

CHAPTER 8

LAND USE AND ZONING

How a community expands and develops its land over time reflects its history and values. Throughout Athol's history, its development and land use patterns have been strongly tied to the transportation infrastructure of different eras, and to the Millers River. During the sixteenth century, Native Americans were drawn to the Millers River for fishing. They also used the banks of the river as a transportation route, the original Mohawk Trail. Later, once European settlement began in the 1730s, settlers learned the benefits of harnessing the river's power for industrial purposes. By the end of the eighteenth century, twelve mills had been established along the Miller's River and the Town's other waterways. Later, with the start of rail service to the downtown in the 1840s, development along the river and lower Main Street accelerated, and water-power based manufacturing grew as well. This growth continued through the early twentieth century, with the number of manufacturing workers increasing from less than 500 to close to 2,500 by 1915. The Town's largest employer today, the L.S. Starrett Company, began its manufacturing operations along the Millers River during the Late Industrial Period (1870-1915). Many of the buildings located in the downtown and along lower Main Street today also date from that era. Activity and employment in the downtown began to decline in the mid-twentieth century as the use of truck transport increased, and as highway bypasses, including Routes 122 and 202, were built around downtown Athol, thereby drawing traffic and activity away from the Town center.

Outside of downtown Athol, settlement patterns have also been affected by the Town's transportation infrastructure. The Town's original village center was located on upper Main Street along the path of the Fifth Massachusetts Turnpike established through Athol in 1780. The village center shifted from upper Main Street and the Uptown Common area to the current downtown after the start of rail service to the downtown depot area. Additionally, the village in South Athol grew after the beginning of rail service from the downtown depot to South Athol in 1873.

The current land use patterns in Athol greatly reflect its history and follow historic land use trends. Prior to developing its manufacturing base, Athol was an agricultural community, and historical agricultural landscapes and farms still remain in the early settlement areas of Moore Hill and Chestnut Hill. Most of the Town's current commercial and industrial development is still focused in the downtown and along the Millers River. Similarly, Athol's residential land uses continue to be concentrated near the historic village centers, though in recent years, there has also been low-density residential development along major road corridors outside of the downtown.

Athol is often seen as less rural than many neighboring towns and is considered one of the employment centers for the region. According to 1999 land use data, residences, commercial and industrial activity, and other developed land uses account for 15 percent (3,180 acres) of

the Town's total land area. The remaining 85 percent (18,174 acres) predominantly contains forest (16,220 acres) as well as some farms (663 acres). Some of this land remains undeveloped as a result of the community's and conservationists' efforts to protect the Town's current open spaces and its natural environment. During the past several decades, the Athol Conservation Commission had actively worked to preserve hundreds of undeveloped acres in Athol, the majority of it lying within the Bearsden Forest Conservation Area. As a result, today, 3,700 acres in Athol are permanently protected from future development and close to another 3,100 acres in Athol are temporarily protected from development through enrollment in the State's Chapter 61 programs.

Athol's protection of undeveloped areas is one way in which the community has demonstrated its commitment to preserving its open spaces, natural resources, and rural characteristics and landscapes. Zoning provides another means for Athol to protect these important Town features, and is also a way for the Town to encourage development and land uses which agree with the community's values and its vision for the future. Athol's zoning bylaws were first enacted in 1965. As part of the Master Planning process, the Town's zoning bylaws and regulations will be evaluated to see how well they help promote the community's vision for its future and for future development, and whether bylaw changes may be needed to discourage undesirable land uses and unwanted patterns of residential and commercial growth.

The Land Use and Zoning chapter opens by reviewing land use patterns and development trends in Athol, and the Town's current zoning districts and zoning regulations. The chapter then presents an assessment, known as a buildout analysis, of the potential for future development and growth based on current land uses and zoning. This assessment is followed by a simplified cost of community services analysis to show the different municipal service costs and tax revenues that are typically generated by residential, and commercial and industrial development, and by open space land. The chapter then discusses the potential issues and impacts of the town's current approach to new development. The chapter closes by presenting recommendations that have been developed by the Land Use and Zoning Subcommittee and the Master Planning Committee to direct future land uses and growth in Athol, and to address the identified potential issues associated with new development.

The Land Use and Zoning chapter's direction and discussion are governed by the following land use goals and objectives that have been expressed and supported during the Master Planning process. These goals and objectives have been developed through a careful review of the recommendations presented in the previous chapters of the Master Plan, and with input from the Land Use and Zoning Subcommittee. In many ways, the Land Use and Zoning chapter represents a synthesis of the work presented in earlier chapters, and a more in-depth evaluation of the ways that Athol's current land use and zoning policies could potentially be revised to help support the Town's goals and vision for its future.

Goals:

- To encourage commercial and industrial uses to locate in appropriate areas in Town as defined by zoning, and to promote more small-scale and home-based businesses.
- To protect the Town's natural resources and open space areas through appropriate zoning and non-zoning measures.
- To support land uses that will encourage heritage and recreational tourism.

Objectives:

- Support the diversification of the employment base to reduce the current economic dependence on a few major employers, by encouraging an increase in small and medium-sized businesses in a variety of sectors.
- Review the current zoning regulations and zoning district boundaries to ensure that they are not negatively impacting desired residential, commercial, and industrial development.
- Work with existing business owners to address any space or infrastructure issues that may be compromising their ability to compete and expand.
- Promote a diversity of housing choices that will meet the needs of current and projected future residents.
- Encourage infill commercial and residential development, and redevelopment of vacant and underutilized parcels in and near the downtown.
- Consider actions that will help balance residential, commercial, and industrial development with the provision of municipal services and the protection of natural resources.
- Encourage community actions to preserve open space lands, farmland, and potential future recreation areas.
- Investigate ways to preserve and promote Athol's historic resources, such as the creation of a National Historic District and the introduction of voluntary architectural guidelines for historic structures and sites to protect their unique historic character.
- Consider sidewalk, crosswalk, and intersection improvements, particularly in the town center, to improve traffic safety.

Land Use Changes Since 1971 and Current Land Use Patterns

This section reviews the land use changes that have occurred in Athol since 1971, and discusses the Town's current land uses and development patterns.

Current Land Uses

Information on Athol's current land uses and land use changes over the past three decades comes from the Resource Mapping Project (RMP) at the University of Massachusetts-Amherst. The RMP used 1:25,000 scale aerial photography to estimate land uses statewide in 1971, 1985, and 1999. In addition, more than half the State had land uses interpreted from aerial photography flown during 1990, 1991, 1992, 1995 or 1997.

In 1971, aerial photographs were utilized to interpret and classify land into 104 different land use categories. These land uses were then aggregated first into 37 groupings, and then further into 21 categories, using a method developed by Professor William MacConnell at the University of Massachusetts-Amherst Forestry Department. Beginning with the 1985 aerial photography and thereafter, the RMP staff interpreted aerial photographs and estimated land uses according to the 21-category land use classification system.

Athol's total land area is 21,354 acres. Because development in Town has historically been concentrated into a few areas, today most of Athol remains undeveloped. According to the 1999 MacConnell (RMP) land use data, 84 percent (17,898 acres) of the Town's total land area is undeveloped and remains largely in a natural state (*see Table 8-1*). Most of this undeveloped land consists of forestland. Forestland, including forested wetlands, occupies 16,220 acres in Athol, which equals 91 percent of the Town's undeveloped land area, and 76 percent of the Town's total land area. Agricultural uses, including cropland, pastures, orchards, and nurseries, account for another 663 acres (3% of Athol's total land area), and surface waters and non-forested wetlands together comprise another 1,015 acres (5%). Surface waters include the Millers and Tully Rivers and their associated brooks, Lake Ellis, Sportsman's Pond, White Pond, South Athol Pond, and a portion of Tully Lake.

Over a third of the Athol's undeveloped land areas have permanent, limited, or temporary protection from development. Thirty-seven hundred (3,700) acres are permanently protected. The permanently protected areas include the Millers River Wildlife Management Area and the Bearsden Forest Conservation Area. Three-hundred and sixty-five (365) acres have limited protection from development because of their State or Town ownership, even though they haven't officially been set-aside as conservation lands. An additional 3,092 acres have temporary protection from development through the Commonwealth's Chapter 61 property tax-abatement programs, which offer tax reductions for forestland, farmland, or open space properties if the owners commit to keeping the properties undeveloped for a certain period of time. A one-year commitment is typically required for farmland, and a ten-year commitment required for forestland and for open space parcels. A full inventory and discussion of the properties in Athol with permanent, limited, or temporary protection from development is contained in the Natural Resources and Open Space chapter (Chapter 1) of the Master Plan.

