



CITY of
Waterville
M A I N E

CITY OF WATERVILLE, MAINE

COMPREHENSIVE PLAN 2014

COMPREHENSIVE PLAN SUBMITTAL FORM

**Municipal Planning Assistance Program
Department of Agriculture, Conservation & Forestry**

I. Municipality: Waterville
Contact Person: Ann Beverage
Title: City Planner
Address: 1 Common Street
Waterville, ME 04901

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Place where comprehensive plan will be available for public inspection:
City Clerk's Office

Address: 1 Common Street
Waterville, ME 04901
Hours: 8:00 to 5:00

II. Certification

I certify that this comprehensive plan has been prepared and is being submitted with the intention of satisfying the plan consistency provisions of the Maine Growth Management Act (30 M.R.S.A. § 4312 et seq.) in accordance with the Maine Comprehensive Plan Review Criteria Rule (07-105 CMR 208).

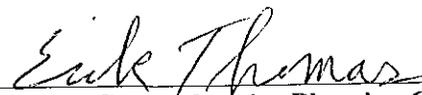
A paper or electronic copy of the plan has been sent to the following regional planning organization for review and comment: Kennebec Valley Council of Governments

Required Signatures:



Chief Elected Official

Mavor Karen Heck
Printed/Typed Name
Date: March 25, 2014



Chairperson, Comprehensive Planning Committee

City Councilor Erik Thomas
Printed/Typed Name
Date: March 25, 2014

Please be sure that your submission includes:

- The completed and signed Comprehensive Plan Submittal Form
- One paper copy of entire Comprehensive Plan, complete with all maps
- One digital copy of entire Comprehensive Plan, complete with all maps.

[The digital copy, preferably in the form of a single Adobe Acrobat (.pdf) or Microsoft Word (doc/.docx) file, may be submitted via CD, web link or email attachment.]

Please contact us if a digital copy of the Plan cannot be provided.

To be accepted for review, the submitted comprehensive plan must include:

- A vision statement
- A summary of public participation demonstrating compliance with 30-A MRSA §4324
- A regional coordination program
- A future land use plan with associated map(s)
- An implementation section

Please submit materials to:

**Department of Agriculture, Conservation & Forestry
Municipal Planning Assistance Program
18 Elkins Lane
22 State House Station
Augusta, Maine 04333-0022**

Email:

phil.carey@maine.gov

or

MacGregor.Stocco@maine.gov

WATERVILLE COMPREHENSIVE PLAN PUBLIC PARTICIPATION PROCESS

Waterville's Comprehensive Plan Steering Committee met numerous times to develop a plan to maximize public participation in the development of the City's new comprehensive plan. The Committee, consisting of the mayor, city manager, two city councilors, two planning board members, the chairman of the last (1997) comprehensive plan committee, and other citizens representing various constituencies, voted to hire consultant Bill Najpauer to assist them.

Bill Najpauer performed several tasks. He created agendas and worksheets for all public meetings. He facilitated those meetings and, after each one, Bill provided Committee members with a list of public comments. At the end of the series of public meetings, Bill used those notes to compose the first draft of the Goals and Policies chapter of the comprehensive plan.

All seven of the initial public meetings were held at the Waterville Public Library. Committee members chose the Library as the venue for the meetings, because they believed that some citizens are not comfortable attending meetings at City Hall. The library is both centrally located and an inviting facility for Waterville residents.

All meetings were videotaped and those videos were posted on the City's web site in an effort to inform the public and to encourage people to attend future meetings. The Committee also posted meeting agendas and worksheets produced by Bill Najpauer and draft background chapters of the plan prepared by the city planner with assistance from Chris Huck and Joel Greenwood of Kennebec Valley Council of Governments (KVCOG).

The local newspaper, the "Sentinel", provided excellent coverage of the comprehensive planning process. The "Sentinel" ran articles both in advance of each meeting and recapping the discussion after the meetings as well.

In addition to notices on the City's web site and in the "Sentinel", public notice of meetings was given via Facebook and email. The city planner sent email invitations to more than 130 persons before each meeting.

At the conclusion of the initial public meetings, the Committee met numerous times to edit the Goals and Policies chapter drafted by Bill Najpauer and presented the Committee's version to the Planning Board. The Board held two public hearings on the plan and then sent the draft plan, with public comments incorporated, to the City Council.

At its March 18, 2014, meeting, the Waterville City Council voted to send the plan to the State for review.

It is the intention of the City Council to adopt the plan once the State makes a finding of consistency with State goals for planning. Once adopted, the City Council will establish an ad hoc committee to implement the 2014 Waterville Comprehensive Plan.

CITY OF WATERVILLE

VISION

The Waterville Comprehensive Plan Steering Committee opted to use as Waterville's vision the Mid-Maine Strategic Vision for the Year 2020. That document (below) was created in early January 1996 by a group of 48 volunteers who spent a weekend at the Waterville Opera House crafting it. Their vision became the guide for the work of the non-profit REM (Revitalizing the Energy in Maine).

We are a vibrant, family-oriented, regional community actively engaged in and responsible for shaping our future. Family in our community is about our relationships with each other: we are all family. We are an inclusive community that embraces individuality and values diversity. We promote interaction and respect among people of all ages and backgrounds. We nurture honesty, integrity, spirituality, and personal and civic responsibility.

Everyone feels secure here. We can express ourselves without fear and we encourage public discussion and debate. We celebrate a high participation in consensual government. Our government and service agencies are coordinated and effective. We have an open-door policy in all our institutions and welcome participation from everyone.

We are fiscally responsible. We maintain a vigorous economic environment while preserving a small-town atmosphere that is attractive, enjoyable and affordable. We actively recruit and support socially responsible enterprises. We are competitive in the global economy. High quality jobs provide economic equity, advancement and security for individuals and families. We cooperate regionally to foster the entrepreneurial spirit and promote sustainable economic development. We work with other communities to enhance their quality of life.

We are a community that coordinates our responses to our social, economic, cultural and artistic needs. Our health care services foster the physical, emotional and spiritual health of our residents. Our community offers broad educational opportunities for people of all ages and all needs. We emphasize service in all levels of education. Educational, religious, government, social and business organizations collaborate in supporting life-long learning and growth. We promote the creative and performing arts as a cornerstone of our regional identity.

We place a high priority on our youth. The entire community shares responsibility for the welfare of every child. Parenting is valued and supported. All children have a healthy, nurturing start in life. Youths actively participate in the community decision-making process. The community prepares young adults for productive lives and provides local career opportunities. As community members age, we value their wisdom and continue to provide opportunities for them to meet their needs.

We hold an ethic that respects the interconnectedness and interdependence of all living things. We make decisions based upon our understanding that the quality of our lives depends on respecting our environment. We value and work together to preserve our heritage, our architecture, and our natural environment. Because we have preserved the blessing of our rivers, lakes, forests and farms, we are a center for rest, reflection and recreation.

We trust in the value of community. We respect each other. This is a place where people thrive.

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CHAPTER 1: DEMOGRAPHIC PROFILE

Waterville's future will be shaped in part by regional, statewide, and national trends. An understanding of the growth and change occurring within the population is essential to developing a realistic direction for the future. [For instance, a community whose growth is fueled by the in-migration of retirees will face different issues and have different needs than a community with a large in-migration of young families with children.] This chapter provides a summary of the demographic forces at work in Waterville and the implications of those factors for the future of the City.

Population Trends: 1890 to 2000

Just 120 years ago (1890), Waterville had a population of 7,107 people, or about 45% of the 2010 population (15,722). From 1890 to 1960, Waterville's population grew from 7,107 to 18,695 people, albeit at a smaller and smaller rate each decade. The City's growth during that period reflected the movement of people from rural areas to urban areas in much of the nation as family-farming declined.

From 1960 until 2000, the population of the City declined. That decline also reflected a national trend, a movement away from urban areas into the surrounding countryside. Increased migration from Waterville was due in part to ease of commuting and people's desire to be close to amenities such as lakes and open space, larger house lots, new schools, and lower property taxes. [Between 1990 and 2000, for example, Waterville lost 1,400 persons through net migration and only 168 through natural change or decline in birth rate.]

Population: 2010

After fifty years of decline, the population of Waterville increased in 2010, albeit only by 117 persons. Waterville experienced a net in-migration of 428 persons and a net natural loss of 311 persons according to figures provided by the Kennebec Valley Council of Governments (KVCOG).

Table 1-1 illustrates the City's growth trends since 1890 and compares the City's population change to County and State growth.

TABLE 1-1: POPULATION CHANGE 1890-2010

	Waterville	Kennebec County	State of Maine
1890	7,107	57,012	661,087
1900	9,477	59,117	694,466
1910	11,458	62,863	742,371
1920	13,351	63,944	768,014
1930	15,454	70,691	797,423
1940	16,688	77,231	847,226
1950	18,287	73,831	914,950
1960	18,695	89,150	969,265
1970	18,192	95,247	993,722
1980	17,779	109,889	1,125,043

1990	17,173	115,904	1,227,928
2000	15,605	117,114	1,274,923
2010	15,722	122,191	1,328,361

Source: U.S. Census .

Statewide Population Comparison

According to the 2010 Census, Waterville is the fifteenth largest community by population in the State. It is smaller in population than only Portland, Lewiston, Bangor, South Portland, Auburn, Biddeford, Sanford, Brunswick, Augusta, Scarborough, Saco, Westbrook, Windham, and Gorham. The last five cities were smaller than Waterville in 1990, when Waterville was the tenth largest city by population.

[Note that in 2010 the cities in Maine with the highest populations were Portland, 66,194; Lewiston, 36,592; Bangor, 33,039; South Portland, 25,002; and Auburn, 23,055.]

Regional Population Comparison

Despite the City's population losses since 1960, it still is by far the largest community in the region and remains a service center for its region. It is worth noting, also, that although the population of Waterville has declined, the regional population has increased substantially over the past five decades. [See Table 1-2.]

TABLE 1-2: WATERVILLE AREA POPULATION CHANGE: 1960 - 2010

Community	1960	1970	1980	1990	2000	2010	% Change 1960-2010
Waterville	18,695	18,192	17,779	17,173	15,605	15,722	-15.9%
Albion	974	1,056	1,551	1,736	1,946	2,041	
Belgrade	1,102	1,302	2,043	2,375	2,978	3,189	
Benton	1,521	1,729	2,188	2,312	2,557	2,732	
China	1,961	1,850	2,918	3,713	4,106	4,328	
Clinton	1,729	1,971	2,696	3,332	3,340	3,486	
Fairfield	5,829	5,684	6,113	6,718	6,573	6,735	+15%
Oakland	3,075	3,535	5,162	5,595	5,959	6,280	+104%
Rome	367	362	627	758	980	1,010	
Sidney	988	1,319	2,052	2,593	3,514	4,208	+325%
Smithfield	382	527	748	865	930	1,033	
Vassalboro	2,446	2,618	3,410	3,679	4,047	4,340	
Winslow	5,891	7,299	8,057	7,997	7,743	7,794	+32%
Total Region	44,960	47,444	55,344	58,846	60,278	62,898	+39.9%

Source: US Census.

Population Projection

Table 1-3 shows that Waterville’s population is projected to increase by 400 persons over the next ten years. While Kennebec County also is expected to experience growth, the State as a whole is projected to decline in population by 2023.

TABLE 1-3
POPULATION PROJECTIONS
WATERVILLE, KENNEBEC COUNTY, STATE

	2010	2018	2023	CHANGE 2010 - 2023
Waterville	15,722	16,151	16,122	400
Kennebec County	122,151	123,655	124,186	2,035
State of Maine	1,328,361	1,327,070	1,322,449	(5,912)

Source: Maine State Planning Office, 2010

Seasonal Population

With only 66 seasonal housing units (2010 Census), Waterville clearly does not have a significant number of seasonal units. However, the population does fluctuate over the course of the year. Some Waterville residents escape the cold winter weather, leaving their homes empty until the spring. Others move to second homes on the lakes in nearby towns during the summer. Furthermore, the City hosts a significant number of college students each school year at Colby College and Thomas College. [The 2010 Census lists 1,826 non-institutionalized persons in group quarters.] Waterville also benefits from summer residents and tourists staying in housing on lakes in other, smaller towns who frequent commercial and cultural venues in Waterville.

While neither Colby College nor Thomas College offer summer sessions, both offer special programs to visiting groups. Colby schedules over 50 summer programs, including refresher courses for doctors and athletic camps for children, and attracts approximately 7,000 persons to Waterville over the course of the summer. Thomas College offers Elder Hostel.

Daytime Versus Resident Population

It is important to note that Waterville’s population fluctuates not only by season, but also by time of day. As a service center community, Waterville provides public services to both residents and to persons who commute to Waterville to work or travel to Waterville for shopping, medical and professional appointments, and entertainment and other amenities. Various studies estimate our

daytime population at over 21,000, well above our 2010 resident population of 15,722. [See Chapter 6: Public Facilities and Services.]

Household Change

The 1970s saw a dramatic decrease in household size. In Waterville, the average household shrank from 3.15 persons in 1970 to 2.50 in 1980. That decrease was typical of national trends and was caused by a variety of factors including lower birth rates, increased longevity among the elderly, higher divorce rates, and more elderly and young people living independently in their own homes.

The trend of decreasing household size has continued, but at a slower rate. The 2010 Census indicated an average household size of 2.13 persons in Waterville. There were 2,481 single person households representing more than a third (38.9%) of Waterville's 6,370 households. Husbands and wives without their own children under age 18, accounted for 1,387 or 21.8% of households.

Only 1,577 households, about a quarter (24.8%) of Waterville's households, had children. Of those households with children, 565 were headed by single mothers and 181 were headed by single fathers. [For school enrollment projections, see Chapter 6: Public Facilities and Services.]

Impact of Household Change on Housing Demand

Over the past fifty years, the decrease in household size has had a substantial impact on residential development in Maine communities, including Waterville. During the 1980s, for example, although the population of Waterville declined by 606 persons, the number of households increased by 382. Consequently, more dwelling units were needed to house fewer people.

Between 1990 and 2010, Waterville lost 8.4% of its population (1,451 persons). Over that same period of twenty years, Waterville lost only 213 households or 3.2% of its households. [There were 6,583 households in Waterville in 1990 compared with 6,370 households in 2010.]

Assuming that there will be 400 additional persons in Waterville in 2023 and that the number of persons per household will remain at 2.13, we can estimate that 188 additional housing units will be required by 2023. In 2012, fifty-eight (58) one-bedroom units of low-income, elderly housing were approved for construction on the current site of St. Francis Church on Elm Street. After those units are completed, at least 130 more units will be needed to fill the demand and others will be necessary to replace dilapidated units. [See Chapter 2: Housing.]

Age Distribution

As might be expected, and as shown on Table 1-4, in 2010 Waterville had a much higher percentage of college-aged adults (18-20) and a lower median age than both Kennebec County and the State. Those statistics reflect the presence of Colby College and Thomas College. Also in part because of 20-year olds in the colleges, Table 1-5 shows that Waterville had a higher percentage of adults in the child-rearing age group (20-39) than the County or the State.

TABLE 1-4
COLLEGE AGE AND MEDIAN AGE
WATERVILLE, KENNEBEC COUNTY, STATE

2010

	18-20 Years	Median Age
Waterville	1,593 10.1%	36.8
Kennebec County	4,927 4.0%	42.8
State of Maine	53,834 4.0%	42.7

Source: U.S. Census 2010.

Table 1-5 shows, too, that the City also had a higher percentage of elderly (85 and older) than Kennebec County or the State. This is explained in part by the presence of numerous nursing homes and apartments, including apartments provided for the elderly by Waterville Housing Authority and the Catholic Church. The ease of access to shopping and medical services in this service center community also makes it an attractive location for the elderly.

The middle-age group (40-64), on the other hand, is a smaller percentage of the population in Waterville than it is in Kennebec County or the State. Given that the entire baby boom generation (plus others who are younger than the baby boomers) was included in the age 40-64 cohort in 2010 and that it covers a span of 24 years, it is surprising that that group is not larger in Waterville.

This relatively small cohort may suggest that the trend of population movement from the City to surrounding rural communities has continued among persons in the 40-64 age group. Those persons moving out may be motivated in part by the limited supply of newer homes for sale at the higher end of the housing market in Waterville. Many of them presumably are commuting back into Waterville to work.

TABLE 1-5**AGE DISTRIBUTION COMPARISONS****POPULATION AND PERCENTAGE OF POPULATION BY AGE GROUP****WATERVILLE, KENNEBEC COUNTY, AND STATE****2010**

	Under Age 5	5-19 Years	20-39 Years	40-64 Years	65-84 Years	85+ Years
Waterville	855 5.4%	2,932 18.6%	4,592 29.2%	4,720 30.0%	2,034 12.9%	589 3.7%
Kennebec County	6,334 5.2%	22,248 18.2%	27,832 22.8%	46,777 38.3%	16,293 13.3%	2,667 2.2%
State of Maine	69,520 5.2%	241,439 18.1%	304,175 22.9%	502,147 37.8%	181,944 13.7%	29,136 2.2%

Source: U.S. Census 2010. (Percentages may not add to 100 because of rounding.)

Population Projection to 2023 by Age Group

The State has no population projection by age group for the year 2023 for Waterville. However, we can expect to see a slight increase in the number of persons ages 18 to 21, because of a planned increase in enrollment at Thomas College. We also will see an increase in the 65-84 age group, as the older half of the baby boom will have moved into that bracket by 2023.

Educational Attainment

In 2010 Waterville had a smaller percentage of people age 25 and older with at least a high school diploma (86.9%) than the State (89.8%). In addition, Waterville had a smaller percentage of people age 25 and older with at least a bachelor's degree or higher (23.1%) than the State (26.5%). One might expect a higher percentage of persons with advanced degrees given the presence of Colby College and Thomas College and the City's hospitals. Furthermore, Waterville is a service center community where professional services such as legal, accounting, engineering, medical, and dental services are available. This lower than expected percentage of persons with advanced degrees may be indicative of the number of middle income persons who have moved out to the

outlying towns and who commute back to Waterville for work. The lower percentage of people age 25 and older with at least a high school diploma reflects the poverty rate in Waterville.

Income Characteristics

Table 1-6 shows that Waterville's 2010 median household income (\$33,461) was substantially lower than that of Kennebec County (\$45,973) and the State (\$46,933). In addition, the percentage of families below federal poverty level in Waterville (21%) was significantly higher than in both Kennebec County (12.8%) and the State (12.8%).

TABLE 1-6
INCOME CHARACTERISTICS
WATERVILLE, KENNEBEC COUNTY, STATE
2010

	Median Household Income	% of Families Below Federal Poverty Level
Waterville	\$33,461	21.0%
Kennebec County	\$45,973	12.8%
State of Maine	\$46,933	12.8%

Source: US Census, 2010.

Persons Below the Federal Poverty Level Over Time

Even more dramatic than the percentage of families below the federal poverty level (above) is the percentage and number of persons in poverty in Waterville. Table 1-7 shows the change in poverty between 1979 and 2009. During that thirty-year period, while Waterville lost population, the number of persons in poverty increased. Some of the increase in poverty in Waterville was the result of Waterville residents falling below the poverty level for various reason (for example: unemployment, under-employment, medical expenses, retirement, divorce or death of a spouse, birth of a child, or the cost of heating their homes). Some of the increase in poverty resulted from persons in poverty moving into Waterville.

TABLE 1-7

CHANGE IN POPULATION AND POVERTY 1979 - 2009

WATERVILLE

YEAR	PERCENT OF PERSONS BELOW FEDERAL POVERTY LEVEL	TOTAL POPULATION	TOTAL PERSONS IN POVERTY
1979	16%	17,779	2,845
1989	16%	17,173	2,748
1999	19.2%	15,605	2,996
2009	24.3%	15,722	3,820
CHANGE 1979 - 2009	+ 8.3%	- 2,057	+ 975

U. S. Census Bureau, State and County QuickFacts 2011.

Poverty by Jurisdiction

Table 1-8 shows how the level of poverty in Waterville compares with poverty in other jurisdictions.

The federal poverty line is 33% of the median income in the United States. Federal poverty guidelines for assistance programs are based on household size. In 2010, for a single person the guideline was \$10,830. For a family of four it was \$22,050. [See "2011 Report on Poverty" prepared by the Maine State Planning Office and available on line.]

TABLE 1-8

PERCENT OF PERSONS

**BELOW THE FEDERAL POVERTY LEVEL
BY JURISDICTION**

2009

JURISDICTION	POPULATION	PERCENT OF PERSONS IN POVERTY 2009
Waterville	15,722	24.3%
Kennebec County	122,151	12.9%
Maine	1,328,361	12.6%
United States	308,745,538	14.3% 13.8% (as of December 2011 from the 5-year American Community Survey)
Augusta	19,136	20%
Winslow	7,794	11.4%
Aroostook County	71,870	16.4%
Cumberland County	281,674	9.3%
Hancock County	54,418	11.9%
Piscataquis County	17,535	16.1%
Somerset County	52,228	19.3%
Waldo County	38,786	14.7%
Washington County	32,856	20.6%

U. S. Census Bureau, State and County QuickFacts 2011.

Poverty by Age Group

Poverty varies by age group. Table 1-9 shows that the poorest age group in Waterville is children under age five at 42.3%, followed by persons under age eighteen at 37.2%.

TABLE 1-9
PERCENT OF PERSONS
BELOW THE FEDERAL POVERTY LEVEL
BY AGE GROUP
2010

AGE GROUP	PERCENT
All People	23.5
Children Under 5 Years	42.3
Children 5-17 Years	34.3
Under 18 Years	37.2
18 Years and Over	20.2
18 to 64 Years	22.4
65 Years and Over	11.5

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Poverty Among Children

Poverty is very apparent in the elementary schools. The Waterville School Department reported that 67% of children in kindergarten in the 2007-2008 school year were from low income families and 48% "scored below the norms that lead to successful transition into public school" when screened prior to entering kindergarten. Among all kindergarten through third grade students in the Waterville public schools in 2010, 64% received free or reduced-price lunches. This percentage is considerably higher than the 34% of children in all grades in Maine and 36% in Kennebec County who qualify for free or reduced-priced meals. (Sources: Educare Central Maine application July 2008 and August 2011 Promise Neighborhoods Grant Application.)

[For more information, see the Kids Count web site.]

Percent Low or Moderate Income

In 2009, Waterville conducted an income survey which determined that 56% of Waterville's population is low- or moderate-income (LMI). Maine Department of Economic and Community Development (DECD) accepted the results of the survey, making Waterville income-eligible to apply for Community Development Block Grant (CDBG) funds for public facilities. [LMI means an income at or below 80% of the county median, adjusted for family size.]

Community Evaluation Factor

An additional indicator of distress in Waterville is the City's community evaluation factor calculated by a consultant for DECD in 2011. The score is intended to assess each community's relative need for grant assistance for public infrastructure, public facilities, and economic development. [DECD's Office of Community Development (OCD) no longer uses it in scoring

housing assistance program applications. For that program, the Office uses percent LMI instead.]

The community evaluation factor is composed of 4 components, with a range of 0 to 5 points each:

1. tax burden [total local property tax commitment in 2008 divided by (total population times per capita income), a score of 2 points],
2. per capita income [5 points for a per capita income below \$20,000; Waterville was at \$19,160 in 2009],
3. unemployment [3 points for an unemployment rate of 8.9% in July 2010], and
4. 5 points for being a service center community.

Waterville scored 15 out of a possible 20 points, 20 points indicating the greatest need for State assistance. Waterville was assigned a distress score higher than all towns in the State with the exception of the eleven towns below with higher scores and the eighteen towns with which Waterville tied.

Scoring 18 points were: Milbridge, Millinocket, and Skowhegan. Scoring 17 points were: Bethel, Eastport, Rangeley, and Rumford. Scoring 16 points were: Dexter, Guilford, Jackman, and Lubec. Tying with Waterville were: Ashland, Bancroft, Beddington, Blue Hill, Calais, Damariscotta, Deblois, Dover-Foxcroft, Houlton, Lincoln, Madawaska, Newport, Norway, Oxford, Rockland, Sanford, Southwest Harbor, and Van Buren.

Issues and Needs

1. Waterville needs to attract young people to the *region* in order to fill projected job openings (nurses, for example). Expanding the workforce, in turn, will attract new businesses to bolster the economy.
2. Waterville needs to plan for those in poverty and residents 65 and older.

CHAPTER 2: HOUSING

Total Housing Units

According to the U.S. Census, Waterville had a total of 7,065 housing units in 2010, only 417 units more than the 6,648 housing units thirty years earlier in 1980. As shown in Table 2-1, the City had a far smaller percentage increase in total housing units than either Kennebec County or the State during that thirty-year period. Note that more than 417 units were constructed in Waterville between 1980 and 2010, but many units were demolished, especially between 1990 and 2000.

TABLE 2-1
CHANGE IN TOTAL NUMBER OF HOUSING UNITS
WATERVILLE, KENNEBEC COUNTY, STATE
1980-2010

	Total Number of Units				Net Increase 1980-2010	
	1980	1990	2000	2010	#	%
Waterville	6,648	7,008	6,819	7,065	417	6.3%
Kennebec County	45,478	51,648	56,346	60,972	15,494	34.1%
State of Maine	501,093	587,045	651,901	721,830	220,737	44.1%

Source: U.S. Census.

Composition of Housing Stock

The data in Table 2-2 show that Waterville's percentage of single-family dwellings (42.7%) was far smaller than the percentage of single-family homes in Kennebec County and the State (67.1% and 69.4%, respectively). Conversely, the percentage of multi-family units in Waterville (31.9%) was far greater than the percentage of multi-family homes in Kennebec County and the State (15.8% and 14.1%, respectively). The percentage of two-unit buildings in Waterville (20.4%) also was significantly higher than the percentage of two-unit buildings in Kennebec County and the State (both 7.5%).

Table 2-2 also shows that Waterville had a smaller percentage of mobile homes (5.0%) than either the County (9.7%) or the State (9.0%), despite the fact that in Waterville mobile homes are allowed on individual house lots in both the Residential-B (R-B) and the Rural Residential (R-R)

zones. In addition, mobile home parks are allowed in the R-R zone and much of the vacant land potentially available for development in Waterville is in the R-R zone south of Webb Road.

There are four mobile home parks in Waterville, including one on Grove Street and three on West River Road (Countryside, Village Green, and Punky Meadows). Occasionally, mobile homes are moved out of mobile home parks and replaced by mobile homes of equal or better quality. However, few additional homes are brought in, as not many mobile home lots are available in the parks. An expansion approved for Punky Meadows was not constructed.

TABLE 2-2
TOTAL HOUSING UNITS BY TYPE OF STRUCTURE
WATERVILLE, KENNEBEC COUNTY, STATE
2010

	Single Family Detached # %	Single Family Attached & 2-Unit Dwellings # %	Multi-Family (3 or More Units) # %	Mobile Homes # %	Total #
Waterville	3,031 42.7%	1,449 20.4%	2,258 31.9 %	353 5.0%	7,091
Kennebec County	40,524 67.1%	4,536 7.5%	9,466 15.8%	5,871* 9.7%	60,403
State of Maine	495,685 69.4%	53,191 7.5%	101,010 14.1%	64,384** 9.0%	714,270

Source: 2006-2010 American Community Survey, U.S. Census Bureau.

*Plus 6 in boats, recreational vehicles, or vans.

** Plus 163 in boats, recreational vehicles, or vans.

Percentages may not equal 100 due to rounding

Table 2-3 shows the change in composition of the housing stock in Waterville between 1990 and 2010. The City experienced a net gain of 197 single family homes and 131 mobile homes, but lost 245 other units (including single-family attached, 2-unit buildings, and multi-family units), for a net gain of only 83 units of all types over that twenty-year period.

It is important to note that many more than 83 units were constructed during that time frame, including 67 residential units in the Hathaway Creative Center (the converted shirt factory) and 21 units of low-income senior citizen housing at Pleasant Crossing (a Waterville Housing Authority project on the site of the old YMCA) in 2009 alone. However, many older housing units of all types were demolished over the past two decades. [See table 2-1.]

Note also that discrepancies among tables exist, because they contain data from different sources: the U.S. decennial census and the American Community Survey provided by the U.S. Census Bureau. This is the case, because the Bureau no longer uses the long decennial form, but collects data on an on-going basis.

TABLE 2-3

CHANGE IN COMPOSITION OF WATERVILLE HOUSING STOCK: 1990-2010

	Single Family Detached # %	Single Family Attached & 2-Unit Dwellings # %	Multi-Family (3 or More Units) # %	Mobile Homes # %	Total #
1990	2,834 40.4%	* *	3,952* 56.4%*	222 3.2%	7,008
2010	3,031 42.7%	1,449 20.4%	2,258 31.9 %	353 5.0%	7,091
CHANGE	197	*	*	131	83

* Single family attached & 2-unit dwellings were included in the multi-family total in 1990.

Percentages may not equal 100, due to rounding.

Source: U.S. Census and 2006-2010 American Community Survey, U.S. Census Bureau.

Multi-Family Housing by Units in Structure

Table 2-4 provides a breakdown of multi-family housing units in Waterville, Kennebec County, and the State in 2010. Much of Waterville's multi-family housing stock is in structures with a maximum of 9 units, as is the case in Kennebec County and the State. Many of the larger apartment buildings in Waterville are owned by the Waterville Housing Authority (WHA) and other non-profit housing providers. [See Table 2-9.]

TABLE 2-4
MULTI-FAMILY HOUSING STOCK 2010
NUMBER OF UNITS BY UNITS IN STRUCTURE AND
PERCENTAGE OF TOTAL HOUSING UNITS
WATERVILLE, KENNEBEC COUNTY, STATE

SIZE OF BUILDING	3-4 Units # % of Total Housing Units	5-9 Units # % of Total Housing Units	10-19 Units # % of Total Housing Units	20+ Units # % of Total Housing Units	Total Multi-Family # % of Total Housing Units
Waterville	961 13.6% of Total Housing Units	629 8.9% of Total Housing Units	270 3.8% of Total Housing Units	398 5.6% of Total Housing Units	2,258 31.9% of Total Housing Units (7,091)
Kennebec County	3,356 5.6% of Total Housing Units	3,483 5.8% of Total Housing Units	1,432 2.4% of Total Housing Units	1,195 2.0% of Total Housing Units	9,466 15.8% of Total Housing Units (60,403)
State of Maine	39,360 5.5% of Total Housing Units	29,477 4.1% of Total Housing Units	12,274 1.7% of Total Housing Units	19,899 2.8% of Total Housing Units	101,010 14.1% of Total Housing Units (714,270)

Source: 2006-2010 American Community Survey, U.S. Census Bureau.

OCCUPANCY CHARACTERISTICS

Seasonal Units

The vast majority of Waterville's housing units (99.1%) are year-round units. (See Table 2-5).

Renter-Occupied Versus Owner-Occupied Units

Table 2-5 shows that in 2010, 53.2% of the housing units in Waterville were renter-occupied, as compared with only 27.6% for the County and 26.9% for the State. Waterville is an important source of rental housing for the region, as evidenced by the fact that the City has only 12.9% of the County's population, but 23.9% of the County's renter-occupied units.

TABLE 2-5
HOUSING OCCUPANCY CHARACTERISTICS
WATERVILLE, KENNEBEC COUNTY, STATE
2010

	Total Dwelling Units*	Seasonal, Recreational, or Occasional Use**	Occupied Units*	Owner-Occupied Units*	Renter-Occupied Units*	Vacant Units*	Home-owner Vacancy Rate*	Rental Vacancy Rate*
	#	# %	# %	# %	# %	# %	%	%
Waterville	7,091	66 0.9%	6,307 88.9%	2,949 46.8%	3,358 53.2%	784 11.1%	4.8%	6.8%
Kennebec County	60,403	6,188 10.1%	50,869 84.2%	36,844 72.4%	14,025 27.6%	9,534 15.8%	2.5%	6.1%
State of Maine	714,270	118,310 16.4%	551,125 77.2%	402,907 73.1%	148,218 26.9%	163,145 22.8%	2.3%	7.5%

*Source: 2006-2010 American Community Survey, U.S. Census Bureau.

**Source: U.S. Census 2010.

Waterville now has more renter-occupied units than owner-occupied units. At this point, that situation is not expected to change in the near future. In 2011, after the Census data were collected, the Gilman Street School was converted to 35 units of low-and moderate-income housing [managed by Coastal Enterprises, Inc (CEI)]. In addition, in 2014, 40 units of low-income elderly housing were under development by the Catholic Church on the site of the former Saint Francis Church on Elm Street.

Vacancy Rate

Table 2-5 shows that in 2010, Waterville's residential vacancy rate was 11.11%, lower than the County or the State (15.8% and 22.8%, respectively). The low home-owner vacancy rate in Waterville (only 4.8%) indicates that there was not a wide range of choice for potential buyers. Conversely, the City-wide rental vacancy rate of 6.8% (higher in some neighborhoods than others) may indicate that more rental buildings than single family homes are in foreclosure. In addition, some apartment buildings, reportedly, are being left vacant to avoid the cost of heating them during the cold months. Anecdotally, the vacancy rate may be causing some landlords to rent to tenants they otherwise might not be willing to accept.

Transient Population

The transient nature of Waterville's population is evident in the statistics provided by the U.S. Census Bureau in its American Community Survey. Those data indicate that in Waterville 39.9% of householders moved into their housing units in 2005 or more recently. This compares with 29.6% for Kennebec County and 29.0% for the State as a whole.

The meaning of those percentages is not entirely clear. Some residents who moved recently moved from one unit to another within the City, while others moved in from outside of the City. For whatever reason they moved, a turn-over rate of almost 40% indicates a certain amount of upheaval in the lives of a high percentage of Waterville residents.

HOUSING CONDITION

Housing Age

Waterville has a large number of older residential units and very little recent single family home construction. Table 2-6 shows that Waterville has a significantly lower percentage of housing constructed between 2000 and 2010 than either the County or the State.

Table 2-6 also shows that 43.0% of residential structures in Waterville were built in 1939 or earlier. That is a significantly higher percentage of old housing than in either the County or the State. Old housing often, but certainly not always, is indicative of substandard housing.

In Waterville, much of the oldest housing stock is located in a strip of land along the Kennebec River which includes the South End, part of the downtown along Front Street, the North End, and Trigger Hill (between College Avenue and Eastern Avenue), the lowest income neighborhoods in the City. Although many residential buildings in those neighborhoods have been the recipients of Community Development Block Grant (CDBG) funding over the past thirty years, today much of the housing once again needs maintenance.

TABLE 2-6 : HOUSING AGE
WATERVILLE, KENNEBEC COUNTY, STATE

	% Structures Built 1939 or Earlier	% Structures Built 2000-2010
Waterville	43.0%	2.0%
Kennebec County	29.6%	7.6%
State of Maine	28.1%	8.9%

Source: U.S. Census 2010.

Housing Condition Assessment

In 2002, the City hired consultant Charles Roundy to assess the condition of housing in Waterville and to recommend actions to improve the situation. At that time, Mr. Roundy concluded that "upwards of 25% of all residential units in the City of Waterville are located in moderately to severely substandard residential structures." (See page 14 of Part I of his study which is posted on the City's web site.)

Utilities

A very high percentage of Waterville's housing stock is served by the Kennebec Water District (KWD) and the Waterville Sewerage District (WSD), quasi-municipal utilities. According to the 1990 Census, 97.4% of housing units were served by KWD and 94.3% were served by WSD. Maps of water and sewerage lines are in Chapter 6: Public Facilities and Services. A map showing wells and septic systems in 2012 is included in Chapter 9: Natural Resources.

HOUSING AFFORDABILITY

Affordability of Homeownership

In "A Report on Housing Costs in Maine, 2008," the Maine State Housing Authority (MaineHousing) states that "housing is considered affordable if a household with area median income can buy a median priced home for that area without spending more than 28% of income. "MaineHousing indicates that buying a home is affordable in only 3 of the 16 counties in Maine: Aroostook, Piscataquis, and Somerset.

Table 2-7 shows the affordability index of homeownership in Waterville, Kennebec County, and the State. The affordability index is the ratio of median home price to median income. An index of less than one means that those at or below the median income cannot afford to purchase the average home in the area. The lower the number, the less affordable homes are.

In Waterville, which has an index of 0.70, homeownership is not affordable to 65% of households. The percentage of households unable to buy a home is higher in Waterville than in both the County and the State. However, in our area, Fairfield (with an index of 1.22) and Winslow (with an index of 1.08) are affordable.

MaineHousing writes that housing is becoming less affordable in all counties, because home sale prices are rising faster than incomes. Between 2000 and 2007, the median home sale price increased by 74%, while the median income rose by only 17%. That is, home sale prices increased 4.2% faster than incomes.

Affordability of Renting

MaineHousing considers renting affordable if a household with area median renter income can rent a median priced two-bedroom apartment without spending more than 30% of income. In Kennebec County, between 2000 and 2007, median rent for two-bedroom apartments increased by 32% while renter median income rose by only 2%. That is, rents increased 14.4% faster than incomes. Table 2-8 shows that 59.7% of households in Waterville are not able to afford the average two-bedroom rent.

Subsidized Housing Units

The Waterville Housing Authority is a quasi-municipal agency whose mission is to provide safe and affordable housing to low-income citizens. Currently, the Waterville Housing Authority owns and/or manages 259 dwelling units and administers 512 Section 8 rent vouchers. Units in buildings in Waterville owned or managed by the Waterville Housing Authority are summarized in Table 2-9.

Waterville Housing Authority is the largest but not the only provider of subsidized housing units in Waterville. Other subsidized housing units include those at Seton Village (144 units for senior citizens), which is owned and operated by the Catholic Church. In addition, in 2011 a housing development corporation developed thirty-five apartments for low- and moderate-income families within the former Gilman Street School. Other providers of subsidized rental units include Kennebec Behavioral Health, Coastal Enterprises, Inc. (CEI), and Community Housing of Maine.

The Maine State Planning Office provided numbers indicating that in 2008 Waterville had 951 subsidized housing units, including Section 8 units, as compared to 3,288 subsidized housing units in Kennebec County as a whole. Waterville had 28.9% of the subsidized housing units in Kennebec County, but only 12.9% of its population. After 2008, additional units were purchased and more were constructed on Gilman Street and Pleasant Street. On Elm Street, on the former site of St. Francis Church, 58 units were approved, 40 of which (phase one) currently are under construction.

Residential Care Facilities

There also is housing in Waterville owned by agencies, including Spurwink and Paradigm Development, LLC, that provide care for persons with special needs. Table 2-11 contains a

summary of some of the residential care facilities in Waterville which are licensed by the Maine Department of Human Services.

TABLE 2-7:
HOME PRICES: AFFORDABILITY INDEX
WATERVILLE, KENNEBEC COUNTY, STATE
2008

	Index	Median Home Price	Median Income	Income Needed to Afford Median Home Price	Home Price Affordable to Median Income	Number of Households Unable to Afford Median House Price	Percent of Households Unable to Afford Median House Price
Waterville	0.70	\$118,900	\$31,305	\$44,635	\$83,392	4,233	65%
Kennebec County	0.98	\$134,900	\$44,261	\$44,996	\$132,694	26,168	50.6%
State of Maine	0.79	\$178,000	\$46,321	\$58,951	\$139,864	350,239	62.6%

Source: Maine State Housing Authority (MaineHousing).

TABLE 2-8

AVERAGE TWO-BEDROOM RENT: AFFORDABILITY INDEX

WATERVILLE, KENNEBEC COUNTY, STATE

2008

	Number of Households Unable to Afford Average Two-bedroom Rent	Percent of Households Unable to Afford Average Two-bedroom Rent	Average Two-bedroom Rent	Income Needed to Afford Average Two-bedroom Rent
Waterville	1,962	59.7%	\$716	\$28,640
Kennebec County	7,839	53.5%	\$736	\$29,444
State of Maine	88,627	57.0%	\$847	\$33,878

Source: Maine State Housing Authority (MaineHousing).

TABLE 2-9
HOUSING UNITS IN
WATERVILLE HOUSING AUTHORITY
OWNED OR MANAGED BUILDINGS

Name of Project	Location	Elderly	Number of Units		Total
			Family		
Kennebec Street	Kennebec Street	0	16		16
Chaphill Manor	Chaplin Street	0	31		31
Woodman Heights	Drummond Avenue	0	47		47
Scattered Sites	-	0	18		<u>18</u>
					112
Durbin Apartments	Kimball Street	28	0		28
Elm Towers	Elm Street	48	0		48
Forsythe Terrace	Louise Avenue	27	0		27
Riverview Manor	83 Water Street	23	0		23
Pleasant Crossing	Pleasant Street	21	0		<u>21</u>
					147
TOTAL					259

Source: Waterville Housing Authority, 2009.

Unmet Need for Low-income Rental Housing

Table 2-10 shows unmet need for low-income rental housing. According to this information provided by Maine State Housing Authority (MaineHousing), the need is far greater for families than for senior citizens. However, a recent MaineHousing study indicated that many senior citizen home-owners in Maine are at risk of losing their homes and may need rental housing in the future. They are living in homes that are too large for them and too expensive for them to maintain and heat. They struggle to pay the property taxes owed on their homes.

TABLE 2-10: RENTAL HOUSING NEED SUMMARY**2009**

	Family	Senior (65 and over)	Special	Total
Number of <u>Renter</u> Households at or below 50% of Area Median Income	840	318		1,158 <u>Renter</u> Households at or below 50% of Area Median Income
Number of Subsidized Units Available:	562	431	34	1,027 Units
Project Based & Scattered Sites	173	308		481
Section 8 Vouchers	389	123		512
Number of Affordable Units Needed	278	-113		
Unmet Need %	33.1%	0%		

 Source: MaineHousing, 2009

TABLE 2-11

RESIDENTIAL CARE FACILITIES

LICENSED BY

MAINE DEPARTMENT OF HUMAN SERVICES

Name	Location	# of Beds
<u>Long Term Care Facilities</u>		
Lakewood Manor Nursing Home	220 Kennedy Memorial Drive	105
Mt. St. Joseph Nursing Home	7 Highwood Street	111
Oak Grove Nursing Care Center	27 Cool Street	90
Goudreau's Retirement Inn	110 College Avenue.....	74
The Woodlands	147 West River Road: The Woodlands Residential Care Facility	58
	Evergreen Alzheimers Unit	32
	Park Residences: 39 Apartments	
<u>Intermediate Care Facilities for the Mentally Retarded</u>		
Western Avenue Residence	101 Western Avenue.....	6
<u>Boarding Homes</u>		
Quarry Road Residential Center	Quarry Road.....	15
Seventy Three Pleasant Street	73 Pleasant Street.....	6
Sunset Home	114 College Avenue.....	20

Source: Maine Department of Health and Human Services and individual facility web sites.

Homelessness

In Table 2-12 below, Maine's Plan to End & Prevent Homelessness, published by MaineHousing in 2008, provides estimates of the numbers of homeless persons in the State and offers information concerning the underlying causes of homelessness.

In 2012, a forty-bed regional facility, the Mid-Maine Homeless Shelter, was constructed on Colby Street in Waterville.

TABLE 2-12
ESTIMATE OF HOMELESS IN MAINE
POPULATION BY CAUSAL FACTOR

2008

Causal Factors (estimates) Population	Number	Primary presentation	Secondary presentation	Tertiary presentation
Single Adults: Chronic	960	Mental Illness: 50%	Substance Abuse: 40%	Dually Diagnosed: 35%
Single Adults: Circumstantial	3840	Poverty: 80%	Substance Abuse: 30%	Mental Illness: 25%
Families	1600 (450-650 households)	Poverty: 90%	Substance Abuse: 10%	Mental Illness: 10%
Domestic Violence	720	(Domestic Violence) Consequential Poverty 90%	Substance Abuse: 25%	Mental Illness: 25%
Unaccompanied Youth	880	Substance Abuse: 40%	Mental Health issues: 25%	Sexual Identity issues: 25%

Source: Maine’s Plan to End & Prevent Homelessness, published by MaineHousing in 2008.

Issues and Needs. Major housing needs include the following:

1. Deteriorated Housing. There are pockets of deteriorated housing in Waterville which could be removed to provide open space or land for other uses which are compatible with housing. In the South End, however, housing should be removed only on a very selective basis, in order to protect the historic character of the neighborhood. [See the South End Neighborhood Strategic Plan which was developed by the South End Neighborhood Association (SENA) in 2007.]

2. Housing Affordability. The housing analysis indicates that 59.7% of households, or 1,962 households, cannot afford to rent the average two-bedroom apartment in Waterville, and 65% of households, or 4,233 households, cannot afford to buy the median-priced home.

3. Long-Term Care. There is the potential in Waterville for growth in the health care and elderly care field which could be encouraged by the construction of long-term care facilities such as nursing homes, congregate care facilities, assisted living, and residential care facilities.

CHAPTER 3: THE LOCAL ECONOMY

Waterville has long served as the service, retail, and cultural core for its surrounding region. Although formerly also an industrial center, the City now retains only one of its traditional industries, paper product manufacturing at the Huhtamaki (formerly Keyes Fibre and later Chinet) factory on College Avenue.

While broadening its economic base has made the City less vulnerable to economic fluctuations in any single industry or product, recent retail development in Augusta has diminished Waterville's prominence as a retail center. Nevertheless, Waterville's central location in the State and its excellent transportation, medical, and educational facilities place the City in a good competitive position to expand its service center role.

LABOR FORCE

Labor Force 1970 and 2010

Table 3-1 shows differences between the Waterville labor force in 1970 and 2010. The increase in percentage of females in the labor force reflects both the economic necessity for women to work and changes in the types of jobs available in the area.

TABLE 3-1

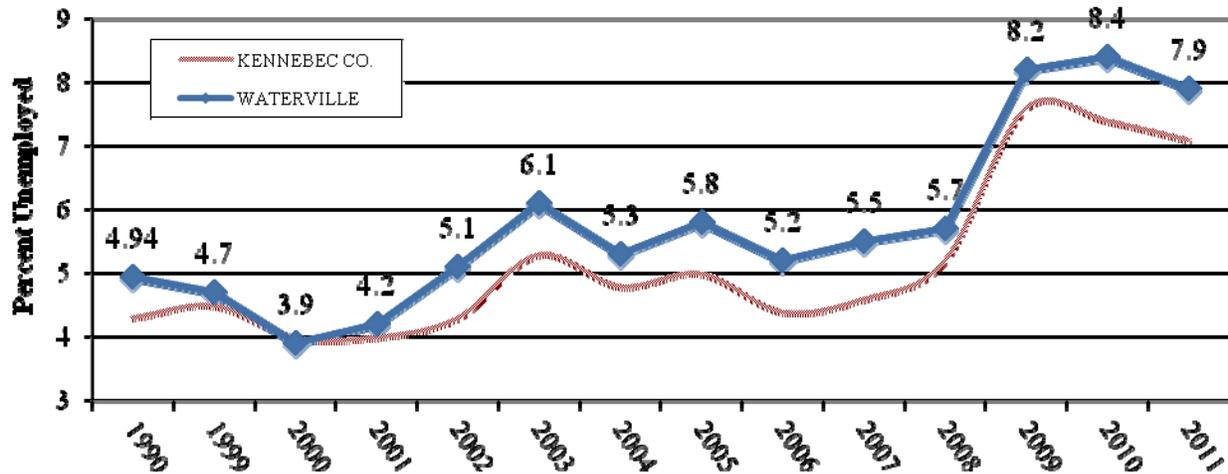
WATERVILLE LABOR FORCE 1970 AND 2010

	1970 LABOR FORCE	2010 LABOR FORCE
Waterville residents in the labor force	7,383	7,758
% of Persons 16 years of age or older in workforce	55.5% of the 13,287 persons 16 years old or older	57.8% of the 13,420 persons 16 years old or older
Percent of total population in the labor force	40.5% of the total population of 18,192	49.3% of the total population of 15,722
Females in the labor force	3,190	3,795
Percent of labor force female	43.2%	48.9%
Persons in the labor force per household	1.34 (7,383 persons in the labor force/5,516 households)	1.22 (7,758 persons in the labor force/ 6,370 households)

Source: US Census and 2006-2010 American Community Survey 5-Year Estimates.

Unemployment

The Maine Department of Labor (DOL) estimated unemployment in the Waterville Micro (see page 3-6 for a list of the towns in the Micro) to be 8.9% in July 2010, as compared to 7.9% for the State, and 9.7% for the United States as a whole. Note that those persons over age 16 who were actively seeking employment were considered to be in the labor force. KVCOG provided the graph below comparing percent unemployment in Waterville with percent unemployment in Kennebec County between 1990 and 2011.



Source: KVCOG.

Employment by Occupation

Table 3-2 contains an occupational breakdown for residents of Waterville, Kennebec County, and the State as a whole, as reflected in the 2010 Census. The highest percentage of Waterville residents is employed as managers and professionals (37.2%), which compares favorably with both the County and the State. The second highest category is sales and office occupations (23.6%), and the third is service occupations (19.4%). The order is the same for both the County and the State.

Employment by Industry

Table 3-3 contains a breakdown of the labor force by industry reported for residents of Waterville, Kennebec County, and the State of Maine as reflected in the 2006-2010 American Community Survey 5-Year Estimates. By far, the highest percentage of Waterville residents is employed in the category of educational, health care, and social assistance services (38.5%), as compared with only 27.4% of Kennebec County workers and 26.1% of workers in the State as a whole. The second highest percentage of Waterville residents works in retail trade (14.0%). That percentage is the same for the County (14.0%) and very close to the State level (13.6%). The third largest employment category in Waterville is arts, entertainment, recreation, accommodation, and food services (8.2%), almost tied by professional, scientific, management, administrative, and waste management services (8.1%). Agriculture, forestry, fishing, hunting, and mining employs only 37 residents.

TABLE 3-2
EMPLOYMENT BY OCCUPATION,
REPORTED BY RESIDENTS OF
WATERVILLE, KENNEBEC COUNTY, STATE

2010

Occupation	Waterville		Kennebec County		State	
	#	%	#	%	#	%
Management, professional, & related occupations	2,598	37.2	20,624	34.6	224,966	34.2
Service occupations	1,355	19.4	10,023	16.8	115,271	17.5
Sales & office occupations	1,650	23.6	15,262	25.6	160,970	24.4
Farming, fishing, & forestry	55	.7	424	.7	10,367	1.5
Construction, extraction, & maintenance occupations	609	8.7	5,894	9.8	66,058	10.0
Production, transportation, & material moving	752	10.7	7,368	12.3	79,924	12.1
TOTAL	6,974	100	59,595	100	657,556	100

Source: 2006-2010 American Community Survey 5-Year Estimates.

TABLE 3-3

EMPLOYMENT BY INDUSTRY

WATERVILLE, KENNEBEC COUNTY, STATE

2010

	Waterville		Kennebec County		State	
	#	%	#	%	#	%
Agriculture, forestry, fishing & hunting, and mining	37	.5	883	1.5	16,245	2.5
Construction	377	5.4	4,705	7.9	50,617	7.7
Manufacturing	425	6.1	4,782	8.0	66,406	10.1
Wholesale trade	188	2.7	1,688	2.8	17,734	2.7
Retail Trade	977	14.0	8,327	14.0	89,202	13.6
Transportation & warehousing, and utilities	242	3.5	2,835	4.8	26,200	4.0
Information	193	2.8	1,456	2.4	13,702	2.1
Finance, insurance, real estate, and rental & leasing	106	1.5	2,716	4.6	40,370	6.1
Professional, scientific, management, administrative, and waste management services	563	8.1	4,703	7.9	54,851	8.3
Educational, health care and social assistance services	2,686	38.5	16,317	27.4	171,491	26.1
Arts, entertainment, recreation, accommodation and food services	575	8.2	3,692	6.2	53,495	8.1
Other services (except public administration)	367	5.3	2,954	5.0	29,699	4.5
Public Administration	238	3.4	4,537	7.6	27,544	4.2
TOTAL Civilian employed population 16 years and over	6,974	100	59,595	100	657,556	100

2006-2010 American Community Survey 5-Year Estimates.

