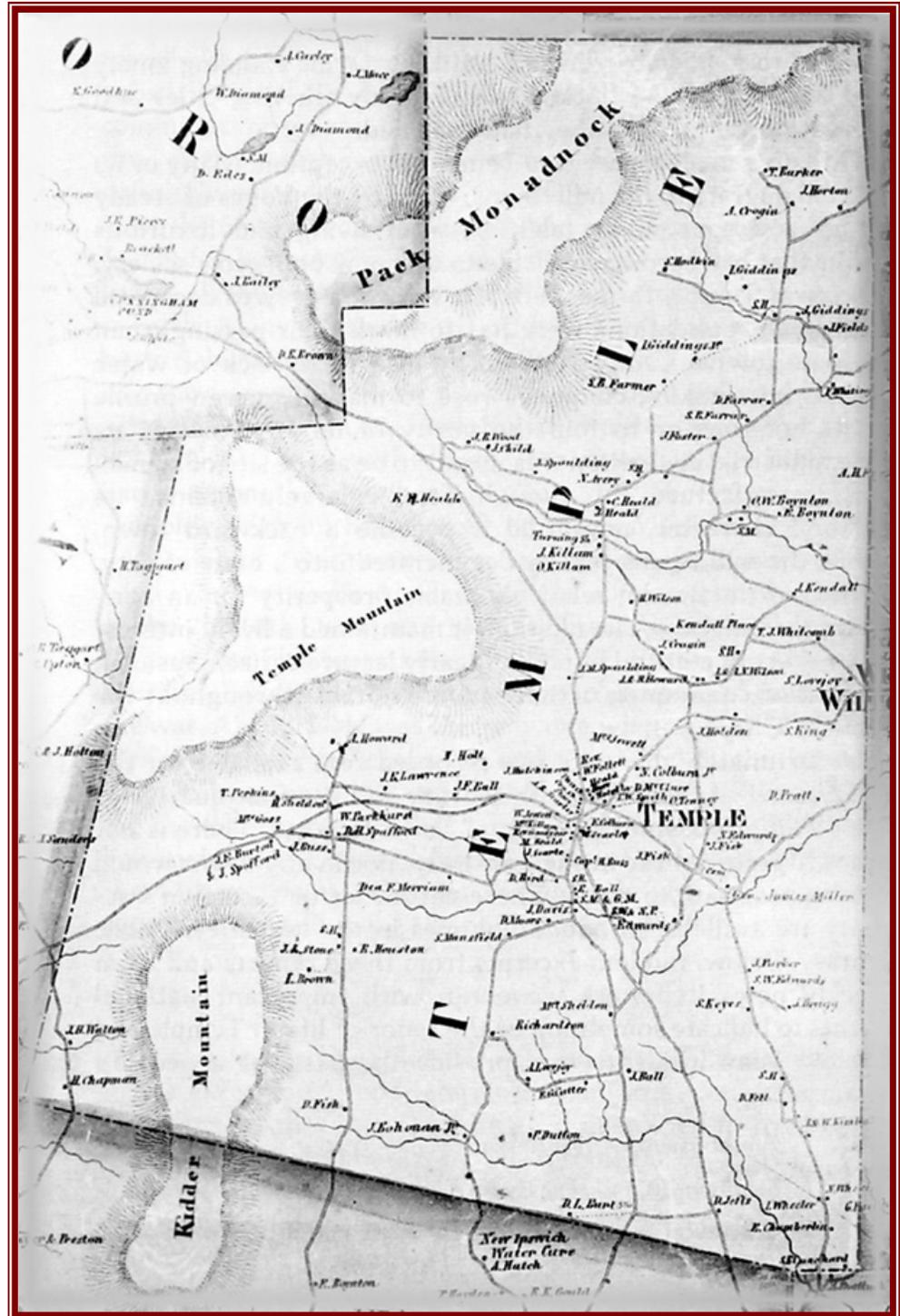


TOWN OF TEMPLE, NH

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ADOPTED BY THE TEMPLE PLANNING BOARD ON DECEMBER 3, 2003
As Amended through 2008

ACKNOWLEDGEMENTS

Planning in local communities is the responsibility of the Planning Board, according to state law. Yet, for it to be effective, it must be the concern of all citizens as well as their elected and appointed town officials. It is for that reason that the Temple Planning Board sought out and enlisted the services of officials and citizens from all walks of life to participate in the master planning process.

The individual reports and the final plan are the results of community participation. It involved the compilation of a lot of information, many meetings and lengthy discussions over a long period of time. There were many individuals who participated in this process. Though their names are not listed here, we gratefully acknowledge their invaluable assistance.

As a member of the Southwest Region Planning Commission, Temple gained very valuable technical assistance and guidance in the preparation of this plan from the Commission's professional staff.

Members who served on the Temple Planning Board during this process include:

Bruce Kullgren, Sr., Chairman

Randall Martin

Richard Whitcomb

Martin Connolly

Rae Barnhisel

Allan Pickman

Theodore Petro

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ENERGY CHAPTER (APPROVED 2010)

INTRODUCTION

New Hampshire state law mandates planning boards to “*prepare and amend from time to time a master plan to guide the development of the municipality.*”¹ The sole purpose of the master plan is to aid the planning board in the performance of its duties. The duties of the planning board are varied, but the only duty specifically required² is the maintenance of the town’s master plan.

The statute goes on to say that the master plan may include consideration of any areas outside of the town which, in the judgement of the planning board, bear a relation to or have an impact on the planning of the town.

■ WHAT IS A MASTER PLAN?

The master plan may be comprised of a collection of reports, statements, land use and development proposals, with accompanying maps, diagrams, charts and other descriptive matter that shows as fully as possible and practical the planning board’s recommendations for the desirable development of the town. The master plan shall include, at a minimum, the following required sections³ :

- (a) “A vision section that serves to direct the other sections of the plan. This section shall contain a set of statements which articulate the desires of the citizens affected by the master plan, not only for their locality but for the region and the whole state. It shall contain a set of guiding principles and priorities to implement that vision.”
- (a) “A land use section upon which all other sections shall be based. This section shall translate the vision statements into physical terms. Based on a study of population, economic activity, and natural, historic, and cultural resources, it shall show existing conditions and the proposed location, extent, and intensity of future land use.”

The master plan may also include the following sections (RSA 674:2.III):

- (a) Transportation section;
- (b) Community facilities section;
- (c) Economic development section;
- (d) Natural resources section;
- (e) Natural hazards section;
- (f) Recreation section;
- (g) Utility and public service section;
- (h) Cultural and historic resources section;
- (i) Regional concern section;
- (j) Neighborhood plan section;
- (k) Community design section;
- (l) Housing section;
- (m) Implementation section.

¹RSA 674:1.

²Other planning board duties, such as subdivision and site plan review, etc., are actually allowed only if the voters at town meeting authorize the planning board to take on these responsibilities.

³RSA 674:2.

Where appropriate, the plan may contain appendices or separate reports that contain the underlying scientific and statistical data that support the various elements of the plan.

■ WHAT WILL THE MASTER PLAN ACCOMPLISH?

The Master Plan provides a framework for the Planning Board in particular and the town as a whole to use in shaping the future over a period of years (5-10 years is recommended for master plan updates⁴). The Planning Board should be able to refer to the town's Master Plan whenever a development proposal comes before it, to determine whether development that is being proposed is consistent with the Master Plan.

Most importantly, in order for any municipality in the State of New Hampshire to adopt a zoning ordinance, a Planning Board must have adopted, at a minimum, a general statement of goals and objectives and the land use section of a master plan. In Temple's case the town does have a zoning ordinance. And, the current Master Plan was completed in 1984; in the ensuing 18 years, many changes have occurred in town. Therefore, it is incumbent on the Planning Board to bring the Master Plan up to date with current conditions.

This Master Plan represents - to the best ability of the Planning Board to determine - the wishes of the residents of Temple regarding the present and future vision of the town for the next 5-10 years. Throughout this process, the Planning Board has informed the public and solicited comment in order to reach the concluding recommendations.

⁴RSA 674:3.II.

POPULATION AND HOUSING

■ INTRODUCTION

The examination of population and housing statistics is a critical element of a master plan. The state statute that addresses the purpose and description of a master plan (RSA 674:2) allows inclusion of a *“housing section which analyzes existing housing resources and addresses current and future housing needs of residents of all levels of income of the municipality and of the region in which it is located, as identified in the regional housing needs assessment performed by the regional planning commission pursuant to RSA 36:47,II.”*

While population studies are not specifically addressed in the enabling legislation, to plan for the impacts of population changes as they relate to housing availability is obviously an integral part of the master planning process. By knowing Temple’s past population trends and projecting the future population, it is possible to estimate the level of town services necessary to serve the expected growth and to see that it happens in an orderly manner.

An analysis of the population and housing statistics also enables the Planning Board to determine whether amendments to the zoning ordinance might be required in order to address any inequities made apparent through the analysis. Following two important NH Supreme Court cases,⁵ the concept of equal opportunity housing is now firmly established in the master plan process. In short, every town must, through its master plan, address the current and future housing needs of all its residents; and in doing so must consider the housing situation in its neighboring towns as well.

■ METHOD OF ANALYSIS

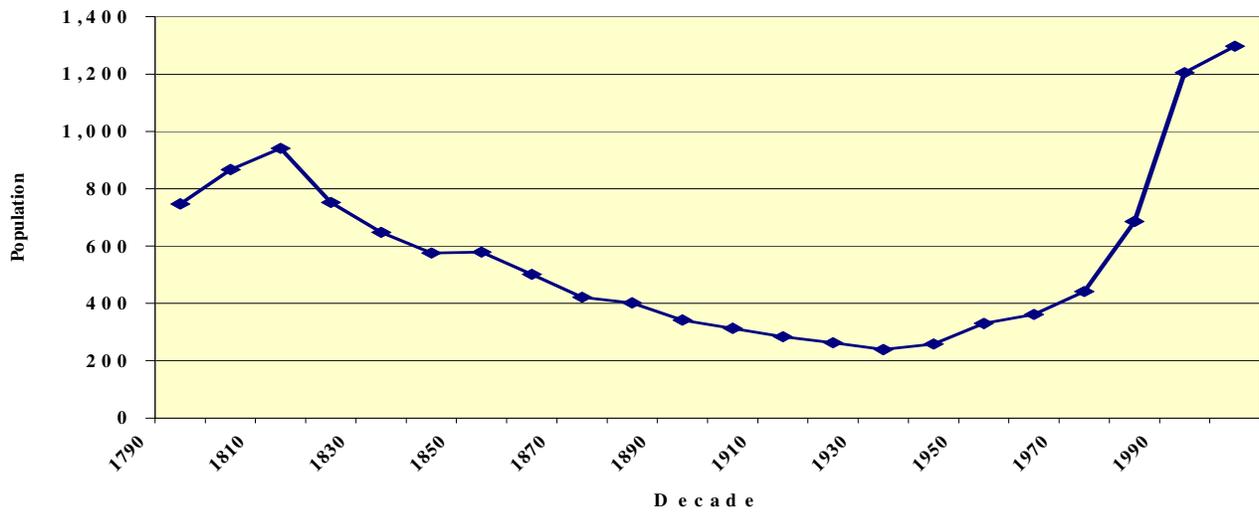
This analysis relies on two primary sources: the US Census Bureau and the New Hampshire Office of State Planning (OSP); some figures are also supplied by Town Records. Decennial information for both population and housing is taken from the US Census, and annual figures are based on estimates developed by OSP. It must be noted that the way in which Census information is collected and reported results in some inconsistency in the numbers; nevertheless, this is the best and most comprehensive information available. The methodology employed measures the absolute growth in population and housing; the percentage growth over a particular time period; and the change in percentages. Tables and graphs are used, where appropriate, to visually depict information.

