
Open Space and Recreation Plan for the Town of Hamilton

Hamilton Open Space Working Group
Hamilton Conservation Commission
Hamilton, Massachusetts
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SECTION 1

PLAN SUMMARY

The Hamilton Open Space Plan is founded on the idea that what defines the town to most of its residents is that, although it functions as a residential suburb to Boston and the North Shore and Route 128 urbanized area, it maintains a rural feeling, offers rural recreation opportunities, and much of its land seems unspoiled. Maintaining all these desired features in the face of continuing development pressure poses many challenges that call for continuing attention to an open space and recreation strategy. This theme dominated the 1965 Master Plan for Hamilton by the reknowned planner Charles Eliot, and the 1982 Open Space and Recreation Plan this document updates.

The preparation of this plan involved:

- Distributing town-wide questionnaires and public meetings, which validated the idea that town residents perceive and treasure this rural feel, and determined what they consider it important to accomplish in promoting open space and recreation opportunities;
- Documenting an updated inventory of open space resources and special natural features of the town;
- Analyzing the challenges to maintaining these values as development pressure continues.

The five-year action plan to identifies and evaluates priorities of actions to promote the open space goals identified, particularly getting real, durable protection for some valued open spaces like the Gordon College lands west of Beck Pond and the Hamilton ski hill. We take these lands for granted; but in fact they are very vulnerable to residential development.

SECTION 2

INTRODUCTION

A Statement of Purpose

Hamilton is extremely fortunate in the quantity and quality of its remaining natural resource areas and open spaces; but this good fortune cannot be counted on to continue without an appropriate and continuous level of attention on the part of citizens, reflected in the policy and actions of town boards and private conservation organizations.

This report was prepared to review and evaluate the town's Master Plan and its 1982 Open Space and Recreation Plan, and to update their goals and policies.

B Planning Process and Public Participation

The Hamilton 1997 Open Space Plan was developed by an informal group of citizen volunteers. The initial impetus for the project was from members of the Conservation Commission who found that members of the Planning Board, Board of Health, other town boards, and the Hamilton-Wenham Open Land Trust shared their concern that the town had not gone through a comprehensive review of its Open Space policies since the 1982 Open Space Plan.

A questionnaire was prepared and distributed to town residents in conjunction with the 1994 Town Meeting and elections. The results of these public opinion surveys were discussed in a televised public meeting, and volunteers were solicited to research and write the plan.

We were fortunate that upwards of a dozen hardworking volunteers have stayed with the research and writing team that met in meetings open to the public at Town Hall at least once a month through the summer of 1994 and the winter of 1994-95. The volunteers have included people closely associated with the Planning Board, the Board of Health, the Recreation Committee, the Conservation Commission, the Hamilton-Wenham Open Land Trust, the Essex County Trails Association, the Two Town Walking Club, and individuals who worked on the 1982 Plan and the Bay Circuit Guide to Walks in Hamilton and Wenham. Members of the Open Space Committee interviewed the Park Superintendent, Recreation Director and members of the Recreation Committee to determine further needs of the Recreation Department.

The research and writing of this open space plan were done by Hamilton residents, some of whom are professional land use planners. The end result is a plan that sets the tone for future open space planning and also is a natural resources educational and planning tool.

The format of this plan conforms to the specifications set forth by the Commonwealth of Massachusetts Division of Conservation Services.

SECTION 3

COMMUNITY

SETTING

A Regional Context

(1). General Physical Location

Hamilton is located in Boston's North Shore region in Essex County, Massachusetts. The Ipswich River forms the northern boundary between Hamilton and the Town of Ipswich. Hamilton is bordered by Essex to the east, Wenham to the south and Topsfield to the west, with Manchester touching the southeast corner of Town. See "Location map of Hamilton", in the map section.

The center of Hamilton is 24 miles by road from the State House in Boston. Routes 128 and I-95, important commuter highways in the Boston metropolitan region, are located a few miles from Hamilton's borders. The Ipswich line of the commuter rail system connects South Hamilton with Beverly, Salem, and Boston. Beverly Airport is convenient for recreational flying and corporate aircraft. Proximity to transportation corridors, scenic amenities and a reputation for fine schools have made Hamilton an attractive "bedroom community" for professionals working in Boston, Beverly, Salem, and Route 128 technical and industrial firms.

Though sections of Hamilton possess suburban characteristics, it would be inaccurate to classify Hamilton as merely another Boston suburb. The handsome Historic District and several large tracts of forest and agricultural lands contribute to Hamilton's retaining a "small town" New England feeling. Some of these open lands are protected from development by conservation restrictions or by inclusion in State Parks or nature preserves owned by environmental organizations. However much of the Town's remaining open land is technically developable should current private owners decide to sell.

Though Hamilton has its own municipal water supply system, the quality of Town water can be affected by the actions of nearby towns and Hamilton, in turn, can impact the systems of neighboring communities. The active Town wells are located in Wenham Swamp. Because Beverly and Wenham also draw water from Wenham Swamp, cooperation with these neighbors is needed. Gravelly and Round Ponds and portions of their watersheds, located in the southeast corner of Hamilton, are owned by Manchester for its municipal supply.

The North Shore's trails, lakes, beaches and marinas afford many opportunities for high quality outdoor recreation. Hamilton residents can make use of ocean beaches and mari-

nas outside of Town borders. Hamilton’s trail system is a recreational resource of immense value to horseback riders, hikers, cross-country skiers and mountain bikers. Many of these trails connect and pass through large undeveloped tracts of land that are wholly or partially located within the boundaries of neighboring towns. The Massachusetts Audubon Society’s Ipswich River Wildlife Sanctuary, located primarily in Topsfield and Wenham, extends into Hamilton. Bradley Palmer State Park is composed of Hamilton and Topsfield woodlands, wetlands, and meadows. Many of the Grass Rides (The Trustees of Reservations) trails overlook Ipswich’s scenic Appleton Farm. Chebacco Lake, a scenic and boating resource lies within Hamilton and Essex. Finally, the network of trails connecting Gordon College and the ponds and lakes in southeastern Hamilton cross back and forth between Hamilton and Wenham, has a total length of more than 100 miles.

The Ipswich River which separates Hamilton from its neighbor, Ipswich offers historical (the location of the old mill site), recreational (canoeing, swimming and fishing) as well as natural (animal, plant and fish habitat) value. Other local waterways of interest are the Wenham Swamp and Wenham Lake. While the plentiful freshwater supply undoubtedly aided the farmers in Hamilton’s early history, the development of the town as a recreational area was dependent on the existence of these ponds. Today the ponds and streams remain an integral part of the scenic quality which draws people to the area.

(2). Resources Shared With Neighboring Towns

Natural resource areas, and particularly water resources, are no respecters of town boundaries, so although this document is centered on Hamilton, it is evident throughout how much our resources and open spaces interact with those of neighboring towns, and in the case of the Ipswich River, even faraway towns.

The Ipswich River is about 35 miles long and the watershed cover about 155 square miles extending from the Wilmington-Reading area inland to the sea at Ipswich. The surface and groundwater resources of the basin are intensively used for public water supply (see Figure 0-1, “Towns Drawing Municipal Water From Ipswich River basin,” on page 3-2).

TABLE 0-1.

Towns Drawing Municipal Water From Ipswich River basin

Beverly
Danvers
Hamilton
Lynn
Middleton
North Reading
Peabody
Reading
Salem
Topsfield
Wenham
Wilmington

Chebacco Lake is a key recreation and water resource for Essex as well as Hamilton. Manchester owns and uses water resources in Hamilton. Hamilton, Wenham, and Topsfield all have parts of the Great Wenham Swamp wetlands system within their boundaries. Clearly, resource and recreation planning for our town must be to a great extent regional planning as well.

Hamilton shares many active and passive municipal resources with other North Shore communities. At Patton Park, 15.5 acres of open space located on Route 1A close to the library and business center of town, the following activities are used by both Hamilton residents and its out-of-town visitors.

- Regulation baseball diamond (Youth Leagues, man's softball, senior league baseball, girl's softball, women's softball, and intertown baseball)
- Little League diamond
- Horseshoe pit (multitown tournaments)
- Swimming pool (multitown meets)

Other Patton Park facilities that are used by others include the small children's play area, the skating pond, the picnic area (which has grills and benches), the physical fitness course, the basketball court, and the tennis courts. Lastly, children of all ages come from all over to climb aboard the famous olive-drab Patton tank that sits in the middle of the Park.

At the recreation center, located at the old junior high school, programs in the gym for Hamilton and Wenham residents of all ages include youth basketball, gymnastics, beano, badminton, senior citizens aerobics, and adult volleyball. The playing fields are used for Little League, football, and soccer (league play).

Summer concerts at the new bandstand are open to all.

Note: these facilities and activities, though shared, are funded entirely by the town.

Bradley Palmer State Park is an important regional recreation and open space resource that is partially in Hamilton. Likewise the Ipswich River Wildlife Sanctuary crosses town lines and serves a much wider regional population. These tracts and many others are crossed by trails, including a section of the Bay Circuit trail system, which connect and serve a number of towns.

The management of the multi-town network of riding trails is largely undertaken by the Essex Country Trail Association, which has been existence for over a decade. It has more than four hundred members and maintains trails on public and private land in the towns of Essex, Ipswich, Topsfield and Hamilton. The Association publishes a newsletter informing members of rules, regulations, and trail "etiquette", communicating owner's wishes regarding use of their trails (as, for example, prohibitions on dogs, bikes, walkers). Members are issued badges for identification. Most boarding barns and the Myopia Hunt Club require their people to join, and membership is regarded as a bargain for the privilege of the use of the land. The Trail Association is concerned with the preservation of trails and connecting links, but follows a policy of not acquiring property or easements, urging landowners to make any such arrangements with Essex

County Greenbelt Association, Hamilton-Wenham Open Land Trust, conservation commissions and similar groups. The Trails Association takes the responsibility for maintaining the trails.

The interests of walkers and hikers are served by the Two-Town (Hamilton and Wenham) Walking Club, which organizes numerous events in Hamilton open space areas. These events are attended by walkers from a wide regional network of clubs, and participates along with the Hamilton Conservation Commission, the Essex County Trails Association, the Hamilton-Wenham Open Land Trust and other open space interest groups in an annual National Trails Day event in Bradley Palmer State Park. Figure 3-2, “Discover Hamilton” trail, is a fine example of a Hamilton trail.

(3). Socio-Economic Context

Most adult residents (90%+) have graduated from high school and 40% have achieved a college diploma. A large percentage of employed persons (see Table 0-2 on page 3-4) are employed in professional/managerial positions (41%). Median family income increased from \$28,272 (1980) to \$55,101 (1990). Household characteristics reported: mostly families (80%), with children under 18 (40%), persons over 65 (23%) and a poverty level of 4 percent.

TABLE 0-2.

Employment

Employment	%
Professional/managerial	41%
Administrative support	25%
Service	11%
Operators/Fab/Laborers	7%
Self-employed	7%
Other	5%
Total number of employed persons	3,812

B History of the Community

The Town of Hamilton was settled by farmers who had tilled the fields to the south of Ipswich. Early settlers in Hamilton asked that their local church be “set off” from Ipswich due to the distance that the community in the “Hamlet” had to travel. The forty families within the town did not find enough room for them at the Wenham church located to the south and decided to build their own church in 1713. After the Revolutionary War, they petitioned to separate into their own community. Finally in 1793, Hamilton became a town. The farms were originally scattered along early roads.

By 1894, the railroad, (allowing easier access to information and traveling), the Industrial Revolution (encouraging the abandonment of rocky New England soils where

machines were of little help) and the separation of church and state (decreasing community spirit) had all changed the fabric of many New England towns, but Hamilton managed to maintain its agricultural base. The early maps indicate that an increased number of smaller farms were now aligning the roads. Many of these clustered farmsites also housed shoe shops which employed farm workers during the winter as well as full-time workers.

The town of Hamilton experienced the influence of industrial or mill life with the presence of the Willowdale Mill, located on the Ipswich River. When the factory closed, the population of the town decreased by 100 people. A few of the mill dwellings were relocated to Mill Street near the center of town. Many of the farmers who abandoned their farms probably gained employment through millwork and were able to keep their farmsteads. Due to the loss of employment opportunities with the closing of the mill, many finally abandoned their farms and moved to the industrial cities or to richer farmland in the West.

By 1850, Asbury Grove, a 100 acre religious retreat, included 300 cottages, a chapel, tabernacle, hotel, spur railroad station and post office. Many of the gingerbread style cottages were burned in the fire of 1927 and were never replaced.

While Asbury Grove was the first summer community to locate in Hamilton, Myopia Hunt Club was certainly the most significant. After the near-sighted brothers (hence the name) moved their club from Winchester in 1891, wealthy Victorians began purchasing declining agricultural land for their country estates and summer homes thereby preserving the rural quality of the area. Some moved the colonial homes back off the main street for privacy and added barns, pools and gardens. The land once cleared for farmland was now entering a stage of succession. Sixty years after the separation of church and state, the town hall was built in 1897 down and across the road from the First Church in the Historic District. The Wigglesworth Cemetery, located near the First Church and across the street from the town hall was dedicated as Central Park after the interred remains had been relocated to the Hamilton Cemetery. This park was later renamed Cutler Park.

