMTRAK materializes.

The Penobscot River once provided a major conduit for freight and passenger travel in the area. Even petroleum transport has been siphoned off by trucking. Now the river is primarily used for recreation. The BACTS study suggests exploring the feasibility of ferry transportation for trucks transporting wastes to and from the PERC plant; and exploring the costs and benefits of relying upon water transportation versus other modes such as highway and railroad.

The BACTS study also suggests that member communities have an opportunity to establish strong intermodal connections for freight transport. It points to the experience of the City of Auburn, MDOT, and Saint Lawrence and Atlantic Railroad in constructing in partnership Maine's first truck/rail intermodal facility. The City of Auburn will own the facility and lease it to Maine Intermodal Transportation, Inc., a subsidiary of the railroad company. The facility is expected to handle 12,600 truck trailers in its first year of operation and 39,600 within five years. The recent request by Canadian Pacific to abandon its St. John to Montreal route may present an opportunity to capture the freight in an intermodal facility. Georgia Pacific has stated it will have to put over 100 trucks a day on the airline to make up for the loss in rail service.

Finding 11:
TRANSPORTATION PLANNING IS CHANGING.

Passage of the Federal Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and Maine's Sensible Transportation Policy Act has shifted emphasis away from laying down more roadway and pavement as the first step addressing congestion. Now transportation decisions and investments must:

1. promote the coordinated and efficient use of transportation modes;
2. meet the diverse needs of Maine's people and parts of the state;
3. ensure safety of roads and bridges;
4. minimize the harmful effects on public health and air and water quality;
5. reduce reliance on foreign oil and promote energy efficiency;
6. be consistent with state and local land use goals and plans; and
7. include public debate and participation in developing plans and projects.

This means looking at ways to calm traffic flow and reduce vehicle trips and miles traveled before embarking on new construction.

The BACTS committee, along with the Regional Transportation Advisory Committee (RTAC) representing communities outlying the metropolitan area in MDOT's decision-making process, has followed stride. The pedestrian and bicycle plan mentioned earlier is a good example. The study points out that almost two in three automobile trips in the country are less than five miles long and would take less than 25 minutes if undertaken on a bicycle. "Everyone is potentially a pedestrian or bicyclist", according to the study. It is unclear, however, how many vehicles can be reduced through the provision of pedestrian and bicycle pathways because so many people use these modes for recreation rather than commuting or shopping trips; and because of Maine's harsh winters.

The BACTS pedestrian and bicycle initiative and the others discussed in previous findings are aimed at reducing traffic congestion, air pollution, and energy consumption; and creating a transportation system that Maine and its communities can realistically afford to sustain. With scarce public revenues and strong competition for their expenditure, Maine and its communities cannot afford to subsidize all of the options, i.e. an expanded highway network, rejuvenated railway and marine transportation systems, public transit, bikeways, and other alternatives. Choices must be made and long term strategies forged.

Brewer has an advantage in trying to shift dependence away from the automobile and highway trucking, being an urban community where development is concentrated within easy access to services and major access routes. Brewer's development pattern makes public transportation more viable, and pedestrian and bicycle travel more convenient. The river and rail offer ways for removing heavy trucks from sensitive residential travel corridors. But care must be taken in thinking out the consequences of potential solutions. For instance, shifting freight traffic to rail is likely to interrupt highway traffic conditions and must be dealt with accordingly if such an option moves forward.

9. WASTEWATER

Finding 1:

ABOUT 25% OF BREWER'S WASTEWATER VOLUME ENTERS THE PENOBSCOT RIVER EACH YEAR.

Brewer's public sewer system extends forty-six miles (see Map 16 on page 119) and collects 0.80 million gallons a day of sanitary sewage from approximately 9300 users. This is about 7440 million gallons a year and represents service to about 95% of Brewer's population.

Because the majority of the system is relatively old, with some lines as much as 100 years old, many sewers allow excessive ground water infiltration to leak into the system from clay and brick pipes. Other combined sewers allow stormwater inflow to enter from catchbasins, roof and cellar drains, and even natural streams. These sources increase the flow substantially above the 0.80 million gallons a day of sewage wastes. When the ground water level is high or heavy rains hit, total sewer flows may surpass 40 million gallons a day. Because this exceeds the wastewater treatment plant's municipal design capacity of 4.04 million gallons a day, excess flows are discharged into the Penobscot River through ten combined sewer overflow structures. These structures activate frequently and cause over 215 million gallons a year of untreated wastewater to contaminate the Penobscot River. The unpleasant odors occasionally associated with the overflows aggravate people who live near the river and may discourage future development.