Table 8-1: Natural Resources and Agricultural Land Acreage in Athol, 1999

Land Use	Acres	% of Town's Total Land Acreage	% of Town's Natural Resource & Agricultural Land Acreage
Natural Resource and Agricultural Lands			
Forestland, including Forested Wetlands	16,220	76.0%	90.6%
Cropland	325	1.5%	1.8%
Pasture	309	1.4%	1.7%
Orchards and Nurseries	29	0.1%	0.2%
Surface Water	671	3.1%	3.7%
Non-Forested Wetlands	344	1.6%	1.9%
Total Area for Natural Resources and Agriculture	17,898	83.8%	100.0%
Total Land Area in Athol	21,354	100.0%	

***Forested Wetlands** are a subset of Forestland. Forested Wetland areas were determined from the U.S. Fish and Wildlife Service's National Wetlands Inventory, 2001.*

Source for all other land uses: MassGIS, MacConnell Land Use Coverage, 1999.

The large areas of undeveloped land in Athol contribute to the natural beauty of the area, and provide the Town with a wealth of natural resources and scenic resources, including historically significant landscapes and outstanding views from the hills overlooking the Millers River, and from the peaks in Bearsden Forest. Athol's natural resources are described in detail in the Natural Resources and Open Space chapter, and the Town's scenic resources, including scenic roads and landscapes, are discussed more fully in the Historic and Resources chapter.

Table 8-1 above categorizes Athol's 17,898 acres of natural resource and agricultural lands. Of the close to 3,500 (3,456) other acres in Athol, 276 acres are classified as "open land." This land use category includes power line right-of-ways, former agricultural properties, and areas with no vegetation. The remaining 3,180 acres in Town contain Athol's built environment and developed land uses (*see Table 8-2*). Developed land uses account for 15 percent of Athol's total land area, and include single-family, two-family and multi-family residences, commercial and industrial businesses, public and institutional buildings and greenspaces, recreational lands and facilities, waste disposal sites, and transportation facilities and infrastructure. The 1999 Land Use and Land Use Change (1971-1999) Map at the end of this chapter gives the Town's land uses in 1999, as estimated from aerial photographs.

Residential Land Uses

As Table 8-2 indicates, most of Athol's developed land area is occupied by housing lots and structures. Accounting for 2,491 acres in total, housing comprises almost 80 percent (78%) of Athol's developed land area, and 12 percent of its total land area. As estimated by the MacConnell land use data (1999), forty-four percent (1,106 acres) of the residential acreage is comprised of lots of a quarter-acre to a half-acre. Another 3 percent (84 acres) of the residential land contains multi-family housing or single-family residences on lots smaller than a quarter-acre. Most of the multi-family buildings are located in the Multi-Family Residential (RA) zoning district, where they are allowed by right. The RA zoning district is

also where most of the Town’s smallest house lots (less than a quarter-acre) are found. In general, lots of a half-acre or smaller are common in Athol’s well-established neighborhoods, and typically have water and sewer access. These areas are generally zoned RA or RB (Medium Single-Family Residential). Athol’s zoning districts are shown on the Current Zoning Map at the back of this chapter.

Table 8-2: Developed Land Acreage in Athol, 1999

Land Use	Acres	% of Total Land Acreage	% of Developed Land Acreage
Developed Land			
Residential	2,491	11.7%	78.3%
Half-acre lots or larger	1,302	6.1%	40.9%
Quarter-acre to half-acre lots	1,106	5.2%	34.8%
Smaller than quarter-acre lots	63	0.3%	1.9%
Multi-family housing	21	0.1%	0.6%
Recreation	171	0.8%	5.4%
Commercial	143	0.7%	4.5%
Industrial	82	0.4%	2.6%
Urban Open and Public*	207	1.0%	6.5%
Mining	35	0.2%	1.1%
Transportation	37	0.2%	1.2%
Waste Disposal	16	0.1%	0.5%
Total Land Area for Developed Land	3,180	14.9%	100.0%
Land Area for Natural Resources and Agriculture	17,898	83.8%	
Land Area for Other Open Land**	276	1.3%	
Total Land Area in Athol	21,354	100.0%	

*Urban Open and Public includes cemeteries, public and institutional structures and greenspaces (e.g. parks), and vacant land. **Other Open Land includes power line right-of-ways, former agricultural properties, and areas with no vegetation. Source: MassGIS, MacConnell Land Use Coverage, 1999.

During Athol’s early development and growth during the mid-eighteenth century to the late-nineteenth century, most houses were constructed in and near the town’s village centers, including the Uptown Common area and the downtown. Although it has been limited, there has also always been some residential development occurring outside of these areas and along the Town’s major roadways. Today, the in-town neighborhoods and traditional village centers still have the greatest concentration of homes. Nonetheless, in recent decades, there has been a shift towards more residences in the outlying areas of Town and along Athol’s major road corridors. According to the 2000 Census (and as reported in the Housing chapter), between 1990 and 2000, the number of housing units in Athol decreased by 16 units (0.3%). This decline was a result of residential demolitions during the 1990s, including for multi-family units, and a result of the fact that not all of the demolished structures were replaced with new construction. It is important to note that many of the demolished units during this period were in the village centers and the Town’s other older neighborhoods, and that a large amount of the new construction during the decade occurred outside of these areas.

The 1999 land use data in Table 8-2 indicate that over half (52%, or 1,302 acres) of the Town’s residential land area now consists of house lots at least a half-acre in size. Lots of

this size are most commonly found outside of the Town's older neighborhoods. The 1999 Land Use and Land Use Change (1971-1999) Map shows a similar trend. Much of the new housing is located in the rural areas of Town and within the Rural Single-Family Residential (RC) zoning district. In the RC district, homes are required to have lots of at least 44,000 square feet (1.01 acres), and are generally not served by Town sewer or municipal water.

Other Developed Land Uses

After housing, the next more common developed land uses in Athol are urban open and public lands (207 acres), recreation areas and facilities (171 acres), commercial uses (143 acres), and industrial activities (82 acres) (*see Table 8-2*). The urban open and public land use classification includes cemeteries, public and institutional structures and greenspaces, such as parks, and vacant land. The Town's current commercial and industrial land uses continue to be concentrated in the downtown, and near the Millers River and the rail line, where they were located historically. Athol's largest present employer, the L.S. Starett Company, first began its manufacturing operations during the late nineteenth century, and continues to operate in the heart of downtown on the north shore of the Millers River. The Town's four commercial and industrial zoning districts, which allow many commercial uses by right, are predominantly located downtown or along the Route 2A or rail corridors.

It is important to mention that the determination of land uses based on 1:25,000-scale aerial photography does not differentiate between actively used and vacant buildings. If a commercial or industrial property is no longer in active use, or is currently under-utilized, the analysis of the aerial photographs will not likely capture these nuances. As long as a commercial or industrial building/plant is present, no matter what the current degree of activity occurring inside the facility, the aerial photo-interpretation considers the property to have a commercial or industrial land use.

Land Use Changes, 1971-1999

The 1999 Land Use and Land Use Change (1971-1999) Map uses a cross-hatch pattern to show which areas experiences land use changes or new development between 1971 and 1999. The colors underlying the cross-hatched areas represent 1999 land uses. The change in the acreage of different land uses from 1971 to 1999 is also shown in Table 8-3. Many of the changes can be explained by known trends and events that were occurring during that time frame. For example, the 53 percent (17 acre) decrease in waste disposal acreage principally results from the closure of the Athol landfill in 1993.

An examination of the Land Use and Land Use Change (1971-1999) Map and Table 8-3 highlights the amount of natural resource and agricultural lands that were converted to other uses between 1971 and 1999 largely as a result of development pressures. Over the twenty-eight year period, 750 acres of natural resource and agricultural lands were changed to other uses. Over two-thirds (70%) of the affected land was forestland, with a decrease of 527 acres. Also, farmland, including cropland, pastures, orchards, and nurseries, shrunk by 209 acres (24%) over the same time period.

Table 8-3: Changes in the Acreage of Different Land Uses in Athol, 1971-1999

	Land Use Acreage 1971	Land Use Acreage 1985	Land Use Acreage 1999	Change in Acreage 1971-1999	Percentage Change 1971-1999
Natural Resource and Agricultural Lands	18,648	18,360	17,898	-750	-4.0%
Surface Water	671	671	671	0	0.0%
Forestland (including Forested Wetlands)	16,747	16,514	16,220	-527	-3.1%
Cropland	364	331	325	-39	-10.7%
Pasture	489	455	309	-180	-36.8%
Orchards & Nurseries	19	28	29	10	52.6%
Other Open Land* (including power line right-of ways)	223	231	276	53	23.8%
Recreation Land	176	171	171	-5	-2.8%
Participant Recreation (includes golf courses & playgrounds)	163	158	158	-5	-3.1%
Water Recreation	13	13	13	0	0.0%
Residential Land	1,840	2,071	2,492	652	35.4%
Residential, multi-family	6	20	21	15	250.0%
Residential, < ¼ acre	63	63	63	0	0.0%
Residential, ¼ - ½ acre	991	1,030	1,106	115	11.6%
Residential, > ½ acre	780	958	1,302	522	66.9%
Other Developed Land	467	522	520	53	11.3%
Commercial	137	140	143	6	4.4%
Industrial	76	82	82	6	7.9%
Mining (gravel production, etc.)	49	55	35	-14	-28.6%
Transportation	40	37	37	-3	-7.5%
Waste Disposal	33	35	16	-17	-51.5%
Urban Public and Open**	132	173	207	75	56.8%
Total	21,354	21,354	21,354		

*Other Open Land includes power line right-of-ways, former agricultural properties, and areas with no vegetation.

