

8. LAND USE

1. Background

This section of the Master Plan takes into account the analysis made in previous sections concerning growth trends and their impacts on man-made and natural resources. From here, we look forward to Sheffield's projected growth over the next 10 years and compare this to the community's long-term vision. In doing this we establish a comprehensive land use plan which reflects the community's goals for growth management and conservation over the next ten 10 years. The underlying theme for *Section 8: The Land* is as follows:

- Identify and address particular growth issues in a specific and innovative way.
- Balance community concerns of land rights, economic opportunities, and land stewardship.
- Encourage appropriate growth in targeted areas to create new economic and residential opportunities thereby enhancing the overall quality of life for local residents.
- Control the impacts of growth on municipal infrastructure, schools, neighborhoods, agriculture, and cultural and natural resources.

2. Sheffield's Land Yesterday and Today

An analysis of land use patterns based on aerial photography interpretation and town property records illustrates the changes in the community over the past 50 years. The following map shows Sheffield's current land use patterns based on the latest state aerial photography (1999).

□ *Please see Map # 16:
 'Town of Sheffield
 Land Use'
 behind the MAPS tab.*

Land Coverage

The preceding map is broken down into 17 land use categories and based on the interpretation of the most recent state data. This bird's eye view of Sheffield shows that the town's appearance has gradually changed over the past 50 years.

Sheffield Land Patterns based on Aerial Photography, 1952-1999					
Type of Land	1952	1972	1978	1980	1999
Town Master Plan; Town of Sheffield, MA Forest/Vacant Land (including floodplain)	49%	55%	61%	66%	60%
Residential	1%	3%	3%	>3%	<7%

Forest Land - The majority of land in Sheffield is in forest cover (over 60 percent of the community), which increased by 15% between the early 1950s and 1980. In the mid-1900s the community had many more farms with large pastures, hayfields, orchards and croplands. Many of these open lands have been inactive and allowed to reforest. Between 1980 and 1999, forest cover declined slightly as some farms were re-activated and more residential development started to occur.

Sheffield Land Use by Category				
Land Use	Aerial Photographs (1)		By Parcel (2)	
	Acres	%	Acres	%
Forest	18,645	60.1%	2,399	7.9%
Agriculture			7,636	25.1%
Pasture	2,032	6.6%		
Orchard	46	0.2%		
Cropland	4,775	15.4%		
Open Land	704	2.3%		
Open/Recreational			593	2.0%
Wetland	1,534	4.9%		
Water	830	2.7%	830	2.7%
Residential	1,724	5.6%	7,183	23.6%
Residential < .5 Acres	298	1.0%		
Vacant Residential			4,546	14.9%
Commercial	77	0.3%	471	1.6%
Industrial	56	0.2%	61	0.0%
Vacant Industrial			64	0.0%
Mining	42	0.1%	84	0.0%
Waste Disposal	26	0.1%		
Transportation	35	0.1%		
Urban Open	125	0.4%		
Recreational	80	0.3%		
Public Non-Taxable			3,795	12.5%
Private Non-Taxable			1,691	5.6%
Uncategorized Land			630	2.1%

- (1) Land uses based on interpretation of 1999 Statewide Aerial Photos;
(2) Land uses based on parcel records, Sheffield Assessors Office, 2002

Agricultural Land - Comparing the older aerial photography to the current ones, it appears that much of the former agricultural lands, now tree-covered, were in the southern portion of town. Even though total agriculture land declined over the past 50 years it remains the second largest land coverage in the community. In fact, over the past 20 years agricultural lands have increased by about 9%.

Interpretation of the 1999 aerial photographs indicates that the actual agricultural land in use in town is 6,685 acres.¹ Active agricultural lands identified in aerial photos are broken down into pastures, orchards, and croplands.

Cropland (15% of land area) is the largest agricultural use and third largest town-wide. The majority of cropland is situated along the Housatonic River where the soils are deep and rich.

¹ This figure is smaller than the acreage listed in the Chapter 61 and APR programs because not all land in these parcels are actively used for agricultural purposes.

Residential Land - Residential land coverage more than doubled between 1980 and 1999 (from 3% to 7%). Higher density residential land use (less than ½ acres) is primarily concentrated along Main Street between Sheffield Center and the Ashley Falls Village areas. Lower density residential coverage is distributed throughout Sheffield with the highest concentrations fronting on existing local roads. The most noticeable changes as one travels around the community is the addition of a number of new residences along rural roads such as Undermountain Road, Boardman Street, Hewins Street, Salisbury Road, and Polikoff Road.

