III. Community Setting

A. Regional Context

Bridgewater (2000 population, 25,185) is a suburban-rural town 23 miles south of Boston, eight miles south of Brockton, and 29 miles northeast of Providence. It houses Bridgewater State College, the flagship of the Massachusetts State College System with almost 10,000 full time students and 700 staff, and the Bridgewater Correctional Complex with over 2000 inmates and 1300 staff.

Bridgewater is abutted by West Bridgewater and East Bridgewater to the north, Raynham to the west, Halifax to the east, and Middleboro to the south. A major feature is the Taunton River and its main tributaries, the Town and Matfield Rivers. The Taunton River begins at the junction of the Town River and the Matfield River northeast of the town center. The resulting Taunton River essentially wraps around Bridgewater forming its eastern and southern boundaries.

The town has a strong town center served by a commuter rail station about 3000 feet to the east within the Bridgewater State College campus, a variety of neighborhoods and commercial/industrial areas and some scattered remaining farm land. It also has regional highway access via the limited access Route 24 running north-south through western portion of the town and the nearby outer-circumferential Route 495

These roads give good highway access to Boston, Brockton, Providence, and the rest of the region, while the restored rail service connects the town to Middleboro/Lakeville to the south and to Quincy/Boston/Cambridge and the entire MBTA transit system to the north. Such accessibility, combined with the town's other attractions gives Bridgewater broad appeal as a place to live and partially drives its continued growth.

Regional Resources

Open Space

Regional open space resources in nearby communities include the Blue Hills Reservation in Milton and Quincy, the many Easton Conservation areas, Ames Nowell State Park in Abington, D.W. Field Park in Avon and Brockton, Peterson's Swamp in Halifax and Plympton, the Burrage Wildlife Management Area in Hanson and Halifax, the extensive Hockomock Swamp, Massasoit State Forest in Raynham, the open land on the Bridgewater Correctional Complex (BCC) and adjacent extensive private farmland, along with the remaining rural landscape, particularly in Middleborough to the south, along with the whole Town River/Taunton River corridor.

Taunton River Watershed

Bridgewater is in the Taunton River Basin and all streams eventually flow to the Taunton River. The perennial Town River begins at Lake Nippenicket in the Bridgewater portion of the Hockomock Swamp and flows southeasterly through West Bridgewater, joining

the Matfield River in Bridgewater to form the Taunton River. The Taunton River then essentially embraces the town wrapping around its eastern and southern borders. The river is a major portion of the Wampanoag Canoe Passage between Boston's South Shore and Narragansett Bay.

Hockomock Swamp

The entire Hockomock Swamp, the largest swamp in New England at 16,900 acres, covers portions of Raynham, Norton, Taunton, Easton, Bridgewater, and West Bridgewater with approximately 1,131 acres in the northwestern corner of the town excluding the surface of Lake NippenicketThe swamp is also the largest inland state-designated Area of Critical Environmental Concern (ACEC). The designation, largely the work of interested Bridgewater citizens and officials, was approved by the Secretary of Environmental Affairs in 1990. This requires increased scrutiny under the Wetlands Protection Act and other applicable regulations.

Although it is zoned Residential A/B in Bridgewater (as compared to Industrial in West Bridgewater to the north), the Hockomock Swamp is an important wetland and is protected against inappropriate development by the ACEC designation.

The swamp is home to several endangered species according to the state's Natural Heritage Program and serves as critical habitat and a vital water resource for wildlife. The swamp reduces flooding by storing water and also provides some recharge to underlying aquifers, thereby contributing to drinking water supplies, and helping to maintain stream flow.

Bridgewater's western portions of the swamp at the edge of the Lake drain to Lake Nippenicket and then to the Town River and on to the Taunton River, while the portions east of the Lake drain more directly to the Hockomock River and the Town River. Much of the swamp is state owned as described in Chapters II and III.

Bay Circuit Trail

The Bay Circuit Trail was conceived in 1929 by then Secretary of the Trustees of Reservations Charles W. Eliot, III, a disciple of Frederick Law Olmsted. The concept was to have an arc of parks and conservation land linked by continuous trails, waterways, and scenic drives from the North Shore to Duxbury Bay (much as the Emerald Necklace connects neighborhoods and parks within Boston). These holdings would approximate a regional greenbelt around greater Boston and would provide access to the heritage and character of the New England countryside. The contemporary concept is necessarily more modest, as many opportunities for major holdings are gone.

The volunteer implementing body, the Bay Circuit Alliance, stresses continuous trails through the Circuit and connected scenic areas, rather that a wide greenbelt. However, the Alliance still encourages and supports open space acquisition and protection of key resources along the trail where possible, and seeks to integrate the trail with such resources. Over 50 communities are connected by the 100-mile Trail. However there are

gaps where continuous, designated year-round trails are still needed, including some in East Bridgewater, West Bridgewater and Pembroke.

The Bay Circuit Trail runs through adopted and potential segments in West Bridgewater and East Bridgewater to the north and then dips into Bridgewater at Main Street and High Street in order to include the Stanley Iron Works Park on the Town River.

B. History

Old Bridgewater was the first inland settlement in Massachusetts, established in1656 by Myles Standish. The Bridgewaters, including current day Bridgewater, West Bridgewater, Brockton, and East Bridgewater, had been purchased from Chief Massasoit of the Wampanoag tribe by Captain Standish in 1649. The following account is excerpted from a weekly newspaper feature, "Story of an Old Town" in the Bridgewater Independent (April 15, 1948):

Chickataubut, the Indian chieftain …had been acclaimed "the greatest sagamore in the country" and his favorite encampment was in the southern part of what was later Old Bridgewater, on the banks of the great river, Titicut (today's Taunton River). His domain extended …almost to Duxbury and from the Nippenicket in a straight line to the headwaters of the Charles River.

What a choice land was this with fertile fields, glorious woodland to warm the hearts of the huntsman, and streams certain to beguile the fishermen too long limited to the offerings from the sea. Yes, and the great cedar swamps like the environs of the Nippenicket, with a rich offering of timber and shelter, too, for man and the beasts of the forest.

Captain Myles Standish, Samuel Nash, and Constant Southworth ...(made) the purchase … as seen by the deed dated 23rd of March, 1649: "Witness these presense that I, Ousamequin (a.k.a. Massasoit), sachem of the country of Poconocket,... sold. .. on behalf of all the townsmen of Duxbury, aforesaid, a tract of land usually called Satucket... that is to say, from the wear at Satucket seven miles due east, and from the said wear seven miles due west, and from the said wear seven miles due north, and from the said wear seven miles due south ...In consideration of the aforesaid bargain and sale, we the said Myles Standish, Samuel Nash and Constant Southworth do bind ourselves to pay unto the said Ousamequin (a.k. a. Massasoit) for and in consideration of the said tract of land as foiloweth:

7 coats, a yard and a 1h in each coat,
9 hatchets,
8 hoes,
20 knives,
4 moose skins,
10 yards and …of cotton."

The payment does not reflect the land's value and the settlers understood the worth of farmable soils and water. Later observers have wondered whether the Native Americans thought that they were selling just the right to use it freely as they themselves did, or exclusive ownership of the land. Through additional purchases from them, Old

Bridgewater grew to 96 square miles. In 1706 Abington broke away, eventually followed by the present East Bridgewater, West Bridgewater, and North Bridgewater (now Brockton). Whitman later separated from Abington.

The town was chartered in 1656 and grew as farming and manufacturing community with activities based on clay, bog iron and water power. Foundries were developed north of downtown in the Stanley area where a deteriorated dam now forms a major pond on the Town River backing into West Bridgewater. Other industries making nails, shoes, and bricks grew in the late 1800s. The extensive riverside clay deposits led to bricks being made at the present Stiles and Hart Conservation Area just east of Rte. 18 and at the continuing Stiles and Hart Brick works along the Taunton River south of Titicut Street.

As elsewhere, settlement patterns and road building through the years have followed the high ground and avoided unbuildable land in low, wet areas around the town. As a result, most of the existing vacant land and protected open space is concentrated around ponds, rivers, and wetlands, and on abandoned farm land. The later Nineteenth Century saw the formation of two major institutions in Bridgewater, the Normal School which became Bridgewater State College and the various state facilities now comprising the Bridgewater Correctional Complex, a major employer and land owner.

Bridgewater continued growing into the 20th Century with considerable agriculture, largely dairying, scattered long-term industries, and a slowly growing population. Late in the century agriculture declined with reduced profitability and rising land values for development. A major reduction followed the US Department of Agriculture's Whole Herd Buyout program of the late 1980s when the Department bought out productive herds, reportedly including Cumberland Farms' large operation, to reduce milk production. The last thirty years have seen a continuing loss of agriculture even on the most suitable soils.

As noted in the 2002 Bridgewater Master Plan, "During the 1960s, with the construction of the Interstate Highway System (including Rte. 495) and improvements to the State Highway System (Route 24) the town [which had long been under 10,000 population] began to grow. By 1970 it had reached 12,902, an increase of over 25% in ten years. The growing highway system made possible the connection of Bridgewater to major employment centers such as Boston and Providence, both under an hour away by automobile." The highways also attracted more suburban development to the western portion of the town. Growth increased in the 1970s and has continued as shown below.

In 1986 the town created an Historic District containing 96 structures around the Center. Despite the Historic District Commission's efforts and citizen efforts, two significant houses, the 1822 Colonel Abram Washburn House and the Nahum Stetson House on Summer Street downtown were demolished for commercial development allowed as-of-right under a then recent zoning bylaw revision.

The Central Square Historic District is shown on the map of Scenic Resources and Unique Environments in Chapter IV.

Bridgewater Population Growth 1950-2000

Year	Population	% Increase over Decade
1950	9,512	-
1960	10,276	7.7
1970	12,902	25.6
1980	17,202	33.3
1990	21,249	23.5
2000	25,185	18.5

Source: US Census, includes college and correctional populations

The late 1990s saw restoration of commuter rail service between Boston and Middleboro/ Lakeville. The original station off of Route 18, just north of downtown was left in its recent commercial use and a new station and large parking area were built further from the town center between the State College's east and west campuses.

With level, buildable land, good access and many amenities, the town has continued to grow, gaining 8,000 residents (18%) from 1980 to 2000 compared to 8.6% in the County and 5.5% state-wide. This makes it the third fastest growing community in the fastest growing part of the state. Much of this is suburban growth reflecting out-migration from the Brockton and Greater Boston areas rather than local natural increase, but the effects on town growth and land consumption are the same.

One recent advance adding to the local capacities was the 1998 incorporation of the Natural Resources Trust of Bridgewater (NRTB), a non-profit 501(c) 3 community-based land trust, by members of the Open Space sub-committee of the Growth Advisory Committee. It is a supportive private partner to the town and adjacent communities in environmental protection.

More recently, Bridgewater adopted the Community Preservation Act to fund a variety of open space, historic preservation, and housing actions. This offers much potential for saving key open space and historic resources while adding or preserving, affordable housing.

Historic Resources

The town's major historic resources include those in the Historic District and listed below. None of these are known to be state or national registers of historic places.