**Urban Open and Public includes cemeteries, public and institutional structures and greenspaces (e.g. parks), and vacant land.

Source: MassGIS, MacConnell Land Use Coverages, 1971, 1985, and 1999.

Most of the decrease in natural resource and agricultural land acreage between 1971 and 1999 resulted from increases in the acreage of land developed for residential or civic purposes. For example, during the twenty-eight year period, there was a 57 percent increase (equal to 75 acres) in the land area for urban public and open properties due to the construction of new public and institutional structures, and the expansion of existing structures, such as schools. The major development trend between 1971 and 1999 was new home construction, and this trend is expected to continue during the coming decade. Over the 1971 to 1999 period, Athol's residential acreage grew by over one-third (35%), or 652 acres. In 1971, house lots a quarter-acre to a half-acre in size were the predominant land use. However, by the late 1990s, many new homes were being built on larger lots. From 1971 to 1999, the total acreage for residential lots of a half-acre or bigger increased by 67 percent (522 acres).

Much of the new residential construction during the 1971-1999 time period was along the Town's road corridors on the edge of large contiguous forest areas. New residential construction on such frontage lots can occur with relative ease and is mainly regulated by the State's Approval-Not-Required (ANR) rules. According to the Massachusetts Subdivision Control Law (M.G.L., Chapter 41, Sections 81-K through 81-GG), land can legally be subdivided using an ANR plan and without Planning Board approval, if it meets the following requirements:

- Each of the subdivided lots front on a way which the Town Clerk certifies is maintained and used as a public way, or on a way shown on a plan approved and endorsed in accordance with the Subdivision Control Law, or on a way that was in existence when the Subdivision Control Law became effective in the community in which the lots are located, having in the opinion of the Planning Board adequate width, sufficient grades, and other suitable construction characteristics for the amount of vehicular traffic expected to be generated for the proposed use; and
- Each of the subdivided lots meet the minimum frontage requirements according to the town's zoning bylaws; and
- It is demonstrated that there is sufficient access to the buildable portions of the lots to protect public safety and welfare.

Prior to receiving a building permit, the lots must also meet the requirements of a town's zoning bylaws including acreage.

According to the 1999 Land Use and Land Use Change (1971-1999) Map, it appears that at least two subdivisions occurred in Athol between 1971 and 1999, both in the Rural Single-Family Residential (RC) district. The first is in western Athol, north of the Daniel Shay Highway (Route 202) and south of the Millers River. The second is off of Pleasant Street, in the Gee Street area north of Batchelder Road. Three additional subdivisions were approved in Fiscal Year 2002 (as of May 2002). These three new residential developments are all located in southern Athol; they include a 29-lot subdivision off of Petersham Road, a 7-lot subdivision off of Riceville Road, and another 7-lot subdivision off of Conant Road. As with the earlier subdivisions, these subdivisions are also located in the RC zoning district, and as a result must have minimum lot sizes of 44,000 square feet (1.01 acres).

Both subdivisions and ANR plans can lead to low-density residential development in the outlying areas of a town. This type of development can fragment the landscape, and can negatively impact the quality of wildlife habitats, watershed quality, and recreational opportunities within a community. Many towns in western Massachusetts have landscapes that are dominated by forest vegetation, and unlike more urbanized towns, this forestland is not intersected by many roads and by much residential development. In these communities, development is often limited to village centers and along road corridors, and the roadways occur within landscapes of large blocks of forestland. However, as development increases and forestland becomes divided, wildlife habitats may become so segmented that animals requiring large amounts of interior forest habitat may be forced to search for it in more remote areas. Fragmenting large blocks of contiguous forestland with development also

increases the amount of impervious surface within sub-watersheds, which can jeopardize the water quality and quantity of many first and second-order streams. These streams are the most extensive and sensitive components of a watershed's stream network. In addition, the value of recreational opportunities associated with hiking, cross-country skiing, snowmobiling, and mountain biking often depends on whether a network of fields and forests to use for these activities exists away from residential areas. As development fragments these field and forest networks, the quality of the scenic and nature-based experience related to these activities diminishes.

Another potentially adverse effect of new low-density residential development is an increase in municipal service costs. New low-density development results in larger portions of town requiring fire and police protection, school bus service, road maintenance, and other municipal services, and can also create a demand for expanding or extending current sewer and/or water line to new areas. All of these factors can lead to higher municipal costs, which in turn can result in higher property taxes for residents.

Current Zoning Districts and Zoning Regulations

A community's zoning districts and zoning regulations affect the character of a community and how the community develops and grows over time. The Town of Athol established its zoning code in 1965, and has made a number of revisions and amendments to the code over the past 37 years. The Athol Zoning Bylaws, and their guidance on the permitted and prohibited land uses in different parts of town, the minimum lot sizes and setbacks, and the allowable lot coverage and floor area ratios, have influenced the development patterns in the community during the past four decades, and have played a role in the land use trends and changes that were discussed in the last section. The zoning bylaws will also affect the way the Town develops in coming decades, as is discussed in the next section in this chapter, "Potential Future Patterns of Development."

Primary Zoning Districts

The Zoning Bylaws show seven primary zoning districts in Athol. These districts and their acreages are listed in Table 8-4, and the districts are shown on the Current Zoning Map at the end of this chapter. The Rural Single-Family Residential (RC) District is the largest of Athol's zoning districts by far, encompassing 90 percent (19,168 acres) of the Town's total land area. The other residential districts, the Medium Single-Family Residential (RB) District and Multi-Family Residential (RA) District are the next largest, with 5 percent (1,124 acres) and 3 percent (585 acres) respectively of the Town's total land area.

Together, the commercial and industrial zoning districts comprise 477 acres, or 2 percent, of the Town's acreage. The Central Commercial (CA) District consists of an area near Main and Exchange Streets and includes the renovated Pequoig Hotel that now houses senior apartments and Town's senior center. The Neighborhood Commercial (CB) District contains nine separate sections and occurs primarily along Main Street and South Main Street. The CB district also has a few sections north of downtown. The General Commercial District (G)

contains six separate areas which are along Route 2/2A and/or the railroad tracks. The Industrial (I) District is one of the seven zoning districts described in the Town’s zoning bylaws. However, according to Athol’s official zoning map and the Town Planner, there is no place in town that is currently zoned Industrial.

Table 8-4: Primary Zoning Districts in Athol

Primary Zoning Districts	District Acreage	% of Total Town Acreage
Multi-Family Residential (RA)	585	2.7%
Medium Single-Family Residential (RB)	1,124	5.3%
Rural Single-Family Residential (RC)	19,168	89.8%
Neighborhood Commercial (CB)	42	0.2%
General Commercial (G)	418	1.9%
Central Commercial (CA)	17	0.1%
Industrial (I)	0	0.0%
Total	21,354	100.0%

Source: FRCOG Planning Department, GIS Staff, August 2003.

The allowed intensity of uses varies by zoning district and each district has its own specific minimum lot, minimum yard and maximum building requirements. These requirements are summarized in Table 8-5, which is excerpted from the Athol Zoning Bylaws.

Table 8-5: Intensity of Use Schedule, Athol Zoning Bylaws

	RESIDENTIAL A <u>RA</u>	RESIDENTIAL B <u>RB</u>	RESIDENTIAL C <u>RC</u>	CENTRAL COMMERCIAL <u>CA</u>	NEIGHBORHOOD COMMERCIAL <u>CB</u>	GENERAL <u>G</u>	INDUSTRIAL <u>I</u>
Area, Total or First Dwelling Unit (1,000 sq. ft.)	8	10	44	0	10	10	40
Area, Each Additional Unit (1,000 sq. ft.)	4	-	10	-	2	2	-
Minimum Lot Width (feet)	65	70	115	0	115	75	200
Minimum Lot Frontage (feet)	65	70	160	0	115	75	200
Minimum Lot Depth (feet)	80	100	175	0	80	80	150
Minimum Front Yard (feet) ^c	25	25	30	0	25	0 ^a	40
Minimum Side Yard (feet) ^c	10	15	20	0	0 ^a	0 ^{a,b}	30
Minimum Rear Yard (feet)	30	30	30	15	15 ^a	15 ^a	30
Maximum Lot Coverage (%)	20	15	15	50	30 ^a	40 ^a	35
Maximum Height (feet)	-	35	35	45	35	45	45
Maximum Floor Area Ratio	0.3	0.2	0.2	1.0	0.5 ^a	0.5 ^a	0.4

a. Permitted residential uses must comply with regulations for the RA District.

b. Increase to 15 feet when abutting a residential district.

c. Corner lot shall maintain front yard requirements for each street frontage.

d. Uses and buildings must comply with regulations for the underlying district.

