Land Use

I. Issues, Goals & Recommendations

A master plan's most important function is to establish a land use blueprint for the future. "Land use" refers to the allocation and physical arrangement of a community's residential, commercial, industrial and institutional development, its farms, open space and natural resources, and roadways. Most people do not use the term "land use" when they explain what a town looks like, yet associating northwest Hamilton with agricultural landscapes and large forests, or characterizing Hamilton Center as an enclave of historic homes, civic and institutional buildings, is to describe these areas by their land use pattern.

The land use element of a master plan should guide local government's approach to managing growth and change. Toward that end, it identifies opportunities to shape the physical evolution of a town, giving due consideration to the community's history, established land use traditions and character-defining features. It culminates in a set of growth policy principles and a course of action to implement them. Hamilton has many opportunities to influence its future, more than may be obvious to residents and landowners. The town's major challenge will be to harness and guide the investment power of private development in ways that can provide lasting public benefit.

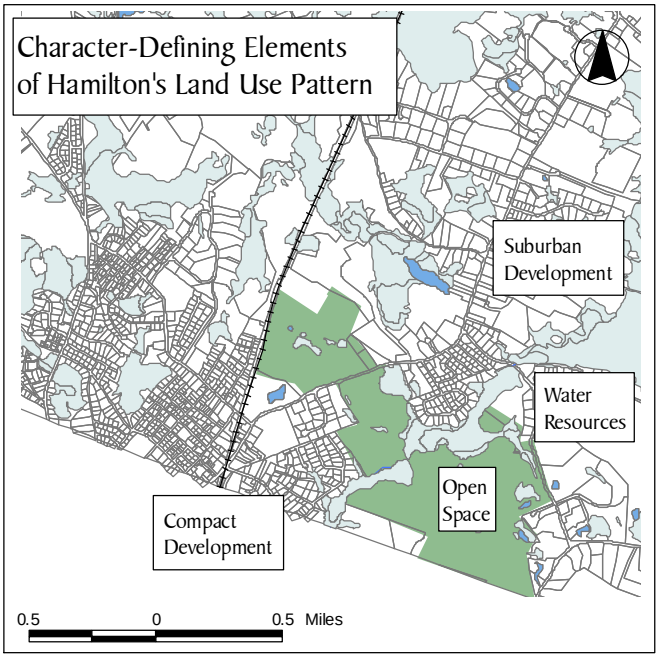
Important Questions

The land use element addresses six questions that form the basis for the growth policy principles outlined in the master plan:

- What ingredients of Hamilton's development pattern are essential to the character of the town?
- Does the Zoning Bylaw promote a land use plan that is compatible with Hamilton's vision of itself and the community's future needs?
- Since Hamilton's estates and farms are vital to the environmental, social, economic and fiscal health of the town, do the right tools exist to guide the future use of these properties? Does Hamilton offer realistic choices to the owners of large parcels?
- Are Hamilton's land use policies conducive to the future vitality of downtown and if not, what changes should be made to increase the retail mix and the economic contribution that downtown commercial properties make to the town?
- Does the town have a good strategy and the tools to manage the incremental changes caused by small-parcel development?
- What is local government's responsibility for managing growth– and does Hamilton have adequate capacity to meet its obligations?

Discussion

Hamilton residents often cite open space as their town's most important feature, yet "open space" is a generic term and it does not capture the qualities that distinguish Hamilton from other communities in the Commonwealth. Framed by a modest roadway system, Hamilton's land use pattern is a tapestry of large undisturbed forests, agricultural landscapes and equestrian facilities, a traditional downtown, residential neighborhoods, and an intricate network of rivers, streams, brooks and wetlands that organize the town into discrete development envelopes.



Viewed in their entirety, these attributes shed light on the town's physical and social history and the kind of community it is today. Farms and vestiges of old family estates reinforce the town's character and explain the endurance of several large land holdings. In contrast, a compact village etched into the southern part of town serves as both a shopping district and gateway, its streets lined with stores, offices and homes on small lots that pre-date zoning. Less than two miles north on Bay Road lies another, much older village memorialized as the Hamilton Center Historic District, a collection of institutional, civic and residential uses nestled against the backdrop of the Miles River. Pockets of modern suburban development occupy land in the east, central and north sections of Hamilton, underscoring the town's long-standing preference for single-family homes.

This mix and arrangement of land uses is important, but few aspects of Hamilton have had the same visual or cultural impact on the town as its equestrian facilities. The villages of South Hamilton and Hamilton Center are made recognizably distinct not only by their architectural traditions and physical form, but also by the open space that separates them: the 414 acres controlled by Myopia Hunt Club. Hamilton has changed considerably since its heyday as a summer retreat for wealthy families and horse enthusiasts, but much of what today's residents say they value about their town can be traced to the role of equestrian activity on Hamilton's physical development, economy and class structure. Though Myopia Hunt Club is a landmark, it is but one element of a much larger system of trails, open fields and pastures, paddocks, barns, stables, boarding, instructional and sales establishments, and built assets that preserve the legacy of families whose late-19th century vacation homes made Hamilton an equestrian mecca. This system had far-reaching consequences for all who once lived and worked in town. As Hamilton's equestrian-centered economy gradually gave way to forces that changed lifestyles, mobility, work and values after World War II, the land market gave way to homes.

Out of a sincere desire to preserve Hamilton's special qualities, the town has adopted zoning regulations with an implied blueprint for growth that is not at all like the community residents cherish today. For example, they value the image formed by large tracts of open and forested land, yet the town's development policies do not encourage the retention of these features or the impression they convey. Existing policies neither protect nor encourage farming, and they leave property owners with little choice but to subdivide land instead of pursuing alternatives that would save contiguous open space. Although many owners of large parcels have said they would like more regulatory flexibility so they can protect the best features of their land if the ever had to sell some of it for development, Hamilton has found it difficult to embrace creative land use techniques.

Hamilton is also a family-oriented town, and in this regard its land use policies have been very successful: 95% of Hamilton's homes are single-family residences and 99% of the town is zoned for residential development. The zoning bylaw facilitates divisions of land into house lots, and ever since Hamilton adopted zoning in 1954, its development pattern has responded in kind. The first bylaw legitimized Hamilton's then-existing development and imposed a one-acre minimum lot requirement over most of the remaining vacant land. By 1971, the acreage used for homes, roads and businesses in Hamilton had increased 212%. Later, the town adopted two-acre zoning and the rate of land consumption per dwelling unit rose significantly. By prescribing larger lots and restricting allowed uses to single-family homes, Hamilton has prevented significant amounts of new growth and remained a fairly small town. However, the same policies have fragmented large amounts of open land, placed Hamilton's equestrian features at risk and made the town increasingly suburban in form and appearance.

Unlike many communities that lost large working farms to suburban development after 1950, Hamilton was in the unusual – and fortunate – position to have farms that met the residential, recreational and leisure interests of owners with long-standing ties to the town. Some farms originated as land grants and had been passed from generation to generation ever since colonial times. Those who acquired property in Hamilton at the turn of the century established summer estates for the use and enjoyment of their families. They changed the town's economy in important ways: by introducing new capital into the community, creating farm and service jobs, investing in agricultural plant and facilities, and shaping a land market that attracted investment in rural-residence farms.

Along with the town's few commercial farmers, the families that settled in Hamilton more than a century ago defined the terms of local commerce for many decades to come. Their impact could be seen in the number of agricultural supply, equipment, automotive and engine repair establishments that once operated in Hamilton. Just as the town was physically changed by suburbanization, so too was its economy. Today, Downtown Hamilton's shops, offices and restaurants cater to consumer spending preferences that differ markedly from those of 50 years ago. Household growth, modern lifestyles and change in the size and make-up of Hamilton's population gradually altered the mix of downtown businesses. These forces go hand-in-hand with the auto-dependent development pattern that has evolved in Hamilton since the mid-1940s.

Downtown Hamilton is an attractive business district with small-scale commercial buildings that contribute to its village charm and pedestrian appeal. It grew up around a major transportation center where the train stopped and horse car, livery stable and today's automobile and pedestrian modes of transport begin. Measured by urban or suburban

standards, however, land in Downtown Hamilton is underutilized. Inadequate parking and wastewater disposal facilities impede business growth, but they are not the only barriers to new investment. Even if the district had more parking and a wastewater treatment plant, Hamilton's zoning regulations do not express a coherent vision of the downtown area. Off-street parking requirements and Title V compliance cannot be met given current lot sizes and land ownership patterns in the Business District, which includes homes that may one day be converted to commercial use.