Around the Common

1. Bridgewater Common, Central Square, set out in 1822 for grazing, reputedly to the dimensions of Noah's Ark.

2. Town Hall, built 1843 - the town's second town hall

3. Bridgewater Academy, built in 1799, rebuilt in 1822 after a fire, and again in 1868 after road construction. Used as High School until 1951 and now holding various town offices and meeting spaces

4. Old Library and Civil War memorial - now holding town offices

5. Wentworth House behind the Old Library, a rare duplex cape design.

6. Congregational Church, built in1836 and rebuilt in 1862 after a fire

7. The Tory House, built in 1716, once home of a British sympathizer, Josiah Edison

8. The Old Post Office - now holding commercial office space.

Along Summer and Plymouth Streets to School Street

9. First Parish Cemetery, established 1716

10. Honorable S.A. Shaw site, site of home of Rev. Shaw, Second minister of First Parish Church

11. Plaque noting site of first Normal School (teachers' college) in U.S., built in 1846 and later burned to ground

12. First Parish Church established 1716, this is the third structure, built in 1846

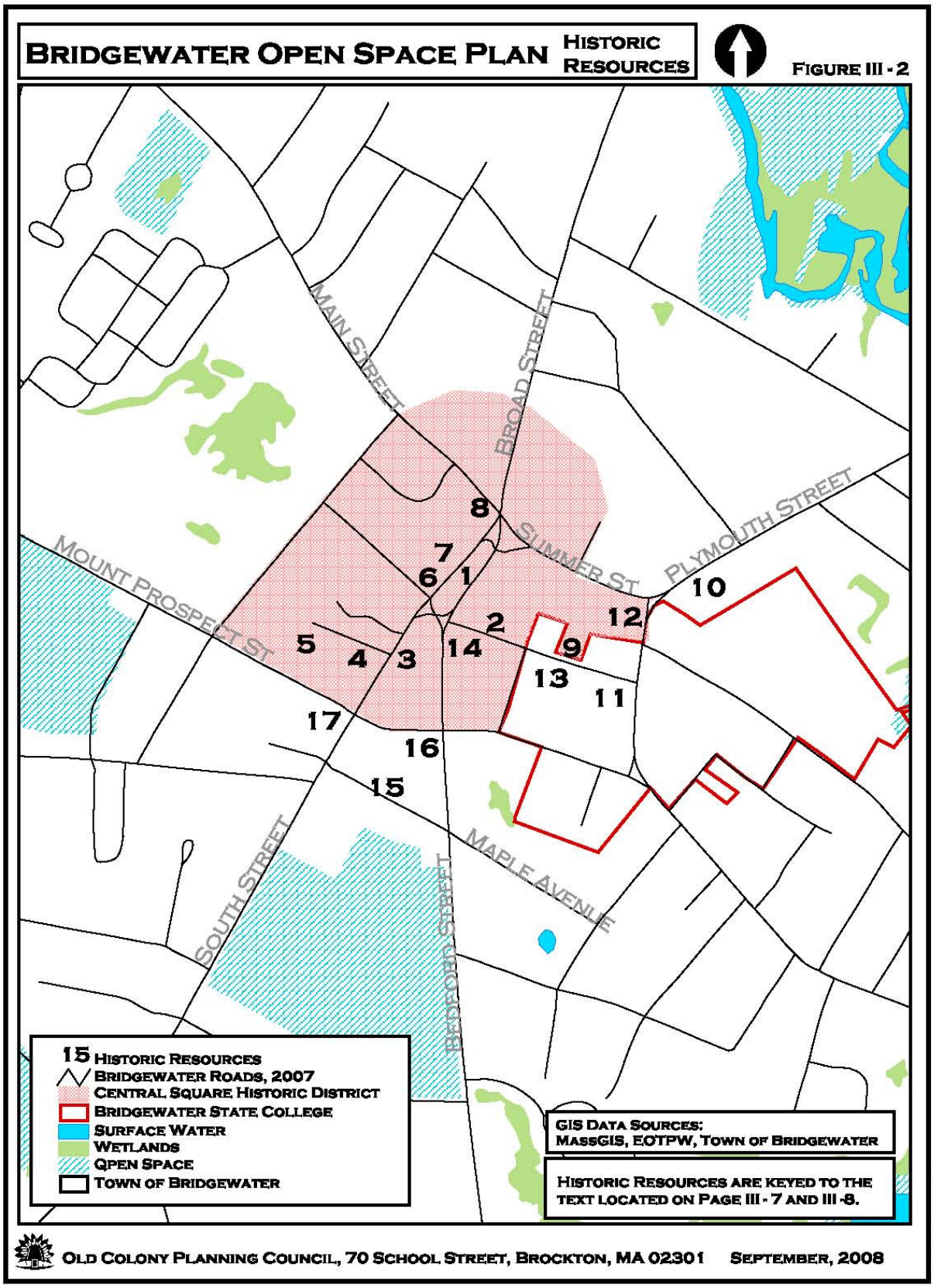
13. Samuel Gates House, originally built across from the Hunt School on School Street and later moved to Cedar and Grove streets

14. New Jerusalem Church, 1871, Steeple was rebuilt after a 1996 fire

15. Forbes House, The oldest house on Maple Avenue. It has a circular cellar

16. L. Holmes House, an old cape on the corner of Bedford and Grove Streets

17. Noah Fearing House, 1796 on the Corner of South and Mt. Prospect Streets, built by Dr. Fearing and now occupied by a pediatrician.


BRIDGEWATER OPEN SPACE PLAN
HISTORIC RESOURCES
FIGURE III - 2
MAIN STREET
BROAD STREET
SUMMER ST
PLYMOUTH STREET
MOUNT PROSPECT ST
SOUTH STREET
BEDFORD STREET
MAPLE AVENUE
8
7
6
1
2
12
10
5
4
3
14
9
13
11
17
16
15
15 HISTORIC RESOURCES
BRIDGEWATER ROADS, 2007
CENTRAL SQUARE HISTORIC DISTRICT
BRIDGEWATER STATE COLLEGE
SURFACE WATER
WETLANDS
OPEN SPACE
TOWN OF BRIDGEWATER
GIS DATA SOURCES:
MASSGIS, EOTPW, TOWN OF BRIDGEWATER
HISTORIC RESOURCES ARE KEYED TO THE TEXT LOCATED ON PAGE III - 7 AND III -8.
OLD COLONY PLANNING COUNCIL, 70 SCHOOL STREET, BROCKTON, MA 02301
SEPTEMBER, 2008
FIGURE III - 2

North on Main Street to High Street

18. Paul Revere' House, 1790, once occupied by a fifth generation descendent of Paul Revere.

19. Site of the Lazell Perkins Iron Works, first permitted by the State in 1695, it was the second largest rolling mill in the US by 1865. It is the centerpiece of the Iron Works Historic District and is the first park site in an intended 17-mile linked greenway along the Town and Taunton Rivers. It is on the Bay Circuit Trail.

Part of Bridgewater's Historic Landscapes; its many small cemeteries - Here the Vernon Cemetery at Vernon and Cross Streets

Another historic resource from Old Bridgewater's early days is Sachem's Rock on the Satucket River near the center of the present East Bridgewater. It is the spot where the Indian Sachem, Massasoit, met with Captain Myles Standish to sell the original Bridgewater lands to the Plymouth Colony Pilgrims as discussed above.

C. Population Characteristics

Overall Character and Trends

Bridgewater's overall population is relatively affluent, predominantly white, relatively young, and rapidly growing as noted above.

From 1950 to 1970 the total population, including that in institutions, grew gradually from 9,512 to 12,902. Growth then accelerated with the population reaching 17,202 by 1980, 21,249 by 1990 and 25,185 by 2000. With the town's area fixed at 28.14 square miles, the overall density, reflecting developed land and undeveloped land, rose from 338 persons/square mile in 1950 to the 895 persons/square mile in 2000. This is still lower than the Year 2000 regional figure of 929 persons /square mile or Whitman's 1,986 persons /square mile, but higher than the nearby communities of East and West Bridgewater with 732 and 421 persons/square mile respectively.

Most neighborhoods are far less dense than this suggests because these figures reflect the whole community, much of which is undeveloped or in very low density uses. The resulting patterns are discussed below under Land Use Patterns and Trends, and the implications for open space and recreation needs are noted in the Needs section (Chapter VII.)

Employment and Income

The median family income was $50,080 in 1990 (1989 data) compared to $47,273 for the same year in the OCPC region and $44,367 statewide. By 2000 (1999 data) it had grown by 45.34% to $73,953 compared to a regional increase of 42.43% to $67,331, and a lesser state-wide increase of 38.98% to $61,664.

These incomes reflect employment in the town and elsewhere since in 2000 only 2,725 employed residents (43.3%) worked within the community out of 6,292 residents employed within the Old Colony Region according to US Census journey to work data. At the same time these 2,725 locally employed residents filled only 32.4% of the 8,398 jobs within in the town in 2000. The local workers are an even smaller proportion of the total of 12,846 Bridgewater residents employed somewhere (inside or outside of the region) in 2000, according to the Massachusetts Executive Office of Labor and Workforce Development (EOLWD). These figures reflect the large degree of commuting to and from other communities inside and outside of the region.

Since 2000 the total local labor force (employed and unemployed) has fluctuated slightly, and declined overall from 13,151 to 13,147. The unemployed population has risen significantly, going from a very low 2.3% in 2000 to an annual average of 5.1 % in 2008, and recently reaching 7.8% in February of 2009 according to the EOLWD.

The industry types found within the town are summarized in the table below, with by far the largest grouping being Educational Services, reflecting the Bridgewater State College. The largest single employers are the College, the Bridgewater Correctional Complex, Roach Bros Supermarkets, and the Burlington Coat Factory

The employment trends are like those throughout the state and region with declining manufacturing and agriculture and growing services, particularly in education, health care, finance and other services.

2007 Employment and Wages by Industry - Bridgewater

Industry	# Establishments	Average Employment	Average Weekly Wages
Construction	110	547	$932
Manufacturing	20	313	$876
Wholesale Trade	23	211	$1,071
Retail Trade	60	629	$463
Transportation and Warehousing	13	203	$633
Information	6	63	$963
Finance and Insurance	24	470	$1,310
Real Estate and Rental and Leasing	13	84	$812
Professional and Technical Services	42	184	$1,143
Administrative and Waste Services	27	81	$1,007
Education Services	13	2,145	$853
Health Care and Social Assistance	33	324	$734
Arts, Entertainment and Recreation	11	120	$259
Accommodation and Food Services	39	826	$276
Other Services, ex. Public Administration	89	350	$450
Total	544	7,757	$858

Source: Mass. Executive Office of Labor and Workforce Development

The implications of these changes for open space and recreation planning are unclear. More people working at a distance from home and at indoor "cubicle-bound" jobs, and fewer in farming, construction and other outdoor and physically active activities may increase demand for nearby hiking, camping or water sport activities. At the same time the in-migration of people from more urban communities to a perceived semi-rural one may increase demand for landscape preservation, for nearby active recreation resources for youth, and for nearby readily accessible opens space for things as simple as a walk in woods and fields after work.

Ethnicity

In ethnic terms, the 2000 population including the institutional population was 87.28% "white, non-hispanic," 4.04% African-American, 6.23% "some other race alone," (as opposed to mixed race) and 2.75% of Hispanic origin of any race, as shown below.

Bridgewater Population by Race/Ethnicity -2000

Total	White	African-American	Amerindian /Alaskan	Asian	Pacific Islanders	Other Race	Mixed Race	Hispanic Origin
25,185	21,982	1,017	59	271	5	1,669	282	693
100 %	87.3%	4.0%	.23%	1.1%	.02%	6.6%	1.12	2.8%

Source: US Census. Note: Census includes College and Correctional populations in group quarters

In terms of age patterns, the share of the town's population aged 15-24 (18.3%) is slightly larger than that in the whole OCPC region at 12.7%, while the proportion 65 and older, 8.7%, is smaller than the region's 11.36%.