The Myopia summer colony became interested in the town's welfare and erected a Community House which still remains on the corner of Bay Road and Asbury Street. The Hunt Club and the associated estates employed the townspeople as caretakers, farmhands, gardeners, chauffeurs, grooms, kennel men, butlers, cooks, maids, housekeepers and laundresses. The blacksmith who had been on the decline was now specializing in polo mallets. By 1911, the variety of non agricultural occupations far outweighed those of farmers. Carpenters, painters, paperhangers, masons, storekeepers, doctors, lawyers, animal brokers, milk dealers, horse trainers, florists, general contractors, railroad workers, and ice workers all worked in the town and clerks and leather workers commuted to other towns for work. Women were employed as laundresses, clerks in stores, teachers, milliners, dressmakers, artists, and bookkeepers.

The settlement of South Hamilton where the service workers lived, began about 1880. The square area between Union Street and Main Street to Linden Street and Asbury Street had been completely built up by 1910. While the estates maintained the agricultural rural quality perhaps with their pastures now in the front yard, the service worker

neighborhood developed into a series of blocks within blocks with similar houses for like-minded citizens.

A separate town center developed in this area where Bay Road crossed the railroad tracks. A fire burned through a portion of South Hamilton, destroying Dr. Cilly’s farm located on the land at the northwest corner of Asbury Street and Bay across from the Community House. The farm was never restored, but was purchased by Myopia and used as a schooling field for their polo ponies until it was donated to the town in 1941.

As country places became too expensive to maintain, they too began to disappear with the infiltration of commuter neighborhoods during the 1950’s. What little agricultural land was left also fell prey to development. These housing tracts retained the names of the once lovely areas they destroyed such as Harrigan’s Meadow. The farmhouses, which were at one time moved back from the street when the summer residents bought the farm-land for estates, are now surrounded by half-acre, one acre, and two-acre houselots. A shopping center with its large parking lot is located at the railroad tracks in the center of South Hamilton. Buildings along Railroad Avenue have been renovated and rebuilt in a more sensitive manner, considering not only human scale, but regional architecture and color. The historic district has remained true to its original character through restrictions.

A numeric snapshot of the land use changes in the last half-century can be seen in the summary figures for the University of Massachusetts “Map Down” analysis of aerial photographs. (Table 0-3 on page 3-6)

TABLE 0-3.

Land Use Changes 1951-1980 (University of Massachusetts “Map Down” Project)

LAND USE TYPE (acres)	1951	1971	1980
Forest Land	5946	5678	4239
Agricultural or Open Land	2161	1265	1150
Wetland	888	666	1910
Water	196	254	205
Urban Land	579	1804	1875

There are clearly some effects of changes in classification methods, but they do not obscure the strength of the shift from open land or farm land to residential development.

The existence of large estates has preserved the some of the visual quality of the town. However, many large estates continue to be subdivided without regard to the preservation of open space.

Although zoning to protect such features as scenic vistas, hilltops, and steep slopes has been promoted by planners over the years, there are serious legal questions regarding these applications of zoning. Therefore, they have not yet been applied in Hamilton.

C Population Characteristics

The composition and trend of population form the background for the analysis of the demand for recreational facilities, and the pressure to be expected for removing land from open space use to residential development

(1). Population Density

TABLE 0-4.

Population Growth 1950-1990

Year	Population
1950	2764
1960	5488
1970	6373
1980	6960
1990	7280

In 1990, with an area of about 15 square miles, the population reached 7,280 persons, about 54 percent of what the developable land area (near saturation) was estimated to be (13,591 persons in the last Long-Range Master Plan). Between 1950 and 1960, population doubled (98.6%) from 2,764 to 5,488 persons.

The age profile of the population is important in assessing the need for different kinds of recreational facilities, as well as for projecting future population trends.

Age Group	1970%	1980 %	1990 %
0-4	7.4	6.4	6.9
5-9	11.5	7.0	7.6
10-14	12.5	11.1	6.4
15-19	9.5	9.6	5.8
20-34	15.7	25.1	22.4
35-64	34.8	34.7	40.6
65+	8.6	8.1	10.7
Median age	29.0	30.0	35.6

The table above clearly indicates an “aging” population, suggesting increasing attention to forms of recreation that are enjoyed by older citizens, as well an increasing importance to providing for people with mobility limitations.

(2). Family Income

Median family income (1990) was \$49,167. This was 33.1% above the median for the state. By and large, incomes were earned by a married family couple (1,734 of 2,437 households). See Tables 0-5 through 0-8.

SECTION 3. COMMUNITY SETTING

TABLE 0-5. Households (1980-1990 US Census)

Year	Households	% change
1980	2,248	
1990	2,437	+8.4

TABLE 0-6. Household Size (1990 US Census)

2.86 persons per household

TABLE 0-7. Households by Type (1990 US Census)

Household Type	Households	%
Married Couple Family	1,734	71.2
Male Householder	41	1.7
Female Householder	185	7.6
Non-Family Household	477	19.6

TABLE 0-8. Income Distribution (1990 US Census)

Income range	Number	%
Less than \$5,000	46	1.9
\$5,000 - \$9,999	190	7.9
\$10,000 - \$24,999	350	14.4
\$25,000 - \$34,999	289	11.9
\$35,000 - \$49,999	378	15.5
\$50,000 - \$74,999	514	21.1
\$75,000 - \$99,999	312	12.8
\$100,000 or more	379	15.6

Median Household Income	\$49,167
State rank (of 351 towns)	72
% of state average	133.1%
Per Capita Income	\$21,269
State rank	61
% of state average	123.5%

SECTION 3. COMMUNITY SETTING

TABLE 0-9. Sources of Income (1990 US census)

Employment type	No. of households	Average Income
Wage & salary	2,085	\$55,086
Nonfarm self-employed	420	17,414
Farm self-employed	0	0
Social Security	610	8,893
Public assistance	108	4,343
Retirement	363	9,483
Interest	1,424	12,467
Other	253	5,588

TABLE 0-10. Poverty Status (1990 US census)

	Hamilton	Statewide
Persons for whom status determined	6,958	5,912,415
Below poverty level	288	19,339
%	4.1%	8.9%

TABLE 0-11. Industry Groups of Residents(1990 US Census)

Industry Group	Number
Agriculture	65
Mining	12
Construction	165
Manufacturing	468
Transportation & Communication	122
Wholesale & Retail Trade	701
Finance, Insurance & Real Estate	304
Government	100
Services	1,608
Total	3,545

(3). Industries

There are currently no industries in Hamilton.

(4). Employment trends

Since most residents are employed out of town, the employment trends are basically the same as those of the broader region. At the time of this writing, both long-term and short-term trends for the region have been reasonably favorable, and the town has not seen the bad effects of reduced industrial employment that have affected some other areas of Massachusetts. See Table 0-9 for statistics relevant to town residents.

D Growth and Development Patterns

The population of Hamilton more than doubled between 1940 and 1960. During this period the Town established a planning board and adopted its first zoning by-law in 1954. The greatest number of new dwellings per year added to the Town housing stock came in the years 1954 to 1957. Since 1957, growth has been quite orderly averaging 24 new homes per year with a few as 7 new dwellings one year and as many as 39 another. Almost all new construction in Hamilton is single family residences with accessory buildings. The fact that the Town relies totally on individual on-lot septic systems and that little change has occurred in the transportation system in the Town and surrounding area attribute to this development pattern. Hamilton is entirely dependent on groundwater for municipal supply. This is a very significant factor in the Town's conservation planning; one of the major priorities is to prevent contamination of the Town's aquifers by a combination of regulation and open space preservation.

A constant theme in Hamilton's development has been maintaining the rural character of the Town. New developments are required to have street trees and since 1990, utilities in new developments must be installed underground. The Town's adoption of pork chop zoning has added to development which preserves scenic vistas. A Groundwater Protection Overlay District based on mapping done to determine the Town aquifers has expanded lot sizes to 80,000 square feet in these sensitive land areas. Flexible Plan Developments on lots greater than ten acres are allowed by special permit. In exchange for deeded public open space, frontage and lot area requirements may be reduced. Most recently Hamilton established a Flood Plain District based on the Hamilton Flood Insurance Rate maps issued by the Federal Emergency Management Agency. Development within the district must comply with the requirements of the zone in which it lies. Approximately 2000 acres of Hamilton's total of 9389 acres are wetlands, ponds, or streams.

The single most outstanding issue affecting Hamilton's future development is what will happen with about a dozen properties. These parcels represent much of the developable land left in Hamilton.

TABLE 0-12.

Housing Units, 1990 US Census

Type	Number
single family housing units	2212
owner occupied units	1965

Type	Number
renter occupied units	472
median value, single family home	\$221,2000

TABLE 0-13. Building Permits for New Housing Units

Year	Building Permits
1990	7
1991	24
1992	30

(1). Patterns And Trends

Hamilton was settled in the 17th Century, while part of Ipswich, as an agricultural community. In the late 19th Century wealthy residents of Boston and other major cities began to acquire large parcels of land and created many beautiful country estates. As the region's transportation systems improved and the cost of maintaining the large properties rose, land began to be sold off for house lots. Hamilton started off on the road to becoming a commuter community.

This trend has intensified and gained acceleration over the past 50 years to the point where the towns status as a unique rural town is close to being lost. Until the mid 1960s cheap land, relatively low mortgage rates, and little or no environmental controls and other land use regulations led to the proliferation of relatively high density subdivisions, primarily in East Hamilton and South Hamilton. As the planning process matured and the legal tools began to become available, the resulting political climate for protecting the environment improved. Minimum lot sizes increased, and wetlands were aggressively protected. Also, state and local regulations pertaining to placement and design and construction of onsite waste disposal systems began to be tightened and more aggressively enforced.

Today, tracts of marginal land are still being developed, though at a drastically reduced rate. And this slower pace will continue as long as regulatory agencies, both state and local, are diligent.

The most significant new housing currently seems to be, typically, a \$500,000 colonial, having a 3 (or more) car garage, on a 2-acre lot. Examples of this type of subdivision are Farrington Lane off Gardner Street and Autumn Lane, formerly part of the Clark property, on Sagamore and Moulton Streets. Some properties have changed hands for approximately \$1,000,000. Infill housing, house lots squeezed in randomly, are being built all over Hamilton. Current construction on Highland Street and the large house on Woodbury Street opposite Gordon-Conwell Theological Seminary are good examples of this phenomenon.

As with the more mature, densely developed bedroom communities closer to Boston such as Melrose and Winchester, the future will bring developments of small pockets of

land here and there all over town. These single lots and small subdividable parcels are forgotten by most, except for those ambitious developers who will continue to ferret them out for many, many years to come. Plus, large tracts of estate land and probably religious/educational land will undoubtedly continue to come on the market. There is no doubt about that. Given the price of land (building lot prices, even on marginal land, start about \$100,000) the task of preserving the unique rural quality of Hamilton is a formidable one.

Details regarding what is in store for Hamilton, assuming maximum buildout, are described in Section 3D(3) of this open space and recreation plan. The options are clear: let the full development option play out unrestrained, or make an attempt to preserve some of the open land that is left. We urge the town to preserve something of what remains for the enjoyment of those generations to come.

(2). Infrastructure

a Transportation System

By far, the largest volume of traffic in and through Hamilton is through the following primary routes.

Bay Road--Route 1A - follows the line of the ancient Kings Highway connecting the earliest settlements of Boston, Salem, Beverly and Ipswich. From Exit 20 on Route 128 in North Beverly, Route 1A is the main road for traffic across Hamilton to and from Ipswich, Rowley and Newbury as well as for access to Crane Beach.

Highland Street in Hamilton, with Arbor Street in Wenham and Mill Street in Ipswich, provides a second primary route across Hamilton from Route 1A at Wenham Center to Topsfield Road in Ipswich. This route avoids the congestion at South Hamilton and the grade crossing with the railroad, and there are fewer developed properties along the way than along Route 1A. A major entrance to Bradley Palmer State Park is located on Highland Street.

Essex Street--Route 22, now serves traffic between Route 128 and Essex, across North Beverly, East Wenham and East Hamilton. It is a winding route with sharp corners in Wenham and gradually winds through Hamilton. In Hamilton, Route 22 follows Woodbury Street, which is a direct extension of Rubbly Road, to a right angle turn into Essex Street at the "Four Corners", and then uses Essex Street to the Essex Line. Just off Essex Street are reservations owned by the Hamilton-Wenham Open Land Trust, Chebacco Lake, a boating and swimming resource, plus many East Hamilton trails.

b Water Supply System

The Town of Hamilton presently obtains water from four production wells as described below (descriptions based on Five Town Water Study, see References). Note that all wells are located within town bounds and are in the Ipswich River Basin.

SITE DESCRIPTION

The Idlewood Wellfield is located near Pine Tree Drive in Hamilton, on a small peninsula of land which extends approximately 1,300 feet into the Wenham Swamp. The wellfield is located east of the Idlewood Brook. Idlewood Brook originates at the outlet of Pleasant Pond located on the Hamilton/Wenham town line, about 700 feet south of the Caisson Well. The brook discharges into the Ipswich River, approximately 4,700 feet northwest of Idlewood Well No. 1.