In addition, there is very little regulatory flexibility to adapt downtown buildings to changes in the real estate market. Though single-family homes are permitted as of right anywhere in the Business District, the town does not allow multi-family housing. However, the ability to convert vacant or underused upper-story space to residential uses is important for maintaining commercial property values, retaining and strengthening downtown businesses, and providing housing choice. Finally, while Hamilton seems conscious of aesthetics, its zoning omits downtown design guidelines. The bylaw's prescription for downtown contradicts what exists on the land and what residents say they would like to see in their only business zone.

As a community's land becomes increasingly parcelized, policymakers face new challenges. The incremental formation of lots makes development more visible and seemingly intrusive, eclipsing views from the road, privatizing land that neighborhoods had thought of as common open space, disrupting historic stone walls, and generating more cars. State laws give a community virtually no say over divisions of land into lots that meet basic local requirements and have adequate frontage on a public way, and since these "Approval Not Required" or "ANR" lots are so easy to create, developers typically prefer them. This type of development is plainly evident in Hamilton: since 1990, ANR lots surpassed the number of lots created in filed subdivision plans at rate of 2:1. Still, the succession of ANR lots along Essex and Moulton Streets, and lower Sagamore Street, undoubtedly altered the character of those roadways as land was cleared for homes, yards and driveways.

Hamilton has placed much greater emphasis on controlling growth in quantitative than qualitative terms. The town's prestigious name all but assures that new homes will be large, expensive and tastefully built, yet valuable single-family homes are not synonymous with quality development or growth management. Much like an imbalanced ecosystem, communities that become dominated by one land use eventually contend with the environmental, economic and fiscal consequences of imbalanced development. While large-lot growth policies have curtailed the amount of single-family home development in Hamilton, they have not helped to control the escalating cost of municipal and school services. If it seems that the solution lies in combating new homes lot-by-lot, Hamilton already has a base of residential development that is expensive to serve, and the town has virtually no commercial tax base to absorb some of the burden. As the market recycles older homes, the departure of elders and empty nesters makes way for younger households, usually with children. Between 1990-2000, the average number of school-age children per family in Hamilton increased at an unusually high rate, from .58 to .74, not only because of general demographic trends but also because of Hamilton's own high rate of turnover in existing housing units. School population growth in Hamilton cannot be explained by new housing development alone, for during the 1990s, five households moved into Hamilton for every new home that was built.

Hamilton has traditionally relied on private activism to save open space and the town continues to benefit from the generosity of its residents. For example, some family estates have not been subdivided into house lots because the owners planned ahead for conversions to a use that maintains substantial amounts of open land, e.g., the Pingree School on Highland Street and Gordon-Conwell Seminary off Bridge Street. Institutions such as Myopia Hunt Club and the owners of family estates have also donated property to Hamilton, such as Patton Park and the Community Center. Other large properties remain somewhat protected, but over time, most of Hamilton's estates have been divided and partially developed in a trend that runs parallel to the town's suburbanization.

Hamilton still has developable land, but capacity for new homes is not the only issue the town should address and in some ways, it is not even the most important issue. Design guidelines, development performance standards, regulations that encourage sensitive land use, and a better alignment between development costs and revenue will help to manage growth without sacrificing the qualities that Hamilton residents find so appealing about their town.

Land Use Goals

1) Preserve large, undisturbed forests, open space and agricultural land, equestrian facilities, trails & trail connections.
2) Respect the capacity and quality of Hamilton's wetland, surface and groundwater resources.
3) Retain and enhance distinctive, pedestrian-friendly neighborhoods, particularly near commercial areas and community facilities.
4) Provide housing choices that meet the social, economic and lifestyle needs of a multi-generational, economically diverse community.
5) Encourage development that is environmentally sustainable and less costly to the town.
6) Preserve buildings and structures that represent all eras of Hamilton's history.
7) Provide for areas that include a mix of residential, commercial, agricultural and equestrian uses.
8) Secure adequate land for current and future community facilities.
9) Commit to a dedicated, professional staff to assist boards and committees in managing the town's growth.

Growth Management Policies

1) Development will be designed to protect the quality of Hamilton's wetland and water resources and to limit water consumption to amounts that do not exceed local and state planning standards for public water supplies, recognizing the need for flexibility to preserve horse pastures and serve agricultural uses.
2) Whenever possible, commercial and residential development will be guided toward established areas without sacrificing the small-town character of Downtown Hamilton and neighborhoods, all as part of a comprehensive plan to preserve open space and farmland, and to connect walkable, attractive neighborhoods with retail, services and community facilities.

3) Farming and equestrian activities are rooted in Hamilton's history and they enjoy a preferred position in the town. Regulations, policies and administrative procedures will consistently promote the retention and expansion of agriculture as a way of life, work and use of land in areas with suitable soils and adequate water supplies.

4) Roadway views play a critical role in conveying an impression of Hamilton. Development will respect and preserve mature trees, stone walls and scenic views along Hamilton's major and minor streets, and protect roadside open space by subordinating the location of new buildings and roads to the significant natural or man-made features of a site.

5) In support of a downtown that thrives as the town's business, social and cultural center, Hamilton's zoning will provide maximum flexibility as to use and dimensional requirements in the Business District and regulate appearance, operation and safety through site plan and design review.

6) While retaining its tradition of single-family homes, Hamilton will promote housing that is suitably designed and affordably priced for senior and young citizens. Where possible, mixed residential uses will be located close to retail, services and transportation resources.

7) Hamilton will target capital investments to support the land use goals of the Master Plan. As such, local government will work to acquire open space that protects farmland and water resources from development, and to acquire or improve recreation, water, wastewater, transportation, municipal and school facilities in areas where new or additional development will occur.

Land Use Recommendations

Bylaws and Regulations

1) Tailor land use regulations and policies to foster open space and farmland protection, encourage vital neighborhoods and mixed-use areas, and improve the town's fiscal future, in ways generally consistent with the outcomes shown in Map 1.

2) Adopt an open space-residential cluster bylaw that requires open space design in developments over an agreed-upon size threshold, e.g., five or more lots or five or more housing units. Provide density incentives to attract small, common-wall housing units that can be clustered efficiently on the land, and thereby provide environmental and fiscal benefits to the town.

3) Revise existing elderly housing regulations to provide for independent elderly housing, retirement and assisted living facilities by special permit.

4) Remove regulatory barriers to infill development in older, established areas of town, in exchange for public benefits such as a greater mix of affordable housing or local commerce, with limits on the number of infill developments per neighborhood in order to preserve the character of downtown's residential areas.

5) Evaluate the appropriateness of a demolition delay bylaw in the town's Residence Districts to protect older residential, non-residential and accessory structures from demolition for at least six months in order to encourage alternative uses, and provide corresponding zoning regulations to make preservation economically feasible.

6) Initiate the necessary planning and surveys to establish more local historic districts in Hamilton, including single-property districts, and to nominate additional districts and properties for listing on the National Register of Historic Places.

7) Use zoning overlay districts to accomplish key land use objectives

   a) Apply an incentive overlay district to large parcels, providing regulations that inspire an alternative to subdivisions, such as mixed-use development to preserve significant natural and built features, agricultural land and equestrian facilities.

   b) Apply an incentive overlay district to areas with established higher-density uses such as Asbury Grove or Gordon-Conwell Seminary, and encourage a mix of residential uses, including affordable housing, with adequate wastewater and other facilities.

   c) Apply a protective overlay district to undeveloped or underdeveloped areas along collector and local streets, substantially increasing the minimum frontage requirement in order to discourage Approval Not Required (ANR) lots or providing for frontage waivers in exchange for conservation restrictions along the roadside.

   d) Apply a protective overlay district to high elevations and hillsides to discourage loss of scenic resources.

8) Amend the Business District regulations to allow accessory apartments above the ground floor of commercial buildings, by special permit.

9) Reorganize and streamline the bylaw's administrative procedures by clarifying the roles and responsibilities of the Planning Board, the Zoning Board of Appeals and other local officials that perform development review and permitting functions.

10) Develop a comprehensive set of architectural, sign and site design guidelines for the Business District, non-residential or mixed-use development in other parts of town, and multi-family housing.

11) Consider allowing accessory dwelling units and single-family to multi-family conversions in residences older than 10 years, subject to administrative site plan review by the Planning Board, an affordable housing use restriction on at least one unit, adequate wastewater disposal capacity, and a cap on the total number of accessory or conversion units per year. Allow accessory dwelling units and conversions by special permit in order to waive the affordable housing use restriction.

12) Conduct a comprehensive review of the town's zoning, subdivision control, wetlands protection and board of health regulations to assure internal consistency and remove impediments to implementing the Master Plan.