Bridgewater Population by Age Range -2000

	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+
Bridgewater	6.2	6.7	6.4	8.6	9.7	14.9	18.0	13.5	4.5	2.8	4.7	3.1	.9
OCPC Region	6.86	7.47	7.54	6.97	5.8	13.91	17.24	14.06	5.15	3.56	5.78	4.07	1.51

Source: US Census, includes College and Correctional populations

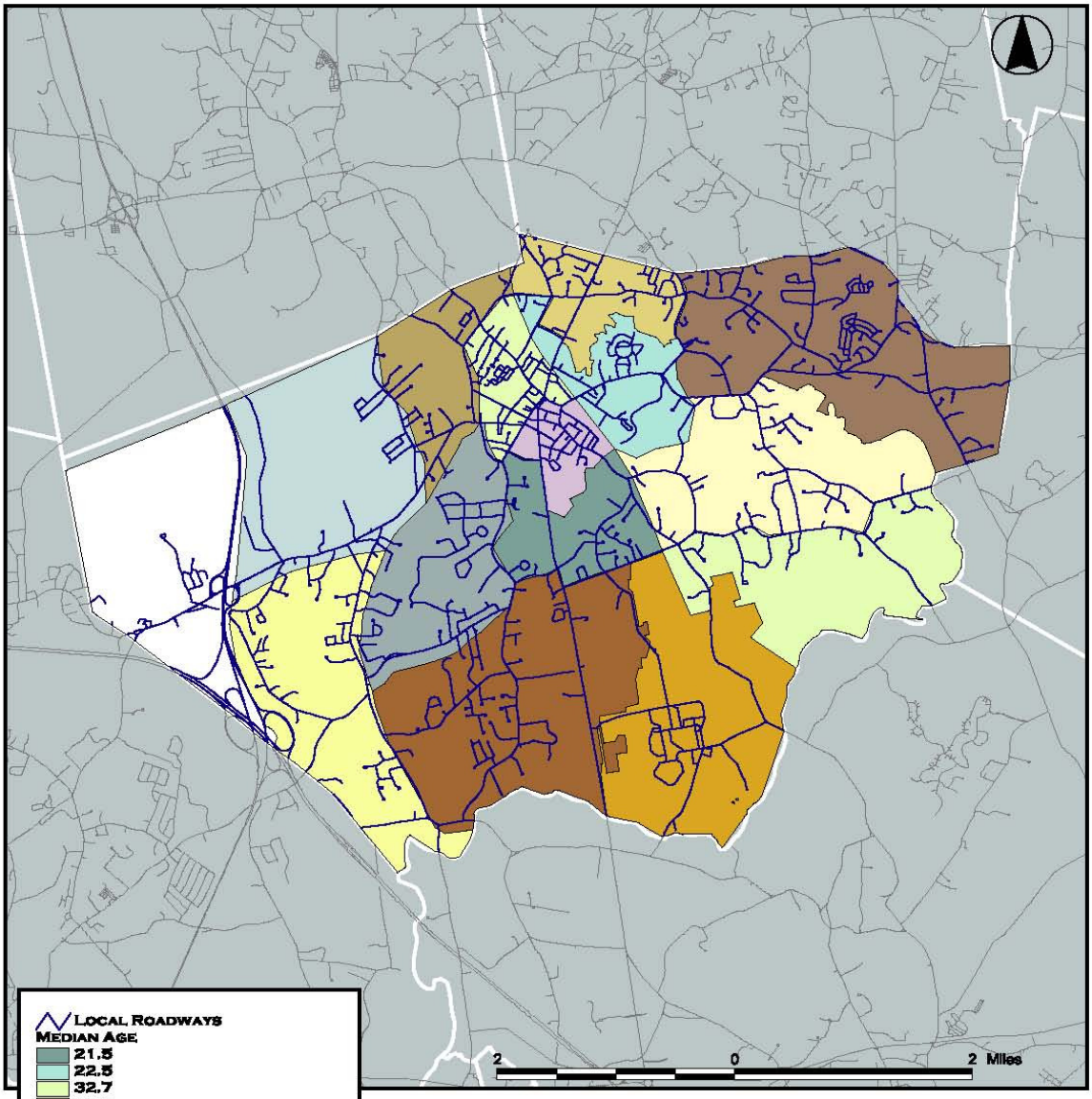
The following maps of social data by Census Tract (Figs. III-2, 3 and 4) show the local differences in age, ethnicity and income age across different portions of the town.

The median age is greatest, 36.4 years, in the tract (5253) which includes the Bridgewater Correctional Complex (BCC), and lowest, 30.9 years, in the northeast quadrant (Tract 5252).

The age data suggest a town-wide need for added athletic facilities, particularly playfields, noted by the Recreation Commission and discussed later. The relatively large 15-24 year old population presumably reflects the college and correctional populations. In turn the significance of this reflects the degree to which these populations use

MEDIAN AGE ~ BRIDGEWATER

FIGURE III-3

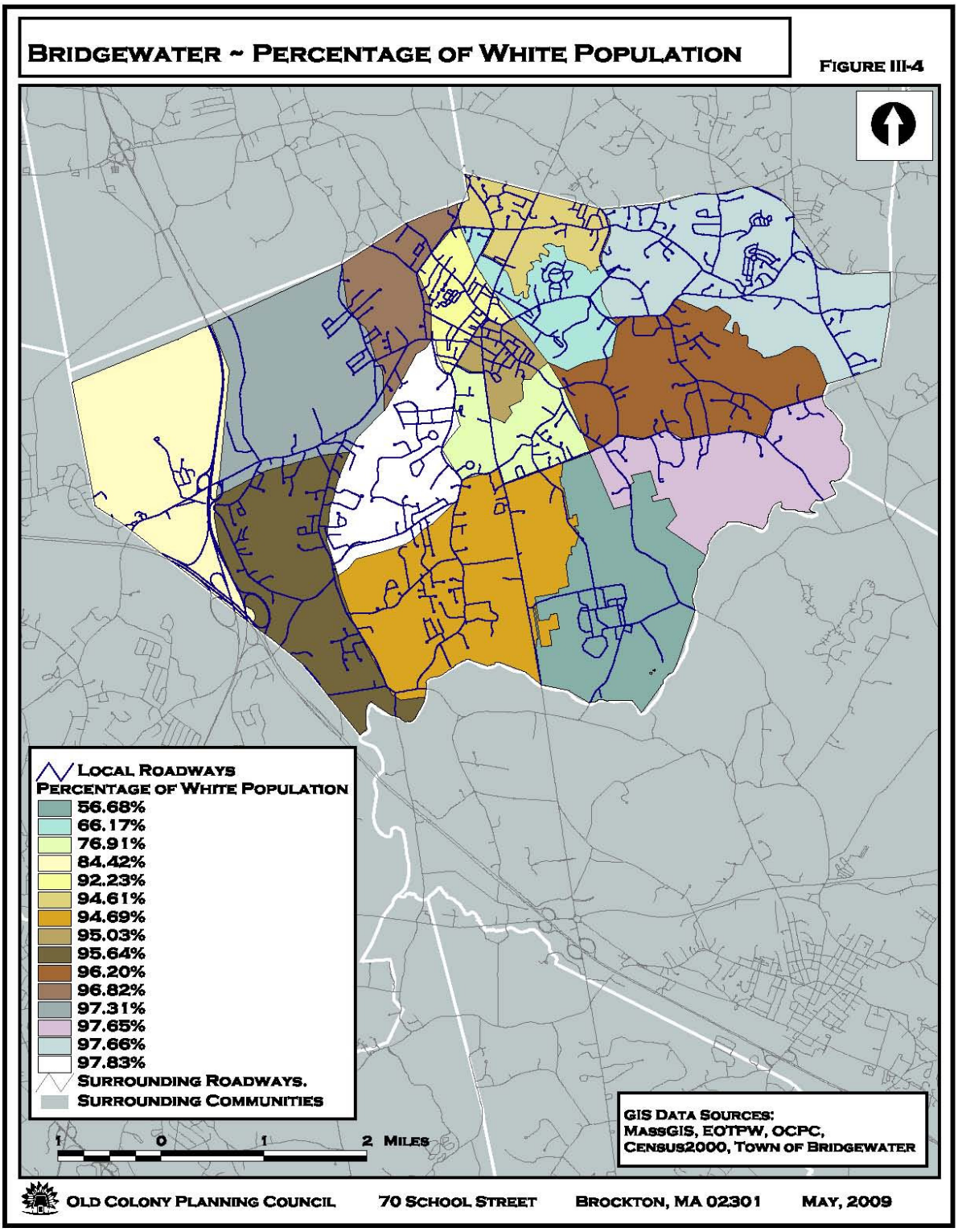


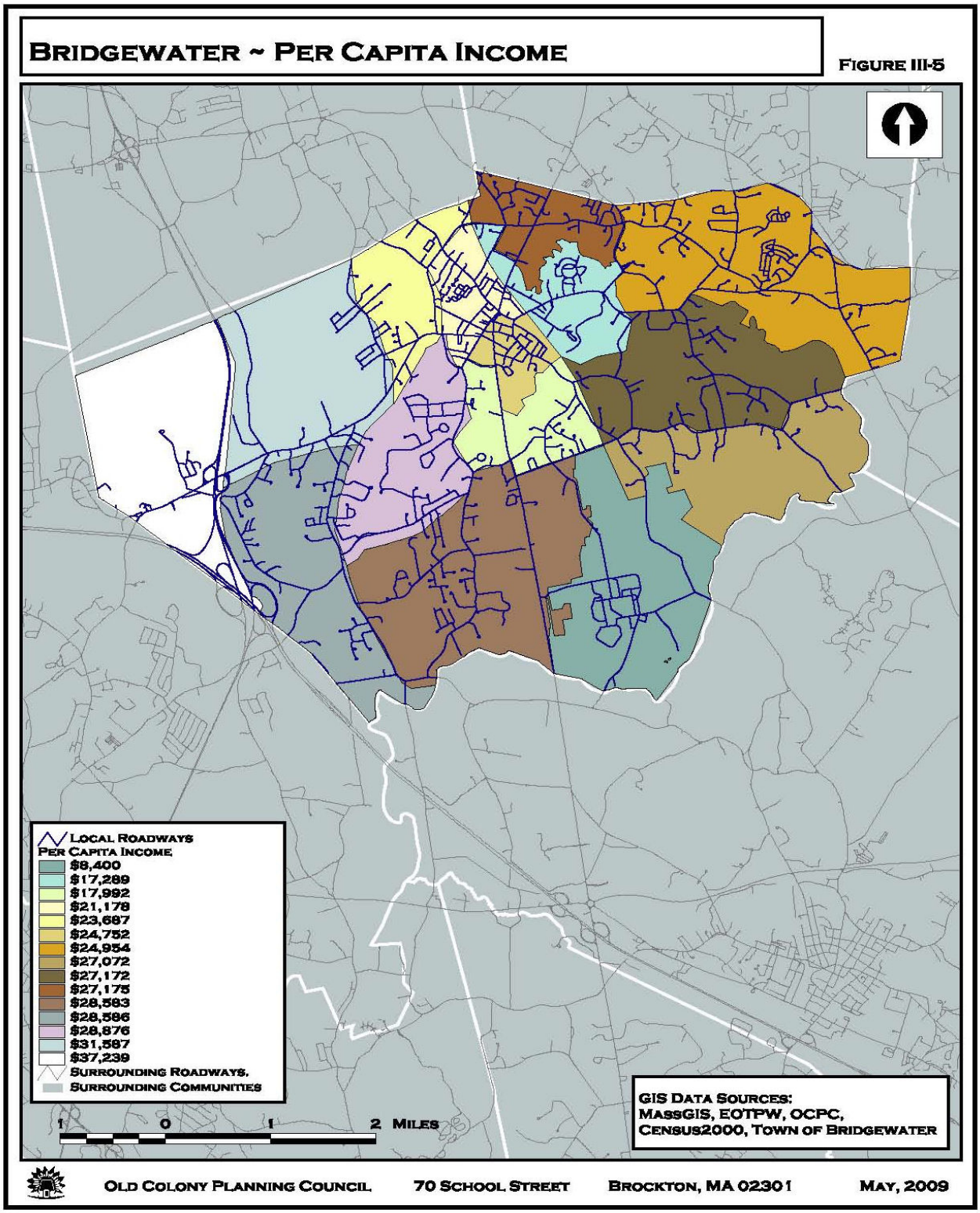
LOCAL ROADWAYS
MEDIAN AGE
21.5
22.5
32.7
33.6
34.7
35.1
36.4
36.6
37.2
37.6
37.7
37.8
39.1
40.4
SURROUNDING ROADWAYS.
SURROUNDING COMMUNITIES

OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET
BROCKTON, MA 02301

GIS DATA SOURCES:
MASSGIS, EOTPW, US CENSUS

MARCH, 2008


BRIDGEWATER ~ PERCENTAGE OF WHITE POPULATION
FIGURE III-4
LOCAL ROADWAYS
PERCENTAGE OF WHITE POPULATION
56.68%
66.17%
76.91%
84.42%
92.23%
94.61%
94.69%
95.03%
95.64%
96.20%
96.82%
97.31%
97.65%
97.66%
97.83%
SURROUNDING ROADWAYS.
SURROUNDING COMMUNITIES
1 0 1 2 MILES
GIS DATA SOURCES:
MASSGIS, EOTPW, OCPC,
CENSUS2000, TOWN OF BRIDGEWATER
OLD COLONY PLANNING COUNCIL 70 SCHOOL STREET BROCKTON, MA 02301 MAY, 2009

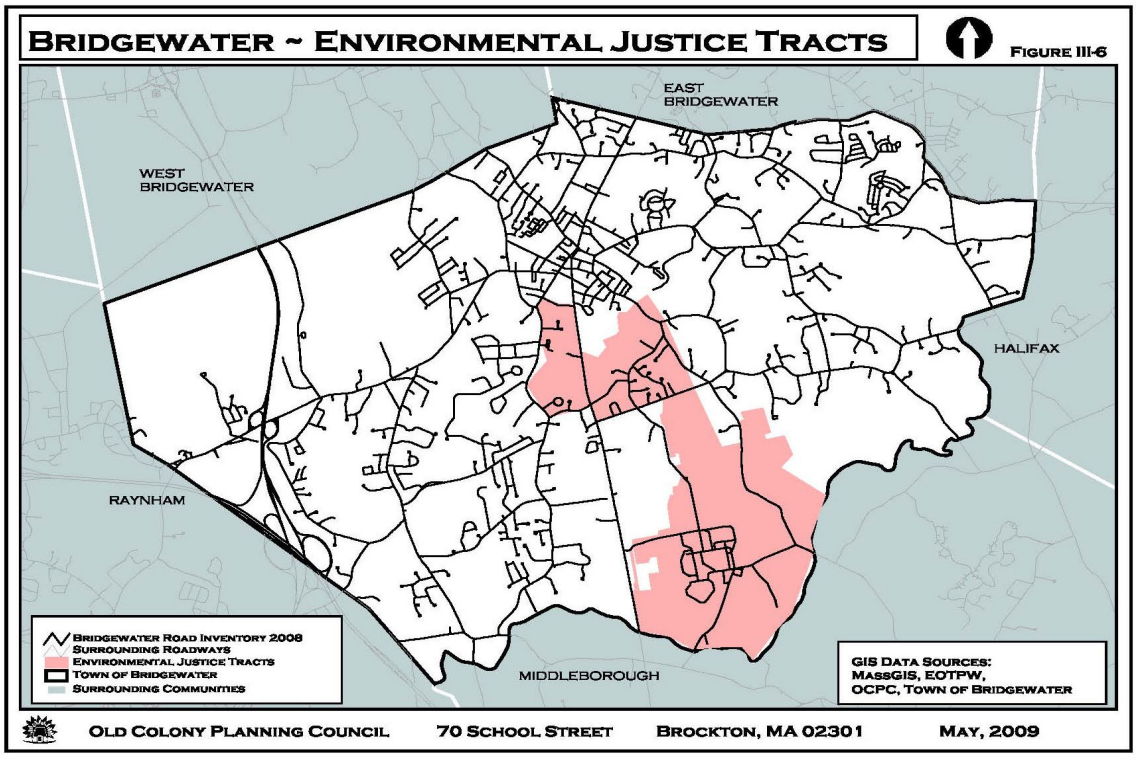

BRIDGEWATER ~ PER CAPITA INCOME
FIGURE III-5
LOCAL ROADWAYS
PER CAPITA INCOME
$8,400
$17,289
$17,992
$21,178
$23,687
$24,752
$24,954
$27,072
$27,172
$27,175
$28,583
$28,586
$28,876
$31,587
$37,239
SURROUNDING ROADWAYS.
SURROUNDING COMMUNITIES
1 0 1 2 MILES
GIS DATA SOURCES:
MASSGIS, EOTPW, OCPC,
CENSUS2000, TOWN OF BRIDGEWATER
OLD COLONY PLANNING COUNCIL 70 SCHOOL STREET BROCKTON, MA 02301 MAY, 2009

institutional rather than town facilities (presumably negligible for the BCC), and the extent to which other town residents use institutional facilities.

In all, the local/regional differences are too slight to determine facility locations and the overall distribution suggests with a continuing town-wide need for facilities and programs serving diverse needs, ages and abilities. Since people of all types are found in all parts of the community, these data are only broadly useful in sitting facilities for particular age or interest groups. The exceptions would be small neighborhood-scale, pedestrian-accessible facilities like tot lots and small playgrounds which should be well distributed throughout the town. Other town-wide facilities may a well be opportunity-driven, taking advantage of any unique sites.

Environmental Justice

The concept of environmental justice is that low income and minority communities should neither be subject to disproportionate hazards and negative impacts of development nor be denied proportionate access to public facilities, services and various amenities. The following map, "Bridgewater-Environmental Justice" reflects the previous maps of income and racial patterns in identifying the vulnerable sensitive "Environmental Justice Neighborhoods" in terms of census tracts. Most of the identified area is that housing the Bridgewater Correctional Complex (BCC) with the largest minority population (over 43%) and the lowest per capita incomes ($8,400). The rest of the neighborhood to the immediate north is the old central portion of the town with the third lowest incomes ($17,992), a high minority population (33%), and by far the lowest median age (21.5 years) reflecting a large student population in and near the Bridgewater State College.



As can be seen, the resulting mapped area is not a conventional Environmental Justice Neighborhood. None the less it is worth noting that the plan proposes no hazardous or environmentally degrading facilities. At the same a review of Figures V-1, Land of Open Space and Recreation Interest, and IX-1, the Five Year Action Program, show that the areas include or are near significant open space and recreation resources. In addition, they include or abut major proposals such as the enhanced riverside greenways and other protected land south of the BBC, the Legion Field recreation area, the nearby Hogg Farm/Crescent St. recreation area, and improvements to Carver's Pond in the heart of the northern end of the Neighborhood. Thus, both existing and proposed facilities respect concnerns with Environmental Justice.

D. Growth and Development

1. Land Use Patterns and Trends

The town's land uses are primarily residential and institutional with some remaining agriculture, and with concentrations of commercial uses in the center and along Routes 18 and 104, along with growing industrial and distribution uses on former farmland along Elm Street as can be seen on the following land use map. The Center is visually strong and accommodates town's main civic uses, but most commercial activity is along Route 18 with a concentration of older firms to the north and a growing number of scattered highway-oriented commercial and light industrial uses the south.

Other commercial and industrial activity including a new Home Depot store is in the western end of town along Route 104 in the Scotland area and east of Lake Nippenicket.

These developments include the Bridgewater Industrial Park northeast of the Route 24 interchange and the Scotland Industrial Park off of Pleasant St. These are generally remote from the flood plain in contrast to earlier water power-based industry in the Stanley area where the Town River enters Bridgewater, and at Paper Mill Village on Route 104, Plymouth Street just below the junction of the Town and Matfield Rivers where the Taunton River begins. Major institutional uses are Bridgewater State College just east of downtown on both sides of the railroad tracks, and the extensive Bridgewater Correctional Complex (ex Massachusetts Correctional Institution) in the south central (Titicut) portion of the town between Route 18 and the Taunton River.

The observations in the 1984 Bridgewater Master Plan Update remain true; "Bridgewater's residential development continues to combine a compact medium density town center with a roughly radial pattern of frontage ("Form A") development along existing streets and a number of small subdivisions" Older moderate density neighborhoods are found around the Center and along the Rte. 28 corridor to the north. Elsewhere new neighborhoods with acre lots are found in peripheral areas, particularly in the western portions of town. The "2000 Population Density by Block Group" map in the 2007 Regional Transportation Plan shows the Center has having 5-10 people per acre (3200 to 6400 persons/square mile) while the rest of the town has 0-5 persons/acre.

This reflects the long- term concentration of development around the center including the town's two major apartment complexes and student housing as well as the effect of present lot sizes and zoning requirements (discussed below.) Only a scattering of lots around the center are under the 10,000 square foot minimum in the small CBD district and are grandfathered. The close-in R-C and R-D neighborhoods require at least 18,500 square feet and the rest of the community requires at least an acre (43,560 Square feet). As a result most new neighborhoods are being built at a density of one unit per acre or less. Thus, while the town-wide density is rising, as noted under Population Characteristics, the actual density of developed neighborhoods is falling

The continuing typically low-density suburban growth is consuming land and changing the community. As the recent Master Plan notes "Once an area of extensive agriculture and open spaces, Bridgewater has become one of the fastest growing residential communities in Massachusetts. This has led to a significant reduction in active farming …and over 1000 acres of open space lost within the last decade. "These trends suggest both protecting major open space to preserve town character and carefully designing neighborhood facilities to complement the large private yards – as discussed under Needs

Declining Farm Land

Approximately 11.98 % (2178.35 acres) of Bridgewater was farmed as of 1999. This is a decrease of 19.8% from the 2,717 acres of 1991, and a great drop from the 2,964 total acres in 1971 found by the MacConnell UMass Mass Map Down Project. (The numbers may not be directly comparable between the UMass data and the later Mass GIS data due to changing definitions.) The 1999 agricultural land consisted of 1,482 acres of cropland, 619 acres of pasture, and a relatively small 78 acres of orchards, nurseries and bogs. These agricultural areas and the acres of non-forested wetland make up the majority of the town's open vistas. In addition the extensive land under Chapters 61, 61A and 61B (discussed later and mapped in Chapter V) gives the town opportunities to preserve some of this land if it comes up for sale and a change of use.