Source: Town of Athol, Zoning Bylaws, 2001.

The Zoning Bylaws list, by district, the uses that are allowed by right, those that are allowed by special permit, and those that are prohibited. Prohibited uses are those that could be a nuisance to other nearby properties (e.g. an automobile body shop in a residential district) or those that could potentially harm the public's health or welfare (e.g. an industrial use which generates significant quantities of hazardous materials located near a public water supply). A full list of the permitted and prohibited uses and those uses that are allowed only by special permit, for each of the seven primary zoning districts, is shown in the Land Use and Zoning Appendix at the back of the Master Plan.

Overlay Zoning Districts

In addition to the seven main zoning districts, Athol also has two overlay districts designed to protect its water resources. These districts are the Flood Plain District and the Groundwater Protection District. Uses and activities within the overlay districts must conform both to the requirements of the underlying zoning districts, and to the additional restrictions for the overlay areas. The Flood Plain District includes all areas within the 100-year floodplain designated on the 1982 Town of Athol Flood Insurance Rate Maps (FIRM), produced by the National Flood Insurance Program run by the U.S. Department of Housing and Urban Development. The zoning regulations for the Flood Plain District appear in Section 3.11 of the Athol Zoning Bylaws. The Groundwater Protection District includes the Zone II Wellhead Recharge Areas approved by the State Department of Environmental Protection (DEP) for the Tully Brook and South Street Wells. The Zone II area boundaries for the two wells were approved by DEP in 1999, and the zoning bylaws for the Groundwater Protection District were amended in 2000 by Athol Town Meeting to reflect the Zone II boundaries. The zoning regulations for the Groundwater Protection District appear in Section 3.13 of the Athol Zoning Bylaws. The intent of both the overlay districts is to protect the water recharge areas and the quality of the groundwater from uses or activities that could potentially be detrimental to the town's water supply. The Flood Plain District additionally seeks to limit activities and uses that could potentially increase flood levels during a 100-year flood event.

Within the Flood Plain District, uses permitted in the underlying district are permitted by right provided that they do not require structures, fill, or storage of materials or equipment. Other uses allowed in the underlying district can be permitted in the Flood Plain District through special permit. However, uses involving land encroachment, including fill, new construction, substantial improvements to existing structures, and other development are prohibited unless certification by a registered professional engineer is provided by the applicant demonstrating that such encroachment shall not result in any increases in flood levels during a 100-year level flood. Proposed special permitted uses must also meet any other requirements or conditions set by the Board of Zoning Appeals to protect the health, safety, and welfare of the public and the occupants of the proposed use.

The Groundwater Protection District generally allows the following activities by right, provided that they can meet all other requirements of the Groundwater Protection District bylaw:

- Conservation of soil, water, plants, and wildlife;
- Outdoor recreation, nature study, boating, fishing, and hunting, where legally permitted;
- Foot, bicycle, and/or horse paths and bridges;
- Normal operation and maintenance of existing water bodies, water control, supply, and conservation devices;
- Maintenance, repair, and enlargement of any existing structure;
- Residential development;
- Agricultural, forestry, and conservation activities; and
- Construction, maintenance, repair and enlargement of drinking water supply related facilities such as, but not limited to, wells, pipelines, aqueducts, and tunnels.

The Groundwater Protection District regulations prohibit a number of uses that could have an adverse impact on groundwater quality. These uses include landfills, dumps, and industrial and commercial uses which discharge wastewater on site, and individual sewage disposal systems, among others. The Ground Protection District also allows a number of other uses only by special permit, including the application of pesticides and fertilizers for non-domestic or non-agricultural uses, the enlargement or alteration of existing uses that do not conform to the Groundwater Protection District, and the construction of dams, or other water control devices, ponds, pools, or other changes in waterbodies or courses. For a use needing a special permit to be approved, the proposed use must not adversely affect the existing or potential quality of water that is available in the Groundwater Protection District, and must be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation, and other water-related natural characteristics of the proposed project site.

Potential Future Patterns of Development

Many factors can influence a town's future patterns and levels of development. These factors include future local and regional economic conditions, both of which were discussed in the Economic Development chapter. They also include a town's zoning and development regulations, as well as the characteristics of properties that are potentially available for new development. Athol's current zoning was discussed in the previous section. This section builds upon that discussion and talks about the town's potential for new development under the present zoning, as estimated through the Town's buildout analysis. The buildout analysis calculated how much growth could occur in Athol under a full buildout scenario where permitted land uses are expanded and intensified to the maximum level and density allowed under the current zoning. This section then discusses the potential costs associated with different types of future development. As shown in the overview of the cost of community services analysis, residential development typically costs a town more in municipal services than it generates through property taxes, and commercial and industrial development, and the preservation of open space, typically costs a town less than they create in taxes.

Buildout Analysis

The buildout analysis for the Town of Athol was conducted by the Montachusett Regional Planning Commission, and was sponsored by the Executive Office of Environmental Affairs (EOEA). EOEA supported the creation of buildout maps and analyses for all 351 municipalities in the Commonwealth to help communities consider their potential for future residential, commercial, and industrial development under their current zoning, and the potential long-term impacts of such growth on municipal services, municipal costs, traffic levels, water quality, and open space lands and natural resources. The basic buildout analysis methodology was developed by EOEA and the thirteen Massachusetts regional planning agencies. For each town, the buildout analyses projected the following characteristics under the maximum buildout scenario, over the present conditions:

- the level of increase in residents,
- the increase in the school population,
- the additional residentially developed land,
- the increase in dwelling units,
- the additional commercial and industrial developed land,
- the increase in water demand,
- the expansion of non-recycled solid waste, and
- the creation of new roads to support the additional residential development.

The first step of the buildout analysis was to determine the land area that could potentially be developed. This step started with all the acreage in a town and then excluded already developed areas. Land was considered to be developed if it contained any of the following land uses: spectator or water-based recreation; residential, commercial or industrial uses; transportation; waste disposal, or transmission lines. The areas with developed land uses were estimated using the most recent MacConnell Land Use data (1997), provided by MassGIS, and also included any subdivisions that had occurred since that data was collected. No subdivisions were noted in Athol for the 1997-2000 period.

From the remaining, undeveloped acreage, the buildout methodology then excluded land areas with characteristics or environmental constraints that would make development impossible or very unlikely. Such characteristics and constraints included land areas being permanently protected as open space (i.e. State Forest or farmland under the Agricultural Preservation Restriction Program), land having a steep slope, land being located within 400 feet of a public water supply; or land being located within a 100 feet of a stream or river, a buffer area regulated by the Massachusetts Wetlands Protection Act (Massachusetts General Laws, Chapter 131, Section 40). The buildout analysis then estimated the total number of new homes and commercial/industrial square footage that could result if every piece of unprotected, buildable land were to be developed, assuming that no additional land is permanently protected within the community, and that the current zoning remains unchanged.

The buildout analysis reflects the community's zoning and general bylaws and subdivision regulations, especially the way it treats resources areas such as wetlands and floodplains for

development purposes. For example, for Athol, the buildout analysis estimated the development potential of residential areas within the 100-year floodplain to be 90 percent of that for residential areas outside of the 100-year floodplain.

Athol has seven primary zoning districts, and two overlay districts. The potentially developable area was estimated for six of the seven primary zoning districts. Because the Central Commercial District was considered to already be completely built out, there are no buildout estimates or analysis for that district. Table 8-6 gives the potentially developable area by zoning district. Overall, the buildout analysis estimated that 62 percent (13,298 acres) of Athol’s total land area is still developable, and that over 90 percent (12,560 acres) of the developable area lies within the Rural Single-Family Residential (RC) District. The RC District allows single-family dwellings by right and requires building lots of 44,000 square feet (1.01 acres) or larger. Together, the RC District and other residential zoning districts contain 99 percent, and all but 105 acres, of the potentially developable area in Athol.