■ POPULATION

Temple’s current population according to the 2000 Census count is 1,297 persons. This is the largest population of Temple ever recorded, since the first Census in 1773, which counted 418 persons. Following this census, the population crested at 941 in the year 1810, then steadily declined to a low of 239 people in 1930; after this time the numbers began to slowly increase. Overall, from 1790 to the year 2000, Temple gained 550 persons, and lost 705 persons during the decline experienced from 1820 to 1930.

⁵ *Soares v. Atkinson*, 128 NH (1986) and *Britton v. Town of Chester*, 134 NH (1991). In both cases, the court held that the local zoning ordinance did not provide reasonable housing opportunity for low- and moderate-income residents.

**GRAPH #1:
TEMPLE POPULATION BY DECADE, 1790 - 2000**



**TABLE #1:
TEMPLE POPULATION, 1960 – 2001**

YEAR	POPULATION	% CHANGE	YEAR	POPULATION	% CHANGE
1960	361	--	1995	1,238	-0.2
1970	441	22.2 (2.0% AGR)*	1996	1,244	0.5
1980	686	55.6 (4.5% AGR)*	1997	1,251	0.6
1990	1,194	74.1 (5.7% AGR)*	1998	1,259	0.6
1991	1,212	1.5	1999	1,270	0.9
1992	1,218	0.5	2000	1,297	2.1
1993	1,235	1.4	2001	1,351	4.2
1994	1,240	0.4			

SOURCES: U.S. CENSUS; NH OFFICE OF STATE PLANNING
* AGR = Annualized Growth Rate

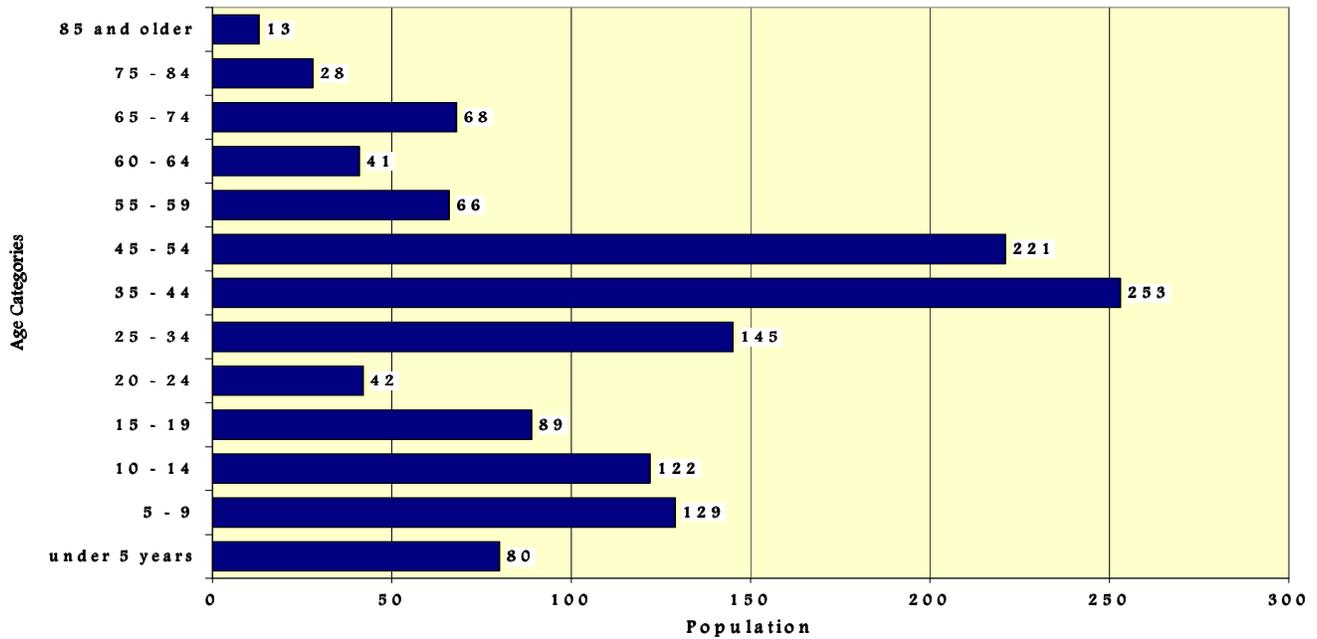
From 1960 to 2000, Temple’s population has increased with every decade, but during the decade of the 1990s, the growth was much flatter than in previous decades; for example, the 1990s gained only 103 people, while the 1980s – the decade of the greatest recorded growth, population increased by 519 people. The growth of the 1980s was very typical of growth being experienced by many towns in this region at that time; and by the same token, the slow growth of the 1990s was also typical. Note that the annual counts for the 1990s are estimates developed by the NH Office of State Planning.

Age and Gender

Temple’s population is fairly evenly divided between males and females. The 2000 Census counted 657 males and 640 females, only slightly more different than the numbers in 1990, when there were 601 men and 604 women. The largest concentration of population was found in the 35-44 age group, both in 1990 and in 2000. Taken together, however, school-age children in Temple (from 0 – 19) make up the greatest

number of people – accounting for 32.4% of the total population (in 1990 this figure was 31%). The graph below illustrates the 2000 Census information, which is not broken out by gender.

**GRAPH #2:
TEMPLE POPULATION BY AGE, 2000**



**TABLE #2:
TEMPLE AGE DISTRIBUTION, 1990 – 2000**

AGE	POPULATION 1990	% TOTAL	POPULATION 2000	% TOTAL	% CHANGE 1990-2000
0-4	120	10.0	80	6.2	-33.3
5-19	264	21.9	340	26.2	28.8
20-34	221	18.3	187	14.4	-15.4
35-64	509	42.2	581	44.8	14.1
65+	91	7.6	109	8.4	19.8
TOTAL	1,205	100	1,297	100	--

SOURCE: U.S. CENSUS

Natural Increase

One other characteristic of the population worth examining is how much of the increase is due to births (natural increase) and how much to in-migration. Review of the statistics from the last four decades shows a wide variation in the way in-migration has impacted the population growth in Temple. The following table presents this information.

TABLE #3:
NATURAL INCREASE VS. IN-MIGRATION

	1960	1970	1980	1990
Population	361	441	692	1,194
Natural Increase during Decade	24	12	112	68
Population if no migration	385	453	804	1,262
Actual Population next Decade	441	692	1,194	1,297
Population Increase	80	251	502	103
Increase Due to In-Migration	32	239	390	35

SOURCE: TEMPLE TOWN REPORTS

Place of Residence

The Census also collects information on how long people have lived in their current residence, which can help to gain some insight into the stability of a community. In Temple, of the 1,237 people five years old or older who were asked this question, 784 of them (63%) had lived in the same house in 1995 as in 2000. 19 percent of that number had lived in the same county but a different residence in 1995. 18 percent of the residents questioned lived in a different county, state or country in 1995.

RESIDENCE IN 1995: (Persons 5 years and older)

Same house in 1995	784
Different house in U.S. in 1995	411
Same County	234
Different County	177
Same State	54
Different State	123
Elsewhere in 1995	42

SOURCE: 2000 US CENSUS

■ **SUBREGIONAL POPULATION TRENDS**

In order to understand how Temple is growing (or not) compared to its neighbors, this section examines the population statistics for Temple and several other towns in the region –some of these towns are direct neighbors of Temple, and others are connected through employment or commercial opportunities; they are: Greenfield, Lyndeborough, Mason, New Ipswich, Peterborough, Sharon, Wilton, Amherst, Brookline, Hollis and Milford. Table #4 on the following page presents this information for the decades 1960 to 2000; the data are presented first as absolute numbers, then as the percentage change for each decade, and finally as

what percentage each town's population accounts for of the total regional population.

Within this subregion, Amherst and Brookline show the greatest population increases by far; it is interesting to note, however, that the greatest growth occurred during the 1960s for Amherst and the 1980s for Brookline – Brookline actually lost population during the last decade. Most of the towns examined here experienced their highest increases in either the 1960s or the 1980s; only five towns had more growth in the 1990s than in the 1980s.

In terms of a town's share of the subregional population count, Milford has the highest, at 23% of the total of 57,685 persons. Temple has just over 2 percent; only Mason (2.0%) and Sharon (0.6%) have lower percentages.

**TABLE #4:
TEMPLE AREA POPULATION TRENDS, 1960 - 2000**

POPULATION					
	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
Temple	361	441	692	1,194	1,297
Greenfield	538	1,058	972	1,519	1,657
Lyndeborough	594	789	1,070	1,294	1,585
Mason	349	518	792	1,212	1,147
New Ipswich	1,455	1,803	2,433	4,014	4,289
Sharon	78	136	184	299	360
Peterborough	2,963	3,807	4,895	5,239	5,883
Wilton	2,025	2,276	2,669	3,122	3,743
Amherst	2,051	4,605	8,243	9,068	10,769
Brookline	795	1,167	1,766	4,210	4,181
Hollis	1,720	2,616	4,679	5,705	7,015
Milford	4,863	6,622	8,685	11,795	13,535
Total Population	17,792	25,838	37,080	48,671	55,461