Hanson Farm, Pleasant Street Photo by Laura Campbell

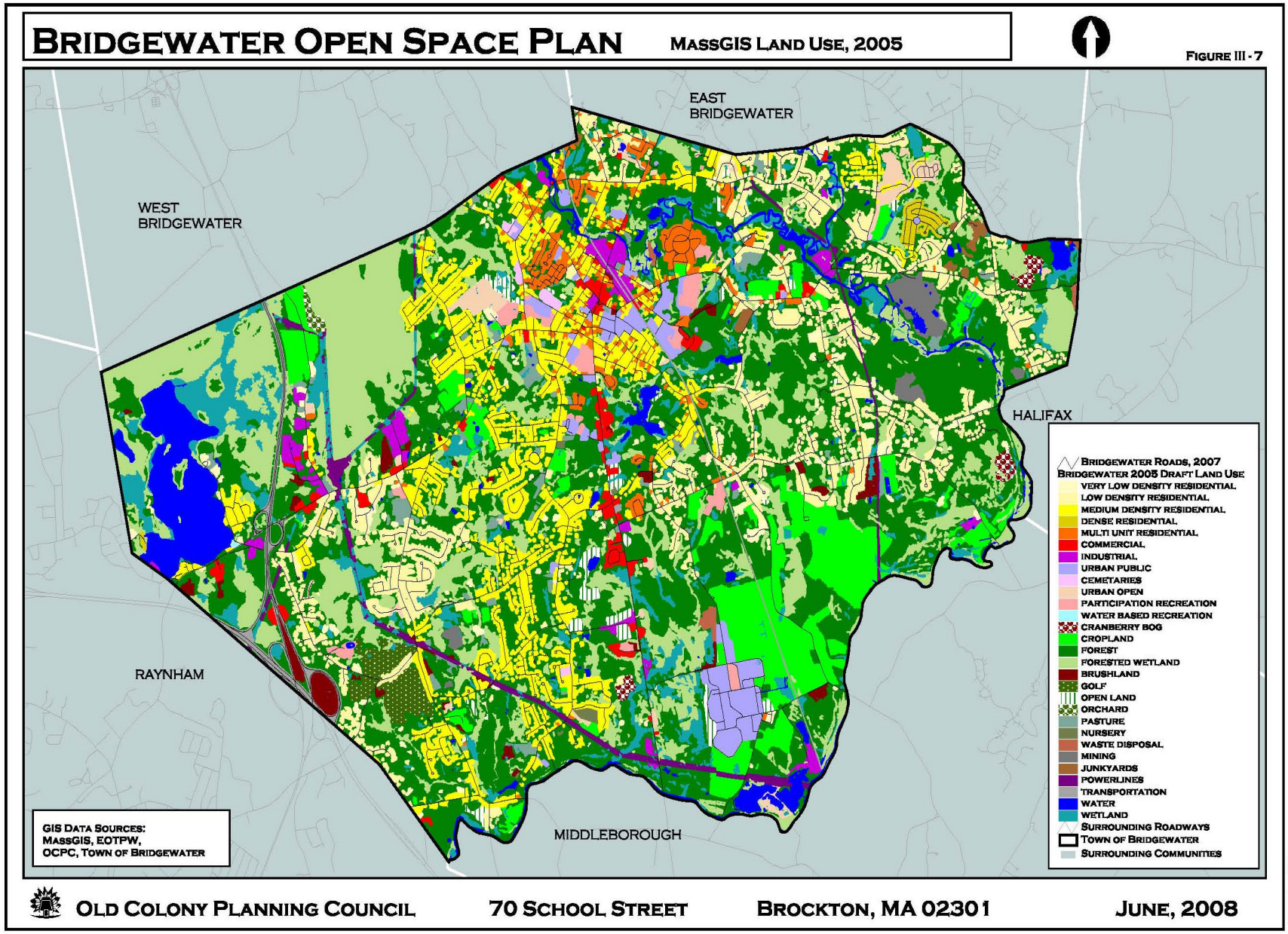
Above: Haying at the W.H. Murray Farm in 1947. Below: Haying there in 2008
Photos by the Peter Murray Family
n

As of 2005 the town's surviving farms were those below. All but those with asterisks (*) were in the Ch. 61A program (mapped in Chapter V). As of 2008 more were gone.

2005		2008
Hanson's Farm	Pleasant and North Streets	Active
Cumberland Farm Parcel *	Elm Street	Inactive, sports dev. pending
Cumberland Farm Parcel *	Curve Street	Inactive
Leach's Land	South Street	Partly developed
Lehtola Farm	Auburn St.	Active-hay Non-profit acquisition under negotiation
Pawlowski Farm	Swift Avenue	New High School, some vacant fields
Murray's Farm	North Street	Active
Old State Farm	Summer and Flagg Streets	Privately farmed under five-year leases
Cherry Street (Perkins)	Cherry Street	Cluster Development with a CR pending

The 1999 distribution of these uses according to the Massachusetts GIS follows.

Cropland	1,483
Pasture	619
Orchard, Nursery, or Cranberry bog	78
Forest	8,155
Non-Forested wetlands, e,g. fresh marshes	459
Open Water	563
Mining, sand and gravel	132
Participant Recreation	307
Spectator Recreation	0
Beaches, Marinas	6
Low Density Residential	1,590
Medium Density Residential	2,802
High-density residential	98
Multi-family residential	153
Commercial	157
Industrial	195
Transportation	226
Waste Disposal	69
Urban Open	416
Open land	713
Total	**18,181**


BRIDGEWATER OPEN SPACE PLAN
MASSGIS LAND USE, 2005
FIGURE III - 7
EAST BRIDGEWATER
WEST BRIDGEWATER
HALIFAX
RAYNHAM
MIDDLEBOROUGH
BRIDGEWATER ROADS, 2007
BRIDGEWATER 2005 DRAFT LAND USE
VERY LOW DENSITY RESIDENTIAL
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
DENSE RESIDENTIAL
MULTI UNIT RESIDENTIAL
COMMERCIAL
INDUSTRIAL
URBAN PUBLIC
CEMETARIES
URBAN OPEN
PARTICIPATION RECREATION
WATER BASED RECREATION
CRANBERRY BOG
CROPLAND
FOREST
FORESTED WETLAND
BRUSHLAND
GOLF
OPEN LAND
ORCHARD
PASTURE
NURSERY
WASTE DISPOSAL
MINING
JUNKYARDS
POWERLINES
TRANSPORTATION
WATER
WETLAND
SURROUNDING ROADWAYS
TOWN OF BRIDGEWATER
SURROUNDING COMMUNITIES
GIS DATA SOURCES:
MASSGIS, EOTPW,
OCPC, TOWN OF BRIDGEWATER
OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET
BROCKTON, MA 02301
JUNE, 2008
FIGURE III - 7

2. Infrastructure

Transportation

Roadways

Bridgewater is on Rte.24, the major north-south limited access highway. This gives access to Fall River and New Bedford and Routes 44, I-495 and I-195 to the south; and to Route 128 and Greater Boston to the north. Local numbered routes serving the town are

- Route 28 running north-south through the town along with Route 18 and connecting to Brockton and on to Route 128 to the northwest
- The east-west Route 106 running west to Plainville and to Routes 1 and I-95, and east to Kingston and Route 3; and
- The east-west Route 104 running northeast to Halifax and south-west to Taunton. See Locus map above.

Rail

In addition Bridgewater has MBTA rail transit in the form of the restored Old Colony Commuter rail service running north through Brockton and Quincy to Boston, and south to Middleboro and Lakeville. It offers 12 round trips per day. The station as been moved from the original site at the edge of downtown off of Bedford street to a larger, but less central site in the College, between the west and west campuses. The MBTA is studying ways to restore service to the Fall River and New Bedford (the "South Coast"). One would use the present Middleborough/Lakeville route through Bridgewater, thereby increasing service.

Bus and Paratransit

The Brockton Area Transit system (BAT) offers school year service routed from the BSC campus along Route 28 to a transfer point serving the rest of the BAT system in the north end of Brockton.

Other service is that within the Bridgewater State College campus; the Bridgewater Council on Aging's paratransit service and the BAT system's Dial-A-BAT demand-responsive paratransit service also serving the elderly and disabled.

Bicycleways

A mapped bicycle route system, intended to offer safe recreational riding opportunities was proposed in the 1995 Open Space Plan. However, according to the Highway Department, it was never acted upon even to the extent of uniform route markers. The system would have included many major roads and scenic routes forming a series loops around and through scenic areas, and the through the northern section of the town as a whole. It included segments of the following streets: Forest, Beech, Conant, Summer, Winter, North, South, Laurel, Auburn, Walnut, High, Pond and East. The initial proposed system was aimed at recreational riding and by-passed downtown and the college.

However, the density of local streets in the center of town offers many unsigned routes to and through these destinations.

A subsequent proposed system served more potential destinations such as the Central Square and major recreation facilities and called for separate bike lanes along portions of the busiest streets (Bedford, Pleasant, and Hayward Streets) and a cross-country trail from Old Pleasant Street to Forest Street. These were proposed in the recent Master Plan but the Highway Department, which would implement most of these proposals, expects no action in the near future. The following map (Figure III-6) draws on the town maps of the two proposals and the references to "Bike Lanes" in addition to "Future Bike Lanes" as though they were existing, reflects those shown on the earlier maps.

Pedestrian ways

The town has a "fairly comprehensive sidewalk network, particularly in the Downtown/Central Square area" according to the town master plan. According to the Highway Department, sidewalks are provided on at least one side of most major roads except for the eastern portion of Plymouth Street and the southern portion of Summer Street. Sidewalk construction projects completed since 2000 are:

- South Street from Keith Place to Lyman Place
- Vernon Street from Cross St. to Maura Drive
- Forest Street from South Street to Woodland Drive
- Birch Street.
- Cottage Street
- Hayward Street
- North Street from Birch Street to Northfield Street:

Sidewalk projects planned for the next five years include:

- Summer Street from Laurel Street to Flagg Street/Auburn Street.
- North Street from Pleasant Street to Birch Street
- Forest Street from Woodland Drive to Vernon Street.

Sidewalk work expected after five years includes:
Old Pleasant Street and Pine Street

Bicycle / Pedestrian way Requirements

The town's zoning requires that the pedestrian circulation system include pathways providing direct routes between major buildings, parking areas and roads and a secondary walking system, and that it must allow movement through open spaces.

At the same time, the subdivision rules and regulations say that pedestrian ways or footpaths will normally be required to provide convenient circulation or access to schools, playgrounds, shopping, churches, transportation, parks and conservation areas with a 15-foot to 20-foot right-of-way. Properly designed, these can also serve as bicycle paths.

These standards need to be more clearly defined and enforced. They rarely are fully implemented because there is often is no path in the adjacent undeveloped land to which the required a path in a new subdivision can be connected. This might be solved by adopting a skeletal town-wide pedestrian /bikeway system which would connect major destinations and be binding on new development.

Water Supplies

Bridgewater's water supplies come from ground water in two aquifers. One is along the Matfield River with four wells south of High Street and east of the river and with two new wells south of Plymouth Street along the Taunton River on the Wyman Meadow land. The other aquifer is around Carver's Pond with four wells just south of the pond and an inactive well on the shore of the southern lobe of the pond.