COMMUTER PATTERNS

Commuting Balance

In 2011, of the 10,173 jobs in Waterville, 8,454 jobs (or 83.1%) were filled by persons commuting into Waterville. Only 1,719 jobs in Waterville (or 16.9%) were filled by Waterville residents. (Source: On the Map: Longitudinal Employer-Household Dynamics, American Community Survey, 2011.)

Of the 5,220 Waterville residents employed in 2011, 3,501 (or 67.1%) commuted out of Waterville to work, mostly in Augusta, Winslow, and Oakland. As stated above, 1,719 Waterville residents remained in Waterville to work.

Given that 8,454 persons commuted into Waterville (mostly from Winslow, Fairfield, and Oakland), and 3,501 commuted out, 4,953 more persons commuted into Waterville than drove out of town to work.

Commute Time

The average commute time for Waterville residents in 2010 was 16.7 minutes, lower than the average for the County (22.4 minutes) and the State (22.8 minutes).

Workers commuting in and out of Waterville has implications for transportation planning. See Chapter 5: Transportation.

REGIONAL ECONOMY

The Maine Department of Labor defines a micropolitan area as "having at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties". Within this "economically integrated" grouping of communities "workers may readily change jobs without changing their place of residence."

The Waterville Micropolitan Area consists of Albion, Benton, Clinton, Fairfield, Oakland, Unity Unorganized (Township), Waterville, and Winslow. These towns are located in 3 counties: Kennebec, Somerset, and Waldo.

The Augusta Micropolitan Area consists of Augusta, Belgrade, Chelsea, China, Farmingdale, Gardiner, Hallowell, Litchfield, Manchester, Mount Vernon, Palermo, Pittston, Randolph, Readfield, Rome, Sidney, Somerville, Vassalboro, Wayne, West Gardiner, Whitefield, Windsor, and Winthrop.

Augusta-Waterville Micropolitan Area

The Augusta-Waterville Micropolitan Area has Maine's third largest workforce (66,800), behind Portland-South Portland and Bangor-Brewer and, at approximately \$1.4 billion, the third highest level of retail sales.

The driving forces behind the regional and local economies of the Augusta-Waterville Micropolitan Area are the central location of the area in the State, the area's multimodal transportation network, the medical centers, and the colleges. Augusta-Waterville's central

location in the region drives its retail sector, with tourism contributing to retail trade as well. The aging population supports the health care industry.

Waterville as an Employment Center

Waterville is the employment center for the Waterville Micropolitan Area with 10,895 jobs in 2010. (Source: the U.S. Census Bureau Center for Economic Studies.) Earlier, in 2000, two-thirds of people employed in Kennebec County worked in either Waterville or Augusta. (Source: 2011 Multi-modal Corridor Management Plan for the Lower Kennebec Corridor, KVCOG.)

Major Employers

Major employers (100 or more employees) in Waterville are listed in Table 3-4. This list accounts for only a very few of the 572 businesses in Waterville. [Source: Personal property bills the City Assessor sent to businesses in 2010.] MaineGeneral Health (MGH), with some 3,800 employees in the Augusta-Waterville Micropolitan Area, is the largest employer and a major economic force in the region.

Table 3-5 lists the major employers in towns abutting Waterville, within the Waterville Micropolitan Area. T-Mobile, located in FirstPark in Oakland, is by far the largest.

Education, Health Care, and Social Services

Education, health care, and social services is by far the largest employment sector in Waterville, employing 2,686 Waterville residents. [See Table 3-2, Employment by Industry.] Employers include MaineGeneral Health, Inland Hospital, Colby College, Thomas College, and KVCAP.

Retail

The retail sector provides employment to 977 Waterville residents. Retail is the second largest employment category in Waterville.

Waterville plays an important retail role in its region. Retail sales in the Waterville Economic Summary Area (ESA) totaled \$610,951,000 in 2007. The Waterville ESA includes the Waterville Micropolitan Area [Albion, Benton, Clinton, Fairfield, Oakland, Unity Unorganized (Township), Waterville, and Winslow] plus 14 additional towns [Belgrade, China, Freedom, Hinckley, Palermo, Rome, Shawmut, Sidney, Smithfield, Thorndike, Troy, Unity, Vassalboro, and Weeks Mills], a total of 22 towns. The Waterville ESA had 32% of retail sales in the Kennebec Economic Summary District [\$1,901,155,000]. Although this is a significant percentage of sales, it is substantially less than the share of the Augusta ESA, which had sales of \$962,242,000 or 50% of retail sales in the District.

In addition to the leakage of sales to malls in Augusta, increasingly, Waterville's retail base has expanded out of its Downtown to shopping centers on upper Main Street and Kennedy Memorial Drive (KMD). In spite of this 40-year development trend, the Downtown seems to be holding its own, replacing some of its lost department stores with specialty retailers, professional offices, a variety of services, and financial, insurance, and real estate uses. (See Commercial Centers below.)

Arts, Entertainment, Recreation, Accommodation, and Food Services

The third largest employment sector in Waterville, arts, entertainment, recreation, accommodation, and food services, employs 575 residents or 8.2% of Waterville resident workers. Although Waterville is not yet among the top tourist destinations in the State, it does attract visitors.

Waterville provides lodging primarily for tourists traveling north and south on Interstate-95. Waterville also provides lodging for heritage tourists and for persons visiting Colby College, the Colby College Museum of Art, and Thomas College, as well as patients at the hospitals, among others.

Waterville also offers food and entertainment for both residents of and visitors to the City and surrounding towns. Art and entertainment venues include the Maine International Film Festival (MIFF), the Waterville Opera House, the Colby College Museum of Art (on the Art Museum Trail), and two movie theaters.

Professional, Scientific, Management, Administrative, and Waste Management Services

Professional, scientific, management, administrative, and waste management services is the fourth largest employment category, employing 563 Waterville residents.

Manufacturing

Despite the fact that the Waterville Micropolitan Area has lost several manufacturers over the past decade, the manufacturing sector remains important to the region and to Waterville. Table 3-2 shows that manufacturing employs 425 Waterville residents. Huhtamaki and Mid-State Machine continue to be major employers. (See Tables 3-4 and 3-5 for major employers and Table 3-6 for major manufacturers lost over the past decade.)

Transportation

Although transportation, warehousing, and utilities make-up a small (3.5%) proportion of the area's employment base, they play an important role in Waterville's economy. Pan Am Railways, parent company of Maine Central Railroad, employs more than 100 in Waterville, where its Springfield Yard is located. The Springfield Terminal Line connects the Waterville area with Quebec and New Brunswick. Its primary customers are the paper companies.

Finance, Insurance, Real Estate, and Rental & Leasing

Waterville's relatively low employment numbers in the sectors of finance, insurance, real estate, and rental & leasing suggest that Waterville does not play a central role in financial services. These figures (see Table 3-2) mask the concentration of financial institutions (four banks) in Downtown Waterville.

Municipal Service Employment

Municipal service jobs re-circulate money that is already in the region and do not bring a significant amount of money into the area. However, if we combined all of the jobs at the Waterville School Department (542), the City (110), the Public Library (approximately 12 full-time-equivalents), Kennebec Water District (28), Waterville Sewerage District (9), and the Kennebec Sanitary Treatment District (14), those municipal service jobs (715) would rival the number of workers at Colby College (719), the second largest employer in the City.

TABLE 3-4:**MAJOR EMPLOYERS IN WATERVILLE**

EMPLOYER	APPROXIMATE NUMBER OF EMPLOYEES	TYPE OF BUSINESS	NOTES
MaineGeneral Health	3,800 including part-time and per diem employees	Hospital, Rehabilitation, Nursing Care, Retirement Community	Includes jobs in Augusta, 43 at Jackman Regional Health Center, 56 at Granite Hill Estates, 270 at HealthReach Network
Colby College	719		500-999 (DOL)
Inland Hospital	650		
Waterville School Dept.	542 as of June 2009	Pre-AOS 92	(Source: City Finance Dept.)
Huhtamaki	432	Paper Products	500-999(DOL)
Wal-Mart Super Center	251-500		100-249 (DOL)
Mid-State Machine Products, Inc.	55 at the Wyandotte Mill on Trafton Road	Precision Machining	Plus 160 employees in Winslow
City of Waterville	110 full-time + 140 part-time & seasonal employees		Includes call fire fighters, election workers, and board members, but not library employees.
Hannaford	100-249 Elm Plaza 100-249 JFK Mall		(DOL)
Shaw's	100-249 (DOL)		
Pan Am Railways	101-250	Railroad	Formerly Guilford Transportation, Maine Central Railroad
Kennebec Behavioral Health	100-249 (DOL) 340 at 4 sites	Mental Health	*Sites in Waterville, Augusta, Skowhegan, Winthrop
Care & Comfort	121		87 production staff + 34 admin staff/clinicians
Home Depot	100-249 (DOL)		
TD Bank	101-250	Banking & Insurance	Waterville, Winslow, Oakland, Fairfield
Lakewood Continuing Care	100-249 (DOL)		
Oak Grove Living & Rehab	100-249 (DOL)		27 Cool Street
KVCAP	100-249	Social Services	Water Street
Thomas College	92 full-time + 56 part-time		

Sources: Maine DOL Labor Market Analysis and businesses contacted . January 2012.

TABLE 3-5**MAJOR EMPLOYERS IN WATERVILLE MICROPOLITAN AREA,**

BUT NOT IN WATERVILLE

EMPLOYER	APPROXIMATE NUMBER OF EMPLOYEES	TYPE OF BUSINESS	LOCATION	NOTES
T-Mobile	420	Call Center	Oakland	
Mid-State Machine Products, Inc.	160 in Winslow	Value-Added Precision Machining Services	Winslow and Waterville	50 at the Wyandotte in Waterville
MSAD 47/Oakland School Dept.	251-500 prior to consolidation	Public Schools	Oakland	
Sheridan Corp	101-250	Construction/ Engineering	Fairfield	
Northeast Labs	50-99 (DOL)	Laboratory	Winslow	
Johnny's Selected Seeds	100-249 (DOL)	Seed Distributor	Winslow	Includes a call center for sales
MSAD 49/Fairfield School Dept.	101-250 prior to consolidation	Public Schools	Fairfield	
KVCC	100 full-time plus 50 part-time	Community College	Fairfield	As of 2/7/11
Backyard Tomatoes	200		Madison	
Alcom, Inc.	185	Aluminum Trailers	Winslow	

Sources: DOL web site under Labor Market Analysis, provided by "infoUSA", and businesses contacted as of June 2013.

TABLE 3-6

**MAJOR MANUFACTURING EMPLOYERS LOST FROM THE WATERVILLE
MICROPOLITAN AREA WITHIN THE PAST DECADE**

EMPLOYER	APPROX. NO. OF EMPLOYEES	PRODUCT	LOCATION
CF Hathaway/ Warnaco	700	Shirts	Waterville
Scott Paper Company	500	Paper	Winslow
Avian Farms International	300	Chicken Processing	Waterville

COMMERCIAL CENTERS

Waterville has three major, thriving commercial centers: Downtown, Kennedy Memorial Drive (KMD), and Upper Main Street. A fourth commercial center, College Avenue, is in decline.

Potential Development

Beyond anticipated future development in the major commercial centers described below, potential for additional commercial development exists in other areas of the City. Those include Airport Road, Trafton Road, and Seton Unit of MaineGeneral Medical Center. There also are vacant properties such as the old Harris Bakery and the old Boys and Girls Club that present opportunities for redevelopment.

Recent Development

Chapter 10: Existing Land Use contains a list of all development reviewed by the Planning Board under the Site Plan Review Ordinance and constructed between 1996 and 2012. Also in that chapter, Map 10-2 shows the location of development that occurred between 2000 and 2012.

Upper Main Street/I-95 Exit 130

In the past 15 years, the Upper Main Street commercial center has grown substantially. Among recent projects are the Waterville Commons shopping center (including Wal-Mart, Home Depot, Staples, Ruby Tuesday restaurant, and a mini-mall), Bangor Savings Bank, Tim Horton’s, and People’s United Bank.

Off of Upper Main Street, there are very large blocks of undeveloped land zoned for commercial development with close proximity to water and sewer lines. However, traffic management will have to be enhanced before the Maine Department of Transportation (MDOT) and the City, through its Site Plan Review regulations, will allow additional development to occur.

Bottlenecks and safety concerns include the constricted area under the I-95 overpass, the entrance to Waterville Commons, and the intersections of Main Street with Armory Road, High Street, and Eustis Parkway.

KMD

Kennedy Memorial Drive (KMD), which runs east/west from the Oakland town line, under I-95, to the Messalonskee Stream, bisecting the City, has seen significant change in recent years. In the past 15 years, commercial development on KMD has included Dunkin’ Donuts, McDonald’s,

Hampton Inn, Applebee's, AutoZone, Flagship Cinema, J&S Oil, KMD Plaza (includes Dairy Queen), CVS, Taco Bell/KFC, and Adams Speech Therapy. In addition, there have been expansions of existing commercial and institutional properties, such as the JFK Mall and Inland Hospital, and conversions of former residences to office and commercial uses. After a new, larger Wal-Mart was constructed off of Upper Main Street at Waterville Commons, in 2005 the old Wal-Mart on KMD became Marden's.

Just off of KMD, on Washington Street, a veterinary hospital, a doctor's office, an office subdivision, and KFS bank were constructed, taking advantage of close proximity to KMD.

On Grove Street near the easterly end of KMD, Uncle Dean's grocery store and Maine State Credit Union replaced residential structures.

Although FirstPark is in Oakland, the entrance to that business park is in Waterville on KMD. The City is one of 24 towns that are owners of the park.

The KMD area is poised for further development and redevelopment, but some constraints exist. KMD has both vacant land with water and sewer lines and commercial zoning and old residential properties zoned for limited commercial use. Zoning restrictions on properties on the north side of KMD between First Rangeway and Cool Street could be removed, if politically acceptable. To date, neighbors on Merryfield Avenue have opposed rezoning.

Traffic issues also constrain development along some parts of KMD. Those include a federally-imposed control of access on vacant land west of I-95 and left-turning traffic, especially traveling onto KMD from Carver Street and Airport Road.

Airport Road

After the City adopted its last comprehensive plan in 1997, new businesses on Airport Road have included a solid waste transfer station, Waterville Self-Storage, Clark & Company plumbing supply and, more recently, a Spring Brook bulk propane storage facility and expansions to the Central Maine Auto Group dealerships.

There is great potential for development on Airport Road. In addition to vacant City- and privately-owned land with utilities and commercial zoning in or abutting the Airport Industrial Park, in 2012 the City purchased a 64-acre parcel of land at the end of Airport Road. That land does not yet have utilities, but it is zoned for both industrial and commercial uses and is in a federally designated foreign trade zone.

Owning that parcel will allow the City to build or facilitate the construction of the extension of Airport Road across that land to Mitchell Road which, in turn, connects to Webb Road. The construction of a road connecting KMD to Webb Road west of the airport has been a development strategy proposed in Waterville comprehensive plans for over forty years.

The extension of Airport Road will spur development of both Airport Road and KMD. Furthermore, it has the potential to relieve traffic congestion on the easterly end of KMD, as it will provide an alternate route to I-95.

Constraints to development include the cost of utility and roadway construction and a traffic light at the intersection of Airport Road and KMD.

Trafton Road

A very substantial amount of land abutting Trafton Road on both sides of I-95 is zoned for commercial development and owned by a Rhode Island developer. In addition, the company owns a large parcel of land zoned Rural Residential (a mixed use zone) on Eight Rod Road, an industrial building on Trafton Road, and land in Sidney. In fact, the company owns 500 acres of land in Waterville and many more than that in Sidney.

The company has petitioned the Maine Department of Transportation (MDOT) for an I-95 interchange at Trafton Road. Although constructing the interchange would not be a City expense, the City would be required to reconstruct Trafton Road to meet State standards. A further constraint on development is that no Kennebec Water District (KWD) lines extend down Trafton Road and no Waterville Sewerage District (WSD) lines extend down West River Road beyond Punky Meadows Mobile Home Park.

Seton Unit of MaineGeneral Medical Center

The Seton Unit property off of First Rangeway and Chase Avenue is for sale. It consists of two parcels, one 37-acre parcel of vacant land zoned for residential use and one 44.5-acre parcel zoned for institutional use. The institutional parcel, the site of the former Seton Hospital, a clinic, and several other out buildings, is only partially developed.

Constraints on development are the possibility that no new use will be found to be economically feasible for the massive hospital building and possibly the zoning of the property, depending upon what new uses are proposed for the property. MaineGeneral has prohibited medical re-use of the property.

One strength of the Seton Unit property is that it potentially could be accessed from the Shaw's Plaza entrance road on KMD, if authorized by the owners of the Plaza. That entrance already has a traffic light.

College Avenue

College Avenue is in decline. Over the past few years, College Avenue lost a car dealership, off-track betting, and the ever-popular Marden's to the KMD area. Another car dealership, a carwash, John Martin's Manor restaurant, and several other businesses closed. Traffic has decreased, further reducing the commercial appeal of properties on College Avenue. Over the past 15 years, the only new building constructed on College Avenue was the new Burger King which replaced the old one that was demolished on the same site.

DOWNTOWN WATERVILLE

Downtown is an attractive historic commercial district of classic scale: principally two, three, and four-story blocks of buildings, many of them brick, pulled tightly to the sidewalks.

Waterville's core Downtown is compact and walkable and roughly bounded by Elm Street, Spring Street, the Kennebec River, and Union Street. The Old Post Office, at the intersection of Elm Street, Main Street, and College Avenue, marks the entry to the Downtown. While Main Street and the Concourse are the center of activity, numerous short side streets connecting to Main Street offer similar uses. Downtown is a walkable distance from a notable residential base and it has a riverfront with recreational and mixed-use development potential.

Role of Downtown

Downtown continues to play an important role as a community center. Downtown's mix of uses is typical of community centers: ground floor storefronts, offices, service establishments, City Hall, and restaurants, with upper floor spaces primarily used for offices and apartments. In recent years, Downtown has attracted several new businesses and medical offices and seen the renovation of the beautiful Waterville Opera House.

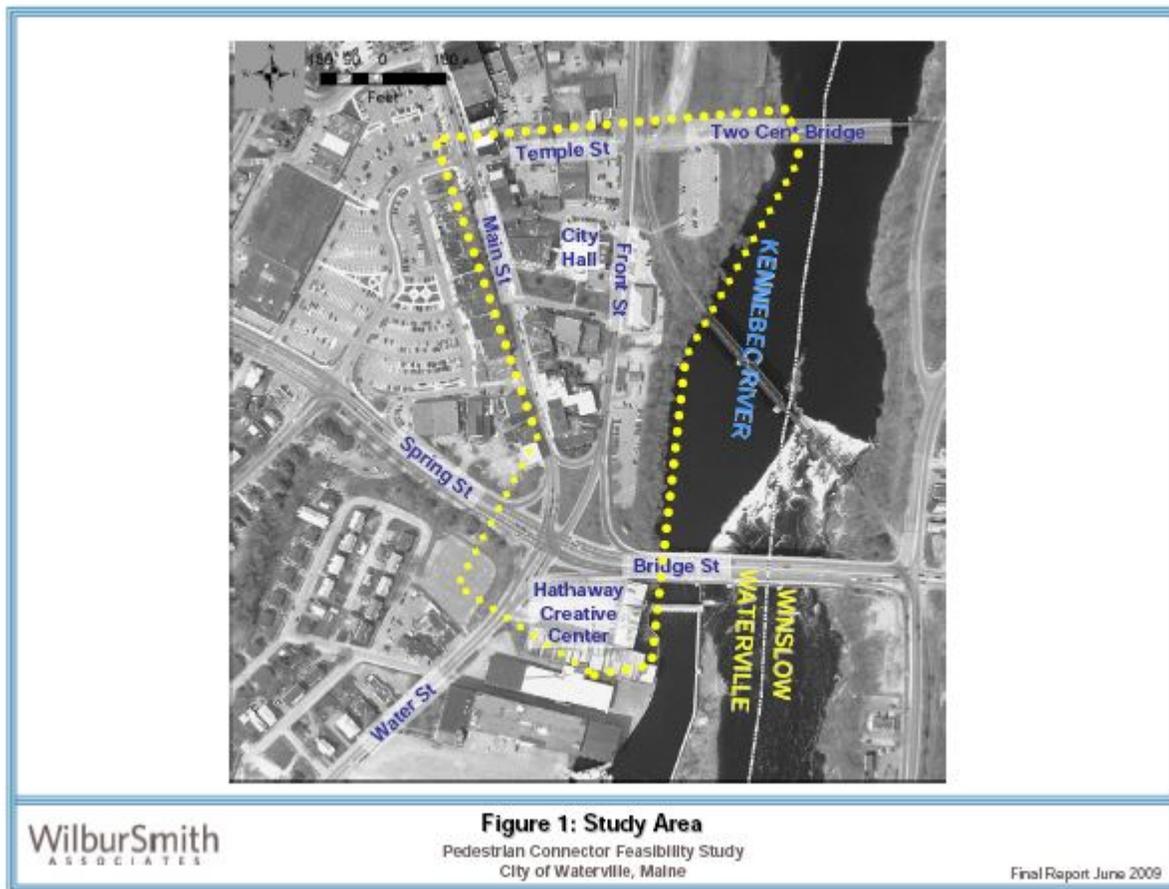
Waterville Main Street maintains an up to date list of all Downtown businesses and administers a micro-loan program. The Downtown Forgivable Loan Program provides loans ranging from \$15,000 to \$50,000 to new businesses and established businesses seeking to expand Downtown. Loans may be used for physical improvements, including façade work and interior renovations, and equipment.

Redefining Downtown

Downtown has the potential to grow, especially if the area is redefined to include Colby Street and Chaplin Street to the north and Sherwin Street to the south, areas which are physically separated from Downtown proper. The Hathaway Creative Center at the southerly edge is separated from the rest of Downtown by the over-built intersection of Spring Street, Front Street, and Main Street. (See Figure 1: Study Area from the 2009 “Pedestrian Connector Feasibility Study” prepared for the City by WilburSmith Associates. That study is posted on the City’s web page.) The northerly edge, anchored by the courthouse, social security office, and the new police station (as of 2013), is isolated by the over-built intersection of Front Street, College Avenue, Colby Street, and Chaplin Street.

Additional land could be made available for development by simplifying those two major intersections. That could be accomplished by removing slip lanes and combining islands of vacant land into buildable parcels. Adding pedestrian-friendly traffic calming features would increase the appeal of those areas and draw pedestrians into Downtown. Traffic enhancements such as making Front Street two-way and connecting it directly to Chaplin Street (eliminating the necessity to use the Colby Street loop to reach Railroad Square and Main Street) would encourage development by improving traffic flow.

Constraining development is the cost of rebuilding the roadways and installing the necessary traffic lights. However, the State could recoup some of its costs by selling excess right of way to developers, and the City could capture its share of costs over time through property taxes collected on that newly redeveloped land.



Head of Falls

On the east side of Downtown, the City-owned Head of Falls is separated from Downtown by both fast-moving one-way traffic on Front Street and the railroad tracks. This area is largely underutilized, having been cleared by the federal Urban Renewal program in the late 1960s. In repeated attempts to redevelop the Head of Falls, the City has commissioned several plans and market studies, installed utilities and an attractive plaza, and established the Waterville Development Corporation (WDC) to help sell the northerly portion. Over the years, the public has expressed strong support for retaining the southerly portion for open space, festivals, and parking.

Elm Street

Elm Street forms the westerly edge of Downtown. Businesses on Elm Street are isolated from Downtown by the heavy volume of traffic on Elm Street and by the back of the Concourse. Many properties on Elm Street have insufficient parking, constraining the expansion of existing businesses and discouraging redevelopment of those properties by new businesses.

The Catholic Church plans to construct a 58-unit apartment building for low-income senior citizens on the current site of St. Francis Church. That project can be expected to increase

pedestrian traffic Downtown and make pedestrian safety there even more of a concern for the City.

Front Street

The area north of Appleton Street between Front Street and Main Street/College Avenue is zoned for commercial development although much of the land currently is in residential use. Several buildings in that area could be removed to make way for commercial development, especially if lots were combined. One property in particular, the American Legion, has a relatively large site that, were it not for the hulking building, the difficulty of making left turns out onto College Avenue, and the one-way traffic flow on Front Street, might have more commercial appeal.

INDUSTRIAL CENTERS

The City Council has zoned land for industrial use in various locations throughout Waterville. Those industrial zones, General Industrial, Industrial Park, Airport Industrial, and Downtown Industrial, are described in the Zoning Ordinance which is posted on the City's web page. Note that industrial zones allow both industrial and commercial uses and the Downtown Industrial Zone also allows residential use. The Hathaway Center and the other two properties in that complex are zoned Downtown Industrial. In fact, the City established that new zone to facilitate the redevelopment of those old mill buildings.

Industrial properties are shown on the zoning map which can be found both on the City's web page where it can be enlarged and in Chapter 10: Existing Land Use on Map 10-3.

Historically, industrial areas were located primarily on the Kennebec River and the Messalonskee Stream where hydro-electric power could be produced. Manufacturers also chose sites where they easily could transport goods. Industrial areas were established where steamships used to dock (on Water Street), along the railroad tracks (including the railroad yard off of College Avenue, the old Harris Bakery, and off of County Road and Marston Road), near the Upper Main Street I-95 interchange (off of Armory Road and Drummond Avenue), and near LaFleur Airport and the KMD I-95 interchange (on Airport Road).

In 1971, the City zoned a large area of farm land on Trafton Road for industrial use. The City created the Industrial Park Zone there and the Kennebec Water District extended the water line down West River Road anticipating industrial development that for the most part never occurred. To date, over forty years later, only one industrial building, the former Wyandotte woolen mill, has been constructed there.

Today, the owner of the remaining Industrial Park land continues to attempt to obtain State and federal approval to build an I-95 interchange at Trafton Road to spur development. Most of the company's land, however, is zoned for commercial, not industrial, use. See Trafton Road under Commercial Centers in this chapter.

TOURISM

Tourism in Waterville has the potential to become a much more significant sector of the economy, especially if a concerted effort is made to direct tourists visiting each attraction on to the next. Most impressive is the Colby College Museum of Art, which will become the largest art museum in the State when the \$100 million Lunder collection opens in the summer of 2013. Although perhaps less well known nationally than the Colby museum, the Waterville Opera House, the Maine International Film Festival, the Redington Museum, surrounding lakes, and (more so in the future) the Quarry Road Recreation Area also attract tourists to Waterville.

Heritage tourists frequently visit the Waterville Public Library, City Hall, Taconnett Falls Genealogical Society, and Pine Grove and St. Francis cemeteries in search of information about their ancestors. They often ask for old photographs of the homes in which their ancestors lived and stop to see the old neighborhoods. One neighborhood, the South End, which has a Museum in the Streets, has the potential to be designated an historic district.

The City has the 470 steam locomotive and a Lombard tractor that could be attractions of a new museum focusing on our industrial past. Exhibits from the Hathaway Shirt Company and other mills as well as information about early settlers including the Red Paint People, the Abenakis, the Plymouth Proprietors, and Franco- and Lebanese-Americans could draw tourists already visiting other sites in Waterville and those traveling on I-95. The museum also could include exhibits on shipbuilding and horse racing in Waterville and the roles that Waterville residents played in various wars including the Revolutionary War and the Benedict Arnold expedition, the War of 1812, and the Civil War.

In addition to whatever they spend at museums and other venues, tourists spend money on food, lodging, gas, recreation, and shopping, further supporting our economy. The cultural assets of Waterville may encourage some tourists to move here.

See also Chapter 8: Historical and Cultural Resources.

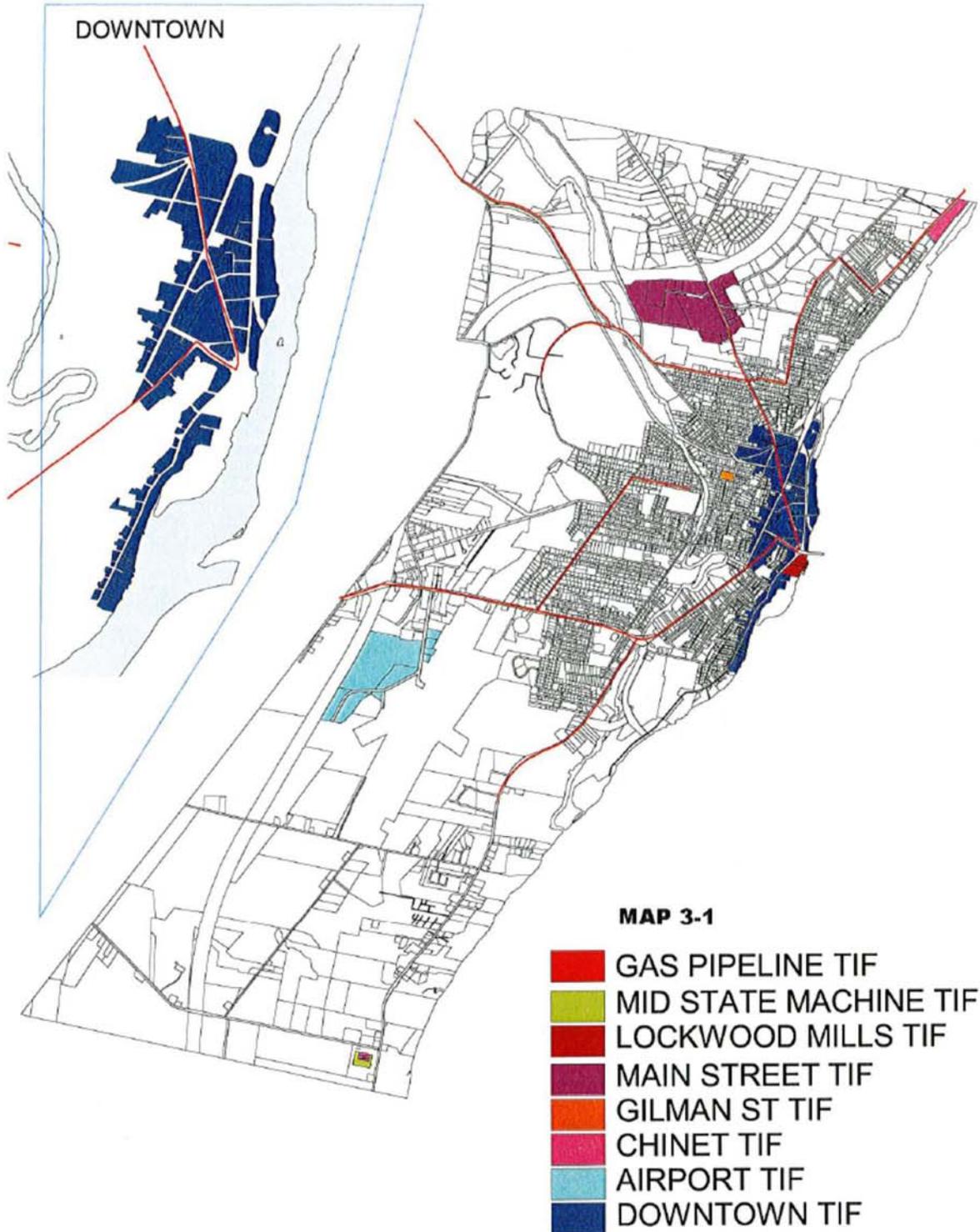
THE ROLE OF THE CITY OF WATERVILLE IN ECONOMIC DEVELOPMENT

The City of Waterville, a regional service center, recognizes the importance of economic development and supports development in several ways. The City:

- Provides financial support to the Kennebec Valley Council of Governments (KVCOG), Central Maine Growth Council, Waterville Development Corporation (WDC) [which the City established], the Mid-Maine Chamber of Commerce, and Waterville Main Street. The City also appoints representatives to serve on the boards of directors of most of those organizations.
- Owns the LaFleur Municipal Airport which has the potential to be a major income producer. See Chapter 5: Transportation.

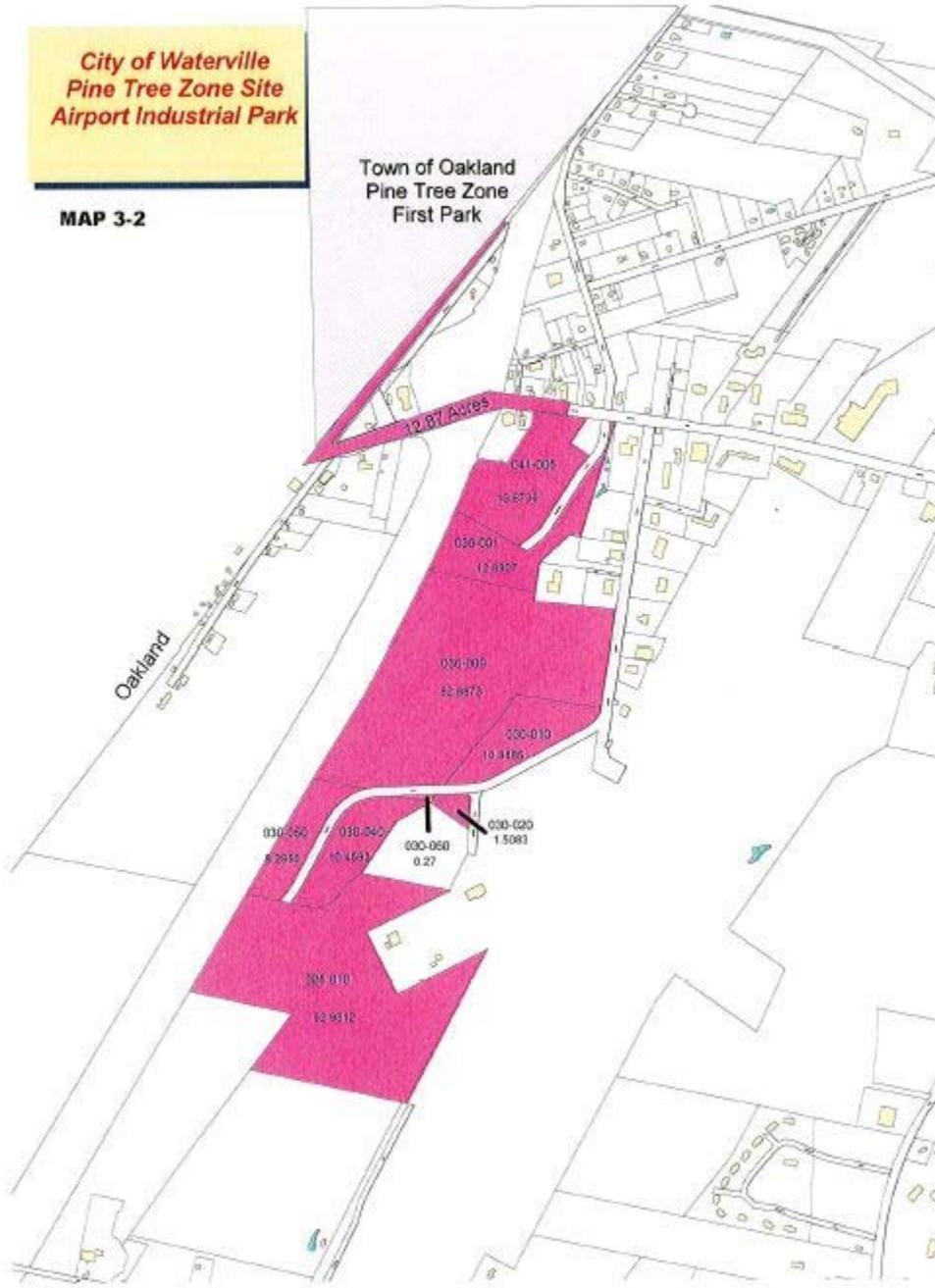
- Created the Airport Industrial Park, located conveniently near Exit 127 off I-95, to provide developable land for sale to businesses. A Free Trade Zone is located adjacent to the municipal airport on land that the City acquired in 2012 for re-sale and development.
- Has created Tax Increment Financing Districts and, with the assistance of KVCOG, an Airport Pine Tree Zone to encourage new development. See Maps 3-1 and 3-2 provided by the City Assessor and Chapter 4: Fiscal Capacity.
- Is one of 24 towns that own FirstPark in Oakland off of KMD.
- Commissioned numerous studies over the years to assess parking, traffic, and redevelopment potential.
- Created in conjunction with Waterville Main Street and the public a Waterville brand “Converge and Create” in recognition of Waterville’s central location in the State and the emerging importance of the arts in Waterville.
- Has applied for and received countless Community Development Block Grant (CDBG) and economic development grants, despite the fact that the City has no staff member specifically tasked with writing and administering those grants.

City of Waterville Maine



**City of Waterville
Pine Tree Zone Site
Airport Industrial Park**

MAP 3-2



Key Issues and Needs

The major issues and needs related to Waterville's economy include the following:

1. **Regional Economic Development Efforts.** There is a need to continue to support local and regional organizations that work to improve the economy. KVCOG, for example, offers assistance to start-up companies and gap financing through its revolving loan fund, creates the regional Comprehensive Economic Development Strategy (CEDS) with its member communities, and assists towns with planning, joint purchasing, and issues such as regionalization of services.
2. **Growth Businesses.** There is a need to encourage technology and other growth businesses and industries which strengthen the tax base and provide jobs for area residents.
3. **Workforce Development.** There is a need to take steps to further develop local skills which match the needs of businesses and industries.
4. **Downtown.** The City needs to continue to support the efforts of Waterville Main Street to improve the viability of the Downtown.

CHAPTER 4: FISCAL CAPACITY

Property Tax Base

The property tax base of a community is its most important financial asset. A community with a relatively high valuation can raise a given sum of money with a relatively low tax rate. On the other hand, a community with a relatively low valuation will need a higher tax rate to raise the same sum of money.

In general, communities with substantial commercial and industrial development tend to have higher valuations than residential communities. Waterville has a relatively low valuation, in part because industrial property constitutes only a small percentage of the tax base. Table 4-1 shows assessed value by land use as a percentage of total assessed valuation.

TABLE 4-1					
ASSESSED VALUE BY LAND USE 2012					
	INDUSTRIAL	COMMERCIAL	RESIDENTIAL	EXEMPT	TOTAL
Assessed Value	\$39,581,200	\$203,655,400	\$346,031,000	\$167,987,000	\$757,254,600
Percent Of Total	5%	27%	46%	22%	100%

Source: City of Waterville Assessor, March 2013

The City's largest tax bills are summarized in Table 4-2. Listings with no assessor parcel number are personal property bills. Note, for example, that Huhtamaki pays considerably more personal property taxes (on formed fiber machinery) than real estate taxes (on the half of its building that is located in Waterville).

Huhtamaki and Mid-State Machine are the only industries among the recipients of the highest tax bills. Three of the highest taxed properties are either residential (Crestwood Park Apartments on West River Road and Thayer Garden Apartments on Quarry Road) or mixed uses with apartments (the Hathaway Creative Center).

TABLE 4-2

HIGHEST TAXED PROPERTIES 2013
REAL ESTATE AND PERSONAL PROPERTY

Map	Block	Lot	Owner's Name	Total Assessment	Taxes @ .02565
			HUHTAMAKI INC	\$ 15,838,500.00	\$ 406,257.53
61	80		WALMART STORES INC	\$ 13,860,800.00	\$ 355,529.52
61	90		ELM PLAZA CORPORATION	\$ 12,568,100.00	\$ 322,371.77
			Mid-State Machine	\$ 9,318,100.00	\$ 239,009.27
44	319		MERIMIL LIMITED PARTNERSHIP (Hydro-power facilities at the Hathaway Creative Center)	\$ 9,111,300.00	\$ 233,704.85
41	102		WP2011 WATERVILLE ASSOCS LLC (Shaw's Plaza)	\$ 8,033,700.00	\$ 206,064.41
44	311		HATHAWAY MILL PO LLC (Commercial and residential)	\$ 7,000,000.00	\$ 179,550.00
61	80	3	HD DEVELOPMENT OF MARYLAND INC (Home Depot)	\$ 5,907,200.00	\$ 151,519.68
27	38		WOODLANDS INC (Assisted Living)	\$ 5,585,100.00	\$ 143,257.82
1			CENTRAL MAINE POWER CO (Transmission lines throughout the City)	\$ 5,395,600.00	\$ 138,397.14
69	12		HUHTAMAKI INC	\$ 4,656,500.00	\$ 119,439.23
58	93		HYDRO KENNEBEC LLC (Kennebec River Dam)	\$ 4,090,600.00	\$ 104,923.89
62	4		GIRI WATERVILLE LLC (Best Western Motel)	\$ 4,073,100.00	\$ 104,475.02
63	259		MAINE CENTRAL RAILROAD CO	\$ 3,318,700.00	\$ 85,124.66
22	130		EWT LLC 3 (Crestwood Park Apartments)	\$ 3,199,300.00	\$ 82,062.05
41	5		KMD INVESTMENTS LLC (Marden's)	\$ 3,116,300.00	\$ 79,933.10
61	30		EWT LLC 8 (Thayer Garden Apartments)	\$ 2,945,600.00	\$ 75,554.64
41	82		VICKERY COMPANY LLC (Hampton Inn)	\$ 2,924,100.00	\$ 75,003.17
37	257	3	HANNAFORD BROS CO (JFK Mall)	\$ 2,655,700.00	\$ 68,118.71
41	102	2	WP2011 WATERVILLE ASSOCS LLC (Flagship Cinema)	\$ 2,569,500.00	\$ 65,907.68
37	257		WP WATERVILLE ASSOCIATES LLC (Portion of JFK Mall)	\$ 2,292,500.00	\$ 58,802.63
			WALMART STORES INC	\$ 2,076,500.00	\$ 53,262.23
43	118		OAK GROVE REALTY LLC (Nursing Home)	\$ 2,034,100.00	\$ 52,174.67
37	257	1	WP WATERVILLE ASSOCIATES LLC (Portion of JFK Mall)	\$ 2,025,300.00	\$ 51,948.95

Source: Waterville City Assessor March 2013

Tax Exempt Property

Aside from the City's heavily residential tax base, a second reason that Waterville has a relatively low assessed valuation is that the City has a high percentage of tax exempt real property. Table 4-1 shows that 22% of Waterville's assessed valuation is tax exempt. This compares with Augusta at 28% (with a considerable amount of State-owned real estate) and Winslow at 8%. (Source: Maine Revenue Services, Municipal Valuation Return Statistical Summary on line.)

Table 10-1 in Chapter 10: Existing Land Use shows that in 2012, of the 7,559 acres of land in Waterville, 2,449 acres, or 32 percent, were tax exempt. By far the highest number of tax-exempt acres is owned by the City (1,207 acres), followed by colleges (794 acres) and, at much lower numbers, churches (132 acres) and hospitals (118 acres). Other owners of tax-exempt property include Kennebec Water District (KWD), Kennebec Sanitary Treatment District (KSTD), Waterville Sewerage District (WSD), Waterville Housing Authority, the State of Maine, the U.S. government, and various charitable and fraternal organizations. Seton Village Inc owns Seton Village, which has its own tax-exempt assessing code. That is, Seton Village is not included in the church category above.

Small Footprint

A third reason for Waterville's low valuation is the relatively small land area of the City. Map 4-1 shows Waterville within the Kennebec Valley Council of Governments (KVCOG) region. Waterville is only 13.58 square miles, as compared to Winslow's 36.82 square miles, and Augusta's 55.13 square miles. (Source: QuickFacts, U.S. Census Bureau on line)

Historical Valuations and Taxes

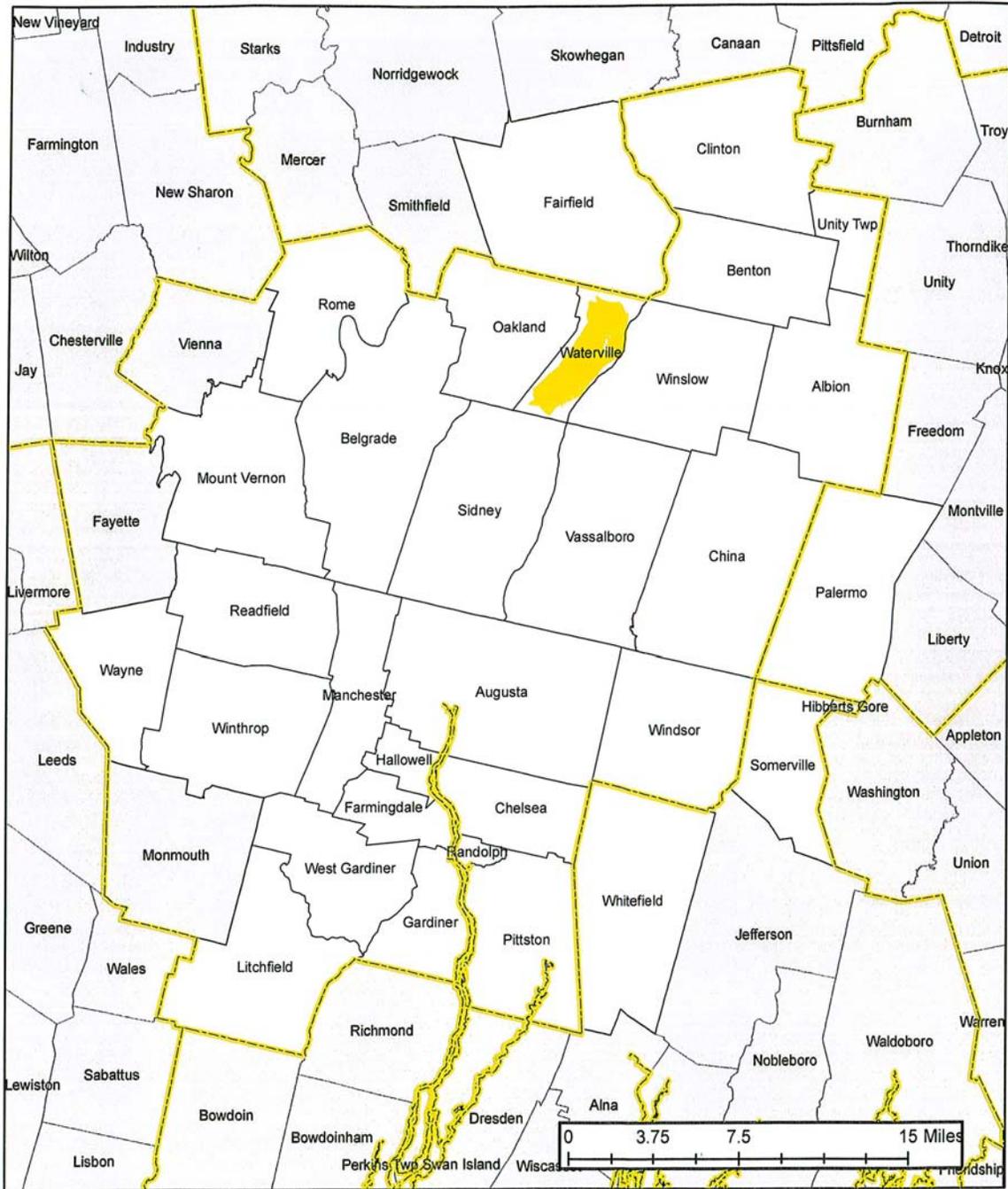
The State Bureau of Property Taxation bases its compilation on actual property transactions so as to reflect market conditions. The State figures for any given year are two years old and thus do not reflect recent market changes. Waterville's figures reflect market conditions only in those years when it conducts a revaluation and adjusts its values to reflect market conditions. Assessed valuation may, however, remain at 100% of market value for several years after a revaluation, as was the case for the thirteen years from 1994 through 2006.

Revaluation

State law requires that when a municipality's valuation drops below 70% of State valuation, the community must undertake a revaluation. Twenty years after Waterville's last complete revaluation in 1993, the City Assessor estimated that a complete revaluation would cost approximately \$400,000.

Table 4-3 provides an overview of Waterville's valuation over time. The table includes both State and City figures for the past few years and for 1995.

Information for 1995 is included to provide some historical perspective on mil rate and municipal value. 1995 was a decade before the Waterville Commons Shopping Center was completed. Chapter 10: Existing Land Use includes a list of development projects constructed between 1996 and 2012.



MAP: 4-1

For Planning Purposes Only
Created 12-30-2010 by IWR

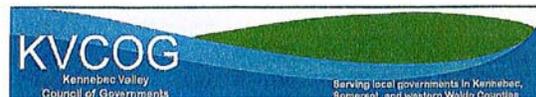


Table 4-3					
HISTORICAL VALUATIONS AND TAXES					
Year	State Valuation	Municipal Valuation	City % of State Valuation	Waterville Tax Assessment	Tax Rate (Mils)
1995-96	\$544,600,800	\$540,083,000	100	\$12,043,851	\$22.30
2008-09	\$819,200,000	\$629,709,444	74.8	\$ 15,806,138	\$24.40
2009-10	\$824,050,000	\$631,590,746	72.6	\$ 15,749,161	\$24.15
2010-11	\$810,050,000	\$632,481,608	79.2	\$ 15,744,598	\$24.15
2011-12	\$789,200,000	\$627,873,184	79.2	\$ 15,994,798	\$24.65
2012-13	\$771,800,000	\$634,964,728	79.2	\$ 16,555,349	\$25.65
2013-14	Not Available	Not Available	82.5	Not Available	Not Available

Source: City of Waterville Assessor.

TABLE 4-4				
COMPARATIVE VALUATION FIGURES 2012				
Municipality	2010 Population	2012 State Valuation	State Valuation Per Capita	Valuation Per Capita Rank
Waterville	15,722	\$789.2 million	\$50,197	5
Augusta	19,136	\$1,518.85 million	\$79,371	2
Winslow	7,794	\$578.05 million	\$74,166	3
Oakland	6,280	\$502.8 million	\$80,063	1
Fairfield	6,735	\$368.55 million	\$54,721	4

Source: U.S. Census and Maine Revenue Service Property Tax Division (on line).

Valuation Comparisons

Waterville's wealth relative to other communities can be measured by comparing State valuations and value per capita. Table 4-4 contains those numbers for Waterville, Augusta, Winslow, Oakland, and Fairfield. Waterville's State valuation is considerably higher than the valuations of the smaller towns. However, Waterville has considerably less value per capita than the smaller towns, because Waterville has so much more population than each of those towns.

Tax Comparisons

Not surprisingly, Waterville's relatively low per capita valuation results in relatively high tax rates. Table 4-5 shows that Waterville's full value tax rate is higher than Augusta's and the tax rates of all towns abutting Waterville (with the exception of Fairfield), for which Waterville functions as a service center. Waterville's tax rate falls between those of Brunswick and Lewiston, the homes of Bowdoin College and Bates College.

TABLE 4-5
COMPARATIVE FULL VALUE TAX RATES 2010

MUNICIPALITY	TAX RATE 2011	FULL VALUE TAX RATES 2010*
Waterville	24.65	18.74
Augusta	17.30	16.77
Winslow	15.50	15.22
Fairfield	19.20	18.97
Oakland	13.05	12.20
Benton	11.50	9.57
Sidney	10.00	9.14
Vassalboro	10.00	10.46
Brunswick	23.68	14.41
Lewiston	25.79	20.18

Source: Tax Rate: Maine Revenue Service Property Tax Division (on line).

Full Value Tax Rate: Maine Municipal Association.