Finding 2:

EXCESSIVE GROUNDWATER FLOW INTO THE SEWER SYSTEM AND EVOLVING STATE AND FEDERAL POLICY COMPLICATE RESOLUTION OF THE COMBINED SEWER PROBLEM.

The issue of combined sewer and stormwater systems has long been deliberated. In the early 1980's, DEP enabled the City to shut down pumps during storm events allowing raw sewage and stormwater to bypass the sewage treatment plant with the caveat that the City would work in good faith to take water out of the system. At the time, state and federal policy was to get as much non-sewage out of the system as possible.

Working under this premise, the City developed a preliminary master plan in 1989 for addressing the problem. To meet EPA/DEP policy at the time, the plan was aimed at reducing overflow discharges from approximately 66 events per year to 5-7 events a year and untreated wastewater pollutants to the river by a minimum of 85%. A revised master plan was submitted to DEP on June 30, 1993 and has yet to be approved by DEP and EPA. A final agreement is expected this fall or winter. The revised master plan commits the City to the following program:

1. Implement sewer system best management practices including street sweeping, catchbasin cleaning, and sewer system maintenance to reduce combined system overflows.
2. Remove private inflow sources such as roof and cellar drains from the system to minimize stormwater flows to the system.

3. Maximize sewer storage by reconfiguring sewage lines and adjusting discharge weirs.
4. Upgrade the wastewater treatment plant's headworks, primary clarification, and disinfection systems to match the interceptor sewer's capacity of 11.0 million gallons a day. At present, the existing force mains can only convey 6.77 million gallons a day.
5. Remove six existing stream and swamp entry points from the sewer system.
6. Separate existing old brick sewer areas where major infrastructure work is needed.
7. Complete previously initiated sewer projects where upstream separated sewers recombine with and overload downstream sanitary sewers.
8. Remove a limited number of catchbasins in small sewer system areas where few basins cause high system overflow.
9. Complete selected upstream sewer system separation projects in high inflow areas.
10. Rehabilitate old, leaking high infiltration sewer systems.
11. Install upland sewer system storage at field inlets where appropriate.

The computer model used for the study predicts that, when the plan is fully implemented, flows will be within the 11 million gallon a day collection capacity of the system except for a few times a year when 10,000 to 100,000 million gallons a day may still need to bypass the plant until further improvements can be identified. Since computer modeling is approximate, the plan requires assessing the effectiveness of constructed improvements every two years during the 7 year implementation timetable, with an in-depth evaluation of system performance after completion.

Plan priorities target high impact projects where large amounts of excess water can be removed at a reasonable cost, with especial emphasis on separating stream flow from the system. The City has moved ahead on implementation of the easiest, least cost improvements that are not likely to change with DEP and EPA scrutiny of the plan. For instance, it completed the Washington Street Extension and Brewer Street projects this summer.

DEP and EPA policy is moving away from separation toward storage and treatment because of the impact of contaminated stormwater on water quality and ecosystems. These agencies are now encouraging communities like Brewer to increase the capacity of treatment plants to accommodate stormwater. They are also looking to communities to require stringent control of stormwater from new development.

Brewer plans to implement the revised master plan and review the results before deciding what additional steps may be needed, if any. In the meantime, city land use ordinances require on-site retention of stormwater to protect water quality, avoid introducing more flow into the system, and slow down peak flows for flood control.

The City's 50% cost share of the total master plan was estimated at 7.14 million dollars in 1993. If system users bear the full cost, this will raise the average sewer bill from \$203 per year in 1993 to \$328 annually over the life of the project. Because \$328 represents only 1.17% of Brewer's median household annual income, under the 2.0% EPA threshold, Brewer must comply with the plan within the timetable set by EPA.

Brewer needs to decide whether users should bear the full cost of separation and treatment. The amount of sewage they put into the system is substantially less than the amount of stormwater diverted into the system from streams and private generators, such as shopping centers. During peak runoff events, sewage comprises only 2% of the total flow. The question of who should pay is further complicated when one considers who will benefit from clean-up of the river.