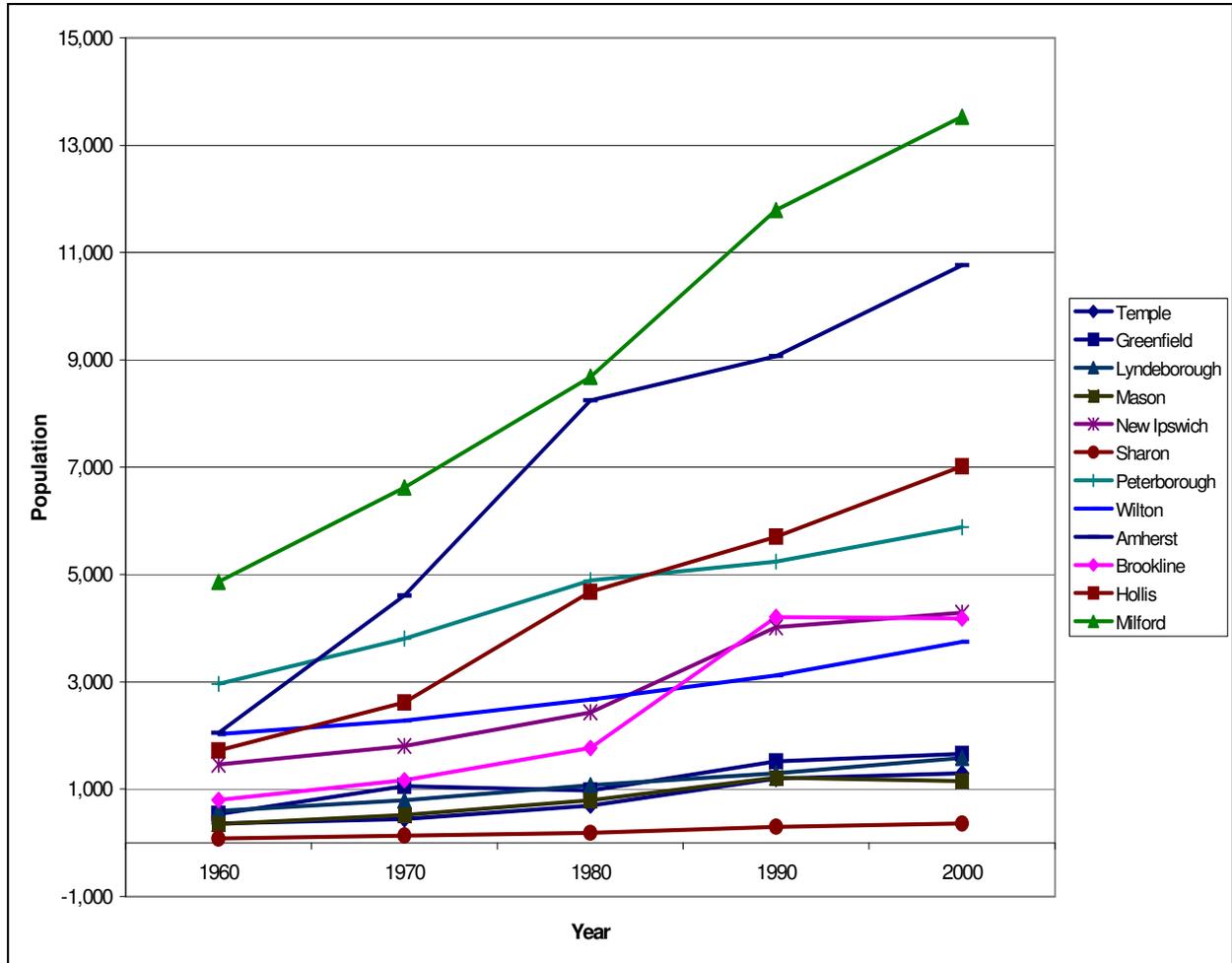
PERCENTAGE CHANGE					
	<u>1960-1970</u>	<u>1970-1980</u>	<u>1980-1990</u>	<u>1990-2000</u>	<u>Avg. Ann.</u>
Temple	22.2%	56.9%	72.5%	8.6%	3.2%
Greenfield	96.7%	-8.1%	56.3%	9.1%	2.9%
Lyndeborough	32.8%	35.6%	20.9%	22.5%	2.5%
Mason	48.4%	52.9%	53.0%	-5.4%	3.0%
New Ipswich	23.9%	34.9%	65.0%	6.9%	2.7%
Sharon	74.4%	35.3%	62.5%	20.4%	3.9%
Peterborough	28.5%	28.6%	7.0%	12.3%	1.7%
Wilton	12.4%	17.3%	17.0%	19.9%	1.5%
Amherst	124.5%	79.0%	10.0%	18.8%	4.2%
Brookline	46.8%	51.3%	138.4%	-0.7%	4.2%
Hollis	52.1%	78.9%	21.9%	23.0%	3.6%
Milford	36.2%	31.2%	35.8%	14.8%	2.6%
Region	45.2%	43.5%	31.3%	14.0%	2.9%

Average Annual Percentage Change				
	<u>1960-1970</u>	<u>1970-1980</u>	<u>1980-1990</u>	<u>1990-2000</u>
Temple	2.0%	4.6%	5.6%	0.8%
Greenfield	7.0%	-0.8%	4.6%	0.9%
Lyndeborough	2.9%	3.1%	1.9%	2.0%
Mason	4.0%	4.3%	4.3%	-0.5%
New Ipswich	2.2%	3.0%	5.1%	0.7%
Sharon	5.7%	3.1%	5.0%	1.9%
Peterborough	2.5%	2.5%	0.7%	1.2%
Wilton	1.2%	1.6%	1.6%	1.8%
Amherst	8.4%	6.0%	1.0%	1.7%
Brookline	3.9%	4.2%	9.1%	-0.1%

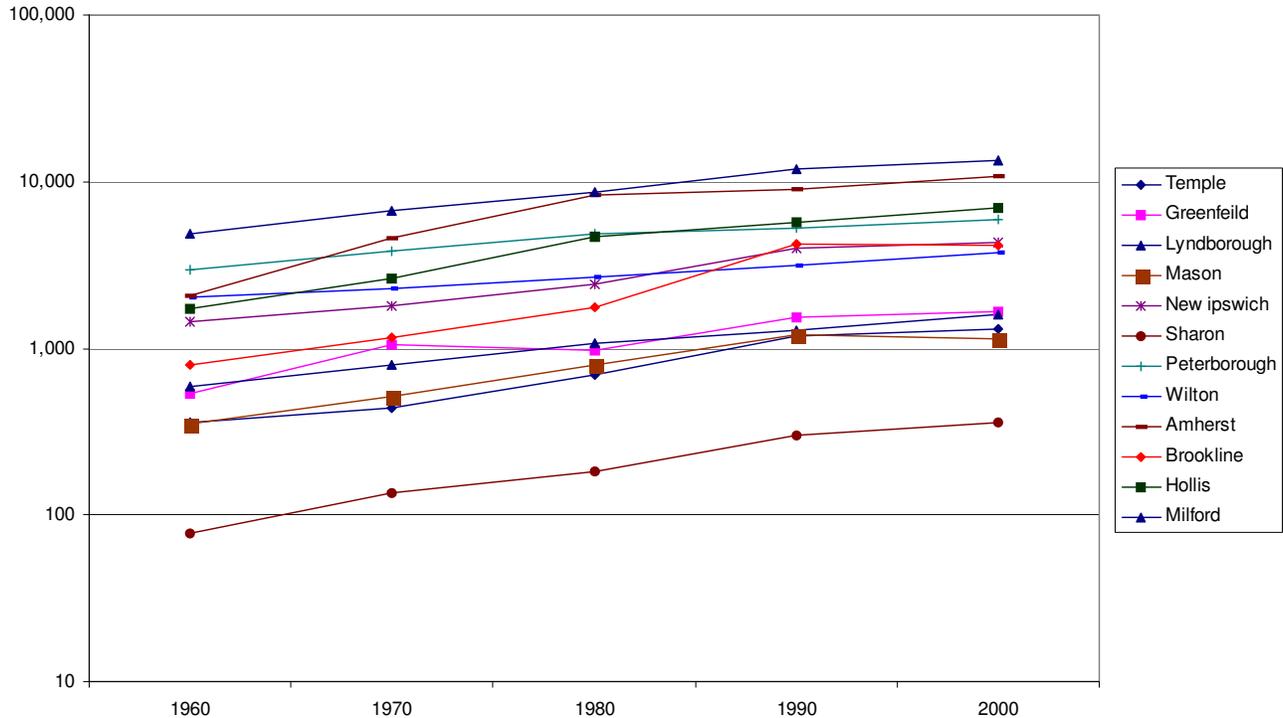
Hollis	4.3%	6.0%	2.0%	2.1%
Milford	3.1%	2.7%	3.1%	1.4%
Region	3.8%	3.7%	2.8%	1.3%

SOURCE: US BUREAU OF THE CENSUS

GRAPH #3:
TEMPLE AREA POPULATION TRENDS, 1960 - 2000



**Graph #4:
Temple Area Population Trends (Log Plot)**



This graph shows the same data as the previous graph, but the population is plotted on a logarithmic scale, so that the slope of a line is proportional to the growth rate irrespective of the size of the town. For example, Amherst, Wilton, and Sharon all grew by about 20 percent between 1990 and 2000. In the second graph the line from 1990 to 2000 for the same three towns has the same slope, reflecting that rate of growth.

Population Density

Another aspect of examining population growth is population density, or the number of people per square mile of land area. Table #5 below presents this information for Temple and its immediate neighbors. Land areas range from 15 square miles in Sharon to over 37 in Peterborough. Temple, Greenfield and Wilton have comparable land areas, and Greenfield’s density is not that much greater than Temple’s; but Wilton’s density is equal to New Ipswich and Peterborough, which also have the largest land areas. Temple and Sharon have seen the greatest percentage increase in density among the eight towns over the last 40 years, and Peterborough the lowest.

**TABLE #5:
TEMPLE AREA POPULATION PER SQUARE MILE**

Town	Population 1960	Population 2000	Land Area (sq.miles)	Density 2000 (Persons/Sq. Mi.)	% Change 1960 – 2000
Temple	361	1,297	23.2	56	259%
Greenfield	538	1,657	25.5	65	208%

Lyndeborough	594	1,585	30.9	51	167%
Mason	349	1,147	23.9	48	229%
New Ipswich	1,455	4,289	32.8	131	195%
Sharon	78	360	14.6	25	362%
Peterborough	2,963	5,883	37.7	156	99%
Wilton	2,051	3,743	25.8	145	82%

SOURCE: U.S. CENSUS

■ HOUSING SUPPLY

According to the 2000 Census, Temple has 465 housing units. This number represents a 7% increase in the housing stock since 1990. Between 1980 and 1990 Temple had a 73% increase in its housing stock – from 252 units to 435. The slower housing growth of the 1990s is consistent with the slower population growth (9%) experienced during the same time period.

From January 1990 through October 2001 the Temple Planning Board approved approximately 66 lots for new construction.

Temple's housing stock is comprised predominantly of single family homes. Of the estimated 465 units of housing, 85% are single family homes, 8% are multi-family units (defined as three or more units in a building), and 7% mobile, or manufactured homes. (Note that according to the U.S. Census definition, once a mobile home has been added onto, it is then counted as a single family home.)

The 2000 Census profile lists 369 owner-occupied housing units and 71 renter-occupied housing units in Temple. Of the total 465 units, 440 are occupied year-round and 25 are vacant; of the 25, only nine are used for seasonal or recreational use.

**TABLE #6:
BUILDING PERMITS FOR NEW HOUSES**

YEAR	# PERMITS
2003	2 in process as of April 1, 2003
2002	21
2001	14
2000	14
1999	5
1998	3
1997	6

SOURCE: TEMPLE TOWN RECORDS

The assessed median value of homes in Temple was reported by the Census to be \$124,800, compared to \$139,100 for Hillsborough County. The median rent in Temple was \$794, compared to \$694 for Hillsborough County. The cost of a home in Temple in 2000 was lower than the median cost in Hillsborough County; however, the median rent was higher in Temple than in Hillsborough County.

The Census also collects data that indicates how affordable housing is for people. The rule of thumb is that a person or household should not be paying more than 30% of their income for housing. As the information on the right suggests, as a group, 135 of the 378 households surveyed that pay more than 30% of their income toward housing have incomes as low as \$10,000 and no higher than \$34,999 annually.

Income	Households
<\$10,000	10
\$10k - \$19,999	52
\$20k - \$34,999	83
\$35k - \$49,999	101
\$50,000 or more	132

Based on the above-described 30% affordability “rule”, the possibilities for home ownership in Temple are examined in Table #7 below. Note that the property tax calculation is based on the 2000 tax rate of \$25.64.

**TABLE #7:
HOME OWNERSHIP AFFORDABILITY IN TEMPLE, 2000**

2000 MEDIAN HOUSEHOLD INCOME	\$56,500	80% OF MEDIAN HOUSEHOLD INCOME	\$45,200	50% OF MEDIAN HOUSEHOLD INCOME	\$28,250
30% of monthly income	\$1,413	30% of monthly income	\$1,130	30% of monthly income	\$706
Property Tax/month (\$3,200/year)	\$361	Property Tax (\$2,560/year)	\$288	Property Tax (\$1,600/year)	\$180
Available for mortgage	\$1,052	Available for mortgage	\$842	Available for mortgage	\$526
Mortgage affordable at 7.5% for 30 years	\$150,454	Mortgage affordable at 7.5% for 30 years	\$120,363	Mortgage affordable at 7.5% for 30 years	\$75,227
Plus 5% downpayment	\$7,523	Plus 5% downpayment	\$6,018	Plus 5% downpayment	\$3,761
PROJECTED AFFORDABLE HOME	\$157,976	PROJECTED AFFORDABLE HOME	\$126,381	PROJECTED AFFORDABLE HOME	\$78,988

SOURCES: TEMPLE ANNUAL REPORTS; US CENSUS

Based on the above calculations, a median-income household in Temple, as well as households earning 80 percent of the median household income, could afford the median home valued at \$124,800. By the same token, households earning 50 percent of the median household income or less have even fewer options for home ownership.