Table 8-6: Potentially Developable Area by Zoning District, according to the Buildout Analysis

Primary Zoning Districts	Potentially Developable Area (in acres)
Multi-Family Residential (RA)	115
Medium Single-Family Residential (RB)	518
Rural Single-Family Residential (RC)	12,560
Neighborhood Commercial (CB)	3
General Commercial (G)	98
Central Commercial (CA)	0
Industrial (I)	3
Total	13,297

Source: Montachusett Regional Planning Commission, Buildout Analysis for the Town of Athol, 2001.

After calculating the developable area in each zoning district, the buildout analysis then made assumptions about the type of future development that would take place in each district (*see Table 8-7*). For example, it was assumed that future development in the Multi-Family Residential (RA) District, would consist 80 percent of single-family homes, 10 percent of two-family homes, and 5 percent each of three and four family dwellings. Table 8-7 lists the buildout analysis’ assumptions about the type of future development in each district. The potential future land uses assumed for each district do not include all the land uses that are permitted in each district under the current zoning. For example, although the CB and G commercial districts allow residential development as well as commercial and industrial, it was assumed that no residential development will occur in these districts in the future. Similarly, although the residential districts all allow non-residential uses such as schools, cemeteries, and hospitals, it was assumed that future development in the residential districts will be completely of a residential nature.

Table 8-7: Buildout Assumptions of Future Types of Development, by Zoning District

Zoning Districts	Assumed Future Development
Multi-Family Residential (RA)	80% single-family; 10% two-family homes; 5% three-unit dwellings; 5% four-unit dwellings
Medium Single-Family Residential (RB)	100% single-family homes
Rural Single-Family Residential (RC)	100% single-family homes
Neighborhood Commercial (CB)	50% retail; 50% offices
Central Commercial (CA)	No future development; already built out
General Commercial (G)	40% light industry; 35% retail; 25% offices
Industrial (I)	100% warehouses

Source: Montachusett Regional Planning Commission, *Buildout Analysis for the Town of Athol, 2001*.

For each type of future land use projected for a zoning district, the buildout analysis estimated the build factor, defined as the proportion of potentially developable land that could be developed for that use given zoning regulations and other constraints. For residential uses, the build factor incorporates minimum lot requirements, the estimated road area, odd lot configurations, the limitations when building on slopes of 25 percent or more, and environmental constraints such as floodplains. The development potential of residential areas within the 100-year floodplain, as shown on the National Flood Insurance Program Flood Insurance Rate Maps, was estimated to be 90 percent of that for residential areas outside of the 100-year floodplain. The estimated build factors and other key assumptions used for the residential buildout calculations are provided in Table 8-8. The frontage and minimum lot size requirements given in the table are based on Athol’s zoning regulations.

Table 8-8: Assumptions Used in the Residential Buildout Calculations

Zoning District and Land Uses	Percentage of Future Development	Minimum Lot Size (in square feet)	Required Frontage (in feet)	Right of Way Width (in feet)	Build Factor in 100-Year Floodplain Areas	Build Factor outside 100-Year Floodplain Areas
Multi-Family Residential (RA)						
Single-Family	80%	8,000	65	50	0.658	0.731
Two-Family	10%	12,000	65	50	0.703	0.781
Three-Family	5%	16,000	65	50	0.727	0.808
Four-Family	5%	24,000	65	50	0.753	0.837
Medium Single-Family Residential (RB)						
Single-Family	100%	10,000	70	50	0.676	0.751
Rural Single-Family Residential (RC)						
Single-Family	100%	44,000	160	50	0.681	0.757

Sources: Montachusett Regional Planning Commission, *Buildout Analysis for the Town of Athol, 2000*; *Town of Athol, Zoning Bylaws, 2001*.

For commercial and industrial uses, the build factor is also known as the effective floor area ratio (FAR). Floor area ratios are calculated by zoning district and land use, and incorporate factors such as building height, maximum allowable lot coverage, off-street parking requirements, and environmental constraints. For the buildout analysis, an effective floor area ratio was estimated for each commercial or industrial land use category (offices, retail, warehouses, light industry) in a particular zoning district. The effective FAR for each district as a whole was then calculated by averaging the FARs for the various potential uses. The FARs (build factors) and other key assumptions used for the commercial/industrial

calculations are given in Table 8-9. The frontage, minimum lot size, and maximum lot coverage requirements listed in the table come from Athol’s zoning regulations.

Table 8-9: Assumptions used in the Commercial/Industrial Buildout Calculations

Zoning District	Minimum Lot Size (in square feet)	Required Frontage (in feet)	Maximum Lot Coverage (%)	Build Factor (FAR) in 100-Year Floodplain Areas	Build Factor (FAR) outside 100-Year Floodplain Areas
Neighborhood Commercial (CB)	10,000	115	30	n/a*	0.24
General Commercial (G)	10,000	75	40	0.30	0.31
Industrial (I)	40,000	200	35	n/a*	0.35

**No potentially developable land in the CB or I districts was estimated to be within the 100-year floodplain.*

Sources: Montachusett Regional Planning Commission, Buildout Analysis for the Town of Athol, 2001; Town of Athol, Zoning Bylaws, 2000.

Using the assumptions about the future types of development (in Table 8-7), and the calculated build factors (in Table 8-8 and Table 8-9), the buildout analysis projected the level of new housing units and additional commercial and industrial square footage at maximum buildout. Based on the analysis’ assumptions, it was estimated that at full buildout, there would be an additional 11,557 housing units, 11,419 (99%) of which would be single-family homes. The analysis projected that 82 percent of these new housing units would be located in the Rural Single-Family Residential District. On the non-residential side, the analysis estimated that at full buildout, there would be an additional 1.4 million square feet of floor area of commercial and industrial activities. Ninety-four percent of this commercial and industrial space was expected to be created in the General Commercial District.

The buildout analysis estimates of additional housing units and new commercial and industrial square footage were then used to project the total additional community facilities and services, including drinking water supplies, waste disposal, schools and new roads, that would be needed at maximum buildout. Table 8-10 summarizes these projections.

By maximum buildout, the analysis projected that Athol’s population would grow to 39,295 people, more than 3.5 times the current population, and that there will be just 5,300 additional school children. The analysis also projects that the new residential development between the present and full buildout, and the creation of 11,557 additional housing units, will have these additional impacts as well:

- an increase in the Town’s daily water demands by an estimated 2.1 million gallons;
- an expansion of the Town’s solid waste stream by approximately 14,500 tons per year; and
- the construction of 187 miles of new roads to support the additional residential development.

The primary measured impact of the new commercial and industrial development by maximum buildout is the consumption of 106,000 additional gallons of water per day. At full buildout, Athol’s total water consumption is projected to be over 3.1 millions gallons a day, more than the projected safe yield of the Town’s public water supply, and over three times the current water consumption level. Some of the needed water could come from

private wells, but Athol would still have to consider expansions of the water distribution system and the development of additional public water sources.

Table 8-10: Summary of the Maximum Buildout Projections, including Community Needs

Land Use	Potentially Developed (acres) ^a	Number of New Dwelling Units	Additional Commercial/Industrial Floor Area (square feet)	New Residents ^b	New School Children ^c	Additional Water Usage (gallons/day) ^d	Additional Solid Waste (Recycled and Non-Recycled) (tons/year) ^e	New Roads (miles) ^f
Residential	13,193	11,557		28,199	5,316	2,114,908	14,466	187
Commercial/Industrial	105		1,414,468			106,085		
Totals	13,298	11,557	1,414,468	28,199	5,316	2,220,993	14,466	187

a. Takes into account wetlands and river protection areas.

b. Assumes 2.44 people per household (the 1998 Athol average).

c. Assumes 0.46 school children per household (the 1998 Athol average).

d. Assumes daily usage of 75 gallons per person for residential development, and 75 gallons per 1,000 square feet of floor space for commercial and industrial development (figures from the MA Department of Housing and Community Development’s Growth Impact Handbook).

e. Assumes 0.3648 tons per person/year for non-recycled solid waste (the Statewide average). Commercial and industrial solid waste is excluded because its disposal is not typically dealt with by towns, but by private haulers.

f. Assumes that houselots would be built on both sides of the new roads..

There are a number of other infrastructure improvements and expansions that would be needed at full buildout. These include an expansion of the Town’s wastewater treatment facilities, including the wastewater treatment plant, which has only 18 percent of its design capacity remaining, and new sewer lines. They also include school expansions and development of new parks and recreation areas, to accommodate the additional population. Most of the needed infrastructure expansions would have large financial costs, and the majority of these costs would likely be passed on to Town property owners in the form of higher taxes.

The situation at full buildout could be considered a “worse case scenario” for what could happen in the future under the current zoning. The buildout analysis did not consider factors other than zoning, such as regional and local economic conditions, that could influence how a community develops in the future. It also assumed that the zoning and zoning restrictions, and the environmental regulations affecting development, will remain the same over time, and that no additional farmland, forestland, or recreation areas in Town would become permanently protected as open space.