Finding 3:

THE CITY AND EASTERN FINE PAPER HAVE MET ALL REQUIREMENTS, EXCEPT THOSE RELATED TO COMBINED SEWER OVERFLOWS, SPECIFIED IN A CONSENT DECREE WITH DEP CONCERNING THE SEWAGE TREATMENT SYSTEM.

A few years ago, the City and Eastern Fine Paper paid a \$75,000 fine, and entered into a consent decree with the Department of Environmental Protection because of violations in its discharge permit for the sewage treatment plant. The first two provisions of the three-way agreement were taken care of when Eastern Fine made improvements to reduce loading to the system and the city upgraded the treatment plant. Now the city is in the process of implementing its revised master plan for separating the combined system. This will be a dynamic process, as mentioned earlier, taking many years to implement and periodic measures to determine the plan's effectiveness in solving the problem.

Finding 4:

DEPENDING UPON HOW THE COMBINED STORMWATER/SEWER OVERFLOW PROBLEM IS RESOLVED, BREWER WILL HAVE AMPLE CAPACITY TO ACCOMMODATE FUTURE RESIDENTIAL GROWTH. THE AMOUNT OF POTENTIAL ROOM FOR COMMERCIAL AND INDUSTRIAL GROWTH IS LESS CERTAIN.

Originally, DEP and EPA required communities to reduce the volume of the stormwater in their combined systems by five times for every one gallon a day introduced by new development. Now that these agencies are moving toward requiring communities to store and treat stormwater, they are not enforcing this policy. The current dry flow capacity of the system, about 4.04 million gallons a day, is well above the existing base flow of 0.80 million gallons processed daily by the system. Accordingly, Brewer appears to have ample dry flow design capacity to accommodate the current 37-housing units-a-year projected rate of residential growth.

Finding 5:

SLUDGE DISPOSAL IS NOT CURRENTLY A PROBLEM BUT IT WILL BE IN THE FUTURE.

Two thousand wet tons of sludge a year are produced by the wastewater treatment plant, about half created by the city and the other half by Eastern Fine Paper Company. This amounts to about 3,330 cubic yards. Because Brewer and Eastern Fine do not have a suitable site suitable of their own, they contract with a local wastewater disposal firm to spread the sludge at state-licensed sites. This service costs about \$52 a ton, which the city and Eastern Fine share about equally. The disposal contractor recently was denied a permit for spreading in Etna and other “host” communities such as Troy and Unity may not grant new permits as well. This will force Brewer and Eastern Fine to find another approach. Some potential options include establishing a composting process on-site or elsewhere in the city or entering into an agreement with another community or regional entity that composts, such as Old Town. For financial reasons, Eastern Fine would prefer to avoid an approach requiring significant up front costs so thoughtful and timely consideration of alternatives will be essential.

H. FISCAL

BREWER'S FISCAL SITUATION

The purpose of this section is to give a broad overview of the City of Brewer's financial situation. It is not meant to be a detailed fiscal analysis. Instead, it is intended to give guidance to members of the Comprehensive Planning Committee, particularly in considering the question of needed capital improvements, and in judging how much the City can afford.

Finding 1

FROM 1985 TO 1992 BREWER'S ASSESSED VALUES GREW AND PROPERTY TAX RATES FELL; FROM 1992 TO 1994 THE PROCESS WAS REVERSED.

The story here is fairly straightforward. During the 1985 to 1992 period, a period of robust economic growth, the assessed value of the City's property (as adjusted by the State) increased at a rate of 12% a year -- which, with inflation factored out, represented a real growth of 7% a year. (see Table 40).

From 1992 to 1994, assessed values fell by 1% a year in nominal terms, and 3% a year in real dollars.

Tax rates, not surprisingly, followed the opposite course. As more and more property came onto the rolls, it was possible to reduce tax rates from 1985 to 1992. In real, uninflated dollars, the tax rate fell at an average rate of 8% a year over this period. To be absolutely clear on this point, this does not mean that property tax collections or assessments fell during this time. To the contrary, tax collections increased. But relative to the growing value of property, property taxes took a progressively smaller share of property values. This is reflected in a declining rate over the period.