**TABLE #8:
HOUSING STOCK, TEMPLE AND NEIGHBORING TOWNS
1980 - 2000**

Housing Units			
	1980	1990	2000
Temple	252	429	465
Greenfield	370	517	640
Lyndeborough	370	488	530
Mason	294	451	455
New Ipswich	798	1326	1449
Peterborough	1952	2242	2509
Sharon	81	128	159
Wilton	904	1251	1265
Total	5,021	6,832	7,472

Percentage Change			
	1980-1990	1990-2000	1980-2000
Temple	70%	8%	85%
Greenfield	40%	24%	73%
Lyndeborough	32%	9%	43%
Mason	53%	1%	55%
New Ipswich	66%	9%	82%
Peterborough	15%	12%	29%
Sharon	58%	24%	96%
Wilton	38%	1%	40%

Percentage of Total Units			
	1980	1990	2000
Temple	5%	6%	6%
Greenfield	7%	8%	9%
Lyndeborough	7%	7%	7%
Mason	6%	7%	6%
New Ipswich	16%	19%	19%
Peterborough	39%	33%	34%
Sharon	2%	2%	2%
Wilton	18%	18%	17%

SOURCE: U.S. CENSUS

Subregional Housing

In this section, Temple's housing stock is compared to neighboring towns; note that Amherst, Brookline and Hollis are not included in this analysis, as they were in the population section, and the data only go back to 1980, not 1960, so the two sections are not completely comparable. Over the 20-year period, as Table #8 indicates, Sharon and Temple saw the greatest growth in housing units, followed by New Ipswich. Peterborough, at 29%, had the least amount of growth in the housing stock. Again, most of these increases occurred during the 1980s – all of these towns had far greater increases during that time except for Peterborough, which experienced 15 and 12 percent growth for the two decades, respectively.

So, while Sharon and Temple saw the greatest increases over this time period, their housing stock accounts for the smallest share of the regional total – two and six percent, respectively.

Peterborough of course leads the ranking with 34% of total regional units, followed by New Ipswich with 19%, and Wilton with 17%. These rankings have not changed appreciably over the years, either; Sharon has consistently held 2% of the housing stock, and Temple five or six percent. Peterborough and Wilton have actually dropped a few percentage points, which have been picked up by Temple and New Ipswich.

As noted above, most of Temple's housing is of the single family type; only 8% is comprised of multi-family units, and 7% manufactured housing. This distribution of housing types is fairly typical in this region, as the figures on the following page illustrate. The one exception here is Greenville, which has an almost even distribution among all three housing types; in fact, in terms of absolute numbers, multi-family housing outnumbered both single family and manufactured homes.

**TABLE #9:
HOUSING STOCK BY TYPE, TEMPLE AND NEIGHBORING TOWNS,
1980 – 2000**

	1980				% of Subreg.
	SF	MF	MH	TOTAL	Total
Temple	225	19	8	252	4.4%
Greenfield	311	39	20	370	6.4%
Greenville	320	230	178	728	12.7%
Lyndeborough	333	25	12	370	6.4%
Mason	268	8	18	294	5.1%
New Ipswich	622	113	63	798	13.9%
Peterborough	1346	592	14	1952	34.0%
Sharon	79	2	0	81	1.4%
Wilton	653	235	16	904	15.7%
Total	4157	1263	329	5749	100.0%

	1990				% of Subreg.
	SF	MF	MH	TOTAL	Total
Temple	369	33	33	435	5.6%
Greenfield	441	50	26	517	6.7%
Greenville	298	335	285	918	11.8%
Lyndeborough	430	30	28	488	6.3%
Mason	418	3	30	451	5.8%
New Ipswich	1044	145	137	1326	17.1%
Peterborough	1393	811	38	2242	28.9%
Sharon	121	5	2	128	1.7%
Wilton	838	345	68	1251	16.1%
Total	5352	1757	647	7756	100.0%

	2000				% of Subreg.
	SF	MF	MH	TOTAL	Total
Temple	404	36	34	474	5.5%
Greenfield	472	51	36	559	6.4%
Greenville	301	329	308	938	10.8%
Lyndeborough	518	30	40	588	6.8%
Mason	486	3	30	519	6.0%
New Ipswich	1187	144	167	1498	17.3%
Peterborough	1481	1032	39	2552	29.4%
Sharon	145	5	2	152	1.8%
Wilton	970	345	71	1386	16.0%
Total	5964	1975	727	8666	100.0%

SOURCES: U.S. CENSUS; NH OFFICE OF STATE PLANNING

For Temple, the greatest increases in the housing stock came in the manufactured housing category: between 1980 and 1990 this category increased over 300 percent; and multi-family homes increased over 70 percent. Both categories remained relatively stable after 1990.

■ **HOUSING NEEDS ASSESSMENT**

The enabling statute relative to the development of master plans (RSA 674:2) requires that the housing section address current and future housing needs of all residents, at all income levels, of the town and the region in which it is located. In order to do that, opportunities for housing development in Temple are examined, as well as population projections that give some indication as to what the town can expect in terms of housing needs for new population.

Housing Opportunity

The zoning provisions of Temple that relate to housing opportunities are presented in the table below, specifically, which housing types are permitted and what the minimum lot requirements for those dwelling units are.

**TABLE #10:
HOUSING OPPORTUNITIES IN TEMPLE**

ZONING DISTRICT	PERMITTED HOUSING TYPES	LOT AND YARD STANDARDS
Village and Historic Preservation	<ul style="list-style-type: none"> • Single family dwellings • Accessory Apartments 	♦ 2 acres, 250 feet of frontage
Rural Residential and Agricultural	<ul style="list-style-type: none"> ▪ Single family dwellings ▪ Accessory Apartments ▪ Manufactured Housing ▪ Planned Residential Development 	♦ 3 acres, 300 feet of frontage
Mountain	<ul style="list-style-type: none"> ▪ Single family dwellings ▪ Accessory Apartments ▪ Planned Residential Development 	♦ 5 acres, 350 feet of frontage

SOURCE: TEMPLE ZONING ORDINANCE

Temple has three zoning districts; all three districts permit single family dwellings and accessory apartments, two districts permit Planned Residential Development, and one permits manufactured housing.

■ **CONCLUSION**

An inspection of the tax cards and tax maps of the Town of Temple indicates that there are many parcels of land that appear to have potential for residential development without further zoning or subdivision approvals. From this review, approximately 165 lots fall into this category. This count from the tax maps and tax cards reflect some, but not all, of the subdivisions approved by the Planning Board between 1990 and 2001. Some of the lots approved by the Planning Board now have houses on them so those lots would not show on the tax map and tax cards as vacant land. The area of potential lots is as follows:

- | | | |
|---------------------|---------------------|---------------------|
| Tax Map 1 – 4 lots | Tax Map 4 – 6 lots | Tax Map 7 – 7 lots |
| Tax Map 2 – 35 lots | Tax Map 5 – 30 lots | Tax Map 8 – 31 lots |
| Tax Map 3 – 3 lots | Tax Map 6 – 39 lots | Tax Map 9 – 10 lots |

COMMUNITY FACILITIES

■ INTRODUCTION

An important function of town government is to provide residents and property owners with a level of service commensurate with taxes and fees paid that meets the current needs of the populace. The degree to which these facilities are developed can have a significant impact on the quality of life and general character of a community. This section of the Master Plan identifies the community facilities that exist within the Town of Temple. RSA 674:2, "Master Plan Purpose and Description" says that a Master Plan *"shall include, if it is appropriate . . . a community facilities section showing the location of, type, and need for educational or cultural facilities, historic sites, libraries, hospitals, fire houses, police stations and other related facilities, including their relation to the surrounding areas."*

The historic development of many of New Hampshire's towns centered on a Village area, within which most of the town and commercial functions were located. Today, in a more mobile and dispersed society, this is no longer the case; the various community facilities addressed in this section are located around the town. These locations are indicated on the accompanying map.

■ TOWN GOVERNMENT

The offices of Temple government are located in the Municipal Building on Route 45 just south of the Village. The Town Offices share a building and parking area with the Fire Department and Police Department. Space is provided for the Selectmen's Administrative Assistant, the Town Clerk, Treasurer, Tax Collector, Road Agent and a meeting room for local boards and committees. The meeting room is frequently utilized by the Police Department to compensate for the inadequate Police Office.

The Town Municipal Offices have been located at this site since 1986, when the former Fire Station was moved to this site and renovated into office and meeting space. Building additions were constructed at this time to house the Fire Department, bathrooms, mechanical room and an office. Interior renovation has occurred since then to provide additional office space within the former firehouse. Municipal office space is now insufficient. The former firehouse is about 1,000 square feet. Office space is about 540 square feet for 1 full-time and 4 part-time employees.

In 1995, a new computer system was leased to serve the Town Clerk, Tax Collector and Selectmen. The software is designed specifically for NH municipalities and has automated many of the daily procedures, including new automobile registrations, dog licenses, tax bills and liens, record keeping and report-generation.

■ TOWN HALL

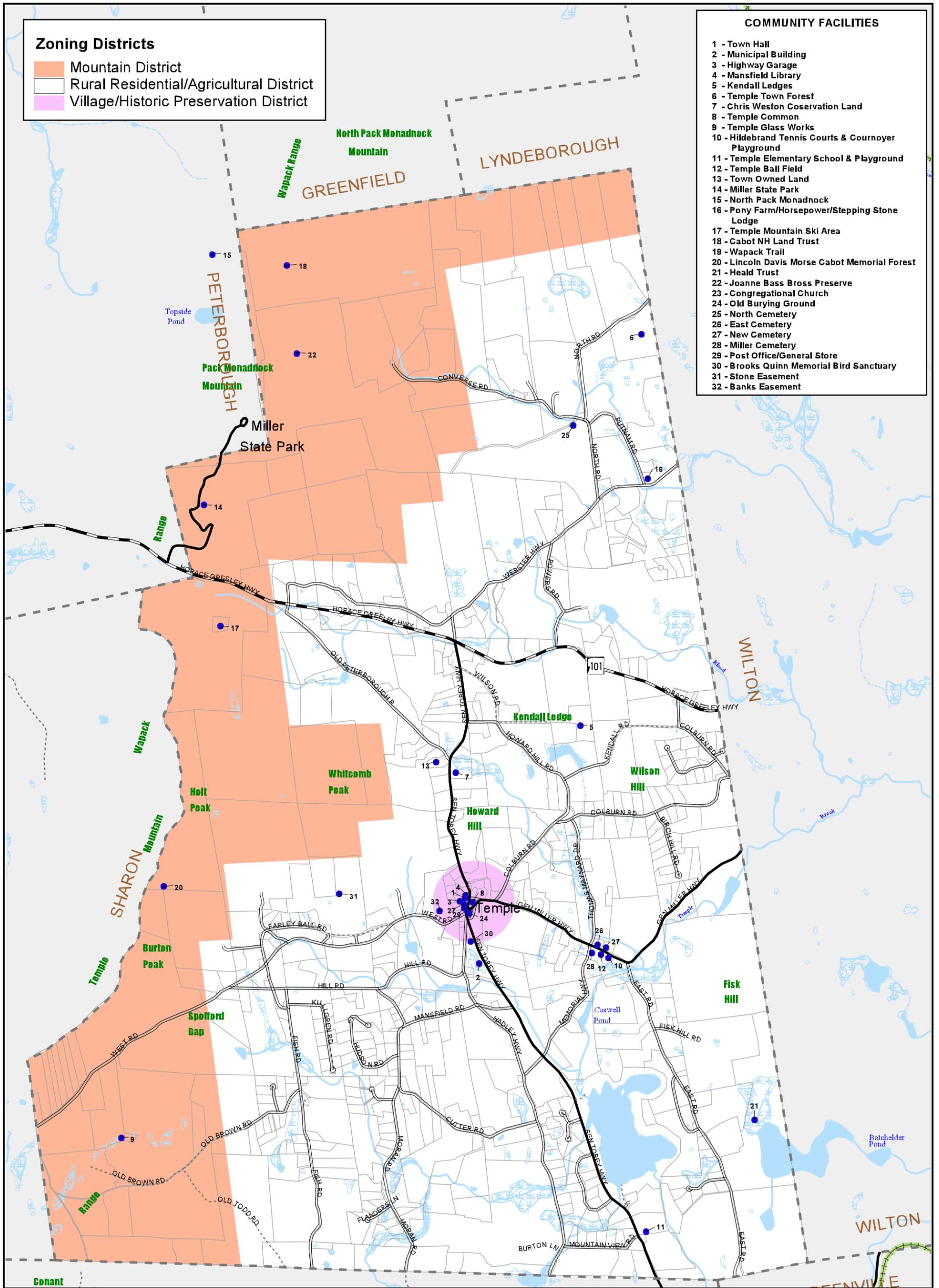
The Town Hall is located on the west side of the Common in the Village, in a row of other public buildings that is comprised of the Mansfield Public Library, chapel, church and post office. The Town Hall was built in 1842 by the Universalist Society, was later owned by the Grange, and became the Town Hall in 1888. It was used for town meetings until the late 1980s, when attendance exceeded capacity, and meetings were moved to the new fire station. Now they are held in the new Elementary School. At the present time the Town Hall is used for elections and some official town functions such as board meetings.