Commercial Land - The most noticeable changes as one walks or drives through Sheffield have been a series of commercial developments along Route 7. Commercial and industrial land use has remained relatively small in terms of total coverage (less than 1% of all lands in Sheffield) over the past 50 years. New businesses along Route 7 have been limited in size and number, and by proximity to the Housatonic River and its flood plain. Industrial land use has been declining. Yet because commercial and industrial uses are so visible, they are an important factor in the community's future. The placement, distribution, architectural quality, and accessory uses (such as parking areas and signage) of these developments must be carefully planned in order to achieve Sheffield's goals of maintaining its attractive rural character.

Water - Since 1952 many hundreds of acres of open water have been created with the construction of dams for multiple purposes. Threemile Pond, for example, has changed from 156 acres to a total of 727 acres. While the original intent of the construction of dams was power for mills, many residents have created small ponds out of marsh and swamp for irrigation, recreation, or landscaping. These new impoundments have resulted in an increase in private recreational opportunities as well as to increase different types of wildlife habitat.²

Land Use by Property Ownership

The previous map was based on aerial photo interpretation – that is, the visual impact of different land uses. In contrast, the following map and discussion are based on property ownership and associated land use classification made by the town. The estimated acreage in each category is based on land ownership and use records kept by the Assessors Office.

□ *Please see Map # 15:
‘Town of Sheffield
Land Use by Parcel’*

behind the MAPS tab.

² Sheffield Open Space Plan, 1987

Compared to land coverage interpretation of the aerial photographs, Sheffield has slightly more land in agriculture use (25%), indicating that some of these lands are not actively farmed. Sheffield also has less land ownership in forest land (8%) and more land in residential use (24%) when compared to aerial photo interpretation of land coverage.

Sheffield's parcel count has grown moderately since 1990 with the addition of approximately 140 new lots. This is consistent with development trends during the 1990s, which included a high percentage of scattered residential construction on new or existing large lots, and relatively few new residential subdivisions. Parcels in residential use make up about 1/2 of all parcels in town and increased by about 7% (from 42% to 49%) since 1990.

Sheffield Parcel Count by Property Class, 1986-2003										
FY	Single Family	Multi Family	Apt	Misc. Residential	Vacant Land	Open Space	Commercial	Industrial	Other Usage	Total
1986	916	65	9	0	291	529	38	9	208	2,065
1987	938	65	10	0	270	554	20	8	226	2,091
1988	965	67	11	0	311	430	48	9	312	2,153
1989	961	81	7	42	801	68	51	15	202	2,228
1990	982	84	9	42	859	67	55	15	203	2,316
1991	1,017	82	10	38	866	64	60	16	213	2,366
1992	1,026	56	10	65	871	63	69	19	236	2,415
1993	989	58	9	51	898	59	59	21	257	2,401
1994	1,061	74	9	27	855	59	62	21	287	2,455
1995	1,083	45	9	55	831	57	62	22	292	2,456
1996	1,101	73	8	27	849		63	22	308	2,451
1997	1,115	43	8	57	829		64	23	310	2,449
1998	1,123	44	8	56	775		91	21	322	2,440
1999	1,143	45	8	55	757		92	21	327	2,448
2000	1,153	43	8	53	731		92	22	350	2,452
2001	1,164	44	8	53	710		88	23	354	2,444
2002	1,187	40	7	53	692	0	93	22	353	2,447
2003	1,200	39	7	53	686	0	96	21	353	2,455

Source: Mass. Dept. of Revenue, Division of Local Services

Parcels in commercial use have grown by about 41 since 1990 and remain a small (4%) but growing percentage of the total parcel count. Parcels in industrial use have remained about the same and make up a very small percentage of the total parcel count in Sheffield. The number of vacant parcels has changed the most since 1990 declining by 173, or from 37% to 28% of the total parcel count. Many of these parcels have been put to residential and agricultural use.

Residential Land Use Trends & Patterns

Over the last 30 years several towns in the South Berkshire Region have sustained a significant consumption of land for residential development. The table below illustrates the amount of land that has been converted from other uses, primarily agricultural and forestry, into residential use in a number of these communities. Sheffield, being one of the fastest growing communities in the region, has seen the largest consumption of land for residential use (over 5,300 acres since 1970).