Under the maximum buildout scenario, the time frame until full buildout could be many decades, as the buildout analysis does not predict how fast or slow the projected growth would occur. Nonetheless, it is important that the Town take steps now to review its zoning bylaws and current approach to development to see if there are changes the Town wants to consider which could help mitigate the potential negative impacts and costs of the new development that have been suggested by the buildout assessment. Making such changes could also help support the Town’s vision for its future and improve the quality of life for both present and future Town residents.

Sustainable Development and the Cost of Community (Municipal) Services

Through the recommendations made in the Athol Master Plan's earlier chapters, the Plan seeks to encourage economic expansion and population growth that will be sustainable over the long-term, and that will preserve the Town's historic, natural, and scenic assets. This approach is continued in this Land Use and Zoning chapter. In evaluating potential future land use and zoning options, this analysis works to understand the capacity of Athol's critical natural systems; to assess the benefits and costs of the alternatives; and to promote a balance of land uses and a stable tax rate.

For the purposes of the Master Plan, a critical natural system is defined as a set of interconnected natural resources that helps sustain Athol residents. One critical system examined in previous chapters relates to the quality and quantity of the public water supplies. Undeveloped forestland in Athol that is managed through environmentally sound practices protects drinking water supplies and the levels of water within aquifers, rivers, and streams. It is therefore important to limit the development of forestland, particularly in areas where such development could adversely affect water resources such as the public water supply. Forests, pastures, and properly managed cropland in Athol naturally help the landscape filter, retain, and then release water into streams, allowing for ample supplies of water for wildlife and fisheries, and for human consumption. It is also essential to prevent decreases in water quality, and to protect the land in current and future aquifer recharge areas from over-development, and from land uses that could lead to increases in runoff and non-point source pollution. A critical natural system impaired by land use and development impacts can result in a significant reduction in the health, prosperity, and quality of life for Athol residents.

Athol took an important step towards protecting these areas through the adoption of a Groundwater Protection District Bylaw in 2000. The Groundwater Protection District includes the delineated Department of Environmental Protection (DEP) Zone II Recharge Areas for the Tully and South Street Wells. Land uses that could have an adverse effect on groundwater quality are restricted or prohibited within the Groundwater Protection District. Designing and implementing a plan for development that balances future growth with the protection of natural systems such as aquifers and watersheds is essential for a healthy community. It is also important to have development that is compatible with the preservation of scenic and historic resources and open space lands. This type of approach to development is sustainable not only because it helps protect natural, scenic, and historic resources, but because it can also lead to stable municipal service costs and property taxes.

As Athol considers which type of new development is most sustainable and should be encouraged, it is important to understand the relationship between land uses and municipal costs. Residential, commercial and industrial development each generally have a different fiscal impact on town finances depending on the relationship between the additional property tax revenues generated by the new development, and the additional municipal costs incurred as a result of new development. If the municipal expenditures associated with new development exceed the new tax revenues created, then net municipal costs increase. These costs, or at least a large portion thereof, are then passed onto residents in the form of higher property taxes.

Different developed land uses result in different net fiscal impacts to the community. A Cost of Community Service (COCS) analysis is one way of comparing the fiscal value and costs of different land uses within a town. The COCS methodology was developed by American Farmland Trust (AFT) in the mid-1980s to give communities a simple mechanism for evaluating the contribution of different land uses to the local tax base. In the COCS analysis, municipal records on costs and tax revenues are reviewed, and the costs and revenues are assigned to different land use types, including residential, commercial and industrial uses, and farmland, forestland, and open space.

In 1992, American Farmland Trust conducted a COCS analysis for several towns in the region. The results of that study showed that the protection of open space and the creation of new commercial and industrial development are effective strategies for promoting a stable tax base. In all the towns studied by AFT, residential development was found to cost more in town service expenditures than it generated in property tax revenues, and commercial and industrial development and open space were found to generate more tax revenues than they cost in terms of municipal services. For example, the AFT study results for Deerfield found that for every dollar generated by residential development in Deerfield, the municipal services required by that land cost a dollar and sixteen cents (\$1.16) on average. In contrast, for every dollar generated by farmland and open space, the municipal services required by that land cost only twenty-nine cents (\$0.29), and for every dollar generated by commercial and industrial tax revenues, municipal services cost only thirty-eight cents (\$0.38). The surplus revenues for commercial and industrial uses and open space can be used to offset the town's fiscal losses from residential development. In 1995, the Southern New England Forest Consortium (SNEFC) commissioned a study of eleven southern New England towns that confirmed the findings of the earlier AFT study. The results of COCS analyses for four Western Massachusetts towns are shown in Table 8-11. Each set of results shows that residential land uses on average result in a negative net fiscal impact for towns, and that commercial, industrial, farmland and open space land on average have a positive net fiscal impact for towns.

Table 8-11: Results of Community Service Analyses for Western Massachusetts Towns

Town	2000 Population	Cost of Community Service Ratio (Revenues/Costs)			Study
		Residential	Commercial/ Industrial	Farmland/ Open Space	
Agawam	28,144	1 : 1.05	1 : 0.44	1 : 0.31	AFT, 1992
Becket	1,755	1 : 1.02	1 : 0.83	1 : 0.72	SNEFC, 1996
Deerfield	4,750	1 : 1.16	1 : 0.38	1 : 0.29	AFT, 1992
Gill	1,363	1 : 1.15	1 : 0.43	1 : 0.38	AFT, 1992
Leverett	1,663	1 : 1.15	1 : 0.29	1 : 0.25	SNEFC, 1996

Sources: COCS data: American Farmland Trust, *Cost of Community Service Studies, 1999*;
population: U.S. Census Bureau, *2000 Census of Population and Housing, Summary File 1*.

The SNEFC study also found that there is a correlation between a town's population trends and municipal service costs. Towns with larger or growing populations were found to experience greater net financial losses from their residential development than towns with smaller or stable populations.

One way of providing an inviting economic climate for new development, as well as existing commercial and industrial establishments, is through a favorable property tax rate. Athol's tax rate and average single-family tax bill is lower than that for the nearby communities of Orange and Gardner (see Table 8-12). In FY 2001, the average single-family tax bill in Athol was \$1,348, while in Orange and Gardner, it was \$1,851 and \$1,521 respectively. Like most of the communities in the region, Athol, Orange, and Gardner all have a single property tax rate which applies to residential, commercial, and industrial development, as well as open space or undeveloped parcels, instead of different tax rates for different uses. Erving, Montague, and Rowe are among the few communities in the region with different tax rates for residential and commercial/industrial uses. In each of the three towns, the residential property tax rate is lower than the commercial/industrial tax rate.

Table 8-12: Property Taxes for Athol and Nearby Towns, FY 1995-2001

Town	Fiscal Year 1995		Fiscal Year 1998		Fiscal Year 2001		Change in Tax Rate FY 1995-2001	Change in Single-Family Tax Bill FY 1995-2001
	Tax Rate (per \$1000 valuation)	Average Single - Family Tax Bill	Tax Rate (per \$1000 valuation)	Average Single - Family Tax Bill	Tax Rate (per \$1000 valuation)	Average Single - Family Tax Bill		
Athol	\$13.00/1000	\$910	\$14.33/1000	\$1,073	\$15.63/1000	\$1,348	\$2.63/1000	\$438
Gardner	\$15.17/1000	\$1,428	\$18.30/1000	\$1,623	\$19.92/1000	\$1,851	\$4.75/1000	\$423
Orange	\$15.93/1000	\$1,323	\$20.10/1000	\$1,464	\$20.87/1000	\$1,521	\$4.94/1000	\$198

Source: MA Department of Revenue, 2002.

Although Athol's tax rates are lower than those elsewhere, the Town's overall property taxes have still been increasing in recent years. Between FY 1995 and FY 2001, the average single-family annual property tax bill increased by almost 50 percent (48%). The Town should consider ways to minimize future increases of such magnitude and to maintain its relatively low taxes. According to the Massachusetts Department of Revenue, in FY 2001, Athol had the seventeenth lowest tax bill of 340 Massachusetts communities.

Athol's slow population growth has allowed the Town to keep up with demand for services and maintain a relatively low property tax rate. However, the Town's interest in stimulating new economic development and job creation could also encourage new residential development, which typically produces a negative net fiscal impact. If the new jobs created by the economic development are well suited to the skills of existing residents who are unemployed or underemployed, then the new economic development will have maximum benefits for the town, by creating additional tax base and providing jobs for existing residents.