Zoning Districts

- Mountain District
- Rural Residential/Agricultural District
- Village/Historic Preservation District

COMMUNITY FACILITIES

- 1 - Town Hall
- 2 - Municipal Building
- 3 - Highway Garage
- 4 - Mansfield Library
- 5 - Kendall Ledges
- 6 - Temple Town Forest
- 7 - Chris Weston Coservation Land
- 8 - Temple Common
- 9 - Temple Glass Works
- 10 - Hildebrand Tennis Courts & Cournoyer Playground
- 11 - Temple Elementary School & Playground
- 12 - Temple Ball Field
- 13 - Town Owned Land
- 14 - Miller State Park
- 15 - North Pack Monadnock
- 16 - Pony Farm/Horsepower/Stepping Stone Lodge
- 17 - Temple Mountain Ski Area
- 18 - Cabot NH Land Trust
- 19 - Wapack Trail
- 20 - Lincoln Davis Morse Cabot Memorial Forest
- 21 - Heald Trust
- 22 - Joanne Bass Bross Preserve
- 23 - Congregational Church
- 24 - Old Burying Ground
- 25 - North Cemetery
- 26 - East Cemetery
- 27 - New Cemetery
- 28 - Miller Cemetery
- 29 - Post Office/General Store
- 30 - Brooks Quinn Memorial Bird Sanctuary
- 31 - Stone Easement
- 32 - Banks Easement



Zoning Map/Community Facilities

Town of Temple, NH



Scale = 1:36,000

0.5 0 0.5 Miles

Map Not Intended For Site Specific Work

- Community Facilities
- Waterbodies
- Wetlands*
- Watercourses
- Municipal Boundaries
- Property Lines
- Railroad/Railtrail
- DOT Road Classes
- Class I
- Class II
- Class V
- Class VI

* USFWS National Wetlands Inventory & USGS Data

Map Prepared By



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Digital base information provided by the New Hampshire Geographically Referenced Analysis and Information Transfer System (GRANT)

It is also used for various gatherings and events, such as the Harvest Festival and the annual play by the Temple Drama Club. The Recreation Commission uses it for annual Halloween, Christmas and Easter events, and performances by Andy's Summer Theater. The Temple Band uses it for rehearsals.

The building is approximately 36' wide and 61' feet long. There is a small kitchen on one side of the entrance and toilets on the other. A wheelchair accessible entrance has been added, but the toilets are not wheelchair accessible at this time. There is a closed-in balcony above these rooms used for storage. There is a stage at the back of the hall.

■ FIRE DEPARTMENT

The Fire Department is located on Route 45 just south of the Village. The Department shares a building and parking area with the Town Offices. There are two bays that hold four vehicles: a pumper, a tanker, a rescue vehicle, and an ambulance. An addition was added in 2002 to the side of the building creating one more bay that will house two vehicles.

In 1995, the Department completed the transfer of all emergency calls to Southwest New Hampshire Fire Mutual Aid in Keene, which serves as the central dispatch station for all fire, police, and ambulance calls in the region. In addition, all of the houses in Temple have been assigned numbers to locate them in case of emergency, in cooperation with the statewide Emergency 911 system that was recently put into effect.

In an effort to improve water supplies, the Department has installed dry hydrants (a fire hydrant that does not have pressurized water) on Hudson Road, Memorial Drive, and West Road. Other dry hydrants exist on East Road, Webster Highway, and Colburn Road. There are two pressurized hydrants in Temple, one at the Elementary School and one at the Tobey Reservoir pump station. There are also several ponds and streams within Temple that, because of their close proximity to roads, can be used as water resources.

Currently the Department is staffed by a Chief and 23 volunteer fire fighters. Volunteers undergo training at the departmental level and elsewhere. The Department regularly meets three times per month. One meeting is a general business meeting, another is a training drill, and the third meeting is to perform regular maintenance on the various fire trucks and equipment.

An important facet of the Fire Department is the Fire Department Auxiliary. The mission of the Auxiliary is to support the Fire Department; this mission is met by holding fundraisers to benefit the Department, and by providing sustenance to firefighters during structure fires and other major incidents. Additionally, the Auxiliary may provide emotional support to the victims of an incident. The Auxiliary is also responsible for producing the Town Newsletter. Currently there are 6 active members of the Auxiliary.

Generally, the Department is in good shape and meets the current needs of the town. The biggest problem faced by the Department is one that many small towns share, and that is finding volunteers who can give the time not only to serve, but also to be away for certification training. Level One Training can amount to as much of a commitment as twice a week for five or six months. Alternatively, Temple volunteers utilize the facilities at Meadowood Fire Training Center (Fitzwilliam, NH) for intensive specialty courses held during weekends. Currently less than a third of the Temple volunteers are certified firefighters.

■ AMBULANCE SERVICE

In 1997, Temple joined the Wilton/Lyndeborough Ambulance service and then collaboratively formed the Wilton/Lyndeborough/Temple Emergency Medical Service (WLT/EMS). The benefits of this association are many, as the town now houses an ambulance in the firehouse, and with the combined personnel of the three towns, it has a substantial emergency response staff of 35 trained individuals. One member of this staff is a fulltime EMT Paramedic such that there will always be someone available to provide Advanced Life Support services as needed in any of the towns serviced by WLT/EMS.

In addition to the ambulance stationed in Temple, there is an ambulance housed at the main WLT/EMS facility on Route 31 in Wilton, near the Lyndeborough Town line. Calls for response from the ambulance stationed in Temple are dispatched from Southwest NH Mutual Aid in Keene via the statewide 911 service. In cases where Advance Life Support is required Wilton is also automatically dispatched.

There are four levels of training for these Pre-hospital Care Providers. The first level is known as First Responder, followed by the levels EMT Basic, EMT Intermediate, and EMT Paramedic (the most advanced level.) Currently there is one First Responder, one EMT Basic, four EMT Intermediates, and zero EMT Paramedics residing within Temple.

■ POLICE DEPARTMENT

The Police Department is located in the Municipal Building with an office of 145 sq. ft. Department personnel consist of a chief, one full time officer, four part time officers, and a part-time administrative assistant. The animal control officer is associated with the Department. Calls are dispatched from the Hillsborough County Sheriff's Office. Currently, Department equipment includes:

- ◆ 2 Cruisers (1 equipped with radar and a video camera)
- ◆ Fingerprinting and photography equipment
- ◆ "Use of force" equipment
- ◆ Safety aids for cruiser and the Police Office

The Enhanced 911 system has been implemented and there are new and up-to-date Mutual Aid agreements with neighboring towns. The Department is undertaking development of a safety incident protection system for the Temple Elementary School. The Department is developing a hazard incident response program for the protection of the town.

The Department participates in other activities such as making presentations to the pupils at the Temple Elementary School and at ConVal High School on such topics as bicycle safety, Halloween safety and juvenile law. The staff has also provided training to neighboring police departments and to the State of New Hampshire Police Training Academy.

■ HIGHWAY DEPARTMENT

The Temple Highway Department is located in the Village behind the library. Personnel consist of a full-time Road Agent, two full-time employees, and one part-time employee. During winter months subcontractors are used to assist in plowing snow.

The facility is comprised of one large bay and two smaller bays. Improvements to the facility consist of the following: in 1990 old sheds were moved out to the backyard of the Highway Department and set on a new foundation, and walls of the garage were repaired and new doors installed; in 1991 an underground

fuel tank was removed and replaced with an above ground tank, and a new salt barn was constructed; and in 2000 a 40 x 42-foot addition to the garage was built to house two pieces of heavy equipment. The Road Agent’s office is located in the Town Office building. Equipment consists of:

- | | |
|-------------------------|------------------------|
| ◆ 2 6-wheel dump trucks | ◆ 1 farm tractor |
| ◆ 1 one-ton dump truck | ◆ 1 brush chipper |
| ◆ 1 grader | ◆ 1 tow-behind sweeper |
| ◆ 1 loader | ◆ plowing equipment |

■ **SOLID WASTE DISPOSAL**

The Town of Temple contracts with the Wilton Recycling Center located on Route 101 in Wilton, for solid and selected hazardous waste disposal. The Center collects and recycles paper, most plastics, glass, aluminum, steel and fabrics. An incinerator burns other materials, and appropriate items are placed in a landfill. Temple pays a fee to the Center. The Center attempts, with increasing success, to sell the recycled materials, and depending upon the revenues, a refund is made to the town. Last year the Center recouped \$94,000.00 which was divided among the towns it serves. The Recycling Center has a reputation as an efficient, clean, and cheerful operation.

After applying for a sticker authorizing a resident's privileges, residents transport and sort their own waste when the facility is open for non-commercial deposits. Some residents find it inconvenient to utilize the recycling center and dispose of their refuse by contracting with private haulers.

■ **LIBRARY**

The Mansfield Public Library is located on the west side of the Village. The building was constructed in 1890 from funds made available by a Temple native, Solon Mansfield. An addition was added in 1951.

The Library is staffed by a part-time Librarian and administered by a seven-member board of trustees; in addition, a private Friends of the Library contributes to programs and events. The Library has a circulation of over 7,000 publications – which includes magazines and tapes as well as books. The Library also offers public speakers (provided by the Friends of the Library), a Summer Fun Reading Program, a computer with internet access, a copier, tax forms, and two adult tickets to the Boston Museum of Fine Arts. An addition to the library was completed in 2002.

■ **RECREATION**

The open space and recreation opportunities are listed in the table below. In addition to those listed, there are 10,713.98 acres in Temple in current use, and 2,322.51 acres of those are in recreational current use.