Consumption of Land in Acres for Residential Use in Sheffield Area, 1970-2000								
Town	Residential Development		Population		Residential Dev. In Acres per Capita		% Gain or Loss	
	1970	2000	1970	2000	1970	2000	Population	Dev. Land
Lee	2,825	2,908	6,426	5,985	0.440	0.486	-6.9%	10.5%
Lenox	2,471	2,376	5,804	5,077	0.426	0.685	-12.5%	60.8%
Sheffield	1,274	6,582	2,374	3,335	0.537	1.974	40.5%	267.7%
Stockbridge	4,220	5,297	2,312	2,276	1.825	2.327	-1.6%	27.5%
W Stockbridge	2,753	4,683	1,354	1,416	2.033	3.307	4.6%	62.7%

Source: U.S. Census and Statewide Aerial Photo Interpretation

Population growth and housing development has begun to change the traditional land use patterns in Sheffield. Until the recent era, the community was settled based on a central village surrounded by agricultural lands. Residential development until the mid-1980s was mostly centered in and around the villages of Sheffield and, to a lesser degree, Ashley Falls. Since then, most new homes have been built along rural roads outside established village neighborhood areas. Older neighborhoods and streets in the village areas such as Main Street, Maple Avenue, and Root Lane in Town Center, and East Main Street, School Street and Railroad Street in Ashley Falls typically have smaller lots, narrower frontage and shorter front yard setbacks. Traditional architecture is common in these established neighborhoods, and streets are narrow at 20 to 22 feet on average.

Residential Development Characteristics in Sheffield, 1992-2001						
Development Characteristics	Approval Not Required		Subdivisions		Second Homes	
	Total	Average	Total	Average	Total	Average
Number of Units	143	14 per year	27	2.7 per year	27	2.7 per year
FY02 Building Value	\$29,637,700	\$207,257	\$ 555,600	\$168,726	\$7,366,500	\$272,833
FY02 Land Value	\$6,732,400	\$47,080	\$1,131,900	\$41,922	\$ 2,120,200	\$78,526
FY02 Total Value	\$36,370,100	\$254,376	\$5,687,500	\$ 210,648	\$9,486,700	\$351,359
Type of Dwelling	130 SF Dwellings, 13 other residential types		All SF residences		23 SF Dwellings, 4 other res.	
Land Area (acres)	939.5	6.6	38.6	1.43	348.8	12.9
Finished Area		187,531	1,311	29,699	1,100	39,774

Source: Sheffield Assessors Office

The Table above demonstrates that the majority of residential development over the past 10 years has occurred on existing rural roads throughout the community. The majority of these homes are permitted for development without subdivision approval under the State's ANR laws. As long as a parcel (existing or new) fronts on an existing public street and meets the minimum zoning requirements (such as lot size and setback) the new home does not have to follow other requirements of the subdivision regulations. The result can be excessive curb cuts and tree clearing along some of the Town's most attractive rural roads.

The second most common form of residential development over the past 10 years has been seasonal homes. The Housing Distribution map in *Section 2: Who We Area and How We Live* illustrates that seasonal home development is also distributed throughout town but with the highest concentrations in the southwest quadrant between Berkshire School Road, Undermountain Road, Route 7 and the state line. Both ANR and seasonal home development have been averaging larger lot sizes than required by local zoning.

Village Land Use Patterns

Historically, the Town Center has contained a mix of civic, institutional, commercial, industrial, and residential uses all within walking distance of each other. The surrounding lands were mostly in agricultural uses. However, as the land use maps for housing and business development illustrate, residential development has begun to spread out into more rural parts of the community while commercial developed has followed a linear pattern along Route 7.

Town Center and Ashley Falls remain the traditional mixed-use cores of Sheffield with commercial, office residential, public and education uses. While new development has been limited in both areas, some residential properties have been converted to commercial uses such as small retail stores, home businesses, and accommodations.

Recent scattered residential and commercial development patterns may have a significant effect on household travel. Residential accessibility is measured in terms of distance to desired locations such as work, recreation, services, and shopping. Scattered development affects our ability to link trips efficiently for different purposes and the opportunity to complete more than one activity at a single stop.

Mixed uses in Town Center and Ashley Falls should be encouraged as much as the market will allow. Major advantages of mixed-use are the ability to reduce vehicle trips, ease walking trips, improved residential property values in surrounding neighborhoods, better opportunity for casual social contact, enhanced rural character, and a greater sense of community.

Commercial Land Use Patterns

Sheffield's commercial land use patterns have changed moderately over the past 30 years with the greatest concentration of retail and service activity remaining in or near the Town Center. However, zoning is geared for commercial development on Route 7 from the Great Barrington town line to intersection of Route 7A. Over the last several years scattered highway-oriented commercial developed has begun to occur along this corridor.