13) Use GIS technology to estimate development impacts on surrounding areas and to evaluate developments for consistency with the Master Plan.

<u>Policy, Program and Capital Investment Actions</u>

1) Authorize a bond issue for agricultural, conservation, park and recreation land purchases, and finance bond repayments with Community Preservation Act (CPA) revenue and other available funds.

2) Evaluate the appropriateness of establishing a Department of Planning and Community Development in order to provide town boards with adequate support for planning,

growth management and open space protection, and finance a portion of the department's operating costs with CPA revenue and open space bond proceeds.

3) Initiate, secure financing and coordinate the construction and operation of a package treatment facility and municipal parking areas to serve downtown commercial and mixed-use buildings.

4) Focus public capital investment in roadway maintenance and improvements, sidewalks, bikeways, water supply and distribution system improvements, and other community facilities in areas designated for higher-density or mixed-use development, and focus public land acquisition investments in areas designated for resource protection priorities.

5) Assure consistency between the town's water rate structure and the land use objectives of the Master Plan, and develop public water supplies in areas where aquifer protection zones will benefit wildlife and critical resource areas.

6) Support the Conservation Commission's efforts to maintain timely five-year updates of the Open Space and Recreation Plan so that Hamilton can apply for and receive Self-Help grants.

7) Institute a predictable cycle of Master Plan updates.

Implementation Capacity

1) Improve communication and coordination between town boards and committees with a role to play in growth management and the development process, such as the Planning Board, Conservation Commission, Board of Appeals, Historic District Commission, Board of Health and Inspectional Services, and the proposed Farm Commission, Economic Development Commission and Housing Partnership[1]. Provide adequate training and support for town staff to assist citizen volunteers, and consider bylaw changes that reinforce the need for coordinated development review procedures.

2) Appoint a Master Plan Implementation Committee to assist the Planning Board with the initial phases of Master Plan implementation, and ask other town boards and commissions to participate.

3) Adopt and use GIS as a standard component of development review.

[1] See Open Space & Resource Protection, Economic Development and Housing elements of the Master Plan.

II. Land Use Analysis

Hamilton's regional setting, water resources and unusual social history have influenced the land use pattern that exists today. The town's 14.9-mi^2 area contains significant views, a number of large, uninterrupted wetland areas associated with rivers and streams, and a mix of forested, agricultural and institutional open space. Not surprisingly, the Massachusetts Department of Environmental Management (DEM) classifies nearly three-fourths of the town as a scenic resource. Hamilton is a strikingly beautiful, pleasant place to live, work and visit, although the character of late 20th-century development has altered the town's open, rural feel. Noteworthy features of Hamilton's land use pattern include a wealth of open space, the cluster of well-preserved, historic built assets around Hamilton Center, an inviting, attractive downtown and its adjacent traditional neighborhoods.

The distribution and arrangement of land uses in Hamilton have helped to preserve many of the town's rural qualities despite changes that have occurred in the past 25 years. Most of Hamilton's existing development is concentrated in three areas, and a vast amount of open space extends across the western half of town (Map 2). Developed land uses and roads cover about 22% of the town's land area, excluding farms, institutional uses and land occupied by family estates. More than one-fourth of the town consists of wetlands, streams and open water. Just as the location of Bay Road has shaped Hamilton's development history, so have wetland and water resources. This is plainly evident in the southwestern corner of Hamilton, where the Ipswich River forms part of the town line and a large expanse of wetlands (Wenham Swamp) constrains development.

The Miles River and its associated wetlands form a natural break between the central and east sections of town, and influenced the location of Bay Road, which parallels the Miles River from Wenham to Ipswich. Similarly, Black Brook and the wetlands connected to it track the course of Cutler Road. While the Ipswich River defines most of Hamilton's border to the west and north, the Miles River separates eastern Hamilton from Ipswich and Essex. Finally, Chebacco Lake and three other ponds in East Hamilton help to explain the relatively higher density of development nearby. At the same time, they have acted as a barrier against the creation of east-west roadways between Hamilton and neighboring Manchester.

From colonization through the early 1800s, Hamilton developed as an agricultural settlement with a few mills and shops. Those who did not own or work on one of the town's farms were employed in a variety of trades. As was the custom before the separation of home from workplace in the 19th century, Hamilton's people built cabinets, boats, chairs and shoes on their own property. Their travel about town was made possible by a limited number of trails, which eventually became roadways that connected the best of farmland and followed the contours of the natural landscape. Bay Road was the organizing feature of Hamilton's transportation system, as suggested by the cluster of buildings around the church and town meeting building constructed by settlers in the Hamilton Parish of Ipswich.

In 1830, farmers co-existed with mill workers, shopkeepers and tradesmen across the town and the idea that communities ought to be divided into distinct areas for residences and businesses was utterly alien. By the turn of the century, Hamilton had changed significantly. The founding of Myopia Hunt Club in 1876 and the development of many large family estates gave rise to Hamilton's image as a rural retreat, installing a new class structure that endured through much of the 20th century. South Hamilton's commercial center grew up around the junction of two rail lines, one serving Essex's ship building industries and the ice

export industries and hotels around Chebacco Lake and the other established to carry summer residents to the Asbury Grove Camp Meeting Ground (1863). New residential areas grew up around churches located in Hamilton Center, at the cross roads of Walnut and Essex Street and schools.

Equating land use records from the past with today's geographic data is difficult because the information is not organized systematically and descriptive land use classifications have changed. Still, the MacConnell Resource Mapping Project (1951) shows that at mid-century, 60% of the town's land was forested and some 2,100 acres remained in use for farming. Hamilton's year-round population of 2,746 was housed in fewer than 1,000 dwelling units and aggregate residential development covered slightly more than 850 acres of land, excluding farm homes and large estates. Table 1 tracks land use changes that have occurred in Hamilton since 1971.

Table 1: Land Use Change, 1971-1999[2]

	Acres of Land			Change
Land Use Classification	1971	1985	1999	1971-1999
Agricultural Land	1,308	1,247	1,212	-96
Forest	5,181	4,996	4,945	-237
Wetlands	786	786	646	-140
Recreation	195	195	177	-18
Moderate-Density Residential	742	742	781	39
Low-Density Residential	838	1,078	1,251	414
Commercial/Industrial	32	37	37	5
Institutional/Urban	113	134	167	53
Transportation[3]	0	1	1	1
Water	231	231	233	2
Other	144	123	120	-24
Total Acres	9,570	9,570	9,570	
Summary Statistics	1971	1985	1999	
Residential	16.5%	19.0%	21.2%	
Commercial/Industrial	0.3%	0.4%	0.4%	
Agricultural	13.7%	13.0%	12.7%	
Forest	54.1%	52.2%	51.7%	

Source: MassGIS, Vector Data Library, "lu119ph.dbf," (2001).

[2] Table 1 reports land use on the basis of coverage and required area, not total development. Example: "residential" includes land covered by buildings and site development features such as driveways, and for each home, sufficient land area to meet the town's zoning requirements. If measured by land in all developed parcels, the amount of residential land in Hamilton is about 4,200 acres, not including vacant/undeveloped.

[3] Transportation refers to major transportation facilities such as a highway interchange, rail or inter-modal facility. Land used for local roadways is assigned to the closest land use class, e.g., residential for roads that serve predominantly residential uses.

Major Land Use Features

Open Space & Agricultural Land

Both the variety and abundance of open space in Hamilton are important to the character of the town. Large, contiguous forests and wetland areas, farms, equestrian facilities, family estates and private institutions all contribute significantly to the town's natural beauty and character. Bradley Palmer State Park, the Ipswich River Wildlife Sanctuary and Appleton Farms, along with farmland protected by permanent restrictions such as the Winthrop, Lawrence, Patton, Pingree, Totten and Britton properties, all play a crucial role in preserving the open, rural ambience of West Hamilton. Another large tract of open space indelibly shaped Hamilton's modern development history: Myopia Hunt Club and Schooling Field, a private, 414-acre country and hunt club founded in 1876. Unlike other sizeable open space areas, however, Myopia and adjoining Devon Glen, the Bradford Reserve, and the Harvard Forest are not permanently protected from development.

Owing to the tradition of equestrian activities in Hamilton, the town's open space not only meets scenic, environmental and recreational needs but also supplies a substantial network of bridle paths and trails. According to local records, Hamilton's open space inventory includes approximately 4,480 acres of land, 65% of which is permanently protected.[4] Nearly all of the large, permanently protected open space parcels are owned and managed by non-local organizations such as DEM, the Massachusetts Audubon Society, Essex County Greenbelt Association and The Trustees of Reservations (TTOR). The town acquired its largest conservation area, Chebacco Woods, in the late 1990s, but the Hamilton Conservation Commission and the Hamilton-Wenham Open Land Trust hold conservation restrictions on a number of smaller parcels throughout town.