A five-member Recreation Commission, established in 1976, oversees the maintenance of the town's public park, consisting of the Hildebrand tennis courts, a basketball court and a small playground. A nonprofit group consisting of Recreation Commission members fundraised and added onto the playground in 2002. It also organizes functions throughout the year such as an Easter Party, 4th of July, Halloween, and Christmas festivities.

The Conservation Commission, established in 1972, is involved in recreation and open space issues, as many of the properties that are managed by the Conservation Commission are used for passive recreation. The Commission also maintains several hiking trails in town, is working on an inventory of wetlands, performs site visits with landowner permission for advice and consultation on pond constructions and driveways, operates the Adopt a Highway program and provides financial support to many other projects. Most recently, the Commission has supported the restoration of a schoolhouse, the arch bridge and hiking trails on newly acquired town land.

**TABLE #11:
OPEN SPACE AND RECREATION FACILITIES IN TEMPLE**

Town – Owned or Town Organization

Name/ Ownership	LOCATION	Acreage	Use/ Assessment
Kendall Ledge or White Ledge	Northwest of Kendall Road	16	Maintained by the Conservation Commission. An outcropping of white quartz ledge. Natural area for hiking, views and nature study. Abundant natural habitat for berry picking and wildlife.
Temple Town Forest	South Side of North Road at Lyndeborough town line	46	Maintained by the conservation commission. Timber area, hiking, hunting, snowmobiling, riding and nature study.
Chris A. Weston Memorial Conservation Land	East Side of Rte. 45, north of town center	25.19	Created and maintained by the Conservation Commission.
Temple Common	Village Center	1.75	Town owned Historic Site. Location of old musterfield and Temple’s war memorial monuments. Site of band concerts, festivals, etc.
Temple Glass Works	North shoulder of Kidder Mtn.	1.4	Owned by Temple Historical Society, it is a historic site and subject of extensive archaeological studies.
Hildebrand Tennis and Basketball courts and Playground	Adjacent to and east of Ball field	2.3	Tennis and basketball practice by 25-30 persons/week mid-spring to mid-fall. The small playground has recently been expanded.
School Playground	Temple Elementary School Rte. 45	1	Small playground area used by elementary school pupils, plus some public use. On Conval property. New ball field and skating rink.
Temple Ball field	1 mile from village center, south side of General Miller Hwy.	4.03 (including cemetery)	Public use for field sports and picnics. Used by 120 persons/week mid-spring to mid-fall. Town owned.
Town owned land (4 sites)	West of Rte 45	4.01 3.65 4 4.14	Four town owned locations west of rte 45 open for recreational use.

State/ Federal

Name/ Ownership	LOCATION	Acreege	Use/ Assessment
Miller State Park	Off Rte. 101	344 in Temple	Spectacular scenery, hiking trails, picnic area, fire lookout tower. NH's first state park. Was 3 acres at the top.
North Pack Monadnock	Temple- Greenfield town line	474.5	Federally owned. Open space, wildlife habitat, nature studies, hiking and hunting.

Privately Owned

Name/ Ownership	LOCATION	Acreege	Use/ Assessment
Pony Farm Inc. Horsepower Inc. Stepping Stone Lodge Inc.	Webster Hwy and Putnam Road	30	Three corporations working together to provide summer riding camps, an academy, horse shows, clinics, workshops, therapeutic riding program, function hall for special events, lodging & meals. Serving about 2000 people/ year.
Temple Mountain Ski Area	Rte. 101 Temple/ Peterborough Line	313.58 (Temple) 40 (P'boro)	Currently for sale and future is uncertain.
Cabot NH Land Trust	East Side of Pack Monadnock	453	Owned by the Nature Conservancy. Forested land open for hunting, hiking and cross-country skiing. Wapack trail runs through the property.
Wapack Trail		Approx. 8 miles in Temple	Runs from Mt Watatic in Ashburnham, MA to Greenfield, NH. In Temple it runs for ~21 miles along the western boundary through public and private lands. Management is through sponsorship of the Friends of the Wapack. Hiking, skiing, snowshoeing, berry picking, nature studies. An estimated 3000 persons / year use the trail.
Lincoln Davis Morse Cabot Memorial Forest	Off of Mountain Road	966 total, 308 in Temple	Hiking, cross-country skiing. Wapack Trail passes though it. Owned and maintained by the N.E. Forestry Foundation.
Heald Tract	East Road	25.7	Hiking nature, study, berry picking.

■ **TOWN COMMON**

The Town Common is a 1.75-acre parcel that sits in the center of the Village and has served as the site of two town meeting houses and a muster field for military training. The Common is now an outside gathering place and has a hand-cut stone and wooden rail oval fence and maple trees. The Common, and the grassy area across Route 45, are the sites of several monuments that have been made possible through public as well as private efforts.

- ◆ 1872 – a Soldier’s Monument was dedicated.
- ◆ 1889 – two cannons and two piles of cannonballs were placed on the west side of the Soldier’s Monument.
- ◆ 1901 – a large monument at the south end of the Common commemorates 53 Revolutionary soldiers and pioneers of the town, and a smaller monument at the north end in honor of seven soldiers of the War of 1812 were dedicated.
- ◆ 1922 – a plaque was placed in the large boulder, dedicated to the veterans of World War I.
- ◆ 2001 – a veteran’s memorial monument was placed across the road and dedicated to veterans of World War I, World War II, the Korean War, the Cold War, the Vietnam War, Persian Gulf War, and Peacekeeping.

■ **CHURCHES**

There is only one church in town and that is the Congregational Church, United Church of Christ, located on the west side of the Village between the Post Office / Store and the Chapel. The church building was constructed in 1842, although the church congregation had been formed in 1771.

The Chapel was erected in 1888 and originally served as the meeting place for the Congregational Society. In 1966 the Society dissolved and the Church became known as the Congregational Church of Temple. Currently, there are 89 active members in the Church.

In 1998 there was a 30’ x 50’ addition added to the Chapel. The addition consists mainly of a large meeting room of size 30’ x 35’ and a kitchen equipped with commercial appliances. The Chapel’s new kitchen and meeting space offer a modern alternative to the Town Hall, or can be used in conjunction with the Town Hall for large receptions or other functions.

Regular activities in the Chapel include the Temple pre-school, Temple Sunday School (in conjunction with the Church), community pot-luck suppers (held monthly), and the regularly scheduled business meeting of Church Trustees, Deacons, etc. Other activities at the Chapel include various community benefits, lectures, and workshops.

■ **CEMETERIES**

There are four cemeteries in Temple, all of which are town-owned and maintained. The Temple Historical Society is currently in the process of undertaking an inventory of, and documentation of text on cemetery markers, headstones and monuments. A general description of the cemeteries follows.

CEMETERY	LOCATION	# OF SITES/ # USED	DESCRIPTION
Old Burying Ground	Between General Miller Highway and Cemetery Road, across the road from the Common.		Used between 1772 and 1891. Most of the first settlers in Temple were buried here.

North Cemetery	Near the junction of Converse Road and North Road.		Used between 1794 and 1822.
East Cemetery	General Miller Highway and Thomas Maynard Drive.		Laid out in 1800. Still used occasionally to bury members of old Temple families. In 1991 lettering for the gateway stone was completed. (On an ongoing basis, a few gravestones are repaired and/or rebuilt each year, subject to budget constraints.)
New Unnamed Cemetery	General Miller Highway		In 1993 three acres of land was donated, adjacent to East Cemetery. Projected completion of this new cemetery is expected to be approximately in 2010.
Miller Cemetery	General Miller Highway and Memorial Highway, across the road from East Cemetery.	238 lots, with as many as six gravesites to a lot. About 90% of the lots are assigned for use.	In 1991 the marker stone was carved and mounted. Land acquired in 1898.

■ **POST OFFICE**

The U.S. Post Office operates the Temple area postal service, housed in a frame structure attached to the general store in the center of town across from the Town Common. The building is leased from the owners of the store. The Town of Temple has no administrative relationship to the Post Office and provides no funds for its operation. The Post Office is open Monday through Friday for full days and for half the day on Saturday. There are 220 post boxes, all occupied, and 325 rural addresses. Currently there are two full time employees and two part time employees.

In August of 2001 the mailing address system in Temple changed to accommodate the 911 Emergency System. All addresses are now numbered street addresses and residents are required to provide visible address numbers on their properties. The Post Office is currently requiring a stricter adherence to the addressing of mail, where in the past the staff could identify almost anyone by name only.

■ **EDUCATION**

The Town of Temple is a member of the Contoocook Valley School District, which was created in 1968-69 to serve the nine towns of Antrim, Bennington, Dublin, Frankestown, Greenfield, Hancock, Peterborough, Sharon, and Temple. This District belongs to School Administrative Unit #1, with offices located at 106 Hancock Road (Route 202) in Peterborough. Funding for the District is by assessments to the member towns, based on average daily membership (50%) and equalized valuation of the town (50%).

The District maintains eight elementary schools (every town but Sharon has one), two middle schools (Great Brook in Antrim, serving Antrim, Bennington, Frankestown and Hancock, and South Meadow in Peterborough serving Dublin, Greenfield, Sharon, Temple and Peterborough), and the Contoocook Valley

High School in Peterborough. All of the school buildings, including the local elementary schools, are owned and maintained by the District; transportation is provided by the District.

Approximate Temple Enrollments:		<u>1990</u>	<u>2000</u>
Temple Elementary School	(K-4)	71	87
South Meadow School	(5-8)	75	87
ConVal High School	(9-12)	<u>45</u>	<u>71</u>
Total		191	245

The elementary school in Temple is located on Route 45 approximately 2 ½ miles south of the Village; this is a new facility, having opened in 1998. The building has eight classrooms, a library, a kitchen, and a multi-purpose room. There is some playground equipment outside, and basketball hoops in the multi-purpose room. Lunch is brought to the school from the Middle School in Peterborough and eaten in the classrooms. The building is designed to accommodate as many as 150 students, and laid out to easily receive an added four classrooms.

The school provides education for kindergarten through fourth grades. From fifth grade on, pupils attend South Meadow School through grade 8, then ConVal High School through grade 12. Staff in Temple consists of a principal, who also teaches fourth grade, four other teachers, three teachers aides, an administrative assistant, and a custodian. A physical education teacher comes to the school twice a week, an art and music teacher twice a week, an occupational therapist once a week, and a speech therapist for half a day twice a week.

The South Meadow School and the ConVal High School are both operating at or over capacity. Both schools use temporary classrooms. The voters just approved a lease purchase agreement in September 2001, which will allow completion of building projects at the Peterborough and Antrim Elementary Schools, and expansion of the Library and Cafeteria at the High School.

The cost of education is of course of great concern to towns in New Hampshire, since education tends to be the most expensive item in a town's budget. Within this region, the six school districts range from just over \$5,000 to nearly \$7,000 per pupil. The average cost per student in Temple is approximately \$6,400.

■ **HEALTH AND WELFARE**

The Town of Temple does not maintain any physical facilities relevant to the provision of health and welfare services to its residents. The town contracts with agencies housed in surrounding towns for a number of services, the most important of which are mentioned below.

◆ **Health Care**

Home based and public health services are provided by Home Healthcare, Hospice and Community Services, which is based in Keene, N.H., but maintains a satellite office in Peterborough serving Temple residents. The agency provides nursing, physical therapy, occupational therapy, hospice, medical social work, home health aides, a child health program, and various clinics addressing specific needs (flu shots, immunizations, etc.). Most of these services are reimbursable by Medicare, Medicaid, and private

insurance programs, but occasionally a specific service is needed but not reimbursable, or a resident has no source of medical coverage. In such instances a sliding scale is applied and the agency absorbs the excess cost, assisted by appropriations from the towns it serves and various fundraising efforts. Temple provides an annual appropriation to this agency; in 2000 it amounted to \$1,750.00. Fifteen residents of Temple received services during the year 2000, involving 309 visits.