*Homestead, BETE, and TIF adjusted

TABLE 4-6
REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
2008-2013 (For the Year Ended June 30)

	2007-2008 Actual	2008-2009 Actual	2009-2010 Actual	2010-2011 Actual	2011-2012 Actual
<u>Revenue</u>					
Taxes	17,033,185	16,692,662	16,519,710	16,695,017	16,943,352
Intergovernmental	15,371,759	15,252,745	13,835,804	12,970,453	14,030,940
Other	4,195,979	4,684,352	3,576,210	5,897,214	3,381,955
Total Revenues	36,600,923	36,629,759	33,931,724	35,562,684	34,356,247
<u>Expenses</u>					
City Expenditures	15,974,621	18,821,991	15,131,988	15,711,161	15,651,247
School Expenditures	19,364,456	19,858,379	19,330,246	18,664,944	19,432,358
Total Expenditures	35,339,077	38,680,370	34,462,234	34,376,105	35,083,605
Change in Fund Balance	(1,261,846)	2,050,611	530,510	(1,186,579)	727,358
Ending Fund Balance	10,353,624	8,303,013	7,772,503	8,959,082	8,231,724
<u>Declining Revenue</u>					
	2007-2008 Actual	2008-2009 Actual	2009-2010 Actual	2010-2011 Actual	2011-2012 Actual
Excise Tax	1,548,444	1,461,043	1,429,547	1,447,982	1,473,415
Revenue Sharing	2,924,537	2,406,580	1,854,621	1,725,518	1,713,395
School Subsidy	11,641,637	12,033,850	11,487,368	10,973,230	11,758,027

Provided by the City Finance Director, April 2013.

Revenues and Expenditures

Waterville's General Fund revenues and expenditures over the past five years are shown in Table 4-6. School expenditures account for well more than half of Waterville's expenses. Critical Revenue Sharing from the State and excise tax on automobile sales in Waterville both are down since 2008.

Personal Property

Table 4-3 shows that the City has experienced only minimal growth in assessed valuation over the past five years. A direct consequence of the enactment of the Business Equipment Tax Exemption (BETE) program in 2008 has been a steady erosion of the local personal property tax base. (See below.) That trend is expected to continue. Personal property is defined as furniture and fixtures, machinery and equipment used in trade.

Personal Property Valuations:

Year	Assessed Valuation	Assessed BETE Valuation	Total Valuation
2008/2009	\$83,644,500	\$4,744,340	\$88,388,840
2009/2010	\$77,716,600	\$8,660,527	\$86,377,127
2010/2011	\$72,310,700	\$11,041,589	\$83,352,289
2011/2012	\$66,758,700	\$10,415,236	\$77,173,936
2012/2013	\$69,228,500	\$7,173,239	\$76,401,739

Provided by City Assessor, April 2013.

Use of Surplus

The City's undesignated fund balance or surplus is the cash balance remaining in the City's general fund when all financial obligations have been met at the end of the fiscal year. These funds are from greater than expected revenue and/or lower than budgeted expenses.

The City strives to use reserves for capital improvements and not for operational needs. This was true for the period 2001-2008, but since then, the City has had to rely on the use of surplus each year to balance the budget. Fortunately, the City's fund balance (surplus) far exceeded the amount required by policy.

As of April 2013, the City Council's policy is to maintain a surplus of at least 16% of the total budget, about two months of operating expenses or about \$6 million. The surplus currently is at \$6 million. If revenues do not increase, the City will have to raise taxes, decrease services, reduce the surplus below 16% of total budget, or make a combination of those changes.

The amount of undesignated fund balance that the City needs to maintain depends upon several factors. The loss of critical revenue from the State (for the City and schools) is an important reason for a surplus cushion. Reserves should be sufficient to cover uncollected property taxes. If, for example, the City were to conduct a revaluation causing the tax burden to increase on homeowners and causing more to be unable to pay their taxes, the City would need to have more reserves to cover the loss. Reserves also should be adequate to cover non-payment by both

major taxpayers and related businesses that are dependent upon the largest taxpayers, in the event that they suspend operations in the City. Fortunately, (or unfortunately), there is no one taxpayer big enough to threaten property tax revenue collections. A lack of alternative revenues to fund City services, should property tax revenue decline, is an additional reason to maintain a high fund balance.



PROPOSED CAPITAL IMPROVEMENT PROJECTS

2012-2016

DEPT.	ITEM	EST COST	REQUEST 2012-2013	REQUEST 2013-2014	REQUEST 2014-2015	REQUEST 2015-2016
ADMINISTRATION	Property Revaluation	\$350,000				\$350,000
AIRPORT	Runway 14-32 Reconstruction	\$50,000	\$50,000 **			
	Runway 5-23 Reconstruction	\$445,000		\$45,000	\$200,000	\$200,000
	Pavement repairs	\$25,000	\$25,000			
	Equipment	\$245,000	\$245,000 **			
PARKS AND REC.	Equipment	\$210,295	\$65,295 **	\$67,000	\$40,000	\$38,000
	Equipment	\$112,000	\$112,000			
	Facilities (tennis court)	\$100,000	\$100,000			
	Cemetery Chapel	\$50,000	\$50,000			
	Head of Falls	\$400,000				\$400,000
	Pool Repair	\$150,000				\$150,000
PUBLIC SAFETY	Fire Station Boiler	\$15,000	\$15,000 **			
	Fire Engine	\$400,000	\$74,785 **			
	Fire alarm system upgrade	\$57,290	\$57,290			
	Equipment	\$60,000	\$60,000			
	Rescue Vehicle	\$100,000				\$100,000
	New Police Station	\$3,419,615	\$3,419,615 **			
PUBLIC WORKS	Equipment	\$1,396,425	\$261,425 **	\$295,000	\$405,000	\$435,000
	Equipment	\$265,000	\$265,000			
	Facilities	\$150,000	\$150,000 **			
	Road Reconstruction	\$1,500,000	\$1,500,000 **			
	Trafton Road Interchange	?				
	Airport Road Extension	?				
	Traffic Study	?				
SCHOOL	High School Repairs (Phase 4 & 5)	\$5,300,000				\$5,300,000
TOTAL		\$14,800,625	\$6,450,410	\$407,000	\$645,000	\$6,973,000

**To be funded through 2013 Bond Issue

Capital Improvement Program

Capital improvement planning is done on a five-year basis. Each year the City removes one year from the schedule, updates the remaining years, and adds a new one. There are times when needs are removed altogether and other times when items are delayed or rushed to the front.

As stated earlier, the preferred financing option is to pay for necessary improvements from the City's cash on hand (surplus). For some improvements (library renovation, police station construction) it makes much more sense to borrow to pay for these in order to have future residents (users) help to support them.

Regionalization of Services and Facilities

The City shares both services and facilities with neighboring communities.

- **Emergency Services:** Currently, the City has mutual aid agreements for fire and police protection and shares a fire chief with Winslow. The City provides dispatching of emergency services to seven (7) other towns for a fee.
- **Utilities:** We partner through the Waterville Sewerage District, the Kennebec Water District, and the Kennebec Sanitary Treatment District.
- **Solid Waste:** The City and the town of Winslow both share the use of the Oakland Transfer Station and the agreement for waste transport to the trash incinerator in Orrington. The City also partners with Winslow in the Waterville-Winslow Solid Waste Corporation for recycling purposes.
- **Schools:** The City is a member of AOS 92. The City houses the superintendent's office and the Regional Area Resource Center and owns the Mid-Maine Technical Center which serves students from many other towns. Waterville also is home to Educare, a regional early childhood learning center attached to the Mitchell School.
- **Recreation:** The City welcomes residents of other towns to use our municipal swimming pool (for a small fee), Pine Ridge Golf Course, and our Quarry Road Recreation Area, among many other recreation facilities.
- **Technology:** The City provides information technology support to Winslow, Oakland, and Clinton on a fee basis.
- **Economic Development:** The City co-owns FirstPark, an industrial park, with twenty-three other towns. Waterville also supports Central Maine Growth Council, an economic development agency, as well as the Mid-Maine Chamber of Commerce, and Kennebec Valley Council of Governments, a regional planning agency.
- **Waterville Public Library:** WPL is used by residents of other towns for a fee.

At the present time, the City does not see any substantial fiscal capacity enhancements by combining other municipal services with area towns. Over the years, the City has tried to share even more facilities with our neighbors. However, other towns have declined Waterville's proposals to combine police and fire departments, to share a high school, and to regionalize the airport.

For more information, see Chapter 6: Public Facilities and Services.

Development Patterns and the Cost of Service Provision

Sprawl and the high cost of providing services to far flung development has not been an issue in Waterville over the past decade. Map 10-2 in Chapter 10: Existing Land Use shows that most of the growth in Waterville since 2000 has occurred in the designated growth areas of the City. In fact, a considerable amount of recent development has occurred in renovated buildings or on redeveloped sites near the downtown. Furthermore, given that the State projects minimal population growth in Waterville over the next decade, sprawl is not expected to be a concern over the ten-year life of this plan.

Tax Increment Financing (TIF)

Tax increment financing (TIF) allows the City to shelter increases in valuation from losses in State revenue sharing and State general purpose aid to education (GPA).

Waterville currently has seven TIF districts. Those are:

- Main Street (Elm Plaza, Waterville Commons, and nearby land on the north side of Main Street),
- Huhtamaki,
- Airport,
- Downtown,
- Mid-State Machine,
- Lockwood (Hathaway), and
- Gilman Place.

The State placed a cap of 5% on the number of acres any community may have in TIF Districts. Waterville has a total of 9,016 acres including streams, ponds, and roads, which allows us to TIF 450 acres. Currently, we have 384.16 acres in TIFs, including the 160.44 acres in our Downtown TIF which the State exempts from the cap. The Elm Plaza TIF will expire in 2017, freeing up 91 acres for new TIFs.

In addition to restricting the number of acres in TIFs, the State also placed a cap of 5% on the original assessed value (OAV) that any community may have in TIF districts. The OAV of our Downtown TIF, \$52,033,100, is exempt from that total. At this time, Waterville has only \$19,162,730 of OAV that counts toward our 5% cap. Waterville can TIF approximately double that amount of value.

Long Term Debt

Table 4-9 contains a summary of the City's long-term debt, showing the balances remaining at the end of the fiscal year. By law, the City's total indebtedness cannot exceed 15% of the total State valuation for the City. However, the State recommends that debt not exceed 5% of State valuation. For Waterville, maximum debt recommended is 5% of \$824.1 million, or \$41.2 million, well more than the City's current debt of \$22,890,084.

<u>Long-term debt:</u>	Date of Issue	Original Amount Issued	Date of Maturity	Interest Rate	Balance at 6/30/2012
1997 General Obligation Bond	11/1/1997	3,880,000	2012	4.35-5.00%	90,000
2002 General Obligation Bond	11/1/2002	5,300,000	2032	2.00-5.00%	3,500,000
2005S School Renovation	4/13/2005	538,051	2014	0.00%	78,802
2005 General Obligation Bond	6/14/2005	5,285,000	2025	3.50-4.00%	3,100,000
2007 QZAB Bond	10/9/2007	965,000	2022	1.44%	727,549
2008 QZAB Bond	7/16/2018	516,279	2023	1.84%	424,000
2009 QZAB Bond	11/18/2009	4,333,368	2025	1.40%	3,755,586
2011 QSCB Bond	5/26/2011	5,000,000	2025	5.69%	4,066,407
2011 General Obligation Bond	5/3/2011	3,150,000	2031	2.00-4.00%	3,150,000
2011 General Obligation Bond	5/3/2011	3,096,000	2020	1.70-2.85%	3,096,000
2012 QSCB Bond	7/15/2011	943,859	2027	5.37%	901,740
Total bonds and notes payable					<u>\$ 22,890,084</u>

The City's Standard and Poor's bond rating of A Plus allows us to borrow at a favorable rate of interest. Changes in the City's fiscal situation, such as a significant decrease in reserves, could cause the City to risk losing its excellent bond rating.

City Debt Per Capita to Per Capita Income

The State recommends that the ratio of City debt per capita to per capita income be less than 5%. Waterville's ratio is 7.3%. [(\$22,890,084/15,722 persons) / \$19,894 per capita income (in 2011)]

Issues and Needs

The issues related to Waterville's municipal finances include the following:

- 1. Tax Base.** Waterville's tax base is relatively weak, and the City's total per capita valuation

is low relative to other communities.

2. Revenues. Municipal revenues have declined over the past five years.

3. Debt. The City's long-term debt is 7.3% per capita, higher than recommended by the State. However, total debt is relatively low.

CHAPTER 5: TRANSPORTATION

Waterville's highways, streets, and bridges are the major components of the City's transportation system. Other elements include the Robert LaFleur Airport, two rail lines, transit and demand response systems operated by Kennebec Valley Community Action Program (KVCAP), taxis, sidewalks, trails, and bicycle lanes.

ROAD CLASSIFICATION

Federal Functional Classification

The federal government classifies roads in Waterville by function as follows:

1. **Principal Arterial:** Interstate- (6.0 miles)
2. **Minor Arterial:** Main Street, College Avenue (Route 201, Route 100), KMD (Route 137), Silver Street (Route 104), Elm Street (Route 11), Carter Memorial Drive/Bridge, Spring Street, Bridge Street, Front Street, and Chaplin Street
3. **Major/Urban Collector:** Armory Road, Hazelwood Street, Drummond Avenue (north of Armory Road), Eustis Parkway, Oak Street, Washington Street, Campus Drive, Mayflower Hill Drive (north side and between First Rangeway and the Messalonskee Stream on the south side; Colby College owns the middle portion), North Street, Pleasant Street, Gilman Street, Park Street, Appleton Street (between Elm Street and Main Street), Union Street, and Temple Street, Lincoln Street, Chase Avenue, First Rangeway, Western Avenue, Cool Street, Water Street, Grove Street, Airport Road, West River Road, Abenaki Road, and Webb Road (to Mitchell Road)
4. **Minor Collector:** Webb Road west of Mitchell Road

Road Length and Maintenance Responsibility

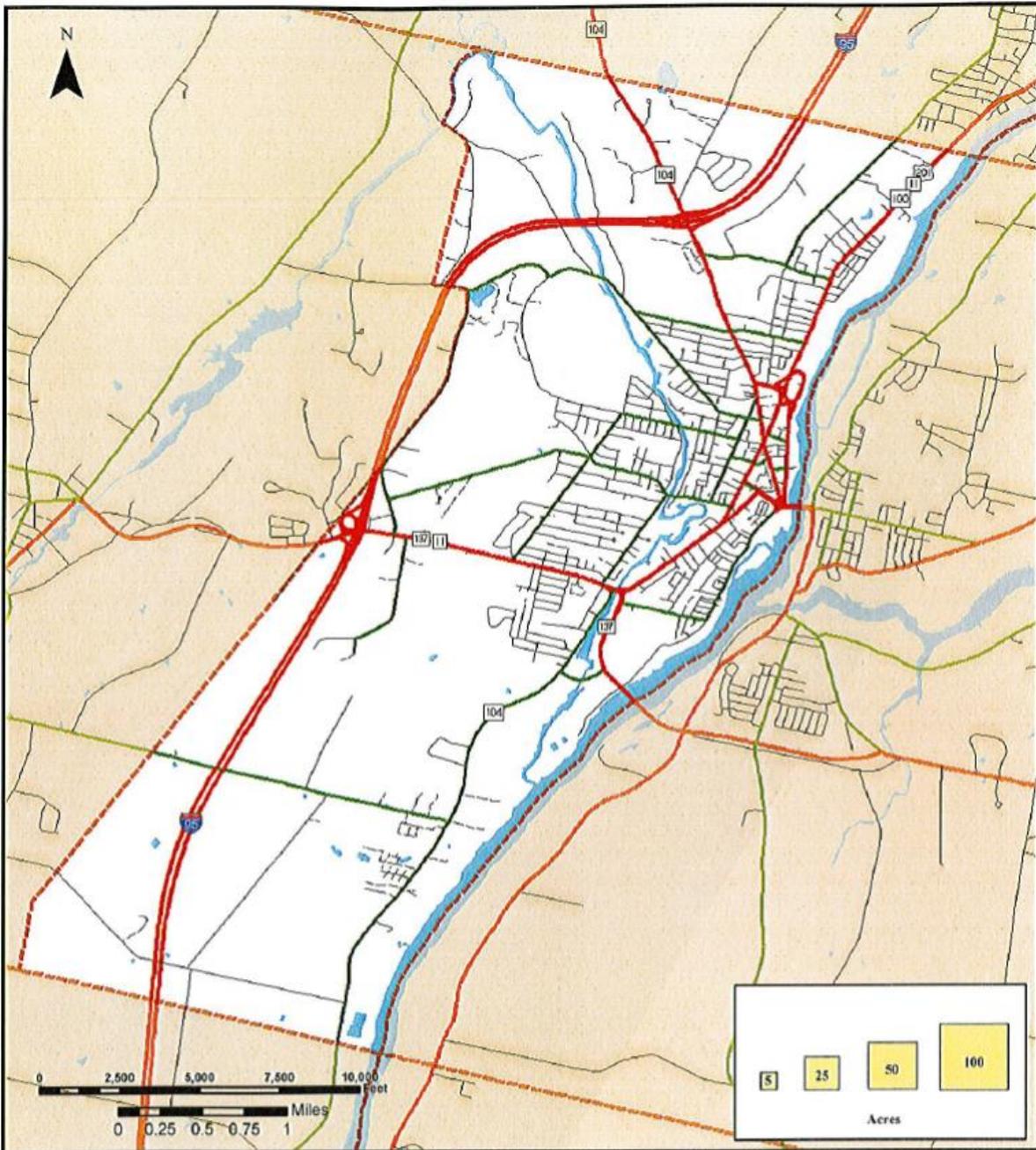
Table 5-1 shows lane miles and length of roads by road type and party responsible for maintenance. Map 5-1 provided by KVCOG depicts road jurisdictions, including State Highways in red and State Aid roads in green.

State Highways

State Highways include: Bridge Street, Chaplin Street, College Avenue (Route 201), Elm Street, Front Street, KMD (Route 137), Main Street (Route 104), Silver Street, and Spring Street.

State Aid Roads

State Aid roads include: Abenaki Road, Airport Road, Appleton Street, Armory Road, Armstrong Road, Chase Avenue, Colby Street, Cool Street, Drummond Avenue, Eustis Parkway, First Rangeway, Gilman Street, Grove Street, Hazelwood Avenue, Lincoln Street, Mayflower



City of Waterville
Kennebec County, Maine
Transportation Map
2012 Comprehensive Plan

MAP 5-1

Map Legend

Road Juristictions

- State Highway
- State Aid
- Minor Town Road
- - - Private Road



Neither KVCOC nor the City of Waterville assume any liability for the data delineated herein. Boundaries depicted on this map are for planning purposes only. Boundary data is based on digital sources and may differ from ground-based observations.
 Data Sources: Maine Office of GIS, Maine DOT
 Created 10-24-2012 by JG

Hill Drive (to Colby College, but not including the portion on the Colby campus), North Street, Oak Street, Park Street, Pleasant Street, Spring Street, Temple Street, Union Street, Washington Street, Water Street, Webb Road, Western Avenue, and West River Road.

Urban Compact Area

Waterville’s maintenance responsibilities differ within and outside of the State-designated urban compact area. Almost all of Waterville is within the urban compact area, the exception being Webb Road west of Mitchell Road and West River Road south of Thomas Drive.

Within the urban compact area, the City is responsible for the maintenance (plowing, crack sealing, shim/overlaying, and painting) of all public roads including State Highways and State Aid Roads. The City controls access to all roads in this area through its curb cut permits.

Outside of the urban compact area, the City plows the roads, but the State is responsible for summer maintenance. The State also issues curb cut (entrance) permits outside of the urban compact area.

In recent years, when roads have needed more than maintenance, the State has only repaired or rebuilt State Aid roads when the City has shared the cost. The Maine Department of Transportation (MDOT) does, however, still plan to fund work on State Highways in Waterville, including Main Street and College Avenue, without City assistance.

Interstate-95

In Waterville, Interstate-95 (I-95) runs 6 miles between the Sidney town line and the Fairfield town line. It is a limited access highway of four lanes, which is designated part of the Federal Interstate system. MDOT is responsible for maintaining I-95.

TABLE 5-1

MILES OF ROADS

BY ROAD TYPE AND MAINTENANCE RESPONSIBILITY

ROAD TYPE	RESPONSIBLE PARTY	LANE MILES	LENGTH IN MILES
State Highway	State	58.44	25.01
State Aid	State and City	40.21	19.98
City Streets	City	110.4	55.18
Private Ways	Property owners	1.11	.58

MDOT, 2009

TRAFFIC VOLUMES

The amount of traffic, expressed in terms of average annual daily traffic (AADT) that uses a road is a good indication of the road's importance. Map 5-2 provided by KVCOG shows current average daily traffic color-coded by traffic volume. Traffic counts, over time, show the rate of change in traffic on road segments and help determine the need for strategies to deal with growth and possible congestion.

Waterville Traffic Volumes Over Time

Table 5-2 shows traffic counts reported by MDOT at selected locations in Waterville between 1993 (or 1996 or 1997, whichever year data are available) and 2008. Traffic increased in some areas and decreased in others.

Between 1993 and 2008, two areas lost traffic. The Downtown lost 12,110 trips per day passing over the Waterville/Winslow Bridge and 810 trips per day traveling down the one-way portion of Main Street. College Avenue, historically a thriving commercial strip, also lost a significant amount of traffic, 4,080 trips per day.

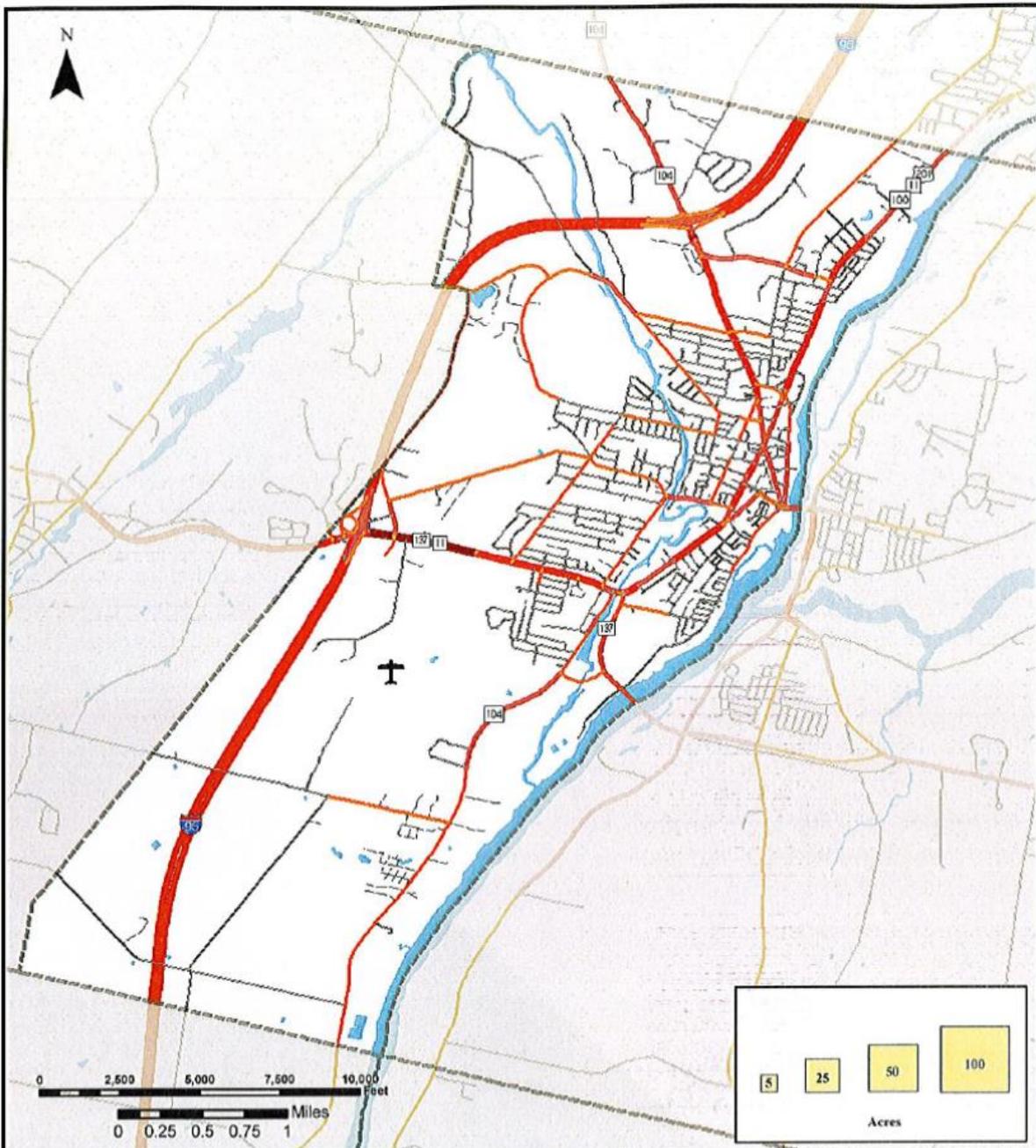
While the Downtown/Main Street and College Avenue commercial centers lost traffic, new commercial development on KMD and Upper Main Street, both of which connect to I-95 interchanges, generated new trips. The new Waterville Commons shopping center (completed in 2005) off of Upper Main Street accounts for many of the 2,710 new trips and KMD saw an increase of 1,150 trips.

The third road to see an increase in traffic, West River Road, has its highest traffic count between Webb Road and Abenaki Road. Clearly, much of the traffic is headed to and from the Carter Bridge. Anecdotally, a portion of the traffic on West River road is generated by drivers from Sidney using Webb Road to avoid traffic lights on KMD.

West River Road also has numerous trip-generators. Those include industrial uses at the old Wyandotte Mill, educational and athletic facilities at Thomas College and the Waterville Junior High School, athletic facilities at All-Pro Soccer and the City's Pine Ridge Recreation Area, and a large assisted living center at the Woodlands.

Recent development has occurred in part because of the existence of our road system, especially our two I-95 interchanges, bridges, and major arterials. That development, in turn, has had an impact on our roadways, contributing to increased traffic congestion in some areas and a decrease in traffic in other parts of the City. On Upper Main Street, in particular, congestion has reached the level at which MDOT no longer will issue traffic movement permits for large scale developments unless developers make significant enhancements to traffic flow.

See Chapter 3: Local Economy for a description of constraints on development and Chapter 10: Existing Land Use for a list of development projects constructed between 1996 and 2012.



City of Waterville
Kennebec County, Maine
Transportation Map
2012 Comprehensive Plan

MAP 5-2

Map Legend	
Daily Traffic Counts	
	0 - 2500
	2501 - 6000
	6001 - 12000
	12001 - 20000
	20001 - 40000



Neither KVCOG nor the City of Waterville assume any liability for the data delineated herein. Boundaries depicted on this map are for planning purposes only. Boundary data is based on digital sources and may differ from ground-based observations.
 Data Sources: Maine Office of GIS, Maine DOT
 Created 10-24-2012 by JG

TABLE 5-2
AVERAGE ANNUAL DAILY TRAFFIC
CHANGE OVER TIME

LOCATION	1990s AADT	2008 AADT	CHANGE 1990s- 2008	ANNUAL PERCENT CHANGE
Waterville/Winslow Bridge	30,000 (1993)*	17,890 (2008)	(12,110)	-2.69%
Carter Memorial Bridge	7,190 (1997)*	11,160 (2008)	3,970	+5.01%
Two Kennebec Bridges Combined*	30,000 (1993)*	29,050 (2008)	(950)	-0.21%
KMD (Route 11/137) I-95 Exit 127	20,300 (1996)	21,450 (2008)	1,150	+0.47%
College Avenue	15,580 (1996)	11,500 (2008)	(4,080)	-2.18%
Main Street (just north of its intersection with College Avenue)	11,650 (1996)	10,840 (2008)	(810)	-0.57%
Upper Main Street/Route 104 (just south of I-95 Exit 130)	15,420 (1993)	18,130 (2008)	2,710	+1.17%
Main Street (north of I-95)	7,400 (1993)	7,710 (2008)	310	+0.27%
West River Road	4,280 (1996)	6,200 (2008)	1,920	+3.73%

* Note that 30,000 trips were generated on the Waterville/Winslow Bridge in 1993, before the Donald V. Carter Memorial Bridge was opened in June of 1997.

Source: MDOT Traffic Volume Counts Annual Reports, 1997 Waterville Comprehensive Plan, and Multi-Modal Corridor Management Plan for the Lower Kennebec Corridor, prepared by KVCOG Planning Director Chris Huck in 2011 (available on both the City and KVCOG web pages).

Private Vehicle Use

As of February 2013, Waterville had 7,981 registered vehicles (source: City of Waterville Finance Department) and 6,370 households. This is an average of 1.25 vehicles per household.

Vehicle miles driven over the last half century have increased in part because of single-occupancy vehicle use. Table 5-3 shows that Waterville commuters fit this profile: 71.3% commute alone to work, compared to 78.6% for the State and 81.3% for the County. Waterville differs from many towns, however, in that 10.9% walk to work (compared to 3.2% and 4.1% at the County or State levels).

Commuting Balance

In 2011, of the 10,173 jobs in Waterville, 8,454 jobs (or 83.1%) were filled by persons commuting into Waterville. Only 1,719 jobs in Waterville (or 16.9%) were filled by Waterville residents. (Source: On the Map: Longitudinal Employer-Household Dynamics, American Community Survey, 2011.)

Of the 5,220 Waterville residents employed in 2011, 3,501 (or 67.1%) commuted out of Waterville to work. As stated above, 1,719 Waterville residents remained in Waterville to work.

Given that 8,454 persons commuted into Waterville, and 3,501 commuted out, 4,953 more persons commuted into Waterville than drove out of town to work.

For more information concerning commuters, see Chapter 3: Local Economy.

TABLE 5-3

MEANS OF COMMUTING TO WORK

2006-2010 American Community Survey 5-Year Estimates

Category	Waterville	Kennebec County	State
Commuters, 16 years and over	6,782	58,044	641,796
Percent Driving Alone	71.3%	81.3%	78.6%
Percent Using Public Transportation	0.1%	0.1%	0.6%
Percent Using Other Means	2.8%	1.7%	1.5%
Percent Walking	10.9%	3.2%	4.1%
Working at Home	5.3%	4.5%	5.1%
Mean Travel Time to Work (Minutes)	16.7	22.4	22.8

Source: 2006-2010 American Community Survey 5-Year Estimates

HIGH ACCIDENT LOCATIONS

MDOT identified 13 high crash points and 7 high crash road sections in Waterville. Those are shown on Map 5-3 provided by KVCOG.

Those high accident locations include the following:

- KMD from I-95 to Airport Road
- KMD and First Rangeway
- KMD, Silver Street, and Carter Drive
- First Rangeway and Chase Avenue (Scheduled for mitigation in 2014)
- Silver Street and Western Avenue
- Front Street and Temple Street
- Pleasant Street and North Street
- Main Street and Pleasant Street
- Main Street from its intersection with Elm Street and College Avenue to Getchell Street
- Main Street from Armory Road to I-95
- Armory Road and Drummond Avenue
- College Avenue from its intersection with Elm Street and Main Street to Getchell Street
- College Avenue at Dunkin' Donuts and Colby Street Connector
- College Avenue from Britt Street to Mount Pleasant Street and Allen Street
- I-95 north from KMD to Main Street, including the northbound ramp to Main Street

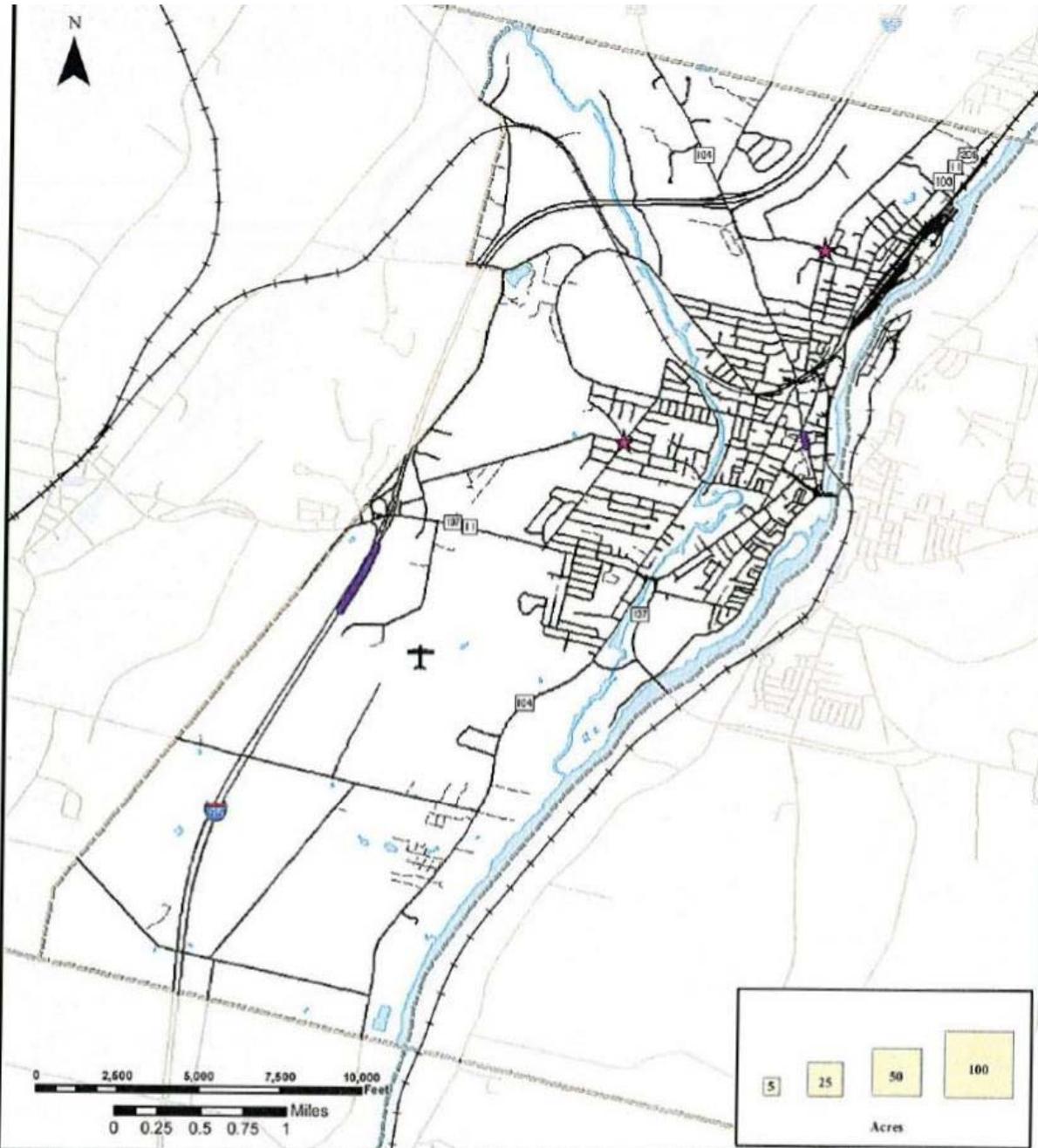
In 2013, one of the highest accident locations is the intersection is First Rangeway, Chase Avenue, and Western Avenue which is scheduled for mitigation in 2014. A road connecting Chase Avenue and Upper Western Avenue will be constructed on a parcel of land recently purchased for that purpose. The southerly end of Upper Western Avenue will be closed to through traffic at First Rangeway.

BRIDGE CONDITIONS

Map 5-4 provided by KVCOG shows the location of all twenty-eight bridges in Waterville.

The MDOT has a bridge inventory on its web page [click on Quick links, Bridge Information, Public Bridges Inventory, Find a Bridge in Your Municipality, Waterville, Go]. The site includes information concerning the condition of bridges and the party responsible for their maintenance. MDOT is responsible for maintaining all bridges in Waterville with the exception of four railroad bridges.

Six bridges in Waterville have low federal sufficiency ratings (below 50). Four of those bridges in need of repair are railroad bridges. (Work needed includes the deck of the Marston Road bridge over the railroad tracks). Other repair projects identified are the substructure of the Armstrong Road bridge over I-95 and the deck of the Western Avenue bridge over Messalonskee Stream (scheduled for replacement in 2014).



City of Waterville
 Kennebec County, Maine
 Transportation Map
 2013 Comprehensive Plan

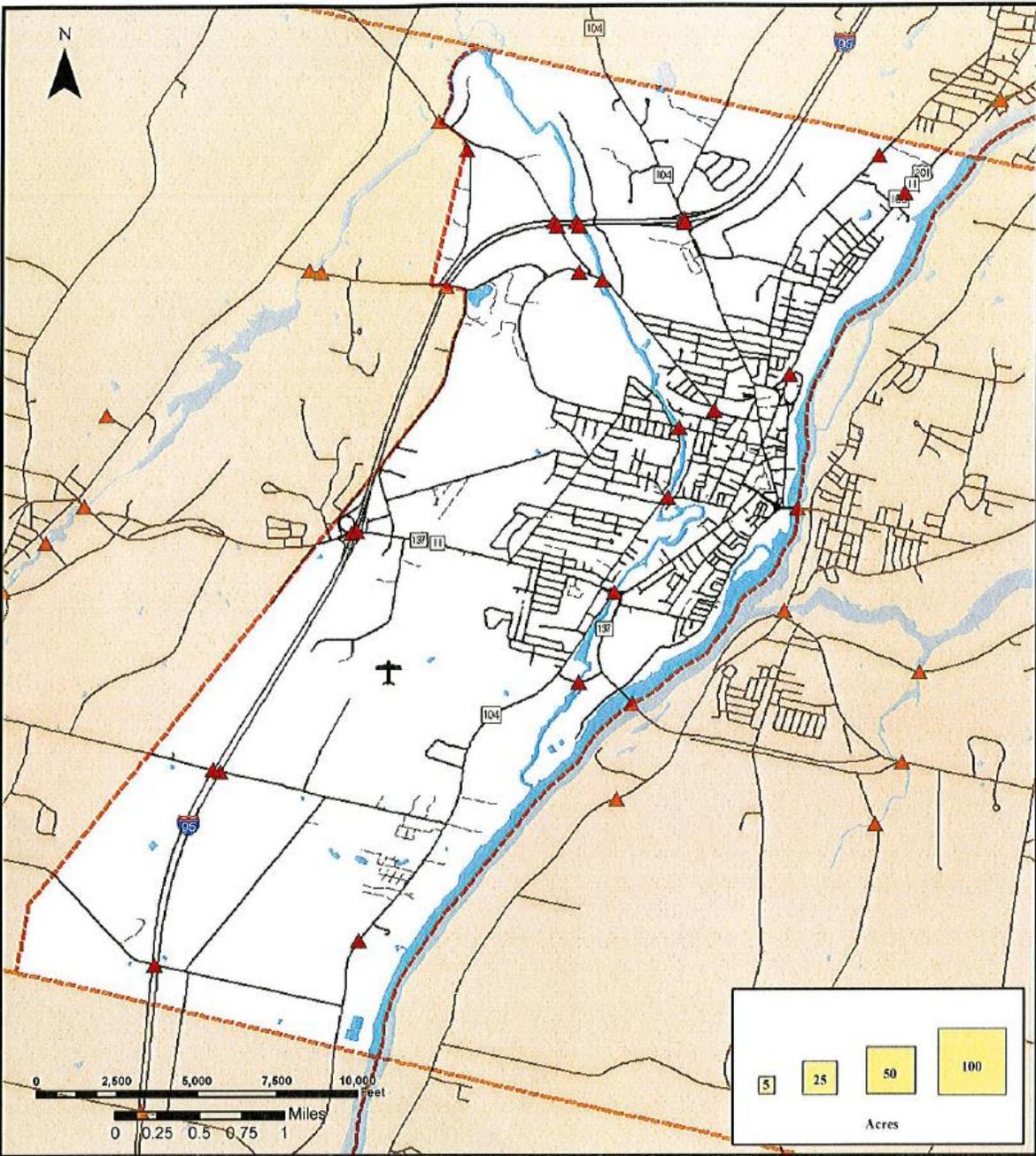
MAP 5-3

Map Legend

-  High Crash Locations (Road Sections)
-  High Crash Locations (Points)



Neither KVCOC nor the City of Waterville assume any liability for the data delineated herein. Boundaries depicted on this map are for planning purposes only. Boundary data is based on digital sources and may differ from ground-based observations.
 Data Sources: Maine Office of GIS, Maine DOT
 Created 10-24-2012 by JG

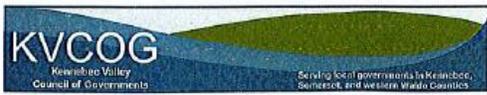


City of Waterville
Kennebec County, Maine
Transportation Map
2012 Comprehensive Plan

MAP 5-4

Map Legend

- Roads
- ▲ State Bridges
- ✈ Airports



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 Created 10-24-2012 by JG

BUS SERVICE

Kennebec Explorer

KVCAP operates the Kennebec Explorer which provides low-cost fixed route community bus service for Waterville, Fairfield, Augusta, Gardiner, Randolph, and other nearby communities. The service receives funding from MaineGeneral Health, the University of Maine at Augusta, Waterville and Augusta employers, Inland Hospital, municipalities, and the Maine Department of Transportation.

KVCAP intends to increase the service area, hours, and frequency in Waterville to provide enhanced availability for commuters and students. Plans include:

- adding another bus to provide service to Colby College, Thomas College, and the Western Avenue corridor,
- increasing the service hours of the bus linking Waterville and Augusta to allow intercity commuter access and increased access to the new MaineGeneral facility,
- providing public transit service linking Waterville to the Skowhegan-Madison region to provide greater access to Kennebec Valley Community College (KVCC) facilities at Hinckley and access to Waterville based businesses and services from Somerset County, and
- extending routes into Somerset County with connections to the Waterville system to improve intercity access.

The Kennebec Explorer public transit system, which provided 64,329 rides during 2012, is intended to serve commuters. Routes and schedules are posted on the Internet. See also Map 5-5 provided by KVCOG.

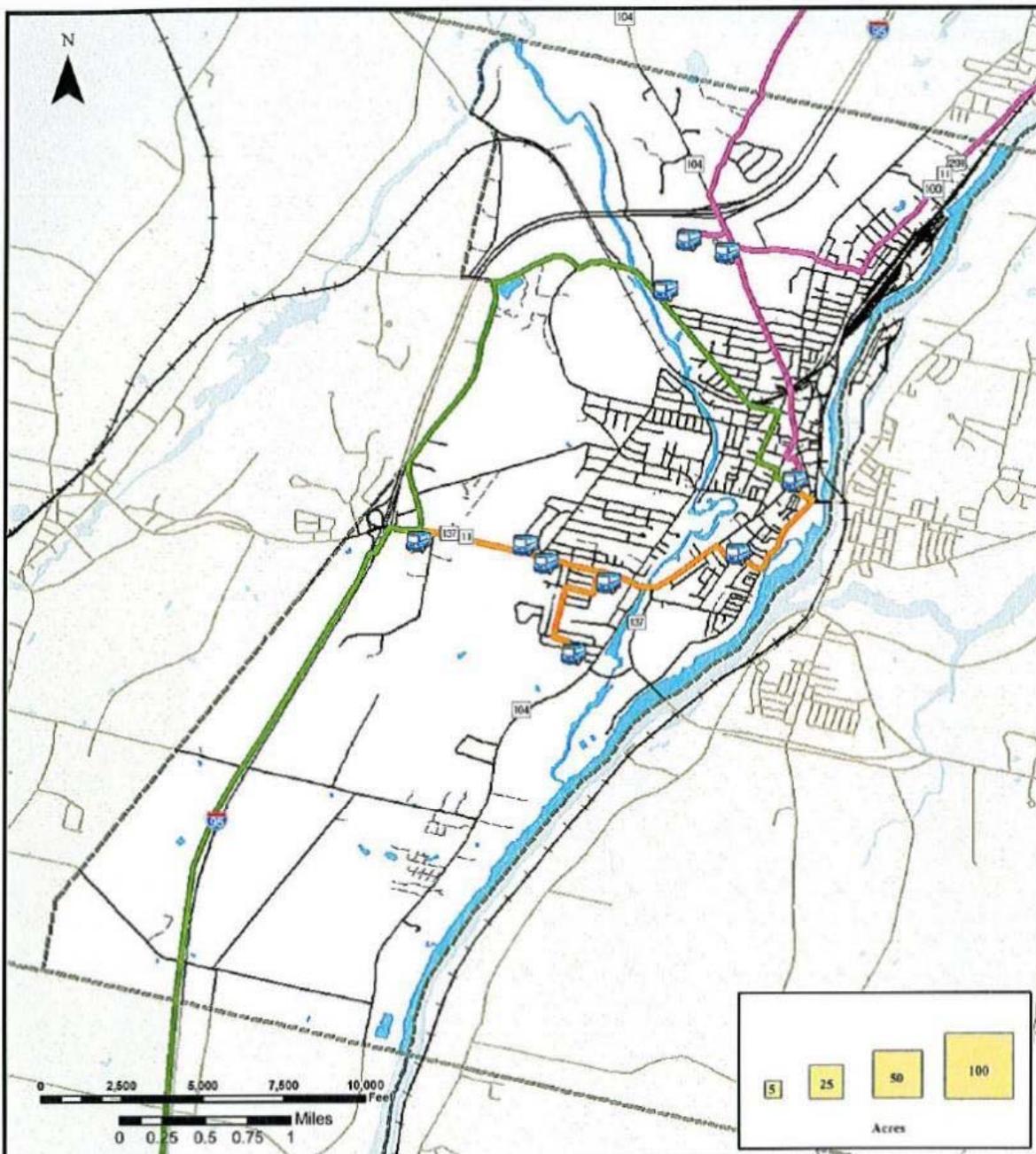
Para-Transit Service

KV Van offers door-to-door van and volunteer driver service to eligible passengers including those served by social service organizations, disabled, elderly and low-income clients in both Kennebec and Somerset counties needing transportation to Waterville. Destinations are doctors' offices, adult day-care, mental health facilities and other Medicaid service centers.

The KV Van system provided over 375,000 rides and transported Kennebec and Somerset County passengers over 8.7 million miles during 2012.

SIDEWALKS

Walking is an important part of a healthy life-style and offers the added benefits of helping to decrease traffic congestion, air pollution, and the need for parking spaces. Waterville residents walk to school, shopping, services, and, as Table 5-3 indicates, 10.9% of Waterville's workforce walks to work.

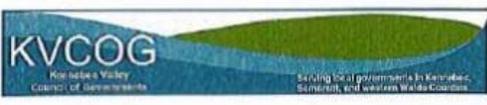


City of Waterville
Kennebec County, Maine
Public Transportation Map
2013 Comprehensive Plan

MAP 5-5

Map Legend

-  Major Bus Stops
- Kennebec Explorer Service**
-  Kennedy Drive
-  WalMart and Fairfield
-  Waterville Augusta



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 Data Sources: Maine Office of GIS, Maine DOT
 Created 09-18-2013 by JG

Many walk by choice, but others walk by necessity. Some do not own cars, are too young or too old to drive, or find public transportation too expensive or inconvenient.

Residents walking by choice, presumably, are more likely to walk, the closer they live to their destinations and the better maintained and plowed in the winter-time the sidewalks are. Currently, the City plows only 50% of our sidewalks. [By ordinance, downtown merchants are required to shovel the sidewalks in front of their stores.]

Sidewalks receiving the most use should have the highest priority for maintenance and plowing. Those include sidewalks in the downtown and in the densely developed residential areas surrounding the downtown, east of the Messalonskee and within roughly three-quarters of a mile of the Kennebec River.

The highest residential density in the City is in the South End. The South End, an area of about a third of a square mile (.32 square miles) with a 2010 population of 2,316 persons, holds 14.7% of the City's population on 2% of its land area. By way of comparison, the City as a whole has 15,722 persons on 13.59 square miles of land, an average of 1,156 persons per square mile. The South End has a population density roughly 6 times that of the City as a whole.

Waterville has about 40 miles of sidewalks. For the most part, sidewalks in the central downtown area are in good to excellent condition, but no accurate picture of the condition of neighborhood sidewalks is available. Typically, the City repairs sidewalks in conjunction with roadwork.

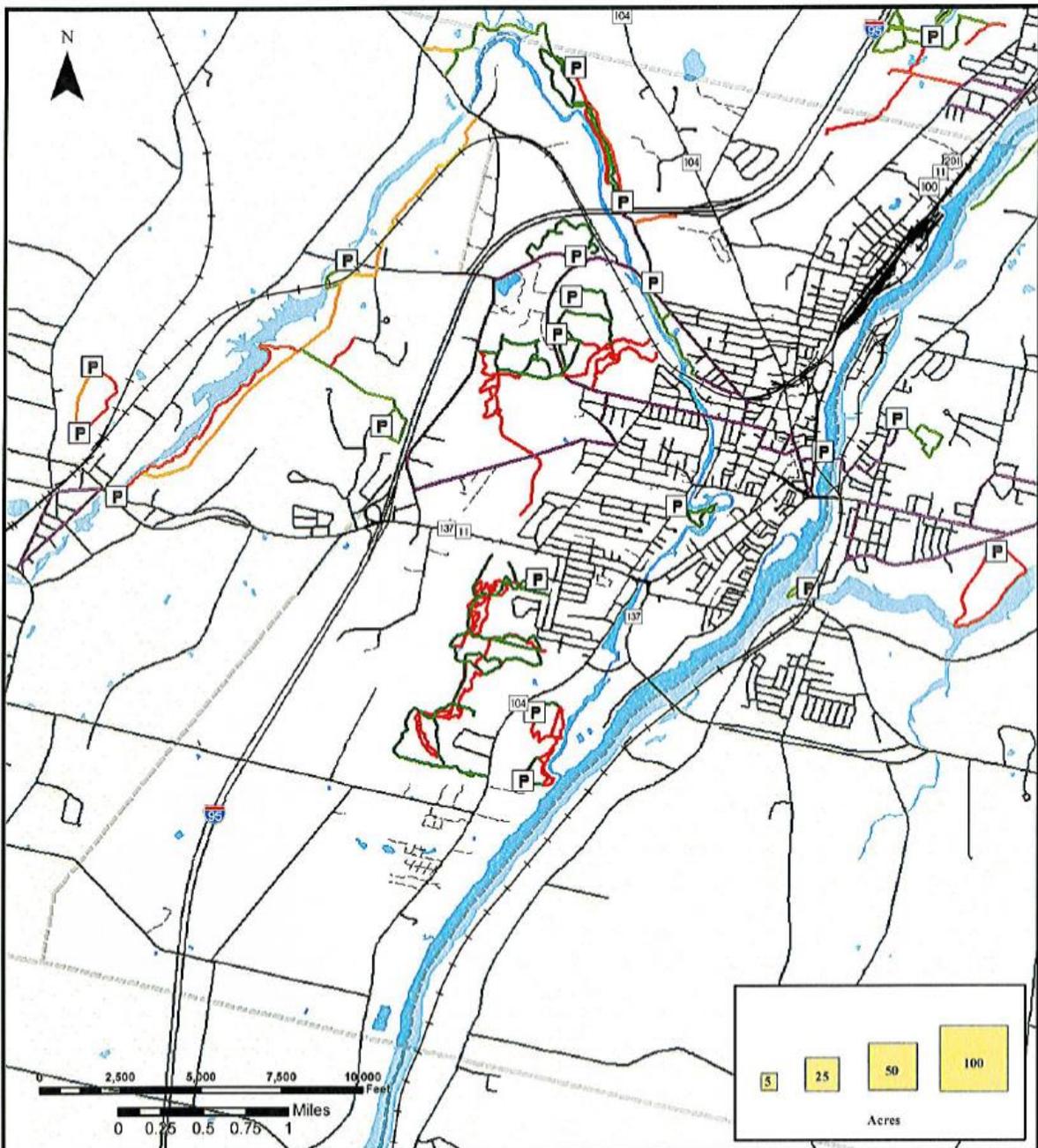
TRAILS

At present, most of Waterville's trails are not connected to other trails. Two notable exceptions are the Inland Hospital trail which connects to the Pine Ridge Trail, the Junior High (Butch Merritt) Trail, and the Thomas College Trail, and the trail behind North Street Park and the Alford Youth Center which connects via streets and sidewalks to the Two Cent Bridge and to the Quarry Road trails.