The existing Idlewood Wellfield consists of three wells (Idlewood Well No. 1, Idlewood Well No. 2, and the Caisson Well), each housing its own control and fluoridation facilities. The Caisson Well began operation in June, 1964 and the Idlewood Well No. 1 came on-line in 1974. Idlewood Well No. 2, constructed in 1989, is located approximately 1,000 feet east of these two wells.

There are three other wells located near the Idlewood Wellfield which draw water from the same aquifer. The Patton Well in Hamilton is located about 5,200 feet north of Idlewood Well No. 1 on the northern edge of the Wenham Swamp and began operation in 1957. The Pleasant Pond Wellfield (Well Nos. 1 and 2), which is owned and operated by the Town of Wenham, is situated approximately 2,800 feet south of the Caisson Well along the southern edge of Pleasant Pond in Wenham. Well No. 1 was installed in 1953 and Well No. 2 in 1958.

PRODUCTION WELL DESCRIPTIONS AND OPERATING HISTORY

The following section provides a detailed description of the production wells.

Idlewood Wellfield

Caisson Well. The Caisson Well is the most southern well in the Idlewood Wellfield. The well was installed in 1964 by Caisson Wells, Inc. The well is 100 inches in diameter, 39 feet deep, and has 3 feet of 84" diameter screen. The well utilizes a vertical turbine pump with a capacity of 500 gpm (0.72 mgd). Flow from the well is measured by a meter with a capacity of 1,200 gpm. The original specific capacity of the well was 170 gpm/ft. In 1990, the well was redeveloped to a specific capacity of 100 gpm/ft.

Idlewood Well No. 1. Idlewood Well No. 1 is a 48 x 24-inch diameter, 48 foot deep gravel-pack well with a 10 foot screen. The well is equipped with a vertical turbine pump having a capacity of 500 gpm (0.72 mgd). Flow from the well is measured by a meter with a capacity of 1,000 gpm. A twelve day pumping test was conducted at this location in 1973 using an 8 inch test well and five observation wells (Hoyle, Tanner and Associates, Inc., 1973). In 1980, a performance test by Layne New England Co. determined that the well was operating with a specific capacity of 54 gpm/ft. at 460 gpm.

Idlewood Well No. 2. Idlewood Well No. 2 is located approximately 1,000 feet east of Idlewood Well No. 1. It was constructed as a 30 x 24-inch diameter gravel-packed well, 45 feet deep with a 10-foot screen. Control facilities and chemical addition equipment are housed at the Idlewood Well No. 1 pumping station.

The well operates with a specific capacity of 35.9 gpm/ft. at 400 gpm.

Patton Well. The Patton Well is located along the northern edge of the Wenham Swamp. Installed in 1957, the well is 24 inches in diameter and 41 feet deep with a 10-foot screen. The well uses a vertical turbine pump with a capacity of 200 gpm (0.29 mgd). Flow from the well is measured by a meter with a capacity of 350 gpm. There is not a well log nor pumping test data available for the Patton Well. Redevelopment of the well in 1980 indicated a specific capacity of 23 gpm/ft.

c Sewage Disposal Systems

There are no municipal sewers in Hamilton. With the exception of Gordon-Conwell Theological Seminary, which has its own collection and package treatment plant, Hamilton depends entirely on individual lot disposal of sanitary wastes.

On balance, onsite disposal is working well—even in the small lots of the densely populated downtown area. This area is underlain by coarse red sand that provides excellent percolation. Some of the commercial establishments also have holding tanks. However, the Board of Health in 1994 called the attention of the Board of Selectmen to the lack of available space for additional systems in the downtown business area, saying that this was an acute problem for any redevelopment plans.

The principal area of concern is Chebacco Lake in East Hamilton, where shoreline onsite systems are old, undersized and prone to failure and have degraded the quality of the lake by adding pollutants such as human waste, plus greywater having such components as detergents and other chemicals.

Evidence of degraded quality is seen in the proliferation of algal blooms and Cabomba weed, which has made the lake a marginal swimming area. Also the weed growth has prevented anadromous fish (alewives) from migrating upstream from the Essex River to spawn in the lake. The lake is shared by both Hamilton and Essex, which must address the problem

(3). Long-term Planning Patterns

a Zoning

Hamilton zoning districts. Hamilton has four zoning districts and two overlay districts. All of the aquifer area in Hamilton is zoned residential, comprising a total of 3,322 acres (see Table 0-14).

TABLE 0-14.

Hamilton Zoning Summary

Zone	Area (acres)	% of Area	Minimum lot size
R1a	1,434	41.2	under 40,000
R1b	583	16.8	40,000 and above
RA	1,305	37.5	80,000 and over

Zone	Area (acres)	% of Area	Minimum lot size
Water	157	4.5	
Total	3,479	100.0	

Residential District. The residential districts, R1a, R1b and Residence-agriculture cover 100% of the aquifer area. The uses permitted by these districts are single family dwellings, rooming houses of four persons, churches, schools, parks, playgrounds, private colleges, tennis, skiing, golf and home occupations provided there is no offensive noises, storage of materials or more than two employees.

Business District. The Business District in Hamilton allows for all uses permitted in Residence 1a and 1b as well as retail stores, service establishments, offices and banks, government buildings, parking lots and garages. The small business district located in Hamilton is found outside the Water Supply area.

Hamilton Overlay Protection Districts

Conservancy District. The Conservancy District or wetlands district overlays parts of the three residential districts and the business district and is designed to conserve natural conditions, wildlife, and open spaces for the education, recreation and general welfare of the public. Permitted uses are passive recreation, agriculture, forestry, religious and educational uses. Uses prohibited in the district are land filling, buildings, pavement, storage of materials, dams, drainage and water course changes, and alteration of terrain.

Groundwater Protection Overlay District. The purpose of the groundwater protection district is to protect, preserve and maintain the existing and potential groundwater supply, groundwater recharge areas, and municipal wellfields within Hamilton. In this district new underground installations of heating oil storage tanks and farm or residential tanks less than 1,100 gallons storing motor oil/fuel are prohibited. Lots must be equal to or greater than 80,000 square feet in area. This district covers the town's two aquifers defined by hydrogeologic studies, but it does not cover portions of the water study area related to the Gravelly Pond, Round Pond, and Essex River watersheds.

Hamilton Flexible Plan Subdivisions. Flexible plan subdivision is intended to provide the option of an alternative pattern of land development which preserves significant natural or agricultural open space and scenic views, but does not increase overall dwelling numbers. This is intended to create cluster development that is environmentally and visually preferable. The character shall remain single-family and semi-rural. The total plan has a minimum parcel size of ten acres. Individual lot size must be 10,000 square feet, communal septic systems are permissible and water supply may be municipal or private. Forty percent of the parcel must be dedicated as permanent open space. No more than 25% of this open area can be considered under Conservancy District, or Wetlands under M.G.L. Chapter 31, Sec. 40. No lot in the plan may be further subdivided. These plans must come under review by the Hamilton Board of Health.

Hamilton Subdivision Bylaw. Before making any division of land in Hamilton, the subdivider is required by law to secure, from the Hamilton Planning Board, approval or endorsement of the plan for the proposed division. This control law was enacted to pro-

protect the people of the town, to insure safety, sanitary conditions and compliance with zoning, and for securing adequate provision for water, sewage and drainage. However, the subdivision regulations do not specifically address potential impacts on groundwater resources.

b Maximum Buildout

A rough estimate of maximum potential buildout can be derived from work done in preparation for the 1987 Plan, updated with information collected from Planning Board records by Evelyn Shuman (Planning Board Coordinator) for this Plan

Land was categorized as permanent open space, semi-secure open space, developed space and undeveloped space. Permanent open space is dedicated for conservation and open space purposes as a result of ownership by conservation nonprofits, government, or deed restriction. This included Bradley Palmer State Park, Massachusetts Audubon Ipswich River Wildlife Sanctuary, town-owned water and park land, Essex County Greenbelt, Hamilton-Wenham Open Land Trust, and Trustees of Reservation tracts.

Semi-secure land is land that, while it has traditionally been available as open space, has no durable legal status as open space and could very well be sold; owned by educational institutions such as Harvard College and the Pingree School, private groups like the Myopia Schooling Field Trust, and the U.S. Government.

Developed land is land that has had houses or other buildings built on it, and undeveloped space potentially could be developed, though it may have practical or regulatory limitations on use.

Status	Acres	%
Permanent Open Space	2041	22
Semi-secure Open Space	900	10
Developed Space	2680	28
Undeveloped Space	3768	40
Total	9389	100

Assumptions used to derive maximum “carrying capacity”:

- Existing population is assumed baseline
- Undeveloped land divided into categories of minimum lot size (20,000 sq. ft., 40,000 sq. ft., and 80,000 sq.ft.) based on land’s basic zone and groundwater protection overlay zone
- A rough overall multiplier for usability limitations of wetland and conservancy restrictions, frontage and access requirements, slope, soil and dept to bedrock limitations of 65% (i.e. undeveloped land assumed to be 65% usable, 35% unusable).
- Average number of persons per housing unit of 3.2 persons/unit.

With these assumptions plus the assumption that “semi-secure” open space remains undeveloped, the number of additional single family lots in a maximum buildout at current building requirements is 2121, for an estimated additional population of 6786.

With the “semi-secure” space also developed, the population projection by this method is 2733 lots (population 8744).

TABLE 0-15.

Projected Increase in Residential Lots and in Population Under “Maximum Buildout”

Zone	Aquifer?	Min. lot size, acres	Total Acres	“Semi-secure” undeveloped		“Semi-secure” developed	
				Est. Lots	Est. Pop.	Est. Lots	Est. Pop.
RA	No	1.837	1571	556	1779	589	1886
RA	Yes	1.837	255	90	289	90	289
R-1B	No	0.918	1398	990	3168	1289	4126
R-1B	Yes	1.837	231	82	262	162	517
R-1A	No	0.459	233	330	1056	494	1582
R-1A	Yes	1.837	206	73	233	108	344
Totals				2121	6786	2733	8744

c Ecological Impacts

Assuming that individual site septic systems remain the predominant method of sewage disposal, overall environmental loading from this source would more than double, probably leading to some “hot spots” where localized pollution effects were evident.

Problems of control of stormwater runoff and accompanying contaminants would reach a much higher level than the town has experienced, leading to problems of the kind seen in the Asbury Woods development, where in spite of careful application of regulations and guidelines (and indeed much wrangling between developers and the conservation commission), the results are not satisfactory from either a wetlands protection point of view or a resident’s point of view.

Erosion and sedimentation problems from construction sites could be predicted to lead to demonstrable degradation of some wetland areas and of some of the streams tributary to the Ipswich River, based on what has already been seen at some sites.

Wildlife habitat area would be reduced by something over two-thirds, and corridors would be even more severely affected, in the end being essentially limited to the zone along the Ipswich River currently protected, with the Town of Manchester water supply lands becoming more or less isolated because so much other land is unprotected in the eastern part of town.

SECTION 4

ENVIRONMENTAL

INVENTORY AND

ANALYSIS

A Geology, Soils, and Topography

(1). Description

Much of the town's land is level to gently sloping, with a few steeply sloped hilly areas, at elevations from about 40 to a little over 200 feet above sea level.

Hamilton's geological surface can, for open space planning purposes, be roughly divided into:

- swampy areas in topographic depressions and floodplains along watercourses where sediments and plant matter accumulate over other materials deposited by glacial action
- low, flat areas in the eastern half of town covered with sediments deposited in beach and nearshore environments during a period of higher sea level after the last glacial episode
- low flat to rolling terrain covered a mixture of deposits laid down when the last glacial ice was wasting away (ice contact deposits like eskers, and outwash)
- hills and high spots mantled in older glacial till
- Beneath all this, and in spots (scattered and mostly small) showing on the surface, is bedrock, mostly of the kind of granite that underlies most of Cape Ann.

Each of these terrains has its own characteristic soils, vegetation, visual qualities, land use patterns and potentials.

Geology and soils in Hamilton wetlands and floodplains. The most extensive area of swamp deposits is the Great Wenham Swamp, which extends into the southwest part of Hamilton near Asbury Grove. At several places nearby upland surrounds or nearly surrounds smaller areas of swamp (as north of Linden Street and near Day Avenue in South Hamilton). Similar conditions and soils in prevail in flat areas bordering the Ipswich River and its larger tributaries such as the Miles River, Long Causeway Brook and Black Brook.

On the US Natural Resources Conservation Service maps, the characteristic soil shown is Freetown muck, made up chiefly of organic material to a depth of 5 feet or more. The

water table is near or at the surface, consequently the soil is very poorly aerated and only supports vegetation particularly tolerant of wet conditions (red maple swamp, shrub swamp). The lack of oxidation gives the soil a very dark color.

Marine sediments. Post-glacial marine sediments are at the surface in a band a mile or two wide roughly parallel to Bay Road. The railroad line to Ipswich corresponds more or less with its western edge. These sediments are clayey to silty in texture, and develop soils that are typically classified as Merrimac soils on the soil map, therefore differing little from the soil characteristics of the ice contact-outwash deposits discussed below, except perhaps in being on the average in lesser slope categories.