♦ **Mental Health Care**

Mental health services are available through private agencies and private practitioners, but Monadnock Family Services, housed in Peterborough, provides mental health services to Temple residents in need or those choosing the agency as a provider. These services are often reimbursable through third party insurers, but requirements for reimbursement are rigid and visits often severely limited. During the fiscal year 1999 to 2000, Monadnock Family Services saw 26 Temple residents and provided 1,765 hours of service. The agency requests financial support from towns served in the amount of \$1.00 per resident, or \$1,259.00 last fiscal year, which underwrites services from those who are uninsured and/or in economic need.

Mediation services for families experiencing conflict are available through the Milford Area Mediation Program, housed in the municipal building in Milford. This program is staffed by a Director and volunteers who undergo extensive training in mediation techniques. Cases vary and may require one mediation session while others need long term follow-ups with many contacts. Referrals may be self-referred but others come from various social and law enforcement agencies and may be Court ordered. During the year July 1, 1999 to June 30, 2000, 9 residents of Temple received services through this agency. Services are free of charge and Temple provides a stipend to the agency in support of Temple residents, most recently in the amount of \$500.00.

♦ **Literacy**

Project Lift, housed in Hillsborough but operating out of town libraries, is an adult tutorial program for individuals studying for a GED, English as a second language, or those learning to read and write. This is a volunteer-staffed program, with volunteers being matched to students for weekly sessions. Sessions and materials are free of charge. Last year 5 students from Temple were served. The town makes a contribution of \$100.00 a year towards support of the program.

♦ **Welfare**

The Selectmen administer a local welfare system to residents in need who make specific requests.

■ **INVENTORY OF TOWN BUILDINGS**

Building	Year Built	Footprint Size (Sq. Ft.)	ADA Access	Bathrooms
Town Hall	1842	2,196	Yes	Not ADA compliant
Library	1890, 1951, 2000-2002	1,777	Yes	ADA compliant
Municipal Building	1986	1,492	Yes	ADA compliant
Fire Station	1986	2,400	Yes	N/A
Highway Department Buildings:				

Garage	1963	1,260	N/A	N/A
Sheds	Moved to site in 1990	905	N/A	N/A
Salt Shed	1991	640	N/A	N/A
Heavy Equipment Storage Garage	2000	1,680	N/A	N/A

ECONOMIC ENVIRONMENT

■ INTRODUCTION

Temple's economy today is that of a predominantly residential community, with very little commercial or industrial enterprise contributing to the economic base. Home-based businesses offer employment for a small number of Temple residents. Farming does not provide a significant contribution to the local economy, although a few farms are still active in town. This situation is fairly typical of many small New Hampshire towns, especially those that abut more urban areas, as Temple does, with Wilton to the east and Peterborough to the west, providing many of the commercial services and the employment base.

This section provides an overview of Temple's municipal finances, as well as selected information regarding the labor force. Locally, very little economic and labor force information is available for any individual year beyond the decennial census. Much of the information used for this analysis comes from the 2000 Census.

■ MUNICIPAL FINANCES

At the local level, the method of taxation and sources of revenues have remained unchanged since the 1984 Comprehensive Plan. Temple continues to rely on the property tax as its main source of revenue. At the state level, the legislature and the courts are embroiled in a controversial school taxation issue that will have significant ramifications for all towns in the state. As of this writing, it is not at all clear what program will be adopted to resolve the school taxation problem; in the meantime, this Master Plan will rely on the current system for information.

Table #12 below presents revenue and expenditure information from 1996 and 2002. Note that only certain items have been selected for individual inclusion in the table, however the total amounts for both expenditures and revenues are presented.

**TABLE #12:
MUNICIPAL EXPENDITURES AND REVENUES**

<u>Expenditures</u>	<u>1996</u>	<u>2002</u>	<u>% Change</u>
General Government	179,767	451,545	151.18%
Public Safety:			
Police	65,543	123,129	87.86%
Ambulance	11,693	6,650	-43.13%
Fire	15,115	28,049	85.57%
Building Inspection	541	3,047	463.22%
Emergency Management	0	802.00	
Other (incl. Communications)	44,389	21,959	-50.53%
Highway and Streets	319,532	314,105	-1.70%
Solid Waste Disposal	21,814	43,353	98.74%
Health:			
Administration	0	120	
Pest Control	4,857	5,478	12.79%

Health Agencies and Hospitals	3,123	3,471	11.14%
Welfare:			
Admin. & Direct Assistance	0	1,213	
Vendor Payment & Other	478	2,020	322.59%
Culture & Recreation	22,569	39,817	76.42%
Conservation	65	0	-100.00%
Debt Service:			
Principal-Long Term Bonds & Notes	9,500	0	
Interest-Long Term Bonds & Notes	537	0	-100.00%
Interest on TANS	6,709	0	-100.00%
Capital Outlay	37,257	85,902	130.57%
Expenditures Total	743,489	1,130,660	52.07%
Education	1,145,687	1,446,595	26.26%
County Taxes	117,737	127,262	8.09%

<u>Revenues</u>	<u>1996</u>	<u>2002</u>	<u>% Changes</u>
Taxes-Other than property taxes	100,776	31,319	-68.92%
Licenses, Permits & Fees	106,611	202,619	90.05%
From Federal Government	17,261	3,490	-79.78%
From State	97,623	109,943	12.62%
Charges for Services	1,133	4,100	261.87%
Miscellaneous Revenues	25,085	34,941	39.29%
Capital Reserve Fund	40,000	0	-100.00%
Trust & Agency Funds	2,800	1,285	-54.11%
Surplus Used in Prior Year to Reduce Taxes	66,203	179,000	170.38%
Revenue Total	457,492	566,697	23.87%

SOURCE: STATE OF NH DRA MS 6

The tax rate is determined by the amount of money the town needs to raise, relative to the total value of property in town. Table #13 below compares the net valuation of property, taxes to be raised, and the tax rate for the years 1996 and 2002.

TABLE #13:
NET VALUATION AND TAX RATE

	1996	2002	% Change
Net Valuation	67,966,688	75,612,947	11.25%
Town Property Tax to be Raised	432,607	583,602	34.90%
Tax Rate:			
Municipal	6.37	7.71	21.04%
Local School	16.57	13.89	-16.17%
State School	0.00	6.33	
County	1.71	1.67	-2.34%
Tax Rate Total	24.65	29.60	20.08%

SOURCE: NH DRA TAX RATE CALCULATIONS

Taxable revenue is based on the assessed valuation of various categories of land use. Table #14 below presents this information for 1996 and 2002, with the percentage change in each category. The table illustrates that the assessed valuation increased slightly from 1996 to 2002.

**TABLE #14:
PROPERTY VALUATION**

LAND USE	ASSESSED VALUATION		% OF TOTAL		% CHANGE
	1996	2002	1996	2002	1996-2002
Current Land Use	\$1,377,357	\$1,250,947	2.03%	1.65%	-9.18%
Residential Land	\$28,122,300	\$17,417,300	41.38%	23.03%	-38.07%
Residential Buildings	\$37,777,502	\$54,259,600	55.58%	71.76%	43.63%
Commercial/Industrial Land	\$0	\$423,400	0.00%	0.56%	--
Commercial/Industrial Buildings	\$0	\$811,500	0.00%	1.07%	--
Manufactured Housing	\$288,500	\$464,600	0.42%	0.61%	61.04%
Utilities	\$501,029	\$1,035,600	0.74%	1.37%	106.69%
Total Assessed Value*	\$67,966,688	\$75,612,947			11.25%

* Total Assessed Value less exemptions

SOURCE: STATE OF NH DRA MS 1

One indication of the relative wealth of a community is its per capita valuation. This amount represents the value of all property in town, upon which the town may depend for its budgetary needs and its subsequent ability to provide services. A low per capita valuation may be representative of many factors present in a community. Much of the land or buildings may be governmental and therefore exempt of any taxes. Primarily residential rather than industrial or commercial development may also be a factor, and how much land is eligible for the current use exemption. Conversely, a high per capita valuation may indicate intense industrial development or the location of a unique facility within the town's boundaries. A high valuation does not however automatically indicate a low tax rate, should services to serve this development result in extraordinary costs.

The Equalization Process

All cities and towns do not conduct revaluations in the same year. Therefore, some towns and cities may be assessing property close to market value (because they just conducted a revaluation) while other towns and cities are assessing property at more or less than market value (because their revaluation was conducted several years ago). This inconsistency makes it impossible to compare towns and cities to one another since local assessed valuations are based upon different revaluation years.

The Annual Equalization Survey conducted by the Department of Revenue Administration attempts to address this inconsistency by determining a ratio which equalizes the assessed property value with the current market value of properties as a whole within each town.

■ SELECTED FINANCIAL CHARACTERISTICS

Tables #15 and #16 below present economic data for Temple and its neighboring towns. Within the subregion, Temple had the fourth lowest per capita income in 2000, moving from number 6 in 1990 to number 5 in 2000. However, Temple's per capita income increase was the third highest of all eight towns – about 51% compared to about 29% for Greenville. Over the six-year period, Sharon continued to have the highest per capita income of the eight towns.

**TABLE #15:
PER CAPITA INCOME, TEMPLE AND NEIGHBORING TOWNS, 1990 & 2000**

TOWN	1990		2000		% Change 1990 - 00
	Income	SUBREGION Ranking	Income	SUBREGION Ranking	
TEMPLE	\$14,488	6	\$21,897	5	51.1%
Greenfield	\$15,107	5	\$19,895	7	31.7%
Greenville	\$13,925	7	\$17,901	8	28.6%
New Ipswich	\$13,759	8	\$20,210	6	46.9%
Peterborough	\$19,144	2	\$26,154	4	36.6%
Sharon	\$20,487	1	\$29,478	1	43.9%
Lyndeborough	\$16,690	4	\$27,169	2	62.8%
Wilton	\$16,935	3	\$26,618	3	57.2%

SOURCE: NH DEPARTMENT OF REVENUE ADMINISTRATION

Table #16 following presents job and wage information for Temple and its neighboring towns for the years 1990, 1995, and 2000. The information collected by the NH Department of Revenue Administration divides the jobs and wages by public or private. Note that after 1990 information was collected differently, so that it is not possible to exactly place the jobs for Lyndeborough and Wilton into those two categories; they are actually categorized as being “manufacturing” or “non-manufacturing.” The table shows that the majority of all jobs held within the eight towns are in the private sector. Average wages earned by the workers (not just the residents) who hold the jobs in the towns range from just over \$450 a week to over \$660 a week, as of 2000. Temple had the lowest average wage in 2000 and in 1995, while in 1990 it ranked third highest out of eight.