Like many communities, Sheffield has designated large stretches of the Route 7, a major regional arterial highway, for commercial uses as retailers and related businesses gradually fill in the individual sites. Under this scenario, new development is scattered and spread out while sites closer to the Town Center and Ashley Falls Village often remain underutilized. Also by designating more commercial land than may be necessary, the Town may be diluting the economic vitality of the traditional business districts.

Commercial development patterns are expected to continue along Route 7 with commercial enterprises gradually replacing older houses and vacant lots. New business sites are somewhat controlled by floodplain and wetland regulations. Strict laws require the landowner to make a substantial investment for the development of a commercial lot on the floodplain. This may influence the rate of growth.

Scattered commercial establishments along local highways can disrupt through traffic, reduce capacity, and generally lack cohesiveness that often results in unattractive development. The pattern of businesses along the north and central sections of Route 7 as illustrated on Map 12 are typically too far apart to allow one-stop shopping and often have no functional relationship with one another.

Land designated for commercial use should be based on local and regional market demands for various types of businesses. Through zoning, the Town should allocate just enough land for this purpose, not more. Sizing the quantity of commercially-zoned lands to local needs can stimulate desired commercial growth in targeted areas, encourage revitalization, improve the quality of established village districts, and protect transportation improvements. Some basic guidelines for sustainable commercial development are as follows:

- Limit the quantity of retail-zoned land and emphasize existing village districts to provide economic strength and react more swiftly to consumer preferences.
- Rezone excess land to encourage reinvestment and improve quality of existing commercial properties.
- Scale retail-zoned land to reflect the realistic assessment of size, strength, and character of the market.
- Stimulate infill, new forms of mixed use, and pedestrian oriented retail development on remaining land.
- Reserve some of the previously zoned commercial land for agricultural businesses, housing, civic uses, recreational features and open spaces.

Industrial Land Use Patterns

According to aerial photography interpretations and local assessors records there are less than 75 acres in Sheffield dedicated to industrial use. The largest industrial use is the Sheffield Plastics operations. Several smaller industries and manufacturers such as Sheffield Pottery and Custom Extrusions make up the balance of industrial lands.

There are as many vacant industrial acres as active in Sheffield. Most noticeable is the Sheffield Business Park located in the southeast section of town between East Stahl Road and Hewins Street. The Park was previously a working farm and enrolled in the Chapter 61 Program. The Town created the Park in 1994 and subsequently received a Public Works Economic Development (PWED) grant from the State to construct the roadway and install utilities. While the intended uses for the park include light manufacturing and other clean industries, it remains vacant.

The Town should reexamine the long-term goals for the Sheffield Business Park and industrial development in general. Suitable lands should be used to attract smaller businesses in growing local industry sectors such as services and construction, or to support growth sectors such as retail and tourism. Industrial land uses should be well buffered from residential and general commercial areas. Certain types of businesses located on Route 7 that are not reliant on traffic and visibility such as

construction, wholesale distribution, agricultural processing, warehousing, certain automobile repair services, and storage facilities, should be directed to designated industrial districts. Some of these types of business might also be encouraged to relocate into the Sheffield Business Park. All industrial land uses must consider the needs of surrounding residential areas in terms of traffic, landscaping, screening, and other potential impacts.

Agricultural and Open Land Use Patterns

Acres of Protected Open Space in Sheffield, 1994-2002			
Ownership	1994	2002	Change in Acres
Federal	898.62	963.28	64.66
State	1,083.24	1,546.48	463.24
Town	153.50	85.14	(68.36)
Private Organizations	811.98	2,270.33	1,458.35
TOTAL	2,947.34	4,806.41	1,859.07

Source: Town of Sheffield Annual Reports

wetlands. There is also a high concentration of permanently protected open space in the northern section of town along the AMC Trail, along the west side of Route 41 at the base of the Mt. Washington Ridge, and farmland along the Housatonic River. Most protected open spaces over the last 10 years have been made by private organizations such as the Sheffield Land Trust, The Nature Conservancy, and Trustees of Reservations.

A significant amount of land in Sheffield remains in active agricultural use. Between the Chapter 61, 61A, and 61 B programs, there are approximately 10,000 acres of land in Sheffield designated for agricultural, forestry and recreational use. Additionally, another 1,804 acres of land in Sheffield are protected under the Massachusetts Agricultural Preservation Restriction (APR) Program.