Hamilton's official open space inventory does not include all vacant property in town. Land classified as open space generally consists of conservation and recreation land owned by government agencies or non-profit conservation trusts, privately owned farms, forests and recreation areas, and the holdings of non-profit institutions such as Pingree School, Gordon-Conwell Seminary and the Hamilton Wenham Regional School District. In addition to 700 acres of forests and farms that are differentially assessed under Chapter 61 or 61A, Hamilton has an assortment of small, partially developable parcels and about 966 acres of vacant land with varying levels of development suitability.[5]

Residential Development

Housing is Hamilton's primary form of development because 99% of the town is zoned for residential use. Approximately 22% of the town (2,032 acres) is covered by residential development,[6] and while homes exist throughout Hamilton, they are concentrated primarily in South Hamilton, East Hamilton, and along Bay Road where most of the developable land

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[4] Citizens Action Planning Committee (CAPC), Open Space and Recreation Subcommittee, "Protected Open Space in Hamilton" (March 2003).

[5] Hamilton Assessor's Office, FY02 Parcel Database (March 2002).

[6] See Footnote 2. In assessment terms, 45% of Hamilton's land (4,200 acres) is residentially developed, but in many cases the land has additional development capacity, e.g., an estate or a larger-than-required lot occupied by a single-family residence.

was converted from farm and woodlot use to residential neighborhoods along connector roads. After World War II, Hamilton began to grow rapidly in response to market demand for homes in the Greater Boston area. During the 1950s and 1960s, suburban development pressures caused the town's housing inventory to double while the amount of land consumed by residential development more than tripled. The postwar influx of homes and people changed the town significantly, yet the changes that occurred in Hamilton did not take place in a vacuum. Federal highway, housing and economic policies converged to ignite the growth of suburbs, siphoning investment away from established urban areas. A number of small towns in Essex County were similarly affected: the populations of Topsfield, Boxford and Lynnfield increased by more than 100% between 1950-1960 while the cities of Lynn, Lawrence, Salem and Haverhill experienced a net loss of residents.

Though Hamilton's residential base consists almost entirely of single-family homes, it retains some of the diversity described by Charles Eliot in the 1965 Master Plan. A mix of homes on small lots that pre-date zoning and subdivision control, several family estates, and conventional development on the larger lots that characterize Hamilton's recent development all contribute to the character of the town. In Eliot's day, more than half of today's homes were built before 1939. Today, however, 73% of the town's housing stock was built after 1939. The age, location, style and value of Hamilton homes varies considerably across the town, as shown in Table 2.

Table 2: Distribution of Housing Units by Census Areas[7]

Description (See Map 3)	Land Area (Acres)	% Town	Housing Units	% Town	Units/ Acre	Median Age of Housing Units	Median Value of Homes (2000)
East Hamilton	1,935.2	20.9%	738	26.1%	0.38	1965	$ 299,400
South Hamilton	310.4	3.4%	427	15.1%	1.38	1957	$ 279,000
Asbury-Highland Sts.	840.8	9.1%	594	21.0%	0.71	1948	$ 231,100
Asbury St.-Wenham Swamp	1,002.5	10.8%	331	11.7%	0.33	1951	$ 171,600
Hamilton Center-Remainder of Town	5,156.5	55.8%	735	26.0%	0.14	1947	$ 492,000

Sources: Census Bureau, Census 2000 Summary File 3, Tables H-1, H-35, H-76 Essex County Block Groups 2151- to 2151-5; MassGIS, Census 2000 Geographic Data Sets.

Commercial Development

Commercial development occupies a very small percentage of Hamilton's total land area. Nearly all of the town's commercial land uses are located in the downtown section of South Hamilton, on and adjacent to Bay Road. For at least three decades, Hamilton has operated

[7] Notes to Table 2: (1) Areas are defined by federal census boundaries as shown in Map 3, not by locally recognized neighborhoods. (2) "Land Area" excludes acres of open water. (3) "Hamilton Center-Remainder of Town" includes non-dormitory housing units at Gordon-Conwell Seminary.

under a policy of confining commercial land uses to a single 26.2-acre Business District. Pockets of non-conforming business activity exist elsewhere in town, but over time, the number of small, locally owned businesses that were once scattered about Hamilton has declined.

Downtown Hamilton is a village scale shopping district with stores, banks, professional offices and a small amount of housing serving the towns of Hamilton and Wenham. A commuter rail stop located just over the line in Wenham makes Hamilton's downtown a resource for both commerce and transportation. Together, these land uses make on- and off-street parking a significant urban feature in South Hamilton's business zone.

Hamilton's commercial development pattern is unique in at least three ways. First, since the only business district is essentially built out, the town has no vacant commercial land. Demand for retail and office space has been met by the gradual conversion of homes to businesses, and a few opportunities for commercial investment linger in the small residential areas adjacent to downtown – that is, areas zoned for business but used for housing. Second, Hamilton's zoning excludes industrial districts, so there is no industrial development in the community. The limited amount of business activity in general, coupled with prohibitions against industrial, research and development and corporate office uses, makes Hamilton a bedroom community for most households but also contributes to the small-town character that residents find so appealing. Third, the absence of neighborhood business zones means that residents who wish to shop locally must drive unless they live within walking distance of Downtown Hamilton.

Public and Institutional Uses

Community facilities and private institutions occupy 420 acres of land in Hamilton. Most properties owned by the town or by non-profit public service organizations, such as Town Hall, the Community Center, public parks and playgrounds, the public safety building and the former library, are located along Bay Road while the new library, shared with neighboring Wenham, is close by on Union Street. The four public schools in Hamilton, all controlled by the Hamilton-Wenham Regional School District, also reflect a long-standing preference for placing community facilities where they are most accessible to the largest number of people. The Cutler Elementary School (1952) on Asbury Street and the Winthrop Elementary School (1959) on Bay Road in South Hamilton, situated less than one mile apart, along with the more recently built middle and high school complex north of Town Hall on Bay Road, all make use of major through roads close to established neighborhoods. In most cases, Hamilton's churches are similarly located on or adjacent to Bay Road.

The town has several private non-profit institutions including the 71-acre Pingree School on Highland Street, the 128-acre Gordon-Conwell Seminary in East Hamilton and the Asbury Grove Camp Meeting Ground, which owns about 83 acres of land off Asbury Street. Though Myopia Hunt Club is usually thought of as open space, it is not only a major private institution serving a membership clientele, but also one of the town's largest property taxpayers. The land and structures owned by Myopia Hunt Club contribute about 48% of Hamilton's commercial assessed valuation.

Roadways

The frame of Hamilton's present road network was etched into the land over a long period of time and is evident on maps from more than a century ago. Roads serve vital purposes in

all communities. In addition to their obvious role as conduits for traffic, roadways provide a window to surrounding land uses. Accordingly, views from the road influence the way people perceive a town and its sub-areas. Roadways also create access to land, and access has a more direct impact on the development process than almost any other feature of a community. This is plainly evident in Hamilton's land use pattern. Route 1-A, or Bay Road, is a historic roadway and a regionally significant arterial that provides access between Route 128 and the towns of Wenham, Hamilton, Ipswich, Rowley and Newbury. In Hamilton, the entire length of Bay Road is surrounded by a mix of established land uses including small businesses, homes, public buildings and parks, churches, and private institutions. As a long-established state highway, Route 1-A channels a considerable amount of north- and south-bound traffic each day congesting the town center. Significantly, all of the local roads that extend toward the east or west – Asbury and Bridge Streets, Cutler and Moulton Roads – terminate (or originate) at Route 1-A. The absence of continuous east-west routes through town is related to the location of open water resources and it contributes to the distinct identities of East and West Hamilton.