Trails are described in Chapter 7: Recreation Facilities. See also Map 5-6 provided by KVCOG, the Parks and Recreation page of the City of Waterville's web site and the Kennebec Messalonskee Trails web site.

BICYCLE ROUTES

For the same reasons that sidewalks are important, safe routes for both bicycle commuters (utility riders) and recreational riders and bike racks at destinations must become a priority for the City. At the present time, the only dedicated bicycle lanes in Waterville are on Mayflower Hill Drive and on roads connecting the North Street Park trail to the Head of Falls. However, the Greater Waterville Bicycle and Pedestrian Advisory Committee in conjunction with Sustain Mid-Maine and KVCOG is developing a plan to improve safety.



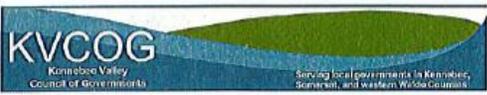
City of Waterville
Kennebec County, Maine
Public Trails Map
2013 Comprehensive Plan

MAP 5-6

Map Legend

- P Trail Parking
- Single Track for Bicycle / Pedestrian Use
- Double Track for Bicycle / Pedestrian Use
- Multi Use (Shared ATV)
- Sidewalk / Paved
- Move More Sidewalk Routes

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 Data Sources: Maine Office of GIS, Maine DOT
 Created 09-18-2013 by JG



DOWNTOWN PARKING

Parking within the immediate downtown area (defined by the Kennebec River, Spring Street, Elm Street, and Union Street) has been studied several times over the past couple of decades. Issues addressed were:

- **Amount of parking:** there is just about enough parking to satisfy current needs, but if more development (or greater use) occurs, there will be a shortage;
- **Hours of use:** some prime, short-term shopper parking is being used by employees and owners as long-term parking, although stricter police enforcement and efforts by Waterville Main Street have helped to lessen the problem. Stars were painted on long term parking spaces.
- **Location of parking:** additional parking is available at the Head-of-Falls, but, because of distance and concern about security in this currently somewhat isolated area, it remains underused.

Two solutions have been proposed: a parking garage in or near the Concourse and a shuttle bus loop to waterfront parking lots.

RAILROAD TRANSPORTATION

Two branches of Pan Am's rail right-of-way cross Waterville:

The east branch extends from the rail yard off of College Avenue through the Head-of-Falls (Downtown). From there it crosses the Kennebec River into Winslow and heads south to Augusta. Historically, it was called "the lower road" as it connected through Brunswick to Portland.

The west branch (also called the back road) was the Springfield Terminal Company's main line. It extends from Bangor (and points north) to Fairfield and south and west across Waterville and then northwest along Messalonskee Stream to Oakland, Leeds, and Lewiston (and points south).

Freight

The west branch, the link between northern and southern Maine, carries larger volumes of freight than the east branch which ends in Augusta. Pan Am operates both branches out of its main freight marshaling and "train building" yard in Waterville, between College Avenue and the Kennebec River. Pan Am repairs and rehabilitates cars and locomotives there as well.

Track Conditions

Railroad track conditions vary through Waterville. Pan Am's branch line to Augusta is rated by the Federal Railroad Administration (FRA) as Class I, meaning it is in fair condition, at best. Freight trains are expected to adhere to a 10 mph limit. The main (Lewiston/Bangor) line through Waterville is in better condition with most segments rated as Class II or III, fair to good.

Rail Passenger Service

Train passenger service extends as far north as Brunswick and its further extension would be a boon to Waterville. However, at this time, it is not clear when passenger service will come to Waterville, over which line, and where the train station will be located.

AIR TRANSPORTATION

The municipally owned and managed Robert LaFleur Airport opened in 1931 and is located east of I-95 and south of Kennedy Memorial Drive, off of Airport Road. It is comprised of approximately 368 acres, two runways (designated 5-23 and 14-32), aircraft parking aprons and various taxiways, publicly- and privately-owned aircraft hangars, utilities, and navigational aids that support aviation activity. The two runways intersect at the northern end of the Airport.

In 2012, the City adopted an update of the 1996 Airport Master Plan. That study, posted on the City's web site, describes all of the facilities and their condition.

TRANSPORTATION IMPROVEMENTS

Recent MDOT Projects in Waterville

In 2011 and 2012, the State:

- Inter-connected and coordinated all of the traffic lights in Waterville
- Participated in the reconstruction of Campus Drive
- Provided funding to construct a road across land purchased from Mount Merici Academy [The new road will run between the Kennebec Water District pumping station on Chase Avenue and upper Western Avenue, east of Charland Terrace. The portion of Western Avenue between the new road and First Rangeway will be closed to through traffic, providing access only to the few homes on that road segment. Eliminating the fifth leg of the intersection of Chase Avenue, Western Avenue, and First Rangeway will improve traffic safety.]
- Provided funding for the construction of a bicycle/pedestrian trail from the Alford Youth Center, along the Messalonskee Stream and local streets, to the Head of Falls.
- Paved Eustis Parkway, Grove Street, and Water Street.
- Repaved a portion of Carter Memorial Drive.

City Road Improvement Program

The Public Works Department assessed the condition of public roads and entered that information into Road System Management Software 11 (RSMS 11) to create a five-year pavement maintenance program shown in Table 5-4 below.

TABLE 5-4**PAVEMENT MAINTENANCE PLAN****2013-2017***

STREET NAME	YEAR	METHOD OF REPAIR
Drummond Avenue 1&2	2013	Shim/Overlay & Reclaim
Pleasant Hill Drive	2013	Reclaim
Blue Jay Way	2013	Reclaim
Penny Lane	2013	Reclaim
Drummond Avenue 3	2013	Reclaim
Ticonic Street	2013	Mill/Fill
Cool Street	2014	Mill/Fill
Patricia Terrace	2014	Reclaim
Greenwood Street	2014	Reclaim
Wolfe Street	2014	Reclaim
Central Avenue	2015	Reclaim
Highwood Avenue 2	2015	Reclaim
Cleveland Place	2015	Reclaim
Coolidge Street	2015	Reclaim
Jackson Street	2015	Reclaim
North Second Rangeway	2015	Shim/Overlay
Aubrey Street	2015	Crack Seal
Ursula Street	2015	Crack Seal
Martin Avenue	2015	Crack Seal
Cherry Hill Terrace	2016	Shim/Overlay
Cherry Hill Terrace	2016	Reclaim
Cherry Hill Drive	2016	Reclaim
Eaton Drive	2016	Reclaim
Westview Drive	2016	Reclaim
Sawyer Street	2016	Reclaim
Crestwood Park	2016	Shim/Overlay
Evergreen Drive	2016	Shim/Overlay
Gilbert Street	2016	Crack Seal
Morgan Street	2016	Crack Seal
Sterling Street	2016	Crack Seal
Rideout Street	2016	Crack Seal
Franklin Street	2016	Crack Seal
Oakland Street	2017	Reclaim
Mathews Avenue	2017	Mill/Fill

Violette Avenue	2017	Mill/Fill
Aubrey Street	2017	Shim/Overlay
Ursula Street	2017	Shim/Overlay
Martin Avenue	2017	Shim/Overlay
Gilbert Street	2017	Shim/Overlay
Morgan Street	2017	Shim/Overlay
Sterling Street	2017	Shim/Overlay
Rideout Street	2017	Shim/Overlay
Franklin Street	2017	Shim/Overlay

*This information is subject to change, depending upon variables such as utility work scheduled, current condition of roads, location of roads, cost of pavement, and funding.

- ▶ Crack Seal (Routine) – A polymer modified liquid is applied to cracks to seal them and prevent water infiltration into the road base.
- ▶ Shim (Preventative) – A thin layer of pavement, usually less than 1 inch, is dragged to fill in depressions and ruts.
- ▶ Shim/Overlay (Preventative) – Existing pavement surface is left in place and an average 1/2 inch shim coat of pavement is applied to fill cracks and level any low spots along curb lines. Finally, a 1+ inch overlay application of surface mix is applied.
- ▶ Reclaim (Rehabilitate) – Existing pavement material is ground and reshaped to provide optimum pitch, elevation and contour before receiving, typically, a 2 inch base layer of binder asphalt material and a 1+ inch overlay application of surface mix.
- ▶ Mill & Fill (Rehabilitate) – Several upper layers of pavement are planed off to lower and add the correct shape to the road. Finally, a variable depth base layer of binder asphalt material and a 1+ inch overlay application of surface mix is applied.
- ▶ Full Reconstruction (Reconstruct) – Pavement and deficient sub-base materials are completely removed, new gravel is placed over the remaining sub-base and reshaped and graded. Finally, a 3 inch base layer of binder asphalt material and a 1+ inch overlay application of surface mix are applied. Typically, reconstruction projects involve substantial utility and drainage upgrades, sidewalk and esplanade improvements, and new signs, street striping and safety enhancements.

All of the information above concerning the City’s road improvement program was provided by Engineer John Lombardi of the City’s Public Works Department

ISSUES AND NEEDS

1. Transportation Funding. Waterville needs to take steps to ensure Federal and State

funding to support a wide range of transportation projects.

2. Airport. There is a need to maintain the airport as an important regional transportation and economic asset.
3. Road/Sidewalk Maintenance. There is a need to provide for cost effective maintenance of the City's roads and sidewalks.
4. Alternative Modes. There is a need to plan for and fund/support bike lanes, pedestrian safety, trails, public transportation and rail transportation.

CHAPTER 6. PUBLIC FACILITIES AND SERVICES

Public services are provided by the City's Public Works Department, Police Department, Fire Department, and School Department, and by four quasi-municipal entities, the Kennebec Water District, the Waterville Sewerage District, the Kennebec Sanitary Treatment District, and the Waterville Public Library. The facilities and services of each is described below.

Day-time Versus Resident Population

It is important to note that public services are provided not only to Waterville residents, but also to persons who commute to Waterville to work or travel to Waterville for shopping, medical and professional appointments, and entertainment and other amenities offered in our service center community. In 1991, Thomas College estimated that the number of persons in Waterville swelled to approximately 27,000 during the day-time. Almost a decade later in 2000, the Census estimated that our day-time population was down to 21,000. Although the second estimate was considerably lower than the earlier number, it still was significantly higher than the year 2000 resident population of 15,605.

PUBLIC WORKS DEPARTMENT

The Public Works Department is staffed by 25 employees who are responsible for multiple functions. They maintain the City's roads and sidewalks, fleet, traffic lights and signs, various buildings, and the City-owned Robert Lafleur Airport, a general aviation airport. In addition, the Department has the enormous job of collecting approximately 5,000 tons of household waste per year as well as seasonal collection of leaves, yard waste, and Christmas trees. Although the Waterville Sewerage District (WSD) maintains catch basins, the Public Works Department must keep covers free of leaves, debris, and ice. Finally, the Department coordinates infrastructure repair with the Kennebec Water District (KWD) and WSD and other utilities.

Public Works Compound

The Public Works Department is headquartered at the Public Works Compound, a 3-acre site located on Wentworth Court off of Main Street, just north of the downtown. The Compound includes six buildings as well as parking areas for vehicles and other equipment. Buildings within the Compound include the administrative office building, a new fleet maintenance building, a salt/sand storage building, a six bay equipment storage building with attached paint/sign maintenance and facility maintenance workshops, a four bay equipment storage building, and an operations and maintenance facility that is utilized by both Public Works and Parks and Recreation personnel.

Fleet

The Public Works Department owns and maintains 60 vehicles and over 100 other pieces of equipment. Major pieces of equipment include twelve heavy duty dump trucks which are used for hauling as well as plowing and sanding, two medium duty dump trucks that are used for

plowing and sanding dead end streets and parking lots, two waste collection (packer) trucks, a roll-off vehicle, two heavy duty loaders (one that is also used to plow snow), one medium duty loader, two street sweepers, one lift truck for maintaining traffic signals and overhead signs, three pickup trucks, a general duty farm tractor used for roadside mowing and clearing snow from fire hydrants, three sidewalk tractors, one skid-steer and four large snow blowers (one is used at the Airport, one is used in the snow dump, and two are used to load trucks). The Fleet Maintenance Division also maintains vehicles and equipment for the Police Department and the Fire Department.

Snow Removal

The Department utilizes 13 plow routes to clear snow from 354 roads or 180 lane miles of public roads. The Department also removes snow from approximately 22 of the City's 40 miles of sidewalks and from municipal and school parking lots, school yards, and the airport.

The first priority after plowing and sanding is to remove snow banks from the downtown area and the Concourse, then to remove snow banks from heavily traveled areas to improve safety. The same personnel who plow streets have to plow sidewalks and remove snow banks. This creates scheduling problems during large storms, because drivers have to be sent home to rest before undertaking sidewalk snow removal and snow hauling.

Public Ways

The Department is responsible for maintaining 180 lane miles of streets (approximately 90 miles of public roads), 40 miles of sidewalks, the Concourse, four municipal parking lots and four school parking lots. The Department conducted a complete road surface survey of the City and used the results to develop a 5-Year Pavement Maintenance plan. [See Table 5-3 in Chapter 5, Transportation.]

Other Maintenance

The Department is responsible for cleaning the City's catch basins, as well as maintaining approximately 5,000 signs, and maintaining street and traffic lights. The 2009 budget for street/traffic lights was \$307,500. The city pays the Waterville Sewerage District approximately \$415,000 for storm water management which includes maintenance of the catch basins.

Solid Waste

The Public Works Department provides curbside collection of solid waste (approximately 16 tons per day) to about 4,100 City households. Curbside collection is provided on a weekly basis to dwellings and apartment buildings with 6 or fewer units. Waste is hauled to a solid waste transfer station administered by the Town of Oakland and is subsequently transported under contract to the Penobscot Energy Recovery Company (PERC) waste-to-energy plant in Orrington.

Recycling

A recycling center, privately-owned and operated by Skills, Inc. and located on Industrial Road, is open to the public Monday through Saturday. According to the latest information from the Maine State Planning Office, in 2010 Waterville had a recycling rate of 24.68%, down from 35.5% in 2002.

Airport

The City is responsible for maintenance of the terminal building, for plowing the airport driveway, parking lot, and runways, and for undertaking various runway improvements. See Chapter 5: Transportation for more information about the airport.

Issues. Issues facing the Public Works Department include the following:

1. Regional Service Delivery. Economies of scale may be achieved by delivering public works services on a regional basis. However, staff levels would probably have to be expanded to accommodate any additional service deliveries on the local level.

2. Pavement Plan. There is a need to continue the pavement management plan so that overall pavement conditions do not continue to deteriorate.

3. Fleet Replacement. There is a need to adopt a fleet and equipment replacement program and include it in a 5-year capital improvement program. There is also a need for a similar effort relative to traffic signs and signals.

4. Sidewalks. The City's 40 miles of sidewalks are not being maintained or upgraded on a regular basis. Moreover, there is no long-range plan to address the question of which streets will have sidewalks on both sides, which streets will have sidewalks on one side, and which streets will have no sidewalks.

POLICE DEPARTMENT

Staff

The Waterville Police Department is headquartered in a 12,000 square-foot facility constructed at 10 Colby Street in 2013. It is staffed by 31 officers, including a Chief, a Deputy Chief, four Detectives, six Sergeants, 18 patrol officers, and a school resource officer. The Department has 12 vehicles which are replaced on a rotating basis. The Department has mutual aid agreements with Fairfield, Oakland, and Winslow.

Budget

The annual budget was \$2.85 million in FY 2009. About 78% of the budget was devoted to personnel costs. Since 1995, the Department has been successful in obtaining a number of federal and state grants totaling over \$1.2 million for advanced technology and equipment, community policing initiatives and enforcement.

Dispatch Services

The City's Waterville Regional Communications Center employs eight Emergency Communications Specialists who provide 24-hour dispatch services to the police departments, fire departments, (including emergency medical services) and public works departments in Waterville, Oakland, Winslow and Clinton, as well as fire and EMS dispatching services for Sidney, Belgrade, Rome, China, and Albion. As such, it is a regional service center for the greater Waterville area, and an excellent example of successful regionalism. In 2009, the Center handled approximately 56,400 calls.

Traffic Accidents

In 2009, the Department responded to 1,118 traffic accidents.

Crime

Waterville had a crime rate of 47.61 per 1,000 population in 2008, according to the Uniform Crime Reporting Program of the Maine State Police. Waterville's crime rate reflects the fact that, although many crimes are committed by people coming into Waterville from surrounding towns, crime statistics are calculated using only the City's population. Crime rates for other communities include: Winslow 25.97; Oakland 20.15; Fairfield 34.49; Augusta 69.51; Auburn 34.0; Lewiston 33.34; and Brunswick 21.25.

The Department utilizes the Kennebec County jail in Augusta for arrests. Arrests in 2008 totaled 2,050 and included arrests for the following crimes:

Homicide	0
Rape	1
Robbery	2
Burglary	14
Larceny/Theft	253
Assault	<u>186</u>
Total	456

Campus Security

The Police Department has full jurisdiction on the campuses of Colby College and Thomas College, although each college also maintains its own security force.

Outreach

The Department operates many public awareness and outreach programs, including the DARE Program through the schools and a reading program in the schools.

Issues and Needs. Major issues and needs facing the Police Department include the following:

1. Regionalism. The Police Department provides regional services through the Dispatch Center.

However, there may be opportunities to combine policing functions with other communities, with a net increase in service and a net savings to participating communities.

2. Staffing. Staffing levels are barely adequate to maintain public safety. The department is staffed at average levels for a similar community its size, however, the challenges of policing in a service center stretch available resources and frequently hamper officers' ability to engage in proactive policing. One concern is that Waterville invests in training its officers at the Criminal Justice Academy, and many of these officers subsequently move on to serve other communities.

3. Parity in Pay. The employees of the Waterville Police Department are paid less than their counterparts in other parts of the State. This disparity results in officers leaving the department to seek employment with agencies offering higher pay and better benefits.

FIRE DEPARTMENT

Staff

The City's Fire Department operates out of Central Fire Station which is located at the major intersection of College Avenue, Main Street, Elm Street, and Center Street. The Department is operated by a full-time staff of 18, including the Fire Chief who also is the chief of the Winslow Fire Department, 3 captains, three emergency medical technicians, 12 fire fighters, and four companies of call personnel headed by a captain and a lieutenant. There are 45 call personnel, including several from surrounding communities, who are paid on an hourly basis. The Waterville Fire Department has mutual aid agreements with Oakland, Fairfield, Winslow, and Sidney.

Equipment

The Department has three major vehicles including two engines and one tower truck. Other vehicles include a utility pick-up truck, a medium-duty rescue truck, one brush unit, one hazardous materials response truck, one Cascade air unit, one rescue boat, two jet-skis, a Kubota, a snowmobile, and a toboggan.

Budget

The current budget for the Fire Department includes \$972,174 for fire-fighting. Hydrant rental, which is funded separately by the City, amounts to about \$200,000/year.

Calls

The Department responds to approximately 1,500 calls per year. Of those, approximately 80% are EMS-related.

Programs

The Fire Department's programs and activities include a fire prevention program through the schools, inspections of businesses and apartments, a technical rescue squad for water rescues, high angle rescue, a hazardous materials response team, and a fire investigation team.

Issues, Needs. Major issues and needs facing the Fire Department include the following:

1. The location of the Waterville and Winslow fire stations directly across the river from each other does not provide the most expeditious response times to the southerly portions of Waterville or Winslow, Oakland, or Sidney, towns with which Waterville has mutual aid agreements. Solutions that have been given some consideration include [moving the Winslow fire department into Waterville's Central Station and] building a new sub-station in Winslow near the end of the Donald Cater Bridge [and moving the Winslow police department into the vacated Winslow fire station on Benton Avenue] or building a sub-station at the airport. A less expensive and less effective possibility would be storing a fire engine and stationing a man at the former fire sub-station on Western Avenue.

WATERVILLE PUBLIC LIBRARY

The Waterville Public Library, located at 73 Elm Street, was first established in 1896 as "The Waterville Free Public Library Association." Between 1896 and 1905, the Library Association's collection was housed in private office buildings. In 1905, the City constructed the Waterville Public Library building at its current location with financial help from Andrew Carnegie. The building was renovated and expanded following a fire in 1960. Second and third expansions were completed in 1976 and 2010.

The Maine Legislature chartered the Waterville Public Library as a public corporation in 1935. It has functioned since that time as a quasi-municipal entity that is governed by a 17-member board of trustees, each of whom serves a staggered four-year term. Board members are nominated by the Mayor and are subject to confirmation by the City Council. The Library is staffed by a full-time director, a cataloger, a children's librarian, a technical service coordinator, one person who serves as head of circulation control and as the adult services advisor, a typist/bookkeeper who also serves as loan coordinator, a janitor, and 11 part-time personnel.

The Library's current collection consists of approximately 96,000 volumes and subscriptions to over 125 periodicals. In 2009, the Library circulated over 155,000 books and other items including magazines, pamphlets, audio-cassettes, and DVDs.

Issues/Needs

1. More Parking. Parking is a problem for library patrons, especially on peak shopping days and when the Farmers' Market is in operation.

2. Outreach. Some potential patrons are unable to use the library, because they lack transportation.

SCHOOLS

The Waterville School Department is part of Kennebec Valley Consolidated Schools, Alternative Organizational Structure (AOS) 92, formed by Waterville, Winslow, and Vassalboro. The proposed AOS budget for the 2010-2011 school year was \$1,667,881, Waterville's share being \$810,307. Special education employees and transportation no longer are shared expenses.

Facilities. The City's school facilities have been well maintained over the years and generally are in good condition. They include the following:

1. George J. Mitchell School. The George J. Mitchell School (Brookside School until 1995) was constructed in 1969 and is located on a 28.1 acre parcel on Drummond Avenue. It serves grades Pre-Kindergarten through three on a City-wide basis.

Educare, a 37,800 square foot early childhood learning center, attached to the Mitchell School, opened in the fall of 2010. It serves approximately 210 children, ages 0 to 5, from throughout the region. Children are primarily from low-income families and most are from Waterville.

2. Albert S. Hall School. The Albert Hall School (formerly the Pleasant Street School), which was constructed in 1922, is located on a 1.3-acre site at the corner of Pleasant Street and School Street. It serves grades 4-5 City-wide.

3. Waterville Junior High. Waterville Junior High is located on a 44-acre parcel on West River Road. The building was constructed in 1978 and serves grades 6 through 8 City-wide.

4. Waterville Senior High School. Waterville Senior High School is located on a 29.5 acre parcel on Brooklyn Avenue and serves grades 9 through 12. The building was constructed in 1962, with major additions in 1966 and 1970 and major renovations completed in 2011 and 2012.

5. The Superintendent's Offices. The Superintendent's offices are located across Messalonskee Avenue from the High School.

The Regional Area Resource Center is located within the Waterville Senior High School and serves the communities of Vassalboro and Winslow, in addition to Waterville.

The Mid-Maine Technical Center serves area vocational students and is attached to the High School.

Alternative Education currently is housed at the Children's Home for Little Wanderers on Silver Street.

Waterville Adult Community Education is housed in the Waterville Senior High School building.

Enrollment

Total school enrollment has declined by 9.4% over the past 12 years. Waterville's school enrollment is expected to continue to decline through the year 2020, based on population estimates and the state-wide trend. State-wide enrollment declined by 12% over the last decade.

Overall, projected enrollments will not exceed the capacity of the system. Waterville will not have to replace any school facilities within the ten-year time frame envisioned by this plan.

TABLE 6-1

WATERVILLE PUBLIC SCHOOLS ENROLLMENT

	Pre-K	K	1-3	4-5	6-8	9-12	Other	Total Enrollment
2000								2,043
2009	20	138	383	262	417	635*	-	1,855*
2010		617	K-3	261	416	599		1,893 + tuition students
2012-13						603		1,850**
2015**								1,800***
2020**								

*Enrollment includes 22 tuition students from Vassalboro.

**Including Educare

***Projection

Source: Superintendent's Office and KVCOG.

State Aid

The State educational subsidy increased almost every year of the first decade of this century. In 2010, however, the subsidy declined and is expected to continue to decline for years to come.

Issues: Major issues and needs facing the School Department include the following:

1. State Aid. The State's declining financial commitment to schools, not only in Waterville but throughout the State, means that an increasingly larger percentage of the school budget will have to be supported by the local property tax.

2. High Turnover. Despite stability in the overall numbers, there is a high turnover of students (30-40%) as families move in and out of the City. This detracts from the learning process.

3. Faculty Sharing. There may be opportunities for sharing faculty members among high schools in the region, resulting in cost savings.

WATER SUPPLY

Kennebec Water District

The Kennebec Water District (KWD) was established in 1899 as a quasi-municipal entity to provide water for domestic use and fire protection to the City of Waterville and the Fairfield Village Corporation and, later, to the communities of Fairfield, Winslow, Benton, and Vassalboro. It also provides water for the Town of Oakland through the Maine Water Company system (formerly AquaMaine).

The District is governed by a 10 member board of elected trustees. Day-to-day operations of the District are directed by a General Manager, who supervises the work of 27 employees. Five employees work out of the water treatment facility in Vassalboro, seven in the business office at 6 Cool Street and the remainder at the Operations and Maintenance and Engineering office on South Street in Waterville.

KWD serves the vast majority of the City's dwelling units. KWD has mains in most city streets and roads with the exception of parts of Louise Avenue and Washington Street and its side streets, and some rural areas such as Webb Road, Trafton Road, Eight Rod Road, Country Way, Stone Ridge Drive, Ashley Terrace, and Mountain Farm Road. KWD has 4,312 residential, 721 commercial, 116 governmental, and 6 industrial customers in Waterville.

Governmental customers include City-owned buildings, the fire department, parks and recreation fields, the National Guard Armory, the post office, Waterville Sewerage District, and school facilities. The vast majority of governmental customers are Waterville Housing Authority units in various locations around the City (including 17 at Forsythe Terrace on Louise Avenue.) In the KWD system, multi-unit buildings can be served either by a master meter or by meters in each individual unit.

As of January 2007, the cost for a residential customer using a typical demand of 2000 cubic feet of water per quarter is \$83.50. There is a minimum charge of \$58.44, which includes 300 cubic feet of water, plus additional consumption at \$1.474 per each hundred cubic feet used.

Source

The District's sole source of supply is China Lake. Water flows from the lake into a 12 million gallon per day capacity filtration facility in Vassalboro, approximately one mile north of the lake. Upon leaving the plant, the finished water travels by gravity through parallel 36 and 24 inch mains approximately 8.7 miles to the primary KWD pumping station on Western Avenue in Waterville.

Currently the daily water demand of the District is 3.5 million gallons, which is well below plant capacity and the estimated “safe yield” of China Lake, 20 million gallons per day in a prolonged drought. To meet the low demand, the District typically only needs to operate its treatment plant and pumping station approximately 8 hours per day.

Filtration Plant

In 1993 the District completed construction of the 12 million gallon per day water filtration plant. The plant was constructed to comply with the federal Safe Drinking Water Act which required that utilities using surface water which did not meet certain quality criteria provide filtration that would bring the water to regulated standards. As a result of engineering investigations prior to the plant construction, the District rejected a move to groundwater wells as it was determined not to be as economical as constructing a plant to treat China Lake water.

Since plant operation began, the District has met all regulated standards. The treatment system consists of coagulation, clarification, and filtration utilizing Tricon Microfloc technology. In addition to its filtration process, the District adjusts pH with sodium hydroxide and adds polyphosphate for corrosion control in its piping system. It disinfects the water using sodium hypochlorite and adds fluoride.

Backwash from the treatment process is sent to on-site settling lagoons and then to a drying bed for dewatering. The dried residuals are trucked to the waste management facility in Norridgewock. The plant operated for 15 years before space limitations necessitated removal of the accumulated dried residuals.

Water Storage

Also required by the Safe Drinking Water Act was an upgrade from the District’s open 40 million gallon reservoir to a closed system. Filtered water from the plant had to be kept contained within pipes and storage facilities to ensure that it did not become contaminated through contact with the environment. In 1991, the District constructed two 6 million gallon concrete storage tanks to replace the open reservoir.

The dam formerly used to contain the open reservoir was partially breached after the new tanks were placed on line. The remaining reservoir pond was allowed to remain as a natural bird and wildlife refuge area. Because runoff pollution into the open reservoir area is no longer an issue for KWD, the surrounding acres are no longer necessary watershed protection. The District is currently offering 170 acres of its 200 acres of reservoir property for sale. Four acres lie in Waterville, with the remainder in the Town of Fairfield.

Transmission and Distribution piping

The total Kennebec Water District water main system consists of over 170 miles of pipe, 633 hydrants, and many facilities including pump stations and storage tanks. The system is responsible for providing water for domestic uses and for public and private fire protection.

Because parts of the system were already in place when KWD came into existence in 1899, there are some portions of the system that are more than 110 years old. Recognizing the need for regular system upgrades, the District maintains an active annual main replacement program. Replacement is prioritized based on several criteria including pipe condition, main break history, water quality, and coordination potential with other municipal street and utility upgrades.

The combination of the size of the pipe grid and pumping capacity provide for a relatively strong public fire protection system of hydrants in the City of Waterville.

Issues, Needs. Major issues and needs facing the Kennebec Water District include the following:

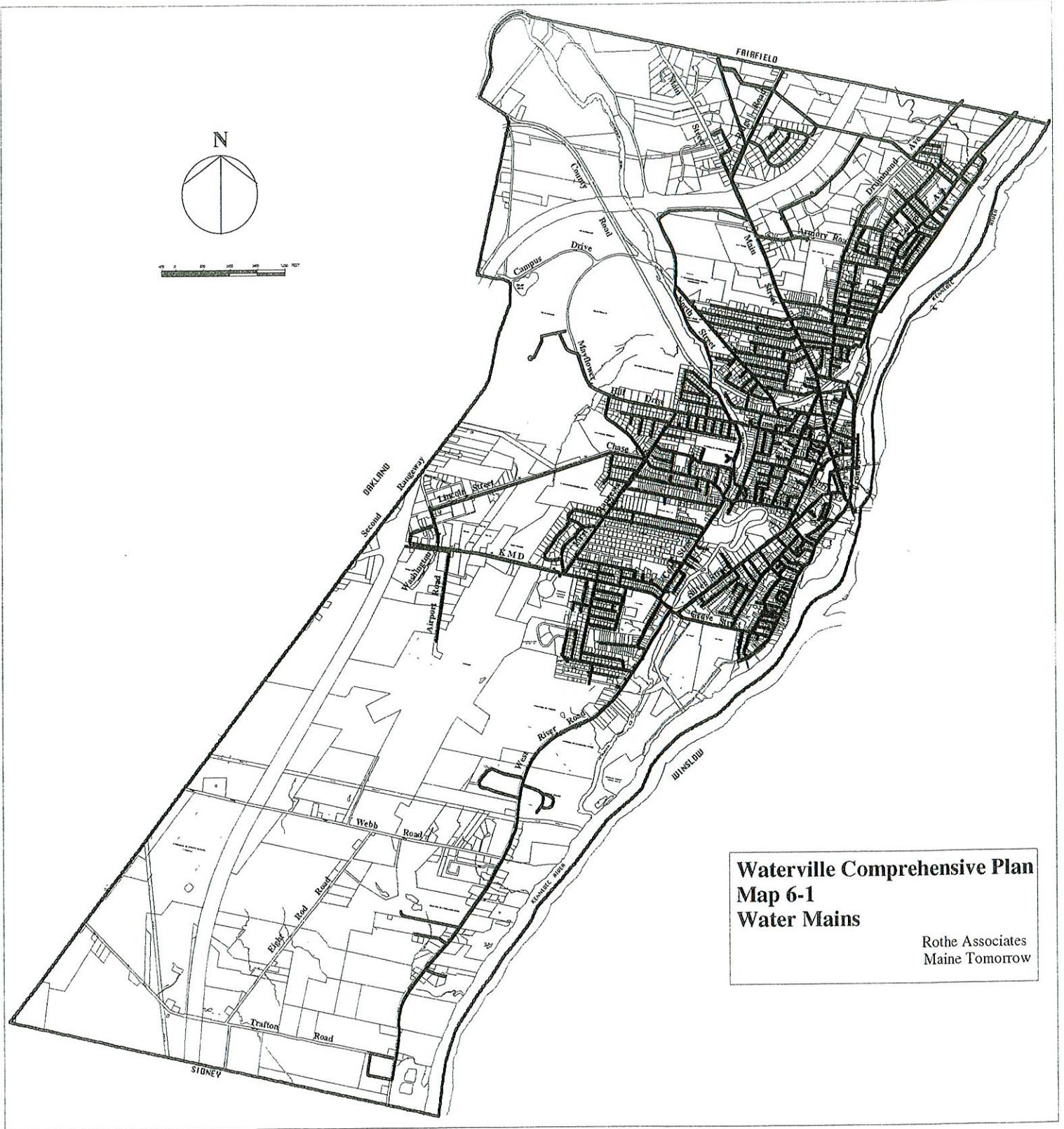
1. Service Limitations. The Kennebec Water District has two service areas in Waterville, its standard zone that serves most of the community and a higher elevation system which includes parts of Waterville west of First Rangeway to the Oakland town line. The higher elevation system has a pumping station on Chase Avenue and a 795,000 gallon storage tank on Shores Road. The District cannot serve additional land areas at elevations over 270 feet without additional pumping and, perhaps, storage systems.

2. Distribution System. KWD plans to continue to address its aging infrastructure by maintaining its current annual main replacement program and seeking additional assistance from programs such as the State Revolving Loan fund and federal grants that might allow an accelerated schedule of replacement. The District currently budgets approximately \$400,000 - \$500,000 annually for main replacements. Replacement of underground water systems can be very expensive and KWD is concerned about being able to replace its system before failures become prevalent.

KWD also is seeking to expand its garage facilities at its operations headquarters on South Street in order to provide adequate protection for its vehicles and equipment.

3. Secondary Water Supply. Because the sole source of supply for the District is China Lake, the District is currently in the process of investigating whether there might be an acceptable alternate source that might be available as a supplemental or emergency source, if something were to happen to the China Lake supply. Investigation is focusing primarily on groundwater supplies in sand and gravel aquifer areas.

4. Operational Efficiencies. KWD also is attempting to limit rate increases by implementing operational efficiencies and is especially interested in potential energy savings. Some KWD facilities are high energy users and the District continually explores opportunities to reduce power and fuel costs. KWD owns and operates a hydroelectric generation facility on Messalonskee Stream in Waterville that provides electricity to run the District's primary pumps and to add revenue through the sale of excess power to the grid.



**Waterville Comprehensive Plan
Map 6-1
Water Mains**

Rothe Associates
Maine Tomorrow

WATERVILLE SEWERAGE DISTRICT

The District

In 1949, the Waterville Sewerage District (WSD) was established as a quasi-municipal entity for the purpose of controlling, managing, and operating all of the sewers serving the people and businesses within Waterville. Today, the District has 4,618 customers in Waterville, including 69% of households.

The District's customers in Waterville are categorized by type as follows:

Category	Number
Domestic	4,092*
Commercial	505*
Industrial	11
Municipal	22
Government	4
Total	4,618

*Three mobile home parks and one apartment complex are included in the commercial category.

In addition, the District accepts flow from FirstPark, a commercial development located in Oakland, and approximately 575 other customers in Oakland.

The District is responsible for constructing and maintaining storm water and sanitary sewers, billing for wastewater collection, and, since 1976, transmission of sewage to the Kennebec Sanitary Treatment District's wastewater treatment plant. The District owns the sanitary sewer lines, the storm drains, and 2,118 catch basins.

The District operates on a budget of about \$2.3 million per year, and is in compliance with all federal and state mandates. The District is operated by a staff of nine, including a superintendent, an engineer, an office manager, a foreman, a billing clerk, and two 2-person crews. The sewer rate is \$2.24/100 cubic feet and a minimum quarterly bill of \$40.25. The average quarterly bill is about \$44.50.

Collection System

The Waterville Sewerage District maintains approximately 103 miles [2009 number] of sanitary sewers within the City, as well as three District-owned pump stations, a number of privately owned pump stations, and about 1,600 manholes. Sewer sizes range from 6 inches to 54 inches.

Prior to 1980, the system consisted of combined storm water and sanitary waste sewers. In addition, there were 26 CSOs (combined sewer overflows), which discharged storm water and raw sewage to various water bodies during periods of heavy rainfall. Since 1982, the District has

eliminated all 26 CSOs, and has upgraded/installed storm and sanitary sewers to such an extent that about 99% of the system now consists of separate storm and sanitary sewers.

Following the separation work, the District replaced or repaired about 1,000 manholes. However, the District continues to undertake some manhole repair/rehabilitation on an annual basis as well as the relining of selected sanitary lines as part of its ongoing inflow/infiltration removal program.

When the Kennebec Sanitary Treatment District's wastewater treatment plant was built, Waterville purchased 43% of the treatment plant's capacity. At that time, sewage flows from the City averaged about 6.1 MGD (million gallons per day). The City's average flow is now about 3.1 MGD, or about 24% of the design capacity of the treatment plant. Oakland uses approximately 0.3 MGD of capacity.

Issues, Needs. Major issues and needs facing the Waterville Sewerage District include the following:

1. Existing Roof/Foundation Drains and Sump Pumps. Existing roof/foundation drains and sump pumps tied into the sanitary sewerage system contribute substantial amounts of surface and ground water to the system, resulting in overflows at the treatment plant during peak flow storm events. In recent years, these overflow events at the treatment plant have been limited to just one or two per year due to actions taken by the WSD and other member communities.

In 1984, WSD began charging fees to all customers having roof drains connected to the sanitary system. The roof drain fee has been reasonably successful over time. Presently, there are approximately 100 roof drain accounts remaining.

In 2009, WSD upgraded its existing flow meters on the Messalonksee Interceptor in order to develop better data concerning peak flow events occurring in that portion of its system.

In 2010, WSD expanded its user fees for illegal connections to include perimeter drains and sump pumps. The fee for existing roof drains was doubled to twice the user rate. The primary intent of these fees continues to be to provide an incentive for customers to remove illegal connections; however, they also help the District to offset the cost of treating unmetered flow.

2. Lack of Easements. During the first part of the last century, portions of the sanitary sewer system were installed on private property without easements.

3. Regionalism. Should WSD contract with Winslow, Fairfield, Benton and Oakland to maintain their sewerage systems? One issue that would have to be addressed is the condition of Fairfield's system, especially the combined sewer overflows. Currently, the Town of Fairfield is using stimulus dollars to fund some separation projects, but additional work will be required.

Although WSD receives all sanitary flows from the Town of Oakland, for the time being, Oakland will maintain operation and maintenance responsibilities for its collection system within Oakland. Although it has no existing CSO's, Oakland's collection system is believed to have a significant infiltration/inflow component.

4. Long-Range Coordination. There is a need for utility providers and City officials to work closely with one another on future development plans involving utilities. WSD continues to maintain a close working relationship with elected municipal officials as required by 38 MRSA 1163 and 1163-A. In the near term, WSD does not envision any extension to its existing sanitary sewer system.

5. Future Upgrading. The District is in the process of upgrading and replacing old sewers that were installed in the 1800s in the older and more densely populated areas of the City. In order to repair these older sewers without extensive traffic disruptions, the District must use expensive repair methods such as installing liners through existing access points.

Waterville is not an MS4 community. As a consequence of separation projects completed in the past, WSD has no CSO's. Nonetheless, WSD is involved with an update with its portion of the CSO Master Plan in conjunction with other member communities of the Kennebec Sanitary Treatment District with projected action items for the next five years. No cumulative impacts from future development are anticipated to adversely affect existing systems.

KENNEBEC SANITARY TREATMENT DISTRICT

The District

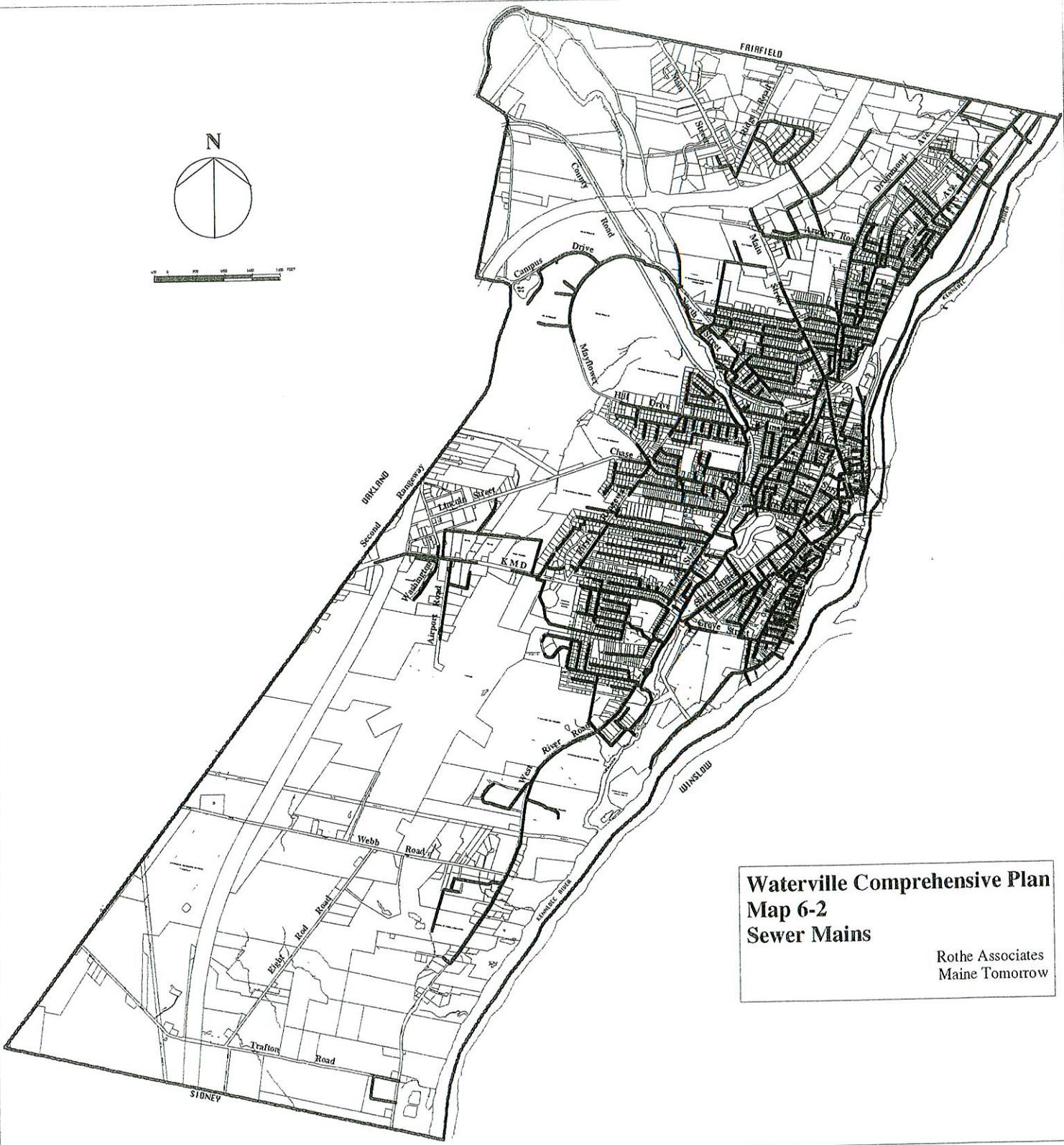
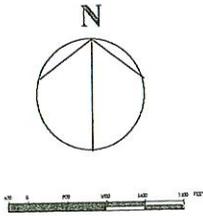
The Kennebec Sanitary Treatment District (KSTD) was established in 1971 as a quasi-municipal entity to provide wastewater treatment to Waterville, Benton, Fairfield, and Winslow, as well as Huhtamaki (formerly Keyes Fiber and later Chinet). As of 2011, a small amount of the sewerage from Oakland is delivered to KSTD for treatment via the Webb Road force main.

KSTD is staffed by 14 employees and overseen by a board of ten trustees with an annual budget of \$3.4 million. KSTD owns and operates the treatment plant and three large sewage pump stations located along a 11.5-mile long interceptor. In addition, by contract, KSTD operates and maintains a large sewage pump station for Winslow and two smaller pump stations for Benton.

Each of the four communities is responsible for connecting and delivering its sewage to a KSTD interceptor. KSTD and each community has a Sewer Use Ordinance. In addition, KSTD is authorized by EPA as an "EPA Pre-Treatment Facility," which requires KSTD to monitor and provide written permits for certain industrial connections.

Treatment Plant

The plant, located on lower Water Street, was completed in 1976. It receives sanitary waste through three major interceptors: the Fairfield-Benton Interceptor, the North Interceptor, and the



**Waterville Comprehensive Plan
Map 6-2
Sewer Mains**

Rothe Associates
Maine Tomorrow

Abram Brook Interceptor. The system includes three CSOs (combined sewer overflows) which periodically may discharge untreated storm/sanitary flows during heavy storm events. However, CSO events are diminishing.

The treatment plant has a design capacity of 12.7 MGD (million gallons per day) of sewage. The average flow in 2009 was 8.1 MGD, or about 64% of design capacity. The plant, which utilizes the activated sludge treatment process, includes two primary treatment tanks, two aeration tanks, and four clarifiers. The plant generates approximately 9,880 wet-tons of bio-solids per year, which is delivered by truck to a private composting facility.

Treatment Plant Upgrades

KSTD has undertaken major upgrades in the past two decades. In 1998 a \$6,200,000 20-year bond was obtained to complete a facility upgrade. A SCADA control system, replacement pumps, and dewatering equipment were installed. In 2007, a \$987,000, 10-year bond was obtained for new heat recovery ventilators, high efficiency boilers, and a heat pump, which improved heating and ventilation. KSTD has continually maintained the faculties to reduce the need for another expensive upgrade.

Bio-solids Disposal

KSTD's bio-solids are relatively "clean" (in terms of heavy metals) and, since 2005, all Bio-solids from KSTD have been composted at NEO at Hawk Ridge, Unity Plantation. KSTD has an additional 5 years remaining on its composting contract with NEO. Over the past five years, the NEO compost facility has been shut down for only one week, and during that time all solids went to the NEO-owned West Old Town landfill.

KSTD maintains State approval to resort to land application [which KSTD hired NEO to do prior to the current arrangement] or land filling at either the NEO facility in West Old Town or the Waste Management landfill in Norridgewock.

Financial Arrangements

The District's budget is supported by assessing the four communities and Huhtamaki according to a complex formula that takes into account three-year flows, Biological Oxygen Demand (BOD), and Total Suspended Solids (TSS). Flows, as well as BOD and TSS levels, are determined by sampling at strategic locations. The assessments for the 2009 budget are as follows:

Waterville (WSD)	31%	\$1,070,372
Fairfield	9.2%	\$312,681
Winslow	11.4%	\$388,865
Benton	1.3%	\$43,004
Huhtamaki	47.1%	<u>\$1,586,378</u>
		\$3,401,300

Annual audits, allocation documents, budgets, and reports are available at the District office at 401 Water Street. [Telephone: 873-0611. Webb site: KSTD.com]

Septage

KSTD also receives income from treating as many as 9 million gallons of septage per year. Septage is trucked in from the District's member communities as well as from out of District locations.

Issues and Needs. Major issues and needs facing KSTD include the following:

1. Combined Sewer Overflows. The District prepared a CSO master plan which lists various options for dealing with CSOs including:

A. Installing expensive storage facilities to hold excess flows until they can be treated after a storm.

B. Modifying the treatment plant to treat an additional 17 million gallons per day of peak hourly stormwater. KSTD has determined that this could be accomplished at a cost of under \$1,600,000.

C. Reducing flows by eliminating combined sewers in the respective communities. KSTD is working closely with the communities to identify cost effective means of reducing CSOs.

2. Septage Trucks on Water Street. The South End Neighborhood Strategic Plan, created by the South End Neighborhood Association (SENA) in 2007, calls for developing "a traffic management plan in cooperation with KSTD to address truck traffic through the neighborhood". In response, KSTD has limited times for delivery of septage.

CHAPTER 7. RECREATION FACILITIES

PARKS AND RECREATION DEPARTMENT

The City of Waterville has many public recreation facilities for both active and passive uses. These facilities, including a number of school facilities, are operated and maintained by the Parks and Recreation Department. The Department also is responsible for recreational programming.

The Department currently employs 3 full-time, 2 part-time, and approximately 40 seasonal employees. The 2011-2012 budget for the Department is \$519,820 for administration and maintenance of facilities.

RECREATION PROGRAMS

The Parks and Recreation Department offers over 50 programs, including swimming lessons, tennis lessons and tourneys, golf lessons, track and field activities, co-ed softball, girls youth softball, boys and girls basketball festivals, over-the-hill basketball, men's basketball tourney, tiny tots, arts and crafts, playground games, arts in the park, volleyball, shuffleboard, horseshoes, Bike Exchange, Senior Games Day, ski trips, cross country and snowshoe lessons, foliage trips, trips to sporting events in Boston and special events like the Easter Egg Hunt, Halloween Party, Father-Daughter Dance, Mother-Son Night, and Civic Day

Other related programs include participation in a free lunch program for youth, a National Youth Sports Coaching Association certification program, and several high level adult softball tournaments. The Department also serves as an information clearinghouse for leisure services offered within the community and as a point of contact for events requiring a permit, such as assemblages, road races, parades, and the like.

The Department also is responsible for City-owned trees. In 1990, the City adopted a Tree Ordinance and designated the Parks and Recreation Director the City Arborist. Because of budget limitations, most of the Department's efforts have been focused on the removal of hazardous trees. However, the Department continues to work on developing a tree inventory and planting trees. The City has received numerous Tree City USA awards for its efforts and applies for various tree planting and maintenance grants annually.

The quality and number of programs offered by the Department is dependent upon the time, energy, and efforts of many volunteers. In addition, the Department has a cooperative relationship with a number of civic groups that have undertaken a variety of projects.

RECREATION FACILITIES

The City's recreation facilities are listed below. The list includes City-, school-, and privately-owned facilities, as the City's recreational needs are filled by a combination of providers.

Baseball

- Junior High School - This field is located behind the Junior High School off the West River Road. It is a full-size (90' bases) baseball field with backstop and outfield fencing. It is used primarily by the Junior High during the school year, Babe Ruth during the summer, and field hockey in the fall. The field is maintained by the School Department with some assistance from the Parks and Recreation Department.
- Gaul Field - Located on Brooklyn Avenue in front of the high school, this regulation (90' base paths) baseball field has outfield fencing and a support/storage building. It is used in the spring by Waterville High School, in the summer by Babe Ruth and American Legion baseball, and in the fall the outfield is used for field hockey. The School Department maintains the field with some assistance from the Parks and Recreation Department.