Lands Listed in Chapter 61, 61A, 61B and APR			
Program	Total Acres (1)	On Prime Agri. Soils (2)	
		Acres	%
Chapter 61/Forestry	2,503.0	261.6	10%
Chapter 61A/Agriculture	7,114.2	2,088.2	29%
Chapter 61B/Recreation	680.7	36.3	5%
APR	1,804.1	253.3	14%

(1) Sheffield Assessors Records;

(2) Interpretation of Sheffield GIS Maps

The majority of land in active agricultural use is located on prime agricultural soils. These rich lands run along the Housatonic River between Route 7 and Route 7A; Rannapo Road and Weatogue Road; and Boardman Street, Hewins Street and Shunpike Road.

Protected Lands in Sheffield, 2003						
Primary Use	Federal	State	Town	Private Non-Profit	Private	Total
Recreation	968		118		27	1114
Recreation & Conservation		486		49		535
Conservation		1217	58	2204	1322	4801
Agriculture				40	1042	1082
Unknown					39	39
Total	968	1703	176	2293	2430	7570.4

Source: Sheffield Assessors Office

3. Growth Trends and Projections

As presented in Section 2: *Who We Are and How We Live*, Sheffield’s population has grown rapidly over the past 20 years. The increasing popularity of the community has also resulted in the addition of nearly 600 new residents and 480 homes since 1980.



A closer look at housing and population growth trends indicates that Census Block Group 3 incurred the largest increase in population, households and housing between 1990 and 2000. This area is located in the southwest quadrant of Sheffield between Undermountain Road, Salisbury Road, Route 7 and 7A, and the Connecticut state line. (See Population Density Map in *Section 2: Who We Are & How We Live*).

Population and Housing Units by Census Tracts and Blocks for 1990-2000						
Area	Total Population		Households		Homes	
	1990	2000	1990	2000	1990	2000
Census Tract 9261	2910	3335	1158	1369	1460	1634
Block Group 1	1023	1132	407	453	552	590
Block Group 2	666	552	274	258	325	295
Block Group 3	409	788	160	333	219	405
Block Group 4	812	863	317	322	364	344

Source: US Census

The following projections are based on several variables including past population trends, housing and commercial construction, home sales, and local economic conditions. Accordingly, Sheffield could reasonably anticipate the addition of approximately 311 new residents between 2000 and 2010, or about a 9% increase.

Sheffield Area Population Trends & Projections									
	Census					MISER Projection			State Rank: 20 year Projection
	1980	1990	2000	Pop. Change 1980-2000	% Change 1980-2000	2005	2010	% Change for 20 Yrs.	
Berkshire County	29,090	28,048	134,953	105,863	363.9%	29,619	29,935	6.73%	13
Egremont	1,311	1,229	1,345	34	2.6%	1,182	1,156	-5.94%	320
Great Barrington	7,405	7,725	7,527	122	1.6%	8,882	9,306	20.47%	156
Lee	6,247	5,849	5,985	-262	-4.2%	5,039	4,767	-18.50%	348
Lenox	6,523	5,069	5,077	-1,446	-22.2%	4,563	4,260	-15.96%	343
Mount Washington	93	135	130	37	39.8%	186	216	60.00%	37
New Marlborough	1,160	1,240	1,494	334	28.8%	1,882	2,082	67.90%	29
Sheffield	2,743	2,910	3,335	592	21.6%	3,511	3,646	25.29%	118
Stockbridge	2,328	2,408	2,276	-52	-2.2%	3,057	3,232	34.22%	81
West Stockbridge	1,280	1,483	1,416	136	10.6%	1,317	1,270	-14.36%	341
Sheffield Area Totals	29,090	28,048	28,585	-505	8.5%	29,619	29,935	17.0%	NA

Source: U.S. Census and Massachusetts Institute of Social and Economic Research (MISER)

Sheffield's average age is expected to get older. The largest projected change in population is expected to be in the 45 and 64 year age group, which is projected to increase by 328 or a 36% increase. Senior citizens are also expected to grow in numbers between 2000 and 2010 by an estimated 54 residents. Younger residents (0-19) are expected to decline somewhat in numbers between 2000 and 2010 by an estimated 49 residents or a 5% decrease.