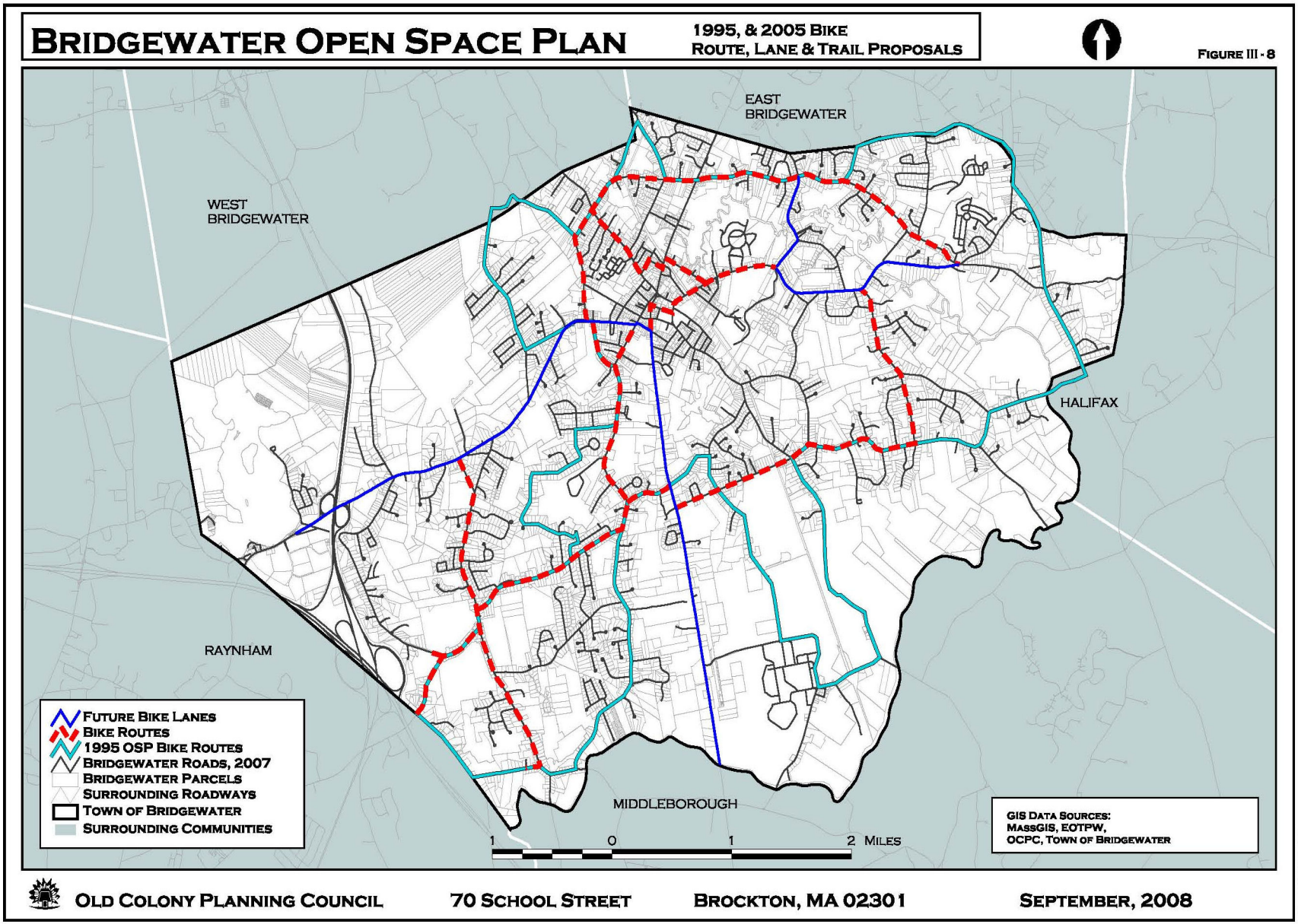
The Matfield River aquifer occupies the northeast corner of the town bracketing the Town and Matfield Rivers, while the Carver's Pond aquifer runs east and west of the Pond and then south, roughly west of Snow's Brook, to the Taunton River near the Middleboro line. These aquifers are indicated by the Zone II recharge areas shown on the Water Resources map in Chapter IV. These are the recharge areas tapped during a six-month drought.

The supplies are protected by ownership of land around the wells and by the town's Aquifer Protection District zoning discussed below. This district is mapped over the Zone II areas shown on the Water Resources map.

Water from the Carver's Pond Aquifer is treated for removal of iron and manganese by a plant at the Carver's Pond Treatment Plant. The High Street wells along the Matfield River were formerly treated for nitrates, but the plant has been closed since nitrate levels dropped following changes in upstream land uses, particularly altered dairy farm operations.

Consumption has risen over the past 17 years, going from a total of 515,847,049 gallons per year (1.41 Million Gallons /Day [MGD]) in 1995 to 612,088,304 gallons per year (1.68 MGD) in 2000, and on to 629,971,419 gallons per year (1.73 MGD) in 2007. At the same time consumption per capita has dropped from 80.4 gallons/capita/day (80.4 g/c/d) in 1995 to 73.9 g/c/d in 2000 and down to 64.24 g/c/d in 2007. This is even lower than the state guideline of 65 g/c/d.

The Water Department has been concerned about meeting long-term supply needs. It recently acquired land and developed two new wells at Wyman Meadow. These went into service in 2006 and are producing 500,000 gallons/day (.5MGD). This gives the system a total safe yield of 2.4 MGD.


BRIDGEWATER OPEN SPACE PLAN
1995, & 2005 BIKE ROUTE, LANE & TRAIL PROPOSALS
FIGURE III - 8
EAST BRIDGEWATER
WEST BRIDGEWATER
HALIFAX
RAYNHAM
MIDDLEBOROUGH
FUTURE BIKE LANES
BIKE ROUTES
1995 OSP BIKE ROUTES
BRIDGEWATER ROADS, 2007
BRIDGEWATER PARCELS
SURROUNDING ROADWAYS
TOWN OF BRIDGEWATER
SURROUNDING COMMUNITIES
1 0 1 2 MILES
GIS DATA SOURCES:
MASSGIS, EOTPW,
OCPC, TOWN OF BRIDGEWATER
OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET
BROCKTON, MA 02301
SEPTEMBER, 2008
FIGURE III - 8

The department has also purchased land at Beech Street next to the Titicut Conservation Parkland for a possible added well. The department reports that the site has turned out to be less productive than expected and the department does not expect to use it.

For distribution, water is stored in two tanks, one on Great Hill holding 990,000 gallons and one on Sprague's Hill to the north holding 4,000,000 gallons. Together these give 2 days storage based on the recent maximum day's consumption of 2.2 MGD and 2.9 days storage based on 2007 average consumption of 1.73 MGD.

The 1913 Matfield River Pumping Station

Modern pumping station on the east side of the Matfield River

The Water Department continues to explore other options such as bedrock wells and alterative sources. These do not include use of the extensive supplies in Lake Nippenicket because of their very high level of iron. Nippenicket reportedly is Wampanoag for "Lake of Red Water."

With the recent increase in safe yields and its continuing efforts to expand supplies the Water Department does not expect water supply to be a significant constraint on development for the foreseeable future.

Protection The town's water supply is protected by the Groundwater Protection Zoning described below. This was adopted in 1988 and updated in 1994 in accord with Massachusetts Department of Environmental Protection Guidelines. Such protection is a concern shared with adjacent communities. Some of the wells serving East Bridgewater and Middleborough are close to Bridgewater and two wells serving Raynham are next to Lake Nippenickett. The Zone II primary recharge areas for East Bridgewater and Bridgewater overlap near the Matfield River. A small portion of East Bridgewater's Aquifer District just east of Bridgewater's Stump Pond, and extensive areas of Raynham's Aquifer District, west and south of Lake Nippenicket, are included in Bridgewater's mapped Groundwater Protection District.

Sewers / Septic System Feasibility

Soil limitations for on-site septic systems greatly influence the location and density of residential development. Areas mapped with severe limitations due to high water tables, rock, or impermeable soils (e.g. fragipan) are the most difficult to develop with such systems and steep slopes add to the limitations.

Maps in the1969 Plymouth County Soil Survey by US Soil Conservation Service show that such restricted lands cover as much as 45% of the community, running north-south in irregular bands, covering extensive areas northwest of the Correctional Complex, northeast of Lake Nippenicket, southeast of Bridgewater State College, and along much of the Town and Taunton Rivers and South Brook, over the State Forest, and east of Vernon Street. (Since these data are not available digitally, this report includes the more generalized map of Soil Units. See Figure IV-1.)

Development without sewers will be constrained in these areas, but generally possible, particularly at the low densities required in Bridgewater. Some health agents note that except in clear wetlands, engineers can often find enough porous soil to site an approvable system. The result is that most severely-restricted soils are able to accommodate up to three quarters of the development otherwise allowed, though system maintenance may be a problem. Thus septic limitations do not predict development potential so much as of future maintenance problems. In addition, more recent Innovative and Alternative on-site sewage treatment systems can reduce the needed depth to the water table, or other dimensional requirements, along with the required percolation rates, making previously marginal sites useable.

None-the less, sewering has a major impact in removing consideration of soil suitability for disposal systems. This makes development more likely and increases feasible densities. Thus, the soil maps still can suggest priorities for protection among comparable sites in presently un-sewered areas.

Bridgewater's present advanced wastewater treatment plant has a capacity to treat 1.44 MGD. It currently receives flows of 800,000 to 900,000 gallons a day fluctuating with the seasonal flows from the college, and up to 1.2 MGD during wet weather. This wet weather flows reflect problems with infiltration and inflow (I/I) which the department is treating through inspection, repair and a mandatory 3:1 I/I removal requirement for major new sewer connection. The system discharges treated effluent to the Town River at the treatment plant site off of Morris Avenue.

The present sewer system serves the heart of the community around the town center, the College and some recently added outlying areas including the Elm Street and Scotland Park industrial areas, the office/retail complex south of Lake Nippenicket, (located over a portion of Raynham's aquifer). It also serves the Mobile Home Elderly Community at the former Wyman's Farm; along with some blocks on along North Street, the upper portion of South Street, Laurel Street and Hayward Street, and Whitman Street.

A number of extensions are planned to meet present or anticipated local water quality problems from failing septic systems rather than to protect the aquifer recharge areas as such. Thus some are proposed for areas over the aquifer like the Fox Hill/Pleasant Drive area west of Carver's Pond while others are only at the edge of an aquifer. At the same time some land over aquifers has no service since septic systems continue to function adequately. The department notes that there is not sufficient capacity to serve all areas presently proposed for service.

Figure III-9 shows the present service area and potential extensions.

3. Long Term Development Patterns

The present development pattern shown on the land use map is expected to continue but with more growth in peripheral areas. This includes commercial expansion along major arterials and near the Route 24 interchange; institutional expansion around the BSC and to a lesser extent the BCC; and residential growth along existing roads and in new subdivisions largely in outlying neighborhoods. New approval-not-required (ANR) housing along existing roads will continue to wall off views while preserving backland, while many new subdivisions will consume much of the remaining open upland in close-in neighborhoods. Some residential growth many continue on an infill or replacement basis near the center with its sewers, access to commuter rail, and downtown amenities.