Basketball

- North Street Basketball Court - This full-size asphalt basketball court with steel uprights and backboards is lighted for evening play until approximately 10:00 p.m.
- Grove Street - Full-size asphalt basketball court
- Chaplin Street Basketball Court - 1/2 Court
- Kelsey Street Basketball Court - 1/2 Court
- Sterling Street Basketball Court - 1/2 Court

There also are privately owned basketball courts both indoors and outdoors at Colby College and indoors at Thomas College.

Boat Landings

- Water Street Boat Landing - This 11-acre facility is located near the end of Water Street, beyond Couture Softball Field. This landing provides access to the river for small boats, parking, and picnic sites. It has a 10-foot-wide hard surface launching ramp.
- Thayer Park Boat Landing - Located on North Street at the base of Mayflower Hill and across North Street from MaineGeneral Medical Center, this landing provides paved parking and carry-in access to Messalonskee Stream.

Bowling Center

- Riverside Bowling Center, located on West River Road, was constructed in the late 1980's. It is privately-owned and open to the public. The facility, which includes a small restaurant/sports bar called "Sportsters," hosts several recreational leagues.

Community Gardens

- North Street Recreation Area: There are 12 4' x 8' raised bed gardens that can be rented for the season.
- Moor Street: There are 12 4' x 8' raised bed gardens that can be rented for the season.

Cross Country Ski Trails

- Quarry Road Recreation Area - 12 Kilometers of groomed Nordic trails (including a 2.5K sprint loop). See also trails and recreation areas.
- North Street Recreation Area - 1 K
- Junior High School
- Pine Ridge - 3 K. There are several trails through the wooded area behind the golf course and softball field. These are generally natural material trails with varying grades. They are used by the school cross country running program and by the public for cross country skiing, walking, and mountain biking.
- Colby College has private cross country ski trails.

Maps of City-owned trails are posted on the City web page under the Parks and Recreation Department. The Department grooms trails for “classic and skate styles” on a regular basis throughout the winter months. Other trails are shown on the Kennebec-Messalonskee Trails web site.

Dog Park

A dog park is located at Pine Ridge Recreation Area on West River Road. The park features a 1-acre fenced area with two pens, a main pen for socialization and play and a separate training pen, kiosk, and benches.

Field Hockey

- The Junior High School baseball field is used for field hockey in the fall.
- Gaul Field - In the fall, the outfield of the Waterville High School baseball field is used for field hockey.

Fitness Centers

There are privately owned health clubs and fitness centers in the City, including Champions Fitness Center in the Elm Plaza on Upper Main Street, the Holiday Inn indoor pool and health club on Upper Main Street, and Planet Fitness on Kennedy Memorial Drive. Colby and Thomas employees also have access to the fitness centers at their colleges.

Football Fields

- **Drummond Football Field:** This regulation size football field is located on Western Avenue. It is used for high school football in the fall, high school track and field in the spring, and the youth track program in the summer. It is maintained by the School Department with some assistance from the Parks and Recreation Department.
- **High School Practice Football Field:** Located on Highland Avenue beside the high school, this 300-foot by 150-foot field is used for high school and junior high school football practice in the fall and for recreation programs in the spring. It is maintained by the School Department.
- **Junior High Football Field:** Located behind the junior high school on West River Road, this field is used by both the junior high football and soccer programs. It is maintained by the School Department with some assistance from the Parks and Recreation Department.
- **Reed Field (youth football):** Located on the Armory Road.
- **Colby College football field**

Golf Courses

- **Pine Ridge Golf Course** is a 9 hole par 3 course located on the West River Road in the Pine Ridge Recreation Area. The course has a new clubhouse and irrigation system. The course is City-owned, but leased to an outside operator. During the summer months, Waterville Parks and Recreation hosts golf lessons and a night golf tournament at the course.
- The **Waterville Country Club**, located just over the town line in Oakland, offers an 18-hole course to members.

Horseshoe Pits

- **North Street Horseshoe Pits:** There are 6 horseshoe pits located behind the North Street tennis courts. Equipment is available for use by contacting the Parks and Recreation office.

Ice Skating/Hockey

- The City has no ice skating rink, but the public has limited access to the indoor hockey rink and to Johnson Pond at Colby College. Colby's Harold Alfond Athletic Center includes a regulation size indoor hockey rink with limited seating. It is used by Waterville High School and the Waterville Youth Hockey Association.

- Sukee Arena in Winslow offers indoor ice skating in the winter. The Sukee Indoor Arena is used by youth and adult ice hockey leagues, as well as Winslow High School. The Arena includes a full size rink and has limited seating. It is open for public skating on a limited basis.
- The Waterville Youth Hockey Association provides a learn to skate program, house teams, and travel teams serving children from ages 3 through 16.

Little League

- Peters Little League Field: This four-acre field is located on the Armory Road. It is a standard Little League field with a backstop and perimeter fencing. There is a gravel parking area and entrance road from Armory Road. Aluminum spectator bleachers are outside the fence along each base line. The field is used spring through summer for Little League games and practices and there is some school use at recesses. The Parks and Recreation Department maintains the facility with some assistance from the Little League Association.
- Purnell Little League Field: This six-acre Little League field is located on Matthews Avenue and used for Little League games and practices. It has a backstop and perimeter fencing. There are dugouts, broadcast tower, and a support building built by Little League parents. Parking is along the entrance road. The field is lighted for evening play. The Parks and Recreation Department maintains the facility with much assistance from the Little League Association.

Picnic Areas

- North Street Picnic Shelters: There are two large picnic shelters located next to the playground. The shelters are approximately 25-feet by 20-feet with several tables under each. Permanent charcoal grills are provided for barbecues.
- Water Street boat launch has picnic tables.
- Castonguay Square has picnic tables and benches.

Playgrounds, Small Parks, and Neighborhood Tot Lots

- Judge Morton A. Brody Playground at the North Street Recreation Area. Installed in 2001, Brody Playground is one of the largest, most visited playgrounds in Central Maine.
- Castonguay Square: This two-acre park is located on Common Street and consists of monuments, open space, benches, and picnic tables. It is used for passive recreation, picnics, and special events.
- Chaplin Street Tot Lot: Approximately ¼ acre; consists of playground equipment.

- Cutting Memorial Park: This 1.5-acre open space on the Messalonskee Stream abutting Gilman Street was donated to the City by Nancy Coveney in memory of her parents.
- Downie Park: This two-acre open space abuts Messalonskee Stream from the Gilman Street Bridge to Highland Avenue.
- Green Street Field and Playground: This 4.6-acre field and playground is located on Green Street in the South End. In addition to a field and walking path, it includes a skate park and playground equipment. The field is used in the spring and summer for open play and a neighborhood Take Back the Night festival, in the fall for flag football, and in the winter for sledding.
- Grove Street Playground: Approximately $\frac{3}{4}$ acre, the park has a paved basketball court and playground equipment.
- Harris Park: This approximately half-acre open space is located at the intersection of North Street and West Street. It is a small vest pocket area left-over from a Maine Department of Transportation railroad overpass project.
- Hillside Street Tot Lot: Approximately $\frac{1}{2}$ acre; consists of playground equipment.
- Kelsey Street Tot Lot: Approximately 1 acre; consists of playground equipment and a basketball hoop.
- Moor Street Playground: Installed in 2007, the park consists of playground equipment for young children.
- David Kenneth Quirion Park "Dave's Place": Located on Drummond Ave; consists of open space and benches
- Sterling Street Tot Lot: Approximately $1\frac{1}{2}$ acres; consists of playground equipment and $\frac{1}{2}$ court basketball area.
- Thayer Park: This approximately 5,000 square-foot area is located in the North Street Recreation Area across North Street from Thayer Unit of MaineGeneral Medical Center. It includes an open lawn area, a community garden consisting of 12 raised beds and a tool shed, a carry-in boat access to Messalonskee Stream, and a glide-swing.
- Veteran's Memorial Park: This 2-acre park, also known as Coburn Park and Monument Park, is located at the corner of Park Street and Elm Street; it consists of monuments, open space, and benches. This park is used for special events and by the Hall School for physical education classes.
- Western Avenue: Approximately 1 acre; consists of playground equipment.

- Play equipment also is available to the public at the Hall School and the Mitchell School when school is not in session.

Recreation Areas (A minimum of 15 to 25 acres)

- North Street Recreation Area: This 16.5-acre complex is located on North Street. It includes a number of facilities, including the Alford Municipal Pool, the Judge Morton A. Brody Playground, picnic shelters, horseshoe pits, shuffleboard courts, tennis courts, lighted basketball court, soccer fields, carry-in boat access, community gardens, Thayer Park, and a trail along the Messalonskee Stream.
- Pine Ridge Recreation Area: This 144-acre complex is located on Louise Avenue off the West River Road. It includes a number of facilities, including Rummels Softball Field, a soccer field, tennis courts, the Pine Ridge Golf Course, the Pine Ridge Trail System (including single and wide-track mountain bike trails, and a dog park.
- Quarry Road Recreation Area: This recreation area is located between the Messalonskee Stream and Main Street on 220 acres of land, a portion of which formerly was the Colby College ski slope. It offers nearly 8 miles of twenty-foot-wide multi-use trails and a winter sliding area near the base of the old ski slope.
- Head of Falls: This 19-acre City-owned parcel is on the Kennebec River with vehicular access on Front Street at the Temple Street intersection. The park includes a large open space, approximately 800 feet by 300 feet in size for special events, a paved parking lot, access to the historic Two Cent Bridge, and Bicentennial Park to the north, through which the Benedict Arnold Trail runs over the Kennebec Sanitary Treatment District (KSTD) sewer line.

Recreation Centers

- There is no City-owned recreation center. However, the non-profit Alford Youth Center at 126 North Street abutting the City-owned North Street Recreation Area houses the YMCA and Boys and Girls Club. It offers a wide range of recreational programs for children ages 6-17 each day after school and during school vacations, as well as preschool and adult swimming programs. Facilities include two swimming pools, a gymnasium, an art room, game room, dance studio, and karate dojo. Financial aid is available for children from low income families. The City Parks and Recreation Department uses the basketball courts at the Alford Youth Center for tournaments.
- All Pro Sports Center: Located at 161 West River Road, All Pro offers a wide variety of soccer-based clinics, leagues, and tournaments. The indoor facility features a full-size synthetic turf field and a full-size outdoor field located on the north side of the building.
- Muskie Center: Located at 38 Gold Street, Spectrum Generations owns and operates this senior center.

Shuffleboard Courts

- North Street Shuffleboard Courts: The two shuffleboard courts are located between the tennis courts and picnic shelters.

Skate Park

- Green Street skate park

Soccer Fields

- Webber Soccer Field: High School field located on West River Road.
- Pine Ridge Soccer Field: Located at Pine Ridge Recreation Area off of Louise Avenue, this is a full-size field (360 feet by 225 feet) laid out on a north-south orientation. It is used in the summer by the adult soccer league and in the fall by Waterville High School teams and Waterville Youth Soccer Association. Parking is shared with the tennis courts.
- Junior High School Soccer Field: Located behind the Junior High on West River Road.
- Herlihy Field: U-11 field located in front of the Junior High on West River Road.
- North Street Youth Soccer Fields: There are 5 less than full-size soccer fields at the North Street Recreation Area. Fields are comprised of 2 40-yard x 60-yard fields and 3 30-yard x 50-yard fields. These fields are used primarily by the Youth Soccer Organization evenings and weekends and some afternoons in the fall and spring. Free play is allowed at other times.
- There are additional privately owned outdoor soccer fields at Colby College, Thomas College, and All-Pro Sport off of West River Road.
- There are indoor soccer fields at All Pro Sport on West River Road (see Recreation Centers above) and Sukee Arena in Winslow.

Softball

- Reed Field: This field is located on the Armory Road. This is a multi-purpose field which accommodates a 275-foot long softball field and a youth football field (80 yards). It is fenced on all sides. There is a small concession building on the site.
- Couture Field: This three-acre facility is located off Water Street very close to the Kennebec River. There is a gravel parking lot adjacent to the field. Wooden bleachers for spectators are on the first base side of the field. The field is used in the spring through fall for softball games and practices.

- Rummels Field: This approximately 275-foot long playing field with skinned infield, perimeter fencing, lights for night games and spectator bleachers is used spring through fall for softball.
- Waterville High School Softball Field: Located in front of the High School, this regulation softball field (60' base paths) is used in the spring for high school girls' softball and in the summer for recreation league softball. It is maintained by the School Department with some assistance from the Parks and Recreation Department.
- Herlihy Field: Approximately 275-foot long playing field located in front of the Waterville Junior High off the West River Road. This field was constructed in the fall of 1998.

Swimming Pools

- The Alford Municipal Pool Complex is used during the summer for lessons and free swims. It includes a 6-lane, 25-meter lap pool, zero-entry swim area, a kiddy pool with a frog slide, a kiddy pool with squirt animals, a spray pool, and a slide pool. The pools range in depth from 0' to 6'. There is a bath house with changing rooms, rest rooms, lockers for clothing storage, and a snack shack.

There also are privately-owned pools at the Alford Youth Center, Colby College, and at the Holiday Inn (which sells pool memberships).

Tennis Courts

- North Street: There are four tennis courts with asphalt surfaces, a 10-foot-high fence around the perimeter, and a parking area. Courts were refurbished with new surface, hardware, and paint in spring of 2010.
- Pine Ridge: There are four asphalt tennis courts with lights for evening use and a parking area.

Tennis courts located at North Street and Pine Ridge Recreation Area are used summer through fall by the public and by the Waterville High School Tennis Team.

- Colby College has eight regulation tennis courts on campus, across Mayflower Hill Drive from the football/track complex. The courts are outdoors and fully enclosed with fencing. Restrooms are available. The College makes the courts available to the public when there are no conflicts with scheduled Colby activities.
- Indoor courts are available for a fee at Champions.

Track

High School Track: The track and field area is on the outside perimeter of the Waterville High School football field. A new concession/bathroom building was completed in the fall of 2002 and a new surface was installed on the 400-yard all weather track in 2010.

- The Colby Outdoor Track is an oval, 6-lane track surrounding Colby's Seavrins football field. Public use of the track is allowed when not in conflict with College activities.

Trails: Recreational, Fitness, and Nature Study

- Benedict Arnold Trail: A portion of the historic Benedict Arnold Trail, the trail that Arnold followed from Saratoga, New York, through Maine to Quebec during the Revolutionary War, passes through Waterville's Bicentennial Park along the Kennebec River.
- Inland Hospital: The Inland Woods Trail offers several short trails for non-motorized activity and provides public access to the adjacent Pine Ridge Recreation Area from Inland's Kennedy Memorial Drive campus. See the Inland Hospital web site for maps.
- Merrit Nature Trail: This 0.6 mile trail with natural surface begins beyond the end of the Junior High School building near the baseball field. The trail passes through a field, a northern hardwood forest, a hemlock and fir forest, and along the Messalonskee Stream. This year-round nature study trail is maintained by the School Department and the Parks and Recreation Department.
- George Mitchell (formerly Brookside) School Nature Trail: Located behind the School
- Oxbow Nature Preserve: The entrance to this natural surface trail along the Messalonskee Stream is located near the parking lot of the Lutheran Church on Cool Street. The Preserve is an ideal area for environmental education, providing views of wildflowers, ferns, trees, birds, muskrat, beaver, and flying squirrels.
- North Street Trail: This trail runs along the Messalonskee Stream, behind the North Street Recreation Area and the Alford Youth Center, to Edgemont Avenue. It extends over existing City streets to the Head of Falls via the Connector Trail.
- Perkins Arboretum at Colby: The west entrance to this trail is off of Mayflower Hill Drive near the intersection with Mount Merici Avenue. The trails through the arboretum and bird sanctuary are maintained for nature study, walking, cross-country skiing, and snowshoeing. Mountain biking is prohibited. The land is a State Wildlife Management Area and includes successional, transitional, and climax forest, as well as Runnels Stream.

- Pine Ridge Recreation Area Trails: This network of trails around the golf-course begins behind Rummels softball field, off of the West River Road, between the field and the trees. It can be used for mountain-biking, walking, jogging, and cross-country skiing. There is a one-mile loop around the ball field, through the woods and fields, and over streams.
- Quarry Road Recreation Area Trails: Trails provide recreational opportunities including cross-country skiing, running, bicycling and walking along the Messalonskee Stream. The north end of the trail opens to a beautiful meadow with a small year-round shelter for resting, picnicking, and warming in the winter.
- Seton Unit Trail (MaineGeneral): This trail is on the west side of the hospital.
- South End Island Trail: This trail, located south of the Hathaway Creative Center, is inaccessible during the spring when the water level of the Kennebec River is high.
- Thomas College Trail: This 3,200-foot long trail runs along the Kennebec River behind the College. The trail includes a spectacular view of the confluence of the Kennebec River and the Messalonskee Stream.
- Connector Trail: This 1.75 mile trail for walkers, runners, and bikers connects the North Street Recreation Area to the Head of Falls. Street portions of the trail are clearly marked with paint and signage.

Trails: Mountain Bike

- Quarry Road Recreation Area - 15 Kilometers of trails for single track and double track.

Kennebec Messalonskee Trails

In addition to the trails listed above, Kennebec Messalonskee Trails, led by Peter Garrett, together with public and private partners, has developed a series of trails in abutting towns. Those trails in Fairfield, Benton, Winslow, and Oakland are mapped and described on the web page of the organization at www.kmtrails.org.

East Coast Greenway

When complete, the East Coast Greenway, the “Urban Appalachian Trail”, will extend over 2,600 miles from Key West, Florida to Calais, Maine. In our area, the East Coast Greenway will run up Route 201 through Vassalboro to Fort Halifax Park in Winslow. It then will turn up Halifax Street (Route 100A) to Benton. Along the way, a spur will extend over to the Two Cent Bridge in downtown Waterville.

ADEQUACY OF RECREATIONAL RESOURCES

Table 7-1 provides a comparison of the number of public recreational facilities in Waterville with National Recreation and Parks Association standards, along with Waterville's unmet need. It should be noted, however, that private facilities [notably basketball courts, tennis courts, ice skating facilities, recreation buildings, and open space areas such as the Colby Arboretum] meet some of the City's recreational needs.

TABLE 7-1: COMPARISON OF WATERVILLE PUBLIC RECREATION FACILITIES TO NATIONAL RECREATION AND PARKS ASSOCIATION STANDARDS

FACILITY	NEED BASED ON NATIONAL STANDARD	AVAILABLE	UNMET NEED - BASED ON NATIONAL STANDARD
Baseball Fields (90 Foot Bases)	1/5,000 population = 3	2	1
Basketball Courts (Outdoor)	1/5,000 population = 3	2	1
Football Fields	1/20,000 population = 1	1	0
Golf	1/50,000 population = 1	1	0
Soccer Fields	1/10,000 population = 1	2	0
Softball Fields	1/5,000 population = 3	4	0
Swimming Pool	1/20,000 population = 1	1	0
Tennis Courts	1/2,000 population = 8	8	0

Source: National Recreation and Parks Association (NRPA) guidelines from "Comprehensive Planning: A Manual for Maine Communities" published by the Maine State Planning Office in 2005.

Location of Recreational Resources

Map 7-1 shows the location of City-owned recreation facilities. It is important to bear in mind that the location of recreation facilities and open space is a factor in determining the adequacy of those resources. Ideally, they should be located within easy walking distance of residences.

Pedestrian access to recreation facilities and open space is especially important in densely developed, low-income neighborhoods such as Trigger Hill, the North End, the downtown/Front Street area, and the South End, all of which are located in the northeasterly quadrant of the City along the Kennebec River. [Those neighborhoods are bounded by the Kennebec River and the red line on the map.] Waterville is very densely developed, at 1,021.9 persons per square mile

(as compared with 323.6 persons per square mile in Augusta, 134.9 in Kennebec County, and 41.3 in the State as a whole), and those older neighborhoods are the most densely developed parts of Waterville. It is there that much of the multi-family housing is located on very small lots.

Not only do the residents of low-income neighborhoods not have much private open space, they also tend to lack transportation. Without cars and discretionary income for taxis, they are unable to take advantage of many of Waterville's excellent recreational facilities and open spaces.

FUTURE RECREATIONAL NEEDS

Planning for the future recreational needs of the City requires taking into consideration the anticipated change in demographics. The population projection by age group in Chapter 1 indicates that by 2020, more than 38% of Waterville's population will be age 65 or older. The oldest baby boomers will be 74. There will be substantially fewer children and young adults.

Although many senior citizens still will be playing hockey and basketball, most will prefer non-contact sports. Trails for hiking, biking, and cross-country skiing will become more important to Waterville residents. Also important to the older generation will be fitness centers which will allow them to maintain muscle mass and cardiovascular health as they age.

Table 7-2 below contains recommendations for future recreation improvements and cost estimates if available.

City Parks

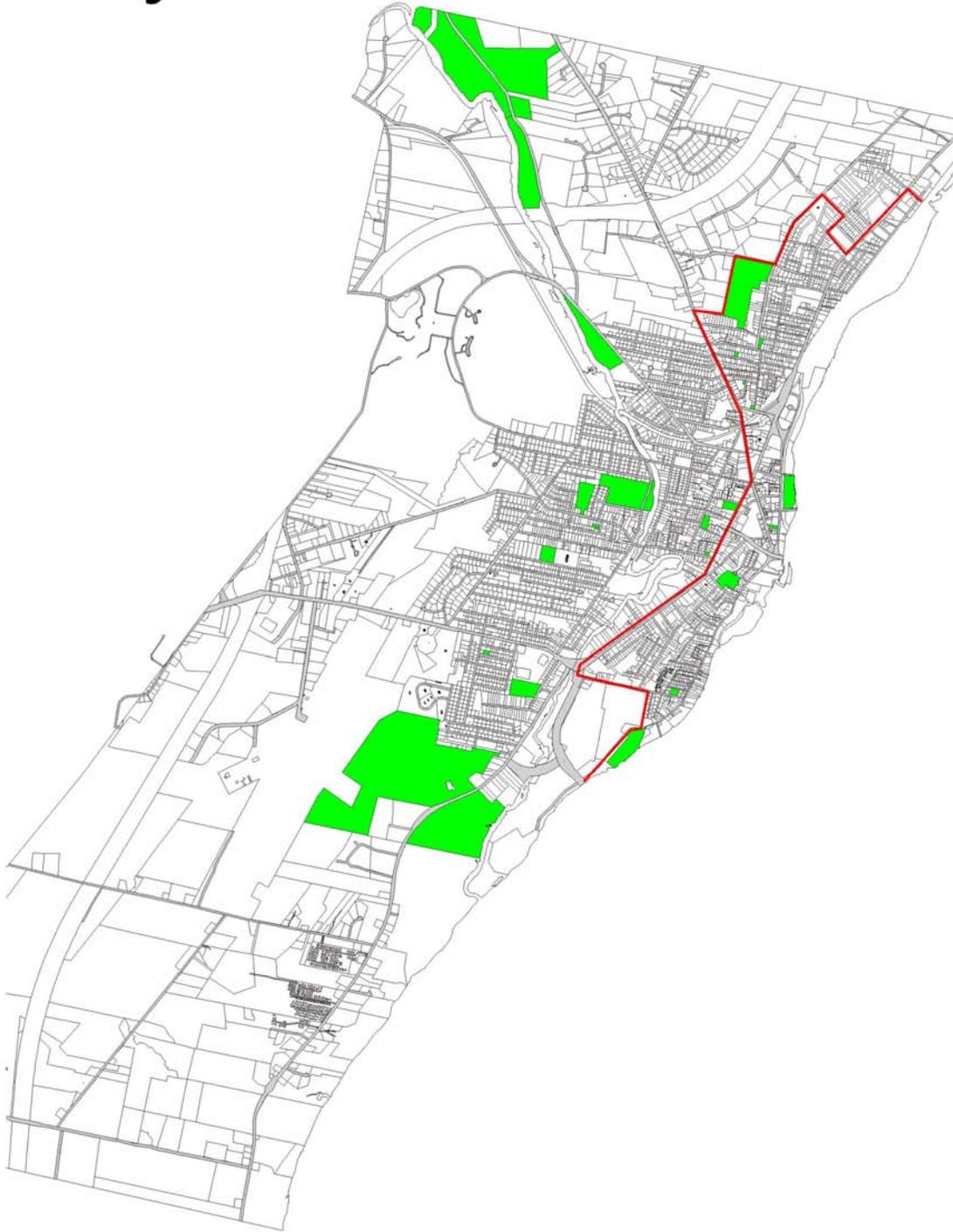


TABLE 7-2: RECOMMENDATIONS FOR FUTURE RECREATION IMPROVEMENTS

FACILITY	RECOMMENDATION	NOTES
Baseball	American Legion Baseball indicated that it would be helpful to have more fields, as other teams use the fields.	
City-wide	For trails and scenic views along the Kennebec River and the Messalonskee Stream, retain tax-acquired properties and encourage donations of land.	Note that the City Council has on occasion in the past sold or refused to accept donations of such land.
Green Street Park	Better utilize the field. Work with the Alford Youth Center to schedule more programming for youth in this low-income neighborhood.	
Green Street Park	Add a basketball court as recommended in the South End Neighborhood Strategic Plan, which is posted on the City's web site.	
Head of Falls	Set aside adequate land for festivals, a minimum of 800 feet by 300 feet.	Given that it is a goal of the Downtown Master Plan to increase the number of persons living downtown, it also should be a goal to maintain the supply of public open space downtown in locations such as the Head of Falls. [The Downtown Master Plan is posted on the City's web site.]
Hockey	The Waterville Youth Hockey Association sees a need for a municipal outdoor ice skating rink for practice. Alternatively, the new hockey rink could be all-weather, ice and in-line.	Acquire the former South End Arena on King Street, which has in the past been offered for sale by its current owner.
Island Park off of Water Street	Construct 2 bridges to provide access to the island at both ends and to connect the island trail to the stairway to Water Street as recommended in the South End Neighborhood Strategic Plan.	
Lombard Tractor	Relocate for better public viewing and to	

	create a tourist attraction	
Nature Study Area	Drummond Avenue wetlands	
North Street Shuffelboard Courts	Build a bench with a cover at each end of the courts to provide shade for users of the courts.	\$5,000
North Street Tennis Courts	Install a lighting system.	
North Street Recreation Area	Construct a volleyball court	
Recreation Committee	Reestablish the Recreation Committee to help set priorities.	
Reed Field	Add lighting	
Rummels Field	Repair access road and ditch as needed.	
Skate Park	Purchase additional pieces of equipment for the facility.	
Softball Fields	Provide lighting where needed.	
Community Gardens	Develop additional community gardens, as supported by Sustain Mid-Maine.	A garden has been considered for the Kelsey Street Tot Lot. A second garden, in addition to the one on Moor Street, may be justified in the South End, the most densely developed neighborhood in the City.
South End Pocket Parks	Develop new pocket parks in the priority improvement areas designated in the South End Neighborhood Strategic Plan. [The South End Neighborhood Strategic Plan is posted on the City's web page.]	
Webb Road Closed Landfill	The landfill property is underutilized: develop cross-country ski trails.	
Wolman Steel Property	Maintain the footpath across the property from High Street to the Mitchell School.	
Wyandotte sewerage lagoons	Preserve the land along the river for passive recreation including a trail.	
City-wide	Update on a regular basis the Playground Audit developed in 2013 and repair and/or replace equipment as needed.	

CHAPTER 8. HISTORICAL AND CULTURAL RESOURCES

[Note: This chapter was updated and edited from the original written by planning consultant Beth DellaVallee in 1997. We have no footnotes or bibliography, but for historical sections her sources likely included The Centennial History of Waterville edited by E. C. Whittemore and published in 1902.]

HISTORY

The banks of the Kennebec River and Messalonskee Stream in Waterville show evidence of Indian settlement as far back as 4,000 years before the present. The area embracing Waterville was first settled by the English in 1653 with the establishment of a trading post at Teconnet or Ticonic, the Abanaki Indian name for the area, meaning 'a place to cross'. The settlement on the west bank of the Kennebec at Ticonic Falls was long known by early pioneers as Ticonic Village, even after it was incorporated as a part of the present Town of Winslow in 1771. Waterville set off from Winslow and incorporated as the Town of Waterville on June 23, 1802. West Waterville set off from Waterville, incorporating as a town on February 26, 1873, subsequently changing its name to Oakland on March 10, 1887. The City's charter was adopted on January 23, 1888.

Industries

Waterville developed into a major shipping center during the 19th century. The Town's primary business at that time was lumbering. The Messalonskee Stream supported numerous sawmills and wood-working factories. Other industries on the Messalonskee included a match factory, a woolen mill, tanneries, brick yards, and a shovel handle factory. The first dam built on the Kennebec was erected in 1792.

In 1866, the Ticonic Water Power and Manufacturing Company was incorporated. The company acquired the water rights and property adjacent to the Ticonic Falls. In 1868 a dam was built and in 1874 the Ticonic Power Company became the Lockwood Company which began spinning cotton in 1876. By 1892, the mills employed 1,250 people and produced over eight million yards of cotton cloth.

Transportation

The major transportation corridor during the 19th century was the Kennebec River. Many steamers anchored at Waterville and in 1848 there were five steamers daily between Waterville and Augusta. River traffic dropped off drastically with the opening of the Androscoggin and Kennebec Railroad.

The Two Cent Bridge, a 700-foot long, small steel suspension footbridge spanning the Kennebec River between Waterville and Winslow, was constructed in 1903. It was one of the last toll footbridges in the United States.

LaFleur Airport became a reality in 1930.

The Franco-Americans

The first documented French Canadian settler came to Waterville and located his business in an area known as "The Plains." The Plains was largely one main street, Water Street, with a few lanes branching off of Water Street north of Grove Street. By 1830, there were some 300 French Canadian families that had settled in Waterville, mostly in The Plains.

The construction of the Lockwood Cotton Mill in 1874 attracted a large number of French Canadian immigrants, in part because agents were sent through the southern Quebec countryside to stimulate emigration. By 1881, the French Canadian population numbered 1,625, more than a third of the total Waterville population of 4,700. Immigration continued until 1896 when economic prosperity in Canada caused a slackening of the movement.

As with many immigrant groups, the church was a critical element in the Franco-American community. In addition, from the earliest years, Franco-Americans in Waterville formed religious, social, and financial societies.

The Lebanese Americans

The Lebanese immigrated to Waterville in waves. The first wave came in the 1860s following a revolution between Christians and Moslems in what was then part of Syria. A second wave came in 1910 to avoid conscription into the Turkish Army and as earlier immigrants urged their relatives to join them in Waterville to take advantage of increased religious and social freedom and economic opportunity.

Initially, Lebanese immigrants worked as peddlers. Soon they came to work on the railroad and in the cotton mills. Eventually, many worked in the woolen mills which offered higher pay and better working conditions. As with the Franco-Americans, many Lebanese settled together in one central area. This area included Head of Falls and Front Street. The church and social organizations played an important role in the lives of Lebanese Americans.

HISTORIC AND ARCHAEOLOGICAL RESOURCES

The following properties in Waterville that are listed on the National Register of Historic Places:

- Two Cent Bridge on Temple Street
- Waterville Opera House on Castonguay Square
- First Baptist Church at the corner of Park Street and Elm Street
- Waterville Post Office at Main and Elm Streets
- Universalist-Unitarian Church at Silver and Elm Streets
- Redington House at 64 Silver Street
- Alvin O. Lombard House at 65 Elm Street
- Professional Building at 177 and 179 Main Street.
- Heald House, 19 West Street
- Lockwood Mill Historic District 6, 6B, 10, 10B Water Street
- Gilman Place, 21 Gilman Street

The Maine Historic Preservation Commission maintains survey data on the commercial buildings along Main Street in Downtown, as well as on the textile mill complex. The City has two self-guided walking tours of historic properties. One is a tour of 43 historic properties in and around the downtown area of the City. (See Map 8-1 and the Waterville Main Street web site.) The other tour is the "Museum in the Streets" in the South End, south of Spring Street.

The Maine Historic Preservation Commission recommends that a comprehensive survey of Waterville's historic above-ground resources be conducted in order to identify other properties which may be eligible for nomination to the National Register of Historic Places. The City-owned chapel on Grove Street, for example, may be eligible for nomination.

While the Commission notes that no professional survey for historic archaeological sites has been conducted to date in Waterville, it suggests that future field work focus on sites relating to the earliest European settlement of the City, beginning in the latter 1700's. Some non-local funding sources available to accomplish survey work include the Commission's Certified Local Government Program and Survey Grants.

The Commission's central repository for prehistoric archaeological survey information identifies six sites along the Messalonskee Stream and the banks of the Kennebec River as prehistoric archaeological sites including Indian artifacts ranging from 4,000 years ago to the arrival of the Europeans. (See Map 8-2.) The Commission indicates that intensive survey is necessary at several of the sites to determine eligibility for listing on the National Register. In the early 1990's, Dr. Arthur Spiess of the Commission visited the site near the confluence of Messalonskee Stream and the Kennebec River and indicated that it would not be eligible for listing on the National Register, because of extensive disturbance over the years (removal of gravel from the City gravel pit).

Reconnaissance work was undertaken prior to construction of the "new" Waterville-Winslow Bridge. Dr. Spiess noted that the site is National Register eligible and that material was excavated from the right-of-way in preparation for planned roadway work. Dr. Spiess indicated that everything outside of the right-of-way is still archaeologically sensitive.

The Commission recommends that the City designate these areas, excluding the one associated with the City's gravel pit, as Archaeological Resource Potential Areas. It further recommends that the City establish a mechanism for archaeological review of all construction activity or other ground disturbing activity within these areas, such that no activity be allowed to proceed without a field check by a qualified archaeologist, and if necessary, archaeological data recovery. As archaeological survey work in the City proceeds, the Archaeological Resource Potential Areas can be refined (usually resulting in a decrease in area) to reflect the locations of known, significant archaeological sites.

Once the sites are identified, individual landowners of significant properties may be approached to obtain their permission for nomination of archaeological sites on their property to the National Register of Historic Places, and additionally to donate preservation easements if they so desire. National Register listing extends protection of Federal legislation against actions by Federal

agencies. The combination of National Register listing and preservation easement plus posting against ground disturbance, extends the protection of State Antiquities Legislation to archaeological sites.

Waterville Historical Society and the Redington Museum

The Waterville Historical Society and the Redington Museum are located in the Redington House, which is listed in the National Register of Historic Places.

The Museum's extraordinary collection of pharmaceutical antiques was donated by Mr. LaVerdiere, and is on loan from the Massachusetts College of Pharmacy and the Maine State Museum. It was collected from a variety of pharmacies throughout the State.

The Museum also houses a collection of artifacts that pertain to the history of Waterville including furniture, examples of early handwork, spinning equipment, tools, early medical equipment, old firearms, Civil War relics, signs from early businesses, china, musical instruments, mementos of the career of Waterville champion trotter, Nelson, material on the development and manufacture of the Lombard Log Hauler which was invented and manufactured in Waterville and which had an enormous impact on the logging industry, Dr. Clair S. Baumen's collection of Indian artifacts with many important pieces related to the Red Paint people who were present in the Waterville area several thousand years ago, period costumes, and documents and artifacts related to the improvement of Waterville as a center for the construction and maintenance of both locomotives and cars for the Maine Central Railroad (MCRR).

Waterville Public Library

The Waterville Public Library, which was built in 1905, was designed by an architect named Miller, who also designed the public library in Auburn. It is in the Richardsonian style that was popular for library buildings in the 1870's and 1880's. Subsequent renovation of the building took place in 1960 following a fire. Additions were completed in 1976 and 2010. For more information about the library, see the public facilities chapter.

PERFORMING ARTS

Waterville Opera House

Another property that is listed on the National Register is the 900-seat Waterville Opera House which was constructed in 1902. The architect was George Adams who designed many city hall/opera complexes in the northeastern United States. Renovations since the mid 1980's provided new seats in the orchestra section, a raised roof stage to accommodate scenery changes, air conditioning, and a skywalk to connect the second floor of City Hall with the nearby Waterville Regional Arts and Community Center (formerly the Waterville Performing Arts Center and Sterns Cultural Center). An addition was constructed in 2012, along with major renovations.

Waterville Opera House Association

The Waterville Opera House Association is a nonprofit corporation which was founded in 1973 to manage and maintain the Opera House. This is done through rental fees, membership fees, in-kind efforts of its membership, and financial support of the City. With the formation of the Waterville

Regional Arts and Community Center, the Association also assumed management and operation of *Artspace* in the Center's building, including designing and administering instruction in the performing arts and scheduling and rental of *Artspace* facilities.

Waterville Regional Arts and Community Center

The Waterville Regional Arts and Community Center (WRACC) is housed in the former Sterns Department Store on Main Street in Downtown. In 1992 a partnership of the Waterville Performing Arts Center and the Sterns Cultural Center purchased the building, renovated it, and secured tenants related to the performing and cultural arts of the region. Since then, classes in classical ballet, tap, jazz, tai chi, African drumming and dance, children's creative movement, theater, and other performing arts have been offered at the facility. When the partnership that owned the building collapsed in 1995, members of the community formed a corporation to purchase the building and hire a building manager.

ACADEMIC RESOURCES

The City has the cultural resources of two academic institutions, Colby College and Thomas College. Kennebec Valley Community College (KVCC), located just north of Waterville in Fairfield, serves City residents as well.

Colby College

Colby College, an independent, co-educational liberal arts college with a 714-acre campus on Mayflower Hill, is a cultural center of the community. The College employs over 700 people, approximately 170 of whom are full-time faculty and 37 of whom are part-time faculty. Current enrollment is 1,838 students.

Colby's campus includes a State wildlife preservation area, 50 acres of playing fields, meadows, woodlands, a pond, and 49 buildings, all of which have been constructed since the College moved from Downtown to its present location in the 1930's. Colby's Library has approximately 778,000 volumes and micro-texts and about 2,710 periodical subscriptions. There are also separate science, music, and art libraries.

Colby's policy is to make its various physical and cultural resources available to the local communities of the Waterville area. The College encourages the public to take part in Colby events, lectures, and performances. The College also encourages faculty and students to volunteer and, in other ways, to become involved in community activities. Colby has an extensive music, performing, and visual arts program.

Thomas College

Thomas College, founded in 1894, is located on a 127-acre campus off the West River Road. It is a private, non-profit, non-sectarian, coeducational professional school which employs approximately 92 people full-time and 56 part-time.

Thomas College offers two-year associate degree, four-year bachelor's degree, and master's degree programs. Fields of study include business, technology, and education.

The College has a current enrollment of approximately 700 full-time students taking day classes, of whom about 65 percent live on campus. Another approximately 300 students attend Thomas part-time, either during the day or in the evening. The College plans to increase full-time enrollment to 1,400 over the next few decades.

Kennebec Valley Community College

Kennebec Valley Community College (KVCC) in Fairfield offers a wide array of courses including nursing, building construction, business administration, electronics, emergency medical technician, health occupations, heavy equipment maintenance, medical/dental assistant, respiratory therapy, and secretarial science.

Churches

There are more than two dozen churches in Waterville representing a broad spectrum of religious affiliations.

Civic, Fraternal, and Community Organizations

Waterville has a wide variety of organizations including the Waterville Rotary Club, the Elks Club, the VFW, the American Legion, the Waterville Women's Club, and the Odd Fellows.

Educational Services

A variety of educational services is available including:

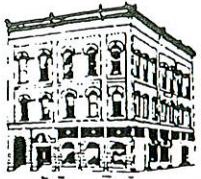
Literacy Volunteer Program: Trains volunteers to tutor adults in basic reading and conversational English.

Maine Children's Home for Little Wanderers: Offers courses in parenting, prenatal care, basic academics, English literature, grammar, history, government, home economics, and aerobics.

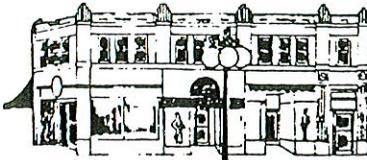
MaineGeneral Medical Center: Offers courses in radiologic technology and laboratory technology.

Social Services

Waterville also hosts a wide range of social service agencies which are more particularly identified in a social services directory available electronically from Kennebec Valley Community Action Program (KVCAP). Those agencies provide alcohol/drug abuse services, boarding/nursing homes, day care centers and preschools, developmentally disabled services, groups that provide assistance with disaster relief, domestic violence project/battered women, employment information, family related information, health information, hospitals and community health centers, housing, meals, clothing, information for the elderly, transportation, legal information, mental health services, rape crisis assistance, and women's services.



1. Milliken Block (1877)
Silver St. Tavern



2. Rancourt Building (1936)
Paragon Shop



3. Plaisted Block (1883)
Plants Alive



4. Soper Block (1890)
Robinson-Davidson (1911)
Carbon Copy



5. Barrell Block (1850/74)
Berry's Stationers



6. Emery (1850)
Day's Jeweler

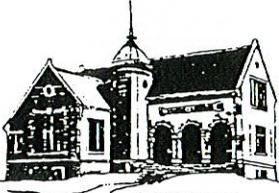


22. Old Post Office (1911)

Historic Walking Tour Of Downtown Waterville Map 8-1



21. Lombard House (1908)



20. Waterville Library (1924)



19. First Baptist Church
(1826)



18. Unitarian Universalist Church
(1832)



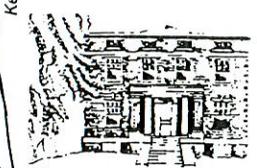
17. Cyrus-Davis House



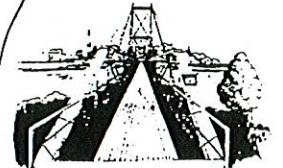
16. Redington House
(1814)



7. Emily Hall House (1834)



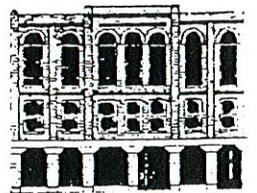
8. Elks Club (1907)



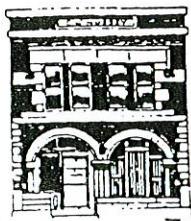
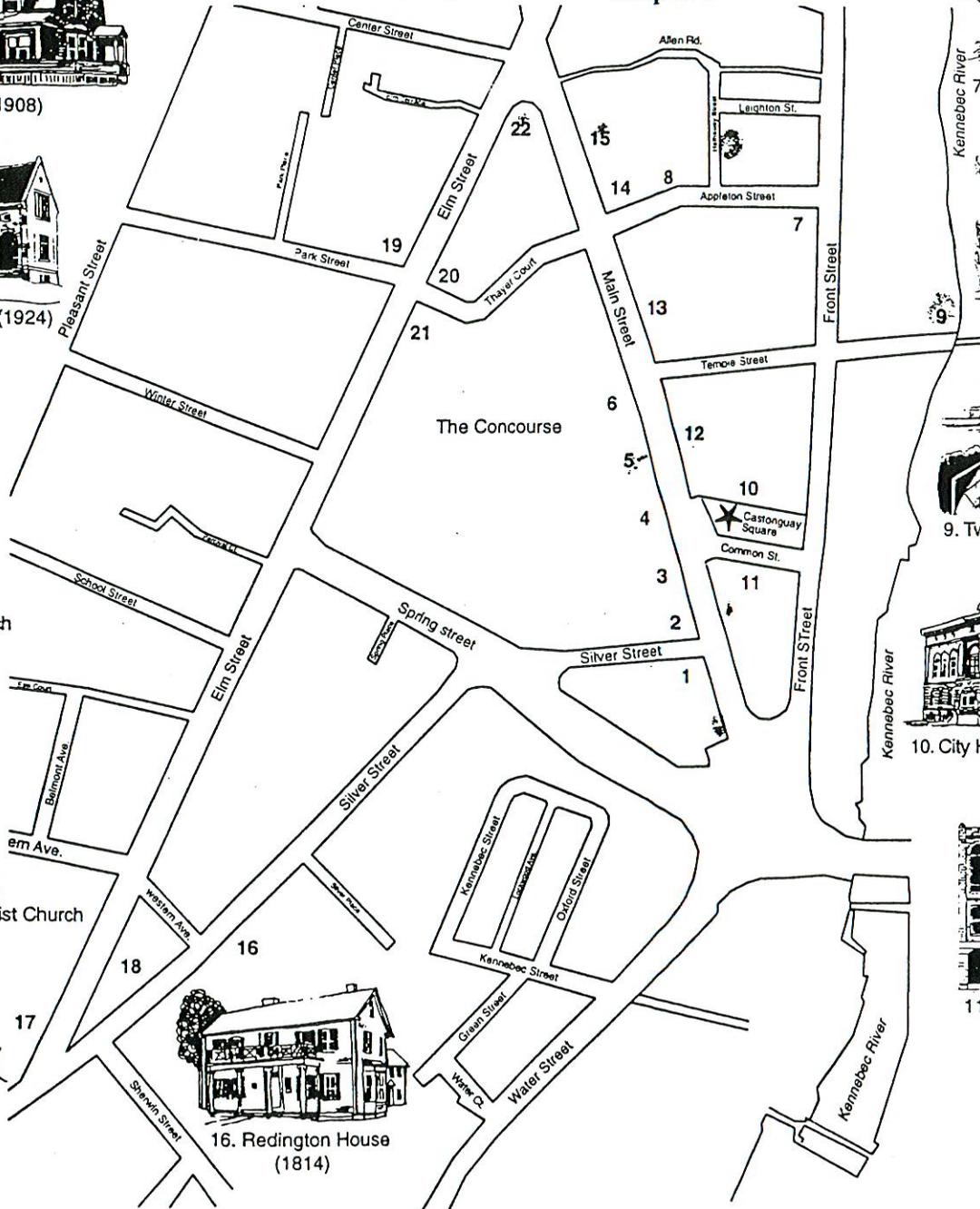
9. Two-Cent Bridge (1903)



10. City Hall/Opera House (1902)



11. Masonic Block (1890)



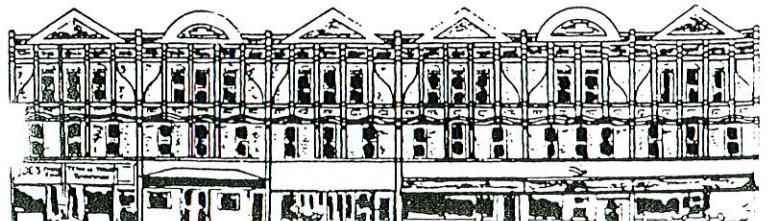
15. Hunney Block (1898)



14. O. G. Clark (1898)



13. Park (1898)

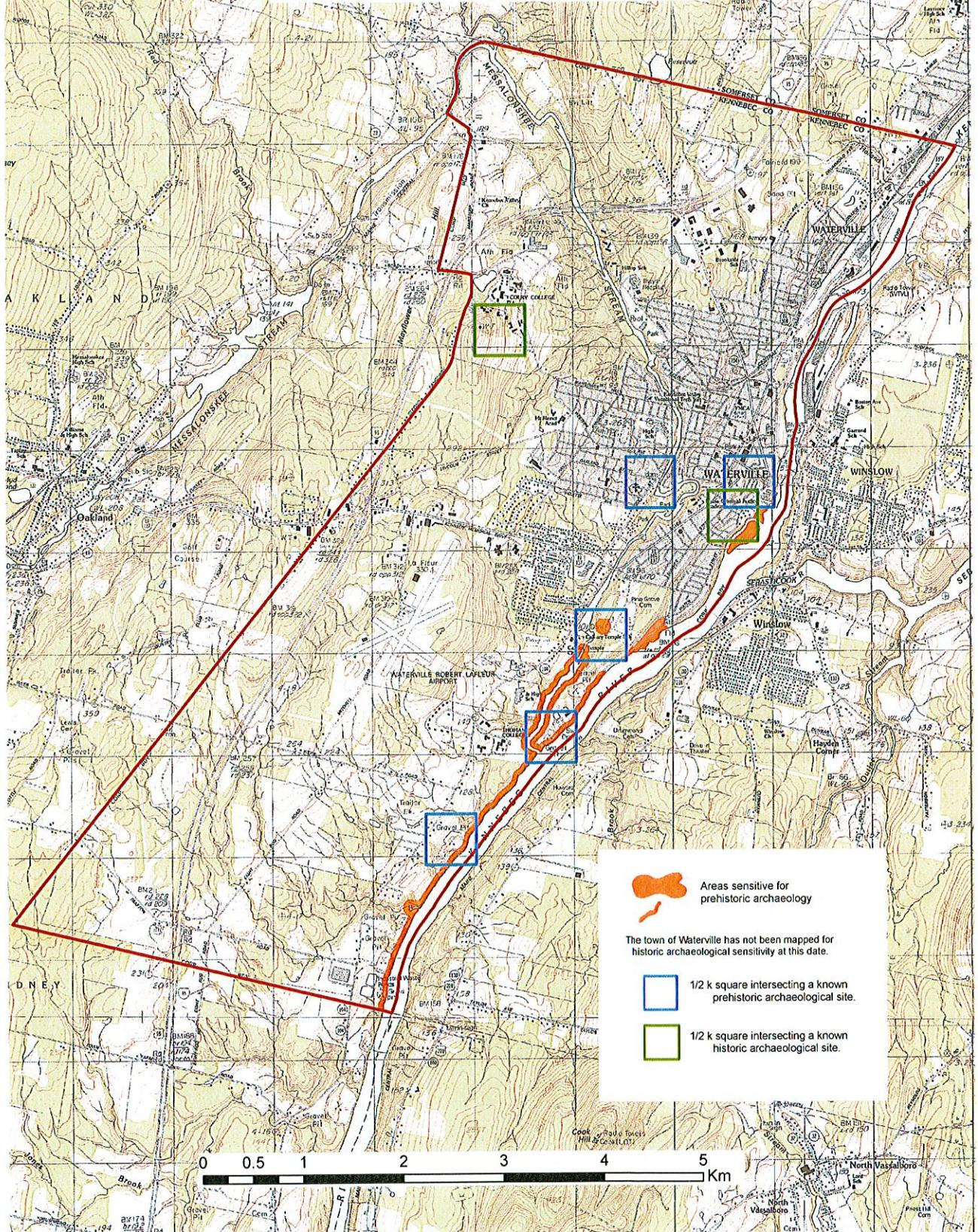


4. Soper Block (1890)

**Known Archaeological Sites* and
Areas Sensitive for Archaeology* in
Waterville**
information provided by
Maine Historic Preservation Commission
April 2009

*dated material subject to future revision

map 1/1

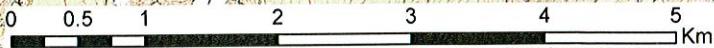


 Areas sensitive for prehistoric archaeology

The town of Waterville has not been mapped for historic archaeological sensitivity at this date.

 1/2 k square intersecting a known prehistoric archaeological site.

 1/2 k square intersecting a known historic archaeological site.



CHAPTER 9: NATURAL RESOURCES

Introduction

This chapter summarizes information about the natural and physical systems that determine the form of Waterville's landscape. Information about the City's geology, topography, soils, surface and ground water, land cover, and unique natural areas and wildlife habitat is intended to identify the physical limitations the natural environment imposes that must be addressed in a thorough planning process and, at the same time, the opportunities it creates for special uses or treatment for future development.

High elevation, steep slope, shallow depth to bedrock, and low bearing capacity are all constraints to development in Waterville. Hydric, highly erodible, and floodplain soils not only place constraints on development, but development on these soils can cause environmental damage. On the other hand, some natural features are not only suitable, but offer unique opportunities or significant cost savings for development.

But difficult decisions must be made when a natural resource with high potential for development is also a limited resource which should be conserved. For example, prime farmland and prime forestry soils are often the best soils, and the least expensive, on which to construct a development -- relatively flat, well drained, and in the case of farmland, cleared of woody vegetation.

Other conflicts may arise when there are multiple, incompatible uses for a resource. For example, bedrock and glacial stream deposits not only are a source of building materials, but of groundwater for wells.