Town of Sheffield Population Trends & Projections					
Age Group	Census 1990	Miser Est. 1995	Census 2000	Miser Mid-Level 2005	Miser Projections 2010
0-4	173	202	180	150	158
5-9	202	226	244	219	190
10-14	212	219	235	254	232
15-19	186	193	194	208	224
0-19	773	840	853	831	804
20-24	156	190	190	187	202
25-29	206	155	184	182	179
30-34	247	264	205	231	232
35-39	238	283	295	230	254
40-44	231	267	311	325	256
20-44	1,078	1,159	1,185	1,155	1,123
45-49	195	234	264	305	319
50-54	138	215	253	286	332
55-59	145	168	250	299	340
60-64	164	107	133	199	237
45-64	642	724	900	1,089	1,228
65-69	136	151	96	121	182
70-74	108	119	136	86	107
75-79	75	87	95	108	66
80-84	55	56	58	62	72
85+	40	58	52	59	64
65+	417	471	437	436	491
TOTAL	2910	3194	3335	3511	3646

Between 1970 and 2000, Sheffield’s housing stock grew by an average 228 dwelling units per decade (including new construction, conversions, and additions). Carrying this trend forward, Sheffield would have a total housing stock of 1,862 in 2010. However, with the increasing cost of land, large average lot size of recent residential development, growing acreage in protected lands, and limited infrastructure, it is projected that Sheffield will incur about 50% of this estimate, or an additional 114 dwelling units between 2000 and 2010.

4. Future Land Use Scenarios & Alternatives

Community Build-Out Analysis

The Massachusetts Executive Office of Environmental Affairs (EOEA) conducted a build-out analysis for Sheffield in 1999 using a formula applied to all cities and towns in the Commonwealth. This formula generally factors in local criteria such as zoning requirements and undeveloped lands. The results of the State’s build-out analysis are included in the tables below.

What is a Buildout Analysis?

A build-out analysis is a broad estimate of the maximum potential development that could occur in a community based on existing land use, environmental constraints, current zoning, and other land use regulations. Its purpose is to identify where growth could be accommodated and its resulting impact on the community. It is also used to assist in the analysis of the adequacy of existing land development management tools, such as zoning and subdivision regulations.

The State evaluated current land use and development constraints. They consider absolute development constraints to include water bodies, slopes over 25%, Zone I of public water wells, permanently protected open space and municipal lands (not including Chapter 61), and area within 100 feet of the River Protection Act buffer around perennial streams. Partial development constraints include wetlands³ and their 100 foot buffer area, 200-foot buffer from perennial streams, slopes between 15 and 25%, the 100-year floodplain, water supply protection districts, and multiple constraint areas (those areas having more than one of the above constraints).

EOEA Buildout Analysis Summary: Demographic Projects			
Demographic Area	1990	2000	Buildout
Population	2,910	3,335	28,800
Students	507	559	5,189
Households	1,158	1,634	12,157

Source: State of Massachusetts, 2000

³ EOEA does not consider wetlands to be an absolute constraint because some wetlands can be used in the total minimum lot size required by zoning.

According to the state’s projections, Sheffield has approximately 11,000 acres of developable land, which is 31% of the total area of the town. To calculate residential buildout, EOE factors in minimum lot size, frontage and road right-of-way requirements to project the number of new house lots that can be created on the developable land. For commercial and industrial buildout projections, the State factors in current zoning regulations for the non-residential districts to determine a floor area ratio.⁴ Once the amount of developable land was determined, it was multiplied by the appropriate floor area ratio to yield the total additional square footage of commercial/industrial floor space.

EOEA Buildout Analysis: Potential Impacts	
Acres of Developable Land Area	11,062
Additional Residents	25,465
Additional Public School Children	4,630
Additional Residential Units	10,523
Additional Commercial/Industrial Buildable Floor Area (SF)	9,587,507
Additional Water Demand (gallons/day)	3,714,039
Residential Water Use (gpd)	1,909,847
Commercial/Industrial (gpd)	1,804,192
Additional Solid Waste (tons/yr)	17,316
Non-Recyclable	12,732
Recyclable	4,584
Additional Roadway Miles	83

Source: State of Massachusetts, 2000

According to the State, if all estimated developable lands were built out based on the maximum allowed by zoning, it would result in over 10,000 new homes and 9.5 million square feet of commercial/industrial floor space. At the maximum buildout, the population of Sheffield would be over 28,000, nearly 10 times what it is today.⁵ Under the State’s buildout projections, Sheffield is currently at only 12% and 13% of its maximum potential population and housing development, respectively. Based on the rate of growth between 1990 and 2000, Sheffield’s population would reach full buildout capacity in 60 years and housing development in 22 years.