A second arterial, Route 22, coincides with lower Woodbury and Essex Streets in Hamilton and carries traffic between Route 128 and Essex. Route 1-A and Route 22 are the only numbered routes that cross through Hamilton. The function of these roadways is supported by a limited number of collector streets, i.e., roads that collect and channel traffic from surrounding local streets to Route 1-A or Route 22. Highland and Bridge Streets serve as Hamilton's major traffic collectors. Highland Street runs through West Hamilton from its origin near the center of Ipswich south to the center of Wenham, merging with Route 1-A in both locations. Bridge Street is an east-west road that runs from Bay Road to Essex Street near the Essex town line. Secondary roadways such as Asbury Street, which extends from Bay Road in South Hamilton northwest to Ipswich Road in Topsfield, and Moulton Street between Bay Road and Sagamore Road, also distribute traffic between Hamilton's outlying areas and the center of town. In total, Hamilton has 51.57 miles of public roads or about 3.5 road miles per mi^2 of land area – slightly below the average for communities of similar size.[8]

Land Use Regulations

Hamilton adopted zoning in 1954 and has amended its bylaw many times in the past 40 years. In its present form, the Hamilton Zoning Bylaw is similar to the suburban zoning found in most of the Commonwealth's communities: it divides the town into traditional use districts (Map 4) and, through overlay zones, it discourages development in significant natural resource areas, notably wetlands and groundwater recharge zones. It also includes a floating special use district for elderly housing. The Hamilton bylaw omits features that are common elsewhere, such as a table of uses, a table of dimensional regulations, and drawings that illustrate, by example, the meaning of a dimensional standard. Though not essential, the absence of "user-friendly" features makes Hamilton's bylaw vulnerable to conflicting interpretation, not only by landowners but also by town boards.

[8] MassHighway, "Massachusetts Highway Department Roads," (December 2002), obtained from MassGIS. Suburban comparison statistics compiled by authors.

Issues and Concerns

Hamilton's zoning and administrative procedures support some, but not all, of the town's development objectives. At times, the zoning bylaw is inconsistent with what residents say they would like to see in their community. It prescribes the divisions of land that have fragmented Hamilton's open space and caused residential development to extend along collector and local roads. It also promotes growth that is usually high on per capita water use, and by discouraging compact development, the bylaw has contributed to making Hamilton an auto-dependent community. If Hamilton did not have a long history of preservation efforts by private citizens, conservation organizations, the state and recently, local government, the zoning bylaw would have spawned large subdivisions in many areas that are protected as open space today. The reason: zoning limits the options available to dispose of land for any profitable use except single-family residential development.

However, Hamilton's zoning has also preserved the town as a place for families to raise their children, a quality that is very important to residents new and old. It includes beneficial features, such as a provision that allows the Planning Board to approve common driveways and thereby reduce driveway openings along rural streets. In addition, the bylaw shows that local officials have tried to offer some alternatives to conventional divisions of land. For example, it includes "flexible plan subdivision" regulations that appear in several suburban bylaws around the state, and when floating zones were unheard of in Massachusetts, Hamilton adopted one to allow for elderly housing development. Unfortunately, these tools have not achieved what Hamilton had in mind when town meeting approved them in the late 1980s. Their lack of success lies partially in the unworkable construction of both bylaws – especially when compared to the ease with which developers can divide land into conforming single-family house lots.

On balance, Hamilton's zoning bylaw reflects the conflicted sentiments about development, open space and social responsibility that residents and local authorities expressed throughout the Master Plan process. There is also disagreement within town government about the purposes of zoning and how regulations ought to be administered. Some officials lament the bylaw's lack of clarity while others think that ambiguous rules enhance the town's ability to negotiate with developers. Of course, Hamilton is not alone in this regard. The state zoning act and subdivision control law make it very difficult for the Commonwealth's towns to regulate land use in ways that most people would consider fair: by adopting rules that express a coherent vision, streamlining the review process for types of development that communities want to encourage, and eliminating conflicts between zoning and other regulations. Several features of the Hamilton Zoning Bylaw create significant growth management challenges for the Town:

- The incentive to divide land. The only economic use for which 99% of Hamilton's land can be developed is detached single-family homes on individual house lots. The town wants to save open space and trails, preserve farms and estates, retain elderly homeowners and prevent large, unwanted comprehensive permits, but it does not have zoning that allows or offers incentives to attain these objectives. Owner of larger tracts of land in Hamilton have said they would like more options.
- Regulatory constraints. A principal aim of Hamilton's zoning bylaw is to reduce the development potential of land. Since a majority of the town is served by public water, there does not appear to be a rational basis for two-acre zoning in many parts of Hamilton except for the purpose of restricting growth. Regulations that define buildable

lot area further reduce the lot yield of vacant land and therefore, the number of homes that can be built. The standards for frontage in Hamilton also discourage the development of new homes in established neighborhoods and facilitate development in other parts of town where there are large enough parcels to meet the area requirements for "pork-chop" lots.

- Land use, fiscal and social policy conflicts. By allowing single-family homes as of right and subjecting other uses such as elderly housing to a more difficult permitting process, the town's zoning limits the number of residences that can be built, increases the municipal and school service costs generated per housing unit, and provides no land use incentives to reduce service costs or increase revenue. As a result, Hamilton has promoted a development pattern that will be increasingly expensive to maintain and contributes to the town's very low percentage of elderly households.

- Agricultural-residential use conflicts. Like most communities, Hamilton allows residential development next to farms on the assumption that houses and agriculture are compatible uses. In fact, residential and agricultural uses frequently conflict. As land develops, the increasing proximity of homes and farms often results in complaints about noise, odors, pesticide use, and conflicts between cars and farm equipment on local streets. Since the town's zoning encourages single-family house lots and does not provide for other land disposition possibilities, Hamilton has unwittingly created conditions that make agricultural activity more difficult.

- Agricultural development policies. Zoning regulations that affect agricultural and equestrian land use seem inconsistent with the town's goal of promoting farms. Though state law exempts agricultural use from zoning, the exemption does not extend to all pursuits commonly thought of as agricultural and like any other enterprise, farms are subject to many types of regulation. Hamilton allows "agriculture" as of right in all zoning districts, yet roadside farm stands and commercial stables require a special permit from the Zoning Board of Appeals. Possibly the town intends only to control farm stands that do not fall under the statutory exemption for agriculture, but the bylaw is not clear. In the past 20-25 years, New England's small, working farms have shifted increasingly toward retail over wholesale distribution of local products in order to survive, a condition that argues for expanding the permissibility of farm stands beyond what is already exempt under state law. Farming is a business: a way of work as much as a way of life. The town needs to consider whether its zoning regulations effectively promote leisure farms over working farms. It is very difficult to retain agriculture in the face of such intense demand for residential land. Regulatory barriers to profitable farming merely exacerbate this problem.

- Housing affordability. Hamilton has no regulations to combat its most significant threat of large-scale housing development: the comprehensive permit. State practice currently limits a single comprehensive permit to 200 units in a town of Hamilton's size, but one 200-unit development would increase the town's housing base by 7%. Hamilton falls below the Chapter 40B 10% threshold by 203 units. As a result, the town could conceivably be required to accept two 200-unit developments in order to reach 10% – if they were rental developments. To produce 203 affordable homeownership units, the comprehensive permit process could generate several developments with a combined total of 400-800 new homes in Hamilton.

- Off-street parking. Hamilton's seemingly reasonable business district regulations are distorted by off-street parking requirements that the town would never want to enforce. By specifying one parking space per 100 ft² of retail and office use, Hamilton promotes "greyfield" land use: the large, sprawling parking lots commonly associated with big-box development. Some local officials report that downtown's parking rules give Hamilton leverage to control building appearance, landscaping and overall site design quality because the town can waive off-street parking compliance in exchange for developer concessions. However, relying on waivers to obtain concessions increases the risk that Hamilton officials will be challenged in court for granting relief in some cases and not in others, simply because the bylaw contains no waiver criteria. The town could regulate aesthetics and safety with clear design and site plan guidelines, and thereby avoid resorting to parking standards that are inappropriate for a small downtown area.
- Design quality standards. The town's parking and site plan regulations are conspicuously silent as to the preferred location of off-street lots in relation to buildings. Although the Business District is substantially built out and the likelihood of major change to existing building configurations is very low, the town's zoning bylaw should state aesthetic and environmental standards for the design of parking lots, e.g., the subordination of parking to structures where possible, and coordinated curb cut access. The bylaw's lack of architectural design guidelines is also noteworthy.
- Downtown development. Hamilton's downtown development regulations establish no size thresholds for separating uses allowed as of right from uses allowed by special permit. Today, communities usually tailor their downtown use and dimensional regulations to enhance the marketability of older buildings and simultaneously preserve their unique attributes. Without relatively simple techniques to control for scale, zoning that allows "retail" by right, regardless of size, runs the risk of inviting larger retail establishments than a town ever anticipated. By establishing reasonable size thresholds for uses allowed as of right, subject to administrative site plan review, Hamilton could streamline the approval process for small-scale development and reserve local government's energy for larger, high-impact projects. Hamilton's present business district regulations are overly generous in some ways and unduly prescriptive in others, the result being a lack of clarity about what the town wants to accomplish in its downtown area.
- Housing choice. Despite the town's expressed desire to provide some low-cost housing options and retain elderly residents, Hamilton does not have realistic tools to create accessory apartments – a fairly conventional, unobtrusive way to bring additional means of support to a fixed-income household. In fact, the zoning bylaw consciously impedes accessory apartments, yet it makes creating homes for caretakers of estates fairly simple. The bylaw provides three special permit mechanisms for small rental development. The first, "Temporary Additional Living Area," is limited to short-term accommodation of an elderly or disabled family member. The regulations are unusually restrictive and as a result, they create barriers to meeting the need for which the bylaw presumably was adopted. In addition, they obligate property owners to invest heavily in a permit that will lapse as soon as the family member no longer occupies the unit.