Ice contact deposits and outwash. These deposits can have a complicated history of deposition in winding channels inside or underneath the glacier (giving the sinuous form of an esker, like those which give interest to the terrain in several parts of Hamilton) or between the side of a glacier and an adjacent hill, perhaps with subsequent slumping. There are sizeable areas of such deposits developed in contact with the ice of a wasting glacier in the low-lying areas of Hamilton outside of the area of marine deposits. These deposits are in many places thick enough and permeable enough to be important aquifers.

Sand and gravel outwash deposits accumulated downstream from a melting glacier and will show the earmarks of having been deposited from moving water, typically including stratification. There is an area mapped by USGS geologists as outwash in the south central part of the town, west of Bay Road and south of Savin Hill.

All these processes around a waning glacier can give rise to complex patterns of grain size distribution, stratification and field relationships that can be deciphered with some subtlety (though not necessarily with certainty) by experts, but for our present purposes, most of these variations can be grouped together.

These parts of town are mapped by the US Natural Resource Conservation Service in the Merrimac-Hinckley-Urban land association. The Merrimac and Hinckley soils are characterized by a sandy subsoil underlain by sand and gravel.

Till uplands. Several drumlins (Brown's Hill, Vineyard Hill, etc.) make up the town's most conspicuous high ground. The highly characteristic material of these and adjacent areas is "till", with its widely varying assortment of particle sizes from sizeable rocks down to silt and clay. Till is distributed over a wider area than the drumlins in Hamilton, but it is often associated with "foothill" areas close to the drumlins, as in the area between Vineyard Hill and Willowdale Hill in the west of the town. Another sizeable till area is near the lakes in East Hamilton.

Hamilton's till soils are mapped in the following soil associations :

1. Paxton-Montauk-Urban land association ("hills and sloping uplands" (US Natural Resource Conservation Service description); Willowdale-Vineyard Hill area, Brown's Hill area, and Sagamore Hill area; often with a relatively impermeable substratum).
2. Canton-Woodbridge-Freetown association ("low irregular hills"; Pigeon Hill area and the till area south of Sagamore Hill)

Chatfield-Hollis-Rock outcrop association (“low irregular hills, ridges and plains with frequent bedrock exposures”; eastern Lakes District from Gravelly Pond west to Route 22 and Essex Street; often shallow to bedrock)

(2). Effects on Community

The glacial outwash sediments giving rise to Merrimac and related soils make Hamilton’s best agricultural land, and it also is favorable for building residences and septic systems. Many of Hamilton’s residential subdivisions are built on this type of material. The sandy texture makes for fast drainage (sometimes faster than a farmer would prefer from the point of view of keeping water in the root zone after rain).

In the glacial till areas, the matrix of superfine grains in till often makes for “tight”, relatively impermeable soils, often creating problems in siting septic systems. Because of the occurrence around hills, high slope is sometimes a limitation for residential development. Additionally, many of the areas of Hamilton where soils have a shallow depth to bedrock are on glacial till.

Concerning the development potential for Hamilton’s areas on wetlands and floodplain soils, the limitations for buildings and septic systems are obvious, and severe.

B Landscape Characteristics

A visitor driving through Hamilton for the first time would likely get the sense that the essential character of the landscape is that of gentle rolling farmland. This first impression would be obtained from the large open fields which line some of the major thoroughfares, such as along Route 1A. If the visitor were to stop their car and spend some time hiking in some of the forested areas, such as Bradley Palmer State Park, Appleton Farms Grass Rides, or Willowdale Mill Reservation, they might get the impression that the essential landscape character of Hamilton is one of upland forests with numerous hiking and bridle paths. However, if the visitor, or even some long time town residents, were to fly over the town, they would probably be surprised to see that much of town consists of wetlands, lakes, and streams. They would also notice a number of drumlin hills with distinctive oval shapes, generally oriented northwest to southeast. The true character of the landscape in Hamilton is therefore one of diversity, ranging from large open fields, upland forests, lakes and streams, and wetlands.

All of these landscape characteristics are important and contribute to what makes living in the Town of Hamilton so enjoyable. However, it is easy to imagine how poorly planned development could degrade the landscape characteristics which give the Town of Hamilton its special character. The remaining large open fields could be subdivided into numerous house lots, Existing hiking and bridle trails could similarly be blocked by poorly planned subdivisions. Wetlands, lakes and streams could all be degraded by not providing for their protection. Many of these impacts can already be seen. Subdivisions are nibbling away at the existing open spaces and numerous trails have been blocked by house lots. The largest lake in town, Chebacco Lake, is already severely impacted by algal blooms which are the result of poorly designed or malfunctioning septic systems. With proper planning, many of the impacts of increased development can be minimized.

Cluster zoning can preserve open space and even enhance trail access while at the same time allowing for new houses. Revised regulations and aggressive enforcement of existing regulations can prevent further degradation of lake and wetland resources. Lake protection and cleanup programs can restore the lakes in town that have been degraded.

C Water Resources

The water resources in the Town of Hamilton consist of surface water and groundwater, and are used primarily for drinking water and recreation. There are no significant water resources being used for hydroelectric or irrigation. An inventory of groundwater and surface water resources is presented below. See the “Water Resource Map”.

(1). Surface Water

a Rivers and Streams

Ipswich River. The Ipswich River serves as the boundary of Hamilton to the west with Topsfield, and to the north with Ipswich. The segment of the Ipswich River adjacent to Hamilton is proposed as a Massachusetts Scenic and Recreational River under the “Scenic and Recreational Rivers Act”. Overall water quality in the Ipswich River Basin can be considered as ranging from good to excellent. According to the use classification promulgated by the Division of Water Pollution Control, the Ipswich River and its tributary streams are meeting Class A and Class B. Periodic violations of coliform bacteria and dissolved oxygen concentrations occur during late summer and early fall. The high coliform levels are generally attributed to the large wildlife population living in the Ipswich River Basin, while the low dissolved oxygen is caused by the leaching of organic materials from adjacent swamps and marshes. The Ipswich River is used for swimming, fishing, and canoeing. The Ipswich River is not used directly for drinking water in Hamilton. However, the river provides recharge for nearby wells in Hamilton and Ipswich.

Idlewild Brook. Idlewild Brook originates at Pleasant Pond and flows to the Ipswich River through Wenham Lake. Idlewild Brook provides partial drainage for the Wenham Swamp.

Black Brook. Black Brook originates at Cutler Pond and flows west to the Ipswich River, Black Brook provides drainage for wetland areas between Highland Street and Bay Road.

Miles River. The Miles River has its source in Wenham Lake and the wetlands at the eastern end of Wenham. The Miles River flows northward from Wenham Lake, through the Longham Reservoir to the Ipswich River in Ipswich. There are numerous minor tributaries entering the Miles River in Hamilton, the most important of which is Long Causeway Brook on the Hamilton-Ipswich line.

b Lakes and Ponds

Chebacco Lake. Chebacco Lake is divided by the Essex-Hamilton boundary with approximately 83 acres located in Hamilton. Some of the recreational uses of Chebacco Lake include fishing, swimming, boating and water skiing. A boat ramp providing public access to the lake is provided on Chebacco Road.

Beck Pond. Beck Pond is approximately 34 acres. Public access to Beck Pond can be made from Chebacco Road, although parking is limited. Motorized boats are prohibited on Beck Pond.

Round Pond. Round Pond is approximately 36 acres. Well points along the shore of Round Pond are used to supply water to Gravelly Pond. The Town of Manchester has a permit to pump up to million gallons per day (MGD) from the Round Pond well field. The water is treated to remove metals before being discharged to Gravelly Pond.

Gravelly Pond. Gravelly Pond is approximately 46 acres and is used as a drinking water supply by the Town of Manchester. The safe yield of Gravelly Pond is reported by the Town of Manchester to be 0.65 MGD per day. A 2.0 MGD water treatment plant near the shore of Gravelly Pond for the Town of Manchester is under construction. As noted above, the flow into Gravelly Pond is supplemented by the Round Pond well field. No Trespassing signs posted by the Town of Manchester limit public access to Gravelly Pond from Chebacco Road.

Pleasant Pond. Although Pleasant Pond is located primarily in Wenham, approximately 2 acres extend into Hamilton. Some of the recreational uses at Pleasant Pond include fishing, swimming, and boating. There is no public access to Pleasant Pond in Hamilton. However, Hamilton residents are permitted by Wenham to use the public beach area in Wenham.

Patton Pond. Patton Pond is located in Patton Park. This one acre pond was originally created in the 1940's by dredging a lowland swamp. Excessive problems with exotic, non-native weeds required chemical treatment in 1994. The pond is the centerpiece of Patton Park.

Cutler Pond. Cutler Pond has a surface area of approximately 5 acres and is located in Cutler Park. Cutler Park is located on a tiny slice of land in the Historic District of Hamilton. The park was originally a graveyard and is completely overgrown and underused. There is a small, inconspicuous sign marking the entrance to the park from Route 1A across from the Town Hall. Cutler Pond is the headwaters of Black Brook. There are presently no recreational uses of Cutler Pond.

(2). Flood Hazard Areas

Seasonal flood hazards exist in the lowlands adjacent to Wenham Swamp, the Miles River, Black Brook, the Ipswich River and shores of the many lakes and ponds. Development is restricted and/or discouraged in these sensitive areas where surface waters can rise quickly and/or there is shallow depth to groundwater.

(3). Wetlands

Wetlands constitute an integral part of the natural environment, and more specifically, the hydrologic system. In addition to diversifying the landscape, wetlands often play a significant role in the storage of water, flood control, and the maintenance of water quality. Wetlands also serve as habitat for a variety of wildlife species. Additionally, wetlands may serve as groundwater recharge or discharge areas.

The existence of wetlands depends on the relative stability of a variety of natural parameters, including groundwater elevation, soil type, topography, and surface waters. The alteration of one or more of these parameters may result in profound changes in both the structure and function of wetland communities. For example, the lowering of the water table or the diversion of surface water away from a wetland may result in conditions suitable for upland vegetation, and thus the eventual loss of the wetland.

Figure x shows the locations of the wetlands in Hamilton. There has been no town-wide detailed mapping of wetlands in Hamilton by the Commonwealth or the Town, and therefore the wetlands shown in Figure xx are approximate. The 1965 Master Plan noted there was about 1870 acres of swamps and wetlands based on the following:

TABLE 0-16.

Swamp and Wetland Areas

Area	Acres
Wenham Swamp	637
South Hamilton	149
Ipswich River	4
Black Brook	827
Miles River	580
Long Causeway Brook	168
Total	1,866

(4). Aquifer Recharge Areas

The drinking water resources and associated aquifer recharge areas in the Town of Hamilton were analyzed and mapped in a report entitled “Report on Aquifer Planning Study, Hamilton Massachusetts” by Haley and Aldrich, Inc., Consulting Engineers and Geologists, 1981. The mapping of aquifer recharge area in this study formed the basis of the Groundwater Protection Overlay Zoning District. As noted above, the Town of Manchester has two surface water drinking supplies in Hamilton: Round Pond and Gravelly Pond. Hamilton does not utilize any surface water for drinking water supplies.

An inventory of the groundwater resources in current use follows (see also “Water Supply System” on page 12):

TABLE 0-17.

Hamilton’s Municipal Water Wells

Well	Yield, GPM	Construction
Idlewood	500	40 ft., deep, gravel packed
Pine Tree	500	34 ft. deep, caisson
School Street	185	26.5 ft. deep, gravel packed
Patton	205	35 ft., deep, gravel packed

The Idlewood and Pine Tree wells provide water to meet normal demands. Peak demands are met by supplemental pumping of Patton and School Street wells. There is also a well field of numerous small diameter well and two gravel packed wells located adjacent to Bridge Street. This well field, however, has been abandoned.

The Chebacco Lake watershed also contains two groundwater wells in Essex which supply water for Essex. The Town of Ipswich has three wells north of the Ipswich River near the confluence of Black Brook. Although the Essex and Ipswich wells are not located in the Town of Hamilton, their cones of depression may extend into the town.

D Vegetation

(1). Forest Land

Northern hardwoods, typified by red oak in well drained areas, and red maple in wet or poorly drained areas are the predominant forest cover in Hamilton. Northern hardwoods include soft and hard maples, beech, birch, cherry, oaks, hickory, and sassafras. Other dominant species of vegetation includes red pine, white pine, eastern hemlock, and some rare occurrences of native rhododendron.

(2). General Inventory

Hamilton has large areas of forested swamp and shrub swamp with abundant red maple, arrowwood viburnum, sweet pepperbush, winterberry, highbush blueberry, swamp azalea. Cinnamon fern, skunk cabbage and tussock sedge are characteristic of the lower layers. Some wetland areas, notably on the Miles River floodplain, have been extensively invaded by purple loosestrife.

There are some fairly extensive areas of upland currently under cultivation, in some cases grading down into wet meadow and wetland. Of course the preponderance of the current woodland areas were formerly cultivated, and show characteristic New England “old field” vegetational patterns.