As the Town works to encourage new economic growth, it will be important for the community to promote development that is sustainable from both a fiscal standpoint and an environmental standpoint. Sustainable economic development can create jobs, and complement other Town objectives such as the preservation, protection, and promotion of Athol's natural, scenic, and historic assets. One type of sustainable economic development that was proposed in the Economic Development chapter of the Master Plan, is heritage and recreational tourism, such as is being promoted and developed through the New England Forestry Foundation (NEFF). Recreational and heritage tourism initiatives can focus attention on Athol's and the region's important natural, scenic, and historic resources, and in

doing so, promote and help preserve them. Tourism initiatives can also have the added benefit of creating new business opportunities and promoting small retail companies and visitor-related businesses such as bed and breakfasts, motels, and restaurants. Locally-owned businesses, including local farm or forestry businesses, can be another type of sustainable economic development since more of these businesses' revenues stay in the local community and the region than non-locally owned businesses, and since much of their workforce typically comes from Athol or nearby towns.

Summary of Land Use and Future Development Issues

Need to Diversify the Town's Economic Base

Athol has always had a large number of workers employed in the manufacturing sector, and today, L.S. Starett Company, a tools manufacturer that first opened in Athol in the late nineteenth century, continues to be the Town's largest employer. Over the 1985 to 1999 period, manufacturing jobs in Athol provided 35 to 42 percent of the Town's total employment base. This dependence on manufacturing has made Athol economically vulnerable during manufacturing sector downturns, and has contributed to the loss of a number of downtown businesses and important employers over the last 50 to 100 years.

The Economic Development chapter of the Master Plan identified three potential future growth sectors for Athol. They are TCPU (Transportation, Communications, and Public Utilities), Services, and Agriculture/Forestry. Some growth in these industries, particularly communications, could complement existing business activity. Computers and quality telecommunications connections are becoming increasingly important for businesses to remain competitive in today's marketplace. Investments in this area could help make Athol businesses more effective and more able to compete with other businesses in their sectors. It could also encourage Athol businesses that have considered relocating to remain in town. Another advantage of promoting the TCPU sector is that TCPU wages are often higher than those in other industries.

Encouraging development in the local agriculture/forestry sector could also produce positive town-wide impacts. Increasing the number of locally-based agriculture and forestry businesses could help expand the supply of local farm and forestry goods, and raise the visibility of these enterprises in the community. This could then create more demand for local products. A primary benefit of Athol residents buying products that are made in Athol is that more of the revenues generated by these sales stay in the community and go to other Athol residents and businesses.

Another local business sector encouraged in the strategies developed in the Economic Development chapter is tourism. Encouraging heritage and recreational tourism-related businesses in Athol, and expanding tourism activities, could attract many more visitors to Athol and to the region, and could complement other proposed business activities. Centrally located within the North Quabbin Region, and with easy access to the Bearsden Conservation Area, Athol is ideally situated for hosting more recreational and heritage tourism. The New

England Forestry Foundation (NEFF) is working to revitalize the North Quabbin economy through initiatives that increase the public's access to the region's wealth of natural resources. NEFF has developed marketing strategies to promote these resources and has some programs already underway. Athol could also further promote its history as an industrial center, and its early Native American and colonial settlement.

Land for Commercial and Industrial Development

Concern has been expressed about the availability of space for commercial and industrial development in Athol. However, there are currently a number of vacant or underutilized commercial and industrial buildings within the Town, including in the downtown, and these structures could potentially be redeveloped for new commercial or industrial uses. In addition, the buildout analysis indicates that at full buildout with the current zoning, up to 1.4 million additional square feet of floor area of commercial and industrial activities could potentially be created within the current commercial and industrial zoning districts. Athol could investigate the feasibility of using some of the presently undeveloped land within its current commercial and industrial areas for a new industrial park or other large commercial or industrial employer. If adequate space for these economic activities cannot be found within the existing commercial and industrial zoning districts, then the Town could consider developing an industrial park in another section of Athol, and rezoning the industrial park site accordingly. The Industrial Park Committee recently reviewed potentially developable areas in Athol, and created a list of three primary potential locations for a future industrial park or independent manufacturing. These three locations are the following:

- South Athol Road Area: (roughly, bounded on the south by Route 2, on the west by White Pond Road and Patridgeville Road, on the north by Patridgeville Road, and on the east by Chase Road.)
- Templeton Road Area: (roughly, bounded on the north and east by Templeton Road, on the west by Petersham Road, and on the south by Route 2, between the existing interchanges at Route 32 and Route 2A.)
- Cottage Street South Area: (roughly, bounded by the north by the end of Cottage and Sanders Streets, on the west by Chase Road, on the east by High Knob and on the south by Batchelder Road.)

(Note: the Industrial Park Committee has the precise parcel-level descriptions of the proposed industrial park areas. The boundaries given above are meant only as very general guides of where the proposed industrial park areas are located.)

The Industrial Park Committee feels that these three areas are well suited for an industrial park or independent manufacturing, especially the second area. The Industrial Park Committee believes these areas have a number of desirable characteristics for economic development including large undeveloped parcels, street access, good proximity to Route 2 and to water and sewer, and suitable topography and soil conditions. These sites, and possibly others as well, will need to be investigated in more detail before decisions can be

made about which site(s) should be pursued for future economic development and what zoning changes may be necessary to facilitate this development.

Need for Greater Housing Diversity

A diverse housing stock, covering a range of costs, sizes and accommodations is necessary for Athol's vitality and economic health. The housing stock needs to accommodate many different resident groups, including the elderly and young families with children. The housing stock also needs to offer quality residences at affordable prices. Housing in Athol is affordable for the most residents. However, there are some residents, particularly those with low incomes, who are overly burdened by their housing costs. According to the 1990 Census, 45 percent of households with incomes under \$20,000 (1989) spent at least 35 percent of their incomes on housing.

Additionally, in recent years, few multiple unit housing structures or rental housing has been added to the Town's housing stock. From FY1991 to FY2001, Athol issued not a single building permit for the new construction of any multiple-unit housing, while a number of apartment buildings were demolished during the same period. As a result, it is getting more difficult to renters to find suitable, affordable housing.

It is important that the Town work to increase the diversity of its housing stock, either through the rehabilitation of existing vacant or underutilized housing stock, or through the creation of new housing options. The latest population forecasts (MISER, 1999) show that by 2010, Athol is expected to have close to 1,400 residents ages 65 and over, and almost 300 residents ages 85 and over. This elderly population, especially the older subgroup, may need more accessible and smaller homes. For younger families, larger-sized apartments and lead-free housing is essential. Affordable housing is also a key necessity for both groups since they often have limited or fixed incomes. Further, developing and providing housing for young and elderly residents with low or moderate incomes can help Athol meet the State's 10 percent affordable housing goal under Chapter 40B. Only 5 percent of Athol's housing units are currently considered affordable under the Chapter 40B definition of affordability..

Higher Service Costs with Development Outside of the Town Center

The predominant current pattern of development in Athol is residential construction on Approval-Not-Required lots outside of the Town center. With this pattern of development, the costs of municipal and public services including road maintenance, school busing, and police and fire increase disproportionately to the number of new residents. As communities experience predominantly spread-out development patterns, it is logical that the costs of community services will rise faster than if most of the development were to occur in the in-Town area where municipal services infrastructure already exists.

Accelerated Development with Uncoordinated Water or Sewer Expansions

Vacant land with access to sewer is considered more valuable for development purposes, and is therefore more likely to face future construction. In areas without public sewer, developers often have to overcome constraints to development. These constraints can include the presence of wetlands, bedrock, or a relatively high groundwater level, which could prohibit a septic system from passing a Title 5 inspection. Sometimes the presence of these constraints results in residential parcels being larger than the minimum lot size to accommodate the proper location of a septic field. With access to a sewer line extension, developers can build more dwelling units on the same area because no septic field is needed. Expanded sewer lines also allow businesses that are dependent on sewer to locate in an area where they previously could not. Extending sewer lines outside of the village areas promotes the development of currently undeveloped, rural lands. The Town should be cautious and extend sewer lines only to areas where it wants to channel future growth and development.

Expanding sewer lines is itself expensive. When the collection system expands, so does the hydraulic flow arriving at the treatment plant, and the treatment plant needs to be able to handle the added flow. Athol's wastewater treatment plant is already at 88 percent of its capacity, and cannot handle much increase in demand without an expansion or without improvements to reduce the system's current level of infiltration and inflow (I & I), whereby additional water enters the system via breaks within pipes, open joint pipe, manholes, or catch basins. The Town's I & I problems also mean that during a major storm event, excessive flow can so overwhelm the treatment system that untreated effluent gets deposited in the Millers River. Improvements to expand the capacity of the wastewater treatment plant or to reduce the I & I problem are both expensive for the Town, but must be addressed.