The Town considers EOE’s projected buildout to be highly overstated. The EOE buildout is based on general formula applied state-wide, which considers existing land use, environmental constraints, remaining developable land and existing zoning. However, based on current and historic development trends in Sheffield, it is highly unlikely that this extremely high buildout scenario will ever happen.

Town officials and other local leaders believed that there were problems with the above buildout analysis, largely because of crucial underlying assumptions, some of which might not hold true for the community and landscape in Sheffield:

- Developable Lands - Build factor for roads and odd lot sizes: 85%
- Additional Residents - BRPC projection of 2.42 persons per household
- Water Use – Based on 75 gallons per day per person (DEP/DHCD “Growth Impact Handbook”)

⁴ Floor Area Ratio (FAR) is a ratio of the gross floor area of the structure to the total area of the lot. It is calculated based on a combination of maximum lot coverage, maximum building height, parking regulations, and different commercial/industrial uses.

⁵ Report on Potential Buildout of Sheffield, MA, January 31, 2000. Prepared by the Berkshire Regional Planning Commission.

- Municipal Solid Waste – Based on amount of solid waste generated per capita in Sheffield in 1997
 - MSW Generation Rate = .68 tons per year
 - Non-Recycled Rate = .5 tons per person per year.
 - Public School Students - .44 students per household in 1999
 - New Subdivision Road Mileage – Assuming 70% of new homes in subdivisions; multiply # of lots by frontage and ten by 0.6 to account for lots on opposite side of road.
 - Buildout projections do not include reductions for seasonal housing units
- DHCD Growth Impact Handbook determines that water demand for new commercial/industrial building is 75 gallons per 1,000 square feet of floor space.

□ *Please see Map # 17:
‘Town of Sheffield
Enhanced Buildout’
behind the MAPS tab.*

An enhanced buildout analysis was conducted using the EOEA build-out analysis as a starting point. Additional local factors and trends including recent population growth, land development characteristics, environmental constraints, potential demand for land over time, the location of developable land, intensity of land use, available infrastructure, and household and employment projections were also considered. The preceding map shows the results of the enhanced buildout’s identification of land in Sheffield that is most physically able to sustain development. Specific modifications to EOEA’s buildout factors are identified below:

Environmental Constraints – The State formula does not consider soil suitability for septic systems as a limiting factor for development. However, an estimated 30% of developable lands lay over poorly drained soils. This is an important factor given the fact that Sheffield has no public sewerage system. Of this area, approximately 2/3rd is covered in the state’s buildout analysis under other development constraints leaving an estimated building constraint factor on an estimated 10% of the total developable land. The *Enhanced Buildout* Map takes into account hydric soils as the best available GIS data relating to wetlands.

Permanently and Partially Protected Lands – The state’s buildout analysis underestimates the total amount of permanently protected lands in Sheffield. For example the total estimated land under absolute constraints in the Rural District (including permanently protected private and public lands, water bodies, slopes greater than 25%, 100-foot River Protection Act zone, Zone I of public water supply wells) amounts to 7,922 acres. However, according to 2003 town records, there are approximately 7,236 acres of permanently protected open space in this district alone. The enhanced buildout estimates that an additional 10% of the state’s developable land inventory is actually under permanent protection. The State buildout analysis also does not factor in lands under the Chapter 61, 61A or 61B program. However, Sheffield has demonstrated over the last several years a successful rate of converting these lands into permanent protection through conservation easements. For this reason an estimated 25% of these temporarily protected properties are expected to be permanently protected over the next 10 years.

Availability of Infrastructure - Sheffield has a very limited geographic area serviced by public water located in Sheffield Center and the surrounding neighborhoods. The amount of capacity and general condition of the system, as well as the limited amount of developable land adjacent to the service area, limited its growth potential. Additionally, the town has no sewerage system that would allow for higher density development on marginal lands.

Residential Development Factors – Residential development trends in Sheffield have been predominately single family homes on large lots along existing roads. However, EOEAs projects are based on an assumption that 70% of new homes will be in subdivisions. The typical new residential lot is much larger than required by local zoning. The EOEAs project also did not take into account the important local market for seasonal [or second] homes, which have a distinctly different impact on the landscape [median lot size more than 9 acres] and on Town services [no school children per household].

Commercial and Industrial Development Patterns – Assessors records indicate that there are approximately 96 active commercial parcels amounting to 471 acres, and 21 active industrial parcels totaling 61 acres of land. Therefore, the average commercial lot size is 4.9 acres and the average industrial parcel is 2.9 acres. In the absence of a sewer system and also limited availability of the water system, Sheffield’s commercial and industrial lot coverage figures are much lower than the state’s buildout projections.