(3). Rare, Threatened and Endangered Species

The rare plant species recorded in the Hamilton area include the showy lady's slipper, pale green orchis, terrestrial starwort, and the river-bulrush. The first two are orchid species and have been historically reported to occur in the area.

The terrestrial starwort is a rare plant likely to be found on muddy flats and trails near lakes in the area. The tidal river shore species, the river-bulrush, is rare but recorded in the vicinity.

E Fisheries and Wildlife

(1). Inventory

Aquatic Habitats. The ponds, stream, and marshes provide habitat including food and cover for black duck, mallard duck, and wood duck in addition to many migratory species of waterfowl.

Muskrat, otter, mink, and raccoons may be found in wetland areas. Major game fish include brook trout, brown trout, rainbow trout, largemouth bass, and chain pickerel.

Terrestrial Habitats. Songbirds indigenous to the area include various sparrows, wrens, chickadees, titmouses, cardinals, doves, and mockingbirds. Whitetailed deer are the only large game animal found in Hamilton. Small game includes ring-neck pheasant, quail, ruffed grouse, woodcock, cottontail rabbits, raccoons, fisher, opossum, grey squirrel, and grey fox.

(2). Corridors

Protected corridors of open space for wildlife habitat are an important goal of Hamilton's planning process.

The Hamilton Conservation Commission's Discover Hamilton Trail project, the greenway extending from Patton Park and Myopia Hunt Club area through the Devon Glen Farm conservation restriction, the Harvard Forest, the Pingree Restriction and the Ipswich River conservation restrictions of the Arbella Trust and G. Horne is a critically important wildlife corridor.

Continuous with this greenway is a section of the Hamilton bank of the Ipswich River extending from a portion of the Wenham Swamp within the Massachusetts Audubon Ipswich River Wildlife Sanctuary through Bradley Palmer State Park, with a side branch in Topsfield at Willowdale State Forest, through Essex County Greenbelt's Willowdale Dam reservation and through restrictions granted by the Winthrop family, and by G. Horne almost to the Mill Street-Highland Street bridge. This corridor complex also connects to the Appleton Farms Grass Rides and adjacent open spaces.

On the eastern side of this complex, the corridor extends via the wooded parts of the Myopia Hunt Club to open spaces in East Hamilton, Wenham, and Manchester in the “Lake District” including Gordon Woods, the Town of Manchester Water Supply area surrounding Round Pond and Gravelly Pond, the Iron Rail area, and the wooded part of the old landfill site. This section is in need of serious future vigilance since large parts of it have no durable protection and, such as the Gordon Woods, are vulnerable to sale for development very soon.

(3). Rare, Threatened and Endangered Species

The Massachusetts National Heritage Program (MNHP) considers five animal and four plant species recorded in Hamilton to be rare, uncommon, or ecologically sensitive.

The rare animal species include the blue-spotted salamander, spotted salamander, eastern box turtle, golden-winged warbler, and New England medicinal leech.

The rare blue-spotted salamander may occur near wooded swampy areas or moist woods. The spotted salamander, although more common, is considered ecologically sensitive and may be found in similar areas around Hamilton.

The eastern box turtle is considered to be declining and threatened in Massachusetts by some experts. It prefers open woodlands and wet meadows and was sighted in Hamilton in 1977.

The Massachusetts Division of Fisheries and Wildlife lists the golden-winged warbler as “State Rare.” This species has been sighted infrequently in the area. It prefers overgrown fields of wet shrubby deciduous thickets.

The New England medicinal leech, a rare invertebrate, has been found in local vegetated freshwater ponds and streams within the coastal plain. Habitat alteration or pollution have severely threatened the status of this animal.

F Scenic Resources and Unique Environments

Hamilton has an abundance of scenic resources and unique environments which blend together to give the town its diverse character. These resources include rivers, lakes, parks, reservations, wetlands and historic areas.

Rivers

The portion of the Ipswich River adjacent to Hamilton is proposed for possible inclusion as a Massachusetts scenic and recreational river. The river is widely used for fishing, swimming and canoeing. The Ipswich River is susceptible to pollution from increased development. The river may also experience reduced flows in the future as upstream communities increase their drinking water supplies.

Lakes. Hamilton has several lakes and ponds which contribute to the scenic character of the town. Of these, Chebacco Lake is the largest and most important. It is also the most

threatened. As a result of the large number of poorly operating septic systems, the lake is experiencing increase algal growth which leads to eutrophication.

Parks, Reservations, and Open Space. Hamilton also has several parks and reservations which contribute to the scenic character of the town, The largest of these include Bradley Palmer State Park, Appleton Farms Grass Rides, Willowdale Mill Reservation, and Patton Park. The parks and reservations are protected and are not at risk of being developed.

There are other open space areas in town which are very scenic but are unprotected, These include the Harvard Forest, Myopia Schooling Fields, Iron Rail, Gordon College lands including Gordon Woods, and Pingree School lands.

Wetlands. Hamilton has several very scenic wetland areas, most notably: Wenham Swamp, Miles River, and Black Brook, and on the fringe of Chebacco Lake. Development pressure is constant in these areas. As the availability of buildable land decreases, house lots are put right on the very edge of the wetlands. This can have a negative impact on the function of wetlands because it may change sunlight or drainage patterns, or can interfere with wildlife which live on the edge of wetlands and need buffer zones. Development in wetland buffer zones is closely monitored by the Hamilton Conservation Commission.

Unusual Geologic Features. One of the most striking geologic features of Hamilton is its sharply rising hills, which afford spectacular views from their tops. Examples are Candlewood Island, Sagamore Hill (and surrounding hilltops such as Eveleth Hill), the Hamilton Ski Hill, and Cilly's Hill, which is close to the business center of town. Also attractive are the expansive bedrock outcroppings below and to the south of Sagamore Hill and the rock ledges and outcroppings of the former Prince estate, now owned by Gordon College.

Historic Areas. Hamilton is fortunate to have a well defined and protected historic district. There are other historic features of the town which are protected, such as the burial site of Chief Masconomet on Sagamore Hill.

Areas of Critical Environmental Concern. There are currently no ACECs in Hamilton, as defined by the state ACEC process.

G Environmental Problems

(1). Hazardous Waste Sites

Presently, there is only one DEP certified hazardous waste site in Hamilton. The site is on town property behind the town hall where diesel and gasoline fuel tanks are stored. The tanks store 5,000 gallons each. There was leakage from the original tanks and they were replaced in 1986. In addition monitoring wells were put down. Shortly thereafter a plume of hydrocarbons was discovered on the surface of the groundwater. In 1987, a vapor recovery system was installed as a precaution. The town has an on-going contract

with Zecco for monitoring the tanks and the groundwater. The site should be decertified in the next few years.

(2). Landfills

Hamilton's town landfill is located at the end of Chebacco Road in the Gravelly Pond watershed. It was capped in 1983. The landfill is monitored and tested four times a year for leachate: it currently tests clean.

(3). Erosion and Sedimentation

There are several sites in Hamilton where substantial erosion is taking place but because they are outside of the 100 ft. buffer zone, they are outside of the jurisdiction of the Conservation Commission. Therefore it is difficult to mandate preventative measures.

Continually, there are open construction sites that need erosion control but are presently not addressed because they are outside of the buffer zone.

In addition, there is an erosion control problem with Gordon Conwell's new library parking lot. It has no adequate means for drainage. It ends at the top of a hill on Bridge Street and causes a tremendous amount of sediment to wash into the street. Approximately 200 tons of sediment eroded over the course of one winter.

There are exposed gravel banks along Chebacco Road adjacent to Beck Pond. Presently gravel is being washed across the street and into Beck Pond. The embankments need stabilizing with a retaining wall.

Prior to 1994 there was an erosion problem along the access drive to the US Air Force installation on Sagamore Hill. Large amounts of runoff were coming down the access drive and eroding the western shoulder of Sagamore Street. In 1994 the town installed a slotted drain pipe across the driveway entrance which captures the run off and any sediment. The sediment is captured by a series of sedimentation basins before water goes on to the Miles River. The catch basins and sedimentation basins need to be monitored and maintained.

(4). Chronic Flooding

Seasonal flooding is a concern in an area surrounding Highland Street, Howard Street and Linden Street where water overflows from a small stream which is shallow and has a large bordering wetland. Houses on Howard Street are known to be set on wooden pilings. However, areas of the streets are settling.

There have been episodes of flooding associated with beaver dams in streams crossing roads in the eastern part of town, for example on Moulton Street.

Another area of flooding is the pond in Patton Park. The pond overflows the banks and inundates a portion of the park.

The Hamilton FEMA flood maps indicate in a general way numerous other areas subject to flooding, most of which, fortunately, have not been built upon.

Water Overuse. The Ipswich River watershed is becoming increasingly overused. The river basin currently serves about a dozen communities. Hamilton draws out about 175 gallons per person every day, a level that is considered excessive. The communities of Ipswich, Manchester, Hamilton and Wenham could be facing chronic and severe water shortages in the next thirty years. At one point in the summer of 1994, there was a draw of a million gallons in a ten hour period, leaving only 100,000 gallons in the reservoir. When the reservoir gets below a certain level mud starts entering the system.

Wetlands Resource Impacts. As the contiguous builtup area of town fills in, the development of new subdivisions and individual lots is more and more constrained to be near wetlands and in adjacent upland areas formerly providing wildlife habitat and corridors. The Conservation Commission has been disturbed by the number of applications for construction of single family homes which, although they do not actually fill wetlands resource areas directly, include structures or grading that are so close as to almost certainly affect the functioning of the wetland microenvironment and which leave wildlife no effective "wetlands fringe" area that has been shown to be as essential to many species as the wetland itself.

In response to this the Commission promulgated Regulations under the town Conservation Bylaw (Chapter 17) in 1995 which set guidelines for new construction including a 50-foot "no-build", and a 25-foot "no-impact" adjacent to wetlands. The regulations also included among wetlands protectable under the Bylaw isolated areas which, though not necessarily state-certified as vernal pools, showed significant biological signs of functioning as vernal pools.

(5). Surface Water and Groundwater Pollution: Point and Non-point

Hamilton is completely dependent on groundwater for its drinking supply. In addition, Gravelly pond, which is used as a drinking water supply for the town of Manchester, is located in Hamilton. The loss of these water resources would have devastating consequences for the towns of Hamilton and Manchester. Therefore the primary environmental problems facing the town are those which could potentially impact these drinking water resources. These include underground storage of fuel, floor drain discharges, septic systems, agricultural practices, household hazardous waste, leachate from the town's landfill and road salting.

Underground Storage of Fuel. Leakage of tanks or piping that are subject to corrosion or puncturing can lead to contamination of water resources. Underground storage tank leaks are caused by a number of factors including defects in tank materials, improper installation, corrosive soils, problems with piping systems, weather conditions, or tank fatigue. Unprotected steel tanks have an average life expectancy of 15 years in corrosive soils which are characteristic of much of Massachusetts. Once tanks leak, gasoline can move through the ground and contaminate large volumes of water, since concentrations as minute as several parts per billion in drinking water are considered unsafe.

Petroleum fuels are mixtures of huge hydrocarbons. If a fuel such as gasoline is released into the subsurface, the more water soluble components such as benzene dissolve into the groundwater and move with the ground water flow. The drinking water limit for benzene is 5 parts per billion. This problem can also occur to releases of oil, but to a less degree. Once an aquifer has become contaminated, it is very difficult and expensive to clean it up. Typically, a groundwater remediation system would be installed to intercept and treat the contaminant plume. If the contaminant plume were to reach the drinking water wells the town would have to construct a water treatment plant or find a new water source. The cost of either of these alternatives would likely be in the millions of dollars. Therefore, it is important to take whatever steps are necessary to prevent the aquifer from being contaminated.

There is one facility storing gasoline and diesel fuel in Hamilton's water resources area. This is the filling station on the corner of Asbury Street and Highland Street. There are three known underground storage tanks on this site, all three are more than 15 years old. The total amount of gasoline and diesel stored in the study area is approximately 18,000 gallons.

In addition, within the water study area residences and institutions are storing fuel oil in 15 underground tanks throughout the study area. The total volume of fuel oil stored underground in Hamilton's water study area is approximately 68,050 gallons. The records do not indicate the ages of these tanks, but many are likely to be at least 20 years old. Almost all of them are unprotected steel tanks.

Floor Drain Discharge. Floor drains are often tied to a leaching structure such as a dry well or a septic system. Poor management practices, accidental and/or intentional discharges may result in petroleum and other hazardous materials being released into the subsurface. Once the contaminants enter the subsurface they can cause similar aquifer contamination as described above.

Septic Systems. Hamilton relies on septic systems to treat sanitary wastes with the exception of Gordon Conwell Theological Seminary, which utilizes a packaged treatment plant before discharging the treated water to the subsurface. A septic system consists of a septic tank and leaching system. The tank is a watertight structure designed to allow settling of solids and digestion of organic material. The leaching system allows the effluent from the tank to discharge into the underlying soil. In older systems, a cesspool is used instead of a septic tank and leaching field. Cesspools provide less treatment than a properly designed and operating septic system. As part of Title 5, the Massachusetts Department of Environmental Protection has promulgated new regulations concerning cesspools. Among other criteria, cesspools must be replaced by a septic system under the following conditions:

- 1) The system has failed.
- 2) The system is located less than 50 feet from a wetland.
- 3) The bottom of the cesspool is located in the water table.
- 4) A two year review of water usage indicates the holding time is less than 12 hours.