City policy must balance competing demands between preservation and development in both the short and long term.

Geology

There are two major bedrock formations in Waterville, the Waterville Formation, which runs along the Kennebec River and in a parallel band through the middle of the City, and the Mayflower Hill Formation, which runs through the western portion of Waterville in two bands between Fairfield and Oakland. The Waterville Formation is a shaley phyllite, with fractures trending northwest and southeast, which was laid down in the Silurian time then folded and intruded upon in the Devonian and Permian time. The Waterville Formation is visible during low water at Ticonic Falls just below the Two Cent Bridge. The Mayflower Hill Formation can be seen at the Devil's Chair Rock Quarry.

Glacial action was the dominant force that shaped Waterville's land forms and surficial geology. As the Late Wisconsinian glacier advanced, the ice mass scraped off the loose soils and geologic material from the surface of the ground before it. The massive weight of the ice depressed the ground surface to about 400 feet below its present elevation, allowing the sea to follow the

retreating ice margin inland. The glacier left its unsorted debris, called till, on points of high elevations as the ice mass slowly melted and eased its load of sediment and rock down onto the land surface. As the melting continued, water streamed down over the ice and land from the exposed high elevations and deposited material in a stratified sequence from large boulders to fine particles of silt and clay as the stream velocity slowed to standing water in drainage-blocked glacial lakes.

Much of Waterville is covered with till which is made up of a mixture of sand, silt, clay, and stones that are rarely stratified. Till generally overlies bedrock, but may overlie or include sand and gravel, and commonly conforms to the bedrock surface. Thicknesses of till can locally exceed 100 feet. In Waterville, there are also areas of bedrock outcrops or thin surficial deposits, generally less than ten feet thick. The glacial-marine sands and silty clays of the Presumpscot Formation are located at lower elevations. This Formation was deposited on the depressed landscape as the Holocene ocean inundated the land and a blanket of glacio-marine clay, made up of the clays and silts transported to the sea by melt-water slowly rebounded and once again the submerged land was exposed to subaerial weathering. Today these marine sediments occur at low elevations in deposits ranging from 20 to more than 100 feet. Areas of topographic depression are filled with swamp and tidal marsh organic deposits.

The location of bedrock and surficial deposits influences development decisions. Construction costs increase when bedrock, also known as ledge, must be blasted to build basements or to extend water and sewer lines. Shallow depth to bedrock (0 to 15 inches) may cause septic systems to contaminate groundwater. Glacial marine silts and clays have relatively low bearing capacity and cannot support heavy structures. Construction on silts and clays on steep slopes may be unstable. Additionally, silts and clays have poor drainage.

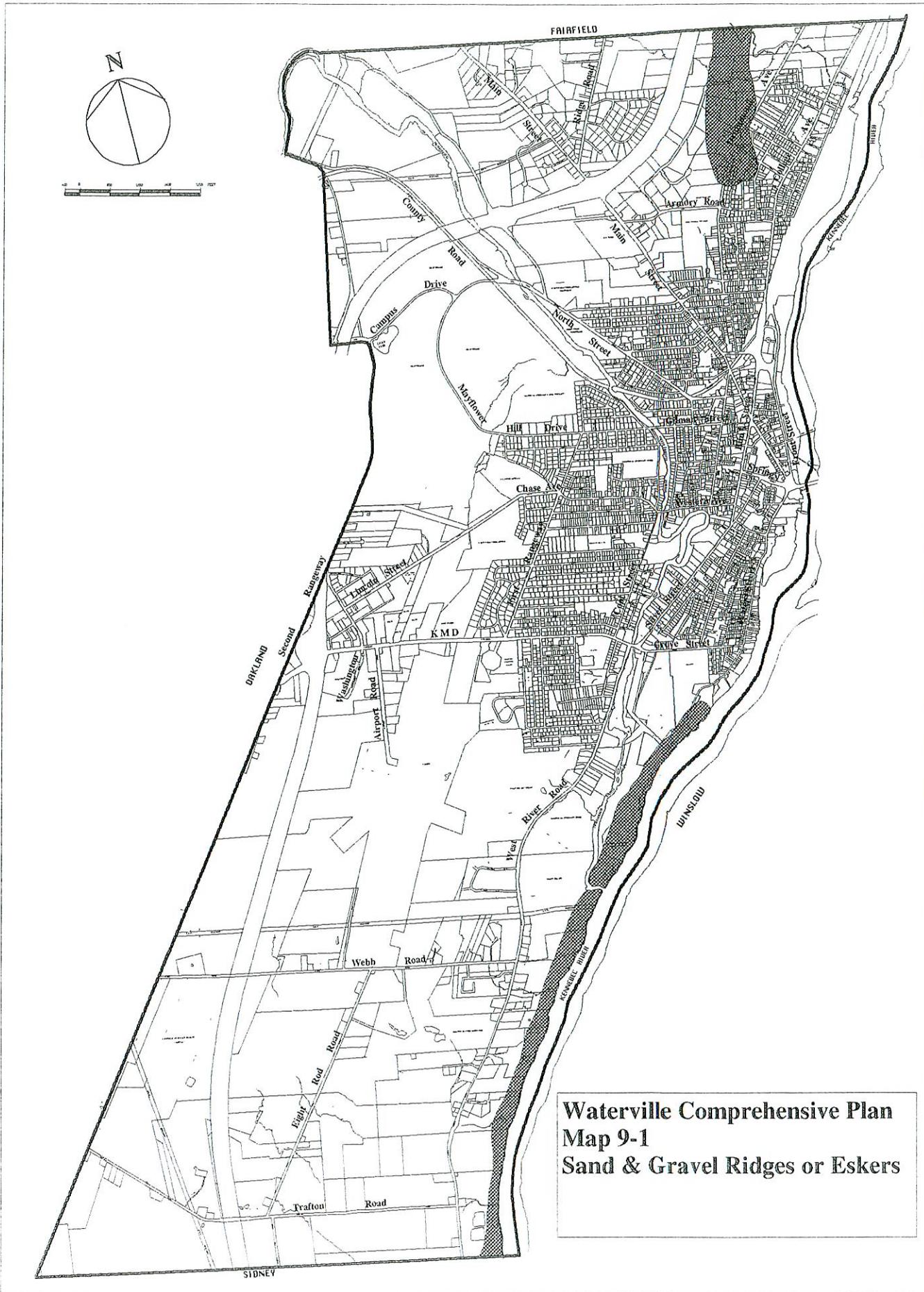
Aside from influencing the location of development, bedrock and surficial deposits are resources. Bedrock may be a source of groundwater for wells. Glacial stream deposits are both aquifer recharge areas and sources of sand and gravel for construction. Map 9-1 shows three sand and gravel ridges, or eskers, that were deposited in meltwater tunnels or rivers beneath glaciers.

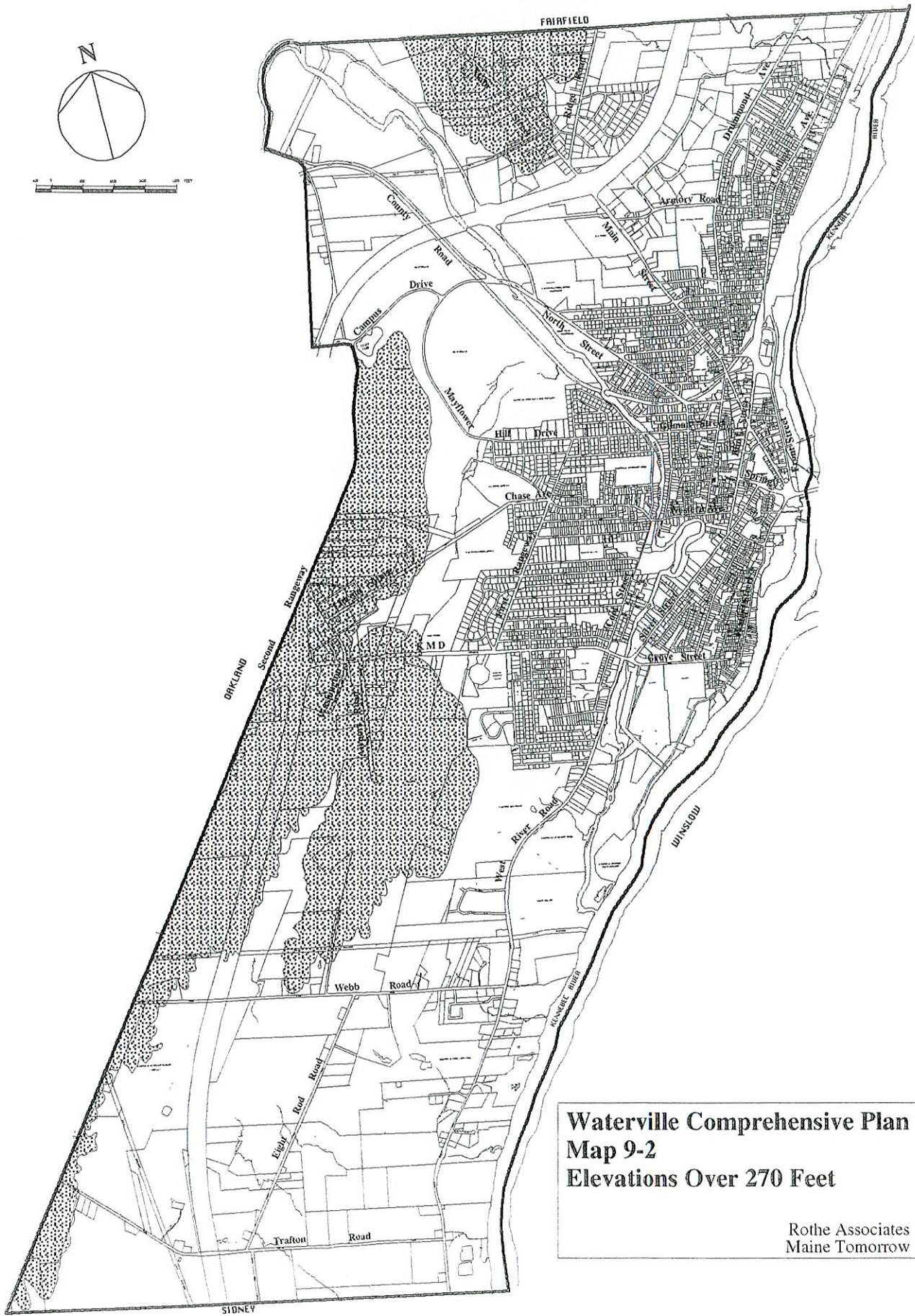
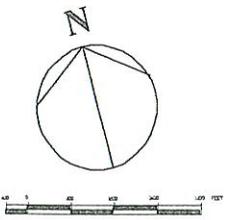
These eskers, off Drummond Avenue extending north into Fairfield and along the Kennebec from Couture ball field south into Sidney, have been greatly disturbed over the years by sand and gravel operations.

Topography

Land in Waterville rises from a low of about 30 feet above sea level along the Kennebec River and Messalonskee Stream to the hills along the City's western and northern borders. The highest elevations include Pung Hill (378 feet), over which Upper Main Street rises to Fairfield; Mayflower Hill, the site of Colby College; and the Airport.

High elevations place constraints on development in Waterville. The Kennebec Water District currently has no plans to provide water in areas of greater than 270 feet in elevation, shown on Map 9-2, where a static pressure of 35 psi cannot be maintained with existing facilities. Currently, the most heavily developed sections of Waterville are concentrated at elevations 100





**Waterville Comprehensive Plan
Map 9-2
Elevations Over 270 Feet**

Rothe Associates
Maine Tomorrow

to 200 feet above sea level in the eastern half of the City.

Slope gradient influences the retention and movement of water, potential for slippage and accelerated erosion, and the ease with which machinery can be used. Water may not drain from very flat areas of less than two percent slope. Conversely, slopes of 15 percent or more are costly to develop and highly vulnerable to erosion. On steep slopes, preparing construction sites, building roads, and installing underground utilities all require special design considerations, more grading and filling, and better erosion control. Stormwater management becomes more difficult and road maintenance and snow removal costs rise. Currently the State Plumbing Code prohibits the installation of subsurface wastewater disposal systems on land with a slope of 20 percent or more.

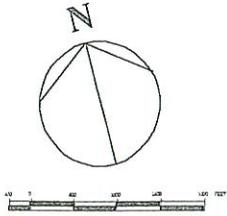
In the late 1990s, four Colby College seniors in the Geology Department identified approximately 560 acres of steep slopes (greater than 20 percent) or about six percent of the total land area in Waterville. As indicated in Map 9-3, most of these steep slopes are located along the banks of the Kennebec River, Messalonskee Stream, and a few tributary streams as well as along the west side of Pung Hill, the east side of the Airport, and in the area between Eight Rod and West River Roads. Steep slopes are particularly problematic when they overlie the Presumpscot Formation because they are susceptible to slumpage or slope failure. Approximately 48% of Waterville's steep slopes are underlain by the Presumpscot Formation. The students recommend "structures, roads, utility lines, and pipes should be set well back from slopes in general, especially slopes composed of the Presumpscot Marine clays...Vegetation should be left in place on and around areas of steep slopes especially along river banks...Lastly, water from drainage systems should not be directed towards steep slopes."

Soils

Bedrock geology and surficial deposits are the parent material from which soils develop. Soils in Waterville are dominated by the silty clays of the Presumpscot Formation and by silty loams and gravely sandy loams developed from glacial till and meltwater. Soils of glaciofluvial or marine origin, and the shallow soils of glacial till or outwash tend to have high water tables.

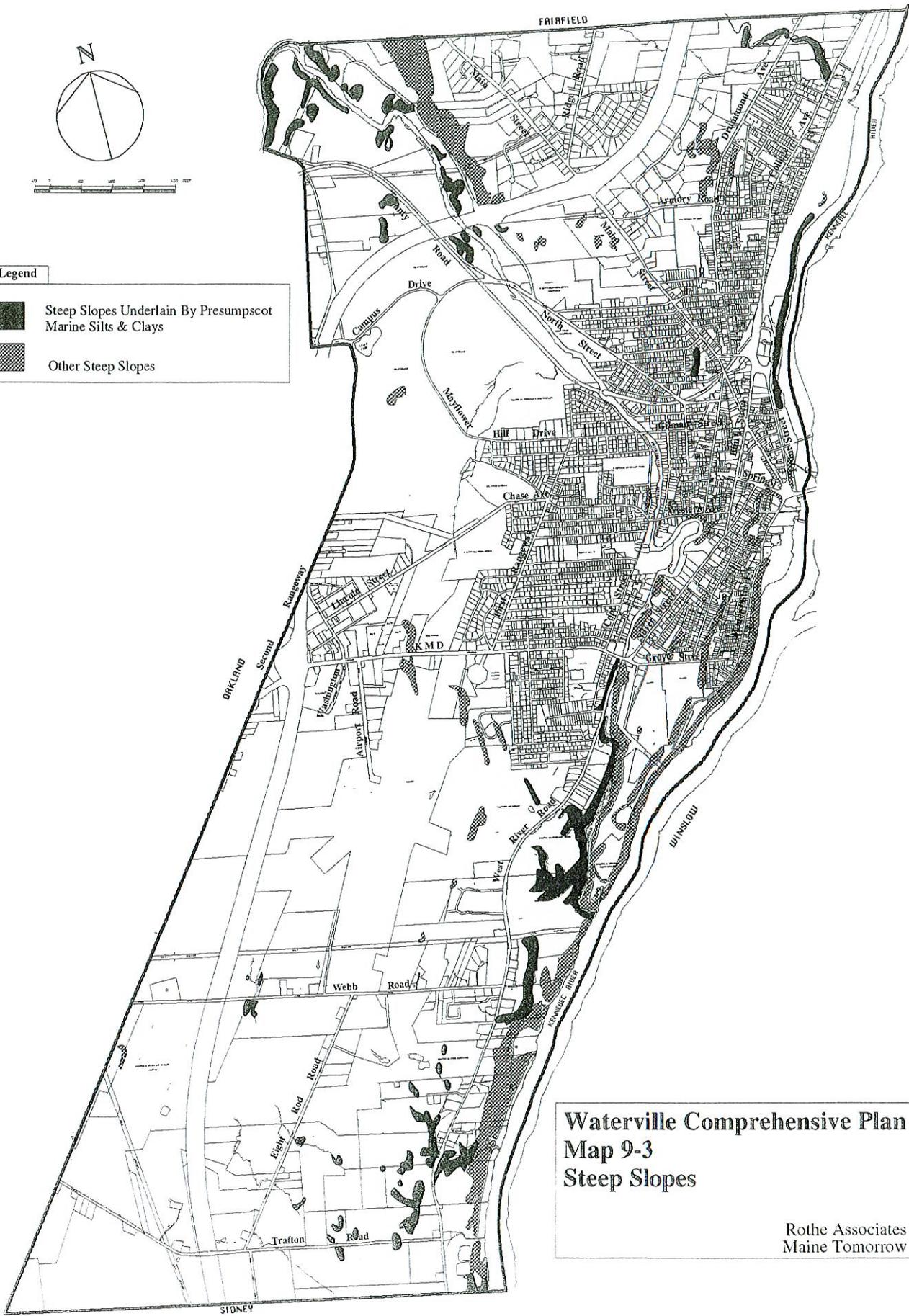
Approximately 60% of the soils in Waterville are in the Buxton-Scio-Scantic Association. The major soils in this Association formed in marine and lacustrine sediments. They are deep, moderately well to poorly drained, nearly level to sloping, medium textured soils, in flat areas and near waterways. Wetness and permeability are the major limitations for septic system absorption fields and cultivated crops. Supplemental drainage and erosion control are the major concerns of management.

The second largest soil association is the Hollis-Paxton-Charlton-Woodbridge Association, which largely occurs on the three hills. The major soils in this Association formed in glacial till. They are somewhat excessively to moderately well drained, gently sloping to moderately steep, moderately coarse textured soils. These soils are mainly in woodland, but may be farmed and used for other purposes. The well drained Paxton and Charlton soils are suited to cultivated crops, orchards, and other intensive uses. The Woodbridge soils have some limitations for both nonfarm and farm uses. Many orchards and dairy farms are on this Soil Association in Kennebec



Legend

-  Steep Slopes Underlain By Presumpscot Marine Silts & Clays
-  Other Steep Slopes



**Waterville Comprehensive Plan
Map 9-3
Steep Slopes**

Rothe Associates
Maine Tomorrow

County.

Other soil associations that are fairly representative of soils in Waterville are the poorly drained Monarda Association, the Scantic-Ridgebury-Buxton Association, and the Berkshire-Lyman-Peru Association which is generally found on upland hills and ridges.

Soils information used in this inventory is based on a countywide medium intensity soil survey prepared by the U.S. Soil Conservation Service (SCS). It should be noted that other soils are present within mapping units and the boundaries of mapping units are imprecise. Additionally, the maps were drafted nearly 40 years ago (1978) and, in some instances, the soil has been stripped or otherwise disturbed since then. Nevertheless, the maps provide generalized information which is helpful in making locational decisions and in determining where more intensive soils investigations are necessary for specific site plans.

Properties of soil are important in engineering because they affect construction and maintenance of buildings, roads, and utilities. Soil properties are also important for crop and wood production.

Hydric Soils

Hydric soils are wet and often indicate the presence of wetlands. Map 9-4 identifies wet soils in the area off Webb Road north of the landfill, along I-95 south of Kennedy Memorial Drive, along the Messalonskee Stream at its confluence with the Kennebec River and at the Oxbow Nature Trail, on the island off Water Street, off Drummond Avenue, and off Ridge Road.

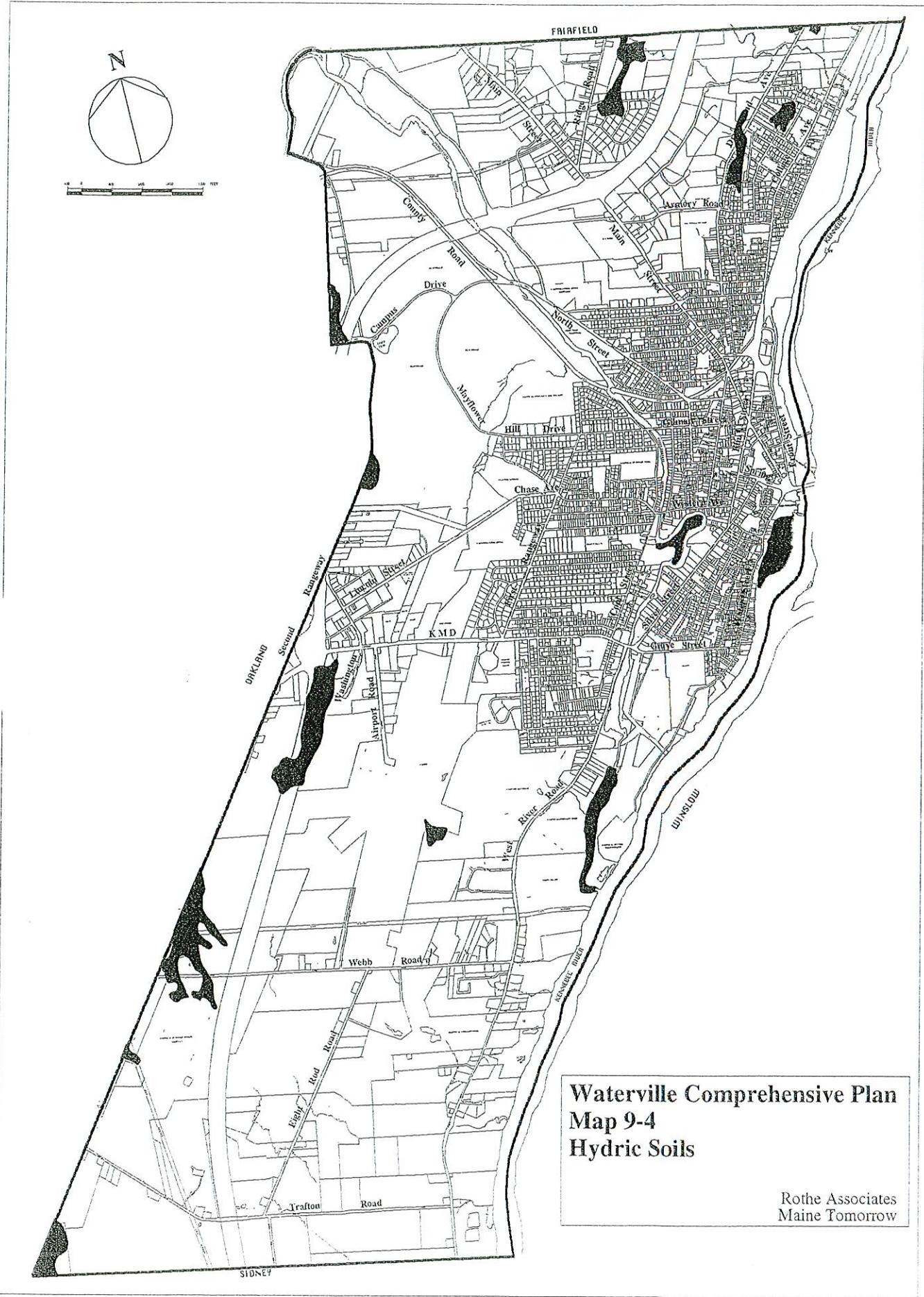
Highly Erodible Soils

The Waterville area contains many soils which are considered to be highly erodible, including Buxton, Hartland, Hinckly, Hollis, Paxton-Charlton, Scantic, and Suffield. Map 9-5 indicates that highly erodible soils are found primarily along the banks of rivers and streams throughout the City with some on Mayflower and Pung Hills.

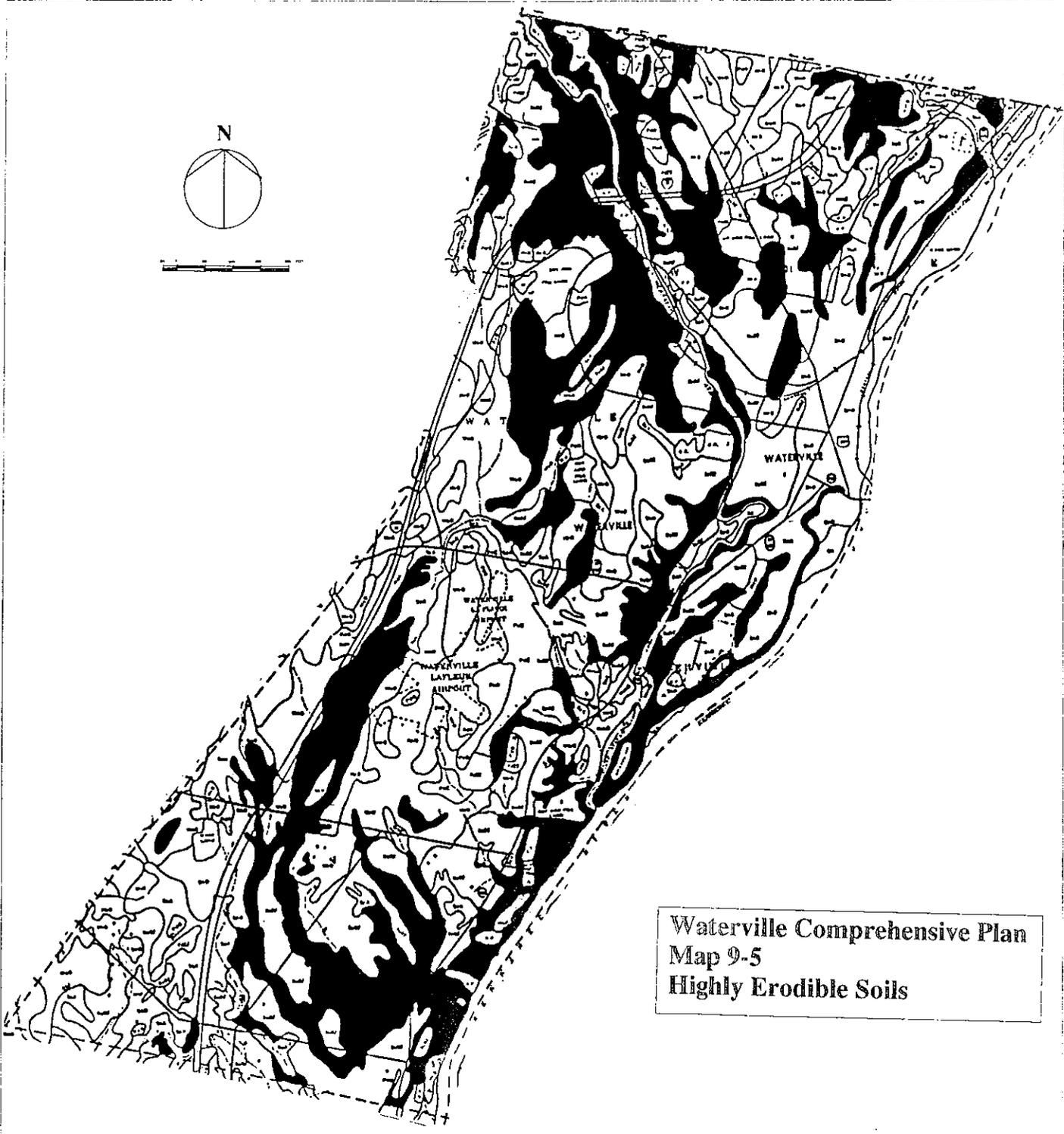
Development on highly erodible soils can be unstable if not carefully designed and constructed. Clearing of vegetation can result in severe soil erosion which may cause sediment to clog drainage systems and degrade water quality. In suspension, sediment reduces the amount of sunlight available to aquatic plants, covers fish spawning areas and food supplies, and clogs the gills of fish. Phosphorus moves into receiving waters attached to soil particles. Excessive amounts cause algae blooms.

Prime Farmland Soils

Prime farmland soils are those soils defined by the U.S. Department of Agriculture (USDA) as the best soils for producing food, feed, forage, fiber, and oilseed crops. It has the soil quality, growing season, and moisture supply needed to produce a sustained high yield of crops while using acceptable farming methods. Prime farmland produces the highest yields and requires minimal amounts of energy and economic resources, and farming it results in the least damage to the environment. A large percentage of the land in Waterville is considered prime agricultural land. Because these soils are also good for construction of roads and buildings, much of existing



Waterville Comprehensive Plan
Map 9-4
Hydric Soils
 Rothe Associates
 Maine Tomorrow



Waterville Comprehensive Plan
Map 9-5
Highly Erodible Soils

development, including the Airport and numerous residential areas, has been constructed on prime farmland soils.

Map 9-6 indicates that undeveloped areas of prime farmland soils are located mostly in the southern area of the City, mainly along West River, Eight Rod, and Trafton Roads. There also is some undeveloped prime agricultural land in the northwestern corner of the City. Unless these areas are rezoned, development will continue to take place on prime agricultural lands. These acres are currently zoned Rural Residential (RR) and General Industrial (I) in the north of the City and RR, Industrial Park (IP), and Contract Zoned Commercial (CZD/CC) in southern areas.

Prime Forest Land Soils

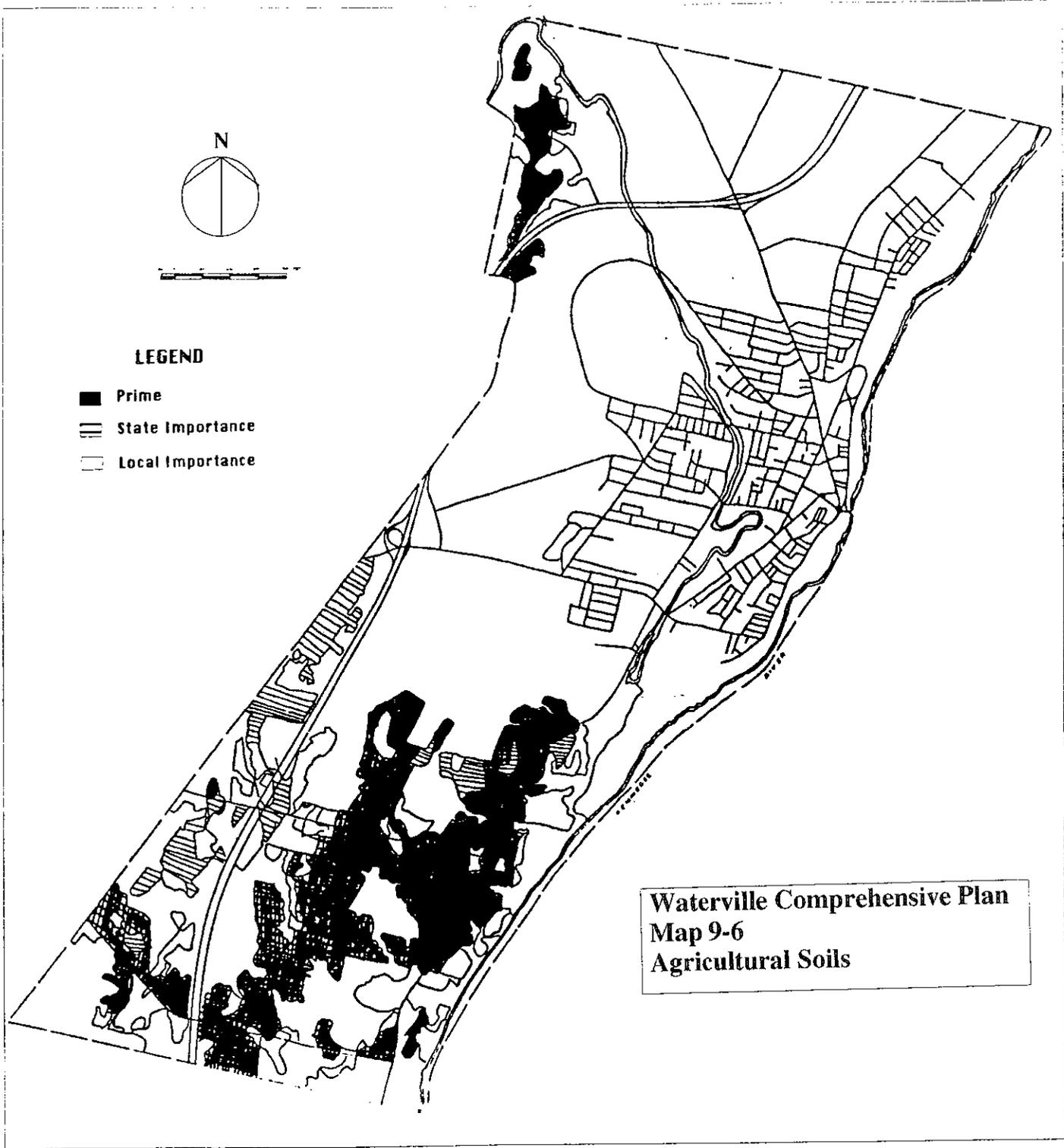
Most of Waterville is covered by prime forest land soils. That is, most of Waterville has soils rated medium, high, or very high for woodland productivity and capable of growing eastern white pine at an economically-productive rate. The best soils for tree growth in Waterville are located along the Kennebec River, from Pine Grove Cemetery south of Grove Street all the way north to Fairfield, and along the Interstate south of Kennedy Memorial Drive, including land owned by the City surrounding the landfill.

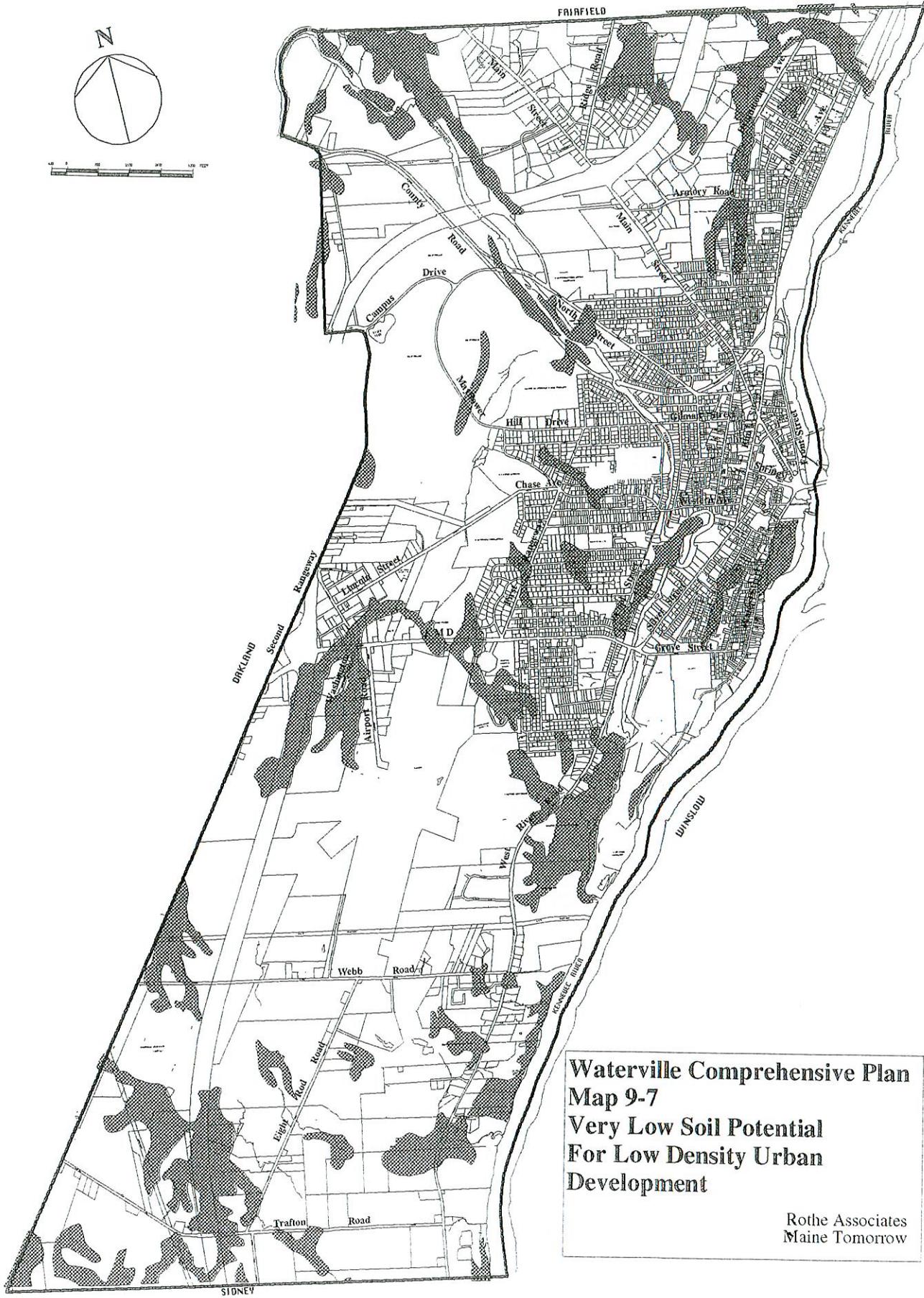
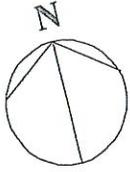
The prime forest land soils along the Kennebec for the most part are already developed. Much of the prime forest land soils along the Interstate are still vacant. However, many of these areas are located along the route of the proposed Washington Street Extension to Webb Road and are currently zoned Commercial or Industrial, and are therefore unlikely to be used for forestry purposes.

Soil Potential for Low Density Urban Development

The SCS has developed a soil potential rating system to identify soil limitations for low density developments. The rating system takes into account soil characteristics such as permeability, slope, texture, depth to water table, flooding, erodibility, and depth to bedrock. Additionally, it considers the potential for development to cause environmental damage and the long term maintenance costs of development constructed on a particular soil type. In this rating system, low density urban development means dwellings with basements, roads, and septic systems. Soils that have the fewest limitations are the least expensive on which to develop. Soils that are rated very low potential for development have the most limitations. They are the soils on which development is both very expensive and potentially damaging to the environment. These soils are located mainly along streams and the Kennebec River (see Map 9-7).

Of the 36 soil types found in Waterville, 15 are rated "poor" or "very poor" for development. (See Table 9-1.) These ratings are a composite of weighted ratings of potential for septic tank absorption fields, dwellings with basements, and local streets. In an area where quasi-municipal sewerage is available, a "very low" rating for septic would not necessarily preclude development, especially if the ratings for dwellings and roads were "medium." A "very low" rating for septic might indicate shallow depth to either water table or bedrock, or poorly drained soils. We might expect to have wet lawns and wet basements in these soils. A "very low" rating for roads might indicate that the soils are poorly drained with seasonally high water table or the soils might be unstable, erodible, susceptible to frost action, or shallow to bedrock.





**Waterville Comprehensive Plan
Map 9-7
Very Low Soil Potential
For Low Density Urban
Development**

Rothe Associates
Maine Tomorrow

Much of the undeveloped land in Waterville is rated high or medium potential for low density development, although it might otherwise be limited by higher elevations.

TABLE 9-1					
SOILS WITH LOW AND VERY LOW POTENTIAL FOR LOW DENSITY DEVELOPMENT, BY TYPE OF DEVELOPMENT					
Soil Type	Symbol *	Septic	Dwellings	Roads	Development
Biddeford	Bo	Very Low	Very Low	Very Low	Very Low
Hartland	Hfd	Very Low	Medium	Low	Low
Hinckley	Hkd	Very Low	Medium	Medium	Very Low
Hollis	Hrd	Very Low	Very Low	Low	Very Low
Limerick	Lk	Very Low	Very Low	Very Low	Very Low
Monarda	MoA	Very Low	Medium	Medium	Low
Monarda	MrA	Very Low	Medium	Medium	Low
Paxton-Charlton	PeD	Very Low	Low	Low	Very Low
Ridgebury	RdA	Very Low	Very Low	Very Low	Very Low
Saco	Sa	Very Low	Very Low	Very Low	Very Low
Scantic	ScA	Very Low	Very Low	Very Low	Very Low
Scarboro	Sd	Very Low	Very Low	Very Low	Very Low
Suffield	SuD2	Very Low	Medium	Low	Very Low
Suffield	SuE2	Very Low	Low	Very Low	Very Low
Windsor	WmD	Very Low	Medium	Medium	Very Low

* The first two letters in the symbol indicate the kind of soil; the last letter indicates slope. D and E are steep slopes, 15-45%. The number "2" indicates that the soil is eroded.

Source: Soil Survey Data for Growth Management in Kennebec County, Maine, U.S.
Department of Agriculture, Soil Conservation Service, Orono, Maine, December 1989.

Groundwater

Chapter 6, Public Facilities and Services, describes the quasi-municipal water supply in Waterville. Kennebec Water District (KWD) serves the vast majority of the City's dwelling units. According to the District, today only a few homes have drilled or dug wells. Those homes are identified on Map 9-7.5: Wells and Septic Systems produced by the city assessor.

In Waterville, there are no "public water supplies" defined by the Maine Department of Health and Human Resources as systems serving "at least 25 persons per day for at least 60 days per year". In other Maine towns public water supplies provide water for such uses as restaurants, motels, and schools. The Waterville Country Club and the Kennebec Mobile Home Park in Oakland are nearby examples of developments on public water supplies.

The source of water for wells in Waterville is either sand and gravel aquifers or bedrock aquifers. The Maine Geological Survey identified three significant sand and gravel aquifers in Waterville. These aquifers are capable of yielding more than ten gallons of water per minute. (See Map 9-8.)

Two of the aquifers are located along the Kennebec River north and south of its confluence with Messalonskee Stream. The depth to water level is 25 feet in the aquifer north of the Stream and 50 feet in the aquifer south of the Stream. The third aquifer is located between Drummond Avenue and I-95 and extends into Fairfield. The portion of the aquifer in Waterville has a ten foot thick sand and gravel deposit. According to the Kennebec Valley Council of Governments, this aquifer may be contaminated by leachate from the Fairfield landfill.

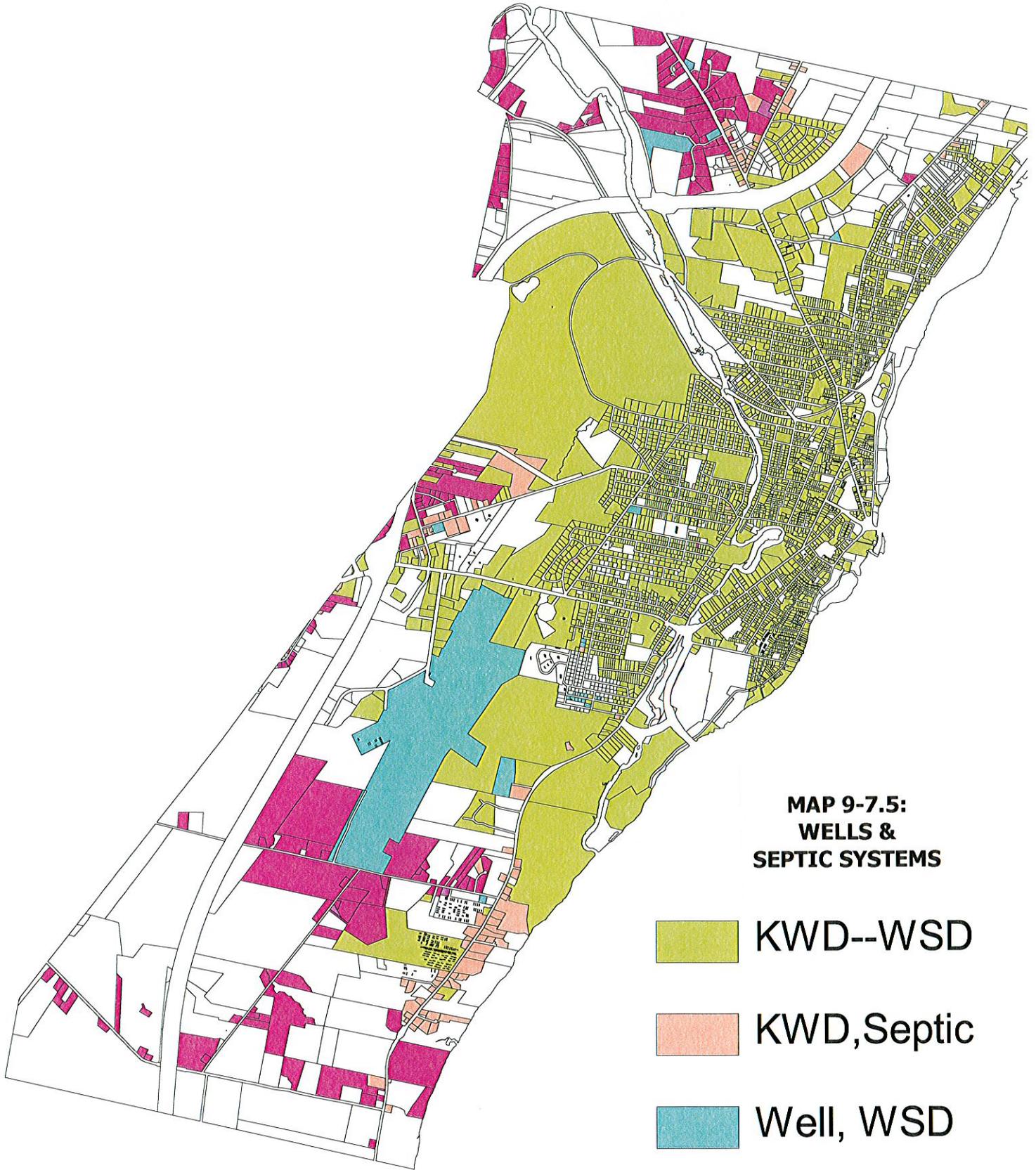
Future development outside the reach of Waterville's quasi-municipal water supply is dependent on groundwater resources. Since sand and gravel aquifers are geographically limited in Waterville, bedrock aquifers must supply the majority of the City's wells.

The City's primary bedrock aquifer is the Waterville Formation. Since igneous and metamorphic bedrock are not very porous, groundwater is stored and flows mainly through fractures and joints in the rock. Fractures in the Waterville Formation are oriented primarily northwest-southeast.

In the late 1990s, four Colby College seniors in the Geology Department conducted research to create a more comprehensive hydrogeological inventory of the City. In cooperation with local homeowners and City officials, the students created a potentiometric surface map for Waterville and reviewed bedrock fracture data to illustrate probable local groundwater flow rates and direction. (See Map 9-9.)

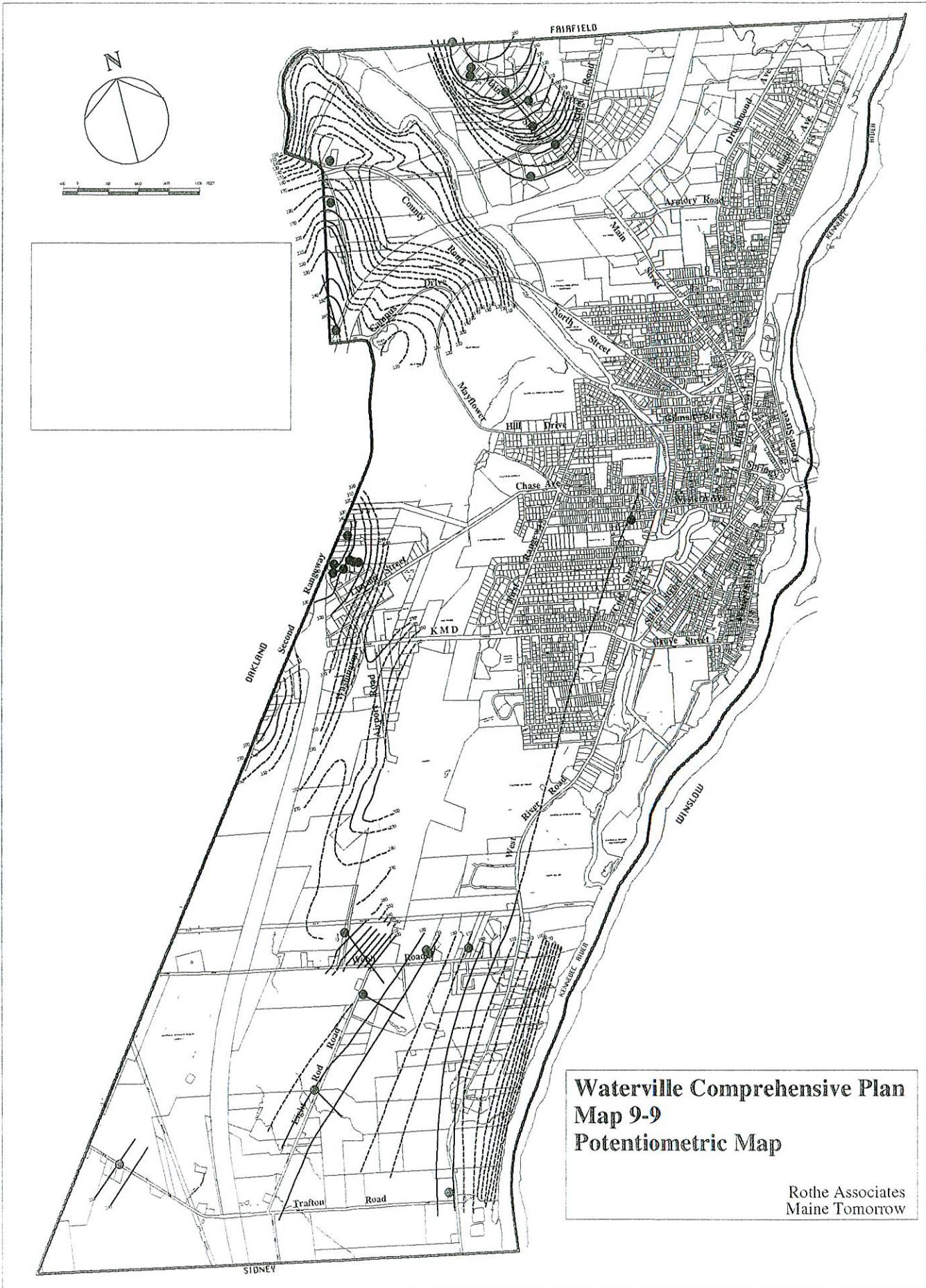
The students concluded that groundwater flows towards the Kennebec River in the southern part of Waterville, where fractures provide a channel for groundwater flow. In the area from Webb road to the Sidney town line, most homeowners rely on groundwater. Since these homeowners are down-gradient of most of the City's potential groundwater contamination sources (landfills, agriculture, gas stations and other petroleum storage facilities, industrial facilities, individual septic systems), they face the greatest risk from groundwater contamination. This situation is

Waterville Maine



**MAP 9-7.5:
WELLS &
SEPTIC SYSTEMS**

-  KWD--WSD
-  KWD, Septic
-  Well, WSD
-  Well, Septic



aggravated by the fact that groundwater seepage velocities in this area are relatively slow and, therefore, likely to result in longer retention times and less thorough flushing of contaminants from the aquifer in areas used for water supply.

The students recommend that either precautions concerning contamination need to be taken (for example, well-head or some other type of protection around aquifer recharge areas along Upper Main Street, Mayflower Hill by Colby College, along the ridge of I-95, and the area around the Airport) or the quasi-municipal water supply should be extended to include development on Webb, Trafton, and Eight Road Roads. They also recommend that existing potential contamination sites should be monitored for possible future contamination.

Surface Water

The Kennebec River forms the eastern boundary of Waterville. Other streams and brooks include Messalonskee Stream, Holland Brook, Trafton Road Brook, Runnals (also known as Reynolds) Stream, and numerous unnamed perennial and intermittent streams. The breached Kennebec Water District reservoir, which straddles the Waterville/Fairfield line, Johnson Pond on the Colby Campus, and a number of small ponds are also located in Waterville.