On the other hand, after 1992 tax rates went up at a rate of 5% a year (2% when inflation is factored out). The combination of state cutbacks, lower property values, and continued federal/state mandates made recent tax increases inevitable.

Table 40
 CHANGES IN ASSESSED VALUE AND PROPERTY TAX RATES, BREWER
 Source: Brewer City Records

YEAR	ASSESSED VALUE		TAX RATE	
	LOCAL (in millions)	STATE- ADJUSTED	LOCAL	STATE ADJUST
1985	\$126.6	\$174.0	33.42	24.32
1986	\$195.0	\$185.7	22.75	23.90
1987	\$202.1	\$194.0	24.70	25.73
1988	\$212.5	\$207.9	24.70	25.25
1989	\$220.4	\$240.5	27.15	24.88
1990	\$232.6	\$283.5	27.15	22.28
1991	\$238.7	\$344.8	28.15	19.49
1992	\$341.6	\$377.0	19.70	17.85
1993	\$360.3	\$353.4	19.70	20.09
1994	\$360.1	\$369.1	20.00	19.52
Annual% (uninflated)	1985 - 1992	11.7% (7.2%)		-4.3% (-8.1%)
	1992 - 1994	-1.1% (-3.4%)		4.6% (2.1%)

Finding 2

UTILITY RATHER THAN PROPERTY TAX INCREASES HAVE HAD THE MOST IMPACT ON THE AVERAGE BREWER FAMILY.

At the public forums many Brewer residents expressed the view that property taxes were a growing burden on their families.

This is true, but only a small part of the picture. The major burden on Brewer homeowners in recent years has come from utility costs.

The proportion of family income going to pay property taxes has actually declined slightly from 1990 to 1994 -- from 5.8% to 5.6%. On the other hand the proportion going to pay for utilities has increased a full percentage point -- from 4.2% to 5.2%.

In fact 85% of the increase in homeowner bills in the last four years have come from utilities, and only 15% from property taxes. Water and sewer rates are scheduled to increase again next year, and electrical rates can also be expected to continue to rise -- though probably at a lower rate than in the past.

Utility costs do not traditionally enter into an analysis of property tax capacity, and are not specifically addressed on the following pages. However the fact that such costs are rising places a real-world limit on the capacity of Brewer homeowners to absorb new municipal property tax increases, and must be therefore kept in mind.

Table 41
INFLATION, 1990 TO 1994
Sources: U.S. Census, Claritas Inc, Public Utilities Commission, Brewer officials

	1990	1994	Change	%	Annual
Consumer price	114.9	130.0	15.1	13.1%	3.1%
Median income	\$28,496	\$30,631	\$2,135	7.5%	1.8%
Median home value	\$79,500	\$84,201	\$4,701	5.9%	1.4%
Tax rate	20.89	20.47	-0.42	-2.0%	-0.5%
Property tax	\$1,660	\$1,723	\$63	3.8%	0.9%
Water	\$140	\$168	\$28	20.0%	4.7%
Sewer	\$172	\$281	\$109	63.2%	13.0%
Electric	\$894	\$1,130	\$236	26.4%	6.0%
Total payment	\$2,867	\$3,302	\$436	15.2%	3.6%
% of income	10.1%	10.8%	0.7%	7.2%	1.7%

Notes: Tax rate is a blend of two fiscal years occurring in each period. Water estimate for 1994 is from the Water District; 1990 estimate is based on a \$7/quarter lower base rate. Sewer estimates are from local officials. Electric rate information is for 750/kw/month, provided by the Public Utilities Commission.

Finding 3
MUNICIPAL BUDGETS HAVE GROWN AT A MODEST RATE OF 2% PER YEAR (REAL DOLLARS) FOR THE LAST TEN YEARS.

Municipal spending has grown at a very modest rate the past ten years. Three quarters of the increase has been in the education budget (\$4.5 million). County taxes have also risen at a high rate, although the total dollar impact is still relatively small.