5) There is an increase in living space, such as a house addition.

Some of the ways in which cesspools and septic systems can contribute to groundwater contamination include allowing poorly treated water to enter the groundwater. This poorly treated water may contain pathogens, such as viruses, and increased levels of nutrient such as nitrogen and phosphorus. These nutrients, in turn, can contribute to eutrophication if the groundwater enters a surface water. The problem of eutrophication in Chebacco Lake is discussed below.

Another way in which septic systems can contribute to groundwater contamination is through the use of septic system cleaners. According to DEP, septic systems contain a variety of hazardous chemicals. Many hazardous chemicals are resistant to biodegradation and pass through septic systems, harming beneficial bacteria and contaminating groundwater. Six of the most commonly found chemicals in septic system cleaners are

Trichloroethylene
1,1,1, Trichloroethane
Tetrachloroethylene
Methylene Chloride
Dichloromethane
Napthalene

These chemicals have been involved in the closure of over 40 public water supplies in Massachusetts.

Agricultural Processes. Pesticides: The term pesticides includes insecticides, fungicides, herbicides and rodenticides. They are all chemical compounds used to control unwanted organisms such as insects, weeds and rodents. Since the compounds vary depending on their target organisms, their potential effects on water resources vary greatly. Pesticides may enter the ground by direct infiltration through the ground or by way of runoff. Additional impacts on water can occur with improper storage and/or disposal of agricultural products and wastes. Pesticides in ground and surface water pose a risk to aquatic and wetland plants and animals and increase public health risks.

Hamilton has two important rights of way, the Boston and Maine Railroad and a gas pipeline owned and maintained by Tenneco, Inc. Tenneco's easement is hand cut and no herbicides are used. The railroad utilizes herbicides to control all vegetation along the track since plant growth may cause degradation of the tracks and/or can lead to fires. In most cases treatment extends 12 ft. to either side of the center of the track. (Within 100 ft. of a resource area state regulations restrict application.) The railroad does not run through Hamilton's water supply study area.

There are currently several hundred acres of agriculture cropland and orchards in Hamilton, of which 238 acres is in the aquifer area. The amount of pesticide application this land is subject to is unknown. There are no local controls of pesticides in Hamilton.

SECTION 5

INVENTORY OF LANDS OF CONSERVATION INTEREST

A Protected Parcels

The inventory tables associated with this chapter and in the appendices list main characteristics of parcels in Hamilton which are protected by the state, by municipal water departments, or nonprofit land trusts. Brief descriptions of some of the major parcels follow; see also the “Bay Circuit Guide to Walks in Hamilton and Wenham” for more details.

Bradley Palmer State Park. The former Bradley Palmer estate, partly in Hamilton, was donated to the state and is a major regional recreational resource. It is used intensively for walking, riding, cross country skiing as well as for its picnic areas and wading pool.

Willowdale Mill. The Essex County Greenbelt Association’s 25-acre Willowdale Mill reservation adjoins Bradley Palmer State Park on the north, and its trails connect with those of the park. It protects 1500 feet of the east bank of the Ipswich River, and links the river bank and the park with Winthrop Street. Its features include the ruins of the 19th century mill, a fish ladder (unfortunately in disrepair and not functioning), and walks through forested areas.

Appleton Farm Grass Rides. The Appleton Farm Grass Rides are a 160-acre part of the 350-year-old Appleton Farm. The rest of the nearly eight hundred acres of the farm, in Ipswich and Hamilton, are still in agricultural use, but the Grass Rides are owned and managed for public use by the Trustees of Reservations. It has a network of wide grassy avenues built for carriage riding but now used by cross country skiers, snow shoers, and walkers.

Ipswich River Wildlife Sanctuary. Another huge turn-of-the-century estate, that of Thomas Proctor in Wenham, Topsfield, and Hamilton became in the 1950’s the Massachusetts Audubon Society’s Ipswich River Wildlife Sanctuary. The Society uses the property in an active program of nature education. Like the Bradley Palmer park and the Harvard Forest, it bears the imprint of the former owner’s very ambitious ornamental horticulture projects (as for example in the remarkable pondside “Rockery”). It protects a very large section of the banks and floodplain of the Ipswich River and includes walking trails through a range of wildlife and plant habitats from pond, swamp, and marsh to upland forest.

Fee-simple lands of Essex County Greenbelt Association. The Essex County Greenbelt Association, in addition to actively working with landowners in Hamilton as well as the rest of the county to put land under Chapter 187 Conservation Restrictions, owns some lands outright—Willowdale Mill has been mentioned but there are several other parcels of varying sizes listed in the tables, the largest being over 150 acres recently acquired from J. Pingree.

Hamilton-Wenham Open Land Trust. The Hamilton-Wenham Open Land Trust, which in addition to seeking traditional donations of lands for open space, has worked to facilitate the protection of open space in conjunction with new residential developments.

Name of Reservation	Location	Acres	Map/Lot
Pondview	Boardman Lane	2	31/23
Helan Warren Richardson	Woodbury Street	2	69/25
Riverside	Gardner Street	9	17/4
Whipple	Candlewood Island	2	35/3
Taft Woods	Taft Woods Row	4.4	65/154
Ted & Ella Johnson	Candlewood Island	7	35/2

We are grateful to the Winthrops, Pingrees, heirs of Francis Whipple, Ted Johnson, the Catlins, Fred Richardson, the Fords, and others who in recent years have donated land for conservation and recreation. We recognize and appreciate their generosity and demonstration of concern for the future of Hamilton. The town also appreciates the generosity of the Clark, Sears, Donovan and other families who have permitted riders and walkers access to their lands.

Town of Hamilton Water Supply Lands. The town owns relatively small parcels surrounding their several water supply wells: Pine Tree (7 acres), Idlewood No. 2 (38 acres), Bridge street (17 acres), Patton (4 acres), School Street and one acre at the reservoir site on Brown’s Hill.

Town of Manchester-by-the-Sea Lands. Gravelly Pond and Round Pond are owned by Manchester-by-the-Sea for water supply, and they own and maintain a sizeable area in that part of southeast Hamilton for water supply protection. Although this is not available for public use, it fulfills the resource protection and habitat functions of open space.

B Unprotected parcels

Essex County Greenbelt Association less-than-fee interests. The Essex County Greenbelt Association has been very active in seeking donations of Chapter 187 Conservation Restrictions and other less-than-fee interests in land which are listed in the inventory. Some examples are the Patton and Totten restrictions, and the Devon Glen Farm restriction.

Miscellaneous town holdings. Many parcels, mostly quite small, are held by the Town of Hamilton for various purposes. The most significant may be the inactive town landfill site in the extreme southeast corner of the town, on the Manchester town line and across Chebacco Road from the Manchester town water supply land around Gravelly Pond. The process of closing the landfill to the standards of the Department of Environmental Protection is not yet complete. Landfill and sand and gravel mining operations have substantially denuded the western part of the site, but the hilly and forested eastern part and adjacent wetlands have open space and wetlands value worth preserving.

U.S. Air Force. The Air Force site on Sagamore Hill is not open to the public.

Harvard Forest. This property straddles the Boston-Ipswich commuter rail right of way in the center of Hamilton, and is land formerly planted with hundreds of groups of exotic trees and shrubs and later donated by Nathaniel Martin to Harvard College. It is under the management of the Harvard Forestry school headquartered at Petersham, Massachusetts. It has recently had a fairly extensive harvesting of trees. It has trails that are used for riding. This property forms part of the greenway extending from the Ipswich River in the east to Bay Road and the old town center. Harvard has so far shown no public signs of wanting to develop this land for economic reasons, but this property and others like it must be considered at risk.

Gordon College undeveloped lands. The extensive tracts in Wenham, Manchester and Hamilton which were formerly part of the country estate of Frederick Henry Prince and are now owned by Gordon College extend far beyond the area used as a campus. In southeast Hamilton they include areas adjacent to Gravelly Pond, Round Pond, and Beck Pond. In this irregular terrain, made up of hummocky glacial till often thinly overlaid on rough bedrock with large ponds as well as smaller water bodies and vernal pools in kettleholes, a variety of habitats and scenery can be found, including between Beck Pond and Woodbury Street, hemlock forest reminiscent of cool rocky ravine microenvironments of further north in New England.

People in Hamilton and nearby communities have gotten used to thinking of these areas, with their unspoiled forested lakeside areas and well-developed network of walking and cross-country ski trails, as permanent open space, but in 1994 it became evident that Gordon College had selected these lands, which are increasingly seen as highly valuable for upscale residential development, to be sold as a source of funds for the college. These lands have long been identified as desirable open space, of particular importance because in contrast to the western part of town, the eastern part adjacent to this land has very little protected open space and a general lack of recreational opportunities. These problems will become much worse if these lands go into development. The college has indicated that if organizations wanting this to remain as open space can act quickly and can meet their financial goals, they are willing to discuss this alternative to selling it to developers. Consequently this is one of the most urgent goals stated in this Open Space Plan.

Other significant unprotected parcels. Institutions including Pingree School, Gordon-Conwell Theological Seminary, and the Archdiocese of Boston have significant amounts of undeveloped land which is not protected. Private recreational land, notably and the Myopia Hunt Club and Myopia Schooling Field Trust land, and the former Hamilton Ski Hill may not have as assured a future as we might like to think. The maps

with this report identify areas which because of their resources, position in relation to greenways, importance as aquifer recharge areas, etc., are of particular priority to keep as open space. In conjunction with this, the appendix has lists of owners, areas, and map and lot locations for many parcels, to serve as a resource for future planning about potential open space targets in addition to those already identified in this plan.

C Inventory Matrix

SECTION 6

COMMUNITY GOALS

A Description of Process

As one way of obtaining public opinion on open space issues, the open space research team distributed a questionnaire modeled closely on the Deerfield questionnaire used as an example in the EOE Division of Conservation Services Open Space Planner's Workbook. Through distributing the form at town meeting and town elections, the post offices and town library, through a mailing to Hamilton-resident members of the Hamilton Wenham Open Land Trust, and through distribution in public places, team members were able to collect 203 responses, close to their goal of a 10% sample of households.

A copy of the form is attached, also showing a numerical summary of the results, to serve as the basis for the following discussion.

Members of the Open Space Committee interviewed the Park Superintendent, Recreation Director and members of the Recreation Committee to determine further needs of the Recreation Department.

B Statement of Open Space and Recreation Goals

1. Protect And Encourage Visual Quality And Rural Quality.

Update the Hamilton cluster zoning bylaw based on the experience obtained with its implementation to date; and raise public awareness of its value for open space protection. Preserve historic buildings. Preserve scenic country roads. Preserve some of the remaining open lands considered most significant to Hamilton's visual quality. Encourage survival of remaining farms, which contribute greatly to Hamilton's visual quality. Enhance the visual quality of Hamilton's downtown.

2. Protect Water Supply.

Investigate options for future water supply. Take steps to protect recharge areas of all existing and new wells to ensure adequate water quality. Investigate alternative sources of surface water. Encourage/maximize recharge of aquifers within Hamilton. Update groundwater protection bylaw.

3. Avert New Flooding And Drainage Problems, Protect Wetlands.

Protect wetlands and floodplains from significant reduction of water storage capacity. Limit increases in runoff and potentially disruptive changes in drainage patterns resulting from new development and other construction activities. Prevent property damage in floodways of streams and rivers, and prevent alterations of floodways that would worsen flooding problems. Protect wetland wildlife habitats.

4. Encourage And Preserve Agriculture And Forestry.

Maximize the economic viability of agriculture in Hamilton. Find and encourage other means of preserving farms that go on the market.

5. Encourage The Preservation Of Wildlife Habitats.

Wildlife is part of our ecosystem and high quality habitat preservation should be encouraged.

6. Maintain and Improve Hamilton's recreational facilities and environments, including parks, fields, playgrounds, waterways and trails systems that offer innovative programming a opportunities to the growing and diverse population

SECTION 7

ANALYSIS OF NEEDS

The “Community Goals” section has discussed the state of affairs the people of town would like to see in the future for protected open space. This section is to analyze in detail the problems and challenges that face the town in meeting these goals as time goes on.

A Summary of Resource Protection Needs

A key physical challenge to the town is to maintain its supply of clean drinking water. As a groundwater-dependent town, and a town served by individual-site underground sewage disposal systems, the challenges of increasing density are fairly obvious. Recharge areas must be maintained in a functioning condition, groundwater contamination must be avoided, and additional sources of water meeting quality standards must be sought. Due attention must be paid to the fact that the town’s surface waters are public water supplies for adjacent towns and may in the future play such a role for Hamilton as well. As will be seen in the discussion of questionnaire results below, the great importance of open space for water resource protection was one of the areas of strongest agreement among the townspeople responding.

Further, for the good of the town and the wider environment, the other resource functions of open space in maintaining habitat for a diversity of animal and plant species must be maintained and enhanced. It is of great importance that our resources be managed with attention to the connections and spatial relations among them, and their relation to resources in adjacent communities.