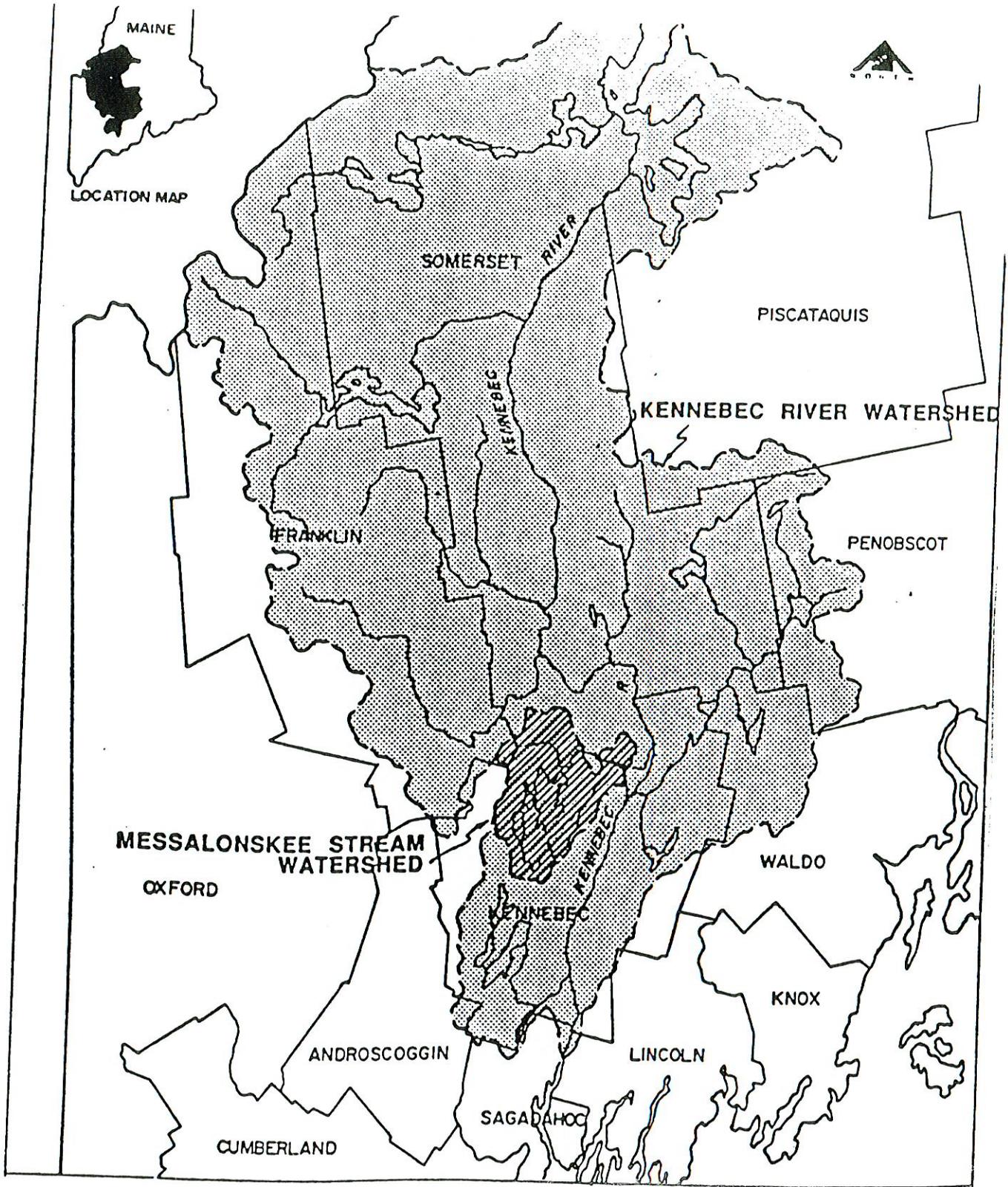
All of Waterville is located in the Kennebec River watershed (see Map 9-11). This watershed, draining a total of 5,870 square miles or approximately one-fifth of the area of the State, is the second largest in Maine. The Kennebec River originates at the outlet of Moosehead Lake and flows southerly approximately 175 miles through Merrymeeting Bay to the Atlantic Ocean. The Kennebec is dammed in Waterville at the former Scott Paper Company and at Ticonic Falls by the Milstar Dam.

A major tributary of the Kennebec is the Messalonskee Stream. The Messalonskee is 10½ miles long and runs from the outlet of Messalonskee Lake in Oakland to its confluence with the Kennebec River at the south end of Water Street in Waterville. Map 9-12 illustrates the watershed of the Messalonskee Stream, a drainage basin of approximately 210 square miles.

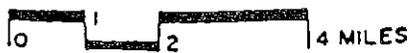
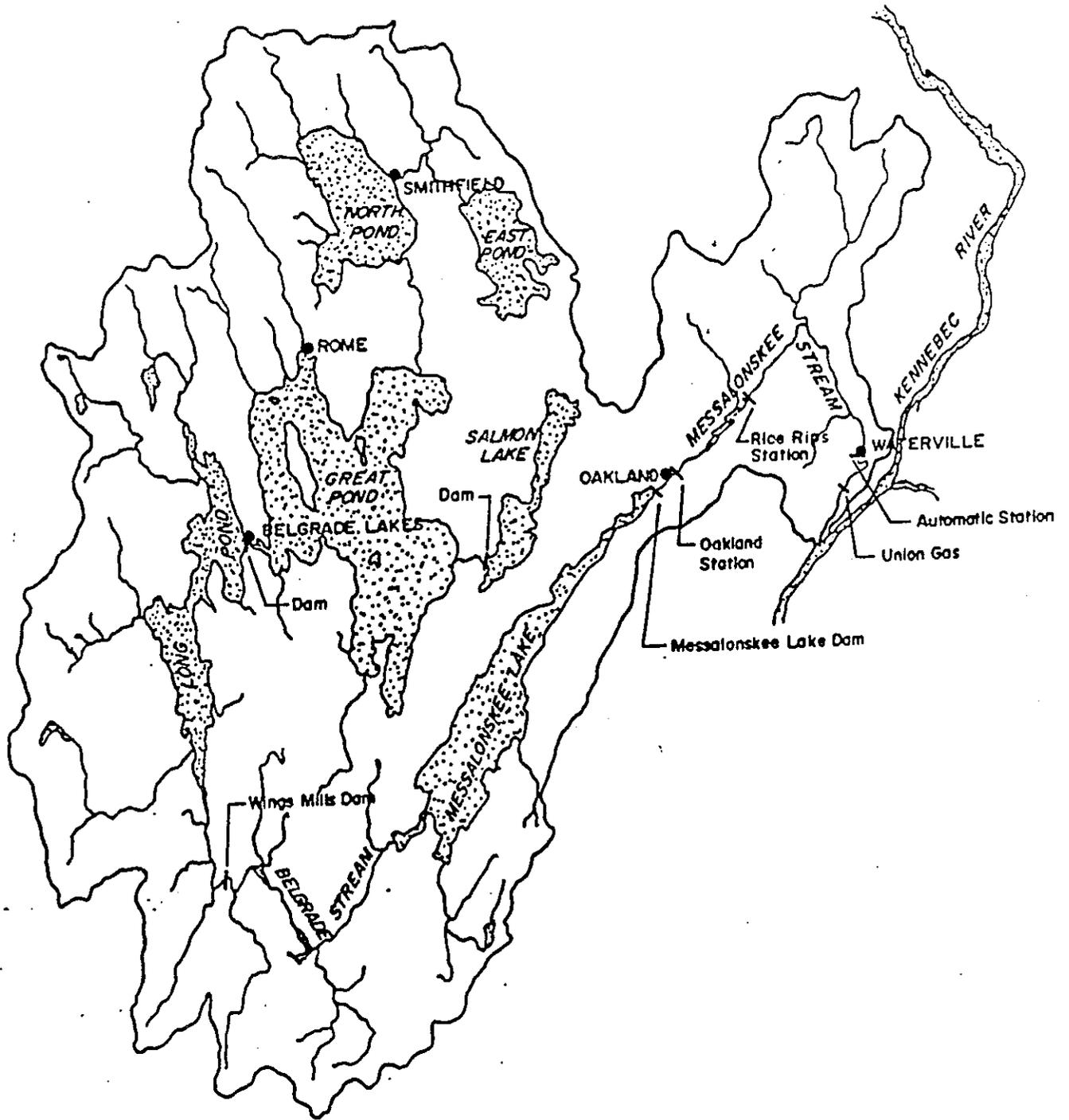
There are four hydroelectric stations on the Messalonskee, two of which are located in Waterville. The two dams in Waterville are the Automatic Dam on Western Avenue at the Kennebec Water District facility and the Union Gas Dam on West River Road, north of Calvary Temple.

The Maine Department of Environmental Protection (DEP) classifies the water quality of the Kennebec River as follows:

1. Class B: from the Fairfield town line to its confluence with the Messalonskee Stream, excluding all impoundments,
2. Class C: waters impounded by the Hydro-Kennebec Dam and the Lockwood Dam in Waterville-Winslow, and
3. Class B: from its confluence with the Messalonskee Stream to the Sidney-Augusta boundary,



Waterville Comprehensive Plan
 Map 9-11
 Kennebec River Watershed



Waterville Comprehensive Plan
Map 9-12
Messalonskee Stream Watershed

including all impoundments.

Class C streams are considered satisfactory for drinking water after treatment, fishing, recreation in and on the water, industrial process and cooling water supply, navigation, and as habitat for fish and other aquatic life. It is considered swimmable, but swimming is not recommended after heavy storm events, because of combined sewer overflows (CSO's). Both the Kennebec Sewerage Treatment District (KSTD) and Scott Paper Company discharge treated wastewater into the Kennebec in Waterville.

Class B is similar to Class C, except that discharges to Class B waters are not permitted to cause adverse impacts to habitat or aquatic life and dissolved oxygen and E. coli bacteria standards are more stringent.

Water quality in the Messalonskee Stream is classified as Class C. Until 2012, the Oakland Sewage Treatment Plant, storm water pipes, and some combined sewage overflows discharged into the Messalonskee, causing high bacteria levels in some locations. The Oakland plant now is connected to the Kennebec Sanitary Treatment District (KSTD).

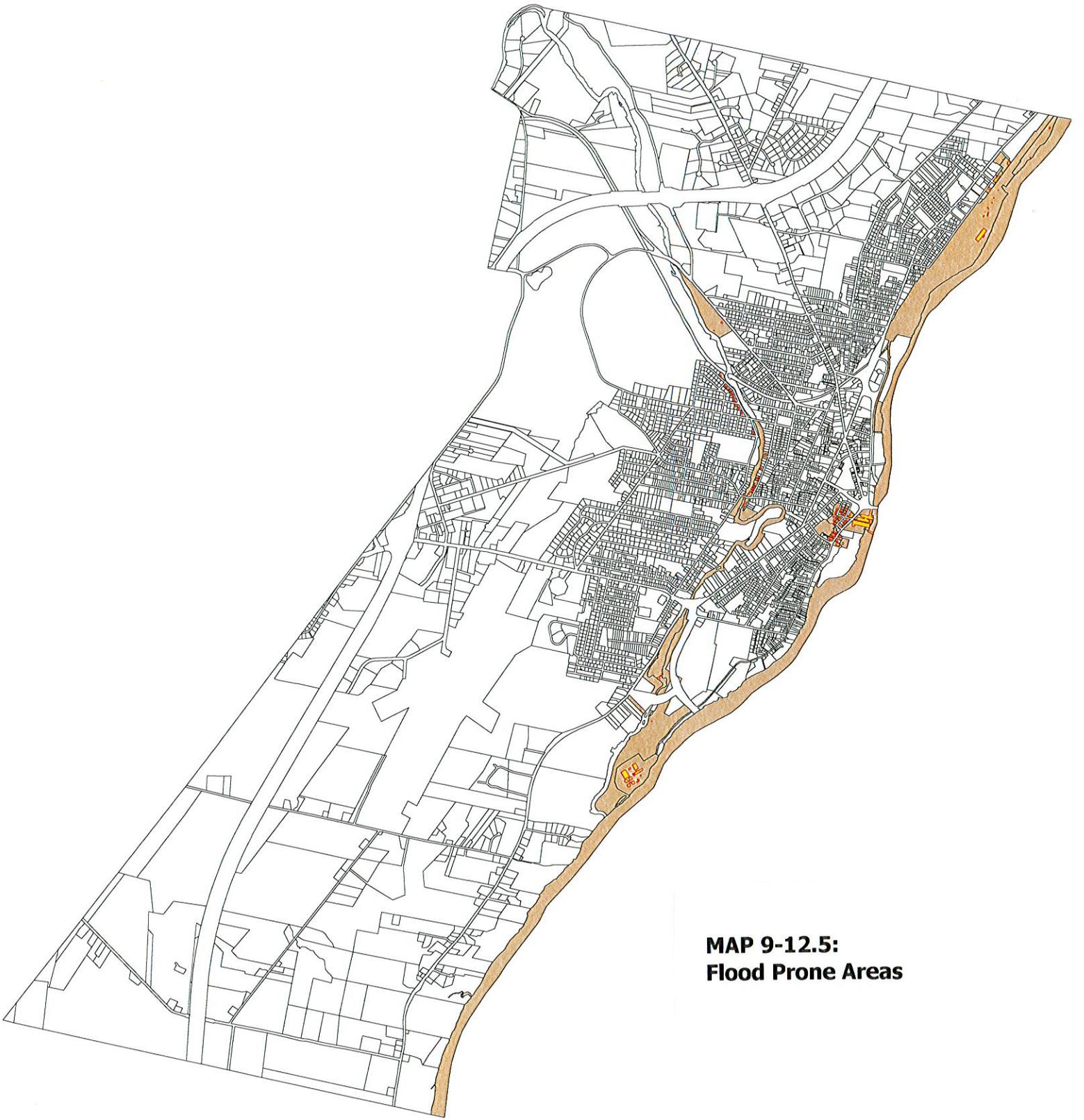
Streams are classified according to water quality which is affected by contamination from many sources. Water is cleansed by filtering through soil, the thickness of the overburden determining the amount of cleansing that will occur. Contamination of surface and groundwater can occur through direct introduction of wastes through human factors, sediment from soil erosion, dissolved ions from minerals that make up the bedrock geology, and salt intrusion.

Human factors that contaminate water include sewage, untreated runoff from developed surfaces, effluent from solid waste disposal sites and settling lagoons, individual septic systems, oil spills, and farm feed lots as well as fertilizers and pesticides for farming and forestry practices. Dissolved ions originate from the bedrock and are contained in groundwater flowing through fractures. Salt contamination is common from heavily salted highways. Intrusions occur where wells penetrate salt deposits or trapped marine water.

Flood Prone Areas

Flood prone areas in Waterville were identified by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program. (See Map 9-12.5.) Waterville's Floodplain Management Ordinance implements the regulations of the National Flood Insurance Program. The ordinance requires that structures built or reconstructed in the flood hazard area be built one foot above the elevation of the 100 year flood. A 100 year flood is a flood having a one percent chance of being equaled or exceeded in any given year. As Map 9-12.5 illustrates, Waterville's flood prone areas are located along the Kennebec River, Messalonskee Stream, Holland Brook, and Trafton Road Brook. The National Flood Insurance Program is designed to provide flood insurance and to discourage development within the 100 year flood plain.

Existing development within floodplains in Waterville consists of single family and multifamily residences, roads, businesses, utilities, several parks, the Two Cent Bridge, and the Hathaway Mill complex.



**MAP 9-12.5:
Flood Prone Areas**

Wetlands

Wetlands are areas with high water table, wetland vegetation (hydrophytes), and hydric soils, which are saturated with water or covered by shallow water at least some time during the growing season of each year. Wetlands in Waterville are located in three major areas -- dispersed intermittently between Kennedy Memorial Drive and Trafton Road; in the floodplains along Runnals (Reynolds) Stream, Messalonskee Stream, and the Kennebec River; and in a low area along Drummond Avenue. The wetlands along Runnals (Reynolds) Stream, Messalonskee Stream, and the Kennebec River are important for flood storage, nutrient removal, and erosion control. Because of the association of wetlands with a sand and gravel aquifer, the wetland adjacent to Drummond Avenue is a valuable area for groundwater recharge and water quality protection.

Aerial Survey & Photo, Inc. estimated that there are a total of 80 acres of wetlands on large parcels they classified as to landcover for the City. Of the 42 parcels found to have wetlands, 27 contained less than 2 acres of wetlands; 14 contain between 2 and 10 acres of wetlands; and only one parcel, the WalMart (now Marden's) site, contained about 10 acres of wetlands. Theoretically, some of the small parcels which Aerial Survey did not classify (parcels less than five acres) might contain as much as four acres of wetlands. It also should be noted that some forested wetlands are not included in the Aerial Survey list because they are not easily detectable on aerial photographs.

Initially DEP identified only the wetlands on Drummond Avenue as ten acres or greater. Subsequently, the DEP stated that this was not a ten-acre wetland after all. However, through the Site Location of Development permit process in 1991 and 1992, consultants identified three ten acre wetlands in Waterville. Two of the wetlands are located on the Colby Campus and the third is on the WalMart (now Marden's) site.

Wetlands serve many functions. They act as natural sponges storing water to prevent flooding downstream and serve as water sources for streams and groundwater supplies. Wetland vegetation stabilizes shorelines, serving as a buffer against shoreline erosion by absorbing storm energy in water currents. Wetlands filter runoff prior to release downstream, removing sediment, organic matter, and pollutants such as waterborne chemicals. Wetlands provide nesting and feeding habitat for waterfowl and other birds, and are inhabited by fish, furbearing animals, and other wildlife. Wetlands are not suitable for development because of poor soil drainage and seasonally high water tables, but they do provide for recreational activities such as hiking and nature study.

Land Cover

Land cover is the vegetation or type of development that directly overlies the soil or geological formation. Land cover consists of wooded areas, wetlands, fields, disturbed areas, various types of development, and open water.

Gravel pits are located in naturally occurring surficial geologic deposits. According to the 1982 United States Geologic Society (USGS) map (photo-inspected in 1988), there are six gravel pits and one sand pit in the City. All of the gravel pits are adjacent to the Kennebec River south of

the Kennebec Sanitary Treatment District (KSTD) sewage treatment plant within the eskers described in the Geology section of this chapter. Because these areas are generally excessively drained, they may serve as exposed areas of groundwater recharge, and as such, are areas of potential groundwater contamination. In addition, these areas erode easily if disturbed by human activities.

Wooded areas are functionally divided into softwoods, hardwoods, and mixed forest growths. In Waterville, forests primarily occur in nonagricultural and undeveloped land. These forested areas typically collect water in the landscape by intercepting precipitation, thereby reducing the volume and rate of runoff, as well as reducing soil erosion. Forests also bind up soil moisture in an area that may otherwise be subject to larger seasonal flooding and associated erosion problems.

A number of fields exist in Waterville. These areas include active farmland and farmland homesteads as well as abandoned old fields with their abundant vegetation and wildlife. Other cleared areas include athletic fields, golf courses, and land cleared for development projects. Naturally cleared areas also exist. Clearing vegetation from the land may affect the local water table, drainage, and runoff. Exposed soil is also susceptible to erosion both by increased runoff, and in the case of drier, sandier soils, by the wind.

Development in Waterville is primarily concentrated in the northeast quadrant of the City and along Kennedy Memorial Drive, College Avenue, and Upper Main Street. Table 10-1 in Chapter 10: Existing Land Use shows development by land use category. See also the 2009 aerial photograph of the city posted on the City of Waterville web page.

Unique Natural Areas and Wildlife Habitats

Unique Natural Areas. There are no unique natural areas in the City of Waterville registered under the State's Critical Areas Program. However, there are three natural areas identified by the State which may have local or regional significance.

Devil's Chair Rock Quarry. This is a natural areas inventory site of regional significance located near the old Colby ski slope, between Upper Main Street and Quarry Road. The Quarry, which is the site of the western most graptolite fossils found in Maine, has been used in the past by Colby College for educational purpose. It was tax-acquired by the City and is now part of the Quarry Road Recreation Area.

Perkins Arboretum. The Perkins Arboretum, on Mayflower Hill, is a natural areas inventory site of local significance. The Arboretum consists of 128 acres of relatively undisturbed plant and animal habitat, owned and managed by Colby College. There are walking trails through the Arboretum that are open to the public.

Waterville Esker. Identified as an area of regional significance by the State Planning Office, this two acre site contains fossils studied by the University of Maine at Orono. Colby College used this site for geology field trips in the past, but no longer does so because of

adverse impacts of housing development and gravel extraction.

The State's Natural Heritage Data Base identified four endangered, threatened, or rare plants in Waterville. These plants have been documented, but their locations are not known.

- 1) **Calypso bulbos, "Fairy Slipper."** This flowering plant is identified as rare in Maine, and is on the State's "watch list" as a species of concern.
- 2) **Gleraris spectabilis, "Showy Orchis."** This plant is identified as critically imperilled in Maine because of its extreme rarity. Its State status is "threatened."
- 3) **Astragalus alpinus, "Alpine Milk Vetch."** This plant was identified by the State Planning Office in 1988 as being found in Waterville.
- 4) **Gentianopsis crinita, "Fringed Gentian."** This plant was identified by the State Planning Office in 1988 as being found in Waterville.

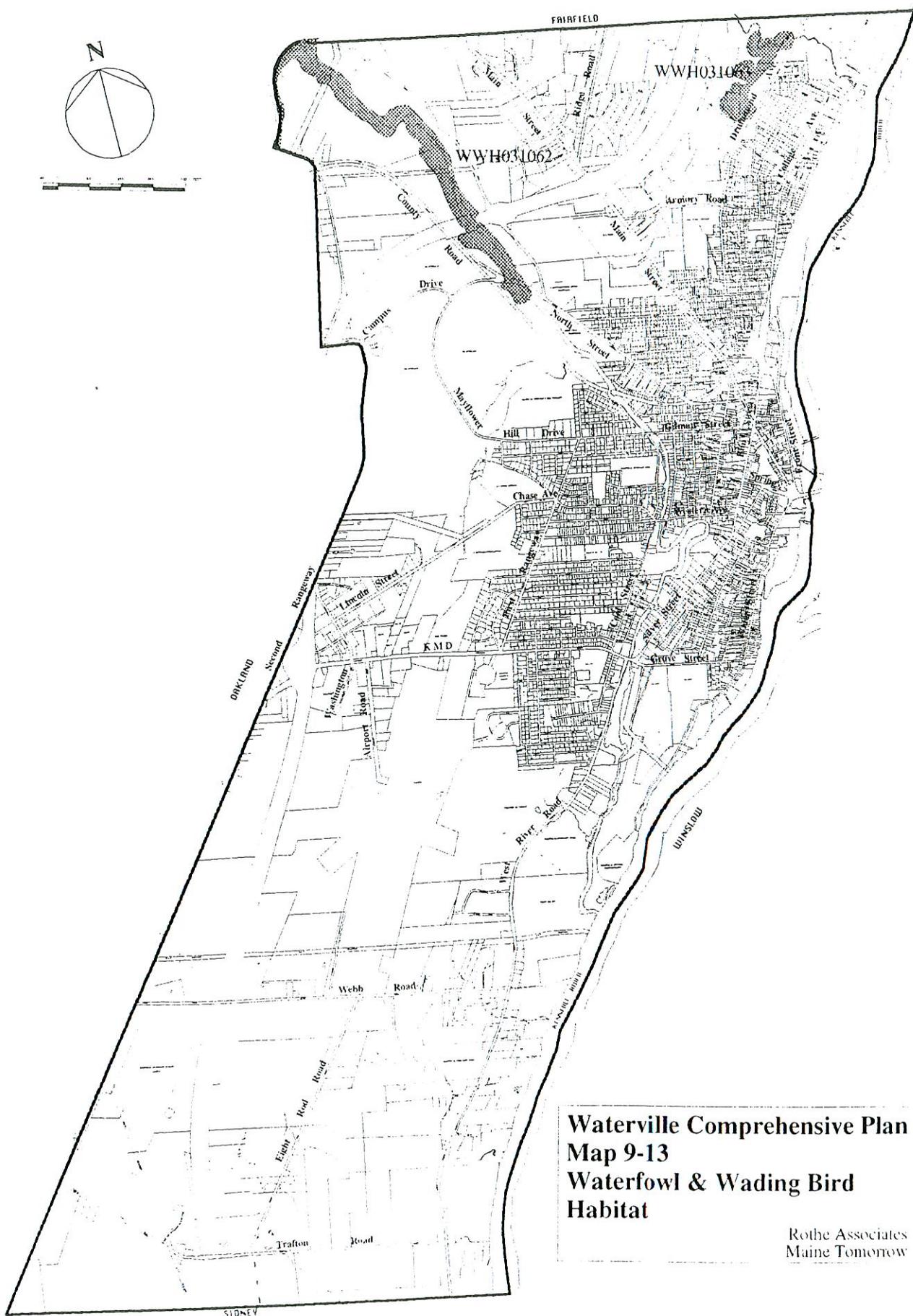
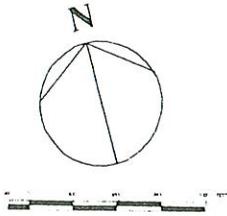
Wildlife Habitat

Preservation of habitat is the key to wildlife survival. Habitat must supply food, water, and shelter. A variety of habitat types, including open field and mature timber, are necessary to meet the habitat requirements of most wildlife species. Since different species have different habitat requirements, loss of habitat will affect each in different ways, ranging from "loss of individual nesting, feeding and resting sites to disruption of existing travel patterns. The Maine Department of Inland Fisheries and Wildlife (IF&W) recommends that sufficient areas of forest and agricultural open space be maintained in addition to the critical habitats, which include deer yards, wetlands, and water courses.

Brooks, streams, and rivers provide habitat for fish and aquatic furbearers and travel corridors connecting other habitat types for numerous wildlife species. Riparian areas are considered critical wildlife habitat because they support a greater diversity of wildlife than most other habitat types. Vegetation in buffer strips along water courses provides cover for wildlife movement and maintains water temperatures critical to fish survival. Buffers protect water and air quality by filtering pollutants and preventing erosion, moderate water temperature, and provide cover and food sources.

The Maine IF&W has not completed a recent or intensive survey of significant wildlife habitat in Waterville. However, IF&W rated the Messalonskee Stream from the north of the City down to Kennedy Memorial Drive moderate value habitat for waterfowl and wading birds. IF&W also rated Johnson Pond on the Colby Campus low value habitat for waterfowl and wading birds (see Map 9-13).

In the past IF&W identified the areas illustrated on Map 9-13 as deer yards; however, no current additional information is available. Deer range freely over most of their habitat during spring, summer, and fall, but according to IF&W, snow cover over 18 inches deep forces deer to seek out areas which provide protection from snow and wind. These areas provide the food and cover



**Waterville Comprehensive Plan
Map 9-13
Waterfowl & Wading Bird
Habitat**

Rothe Associates
Maine Tomorrow

necessary to sustain deer during critical winter months. Since the major factor affecting deer carrying capacity is the quality and quantity of the winter range, protection of deer yards is critical to maintaining a healthy deer population. Threats to deer populations include loss of wintering areas to development or clear cutting, loss of travel corridors, and reforestation of abandoned agricultural lands.

Waterville has no documented animals on the official state or federal list of endangered or threatened species. Therefore, no habitat has been preserved specifically for any endangered animal. However, bald eagles feed at the Kennebec Sanitary Treatment District plant, especially in the wintertime and have been sighted at the closed landfill and along the Messalonskee Stream. Wildlife species found in Waterville are listed in Table 9-2.

TABLE 9-2

**WILDLIFE SPECIES IN WATERVILLE: MAMMALS,
BIRDS, REPTILES, AND AMPHIBIANS**

MAMMALS

Smokey Shrew, Masked Shrew, Pygmy Shrew, Shorttail Shrew, Star-nose Mole, Little Brown Bat, Muskrat, Mink, River Otter, Beaver, Raccoon, White Tail Deer, Moose, Fisher, Short Tail Weasel, Long Tail Weasel, Striped Skunk, Coyote, Red Fox, Bobcat, Wood Chuck, Eastern Chipmunk, Gray Squirrel, Red Squirrel, Flying Squirrel, Deer Mouse, Red Back Vole, Meadow Vole, Porcupine, Snowshoe Hare

BIRDS

Black Duck, Mallard, Ring Neck Duck, Wood Duck, Green Wing Teal, Blue Wing Teal, Common Pintail, Hooded Merganser, Common Goldeneye, Canada Goose, Pied Billed Grebe, American Widgeon, American Bittern, Great Blue Heron, Virginia Rail, Sora, Mourning Dove, Black Bill Cuckoo, Common Nighthawk, Ruby Throated Hummingbird, Belted Kingfisher, Pileated Woodpecker, Northern Flicker, Yellow-Bellied Sapsucker, Brown Creeper, Northern Shrike, Black Bellied Plover, Killdeer, American Woodcock, Common Snipe, Greater Yellowlegs, Lesser Yellowlegs, Solitary Sandpiper, Pectoral Sandpiper, Spotted Sandpiper, Ruffed Grouse, Bald Eagle, Turkey Vulture, Red Tailed Hawk, Red Shouldered Hawk, Broad Winged Hawk, Cooper's Hawk, Northern Goshawk, Sharp Shinned Hawk, Northern Harrier, Osprey, Merlin, American Kestrel, Short Eared Woodpecker, Flycatcher, Swallow, Crow, Jay, Chickadee, Nuthatch, Grosbeak, Sparrow, Finch, Tanager, Wren, Kinglet, Mockingbird, Thrush Species, Starling, Waxwing, Vireo, Warbler, Blackbird.

REPTILES AND AMPHIBIANS

Snapping Turtle, Eastern Painted Turtle, Northern Red Bellied Snake, Northern Water Snake, Eastern Garter Snake, Spotted Salamander, Red Spotted Newt, Northern Two Lined Salamander, American Toad, Spring Peeper, Pickerel Frog, Northern Leopard Frog, Green Frog, Wood Frog, Bull Frog

Source: Species Range Maps, Maine Department of Inland Fisheries and Wildlife, 1992; Field surveys by consultants for Colby College; Waterville Conservation Commission members; Ron Joseph; and Oxbow Nature Trail Brochure.

Fisheries Habitat

Fisheries habitat types in Waterville range from river and stream riffle and run to flat water pool environments mostly located upstream of impoundments. A wide variety of fish are found in the Kennebec River although warm water species such as small mouth bass and white and yellow perch predominate.

Warm water species are predominant in Messalonskee Stream and mainly include black bass, perches, pickerel, and hornpout. Fish Brook in Fairfield and Red Brook in Oakland have notable populations of brook trout in Messalonskee Stream. The IF&W currently stocks brown trout in both the Kennebec River and the Messalonskee Stream. Fish species found in Waterville are listed in Table 9-3.

A 1989 Fisheries Management Report for Messalonskee Stream recommended continued stocking of brown trout. The report also recommended that full bank water levels be maintained to assure the health of the fishery. Water drawdowns for dam inspections were considered allowable as long as they were only temporary disruptions in water level.

TABLE 9-3

FISH SPECIES IN WATERVILLE

FISH

Atlantic Salmon, American Shad, Alewife, Sea Lamprey, Atlantic Sturgeon, American Eel, Blueback Herring, Round Whitefish, Lake Whitefish, Rainbow Trout, Brown Trout, Brook Trout, Lake Trout, Rainbow Smelt, Redfin Pickerel, Chain Pickerel, Lake Chub, Carp, Golden Shiner, Common Shiner, Blacknose Shiner, Northern Redbelly Dace, Finescale Dace, Fathead Minnow, Blacknose Dace, Longnose Dace, Creek Chub, Failfish, Pearl Dace, Longnose Sucker, White Sucker, Creek Chubsucker, Brown Bullhead, Burdot, Banded Killfish, Mummichog, Brook Stickleback, Bluefish, 3-Spine Stickleback, 9-Spine Stickleback, White Perch, Striped Bass, Redbreast Sunfish, Pumpkinseed, Smallmouth Bass, Largemouth Bass, Black Crappie, Swamp Darter, Yellow Perch, Slimy Sculpin.

Source: Species Range Maps, Maine Department of Inland Fisheries and Wildlife, 1992; Field surveys by consultants for Colby College; Waterville Conservation Commission members; Ron Joseph; and Oxbow Nature Trail Brochure.

CHAPTER 10: EXISTING LAND USE

This chapter includes a description of historical and current development patterns and a summary of City ordinances which regulate land use development. Future development patterns will be determined in large part by the limitations and opportunities imposed by existing land use patterns and natural resources and by land development trends occurring in the community.

HISTORICAL PATTERNS OF DEVELOPMENT

Waterville's land use reflects a traditional mill town pattern, with densely developed residential areas surrounding industrial and commercial uses along the Kennebec River. Over time, development expanded from this urban core along the riverfront.

In the 1960s and 1970s, development spread out in a more suburban pattern of subdivisions, filling in the area between the downtown and the Colby College campus on Mayflower Hill and along upper Main Street and Kennedy Memorial Drive (KMD). That was followed by "big box" retailers including Wal-Mart and Home Depot and more infill development in previously approved residential subdivisions.

Residential Development

There are several patterns of residential development in Waterville described as follows.

Downtown has a mix of homes, small apartment buildings, and relatively large apartment buildings. Some of the larger residential buildings in the Downtown include the Appleton Apartments at 13 Hathaway Street (which housed the Hathaway Shirt Company before it moved to Water Street (39 units), Elm Towers at 60 Elm Street (49 units), and the Melcher at 77 Elm Street (30 units). The Hathaway (67 residential units) at 10 Water Street, just beyond Spring Street, is a mixed use redevelopment project.

Housing in the densely developed urban core beyond the Downtown includes single family, two-family, and multifamily residences on relatively small lots in the historic South End, North End, and Union Street/Front Street neighborhoods. This pattern developed to house the workforce of the water-based industries, the railroad, and commerce. Street blocks tend to be fairly short and walkable, reflecting a time when pedestrians, rather than automobiles, dictated the City's form.

Farther from the Downtown there is a mixture of single family homes on small lots and large, stately homes on larger lots along streets branching out from the Downtown and along the Messalonskee Stream, on Silver Street and Burleigh Street, for example. This area also includes a fair number of two-family and multifamily buildings. City blocks are longer here, reflecting the availability of various modes of transportation over time.

Still farther away from the Downtown, west of the Messalonskee Stream, northwest of Maine Central Railroad's Springfield Terminal, and south of Kennedy Memorial Drive (KMD), there are single family homes on lots of approximately 10,000 square feet or slightly smaller which

generally are part of subdivisions. These neighborhoods were built to serve residents who owned automobiles.

The southern part of the City includes scattered homes along Webb, Eight Rod, Trafton, and West River roads on former farm lands. Many of these very large parcels still are owned by descendants of the early farmers. Others are owned by an out-of-state developer. The lots are large because of owner preference, not because of zoning requirements. In this area, the Rural Residential zone, a 20,000 square-foot minimum lot size was established to accommodate wells and septic systems on the same lot. This is the largest minimum residential lot size required by Waterville zoning.

Also in the southern portion of the City, there are three mobile home parks. Punky Meadows, Countryside, and Village Green are located off West River Road south of Webb Road. A fourth park is located off of Grove Street in the historic South End neighborhood.

Still more housing is provided in student dormitories located on the Thomas College and Colby College campuses. Approximately 1,600 of Colby's students live on campus. Approximately 275 of Thomas College's students live on campus and another 20 are housed across West River Road at the Orchard Park Apartments.

Over the past decade, many new dwelling units have been constructed on properties formerly used for other purposes. For example, 21 units of low-income senior housing were built by the Waterville Housing Authority on the former site of the YMCA on Pleasant Street, 35 units of low and moderate income housing were constructed inside the old Gilman Street School, and 67 units were built inside the old Hathaway shirt factory on Water Street mentioned above.

For more information, see Chapter 2: Housing.

Commercial, Industrial, and Service Development

Waterville's earliest industries located along the Kennebec River and the Messalonskee Stream to take advantage of hydropower. Employees of those industries lived within walking distance of their jobs in the woolen, cotton, paper, and other mills and warehouses. To meet the community's shopping and service needs, a Downtown formed around the Head of Falls. For many years this pattern changed little, except for an increase in the overall size of Waterville's urban core. Today, however, with the shift from a manufacturing to a service base, many of Waterville's strongest employment sectors (educational, health care, and social services and retail trade) are not dependent on waterfront locations, and are dispersed throughout the northerly two-thirds of the City.

Over the last half century, major retailers have developed and/or relocated from the Downtown to Kennedy Memorial Drive (KMD) (JFK Mall and Shaw's Plaza) and Upper Main Street (Elm Plaza and Waterville Commons) to anchor shopping centers. Many smaller retailers and services followed. Today Waterville has three distinct commercial areas, the Downtown, KMD, and Upper Main Street.

Public Utilities, Facilities, and Services

Most of the City's facilities are located close to the urban core of the City. Public Works maintains its compound, a three acre site, on Wentworth Court off of Main Street just north of Downtown. Central Fire Station is located at College and Main Streets. Waterville Public Library is located on Elm Street. See Chapter 6: Public Facilities and Services.

Waterville's schools are distributed throughout the developed areas of the City. For a description of the schools, see Chapter 6: Public Facilities and Services.

Public recreation facilities are fairly well distributed throughout the developed areas of the City. However, some parks are not easily accessible to people residing in low-income areas without cars. One third of the City's residents live in those three neighborhoods (the North End, the South End, and the Downtown) located along the Kennebec. For a description of the parks, see Chapter 7: Recreation.

The Kennebec Sewerage Treatment District's wastewater treatment plant is located on the Kennebec River on Water Street. The facility and the Waterville Sewerage District's collection system serve the most developed areas of the City, extending to residential subdivisions off of Upper Main Street west of I-95 and south along West River Road to Punky Meadows Mobile Home Park. Outlying areas are served by privately owned septic systems. See Chapter 6: Public Facilities and Services.

Public water is provided to the majority of Waterville's housing units by the Kennebec Water District. The District's water supply flows from China Lake through a filtration facility in Vassalboro to a pumping station off Western Avenue and, from there, throughout the City. Public water is not provided to elevations over 270 feet. See Chapter 6: Public Facilities and Services and Chapter 9: Natural Resources.

Central Maine Power Company (CMP) distributes electricity to the City. See Chapter 9: Natural Resources regarding the four hydroelectric stations on Messalonskee Stream.

Open Space

Open space is generally found in the northwestern parts on the City, particularly at higher elevations, and in the southern portions of the City that are not served by public water and sewer facilities. Colby College also has a very large nature preserve. See Map 10-1.

Agriculture, Forestry, and Mining Activities

There no longer are any dairy farms in Waterville, although some land is hayed and horses are kept in rural areas off of Marston Road and Eight Rod Road.

Two parcels currently (July 2012) are registered with the City Assessor under the Tree Growth Tax Law. One is off of Trafton Road and the other is off of West River Road south of Thomas Drive. The Tree Growth Tax Law affords property owners a reduced tax rate when land is specifically managed for tree growth.

There are three active gravel pits in Waterville, all located off the West River Road.

Transportation

Waterville's major access routes include:

- Interstate 95 which crosses the northwestern corner of the City and then roughly parallels the western border of the City; interchanges are located at Upper Main Street and KMD;
- Route 104 which runs southeast as Upper Main Street to Downtown, then southwest as Silver Street to KMD, and then as West River Road farther south in the City;
- Routes 11, 100, and 201 converge in the northeast corner of the City and extend along the River as College Avenue to Downtown where Routes 100 and 201 cross the River and extend south in Winslow, while Routes 11 and 137 continue southwest in Waterville as Silver Street and then west as KMD.

Two branches of Pan Am's right-of-way cross Waterville.

The municipally-owned Robert LaFleur Airport is located on 387 acres east of I-95 and south of KMD off Airport Road.

See Chapter 5: Transportation.

RECENT DEVELOPMENT PATTERNS

LAND USE: 1996 AND 2012

Table 10-1 shows acreage by land use category in 1996 and 2012. Data are from the City's last comprehensive plan, adopted in 1997, and from the current assessor database. Using the assessor database to make those comparisons is complicated by the fact that the assessor database now uses different land use classifications than it did in 1996. For example, twenty-one (21) Seton Village acres, fifteen (15) Waterville Housing Authority acres, and one (1) convent acre now listed as tax exempt land were classified as residential in 1996. Those and other differences in land classification codes make it appear as though Waterville has 355 fewer acres of residential development than it did in 1996. In addition, although 24 acres of mixed use development are included in the residential category, the Hathaway redevelopment project, which converted the former shirt factory to both commercial and residential use, has a commercial code.

TABLE 10-1
LAND USE SUMMARY
1996 AND 2012

LAND USE	1996 PARCELS	2012 PARCELS	1996 ACRES	2012 ACRES
Residential Developed	3,814	4,258	2,389*	2,034*
Commercial Developed	429	482	434	616
Industrial** Developed	61**	50**	237**	227**
Institutional Developed	176	See Tax Exempt	2,082	See Tax Exempt
Utilities [& Transportation] Developed	33**	**	99**	36 Electric plant, substation, right of way**
Sand & Gravel				26
Tax Exempt		289		2,449
TOTAL DEVELOPED	4,513	5,079	5,241	5,388
Vacant Residential	427	318	1,527	1,320
Vacant Commercial	58	56	418	659
Vacant Industrial	27	24	387	177
TOTAL VACANT	512	398	2,332	2,156
TOTAL	5,025	5,477	7,573***	7,559***

*Some acres listed as residential in 1996 are classified as tax exempt in 2012.

**The Utilities & Transportation category includes railroad land in 1996, but not in 2012. In 2012, railroad land is included in the Industrial category.

***Acres were lost when the town line between Oakland and Waterville was surveyed in 2008. Discrepancies also may be caused by rounding.

Source: Waterville Assessors Office October 1996 and July 2012.

Tax Exempt Acres

Table 10-1 shows that in 2012, of the 7,559 acres of land in Waterville, 2,449 acres, or 32 percent, are tax exempt. Ownership of those acres is as follows:

TAX EXEMPT LAND	ACRES
City of Waterville	1,207
Literary (includes colleges)	794
Churches	132
Hospitals	118
Charitable	66
KWD	27
KSTD	25
Other	22 (Seton Village)
Fraternal	17
WHA	15
State of Maine	14
WSD	8
U.S. Government	<u>4</u>
	2,449

Map 10-1

Map 10-1 shows the location of land uses by category, providing a graphic representation of the parcels and acreages provided in Table 10-1. For easier viewing, Map 10-1 also is available on the City's web page where it can be enlarged.

Subdivisions and Site Plans Approved and Constructed after 1996

The following list includes developments that were reviewed by the Planning Board and constructed between 1996 and 2012. Developments in each category are listed in chronological order of construction.

Note that additional development occurred, but is not listed because it did not require Planning Board review. For example, several homes were built between 1996 and 2012 on individual lots or on lots in subdivisions that were approved prior to 1996. Map 10-2 shows that many homes were built after 2000 on vacant lots in the old McBrady subdivision located between Ridge Road and I-95 and in previously approved subdivisions on Barnet Avenue and Forest Park.

Residential Development

Sunset Home, a 9,300 square foot senior citizen housing facility at 114 College Avenue

The Woodlands, 34,000 square foot addition at 147 West River Road

Bard 4-lot subdivision at the intersection of First Rangeway and Oakland Street

Stream View Drive, 9-lot subdivision

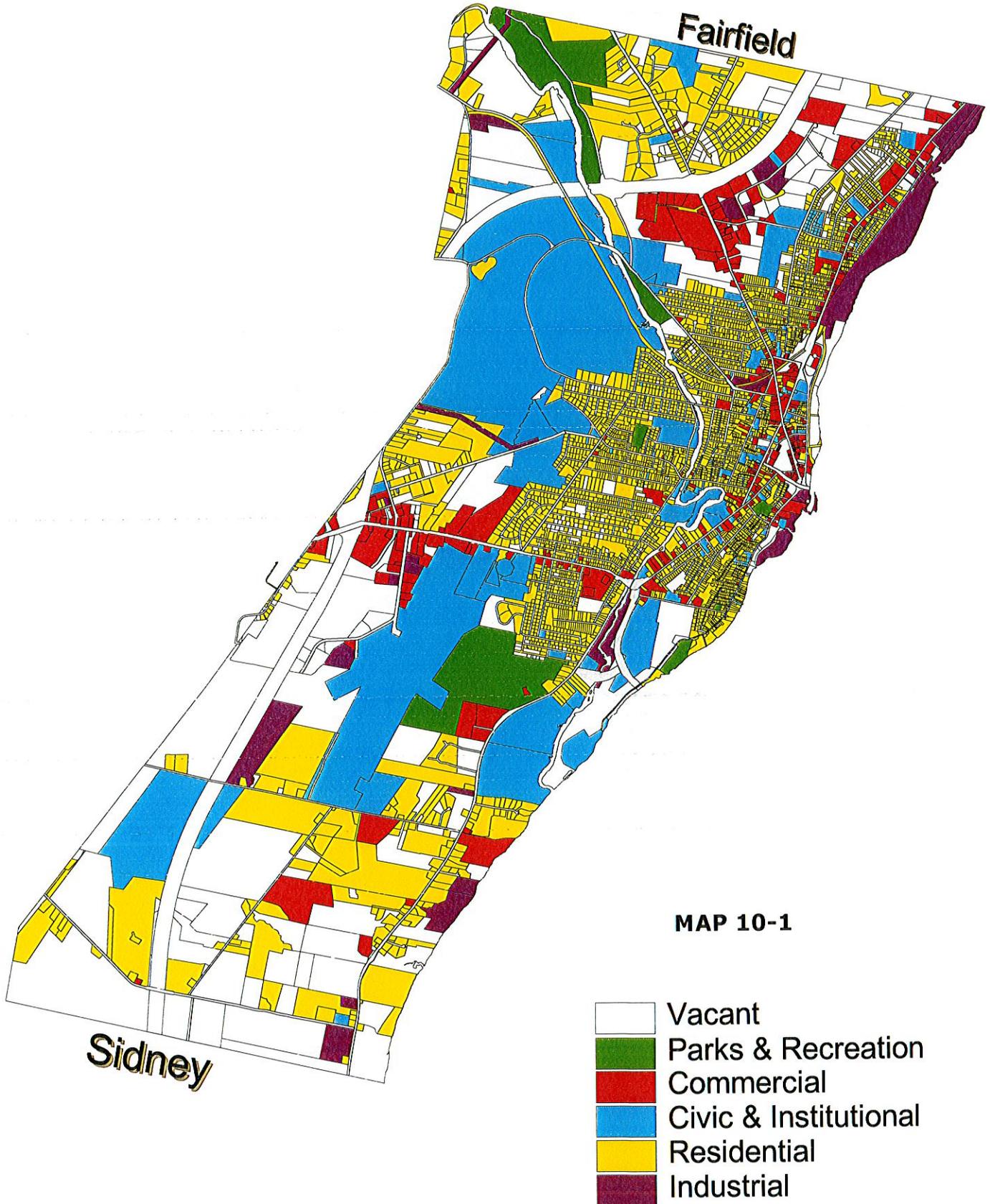
The Woodlands, Alzheimer's Unit at 147 West River Road

Oak Grove Nursing Home expansion on Cool Street

Haley Way, 4-lot subdivision

Lincoln Green, 39 condominiums off of Lincoln Street

Waterville Comprehensive Plan Existing Land Use As of 2012



MAP 10-1

Waterville



MAP 10-2

-  Built since 2000 in Rural Area
-  Built since 2000 in Growth Area

Bard apartments, 10 units at 99 Oakland Street
Yawkey Way subdivision, 5 lots off of County Road
Fieldstone Landing off of Shores Road, 7 units in Waterville, others in Oakland
Hathaway Creative Center at 10 Water Street, 66 apartments
Pleasant Crossing, WHA at 89 Pleasant Street, 21 low-income senior units
Gilman Street School conversion to 33 low and moderate income apartments
Saint Frances Apartments, 58 low-income senior apartments at 52 Elm Street (under construction in April 2013)

Commercial Development

Century Drive, a 6-lot commercial subdivision off of KMD developed by Union Front (Dunkin Donuts was constructed there in 2003)
105 KMD converted from residential to office use (United Way)
Veterinary office on Washington Street
129 Silver Street converted from residential to office use (financial planner)
91 Silver Street converted from residential to spa/restaurant use
Warehouse expansion on Marston Road
Maine Eye Care Associates expansion at 325 KMD
McDonald's 435 KMD
Transfer Station on LaFleur Road
Hampton Inn on KMD
Applebee's Restaurant at Shaw's Plaza
Waterville Commons Shopping Center
Doctors' office building on Washington Street
AutoZone on KMD
Uncle Dean's health food store at 78 Grove Street
D.L. Electric on Jefferson Street
Hamlin's Sports World boat storage buildings at 290 West River Road
Waterville Self Storage buildings on Airport Road
Clark and Company addition at 56 Airport Road
Bangor Savings Bank on Upper Main Street
Advance One Cleaning garage at 57 Water Street
Flagship Cinema at Shaw's Plaza
Burger King at 44 College Avenue
All Pro Soccer off of West River Road
Office subdivision on Washington Street
Ware Butler warehouse on North Street
J&S Oil car wash, gasoline pumps, express lube, and convenience store at 320 KMD
Caswell's expansion at 68 Armory Road
KMD Plaza at 270 KMD
Irving Oil expansion at 445 KMD
CVS Pharmacy at 1 KMD
Kennebec Savings Bank addition at 226 Main Street
Off-track betting, formerly Coyote Country restaurant and banquet facility, on Jefferson Street
Tim Horton's at 333 Main Street

Kennebec Federal Savings Bank branch bank at 11 Washington Street
People's United Bank (formerly Merrill Bank) at 335 Main Street
Hallowell storage building at 1 LaFluer Road
Expansion of the JFK Plaza
Rite-Aid at 210 Main Street
Taco Bell/KFC on KMD
Maine State Credit Union at 81 Grove Street
Hight Partners office building at 14 Colby Street (leased by Social Security)
Spring Brook Ice and Fuel bulk propane storage facility on Airport Road
MaineGeneral Elmwood Family Practice to former Rite-Aid building at 211 Main Street
Adams Speech Therapy at 155 KMD, house demolished, office building constructed
Delta Ambulance at 29 Chase Avenue

Public Facilities

WSD, 9,200 square foot facility off of Water Street
Softball field, soccer field, and parking lot off of West River Road
Kindergarten wing at the Mitchell School at 58 Drummond Avenue
Office building in the Public Works Compound on Wentworth Court
Central Fire Station addition
KWD office building on Cool Street
Sand and salt storage building in the Public Works Compound
Fleet maintenance garage in the Public Works Compound
City snow dump off of College Avenue
Waterville Senior High School addition and parking lot

Institutional Facilities

Alfond Youth Center on North Street
Colby College dormitory off of Washington Street
Thomas College auditorium
MaineGeneral surgical wing on North Street
Inland Hospital doctors' office building on KMD
Colby College studio art building
Blessed Hope Church auditorium/gymnasium at 10 Pleasant Street
Kennebec Valley New Life Center church on Trafton Road
Maine Army National Guard Ready Building at 29 Armory Road
Thomas College dormitory
Lakewood Manor expansion at 220 KMD
Colby College alumni & development building
Waterville School Department office building on Messalonskee Avenue
Waterville Area Humane Society on Webb Road
Faith Evangelical Free Church youth building on KMD
New Beginnings Church addition 392 Main Street
Mount Merici convent at 172 Western Avenue
Thomas College Alfond recreation center
Colby College Diamond Building

Colby College Pulver Pavilion addition to Cotter Union
Inland Hospital Emergency Department expansion
Thomas College, 12 townhouses
Educare Central Maine at the Mitchell School
Colby College biomass heating plant
Colby College Lunder art museum expansion
Thomas College Student Center expansion
Homeless shelter at 19 Colby Street

GROWTH AND RURAL AREAS

Development after 2000 in Growth and Rural Areas

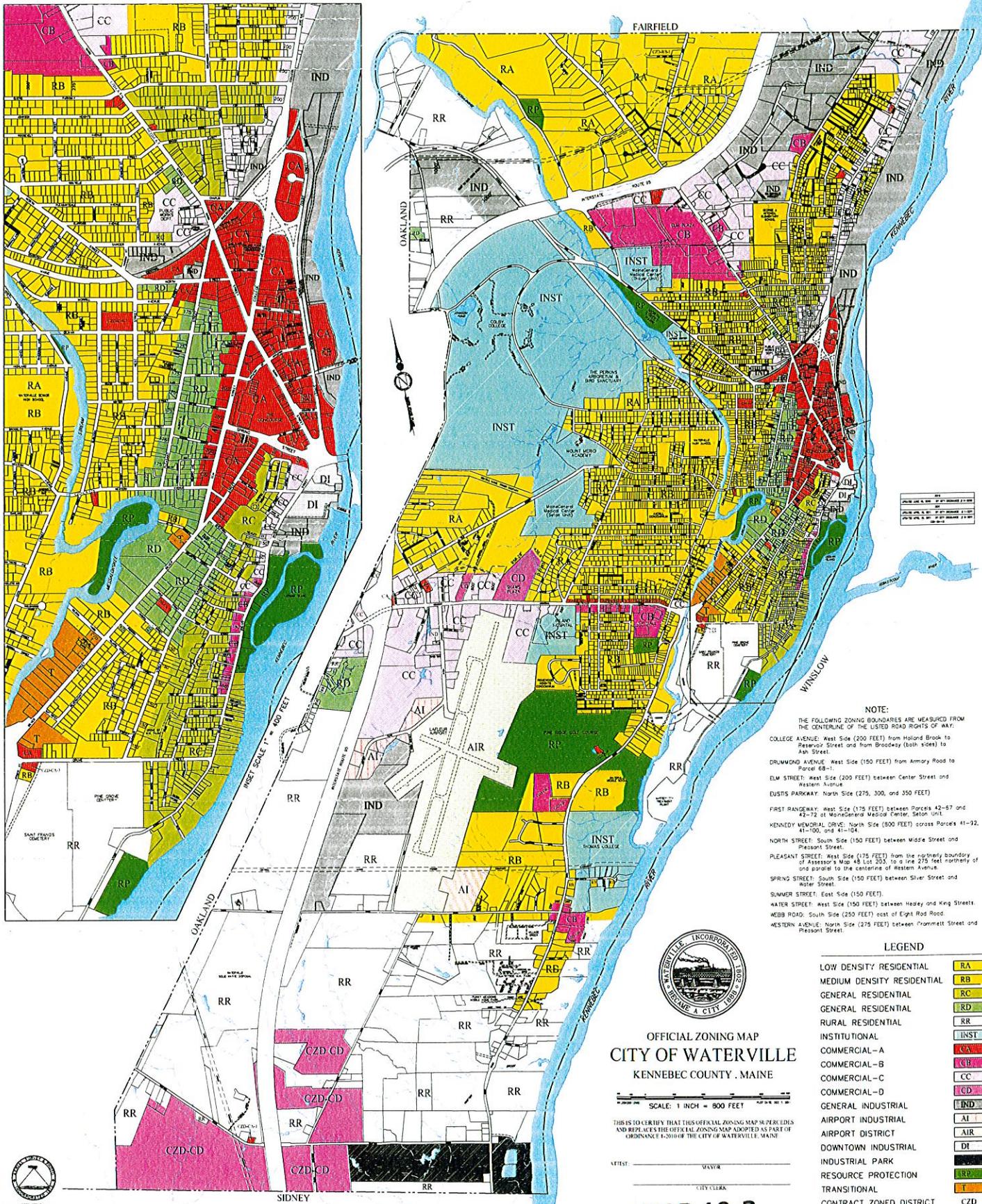
Map 10-2 shows development from 2000 to the present in designated growth (green) and rural (red) areas. Through adoption of the 1997 comprehensive plan, the City Council designated all areas in the shoreland zone and all land zoned Rural Residential or Resource Protection the City's rural area. The City's growth area is comprised of land in all other zoning districts and, for the most part, the growth area is where water and sewer lines are in place and a fairly extensive road network exists.