  A second provision allows for the conversion of older single-family to two-family homes, but confines eligibility to existing dwellings units of at least 4,000 ft² on lots of at least 20,000 ft². By limiting the opportunity for such large homes and restricting the

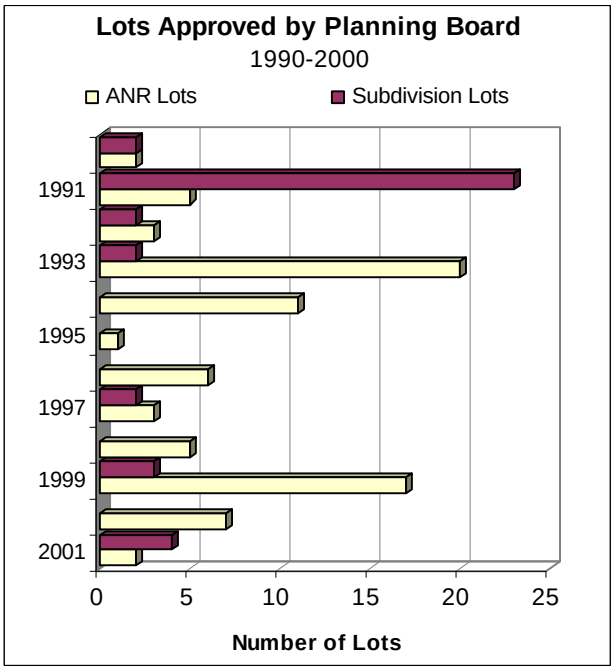
conversion potential to two units, the bylaw encourages a single structure to generate twice the fiscal impact of a single-family home – a condition that could be avoided by allowing somewhat smaller residences to convert under different guidelines, or permitting large homes to convert to three or possibly four units.

The third provision, "Accessory Apartments on Large Lots," intends to allow housing for caretakers on an estate or farm. It applies to properties of 10 acres or more, and the special permit becomes invalid if the property is subsequently reduced to less than 10 acres. Unlike the regulations for "Temporary Additional Living Area," there are no requirements governing occupancy of accessory units on large lots. Though the bylaw's purpose is to house caretakers, it does not prevent recipients of a special permit from making the accessory units available as market rental housing. Hamilton may not be concerned about the potential for large-lot accessory units being used for purposes other than those intended by the bylaw, in part because properties that meet the 10-acre lot requirement are unique and limited in number. However, the town should consider the implications of providing a relatively unregulated environment to the owners of large properties and a highly regulated environment to homeowners whose only option is a temporary apartment.

- Home occupations. Hamilton's zoning contains very broad home-based business regulations. The town allows "customary" home occupations as an accessory use by right, yet the term "customary" is not defined anywhere in the bylaw. A home-based business owner may employ up to two people who do not live on the property and may store up to two commercial vehicles in the yard. Although the bylaw contains general prohibitions against noise, vibration, smoke and unsightly conditions, its otherwise generous language creates a risk of use conflicts between home-based business activity and the expectations of neighborhood residents, particularly with regard to traffic. Since the town wants to encourage work-at-home opportunities, the zoning bylaw should continue to support that end. However, the town could reduce the potential for conflicts by separating home occupations into categories allowed as of right and by special permit. Alternatively, administrative site plan review is a reasonable way to regulate the safety, appearance and layout of premises used for home occupations that are more visible and potentially intrusive on a neighborhood.

- Roles and responsibilities. Hamilton's division of permit granting responsibilities between the Planning Board and the Zoning Board of Appeals is very unusual. Unlike most communities, Hamilton has assigned site plan review to the Zoning Board of Appeals. Presumably the town made this choice because the Zoning Board of Appeals issues most of Hamilton's special permits, but the Planning Board also has authority to issue special permits. The generally preferred division of permit granting powers assigns site plan review and special permits for use to the Planning Board, and to the Zoning Board of Appeals, special permits for non-conforming uses, appeals of building inspector decisions and site plan review conditions, and the issuance of variances and comprehensive permits. Each board has an important role to play in land use regulation, but their roles are not the same. Hamilton's present system complies with the state zoning act, but it increases the risk of inconsistent interpretations of the zoning bylaw and reduces the Planning Board's role in a traditional planning function: site plan review.

Trends



Hamilton's major growth era occurred between 1940-1960, when the number of homes more than doubled and the population increased by 170%. There has been no comparable wave of development since 1960, but during the 1990s, a combination of new homes and older home sales brought many new families to town.[10] By 2000, Hamilton's housing stock had increased by 7.2%, and nearly new homes were single-family residences on lots of two acres or more. While the town added homes faster than the statewide average of 6%, it is important to remember that 32 of the Commonwealth's communities lost housing units during the past decade. Compared to the suburban average of 13%, Hamilton's rate of housing unit growth was much lower.[11]

The Planning Board endorsed 80 single-family house lots on "Approval Not Required" or "ANR" plans and approved six subdivisions with a combined total of 34 lots between 1990-2000. In the same period, the town issued about 160 single-family building permits – for construction on new lots and the accumulation of surplus lots from the recession that set in at the end of the 1980s. One of the developments resulted from a 23-unit Chapter 40B comprehensive permit, but the rest of Hamilton's new single-family homes represent building permits for lots created under, or exempted by, the subdivision control law.

The town exempts larger-than-required lots from the minimum frontage requirement in each residential zoning district. Frontage exceptions alone do not explain the trend toward larger house lots, however. Wetlands, steep slopes, floodplains, Title V and landowner preferences play a major role in determining the development suitability of vacant land. Since the early stages of community development typically consume the best acreage, the parcels available in Hamilton today tend to be comprised of land that is subject to both local regulations and state environmental laws. The impact of Hamilton's zoning, state requirements, the market and landowner preferences can be seen in Table 3, a sample of historic development data showing that new single-family house lots are nearly four times the size of lots approved in the 1950s.

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[10] Hamilton's 1990-2000 population growth also stems from a significant change in the number of persons living in group quarters, apparently due to an increase in students housed at Gordon-Conwell Seminary.

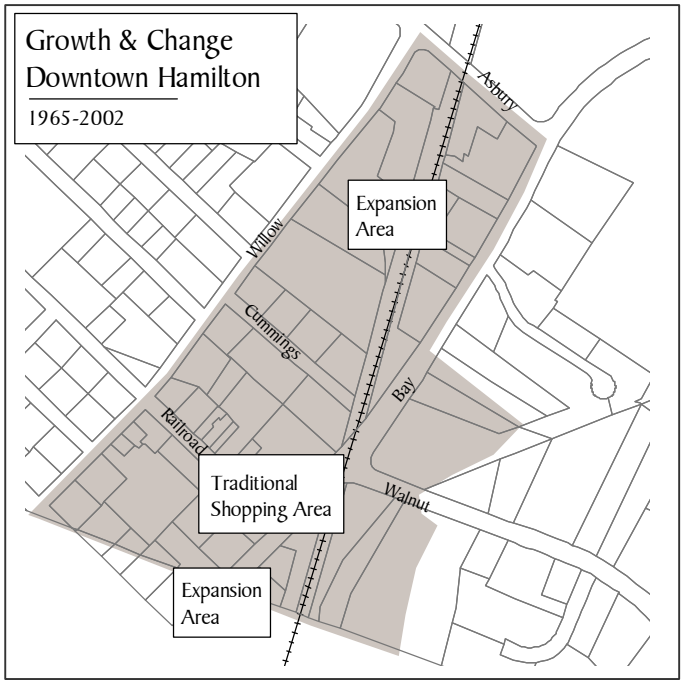
[11] Census Bureau, Census 2000, Summary File 1, Table H1; 1990 Census of Population and Housing, Summary File 1, Table H1.