Potential Impact of Development on the Town's Water Supply

Athol appears to have an adequate water supply for the coming decades. The Town currently consumes approximately 846,193 gallons per day, less than a third of the aquifer's safe yield of 3.0 million gallons per day. The safe yield is the amount of the water that could be withdrawn from a well every day of the year without decreasing its capacity to supply the amount of water in the future. The safe yield does not necessarily take into account the impact of draw down on local wetlands or the risk of contamination within the recharge area.

If the community is successful in attracting new businesses or new industries to town, especially any new manufacturers, it could potentially impact the community's total water demand. As mentioned in the Community Facilities and Services chapter, industrial uses in Athol currently account for only 7 percent of Athol's daily water usage. However, new commercial and industrial uses could potentially have high water demands. For example, in Deerfield, daily water withdrawals averaged about 800,000 gallons per day in 1999. Nearly half of this demand came from one industrial use, a local pickle factory. If Athol wishes to expand its industrial base, it may wish to seek a permit to withdraw an additional amount of water beyond its current registered volume, or work to attract new employers with low water consumption.

Additionally, as Athol faces new development, both commercial/industrial and residential, the quality of the Town's water supply could be adversely impacted by the increase in developed land uses, and their potential for degrading the aquifer. Through the Groundwater Protection District and the district's restrictions on uses within the Zone II Recharge Areas, the Town has already put in place a measure to help protect the quality of its water supply. The Town should look at expanding the Groundwater Protection District to include other potential future public water supplies. It should also monitor the practical impact that the district and its regulations has on proposed land uses near Athol's public water sources, and adjust the district bylaw as necessary to make it more effective.

Potential Impact of Development on Open Space and Recreation Areas

As a town grows, there are often pressures to develop farmland, forestland, or open space for more intensive uses. According to the 1999 MacConnell land use data, 15 percent (3,180 acres) of Athol is currently developed. Seventy-six percent of the Town's total land area consists of forestland, and another 8 percent is comprised of farmland or natural resource areas, including wetlands. From 1971 to 1999, the amount of developed area in town increased by 30 percent, with most of the growth being new residential development. Most of the new housing being built is new Approval-Not-Required residential construction along the Town's road corridors on the edge of large contiguous forest areas. New residential construction on such frontage lots can occur with relative ease. This type of development fragments the landscape, and can negatively impact the quality of wildlife habitats, watershed quality, and recreational opportunities within a community.

If the current pattern of sprawling residential development continues, opportunities for setting aside current, unprotected, open space for parks and recreation may be lost. The Town has already identified 675 acres of open space lands that are not protected from development, but that are important to the town for recreational purposes. Also, improving access to the Millers and Tully Rivers has been expressed as an important goal for the Town.

It is important that the Town work to preserve unprotected open space, farmland, and forestlands before the properties face large development pressures. Doing so could make the acquisition of undeveloped parcels and/or their development rights easier and less expensive. It could also help protect greenway corridors and large contiguous, environmentally sensitive, natural resource areas from a trend of slow, but increasing, fragmentation due to development.

Need to Protect the Town's Historic and Scenic Resources from Degradation

Without due attention and maintenance, deterioration may threaten the Town's significant historic structures. Demolition resulting from lack of upkeep is one of the most pervasive threats to historic resources. Over the last few decades, a number of notable historic structures in Athol have been torn down due to the costs of maintaining or restoring them, and to the interest in using their land parcels for other purposes. These structures include the Leonard Hotel and the Sally Fish House, both demolished to build new parking lots; and the

Highland Grade School and Athol Poor Schoolhouse, both torn down after their school functions had been moved to other locations.

In addition, over time, historic details on many older buildings, such as door and window moldings, porch supports, eaves brackets, and other features may be lost. Often, when such detailing becomes damaged or decayed, it is permanently removed, and the related structure features are replaced by cheaper or mass-produced versions that lack the character of the original. These changes can be detrimental to a building's historic value and nature. The use of vinyl siding and of vinyl replacement windows can similarly be problematic, and can threaten the historic appearance of older structures. A number of the buildings listed in Athol's historic inventory have experienced extensive alterations, expansions, and other construction projects over the years, so much so, that in some cases, they barely resemble their original structures and many of their historic details have been lost.

The Town's noteworthy scenic resources, such as scenic landscapes and views, can face degradation through low density development and loss of open space and farmland. A number of Athol's historic and scenic landscapes are agricultural in nature, and could be threatened as farms are converted to developed land uses.

The Town may want to consider developing strategies to protect its historic and scenic resources, and prevent their decline. Such strategies could include the following:

- Projects to promote the rehabilitation or reuse of currently underutilized historic buildings in the downtown area;
- Town bylaws or voluntary guidelines to delay the demolition of historic buildings and other structures;
- Financing programs to cover the costs of preserving and restoring the Town's historic structures;
- Creation of National Historic Districts in Athol's most intact and historically significant areas;
- Voluntary architectural guidelines for historic structures and sites to protect their historic character and features; or
- Designating roads with scenic landscapes as Local Scenic Roads.

Recommendations

- Promote the diversification of Athol's economy by encouraging the development of new businesses in the TCPU (Transportation, Communications, and Public Utilities) and agriculture/forestry sectors, in part to support and compliment existing business activities. Support local business development, including micro-scale and home businesses, and the creation of a small business incubator and training center. Encourage new tourism-related businesses to promote the Town's and region's recreational, scenic, and historic resources and opportunities.

- Support the rehabilitation of vacant or underutilized buildings, particularly in the downtown, for commercial and industrial uses, or mixed uses with commercial businesses and apartments. Emphasize the rehabilitation of historically significant structures to help protect and preserve these historic assets.
- Support the future growth of current businesses by assessing and addressing their anticipated future infrastructure needs, including water, sewer, transportation, and telecommunications.
- Evaluate the feasibility of developing a new industrial park for commercial and industrial businesses, and suggest potential locations for such development. This analysis should be build upon the work and recommendations of the Industrial Park Committee, which recently developed a list of three primary potential economic development sites near and along Route 2.
- Consider increasing the minimum lot size in the Rural Single-Family Residential (RC) District from 1.01 acres (44,000 square feet) to 2.00 acres (87,120 square feet) to help preserve the Town's open spaces and rural character.
- Encourage the development of more small-scale rental housing, especially housing that would suitable for young families or elderly residents. Consider working with the Athol Housing Authority to establish new elderly housing for Athol that would give priority to Athol residents, and that would contribute to Athol's affordable housing supply and help the Town reach the 10 percent affordable housing level mandated under Chapter 40B.
- Review the existing zoning district boundaries to see how they relate to current water and sewer infrastructure.
- Limit the expansion of water and sewer infrastructure to the areas where the Town wishes to encourage growth, consistent with the findings of the Master Plan.
- Identify future potential public water supplies and have Zone II areas delineated for these water resources. Expand the Groundwater Protection District to encompass these areas.
- Consider creating a Phased Growth Bylaw to promote a phased buildout of lots within approved subdivisions over a number of years, to help balance residential growth with resource protection, and to allow for a gradual expansion of municipal services to meet increased demand due to growth.
- Review the current Use Regulations Table in the Athol Zoning Bylaws and consider updating and expanding the listed uses.
- Consider establishing a Cluster Development Bylaw, which could encourage developers to protect open space in exchange for reducing the infrastructure costs of their projects.

- Considering creating a Site Plan Review process to review future development proposals before they can proceed. A Site Plan Review process could help ensure that new development projects are compatible with existing neighborhoods, and could help minimize projects' potential impacts on the Town's natural and scenic assets.
- Identify and prioritize important farmland, forestland, open space and recreational lands without permanent protection from development and work with Mt. Grace Land Conservation Trust and other conservation groups to permanently protect these parcels. These lands could be protected through Department of Environmental Management, the Athol Conservation Commission, or conservation trust acquisition.
- Develop new, and expand existing multi-use recreational trails, including the proposed Millers River Greenway, to connect Athol's open space, natural, historic, and cultural resources, to its residential areas.
- Consider creating National Historic Districts in the Town's most historically intact and significant areas, including the Uptown Common area and the Downtown Village area along lower Main Street. The creation of National Historic Districts, which is largely an honorary designation that does not impose restrictions on individual properties, could help promote the Town's historic assets and attract additional tourism, as well as generate new tourism-based commercial activity. This, in turn, could then help protect the town's historic resources from decline.
- Investigate whether any Local Scenic Roads (pursuant to Massachusetts General Laws Chapter 15C) should be designated to provide some protection to historic and scenic resources along the roads, and to restrict the removal of important trees and stone walls in the roads' right-of-way. Proposed Local Scenic Roads are identified on the Historic and Scenic Resources Map and include Chestnut Hill Road, Moore Hill Road, and Pleasant Street.