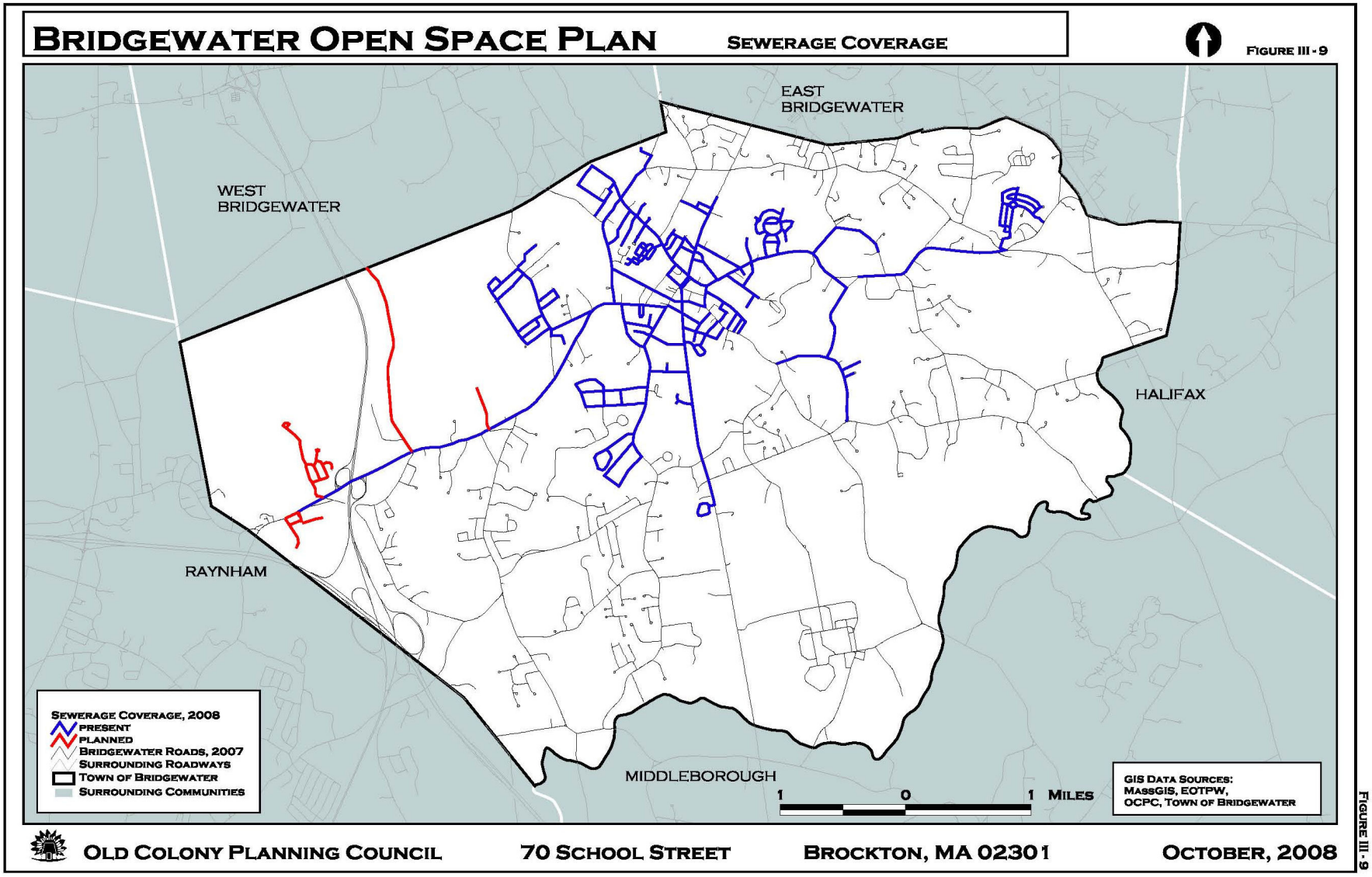
Farm land will continue to be lost to development except where economically very sound or protected. (Even some of that shown on the 2005 Land Use map (Leach, Pawlowski,

Two crops competing for land; houses and milk/hay Photo by the Peter Murray Family

Wyman and Cumberland farms) has since gone at least partly into housing or school construction, or is out of production pending proposed development

It is notable that the remaining farmland, forest or recreation land in current use taxation (under Chapters 61, 61A and 61B) is split between major holdings along the Taunton River or the Hockomock Swamp and scattered, smaller holdings next to or between growing neighborhoods. Some of the latter may be the more important for preserving the character and setting of these neighborhoods, while the riverside land may be important for maintaining present or potential agriculture. The major inactive approximately 200-acre Cumberland Farms holdings between Curve Street and the Taunton River also has approximately 2,400 feet of river frontage. They are not under Chapter 61A, thus any protective actions would have to be at local initiative since the town would not be notified of any first refusal rights before a change in use.

Bridgewater's growth and development will continue to reflect responses to land resources and market opportunities roughly guided by public policy reflected in the Zoning Bylaw and to a lesser extent, by the Subdivision Rules and Regulations; and by infrastructure investments and open space/agricultural protection programs. The Zoning Bylaw is discussed below.


BRIDGEWATER OPEN SPACE PLAN
SEWERAGE COVERAGE
FIGURE III - 9
EAST BRIDGEWATER
WEST BRIDGEWATER
HALIFAX
RAYNHAM
MIDDLEBOROUGH
SEWERAGE COVERAGE, 2008
PRESENT
PLANNED
BRIDGEWATER ROADS, 2007
SURROUNDING ROADWAYS
TOWN OF BRIDGEWATER
SURROUNDING COMMUNITIES
1 0 1 MILES
GIS DATA SOURCES:
MASSGIS, EOTPW,
OCPC, TOWN OF BRIDGEWATER
OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET
BROCKTON, MA 02301
OCTOBER, 2008
FIGURE III - 9

Zoning/Local Protective Provisions

Bridgewater's Zoning requires house lots of 43,560 square feet (one acre) in the Residential A/B District, and one acre per unit in the Planned Development (PD) district, along with 18,500 square feet in the Residential C and D Districts, and 10,000 square feet in the very small Central Business District (CBD).

The Residential C and D districts allow two family or duplex h++ouses as-of-right while the CBD district allows them by special permit. No districts continue to allow multi-family housing except for the Waterford Village Chapter 40R Smart Growth Overlay District.

Higher densities are allowed in the form of "lots" of 7,000 square feet in the Mobile Home Elderly Community District, but in combination with preservation of 20% of the parcel as open space. In addition the zoning allows densities of up to 22.5 units/acre in the Waterford Village Ch.40R Overlay District.

The Central Business District covers the small commercial and higher density residential heart of the town, while the moderate-density Residential D District covers the largely sewered area around the downtown, and the comparable Residential C District is just beyond that, as shown on the Zoning map. The lowest density R-A/B District covers most of the undeveloped parts of the town while the PD District covers the area south of Lake Nippenicket, ensuring that most future residential development will be at densities one acre or less.

The overall residential zoning pattern is basically concentric, with the highest densities in the center and the lowest in the outskirts. The commercial zoning (B-B, SBD, CBD and BOD discussed below) is in the center, along Route 18 and in small selective outlying portions of Pleasant Street and Plymouth Street along Route 104. The Industrial districts are largely in planned or existing industrial areas along Route 24 and in scattered pockets reflecting existing uses.

Descriptions

<u>The Planned Development District</u>
This district mapped just south of Lake Nippenicket allows mixed industrial/commercial/institutional/residential parks by Special Permit in "order to achieve mixed significant revenue or employment benefits without adverse impacts on their neighborhoods or on the Town's natural resources." It requires tracts of at least 10 acres and individual building sites of at least five acres except for house lots which must meet the one-acre requirement and other standards of the R-A/B District.

The guidelines require a 200-foot screening buffer next to most public ways. At the same time building heights and massing are to be compatible with views from adjacent ways

while building materials blend with the setting or complement it. Thus the development should not visually affect Lake Nippenickett.

While the maximum 25% lot coverage will leave much land open, there are no requirements that it blend into any adjacent open space. Similarly, the pedestrian circulation system requires access to all parts of the development and through any open space areas, but does not require connections to surrounding developments or neighborhoods. The allowed houses on acre lots do not leave as much completely open land as would townhouses or apartments at such a density.

In practice developers seeking the required special permits have proposed setting aside connected land areas for rare species such as certain turtles.

Mobile Home Elderly Community District

This mapped district allows communities of mobile homes (actually large one-story modular houses, not readily-moved trailers) for persons 55 years old or older. The parcels must have at least 50 acres (75% upland) with virtual lots of 7,000 square feet, 90-foot natural buffers against any public way, and preservation of 20% of the site as open space. The provisions do not specify the relationship of the preserved land to development or any open space in surrounding neighborhoods, but this might be dealt with through the required special permit. The District is mapped over much of the former Wyman Farm but does not affect the Wyman Meadow holdings.

Open Space Community Development

These provisions aim to protect "the most significant natural or scenic features" of a site that would otherwise be vulnerable to development. They require a Special Permit from the Planning Board and may be applied in any R-A/B, R-C or R-D residential district.

This cluster bylaw requires a minimum of 15 acres in the R-A/B District and 10 acres in the R-C and R-D Districts, and is limited to the number of units allowed in a conventional development (except that there may be 25% more units in an Adult Retirement Village variation). Lots may be reduced to half normal size with the saved land (at least 35% of the total) going to protected common open space. The land may be held by a community association, a non-profit open space organization or the town, but if it is agricultural land it may retained by the owners for continued farming subject to sale of the development rights (as with an Agricultural Preservation Restriction). This can help to preserve working farm land at the cost of usable neighborhood open space.

The design is intended to approximate a village with houses facing the street, backing onto protected open space and focusing on a central open space. "Whenever feasible land along public ways shall be included within an open space community and be largely preserved in their natural state or be appropriately landscaped." The approach's benefits can be extended if the preserved open land abuts the town's protected open space thereby extending the effect and benefits of each and giving residents direct access to public open space and allowing citizens access to the project's protected land.

Gateway Business District

This is mapped over former Industrial 1-A and Residential-A/B land on Route104 from Elm Street to Prospect Street. This allows office uses including creation of new space subject to site plan review design guidelines intended to protect the architectural and historic character of the area. These include visual and sound buffers against adjacent residential properties, sign restrictions, visually acceptable parking layouts, and low-impact parking design. Though mapped as a basic district with no other districts shown below it, it is referred to as "the overlay district" in Section 3.34.6**.**

Elm Street Industrial District Overlay

The town has also mapped extensive farmland along Elm Street land for limited office, commercial, and industrial uses (excluding housing) just east of Route 24, and over present Industrial - A Zoning. It is shown on the zoning map as "EOD" (Economic Opportunity District) and is the area the town has proposed as a Priority Development Site under Chapter 43D's Expedited Permitting program. However that program only requires designating Priority Development Areas within which permitting decisions must be made within180 days, not creating an actual zoning district.

Waterford Village Smart Growth Overlay District (WVSGOD)

This district supports a proposed Ch. 40R rental residential project on "Substantially Developed" and "New Development" sub-districts requiring densities of 20 and 22.5 units/acre respectively. The sub-districts include the present developed land and adjacent land fronting on the Town River. Varied commercial uses are allowed on the land near Route 104. The housing may include altered, extended, reconstructed or expanded existing development with buildings of up to 70 feet high and a minimum lot area/dwelling of 1000 square feet.

The projects are nominally allowed as as-of-right subject to very detailed guidelines and approval by a Plan Approval Authority (PAA), in this case the Planning Board. The PAA may disapprove a plan for basic omissions, failure to meet the District's standards, or the impossibility of adequately mitigating adverse impacts.

The high density allowed may make it possible to preserve much land along the Town River and interested bodies should participate actively in the project review.