Table 3: Consumption of Land for Residential Development, 1950-2002

	Average Building Size (Living Area)	# Homes in Sample	Average Lot Size	Average Assessed Value Yr 2000
1950-59	1,613	613 (61/yr)	0.82	$282,794
1960-69	1,911	310 (31/yr)	1.02	$340,434
1970-79	2,279	266 (27/yr)	1.25	$407,573
1980-89	2,754	212 (13/yr)	2.22	$503,107
1990-99	3,230	138 (14/yr)	3.07	$593,901
2000-02	3,727	42 (14/yr)	3.10	$710,933

Source: Hamilton Assessor's Office, FY03 Parcel Data (January 2003).

Most people think of new growth as the most important land use control issue faced by their communities, but redevelopment and reuse present unique, often difficult challenges. This is particularly obvious in Downtown Hamilton, which absorbed about 73,000 ft² of commercial growth between 1980-2000, all because of redevelopment activity. Since Hamilton has only the most basic of land use regulations for the Business District, downtown's attractive qualities are largely a result of three factors: market expectations, the diligence of town officials, and cooperation from property owners. The most visible redevelopment project occurred toward the end of the 1990s, when the owners of Hamilton Shopping Center developed an additional 9,600 ft² of space and invested in building design and parking improvements. Over time, incremental alterations to older business buildings and conversions of former homes have introduced a significant number of new businesses in Downtown Hamilton and increased the land area used for commercial purposes. As a result, the traditional shopping area located along and adjacent to Bay Road south of the railroad tracks has expanded both to the north on Asbury Street and south across the town line. [12] Aggregate commercial space is about 1.6 times that which existed in the late 1960s.



Today, Downtown Hamilton supports about 75 businesses, mainly retail and personal, business and health service establishments that employ 750-800 people. Hamilton residents depend entirely on their

[12] Carl V. Swanson, CAPC Economic Development Subcommittee, "Analysis of Hamilton Commercial Growth: Draft-A," and source data in EXCEL format ("Hamilton_Downtown_Dev-Summary_A," "DownTownGrow_F_Anal-3_limit.xls").

downtown for local access to goods and services. Years ago, the town rezoned a very small business node in East Hamilton for residential uses, a move that effectively reinforced downtown as Hamilton's commercial center. Although a closed landfill has been considered for commerce use, the site's poor access and proximity to public water supplies in Manchester make it a very unlikely candidate for development.

Given the town's modest potential for future housing growth, Downtown Hamilton is about the right size for the functions it currently serves and will likely be pressed to serve in the next 10-15 years, but it needs public improvements: sidewalks, landscaping, lighting, bicycle facilities, parking, and wastewater disposal. These needs have been known for years, but a downtown improvements plan that the Planning Board developed in the 1980s has never been fully funded.[13] Additional business growth is constrained by a shortage of parking and inadequate wastewater capacity. Addressing these problems requires a coordinated approach by the town and the business community. Downtown offers few options to create more parking, and too much parking will destroy the district's quaint character. Developing shared wastewater systems or a package plant will undoubtedly require local government to participate as a vehicle for low-cost financing and management oversight.

Commercial uses are not the only source of redevelopment investment in Hamilton. As the economy rebounded from the recession, both new-home construction and major improvements to existing residences increased. In many cases, these improvement projects were tied to recent acquisitions: new homeowners who sought to increase the size and value of their property by building additions or investing in large renovation projects. By the end of the decade, Hamilton had begun to witness demolition-rebuild investments, including five in one year.[14] In contrast to the review power that local officials have over major alterations to existing commercial buildings, they have almost no control over major changes to residential buildings, including demolition, unless the house is located in the historic district.

Hamilton's Future Development

As the primary agent of land use policy in cities and towns today, zoning plays a central role in master plan implementation. To understand how zoning may aid or frustrate a community's goals, alone and in conjunction with other forces, master plans usually examine the implications of current zoning for future development, i.e., a build-out analysis of vacant land. However, it is important to remember that vacant land alone does not determine a town's development potential. When communities mature and land becomes scarce, the development process shifts toward a recycling of existing built assets. Opportunities to redevelop older properties and put them to a new, more valuable use are as influential as vacant land to a town's character and vitality. Build-out studies often disregard the changes brought about by reinvestment – that is, rebuilding. By emphasizing quantity over quality of development, build-out studies sometimes mask very important questions about the role that regulations can play in fostering a sustainable future.

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[13] Peter Clark, CAPC Steering Committee, "1980-82 Downtown Study Plan for Hamilton, Massachusetts: Summary of Findings and Recommendations," (April 2002).

[14] Jean D. Nelson, Hamilton Planning Coordinator, "Building Permits 1986-Present," in EXCEL format (December 2001).

The Master Plan analysis of Hamilton's development potential follows two recently completed build-out studies, one prepared by local officials in 1997 and the second, by the Metropolitan Area Planning Council (MAPC) in 2001. The studies reached different conclusions, mainly for methodological reasons.

Analysis of Development Capacity

According to available data, Hamilton has about 1,915 acres of land that is vacant, underdeveloped, reasonably unimpeded by natural constraints and able to accommodate future development.[14] Under existing zoning, the land can support up to 1,264 single-family homes. These estimates do not differ significantly from MAPC's: 2,225 acres of developable land with a total development capacity of 1,484 single-family homes. The studies are based on a similar methodology, but the Master Plan has updated MAPC's analysis with more recent data and modified several of the underlying assumptions.

Today, planners typically use Geographic Information System (GIS) technology to analyze and predict a community's future development potential. GIS brings many advantages to build-out studies, mainly access to large public libraries of spatial data sets that can be viewed, layered, joined and separated. In GIS terms, a spatial data set (or data layer) refers to data that can be represented on a map. In Massachusetts, one state agency – MassGIS – maintains a vast library of GIS data sets prepared by all state and regional agencies. The MassGIS library makes it possible to create multiple images of every community in the Commonwealth, alone or in regional geographies such as counties, regional planning districts, watersheds, or shared highway corridors.

The Master Plan's future development projections for Hamilton draw on GIS data obtained from MassGIS, MAPC and the public works department's engineering consultants. The projections are also informed by field inspection, a review of the town's land use regulations, aerial photography, an in-progress assessor's parcel map digitized by a qualified resident of the town, and electronic (spreadsheet) data supplied by the town assessor. For modeling purposes, the Master Plan analysis uses a methodology instituted by the Executive Office of Environmental Affairs (EOEA) for a statewide program of build-out studies, including MAPC's for Hamilton in 2001. However, the methodology was adjusted to consider unusual conditions such as Hamilton's lot area requirements on the development yield of vacant land parcels. Table 4 updates the original MAPC study and summarizes the town's estimated development potential for three future land use scenarios: continued development under current zoning, i.e., a revised version of MAPC's study, a preferred alternative (Map 1), and a second alternative that reflects an increase in the amount of commercially zoned land in Hamilton.

[14] Vacant, developable land data exclude protected open space identified by the CAPC as of June 2003.

Table 4: Comparison Development Impacts Analysis[17]

	MAPC (2001; Updated)	Existing Zoning	Alternative Plan #1	Alternative Plan #2
Developable Land Area (Acres)	2,224.54	1,915.42	1,915.42	1,915.42
Maximum New Residential Lots	1,484	1,264	977	996
Commercial Floor Area (ft^2)	0	0	47,570	63,427
Commercial Water Use (gpd)	0	0	3,568	4,757
Single-Family Homes	1,484	1,264	977	996
Multi-Family/Attached Housing	0	0	425	525
New Population	4,258	3,628	3,607	3,851
Residential Water Use (gpd)	319,376	272,114	270,514	288,811
Municipal Solid Waste (tons)	2,185	1,861	1,850	1,975
Non-Recycled Solid Waste (tons)	1,553	1,323	1,316	1,405
New Students	889	759	639	663
New Roads (miles)	29	25	20	20

Sources: EOEA/MAPC Build-out Study (2001); MassGIS, DEP; CAPC. Calculations by author.

Modeling Limitations

GIS technology supports a sophisticated approach to build-out modeling, but the methodology developed by EOEA can significantly over- or under-estimate the development yield of land, that is, the potential number of house lots. Nonetheless, it is the only available model that supports existing GIS data for Hamilton. Several caveats apply to the use of build-out statistics. First, data accuracy is key to the credibility of a build-out estimate and unfortunately, not all data sets are equally reliable. For example, the open space data set that was available two years ago did not reflect Hamilton's acquisition of Chebacco Woods, and currently available GIS data provide an incomplete profile of all parcels under conservation or other restrictions in Hamilton. In addition, MAPC was unaware that Hamilton town meeting had rezoned 624 acres in north-central Hamilton from R-1B to RA. Through no fault of MAPC, the earlier build-out forecast overstates the development potential of land in these areas of town.