B Summary of Community's Needs

In analyzing the town's needs, we will begin with a discussion of the findings of the open space questionnaire.

(1). Recreational Needs

View of Hamilton as Rural

Question 1 asked respondents if they agreed with one or more three different characterizations of the town intended to get an overall "gestalt" of how they see Hamilton. The highest proportion checked off "bedroom community" (60.9%) but it is interesting that 53.9% see Hamilton as "a farm/rural town". Much less popular was the characterization as "a suburb" (32.5%), with its connotations of vast expanses of contiguous treeless lawns and tract houses.

As we will see in discussions of the "like most about Hamilton" question, there is clearly a strong attachment to the idea that Hamilton has a rural feel and is a place where there should be farms and horses in abundance. When asked "what kinds of business would you like to see in Hamilton" (question 5), by far the most popular response was "working farms" (69.2%), with "agri-business" second (50.9%).

Views On Residential and Business Growth

Roughly a third of responses said there should simply not be any growth, residential (33.6%) or business and industrial (30.8%). This sentiment tended to go along with a configuration of other responses that, depending on your point of view, one might characterize as preservationist.

Of the remainder who either positively, or with resignation, felt that further residential growth was either a positive good or unstoppable, half saw virtue in confining it to areas already developed, while the rest were about evenly divided between saying growth should be spread evenly over the landscape, and those saying it should be regulated in areas not currently developed. The overwhelmingly favored type of residential growth was additional single-family houses (62.7), with multifamily housing favored by a much smaller fraction (9.5%). The predominant ideas about the desirable pattern of residential growth will depress planners favoring the Center for Rural Massachusetts style of clustering dwellings to minimize the visual impact and maximize visible open space: the desired single family housing was preferred in "scattered low density development" (43.8%) rather than "clustered homesites" (22.5); the latter figure may have been deflated by people reading that phrase as a euphemism for condos.

A substantial minority favored special housing provisions for groups with special needs; housing for the elderly was seen as a need by 34.9%, and affordable housing by 24.3%.

The picture for business/industrial growth preference was similar to that for residential growth, except that a higher proportion thought such growth should be regulated to be in existing business/commercial areas (probably thinking mainly of the existing South Hamilton Bay Road/Railroad Avenue "downtown"). As already mentioned, working

farms and agri-business were extremely popular ideas for acceptable businesses. Other favored business types were home business (46.8%), grocery/food (43.2%), other retail (42.0%), and recreation (40.8%) all businesses that tend to directly benefit current residents in one way or another. Less favored were offices and services (34.9% for both) and light industry (17.8%); proponents were often explicit about these being mainly desirable as sources of tax revenue.

Policy priorities as seen in the questionnaire

The number of people favoring acquisitions of conservation areas by the town (72.2%; question 6) was very surprising to conservation commission members who, in attending the last half-dozen or so town meetings, had formed the strong impression that townspeople were avidly against the acquisition by the town of anything, down to and including paper clips and stamps. It may be time for a rethink of the idea that Hamilton residents want to keep the town out of the acquisition of land and rights in land for conservation purposes, leaving that exclusively to groups like Hamilton Wenham Open Land Trust, Essex County Greenbelt Association, and the Trustees of Reservations.

Fifty five percent of respondents saw a need for regulating housing development. Increasing commercial development (favored by 23.1%) and industrial development (11.2 %) were doubtless seen as strategies for residential real estate tax relief (see below).

When respondents were asked to state how important to them each of an array of goals was (question 9), using a scale from 1 (not at all important), to 5 (very important), the most highly ranked goal was preserve open space to meet water and conservation needs (mean value on forms where this item was not left blank, 4.83). Also highly ranked were preserving current recreation facilities and equipment (4.49) and preserve farmlands (4.45).

Most-Requested Recreational Facilities

The percent of people checking off each of a long list of real and potential recreational facilities as being among the “top five you feel are important” yielded the results in the accompanying graph. Conservation areas come in a clear first, checked off on 58% of forms. This was another surprise for conservation commission members; the others in the top four were more expected (sports fields (49.1%), Patton Park improvements (45%), and children’s playgrounds (42.6%)). Responses to the survey indicate the desire to maintain conservation areas are of paramount importance, with 58% of the forms including this feature. Sports fields are the second most important recreational need to be considered with 49.1% responding. As coordinators of independent organizations such as Little League, Hamilton-Wenham youth football and soccer, the Recreation Department feels that the continuing need to improve existing fields is overshadowed by the lack of field space for competing sports. Open fields must be seasonally rotated to maintain the health of the sod and preservation of the quality of the area. There may be future conflicts between the existing open space now used for conservation and the potential for using these spaces for organized sports.

The popularity of hiking and skiing trails (39.6%) and bike trails (36.12%) hint at reasons for the high response to the conservation areas item -- these are things that gener-

ally need to be embedded in sizable tracts of open space. This is consistent with the general cultural observation that these kinds of outdoor recreation are rising in popularity in a number of age groups.

Patton Park improvements are the third most frequently mentioned important recreational needs with the town (45%). Other features of the park, such as the tennis courts (36.1%), pool (27%), picnic areas (20%) and children's playgrounds (42.6%) are also mentioned frequently. The recreation department reiterated the need for improvements in these areas. The playground is outdated and dangerous. The equipment does not meet Consumer Product Safety Commission (CPSC) or Americans with Disability Act (ADA) standards. The pool needs a larger deck and comfortable outdoor furniture to accommodate the numerous swimmers and those relaxing in the area. Tennis courts and basketball court need to be completely redone as resurfacing the cracks is no longer effective. Picnic areas could be enhanced with more benches and tables. Circulation within the park must be improved by separating parking traffic from pedestrian flow for safety reasons as well as creating pathways for handicapped accessibility.

The request for "Local neighborhood parks" was about even with tennis courts (36.1%). This points up the fact that the recreational facilities of Patton Park, Winthrop School and Cutler School playgrounds, and the old Junior High are all in a small area of west central South Hamilton -- there are far fewer opportunities for residents of other neighborhoods, notably in the eastern part of the town, to take a short walk to a park. This suggests some desirable targets for future conservation areas and parks.

Local neighborhood parks are at present almost non-existent. School Street playground, the only local neighborhood park located in the east side of town, is in disrepair. The equipment is not acceptable to the guidelines presented by CPSC or ADA. The Recreation Department hopes to improve the playground, possibly adding off-street parking and a sport field. The multiplicity of uses encourages a wider range of users to the neighborhood parks. Children may use the play area while their older siblings play sports. Cutler Park, located in the Historic District is unknown as a public space to most residents, as it is adjacent to Cutler Pond out of sight lines from traveled ways. The park would be a potential site for a picnic grove with a pathway leading to a canoe rental and landing.

Chebacco Lake in need of revitalization, not only as a recreational site for boating and swimming but for natural habitat as well. The Recreation Department would like to see the areas dredged and the creation of swimming areas, complete with diving raft, public beach, bathroom facilities, lifeguard and playgrounds. The rentals of canoes and kayaks from a boat ramp area could assist in the funding for this site. Other areas should be devoted to wildlife preservation and natural gardens.

The Recreation Department offers a "Rec Center" near the downtown area which offers a range of programs for all residents with the town including teens, the elderly, adults and children. The recently developed parking space was necessary to accommodate future use, but involved the trade-off of some space formerly in recreational use that will need to be compensated for elsewhere to meet ongoing needs. Funds are needed to further develop the site for playground, street hockey, and outdoor basketball uses to serve a wider user population.

The Recreation Department hopes to accommodate a wide group of residents within its programs and facilities. Site offer programs for one group, while spectators are offered the facilities of adjacent amenities. This multiplicity of uses is one strength of the exit. When rating their overall satisfaction with recreational opportunities in Hamilton on a scale from 1 (very dissatisfied) to 5 (very satisfied), respondent's mean ratings were 3.92.

The Best and Worst of Living in Hamilton

The open-ended questions "What do you like best about living in Hamilton" and "What do you like least about living in Hamilton" evoked responses that are the richest source of insight in the questionnaire. They speak for themselves--so much so that we have appended the full text of all responses to this question to the Open Space Plan.

They merit attentive reading in full, but to summarize some frequent themes, respondents often mentioned small-town (24% of nonblank responses to the "like best" questions) or rural (20%) characteristics, and open space (19%) as the best things about Hamilton. Hamilton Wenham Regional School District brings out strong feelings, both positive (19%) and negative (8%). Public safety concerns were also salient; the characteristic of being "safe" (mentioned by 7%) and having good police and fire services (5% each) were often in responses.

Dislikes were led by taxes (21%), which were seen by many as needlessly high relative to comparable towns. Few respondents made an explicit link between high taxes and a wish to "spread the load" by increasing commercial or industrial development, but it can be inferred that idea was behind many of the questionnaires suggesting the encouragement of such development.

Many responses talked about a variety of other frustrations with town government (13% had something negative to say), but were divided on whether to blame all their fellow citizens for not doing a good job (since Hamilton has a town meeting form of government, the respondents are all part of the town's legislative body) or only those citizens serving as selectmen or town board members. The school committee and/or school district administration were mentioned in 8% of "dislike most" answers, and number of responses show a belief in control of the town by some "establishment" or conspiracy of selectmen and town boards.

TABLE 0-18.

“Like most” and “Like least” about living in Hamilton--frequently mentioned themes (with percent of nonblank responses mentioning the theme)

LIKE MOST		LIKE LEAST	
“small town”	24%	taxes	21%
“rural”	20%	town government (any negative comment about any part of town government excluding schools)	13%
schools	19%	excessive residential growth	11%
“open space”	19%	schools or school committee	8%
“safe”	7%		
police	5%		
fire	5%		

Excessive or uncontrolled residential growth was mentioned by 11% of respondents. Several people felt that town boards had lacked foresight and/or backbone to prevent development that shouldn't have happened. The frequency of the comment that there is no long range plan should at least signal town land-use boards that they need to communicate their long range plans and the regulatory tools they do and don't have to implement them.

Several people expressed strong dislike of the ugliness of the Hamilton Shopping Center.

(2). SCORP

As policies and procedures pertaining to SCORP are currently under revision, this subject cannot be addressed in a firm basis at this time. However, the preparers were cognizant of SCORP's goals and objectives and worked within this framework.

(3). Special Groups

Responses to the survey indicate that the desire to maintain conservation areas are of paramount importance, with 58% of the forms including this effort. Sports fields are the second most important recreational attribute to be considered with 49.1% responding. As coordinators of independent organizations such as Little League, Hamilton-Wenham Youth Football and Soccer, the Recreation Department feels that the continuing need to improve existing fields is overshadowed by the lack of field space for competing sports. Open fields must be seasonally rotated to maintain the health of the sod and preservation of the quality of the area. There may be future conflicts between the existing open space now used for conservation and the potential for using these spaces for organized sports.

The popularity of hiking and skiing trails (39.6%) and bike trails (36. 1%) hint at reasons for the high response to the conservation areas item -- these are things that generally need to be embedded in sizeable tracts of open space. This is consistent with the

general cultural observation that these kinds of outdoor recreation are rising in popularity in a number of age groups.

Patton Park improvements are the third most frequently mentioned important recreational need within the town (45%). Other features of the park-, such as the tennis courts (36.1%), pool (27%), picnic areas (20.%) and children's playgrounds (42.6%) are also mentioned frequently. The recreation department reiterated the need for improvements in these areas. The playground is outdated and dangerous. The equipment does not meet Consumer Product Safety Commission (CPSC) or Americans with Disability Act (ADA) standards. The pool needs a larger deck and comfortable outdoor furniture to accommodate the amount of swimmers and those relaxing in the area. Tennis courts and basketball court need to be completely redone as resurfacing the cracks is no longer effective. Picnic areas could be enhanced with more benches and tables. Circulation within the park must be improved by separating parking traffic from pedestrian flow for safety reasons as well as creating pathways for handicapped accessibility.

Local neighborhood parks are almost non-existent. School Street playground, the only local neighborhood park located on the East side of town, is in disrepair. The equipment is not acceptable to the guidelines presented by CPSC or ADA. The Recreation Department hopes to improve the playground, possibly adding off-street parking and a sport field. The multiplicity of uses encourages a wider range of users to the neighborhood parks. Children may use the play area while their older siblings play sports. Cutler Park, located in the Historic District is unknown as a public space to most residents. As it is adjacent to Cutler Pond. The park would be a potential site for a picnic grove with a pathway leading to a canoe rental and launch.

Chebacco Lake is in need of revitalization, not only as a recreational site for boating and swimming but for natural habitat as well. The Recreation Department would like to see the area dredged and the creation of swimming areas, complete with diving raft, public beach, bathroom facilities, lifeguard and playgrounds. The rentals of canoes and kayaks from a boat ramp area could assist in the funding for this site. Other areas should be devoted to wildlife preservation and natural gardens.

The Recreation Department offers a "Rec Center" near the downtown area of the town which offers a range of programs for all residents within the town including teens, the elderly, adults and children. While the grounds of the Center are presently used for soccer fields with an adjacent playground, future uses could be expanded not only with the enhancement of the parking area, but with upgrading of the unsafe play equipment. Street hockey and outdoor basketball would increase this space for a wide group of users.