Public School Students – The state buildout analysis estimates that there are .44 students per new household. However, the number of school-aged children in Sheffield has been declining as the median age in the community rises. Additionally, the state does not discount the number of seasonal housing units from the school projections. Seasonal homes account for approximately 13% of the town’s total housing stock and this percentage is expected to increase. The following chart shows the number of school children per bedroom in year-round homes, based on Town Assessor records for May 2004.

As is shown by the chart, in Sheffield it is important to distinguish between the impacts of primary homes and the impacts of second homes. Considering the correlation between number of school children and the size of a dwelling unit will also be useful as the community works to implement the Master Plan’s action plan relating to a broader range of choice in homes, including options that are affordable to working families, seniors on fixed incomes, and other traditional members of the local community who are being priced out of the local housing market. From the above chart it can be seen that in Sheffield the median number of bedrooms in single-family homes is 3. Multiplying this by 0.135 local school children per bedroom yield an average of .405 students per primary single family home. In contrast, homes in 2-family and 3-family structures are consistently smaller; the median number of bedrooms in these dwelling units is two or only .27 students per primary home in a 2- or 3-family structure. While the number is relatively small for apartments in buildings of 4 to 8 units, there still can be seen a consistent pattern of the apartments having a median of only 1.5 bedrooms per unit, or only .20 students per primary home in an apartment building.

Computation of School Children Per Bedroom in Primary vs. Second Homes			
(Assessor's use code) & Type of home	Total bedrooms Primary homes	Total bedrooms Second homes	Notes
(101) Single family	3126	603	Total 1243 single family [S/F] homes, of which 201 are second homes. Median 3 bedrooms per single family home
(109) Separate houses on same lot	115	22	Total 137 bedrooms, assume* proportion for second homes is same as among S/F homes [16%]
(103) Mobile Homes	52	2	Total 54 bedrooms, median 2 per mobile home
(104) Two-Family Structures	117	0	Total 117 bedrooms, median 4 per structure or 2 per unit
(105) Three-Family Structures	29	0	Total 29 bedrooms, median 6 per structure or 2 per unit
(111) Multifamily: 4 - 8 units per structure	44	0	Total 44 bedrooms in 29 units, average 1.5 bedrooms/unit
(013-018) Mixed use, primarily residential	222	25	Total 247 bedrooms, assume* 10% second homes
(031-081) Mixed use, primarily non-residential	189	22	Total 211 bedrooms, assume* 10% second homes
Total bedrooms	3894	674	
FY'04 Total FTE K-12 students in Sheffield's public school system	525		
Average student per bedroom in primary homes	0.135		

Source: Assessor Records, May 2004

*** NOTE:** These assumptions were recommended by June 3 & 10, 2004, Working Sessions as best estimates until more detailed data is available.

Suburban “sprawl” vs. village centers and outlying rural resource areas: alternative scenarios

The most important difference between the standard EOEAs build out projections and Sheffield’s enhanced projections is that Sheffield still largely exhibits – *and wishes to continue to enjoy* – the classic New England small town pattern of village centers that feature a vibrant cluster of buildings and activities, surrounded by outlying, lightly settled rural resource areas. Consequently, the *Town Master Plan* project’s final deliberations focused on alternative scenarios for the next 10 years of growth and change in Sheffield. At first the alternative scenarios suggested for study were:

- Scenario 1. Continue along the path we are on, or
- Scenario 2. Focus a mix of buildings and land uses in village centers. At the same time decrease the projected amount of development in outlying rural resources areas, absorbing new development in ways that are least obtrusive.

After preliminary projections for “Scenario 1” were reviewed and discussed⁶, it was agreed the experience of the last 10 to 12 years may not be a good basis for projecting the next 10 years, because there is a sense that market forces are heating up in Sheffield because of its relative affordability compared to the region. Consequently, the project team generated the following combination of future scenarios:

- Scenario 1 Continue along the path we are on
- Scenario 1A Same path, but hotter market
- Scenario 2 Hotter market with growth and change guided to achieve a mix of buildings and land uses in village centers. At the same time decrease the projected amount of development in outlying rural resources areas, absorbing new development in ways that are least obtrusive. Assume Sheffield achieves a broader range of housing choice, including some units that are affordable to traditional resident groups who are being priced out of the community.

First the analysis began with the following summary of “where we are, and where we are headed”.

⁶ At the June 3, 2004, working session of Town officials and other community leaders