Map 10-2 shows that only about a dozen homes, the Humane Society facility (on the south side of Webb Road abutting the east side of I-95), and Kennebec Valley New Life Center (a church on Trafton Road) have been built in the rural area since 2000. Map 10-3, the zoning map, shows most of the rural area: Rural Residential parcels in white and Resource Protection parcels in dark green. The remainder of the rural area can be seen on Map 10-4, the shoreland zoning map. Map 10-4 shows both land in the shoreland zone and parcels zoned Resource Protection—light green on this map. All three of those maps are posted on the City's web page.

In the past decade development has occurred primarily in the growth area as the City intended. From the list of projects above, we see that most of the residential units were in multi-family developments in renovated buildings (the Gilman Street School and the Hathaway shirt factory) or on previously developed sites (Pleasant Crossing on the old YMCA site). Much of the non-residential development was expansions of existing projects and campuses: Colby College, Thomas College, Inland Hospital, MaineGeneral, JFK Mall, Shaw's Plaza, and the Public Works compound, for example. Other projects that did not technically expand existing developments about it: Waterville Commons and Elm Plaza, for instance.

LAND FOR FUTURE GROWTH

How much land is needed for projected population growth? Over the next decade, Waterville's population is projected to grow by only 400 persons. At an average of 2.13 persons per household, we would need only 188 units to house those new persons. If all of the housing were developed in the Rural Residential zone where the largest lots are required (20,000 square foot minimum lot size, but 7,500 square feet per dwelling unit), we would need a maximum of thirty-two (32) acres plus land for roads to serve those units. However, given the age and income level of our population and the type of development that has occurred in recent years, more housing



NOTE:
 THE FOLLOWING ZONING BOUNDARIES ARE MEASURED FROM THE CENTERLINE OF THE LISTED ROAD RIGHTS OF WAY:
 COLLEGE AVENUE: West Side (200 FEET) from Holard Brook to Reservoir Street and from Broadway (both sides) to Ash Street.
 DRUMMOND AVENUE: West Side (150 FEET) from Army Road to Parcel 68-1.
 ELM STREET: West Side (200 FEET) between Center Street and Western Avenue.
 EUSTIS PARKWAY: North Side (275, 300, and 350 FEET).
 FIRST RANNEY: West Side (175 FEET) between Parcel 42-67 and 42-72 of Mon-General Medical Center, Seton Unit.
 KENNEDY MEMORIAL DRIVE: North Side (500 FEET) across Parcel 41-92, 41-100, and 41-104.
 NORTH STREET: South Side (150 FEET) between Wide Street and Pleasant Street.
 PLEASANT STREET: West Side (175 FEET) from the northerly boundary of Assessor's Map 48 Lot 233, to a line 275 feet northerly of and parallel to the centerline of Western Avenue.
 SPRING STREET: South Side (150 FEET) between Silver Street and Water Street.
 SUMMER STREET: East Side (150 FEET).
 WATER STREET: West Side (150 FEET) between Healy and King Streets.
 WEBB ROAD: South Side (250 FEET) east of Eight Rod Road.
 WESTERN AVENUE: North Side (275 FEET) between Frommet Street and Pleasant Street.



**OFFICIAL ZONING MAP
 CITY OF WATERVILLE
 KENNEBEC COUNTY, MAINE**

SCALE: 1 INCH = 900 FEET

THIS IS TO CERTIFY THAT THIS OFFICIAL ZONING MAP SUPERSEDES AND REPLACES THE OFFICIAL ZONING MAP ADOPTED AS PART OF ORDINANCE #2010 OF THE CITY OF WATERVILLE, MAINE.

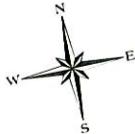
WATVILLE, MAINE
 CITY CLERK

LEGEND

LOW DENSITY RESIDENTIAL	RA
MEDIUM DENSITY RESIDENTIAL	RB
GENERAL RESIDENTIAL	RC
GENERAL RESIDENTIAL	RD
RURAL RESIDENTIAL	RR
INSTITUTIONAL	INST
COMMERCIAL-A	CA
COMMERCIAL-B	CB
COMMERCIAL-C	CC
COMMERCIAL-D	CD
GENERAL INDUSTRIAL	IND
AIRPORT INDUSTRIAL	AI
AIRPORT DISTRICT	AIR
DOWNTOWN INDUSTRIAL	DI
INDUSTRIAL PARK	IP
RESOURCE PROTECTION	RP
TRANSITIONAL	T
CONTRACT ZONED DISTRICT	CZD
PAPER STREET	PS

MADE BY:
 AERIAL SURVEY AND PHOTO, INC.
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 WASHINGTON, MAINE 04497
 (207) 836-2626

MAP 10-3



MAP PREPARED BY:
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 MAP DATE 2-24-2011

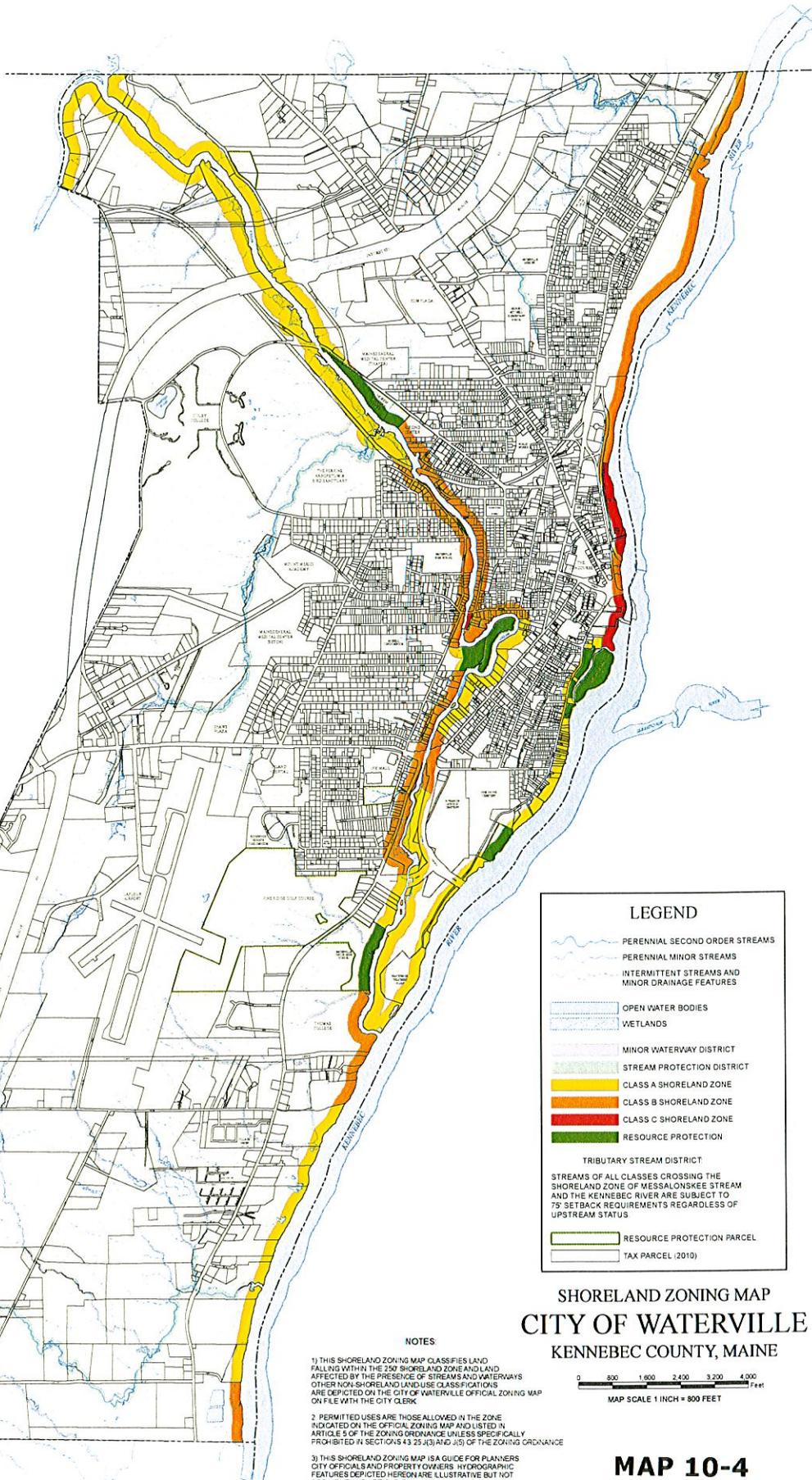
- DATA SOURCES:**
- 1) CITY OF WATERVILLE TAX MAPS CURRENT TO APRIL 1, 2010
 - 2) CITY OF WATERVILLE 2005 DIGITAL ORTHOPHOGRAPHY
 - 3) MAINE OFFICE OF GIS DIGITAL ORTHOPHOGRAPHY
 MEGIS ORTHOIF, 5-19-2003
 - 4) USGS DIGITIZED STREAMS (MEGIS STREAMS)



 MAYOR

ATTEST _____
 CITY CLERK

UPDATED AS OF _____
 PER CITY ORDINANCE NUMBER 9-2010
 ADOPTED JANUARY 18, 2011



LEGEND

- PERENNIAL SECOND ORDER STREAMS
- PERENNIAL MINOR STREAMS
- INTERMITTENT STREAMS AND MINOR DRAINAGE FEATURES
- OPEN WATER BODIES
- WETLANDS
- MINOR WATERWAY DISTRICT
- STREAM PROTECTION DISTRICT
- CLASS A SHORELAND ZONE
- CLASS B SHORELAND ZONE
- CLASS C SHORELAND ZONE
- RESOURCE PROTECTION
- TRIBUTARY STREAM DISTRICT
- STREAMS OF ALL CLASSES CROSSING THE SHORELAND ZONE OF MESSALONSKEE STREAM AND THE KENNEBEC RIVER ARE SUBJECT TO 75' SETBACK REQUIREMENTS REGARDLESS OF UPSTREAM STATUS
- RESOURCE PROTECTION PARCEL
- TAX PARCEL (2010)

**SHORELAND ZONING MAP
 CITY OF WATERVILLE
 KENNEBEC COUNTY, MAINE**



- NOTES**
- 1) THIS SHORELAND ZONING MAP CLASSIFIES LAND FALLING WITHIN THE 750' SHORELAND ZONE AND LAND AFFECTED BY THE PRESENCE OF STREAMS AND WATERWAYS OTHER NON-SHORELAND LAND USE CLASSIFICATIONS ARE DEPICTED ON THE CITY OF WATERVILLE OFFICIAL ZONING MAP ON FILE WITH THE CITY CLERK
 - 2) PERMITTED USES ARE THOSE ALLOWED IN THE ZONE INDICATED ON THE OFFICIAL ZONING MAP AND LISTED IN ARTICLE 4 OF THE ZONING ORDINANCE UNLESS SPECIFICALLY PROHIBITED IN SECTIONS 4.3, 25.4(3) AND 4.5 OF THE ZONING ORDINANCE
 - 3) THIS SHORELAND ZONING MAP IS A GUIDE FOR PLANNERS, CITY OFFICIALS AND PROPERTY OWNERS. HYDROGRAPHIC FEATURES DEPICTED HEREON ARE ILLUSTRATIVE BUT NOT DEFINITIVE AND ARE SUBJECT TO ON-SITE INSPECTION AND ZONING DISTRICT VERIFICATION

MAP 10-4

units are apt to be constructed in apartment buildings in the center of town than in the Rural Residential zone.

There are numerous sites that potentially could be redeveloped for the construction of apartment buildings. Among them are the former Harris Bakery, the old Boys & Girls Club, the Hains and Levines buildings on Main Street, and the Marden's and CMP buildings on Water Street. One redevelopment project already approved by the Planning Board but not yet constructed is 58 units of low-income senior housing on the Saint Francis Church site. (See Chapter 1: Demographic Profile.)

Adequate land to accommodate future commercial, industrial, and institutional development also appears to be available. Both Colby College and Thomas College recently completed campus master plans, and MaineGeneral is moving in-patient care to a new hospital in Augusta in 2013. Only about eleven (11) percent of the developed area of Waterville is used for commercial purposes. (Commercial development, however, accounts for approximately 27% of the City's total **valuation**. See Chapter 4: Fiscal Capacity.) Even less land, about four (4) percent, is in industrial use (including railroad property).

LAND USE CONTROLS

Land use ordinances serve to provide a balance between public and private property interests, a goal consistently upheld by the courts. Land use ordinances in Waterville include the Zoning Ordinance of which Shoreland Zoning is a part, the Subdivision and Site Plan Review Ordinance, and the Floodplain Management Ordinance. All of Waterville's ordinances are posted on our web site along with our Zoning map and Shoreland Zoning map.

Zoning Ordinance

Waterville's Zoning Ordinance (posted on the City's web page) establishes land use districts and for each district sets forth permitted uses, special exceptions, and dimensional requirements. The Zoning Ordinance also contains a number of performance standards governing specific land uses. In addition, the Zoning Ordinance specifies that certain projects are subject to site plan or subdivision review and approval by the Planning Board.

Site Plan Review and Subdivision Ordinance

Purposes. The purposes of subdivision and site plan review include minimizing the environmental, public facility, and transportation impacts of proposed developments.

Applicability. Subdivision review applies to the division of parcels or buildings into three or more lots or units within a five-year period. Projects requiring site plan review and approval by the Planning Board (as set forth in Section 6.4 of the Zoning Ordinance) include the following (single-family dwellings, duplexes, and certain agricultural activities are exempt):

- Any combination of building footprint and impervious area which exceeds 5,000 square feet;
- New construction of 4,000 or more square feet of building footprint;

- Additions to existing buildings of 2,000 or more square feet;
- Impervious surfaces of 8,000 or more square feet.

Floodplain Management Ordinance

The City recently updated its Floodplain Management Ordinance, and it is consistent with State and federal standards.

Issues and Needs

The major land use and land use control issues facing Waterville include the following:

1. **Historic Resources.** There is a need for mechanisms to protect historic and archaeological resources, especially in the Downtown and in the historic South End neighborhood, including the City-owned chapel and Pine Grove Cemetery.
2. **Pedestrian and Bicyclist Safety.** Waterville does not have a City-adopted greenway plan to connect existing recreation and open space areas or a plan to promote pedestrian and bicyclist safety.
3. **Blighted Buildings.** There are multiple vacant blighted buildings in need of redevelopment.
4. **Comprehensive Plan Implementation.** There is a need to ensure that mechanisms are developed to ensure implementation of the comprehensive plan on an ongoing basis.

CHAPTER 11: CAPITAL INVESTMENT STRATEGY

The Capital Investment Plan for Waterville consists of all items already listed in the table of Proposed Capital Improvement Projects (CIP) for 2013-2017 (below) and potentially any or all of the significant recommendations for investment contained in Chapter 13: Goals and Policies.

Through the plan development process, the following items from Chapter 13 should be considered for inclusion in the CIP:

Chapters 2 and 10: Housing and Land Use

The City shall support citizen grass-roots efforts to improve neighborhoods, including reviewing and considering for adoption and implementation neighborhood improvement plans developed by neighborhood associations. This includes but is not limited to the efforts of the South End Neighborhood Association (SENA) to improve the neighborhood and the South End Plan.

Chapter 3: Local Economy

The City shall develop a marketing strategy that highlights its unique character, cultural activities, economic strengths, and its attributes that make it a wonderful place to visit, start a business and raise a family. This plan shall be developed with input and close cooperation from the appropriate organizations such as the Colby College, Thomas College, Inland Hospital, Maine General, The Waterville Opera House, The Maine Film Center, The Mid-Maine Chamber of Commerce, Waterville Main Street, The Central Maine Growth Council and others.

Chapter 5: Transportation

The City shall develop and update annually a road, sidewalk and trail improvement plan to guide related capital improvements in a cost effective manner. In conjunction, the City shall continue to explore all outside funding opportunities, including cooperation with State and Federal Agencies, as well as interested local non-profit institutions. The City shall seek input about this plan from citizens through engagement with interested organizations such as Kennebec Messalonskee Trails. Top priorities include the following:

- Streetscape improvements along gateway routes into the City.
- Continuing to maintain and improve its pedestrian lights and crosswalks to ensure that they are user-friendly for all of the City residents, including children, senior citizens and the handicapped.
- Examining the need for bike lanes and sidewalks whenever a significant road improvement project is approved, and implementing such improvements when appropriate.

The City shall further study the extension of Airport Road to Webb Road in order to

prioritize this need compared to other capital improvements.

The City, in cooperation with the Maine Department of Transportation, shall continue to monitor traffic concerns in key intersections throughout the City and recommend changes as necessary.

The City shall continue to work with local developers, the State, local economic development agencies and the Town of Sidney to further investigate the need for the creation of a new I-95 interchange at the Trafton Road. A primary concern will be whether or not the City should provide funding for the project through a TIF or any other source. (This project currently is listed in the draft CIP under 2016-2017 requests.)

The City, in cooperation with the Maine Department of Transportation, Downtown property owners, Hathaway Creative Center developers, and South End residents, shall continue to explore plans and funding options for improving the pedestrian connection and traffic flow between the Downtown and the South End.

Chapter 7: Recreational Facilities

The City shall investigate the need to create additional pocket parks and other small recreational areas to serve the most densely populated neighborhoods in the City and add these needs to the facility improvement plan as necessary.

The City shall develop a comprehensive greenway plan with the assistance of citizens and existing organizations, such as Kennebec Messalonskee trails, that incorporates walking, hiking and biking access throughout the City. The objective of the greenway plan is to link all major population areas of the City with recreational areas, waterways, and commercial areas. This plan should include a schedule and funding strategies for development of the project. (See also transportation projects above.)



PROPOSED CAPITAL IMPROVEMENT PROJECTS

2013-2017

DEPT.	ITEM	EST COST	ACTUAL 2013-2014	REQUEST 2014-2015	REQUEST 2015-2016	REQUEST 2016-2017
ADMINISTRATION	Property Revaluation	\$350,000			\$350,000	
	Repair of City Hall Roof	\$25,000			\$25,000	
AIRPORT	Runway 14-32 Reconstruction	\$50,000	\$50,000			
	Runway 5-23 Reconstruction	\$320,000			\$320,000	
	Equipment	\$245,000	\$245,000			
	Pavement Repairs	\$25,000			\$25,000	
	New Hangars	\$0				
PARKS AND REC.	Equipment	\$178,000	\$65,000	\$75,000	\$38,000	
	Facilities (Tennis Court)	\$100,000				\$100,000
	Parks and Playgrounds	\$80,000		\$80,000		
	Cemetery Chapel	\$50,000	\$50,000		\$50,000	
	Head of Falls	\$400,000				\$400,000
	Pool Repair	\$150,000			\$150,000	
	Boiler Upgrade	\$15,000	\$15,000			
FIRE DEPT	Fire Engine	\$75,000	\$75,000			
	Rescue Vehicle	\$150,000		\$150,000		
	Equipment	\$1,135,000	\$411,425	\$600,000	\$360,000	\$450,000
	Road Reconstruction	\$3,000,000	\$1,500,000		\$1,500,000	
PUBLIC WORKS	Trafon Road Interchange	\$2,000,000				\$2,000,000
	Airport Road Extension	?				
	Traffic Signal - Airport Rd, KMD	\$125,000				\$125,000
	Traffic Study - Downtown	\$75,000				\$75,000
SCHOOL	High School Repairs (Phase 4 & 5)	\$5,300,000				\$5,300,000
	TOTAL	\$13,848,000	\$2,411,425	\$905,000	\$2,818,000	\$8,450,000

Notes:

1. All 2013-14 expenditures were financed from a Bond Issue approved February 2013.
2. All expenditures shown for 2015-16 are proposed to be funded from a Bond Issue to be approved in 2015.

CHAPTER 12: REGIONAL COORDINATION

Waterville is closely linked in a number of ways to other nearby communities, serving as a regional center for retail, services, culture, and employment. The City shares both services and facilities with neighboring communities.

The following is a partial summary of Waterville's regional coordination efforts:

Economic Development:

- The City co-owns FirstPark, an industrial park in Oakland, with twenty-three other towns.
- Waterville supports the Mid-Maine Chamber of Commerce, Kennebec Valley Council of Governments, and Central Maine Growth Council, an economic development agency which serves Waterville, Winslow, and Fairfield.

Public Services:

- **Emergency Services:** Currently, the City has mutual aid agreements with Fairfield, Oakland and Winslow for police and fire protection. The Waterville Fire Department also had a mutual aid agreement with Sidney and shares a fire chief with Winslow. The City provides dispatching of emergency services to seven (7) other towns for a fee.
- **Utilities:** Waterville partners with other towns through the Waterville Sewerage District, the Kennebec Water District, and the Kennebec Sanitary Treatment District. For a list of towns served by each district, see Chapter 6: Public Facilities and Services.
- **Solid Waste:** The City and the town of Winslow both share the use of the Oakland Transfer Station and the agreement for waste transport to the trash incinerator in Orrington. The City also partners with Winslow in the Waterville-Winslow Solid Waste Corporation for recycling purposes.
- **Public Works Departments:** The Waterville Public Works Department hauls sand with Winslow, Fairfield and Norridgewock and shares mechanics and equipment with the Winslow Public Works Department.
- **Schools:** The City is a member of AOS 92. The City houses the superintendent's office and the Regional Area Resource Center and owns the Mid-Maine Technical Center which serves students from many other towns. Waterville also is home to Educare, a regional early childhood learning center attached to the Mitchell School.

- **Technology:** The City provides information technology support to Winslow, Oakland, and Clinton on a fee basis.
- **Waterville Public Library:** WPL is used by residents of other towns for a fee.
- **Public Transit:** Waterville supports KVCAP's operation of the Kennebec Explorer. Kennebec Explorer provides low-cost fixed route community bus service for Waterville, Fairfield, Augusta, Gardiner, Randolph, and other nearby communities.

Recreation:

- The City welcomes residents of other towns to use our municipal swimming pool (for a small fee), Pine Ridge Golf Course, and our Quarry Road Recreation Area, among many other recreation facilities.

Future Regionalization

This plan envisions that the City and surrounding towns will continue to support these regional efforts and that regionalization will benefit all participants. In addition, the City intends to explore options for additional regional delivery of services.

Chapter 13: Goals and Policies

Introduction

Goals and Policies

The goals for the City are based upon Maine's Growth Management Program and priorities identified by the City of Waterville. Policies incorporate the findings and analysis of the comprehensive plan inventory and public input.

Each policy is followed by the persons or groups assigned to implement it and a time-line indicating when tasks should be completed. Acknowledging the reality that the City will not initiate work on each task concurrently, the time-line is staggered over a period of 5 years. A time-line category "Ongoing" is used to indicate items that should be considered standard operating procedures.

This chapter is divided into sections that correspond to inventory chapters of the plan. Policies that relate to a specific subject, like housing for example, are therefore listed in one place. However, many policies affect other sections of the plan, so it is important to read and consider all of the policies contained in this chapter to understand the scope of those policies.

Demographics

The City experienced a small increase in population between 2000 and 2012, which reversed a decline from previous decades. The City wishes to encourage an increase in new residents and seeks to make the community attractive to a mix of persons, including young professionals, recent college graduates, and persons wishing to create new business ventures.

Goals:

- Plan for orderly growth and development throughout the community and to respond to changes in our population.
- Attract more middle and upper-income persons into the community.
- Create a city that is a great place to live, raise a family, and grow a business.
- Attract and retain younger residents
- Attract new residents into the City interested in creating new business opportunities.

Policies:

1. The City shall monitor demographic trends, especially population, housing, and age distribution and report any significant new trends to the City Council, the Planning Board, and the public. The City shall incorporate any significant changes into the comprehensive plan and revise policies depending upon the data.

Responsibility: City Planner

Time-line: Ongoing

2. The City shall convene a group of citizens tasked with identifying ways to create new excitement about the City and to attract individuals and families into Waterville.

Responsibility: The Mayor and The City Council

Time-line: 2014

3. Because the City is home to a significant number of senior citizens, the City shall continue to communicate with local and regional organizations that serve senior citizens to help ensure that a range of services is available. The City shall provide assistance and financial support when feasible. Service providers include Spectrum Generations, the Alford Youth Center, Waterville Housing Authority, KVCAP transportation services, and the City's Parks and Recreation Department.

Responsibility: City Planner, Parks and Recreation Director, and the City Manager

Time-line: Ongoing

Housing

Superior quality of life is essential for vibrant residential neighborhoods. Issues such as trash, noise, crime, blighted buildings and vandalism, among others, are of utmost concern for residents. Of the significant number of residents who live in apartments, many are unable to find affordable, safe housing, especially units which have the amenities suited to families with children.

Goals:

- Encourage and promote affordable, quality housing opportunities for all residents of Waterville.
- Encourage a variety of types and densities of housing to accommodate households of different sizes, ages and incomes.
- Create vibrant and safe residential neighborhoods.
- Improve the quality of life in neighborhoods by addressing crime, nuisance activities, trash, blighted buildings and poor housing conditions.
- Promote and preserve the unique architecture and historical heritage of our neighborhoods.
- Support and encourage the work of Waterville's neighborhood groups and associations.
- Encourage new housing opportunities through the renovation of vacant buildings, on infill lots, and on the upper floors of buildings in the Downtown.
- Encourage an increase in owner-occupied housing.

Policies:

1. The City shall promote the availability of quality housing for all segments of the population and cooperate with private investors as well as local, state, and federal agencies to make housing opportunities available.

Responsibility: City Council, City Manager and City Planner

Time-line: Ongoing

2. The City shall continue to use Community Development Block Grants (CDBG) to increase the availability of quality housing for people of all income levels, with the renovation of existing units as our top priority

Responsibility: City Manager and City Planner

Time-line: Ongoing

3. The City shall pursue opportunities to help property owners increase the energy efficiency of their homes (including weatherization) and upgrade their heating systems to use cleaner fuels.

Responsibility: City Manager, the City Council, and Sustain Mid-Maine

Time-line: 2014

4. The City shall pursue an aggressive approach to the issue of vacant, substandard or problem buildings by taking the following action steps:
 - a. The City Manager will propose the addition of a new position within the Code Enforcement Office for 2014.
 - b. The City Tax Collector will prepare a list by December of each year of all properties to be foreclosed. The City Manager will solicit recommendations from neighborhood associations regarding City action on these properties within the neighborhood area(s), taking into consideration the following: recreation, open space, parking, and a need to increase owner-occupied housing.
 - c. The Code Enforcement office will work with the City Solicitor to take prompt action against property owners that are in violation of the City's Zoning Ordinance or Property Maintenance Code.
 - d. The City shall review, through the Planning Board, all city codes (especially the Property Maintenance Code), to ensure that provisions are in place for the city to take enforcement action. This review will include examining the feasibility of instituting a multi-family housing inspection program designed to check basic safety and livability, especially in older, low-income neighborhoods. One possible source of funding may be inspection fees that could be used to offset the cost of administering such inspections. The City shall also work in close cooperation with existing agencies that already have inspection programs, such as the Waterville Housing Authority or KVCAP in order to avoid duplication of effort.

Responsibility: City Manager, Code Enforcement Officer, Fire Chief, City Tax Collector, and City Planner

Time-line: Ongoing

5. The City shall continue to ensure that City departments, especially Police and Code Enforcement, have the capacity, including policies, ordinances, legal tools, funds and staff, to maintain a safe environment in all City neighborhoods.

Responsibility: City Manager, City Council

Time-Line: Ongoing

6. The City shall cooperate with neighborhood groups and consider for adoption neighborhood improvement plans developed by residents and implement those plans to the extent that funding is available.

Responsibility: City Council, City Manager, Planning Board, City Planner

Time-Line: 2015

7. The City shall work with developers and representatives of housing organizations such as KVCAP and the Waterville Housing Authority to identify strategies to promote the creation of affordable, safe apartment units through the renovation of existing units.

Responsibility: Housing developers and representatives of housing organizations including KVCAP and Waterville Housing Authority

Time-line: 2015

Local Economy

The City's economic development efforts include funding the services of an economic development director shared with neighboring communities through the Central Maine Growth Council and participating in FirstPark, Waterville Main Street, Kennebec Valley Council of Governments, and the Mid-Maine Chamber of Commerce. Professional, technical, high wage and creative employment opportunities are essential for the financial health of both the City and its residents.

Goals:

- Promote an economic climate that increases job opportunities and overall economic wellbeing.
 - Support the retention and expansion of existing businesses.
 - Promote the airport, industrial parks, FirstPark, Downtown and other commercial areas to increase development.
- Expand and diversify the City's tax base.
 - Create new economic growth by building upon the City's strengths and unique character.
- Foster a talented, trained and entrepreneurial workforce.
- Continue to foster a vibrant Downtown.

Policies:

- 1 The City shall remain actively involved in local, regional, and state economic development efforts in collaboration with the Mid-Maine Chamber of Commerce, KVCOG, Colby and Thomas Colleges, FirstPark, Waterville Main Street, Waterville Development Corporation, Central Maine Growth Council and neighboring communities. The City shall examine the existing arrangement to determine the return on investment in these organizations, and whether or not the City should hire an economic and community development director focused specifically on Waterville to enhance the City's economic development efforts.

Responsibility: City Manager and the City Council

Time-line: Ongoing

- 2 Waterville's Downtown is a local and regional hub for commerce, recreation, and cultural activities and serves to enhance the economic wellbeing of the City and its residents. Continued support for the Downtown and Waterville Main Street with proper oversight to ensure a return on the City's investment is an essential component of the economic vitality of the City.

Responsibility: City Council, City Manager

Timeline: Ongoing

3. The City shall develop a marketing strategy that highlights its unique character, cultural activities, economic strengths, and its attributes that make it a wonderful place to visit, start a business and raise a family. This plan shall be developed with input and close cooperation from the appropriate organizations such as the Colby College, Thomas College, Inland Hospital, Maine General, The Waterville Opera House, The Maine Film Center, The Mid-Maine Chamber of Commerce, Waterville Main Street, The Central Maine Growth Council and others.

Responsibility: City Manager and City Council

Time-Line: 2014

4. Future economic development within the City shall be directed as much as feasible into vacant structures, existing industrial and commercial sites, Downtown and onto College Avenue. Those prime locations have existing services and are zoned for commercial development. The City shall consider creating new TIF districts, applying for grants, assembling parcels of land, making changes to traffic patterns, or rezoning to allow additional uses as needed.

Responsibility: City Planner, City Engineer, Central Maine Growth Council, Economic Development Director, Waterville Main Street, TIF Advisory Committee

Time-line: Ongoing

5. The City shall continue to promote the airport for economic development and operate the facility in an efficient manner, expanding and improving the airport with grants,

enhancing its use for large package delivery service, encouraging new repair and sales activities, and exploiting the Foreign Trade Zone that exists on the site.

Responsibility: City Manager, Airport Director, Economic Development Director, and City Council

Time-line: Ongoing

6. The City shall develop an updated Economic Development Plan for Waterville to guide how the City works to improve the local economy. The plan shall incorporate an analysis of the City's strengths and assets and include regional cooperation. The plan also shall address creating TIF districts, expanding infrastructure, and applying for grant funding along with reexamining development plans for the Trafton Road area, the Airport Industrial Park, FirstPark, Downtown, and College Avenue and renew efforts to expand employment through increased commercial and industrial activities in those areas. The City shall ensure that existing economic sectors and existing businesses are recognized and adequate attention and resources are targeted to foster their continued growth and vitality.

Responsibility: City Manager and City Council

Time-line: 2014

7. The City shall cooperate with and assist organizations providing work force training opportunities within the City, including training for displaced workers, new career opportunities, expanding businesses, and tourism and service workers. The City shall lobby State and Federal sources for funding for this training.

Responsibility: City Manager, Library Director and City Council

Time-Line: 2014

Municipal Finances

The City provides a range of services that residents and businesses rely upon and recognize as benefits of living and doing business in Waterville. Current economic conditions have made it increasingly difficult to finance services, especially when State funding continues to be reduced. As a service center with a large amount of tax-exempt properties, Waterville faces many challenges in trying to balance the need to provide necessary services with the need to keep the municipal tax rate at a reasonable level.

Goals:

- Finance an efficient system of public facilities and services to accommodate anticipated growth and economic development.
- Establish annual budget priorities for both City and school needs to ensure that the City's tax rate remains as low as possible while still delivering a high quality of city services.
- Examine current community services and measure how well they serve the residents of Waterville.

- Limit additional service burdens that should legitimately be absorbed by private development.
- Maintain an excellent credit rating in order to secure a favorable interest rate on future municipal bonds.
- Maintain an adequate fund balance in order to be prepared for unexpected expenses

Policies:

1. The City shall develop a Capital Improvement Plan with annual updates in order to plan for future expenditure requests.

Responsibility: City Council, City Manager, and Department Heads

Time-line: Annually

2. The City shall strive to improve the financial health of Waterville by maintaining an adequate fund balance, pursuing grant opportunities, advocating for stable State revenue sharing and school funding, exploring cost effective regional service delivery programs, and seeking other innovative methods to provide services and improve infrastructure in an economical manner.

Responsibility: City Manager, City Council, Mayor and Finance Director

Time-line: Ongoing

3. The City shall continue to engage residents and local groups as necessary to identify new ways to reduce costs while still providing the services that are necessary to maintain the standard of living that the City’s residents have come to expect.

Responsibility: City Manager, City Council, Mayor and Finance Director

Time-line: Ongoing

4. The city shall continue to work with the major tax exempt institutions to ensure that they provide financial and other support services for community organizations and projects.

Responsibility: Mayor, City Council and City Manager

Time-line: Ongoing

5. The City shall examine imposing fees for some services that are not utilized by all taxpayers in order to more equitably distribute those costs in a way other than through taxation. Some of these services are also used by non-residents, but are currently subsidized through taxation. The City shall also evaluate its current fines or fees for other activities subject to oversight by the City to be sure that we are in line with other municipalities. Examples include:

- a. Examining the City’s municipal solid waste collection and recycling service, including evaluating the possibility of implementing a “Pay-as-you-throw” program

- b. Annually evaluating the fee structure at the municipal pool and adjusting the fee structure so that it becomes self-supporting, including operational expenses and long-term maintenance.
- c. Annually evaluating the fee structure for the Quarry Road Recreation Area and adjusting the fee structure so that it becomes self-supporting, including operational expenses and long-term maintenance.
- d. Imposing or increasing fees for building inspections.
- e. Imposing or increasing fines for code violations.
- f. Imposing or increasing fees for any licenses issued by the City, such as:
 - i. Dog Licenses
 - ii. Liquor Licenses
 - iii. Building Permits

Responsibility: Mayor, City Council, City Manager, Parks & Recreation Director, Public Works Director, Code Enforcement Officer, City Solicitor
Time-line: 2014 & Annually Thereafter

Transportation

The City has a number of significant corridors that serve as principal gateways into the City and can be enhanced by implementing streetscape plans. Those gateways include Main Street, College Avenue, Kennedy Memorial Drive, Front Street, Spring Street, Water Street, the Waterville / Winslow bridge, and Silver Street. Streetscape plans could include improved traffic access, landscaping, signage, and sidewalks. The City also recognizes the importance of rail service to the economic vitality of the City and the region and encourages the continued use of freight service and expansion of passenger service into the City.

Goals:

- Plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.
- Improve traffic circulation.
- Promote traffic safety.
- Improve traffic connections between existing commercial areas
- Plan for and support a multi-modal and alternative transportation system that includes facilities for pedestrians and bicyclists.
 - Create a City-wide network of walking facilities including sidewalks and trails for both pedestrians and bicyclists.
 - Improve existing pedestrian, bicycling, and vehicular connections between commercial areas and surrounding neighborhoods.

Policies:

1. The City shall develop and update annually a road, sidewalk and trail improvement plan to guide related capital improvements in a cost effective manner. In conjunction, the City shall continue to explore all outside funding opportunities, including cooperation with State and Federal Agencies, as well as interested local non-profit institutions. The City shall seek input about this plan from citizens through engagement with interested organizations such as Kennebec Messalonskee Trails. Top priorities include the following:
 - a. Streetscape improvements along gateway routes into the City.
 - b. Continuing to maintain and improve its pedestrian lights and crosswalks to ensure that they are user-friendly for all of the City residents, including children, senior citizens and the handicapped.
 - c. Examining the need for bike lanes and sidewalks whenever a significant road improvement project is approved, and implementing such improvements when appropriate.

Responsibility: Public Works Director, Park & Recreation Director, Planning Board, City Manager, and City Council

Time-line: 2014 with Annual Updates Thereafter

2. The City shall further study the extension of Airport Road to Webb Road in its Capital Improvement Plan in order to prioritize this need compared to other capital improvements.

Responsibility: City Engineer, City Planner, Planning Board, Public Works Director, City Manager, and City Council

Time-line: 2014

3. The City, in cooperation with the Maine Department of Transportation, shall continue to monitor traffic concerns in key intersections throughout the City and recommend changes as necessary.

Responsibility: City Manager, City Engineer, and City Planner

Time-line: 2014

4. The City shall continue to work with local developers, the State, local economic development agencies and the Town of Sidney to further investigate the need for the creation of a new I-95 interchange at the Trafton Road. A primary concern will be whether or not the City should provide funding for the project through a TIF or any other source.

Responsibility: City Manager, City Planner, City Council, and Planning Board

Time-line: Ongoing

5. The City shall review its Site Plan Review Ordinance to examine the feasibility and legality of requiring (or at least encouraging) all new and existing commercial, industrial and similar developments to provide traffic connections and pedestrian access to abutting properties wherever feasible.

Responsibility: City Planner, City Engineer, City Manager, City Solicitor, Planning Board, and City Council

Time-line: 2014

6. The City, in cooperation with the Maine Department of Transportation, Downtown property owners, Hathaway Creative Center developers, and South End residents, shall continue to explore plans and funding options for improving the pedestrian connection and traffic flow between the Downtown and the South End.

Responsibility: City Manager, City Engineer, Planning Board and City Planner

Time-line: 2014

7. The City shall continue to support the transportation services of Kennebec Valley Community Action Program (KVCAP) and advocate for increased bus service.

Responsibility: City Manager, Mayor, and City Council

Time-line: Ongoing

Municipal Facilities

Goals:

- Plan for, finance, develop and maintain an efficient system of public facilities to serve the needs of the community.
- Develop a capital improvement plan to systematically repair and replace Waterville's public infrastructure.
- Encourage citizen participation in all aspects of City life to ensure that the community's assets are developed appropriately.
- Create an excellent educational system
- Pursue less costly alternatives for facilities and services, including cooperative efforts with other communities.

Policies:

1. The City recognizes the vital importance high speed internet plays in economic development, home occupations, medical services, education, and quality of life. The City shall monitor the availability of high-speed internet service and advocate for widespread and affordable internet access to meet current and future demands.

Responsibility: Information Technology Director, City Planner and City Council

Time-line: Ongoing

2. Municipal sewer is available in most areas of the City and provides residents and businesses a safe and economical option for waste disposal. The City shall encourage the Waterville Sewerage District to maintain its sewer infrastructure to continue to provide affordable and efficient services and to reduce infiltration into the system.

Responsibility: City Manager, City Council, and Waterville Sewerage District

Time-line: Ongoing

3. The Waterville Public Library shall continue to be highlighted as the center of reading, learning, creative activities and clearinghouse for ideas to enhance the cultural and social life of the City. Funding for services, materials and programs shall continue to be a priority.

Responsibility: City Manager and City Council

Time-line: Ongoing

4. The City shall work with the school board and superintendent to ensure that there is adequate capital improvement funding in order to continue to invest in its education system and constantly improve facilities. The City shall identify services to assist families and children at risk and to help foster a better environment for learning. The City also shall advocate for a stable source of State and Federal funding to supplement local tax dollars.

Responsibility: City Council

Time-line: Ongoing

Recreational Facilities

Goals:

- Promote and protect the availability of recreational opportunities, including access to surface waters, for all citizens.
- Enhance the quality of life and meet the leisure needs of the community by providing a variety of quality programs for all ages and interests in sufficient, safe, well maintained and properly supervised facilities.
- Enhance and promote the cultural offerings within the City.
- Improve access to the Kennebec River and the Messalonskee Stream for boating, fishing and sight seeing.
- Improve walking, biking, hiking and other outdoor recreational opportunities.
- Provide greater access to recreational areas in the South End and North End neighborhoods.

Policies:

1. The City shall improve its existing recreational facilities according to the facilities improvement plan/schedule contained in the recreation chapter of this plan.

Responsibility: City Manager and City Council

Time-line: Ongoing

2. The City shall investigate the need to create additional pocket parks and other small recreational areas to serve the most densely populated neighborhoods in the City and add these needs to the facility improvement plan as necessary.

Responsibility: City Planner and Parks and Recreation Director

Time-line: 2016

3. The City shall develop a comprehensive greenway plan with the assistance of citizens and existing organizations, such as Kennebec Messalonskee trails, that incorporates walking, hiking and biking access throughout the City. The objective of the greenway plan is to link all major population areas of the City with recreational areas, waterways, and commercial areas. This plan should include a schedule and funding strategies for development of the project.

Responsibility: Parks & Recreation Director, City Council, Planning Board, City Planner

Timeline: 2016

Historic and Cultural Resources

The City contains many historic structures, interesting buildings, and significant places which contribute to our character. It is important that these structures and places be identified and public awareness increased concerning their significance to the entire community. Some historically significant buildings that are valued by residents may be proposed for removal or demolition, due to age or other circumstances. The loss of those buildings would deprive the City of significant pieces of its heritage. A portion of Waterville's Downtown is listed on the National Register of Historic Places as an historic district.

Goals:

- Preserve the City's historic and archeological resources.
- Promote the City's historic resources including its architecture, Downtown, and cultural diversity.

Policies:

1. The City shall conduct a comprehensive survey of all archeological and historic resources within the City.

Responsibility: City Planner, City Engineer

Time-line: 2016

2. The City shall continue to support the efforts of the Waterville Historical Society and other organizations that promote history, art, and cultural heritage throughout the City and strive to

educate residents about our rich heritage and the need to protect and preserve important historical assets within the City.

Responsibility: City Planner

Time-line: 2016

3. The City shall explore the feasibility of creating a local historic preservation ordinance or voluntary standard to protect significant properties including those listed on the National Register of Historic Places. It is important to ensure that appropriate standards are used to guide exterior alterations and additions in a manner that respects the character of those buildings. A preference shall be to use the standards of the Secretary of Interior.

Responsibility: City Planner, Planning Board, Waterville Main Street Director, and City Council
Time-line: 2016.

4. In order to save from demolition buildings identified by the City as historically significant, the City shall do its best to publicize information about buildings that may be at risk so the community has ample opportunity to raise funds or to propose an alternative plan for the property. The City shall also consider establishing a mandatory waiting period before demolition can occur, depending on the legality and feasibility of such an ordinance.

Responsibility: City Planner, Planning Board, Waterville Main Street, City Solicitor, and City Council

Time-line: 2017

5. The City shall convene a committee of Downtown property owners to discuss the possibility of developing a set of renovation standards for exterior modifications and, if necessary, to identify funding sources to assist property owners with the cost of exterior work proposed in the Downtown Historic District.

Responsibility: Waterville Main Street, Downtown property owners, City Planner, and City Council

Time-Line: 2017

Natural Resources

Goals:

- Protect the quality of Waterville's water resources, including rivers, streams, aquifers and ponds.
- Protect Waterville's critical natural resources including without limitation, wetlands, wildlife and fisheries habitat, shorelands, scenic vistas and unique natural areas.
- Protect Waterville's air quality.
- Safeguard the City's agricultural and open space resources in a manner appropriate to the character of the City.

- Be wise stewards of our natural resources to ensure that future residents can enjoy clean water and air, a variety of wildlife and fish habitats, and access to nature, open spaces and recreation opportunities.
- Be aware of climate changes and advocate as necessary for local, regional, State and other measures which will ensure our children's access to a healthy environment.
- Advocate for local measures and practices that lessen or eliminate negative impacts upon the environment, such as using cleaner fuels, reducing energy consumption and promoting weatherization.

Policies:

1. The City shall periodically review its land use ordinances, including Shoreland Zoning and Floodplain Management, to ensure that they conform to all applicable State laws and regulations and that new construction is appropriately reviewed and developed in a manner which protects our natural resources.

Responsibility: City Planner and the Planning Board

Time-line: Ongoing

2. The City shall continue to ensure that its natural resources are protected. The City shall find ways to remove from development those areas, features, and significant spaces that enhance the natural environment, allow for passive recreation, and provide open spaces. The City shall pursue funding to purchase those areas for the future enjoyment of residents when appropriate.

Responsibility: City Planner

Time-line: Ongoing

3. The City has a limited amount of rural land as a consequence of its urban character and small land area. Before any significant zoning changes are made to rural areas, the City shall engage citizens, especially rural residents, to discuss options for the future of the rural portions of the City. This applies specifically, but not solely to the possibility of development of a new I-95 interchange on Trafton Road.

Responsibility: City Planner, Planning Board

Time-line: Ongoing

4. The City shall continue to examine its water resources, including rivers, streams, brooks, and wetlands, to ensure that these resources are protected, suitable access is available for recreation, and habitats for animals, birds, and fish are sustained.

Responsibility: City Planner and interested parties

Time-line: 2016

Land Use

Goals:

- Encourage orderly growth and development in specific areas of the City.
- Provide for adequate space and locations for the City's housing, commercial, industrial, recreational, open space and agriculture needs.
- Periodically review the Zoning Ordinance and map to ensure that they meet the needs of the City and its residents.

Policies:

1. The City shall maintain its existing growth and rural area designations as enacted in the 1997 Comprehensive Plan. All land zoned Rural Residential, Resource Protection or located in the Shoreland Zone is designated rural area and all land in any other zone is part of the City's designated growth area. The City shall monitor the usefulness of the existing zoning map and propose revisions as required.

Responsibility: City Planner and the Planning Board

Time-line: Ongoing

2. Starting in 2014, the Planning Board with guidance from the City Planner shall review the City's Zoning Ordinances and propose revisions as needed and present those changes to the City Council for consideration. This review shall occur every 2 years and provides for revisions to the Zoning Ordinance and map, based upon the experience of the Planning Board. This review shall include, but not be limited to the following:
 - a. The zoning designation and standards applicable to the Kennedy Memorial Drive corridor (between First Rangeway and Cool Street) to determine if modifications are necessary to respond to current development trends and demands in the area.
 - b. Examining the dimensional and setback requirements for housing in residential areas to determine if these requirements are adequate to meet the City's current and future housing demands. Specifically, the City shall investigate ways to create more opportunities for infill housing development on small land parcels, in vacant structures, and in commercial structures.
 - c. Examining the current zoning adjacent to railroad lines to ensure that zoning promotes rail service to commercial and industrial locations.

Responsibility: Planning Board, City Planner, City Council

Time-line: Ongoing

3. The City shall support citizen grass-roots efforts to improve neighborhoods, including reviewing and voting on adopting neighborhood improvement plans that may be developed by neighborhood associations. This includes but is not limited to the efforts of the South End Neighborhood Association (SENA) to improve the neighborhood and the South End Plan.

Responsibility: City Council

Time-line: Ongoing