Business-B

This district, mapped along Route 18 from just south of Flagg Street to Cottage Street requires 10,000 square foot lots, requires special permits for most residential uses, and allows most commercial uses, excluding only space-consuming or hazardous uses such as convention centers, large-scale laundries/dry cleaners, bottling plants, trucking terminals, open storage and uses "detrimental to the health, safety and welfare of the public".

South Business District

This district, mapped along Route. 18 south of Flagg Street, aims to accommodate major uses. It requires lots of 40,000 square feet, prohibits or requires special permits for most

residential issues, allows most commercial uses as-of-right or by special permit including convention centers, bottling plants, and trucking terminals. In order to reduce impacts on Route 18 it requires the 40,000 sq. ft. only for lots getting access from Route 18 and allows 10,000 sq. ft. lots along streets "approved under the Subdivision Control Law," i.e., on back land.

Central Business District

The CBD District is mapped over the area north and east of the Common /Central Square. (However it is no longer mapped over the heart of downtown around the Square itself, as it was on the Zoning Map updated through January 1998. That area is now mapped R-D requiring 18,500 sq .ft. lots and excluding most commercial uses.)

The CBD District requires only 10,000 square-foot lots and may reduce area, frontage and yard requirements by special permit from the Planning Board where consistent with adopted downtown land use plans and guidelines. Therefore it could allow traditional 0-lot line development close to the street. The District allows some residential uses by special permit, but excludes multi-family buildings. It allows most office or commercial uses as-of-right or by special permit, but excludes veterinarians, outdoor storage or automotive or marine uses, laundries, printers and publishers and various space-consumers like trucking terminals, and contractors' yards, and uses "detrimental to the health, safety and welfare of the public". Thus it excludes uses which would rarely be in a downtown along with some like publishers which could fit well.

Since a compact, varied downtown can reduce overall land consumption and complement nearby open space, the R-D and CBD districts' boundaries and use regulations merit reconsideration.

Bedford Street (TDR) Overlay District (BSOD)

The BSOD is mapped just west of the southern portion of the B-B District thereby roughly doubling the depth of commercial zoning at that point with the intent to "facilitate the expansion of a commercial node along Bedford Street, enabling high quality commercial development at the location while minimizing adverse impacts on natural resources, in particular the groundwater resources in the [nearby] Aquifer Protection District." It would do this partly through the use of Transferable Development Rights.

Uses allowed in the B-B District require Special Permits. The sending area must be in the R-C District land surrounding the BSOD mapped land. The amount sent must equal the development site plus any proposed impervious area exceeding half of the "receiving" development site and must be protected by a conservation restriction or transference of the deed to the Conservation Commission; and the project must not have detrimental affects on the groundwater or the neighborhood.

The available land is largely Ch. 61A farmland east of South Street. These provisions offer an opportunity to preserve farmland or at least open space in the center of a largely

developed area. They reportedly have been used to allow at last one intensified development on Route 18.

Environmental Protection Provisions

The Aquifer Protection District

Like most such provisions, Bridgewater's Aquifer Protection District is mapped over the town's main aquifers and over land (Zones I, II and III) significantly recharging the aquifer. It then prohibits or tightly regulates uses potentially contaminating the aquifer and requires special permits for dams, paved areas or other uses affecting storm water management and recharge, and sets standards for storm water management systems.

The District is mapped extensively over the sensitive areas, particularly in the northeastern section of the town, the area around the southern portion of Carver Pond, and a north-south in a strip west of Routes18/28. In addition, East Bridgewater's comparable district covers a small area east of Stump Pond, and the Raynham district covers much of area south of Lake Nippenicket to the Raynham line. These provisions provide much protection, but ownership is the greatest protection so being in the District should be an added factor supporting acquisition.

Local Wetlands Protection Bylaw Article XXXIII

In addition to its Aquifer Protection Zoning bylaw, the town has a non-zoning local wetlands protection bylaw. Such bylaws can regulate current activities as well as proposed activities regulated by zoning, and can go further than the Wetlands Protection Act (Ch.131, S. 40). Thus the bylaw can prohibit alterations within 100 feet of a wetland while the Act requires filing a Notice Intent to work within 100 feet of a wetland but can only regulate work within the resource area or directly affecting it. In addition, the bylaw may include protection of resources and values (e.g. aesthetics, recreation, and agricultural values) not covered under the Act. Further, decisions under the bylaw can be appealed only to Superior Court, while decisions under the Act may be appealed to the Department of Environmental Protection.

Flood Plain District

The Flood Plain (overlay) District is to prevent residential use of land that floods seasonally or periodically, to protect and maintain the water table, and to ensure proper function of water courses to provide "adequate and safe floodwater storage capacity."

The District covers areas mapped as Zone A, A1-30 on the FEMA Flood Insurance Rate Maps and Flood Boundary and Floodway Maps. The Board of Appeals may allow development in the mapped flood plain if it can be done safely without causing problems elsewhere (e.g. by taking up needed flood storage and endangering downstream uses, or conversely, blocking flow and causing flooding upstream).

In addition to the zoning changes noted above, the Planning Board has upgraded its Rules and Regulations for drainage design in compliance with DEP's Best Management Practices.

Buildout Implications

The Year 2000 Buildout Analysis sponsored by the state's Executive Office of Environmental Affairs sought to determine how much growth the town could experience given present land use patterns and zoning regulations. The process excluded land that was permanently protected against development, wetlands or land subject to the Rivers Protection Act, but did not reduce potential development according to sewer or water capacity or soil limitations for septic systems. It did make some adjustments for development constrains such as land ownership patterns and access to roadways.

The Analysis found 8,382 potentially developable acres accommodating 7,610 housing units and 19,538 new residents - a significant 72.9% increase - including 3,517 added school children. There was also the potential for an additional 31,165,899 square feet of commercial/industrial space.

The combined potential residential and commercials/industrial space would demand 3.55 MGD additional gallons of water - far beyond the system's present capacities. The housing alone would demand 1.3 MGD. However not every one is on town water and many houses, especially in outlying areas, could rely on private well. This theoretical potential growth would also involve 76 miles of added roadways.

Such growth, region-wide or in the town, is unlikely since it assumes use of all available land and an infinite regional demand for housing and commercial space. On the other hand it also reflects relatively restrictive zoning. With densities like the 20+ units/acre allowed with the Waterford Village Smart Growth Overlay district or even the 4+ units/acre with the MHEC district, far more people could be housed on less land. In addition, Bridgewater's many locational advantages and attractions could attract more new residents than in many communities despite current budget problems.

In any case, such a buildout would drastically change the character of the community by filling all buildable land with development. On the aesthetic and town character side this would convert Bridgewater to a totally built-up suburb and leaving only presently protected lands and severe wetlands as relief.

On the ecological side the extensive paving accompanying such a build-out would increase runoff and stream flashiness, lessening recharge and depressing water tables unless most development is done as Low Impact Development (LID). This would feature a maximum of recharge and integration of vegetation into stormwater management.

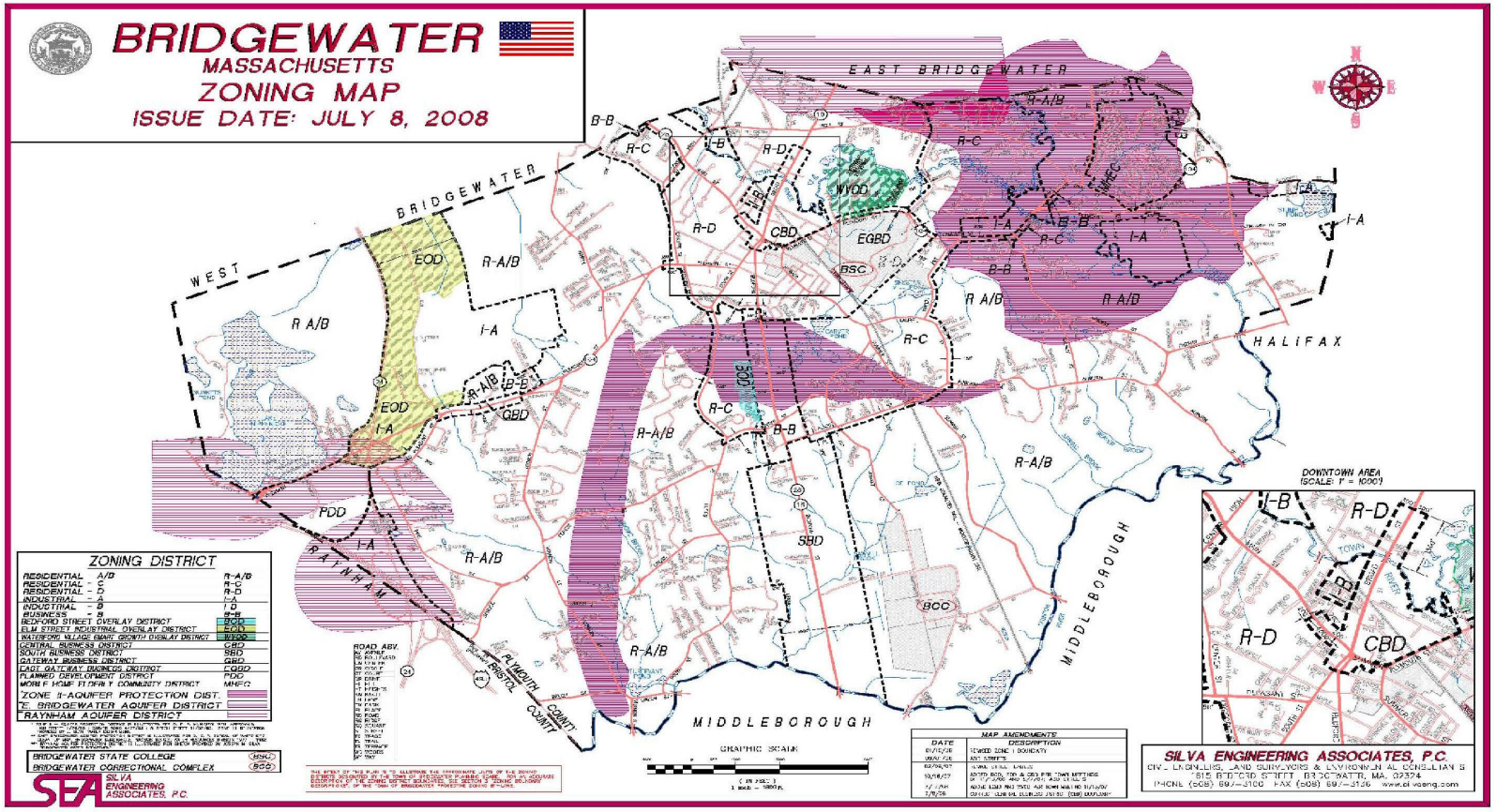
The theoretical build-out would also increase water consumption, particularly if homeowners seek to water lawns all summer despite present prohibitions. Beyond this

the blanketing of the landscape with housing and businesses would break up areas of contiguous forest or rare grasslands wildlife habitat. In addition the probable prevalence of predatory pets (cats, dogs…) would greatly suppress the remaining wildlife. In addition, the presently required low-density development would increase local trips and with them increase fuel consumption and air quality impacts and add to the global warming effects of greater carbon dioxide emissions.

These remote prospects or even more probable lesser growth make it important to identify sites and systems of holdings needed to create an ideal open space system, or at least an achievable one, and to proceed to accomplish it.

BRIDGEWATER OPEN SPACE PLAN ZONING

FIGURE III - 10



OLD COLONY PLANNING COUNCIL 70 SCHOOL STREET BROCKTON, MA 02301 MAY, 2009