Table 42
 INCREASES IN BREWER EXPENDITURES, 1985-1995
 Source: City records

	1985 (000's)	1995 approved	Change	Ann%	Ann% deflated
General gov't	\$568	\$623	\$56	0.9%	-2.1%
Police/fire	1,289	\$1,938	\$648	4.2%	1.0%
Public works	\$777	\$1,405	\$627	6.1%	2.8%
Recreation	\$331	\$492	\$161	4.0%	0.8%
Education	\$4,846	\$9,361	\$4,515	6.8%	3.5%
General Assistance	\$390	\$119	-\$271	-11.2%	-13.9%
County	\$103	\$311	\$208	11.7%	8.2%
Other	\$723	\$688	-\$35	-0.5%	-3.5%
Debt payments	\$346	\$597	\$251	5.6%	2.4%
TOTAL	\$9,375	\$15,535	\$6,160	5.2%	2.0%

Finding 4
IF STATE AID HAD REMAINED AT THE SAME LEVEL IN THE PAST 7 YEARS, BREWER'S LOCAL PROPERTY TAX BURDEN WOULD BE \$850,000 LOWER.

What has had a greater effect than spending increases on the Brewer tax rate has been the withdrawal of state funds. In 1987 45% of Brewer's revenues were derived from the property tax; today the figure is slightly over 50%. If the state still met the same share of Brewer's budget today as it did in 1987, the local property tax burden would be \$850,000 lower, and the average homeowner's property tax bill would be over \$200 lower.

Finding 5
BREWER'S TAX RATE IS ABOUT AVERAGE FOR CITIES OF ITS SIZE.

Brewer's tax rate is above average for Maine as a whole, or Penobscot County as a whole. However these comparisons are not strictly accurate, since most Maine communities are very small and offer few of the services which Brewer offers.

When compared to cities of comparable size and economic composition, Brewer is about at the middle of the pack (see below).

Table 43
 BREWER'S TAX RATE COMPARED TO OTHER MAINE CITIES, 1993
 Source: Maine Bureau of Taxation

	Local Assessment (millions)	State Valuation	Rate
Westbrook	\$17.9	\$642.4	27.85
Houlton	\$3.6	\$148.8	24.27
Presque Isle	\$6.7	\$285.9	23.42
Caribou	\$4.6	\$204.4	22.50
Auburn	\$23.1	\$1,047.5	22.08
BREWER	\$7.2	\$353.4	20.38
Bangor	\$28.4	\$1,397.1	20.36
Winslow	\$5.6	\$282.7	20.14
Topsham	\$6.1	\$354.3	17.35
Kittery	\$10.1	\$584.5	17.30
Old Town	\$6.0	\$367.1	16.38
Penobscot County	\$94.4	\$5,585.5	16.91
Maine	\$1,006.1	\$66,111.9	15.22

Finding 6
BY STANDARD TESTS, BREWER'S CURRENT DEBT LOAD IS VERY
MANAGEABLE.

In the handbook Comprehensive Planning, A Manual for Maine's Communities, issued in 1992 by the Maine Department of Economic and Community Development (and written by Market Decisions), four tests for assessing the ability of a community to increase its bonding capacity are given:

- 1) *Is the total municipal debt less than 5% of its state valuation? (the legal limit for Maine municipalities is 15%)*
- 2) *Is the fund balance (cash on hand) in excess of one-twelfth (8.3%) of the operating budget?*
- 3) *Is the total per capita debt less than 5% of the City's per capita income? In cases where there is a substantial commercial/industrial base, the proportions can safely be higher.*
- 4) *Is the assessed valuation of the community growing?*

Table 44
 TESTS OF BONDED INDEBTEDNESS FOR BREWER, 1990-1995
 Source: City records, Claritas (for per capita income)

	DEBT TO VALUATION RATIO	FUND BALANCE TO BUDGET RATIO	PER CAPITA DEBT TO PER CAPITA INCOME
TEST	UNDER 5%	ABOVE 8.3%	BELOW 5%
1990	2.0%	18.0%	4.6%
1991	1.6%	26.9%	4.2%
1992	1.3%	24.7%	3.7%
1993	2.3%	25.2%	6.0%
1994	2.2%	18.2%	5.7%
1995	2.3%	N/A	5.8%

In general terms, the City of Brewer meets each of these tests comfortably. Its debt level is about 2% of its assessed valuation. Its fund balance is generally about 20% of its budget. Its per capita debt is 6% of per capita income -- a little high, but given the substantial commercial/industrial base of Brewer, not out of line.