Second, a weakness of the EOEA build-out model is that it aggregates all acres classified as "net developable land," without regard to parcel and land ownership patterns, access or frontage. The model distorts what exists in the field and it does not accommodate any form of probability analysis. Statistically, the model assumes a single permutation: aggregate developable acres adjusted by constant, divided by a zoning district's minimum lot size, equals the lot yield of land. For communities such as Hamilton that regulate with fairly complex, restrictive rules for lot area, lot width, building envelope, and frontage waivers in exchange for larger lots, EOEA's model is deceptively simple. Actual practice in Hamilton

[17] Table 4 adopts the format of MAPC's build-out study report (2001) to provide a consistent basis of comparison with the Master Plan's land development analysis. Population and school-age children multipliers have been adjusted to reflect Census 2000 conditions. These changes affect MAPC's original estimates of water consumption and solid waste per capita. See also, Appendix B.

would argue for a lower estimate of future homes, but the model cannot accommodate many dimensional variables or the ways in which individual boards interpret and apply local rules.

Third, by excluding areas already developed at or near the maximum allowed by zoning, the model assumes that a community's most pressing growth management needs involve the disposition and use of vacant land. Renovations at Hamilton Shopping Center would never be accounted for in EOEA's model even though the redevelopment process increased the amount of commercial space on that property and significantly changed the appearance of Downtown Hamilton. For the local officials who worked so hard to review plans, negotiate with the property owner, and monitor construction down to the choice and location of new trees, the Hamilton Shopping Center project was an enormous growth management initiative – one made more complicated, not less, by the land's pre-existing development.

The fourth issue relates to comprehensive permits. EOEA's build-out model assumes that all municipalities have met the 10% low- and moderate-income housing standard set by Chapter 40B, so it does not account for higher-density development that will occur in towns with unmet Chapter 40B requirements. Hamilton has only 69 low- and moderate-income housing units or 2.54% of its year-round housing stock, which means a Chapter 40B shortfall of 203 low-income units. It is not feasible to build low-income housing at a density of one unit/40,000 ft^2 or one unit/80,000 ft^2, so Hamilton's earlier build-out forecast underestimates the amount of development that could occur in the future.

Other Limitations

Build-out studies of all types must be taken as "order of magnitude" assessments of a community's future development. Their purpose is to illustrate potential land use outcomes under different sets of zoning rules. A 15- to 20-year development forecast based on a trends analysis is often a more reliable planning tool because it accounts for local practice and reasonably foreseeable conditions. However, the problem with short-range development forecasts is that they ignore long-term development consequences and may inadvertently foster an incremental approach to land use policy. A trends analysis might argue that by 2020, Hamilton would have 325-350 more homes and 875-1,000 fewer acres of vacant land than it has today, along with 235-250 more school children, an assessed valuation that is 97% residential, and an average single-family tax bill of $15,100. Those who think that Hamilton has grown too much may find 325 homes in 20 years a tolerable rate of growth, but those who worry about the town's open space will be dismayed by the prospect of losing 875 or more acres of land to new development. The more disturbing finding, whether from a build-out study or a short-range development forecast, is that the longer Hamilton grows under policies that allow only for large-lot housing development, the less likely it is that the town will be able to address its open space, social policy or fiscal needs.

Another limitation of build-out models is that they have to rely on a set of assumptions, and some of the assumptions will later be invalidated. For rural and suburban communities that lack public sewer systems, build-out studies usually assume and attempt to model compliance with present-day Title V. However, new technology will alter development forecasts based on current Title V regulations. For decades, Hamilton and most communities in Massachusetts have relied on Title V as a tool to regulate land use. As the technology to reduce nitrogen loading from ordinary septic systems becomes available and feasible, Title V will no longer make marginal land undevelopable – a condition that

underscores the importance of reviewing and strengthening a community's land use regulations today.

Qualitative Concerns

Pure development yield – measured by numbers of house lots, housing units or commercial space – does not mean very much unless the information is evaluated on the basis of impact criteria. A town survey conducted by the CAPC (2002) suggests that Hamilton residents share similar views on some types of development impacts but they disagree about others, mirroring differences of opinion that exist within town government about the aim of land use regulation and zoning policy. The same conflicts endure in virtually every city and town in Massachusetts. Since most zoning bylaws are written to control the amount of development more than the quality of development, communities experience land use change as an intrusive, costly proposition that benefits few at the expense of many. By seeking to curb growth, they hope to protect their remaining special places, yet most towns could never re-create the villages that residents say they cherish simply because formal, prescriptive zoning rules have traded in the village for a low-density suburb. It is little wonder that residents and local officials everywhere want to stop development, but by ascribing the problem to developers, they fail to take stock of the ways that their own land use regulations have magnified the losses of growth and change.

The proposed Land Use Policy Plan (Map 1) addresses many of the concerns identified in community meetings and the CAPC's resident opinion survey. It is not a plan to stop growth; rather, it promotes growth management. The Land Use Policy Plan incorporates the following concepts through a series of trade-offs:

- Hamilton's most critical land use need is to recognize that patterns and types of development influence a town's fiscal condition, vehicular traffic on local roads, water use, and the degree to which open space benefits wildlife, water quality, recreation and agriculture. Toward these ends, the town should work to:
    - Preserve large areas of uninterrupted open space and farmland.
    - Foster development that not only protects open space but also generates lower service costs and higher tax revenue.
    - Make alternatives to single-family home development attractive to and realistic for developers.
- Development can be an agent of open space protection if the town offers intelligent incentives, works with landowners to recruit competent developers, and treats developers fairly. Instead of making development difficult for everyone concerned, channel it toward locations and outcomes that the town wants to encourage.

  The Land Use Policy Plan is based on a system of development privileges that reward preservation and quality design over conventional divisions of land. To achieve that end, the town needs rules that are advantageous to the community, landowners and developers. It also needs internal capacity to work with landowners, especially owners of large parcels, and at times Hamilton may need to acquire high-priority sites in order to guide their development toward outcomes the town wants to encourage. Hamilton could finance most if not all of its open space acquisitions by engaging in strategic development and disposition projects and simultaneously attract developers with open space and historic preservation experience. Regardless of whether the town or a private

landowner controls a site, Hamilton cannot expect developers to cooperate with a local preservation agenda unless it offers realistic ways for them to do so.

- Preserving contiguous open space is more important than reducing the number of housing units that a parcel of land can support.

  The Land Use Policy Plan anticipates about 130 more dwelling units than the number of homes that could be built under existing zoning, yet it saves far more open space and generates a modest revenue surplus to help pay for town and school services used by Hamilton families.

- Changing the structure of Hamilton's tax base by introducing residential alternatives that generate lower costs and more tax revenue per household will do more to stabilize the town's fiscal condition than promoting new commercial development.

  The Land Use Policy Plan promotes no change to the geography of Hamilton's existing business district. It does promote mixed-use development in other parts of town, mainly to make the preservation of large land holdings economically feasible: agricultural businesses, health care, conference and research facilities, and corporate offices.

- Providing for a mix of land uses will make environmental, social, economic and fiscal goals compatible instead of putting them at odds.

  The Land Use Policy Plan anticipates a modest increase in the development value of land, yet because of the mix and arrangement of land uses, the plan encourages water conservation, less traffic, more housing choices and fiscal balance.

- Downtown Hamilton can support many small, thriving businesses if the town offers regulatory flexibility and invests in public improvements that encourage economic development and strong commercial property values.

  The Land Use Policy Plan anticipates a modest increase in commercial space and some multi-family development in the downtown area. By making downtown more versatile, Hamilton will also make downtown a stronger business district and increase the tax revenue from commercial properties. Unless the town becomes more pro-active about the health of its downtown, Hamilton residents will never have access to the mix of businesses they want because the area cannot support more growth without a coordinated approach to parking and wastewater.

- Agricultural development requires policies that put the business interests of working farms and the recreational interests of leisure farms ahead of rigid ideas about growth control.

  The Land Use Policy Plan encourages a reduction in conflicts between agricultural, equestrian and residential uses with buffers and transitional use areas that provide more separation between suburban neighborhoods and farms, and development regulations to preserve trails. It also advocates for regulations that give agricultural businesses the same presumption of desirability as Hamilton already extends to home occupations.

- Hamilton cannot achieve all that it wants for its present and future condition simply by regulating land use, i.e., by redefining the development privileges of private property owners. The town must also align its capital investments, budget policies and governmental organization with the vision implicit in its land use plan.