The Recreation Department hopes to accommodate a wide group of residents within its programs and facilities. Sites offer programs for one group, while spectators are offered the facilities of adjacent amenities. This multiplicity of uses is one strength of the existing facilities and one of the ideals of other sites within the Town.

C Management Needs, Potential Change of Use

(1). Management needs

Management of “active” recreation in the town has at the present an energetic and effective recreation committee and supporting paid staff. “Passive” recreation in protected open space is something the town government has little involvement in at present, since almost all such areas are under state (DEM) or private management.

As for the management of long-term general goals, there is good agreement among the great majority of Hamilton residents, also shared by the largely volunteer town government organization, about what the landscape of the town should look like in the future--as much like it looks today as is consistent with social justice and practicality. Concerning recreational opportunities, there is general agreement that they should be developed and improved continually, with special attention to making them more available to the handicapped and toward serving those who don't live in the east-central area they are currently concentrated in.

At present, all bodies of town government are pulling in much the same direction with regard to open space and recreation goals, the only contentious aspect being how to fit them in with other priorities such as school building and library building improvements.

Ongoing attention to open space and recreation concerns tend to fall into the midst of several departments of town government: the volunteer boards (recreation committee, the conservation commission and the other land use boards), the town engineer and the ‘executive branch’ of selectmen and professional town staff. All of these interest groups share the characteristic of having a lot of other things to pay attention to, and limited time to talk together. In spite of the best of mutual goodwill, it has sometimes been difficult to get ‘quality time’ for dialog on open space. The open space working group is an ad hoc creation initiated by the Conservation Commission, and perhaps it should be made a more enduring and official entity with a regular membership appointed by the selectmen; but this deserves careful consideration. It might not solve the problem since there are obvious pitfalls and risks in both of the alternatives of (1) tapping people who are already serving on one board to serve as liaisons to an inter board open space group and add yet another set of meetings to their unpaid obligations, or (2) creating an entirely new open space entity with new volunteers and without any tight connection to the other boards.

A specific management challenge is the maintenance of the quality of Chebacco Lake. The Chebacco Lake Association, the Selectmen, the Board of Health, the Conservation Commission and the Harbormaster have all expressed concern numerous times about poor septic systems on small lots adjacent to the lake, pathogen threats, nutrient overload and nuisance aquatic weeds, inappropriately intensive boating use of the lake, petroleum product releases, noise pollution, interference with access by anadromous fish, and related problems. A variety of task forces and study groups have come and gone, but the problems need more extensive and intensive work than they have so far received. This may be beyond what can be expected from volunteer efforts, and the political difficulties of public action that will cost substantial money and is seen as ben-

efiting lakeside residents and not the wider town population have not so far been overcome.

Currently a task group including selectmen and other town board members from Essex and Hamilton and the lake association, coordinated by the Essex County Planner's Office, planning and seeking funding for a long-term project to develop a Lake Management Plan and to undertake dredging of Chebacco Lake. The goals include developing programs to mitigate the immediate financial impact of sewage disposal system upgrading to lakeside residents. This will be a long and arduous project to complete, but if successful will improve one of the regions significant environmental problems.

(2). Potential change of use

The highest-priority open space challenge looming on the horizon is the presence on the development market of the Gordon College lands in East Hamilton. This could change the open space and recreation picture in the eastern "lakes district" of town from one of great but unrealized potential to one of just about no additional potential at all, in that this is the largest plausible open space parcel in the area. The college will of course do what it sees as being in its best interest -- the town and the interested private organizations need to act effectively, quickly, in concert to act in the long term best interests of the town by moving to protect this land permanently.

SECTION 8 GOALS AND OBJECTIVES

The goals and objectives were formulated after extensive consultation with members of the public and town officials. The overwhelming majority of Hamilton citizens find the town to be an exceptional place to live and work, and are aware of its value as an important regional conservation and recreation resource. However, there is a great deal of concern regarding its future a real estate development pressure increases.

A Goal 1. Protect And Encourage Visual Quality Of Hamilton

Objectives:

Establish a program for acquiring or protecting parcels that are judged to be important aesthetic resources for the Town.

Continue the work of the Downtown Study Committee in investigating ways of enhancing the Downtown area, including both Town investment and coordination of voluntary efforts of local businesses.

Consider addition of some design guidelines, either mandatory or advisory, to the Town zoning bylaw.

Look for creative approaches to the acquisition of land and less-than-fee conservation interests with the town Conservation Fund, possibly in collaboration with other public and private groups.

B Goal 2. Increase/Protect Water Supply Capability

Objectives:

Identify new municipal well sites, and develop them.

Investigate alternative sources of surface water,

Encourage/maximize recharge of aquifers within Hamilton.

Improve supply delivery capability.

C Goal 3. Protect Water Quality

Objectives:

Continue to refine regulations affecting septic systems.

Consider local regulations on the siting and operation of hazardous-materials-users in coordination with State hazardous waste regulations.

Strengthen the Conservancy District as a wetlands protection tool.

Implement a new solid waste disposal strategy.

Perform a long-range analysis of alternatives for septage disposal, and a sewer versus no-sewer strategy.

Develop controls of gravel mining, erosion, and filling outside of wetlands as additional tools to protect groundwater.

D Goal 4. Prevent New Flooding And Drainage Problems

Objectives:

Protect wetlands and floodplains from significant reduction of water storage capacity

Limit increases in runoff and potential disruptive changes in drainage patterns resulting from new development.

Prevent property damage in floodways of streams and rivers, and prevent alterations of floodways that would worsen flooding problems.

E Goal 5. Encourage Active Agriculture And Forestry

Objectives:

Maximize the economic viability of agriculture in Hamilton.

Find other means of preserving farms that do go on the land-market.

F Goal 6. Improve Recreation Opportunities

Objectives:

Minimize nutrient loading and bacterial contamination of Chebacco Lake.

Carry out needed maintenance and repair of existing facilities.

Encourage full use of existing facilities.

Try to meet the future recreational needs of the Town.

G Goal 7. Preserve And Add To Trail System

Objectives:

Plan for the continued existence of the trail system.

Plan for improving opportunities for biking and running.

SECTION 9

FIVE-YEAR ACTION PLAN

The following action plan reiterates the goals and objectives outlined in Section 8. The recommended five- year action plan for the Town of Hamilton establishes priorities for open space and recreation projects and, for each year, proposes various tasks to be undertaken. If a certain task is not addressed or completed in the designated year, it would be carried forward to the following year. By implementing the action plan, Hamilton can improve markedly the status of conservation and recreation facilities and opportunities over the next five years. Further, it would allow the town to adapt to growth and change while preserving both its rural character and natural resources that create its distinct identity.

YEAR 1

Goal 1: Protect and Encourage Visual Quality of Hamilton

Objective: Support Planning Board's initiative to make the downtown area more visually appropriate to the surrounding landscape. Look for opportunities to connect the downtown area to the trail system.

Objective: Develop a program for acquiring or otherwise permanently protecting parcels that are judged to be important aesthetic resources. Such parcels would include Gordon Woods, Hamilton Ski Hill, Cillys Hill, and parts of Sagamore Hill.

Responsibility: Conservation Commission

Objective: Continue participation in Gordon Woods acquisition consortium, and look for additional opportunities for creative approaches for the acquisition of land and less than fee conservation interests with the town conservation fund, possibly in collaboration with private groups such as the Hamilton-Wenham Open Land Trust, Essex County Greenbelt Association, and Massachusetts Audubon Society.

Responsibility: Conservation Commission

Goal 2: Increase/Protect Water Supply Capability

Objective: Investigate alternative sources of surface water such as Beck Pond and Chebacco Lake, and alternative sources of groundwater such as deep rock wells.

Responsibility: DPW, Planning Board

Goal 3: Protect Water Quality

Objective: Strengthen the Conservancy District as a wetlands protection tool.

Responsibility: Planning Board

Goal 4: Prevent New Flooding and Drainage Problems

Objective: Protect wetlands and floodplains from significant reduction in water storage capacity.

Responsibility: Conservation Commission, Planning Board

Goal 6: Improve Recreation Opportunities

Objective: Inventory existing facilities and evaluate their condition.

Responsibility: Recreation Committee

Objective: Study contamination of Chebacco Lake. This contamination threatens the life of the lake and its ability to be a viable recreational resource.

Responsibility: Board Of Health

YEAR 2

Goal 1: Protect and Encourage Visual Quality of Hamilton

Objective: Continue the work of enhancing the Downtown area, including both town investment and coordination of voluntary efforts of local businesses.

Responsibility: Board Of Selectmen, Planning Board

Goal 2: Increase/Protect Water Supply Capabilitiy

Objective: Encourage/maximize recharge of aquifers within Hamilton.

Responsibility: Planning Board

Goal 3: Protect Water Quality

Objective: Refine regulations affecting septic systems so as to eliminate leakage from substandard systems.

Responsibility: Board of Health

Objective: Complete capping of town landfill and prepare site for end use.

Responsibility; DPW, Board Of Selectmen, Planning Board, Conservation Commission

Goal 4: Prevent New Flooding and Drainage Problems

Objective: Limit increases in runoff and potentially disruptive changes in drainage patterns resulting from new development.

Responsibility: Planning Board, Conservation Commission

Goal 5: Encourage Active Agriculture and Forestry

Objective: Find creative means of preserving farms going on the real estate market.

Responsibility: Planning Board, Conservation Commission

Goal 6: Improve Recreational Opportunities

Objective: Carry out needed maintenance and repair of existing facilities.

Responsibility: Recreation Committee

Objective: Study contamination of Chebacco Lake by leaking septic systems

Responsibility: Board of Health

YEAR 3

Goal 1: Protect and Encourage Visual Quality of Hamilton

Objective: Consider addition of some design guidelines, either mandatory or advisory, to the town zoning bylaw.

Responsibility: Planning Board

Objective: Create plan for protection of Miles River wetlands with adjoining landowners and Ipswich River Watershed Association.

Responsibility: Conservation Commission

Goal 2: Increase/Protect Water Supply Capabilitiy

Objective: Identify new municipal well sites.

Responsibility: DPW, Board Of Selectmen

Goal 3: Protect Water Quality

Objective: Consider local regulations regarding use of hazardous materials, in coordination with State hazardous waste regulations.

Responsibility: Planning Board, Conservation Commission, Board of Selectmen, Board Of Health

Goal 4: Prevent New Flooding and Drainage Problems

Objective., Prevent property damage in floodways of streams and rivers; and prevent alterations of floodways that would worsen flooding problems.

Responsibility: Conservation Commission, Planning Board

Goal 5: Encourage Active Agriculture and Forestry

Objective: Maximize the economic viability of agriculture in Hamilton. Ensure that Green Meadows farm, Meadow Brook farm, and other agriculture-based businesses remain part of the fabric of the community.

Responsibility: Conservation Commission, Planning Board

Goal 6: Improve Recreational Opportunities

Objective: Eliminate bacterial contamination of Chebacco Lake swimming area.

Responsibility: Board Of Health

Objective: Encourage full use of recreation facilities.

Responsibility: Recreation Committee

YEAR 5

Goal 2: Increase/Protect Water Supply Capabilitiy

Objective: Develop new well site

Responsibility: DPW, Board Of Selectmen

Goal 3: Protect Water Quality

Objective: Implement a now solid waste disposal strategy.

Responsibility: DPW, Board Of Selectmen

Objective: Develop controls of gravel mining, erosion, and filling outside wetlands as additional tools to protect groundwater.

Responsibility: Planning Board, Conservation Commission

SECTION 10 PUBLIC COMMENTS

Letters of comment from town boards and regional planning agency follow

SECTION 11

REFERENCES

OPEN SPACE

The Bay Circuit Guide to Walks in Hamilton and Wenham. The Hamilton and Wenham Bay Circuit Committee. 1989.

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Zoning By-law, Town of Hamilton, adopted 1954, with amendments. Contains many provisions relevant to resource protection. See especially Sections I.A. Limitations on land subject to flooding, I.B. Limitations on ways across wetlands and floodplains, V.C. Use regulations, Conservancy District, V.D. Groundwater Protection Overlay District, V.A.12 Flexible Plan Subdivision provision, an innovative attempt to trade density for protected open space (cluster zoning).

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Vegetative practices in site development, Massachusetts Conservation Guide, Volume II. USDA Soil Conservation Service, Amherst, MA. HCC. Detailed planting methods for erosion management.

Guidelines for soil and water conservation in urbanizing areas of Massachusetts. USDA SCS, 1977. HCC. The predecessor to the above series, still worthwhile for its additional information on estimating runoff and soil loss.

SECTION 12 MAPS

The following maps are included in this section:

A Location map of Hamilton

B Hamilton in 1876

C Water Resource Map

D Open Space Map (see also MassGIS 1:25000 Open Space Map)

E Topography Map

F Zoning Map

G Special Landscape Features Maps:

(1). Scenic/Historic Map

(2). Soil Limitations Map

Ch. 61, 61A, and 61B parcels shown on MassGIS Open Space Map

H 5 Year Plan Map