And finally, its assessed valuation, though steady in the last three years, has grown significantly in the longer term (see Table 40).

These tests would indicate that Brewer has some room to increase its debt level in the future. A key to watch is the resumption of growth in assessed valuation; this will be the governing factor for how much more debt it is possible to assume.

Finding 7
LITTLE OF THE CITY'S CURRENT DEBT WILL BE RETIRED IN THE NEXT 5 YEARS

The City is not helped in taking on new debt by the fact that most of its current debt was assumed in the late 1980's and early 1990's, and won't be retired until the fifteen year terms run out in the early years of the next century.

This means that new debt will have to be serviced on top of the old, and will require higher taxes.

Table 45
 BREWER'S SCHEDULED DEBT PAYMENTS
 Source: City Records

	1995	1996	1997	1998	1999	2000
DEBT PAYMENTS	\$600,000	\$585,000	\$545,000	\$545,000	\$545,000	\$545,000

Finding 8
BREWER'S ABILITY TO TAKE ON NEW DEBT IS DIRECTLY RELATED TO ITS GROWTH IN ASSESSED VALUE

The following exercise attempts to project what the property tax rate in Brewer will be in the year 2000 at different levels of new indebtedness, and different rates of growth in assessed value.

The analysis assumes that: 1) future inflation in city expenditures, housing values, and household incomes follows the recent pattern; and 2) that the local share of the municipal/school budget will not have to increase as a result of any new state budget cuts.

The tax burden is described in Table 46 below in three different ways -- as the tax rate, as the anticipated tax on the average Brewer home, and as a percent of income of the average Brewer household at the time. As a point of comparison, the current tax burden in Brewer is:

Tax rate: 21.90
Average house tax: \$1,870
% of household income: 6.1%

The analysis can be summarized simply. If there is less than 2% real growth in the assessed value in Brewer, then even a modest bonding program (\$1 million a year) will increase the tax burden by all three measures.

If there is a 4% real growth in assessed value in Brewer, then up to \$10 million in new debt can be assumed, and at the same time the percent of income of Brewer residents going to property taxes can be reduced.

Table 46
PROPERTY TAXES IN THE YEAR 2000 IN BREWER
 Source: Market Decisions, Inc.

Annual	bonding	@ \$1 mill	@ \$2 mill	@ \$3 mill
Total	bonds	\$5 mill	\$10 mill	\$15 mill
AT 0% GROWTH IN VALUATION	rate	25.47	26.96	28.43
	avg tax	\$2,333	\$2,467	\$2,602
	%/inc	6.9%	7.3%	7.8%
AT 2% GROWTH IN VALUATION	rate	23.08	24.42	25.75
	avg tax	\$2,113	\$2,235	\$2,357
	%/inc	6.3%	6.7%	7.0%
AT 4% GROWTH IN VALUATION	rate	20.95	22.16	23.37
	avg tax	\$1,917	\$2,028	\$2,139
	%/inc	5.7%	6.0%	6.4%

The same figures can be looked at in another way.

Assume that the goal of the City is not to increase the proportion of income of the average household consumed by property taxes. With this as a fixed standard, how much could the City afford to bond in the next five years at different levels of growth.

The result is shown in Table 47. It reinforces the importance of growth. At a 2% real growth in assessed value, less than \$500,000 can be bonded without increasing the tax burden on the individual family. At 4% growth per year, bonding can be increased to \$2.2 million per year without increasing the family tax burden.

Table 47
BONDING CAPACITY UNDER DIFFERENT GROWTH SCENARIOS
HOLDING TAXES AS A PERCENT OF INCOME TO 6.1%

Source: Market Decisions, Inc.

	Annual capacity	Over 5 years
At 0% growth	negative	negative
At 2% growth	\$450,000	\$2,250,000
At 3% growth	\$1,300,000	\$6,500,000
At 4% growth	\$2,200,000	\$11,000,000

This analysis doesn't deal with the distribution of the sewer taxes between the property tax and sewer users. This is an important issue in its own right, and raises questions of equity (should sewer users pay for the problems of storm-water run-off from parking lots?) and economic competitiveness (how much can Eastern Paper be asked to pay?). But however the sewer burden is distributed, ultimately the money will come from substantially the same pockets -- and the same issue of the importance of economic growth will apply.