**TABLE #16:
EMPLOYMENT AND WEEKLY WAGE DATA, TEMPLE AND NEIGHBORING TOWNS**

TOWN	1990				
	PRIVATE		PUBLIC		AVERAGE
	JOBS	WAGES	JOBS	WAGES	WAGES
TEMPLE	60	\$421.13	no data	no data	\$421.13
Greenfield	693	\$389.47	no data	no data	\$389.47
Greenville	325	\$408.42	no data	no data	\$408.42
New Ipswich	599	\$453.82	no data	no data	\$453.82
Peterborough	4,428	\$431.43	no data	no data	\$431.43

Sharon	16	\$261.53	no data	no data	\$261.53
Lyndeborough	53				\$408.99
Wilton	1,366				\$413.26

1995

TOWN	<u>PRIVATE</u>		<u>PUBLIC</u>		AVERAGE
	JOBS	WAGES	JOBS	WAGES	WAGES
TEMPLE	74	\$410.37	13	\$270.29	\$389.59
Greenfield	779	\$506.57	40	\$239.64	\$493.64
Greenville	307	\$557.24	30	\$384.97	\$542.14
New Ipswich	813	\$512.96	47	\$207.75	\$496.22
Peterborough	4,389	\$543.79	119	\$413.88	\$540.36
Sharon	30	\$473.18	0	-	\$473.18
Lyndeborough	76	\$603.71	23	\$140.57	\$496.17
Wilton	1,360	\$506.79	443	\$361.90	\$471.17

2000

TOWN	<u>PRIVATE</u>		<u>PUBLIC</u>		AVERAGE
	JOBS	WAGES	JOBS	WAGES	WAGES
TEMPLE	135	\$420.02	11	\$484.02	\$452.11
Greenfield	694	\$776.75	29	\$364.79	\$570.77
Greenville	296	\$879.52	30	\$449.46	\$664.49
New Ipswich	887	\$926.02	28	\$390.82	\$658.42
Peterborough	4,474	\$584.17	538	\$636.39	\$610.28
Sharon	34	\$543.68	0	-	\$543.68
Lyndeborough	71	\$757.13	16	\$296.03	\$526.58
Wilton	1,375	\$533.47	460	\$398.09	\$561.67

SOURCE: NH DEPARTMENT OF EMPLOYMENT SECURITY

■ **LABOR FORCE CHARACTERISTICS**

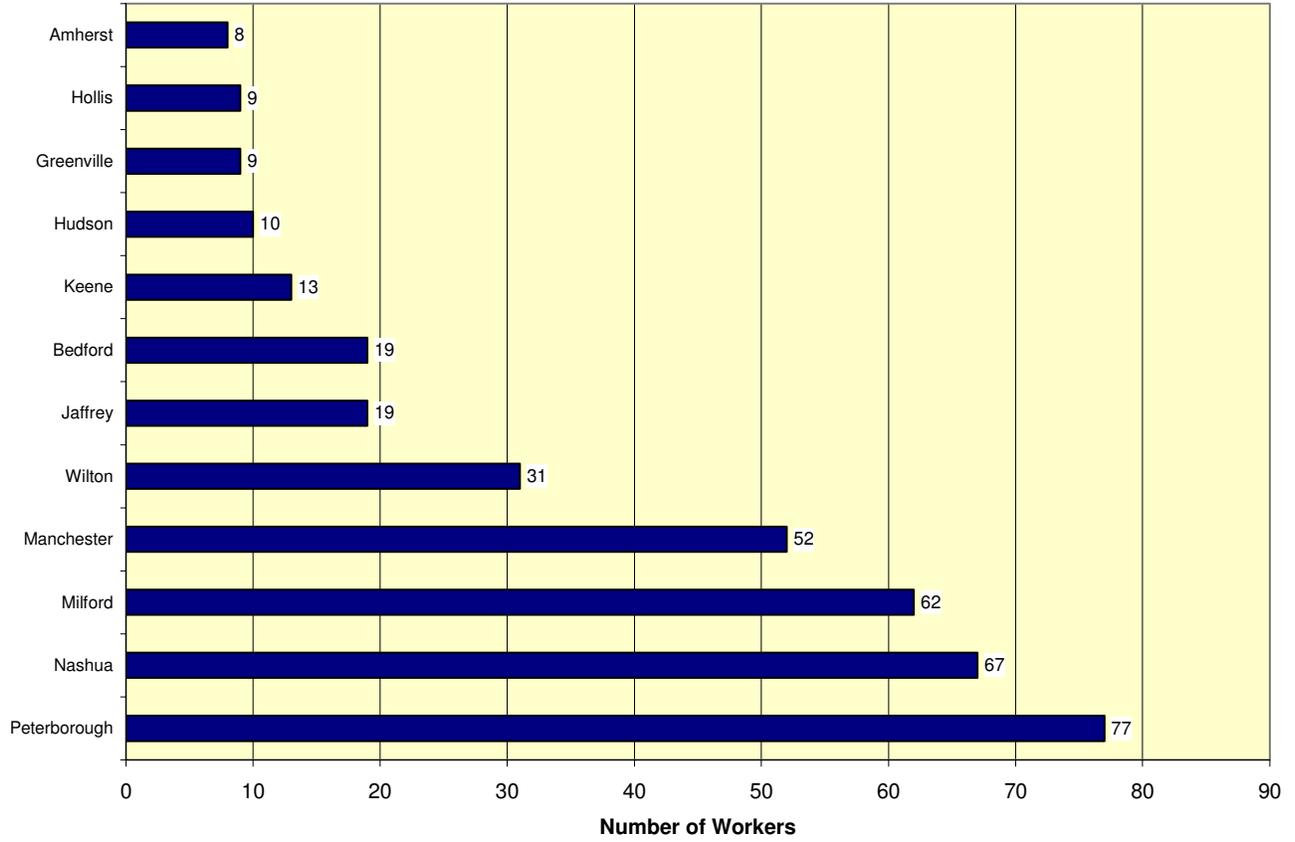
Temple is home to very few commercial and industrial enterprises. The top five employers in the Town of Temple are listed as follows:

- ◆ Timberdoodle Club
- ◆ Wheelands Auto Repair
- ◆ Pony Farm
- ◆ Parker Tool Company
- ◆ American Logistics Trucking

Following are selected characteristics of the work force in Temple. Note that most of this information is based on 2000 Census data:

- ◆ In 2000, Temple had a nearly 77% participation rate in the labor force – amounting to 741 persons. Of the residents who participate in the labor force, 75.3% (522 workers) commute out of town to work (see Graph #5), most of them to Milford, Nashua and Peterborough.
- ◆ According to the data collected for the 2000 Census, Temple workers commuted out to work in 32 towns in New Hampshire, 21 in Massachusetts, and 1 town in Vermont.
- ◆ The two most prominent occupational categories - managerial and professional, are expected to grow at nearly 2% by the year 2005.
- ◆ Of the 11 reported governmental jobs in Temple in 2000, 9 were in local employment, and 2 in federal employment.
- ◆ According to the Department of Revenue Administration 1998 study, 96 people were employed in Temple, of which an undetermined number are Temple residents. The 2000 Census indicated 140 jobs were held in Temple, 102 of them by Temple residents.
- ◆ The latest date for which information is available - 2000 - shows Hillsborough County at 2.8% unemployment, and the State at 2.8%.

**GRAPH #5:
COMMUTER DESTINATIONS OF TEMPLE WORKERS, 2000**



CONSTRUCTION MATERIALS

■ INTRODUCTION

The primary source for identifying sand and gravel resources is the Soil Survey of Hillsborough County, which was completed in 1984⁶. The document includes a table entitled "Construction Materials," that lists four types of material by soil category; these are: roadfill, sand, gravel, and topsoil.

The purpose of this section of the Master Plan is to identify such materials as are located in Temple. The soil types are listed in tables and the boundaries of the soil units are illustrated on maps. These maps were created by the Southwest Region Planning Commission using computer technology known as the Geographic Information System (GIS).

A corollary purpose of this section is to determine whether reasonable opportunities exist in the Town of Temple for earth excavation as defined by RSA 155-E. Amendments made to this law in 1989 and 1991 made it incumbent on towns to ensure that their zoning ordinance provides some opportunity for excavation; otherwise *"excavation shall be deemed to be a use allowed by special exception . . . in any non-residential area of the municipality, . . ."*⁷ and the zoning board of adjustment shall grant the special exception upon a finding by the board that the excavation would not diminish property values, unreasonably change the character of the neighborhood, create traffic hazards, or create any health or safety hazards.

■ THE SOIL SURVEY

The following descriptions and tables of the construction materials are based on the above-referenced Soil Survey of Hillsborough County. Soil categories are identified in the Survey by number and letter; the number represents the composition of the soil, and the letter designates the steepness - "A" being the flattest and "E" the steepest. (Note that the maps developed for this report show the soil unit boundaries but not the identifying number and letter, as the scale of the maps would render this information illegible.) The classifications used to designate the construction materials are based on a number of factors, including observed performance of the soil, soil properties, and site features that affect the removal of the material and its use as a construction material.

DESCRIPTION OF MATERIALS

◆ Roadfill

Roadfill is defined by the Survey as soil material that is excavated in one place and used in road embankments in another place. Only soils suitable for low embankments (less than six feet) were rated by the Survey. Roadfill is rated as being either "Good", Fair" or "Poor". "Good" soils are those that are comprised of significant amounts of sand or gravel or both, and slopes of 15% or less. "Fair" soils have in excess of 35% silt and clay-sized particles, and slopes of 15-25%. "Poor" soils contain many stones, or slopes of more than 25%.

⁶ Soil Survey of Hillsborough County, New Hampshire, Western Part, US Department of Agriculture, Soil Conservation Service, 1985. (The SCS is now the Natural Resource Conservation Service.)

⁷ RSA 155-E: 4,III.

◆ **Topsoil**

Topsoil is defined in the Survey as material used to cover an area in order to establish and maintain vegetation. Temple has adequate topsoil to maintain vegetation.

◆ **Sand and Gravel**

Sand and gravel are defined in the Survey as natural aggregates suitable for commercial use with a minimum of processing. The Survey evaluated only the probability of finding materials in quantities large enough as to be suitable for removal. The properties used to evaluate sand and gravel soils include the thickness of the material, the size of the grain, and the content of rock fragment. A soil rated as “probable” has either a layer of clean sand or gravel, or a layer of sand or gravel with up to 12% silty fines. In addition, the material must be at least three feet thick and have less than 50%, by weight, large stones.

■ **CONSTRUCTION MATERIALS IN TEMPLE**

The following descriptions of construction materials in Temple do not include topsoil, as no significant amount of this material was identified in the soil survey. Note that the acreage calculations for these materials do not denote the amount of the resource in the ground - only the surface area; more extensive testing would need to be done to develop an estimate of the volume of materials present in any given area.

Roadfill

Table #17 lists the soil units found in Temple that constitute roadfill; the Roadfill Map illustrates their locations. According to this information, Temple has 7,347 acres of roadfill; just slightly over half of this acreage is rated as “fair”, the remaining 3,297 acres are “good” soils. The accompanying map identifies only the good and the fair soils.

**TABLE #17:
ROADFILL SOILS IN TEMPLE**

SOIL	SOIL NAME	ACRES
FAIR ROADFILL		
22A,B,C	'COLTON'	541.489
613A,B	'CROGHAN'	102.912
76B,C,D 77B,C	'MARLOW'	2243.479
78B, 79B,C	'PERU'	804.537
104	'PODUNK'	39.530
558B,559B,C	'SKERRY'	217.887
Total Fair Roadfill		3949.834
GOOD ROADFILL		
36A,B,C	'ADAMS'	61.340
142B,C 143B,C	'MONADNOCK'	3231.198
101	'ONDAWA'	4.392
Total Good Roadfill		3296.930
Grand Total all Roadfill Soils		7346.764

SOURCE: SOIL SURVEY OF HILLSBOROUGH COUNTY, NEW HAMPSHIRE, US DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989

**TABLE #18:
SANDY SOILS IN TEMPLE**

SOIL	SOILNAME	ACRES
22A,B,C	'COLTON'	541.489
613A,B	'CROGHAN'	102.912
104'	'PODUNK'	39.530
558B.559B,C	'SKERRY'	217.887
36A,B,C	'ADAMS'	61.340
142B,C 143B,C	'MONADNOCK'	3231.198
'101'	'ONDAWA'	4.392
36E	'ADAMS'	16.773
395	'*CHOCORUA'	76.148
22E	'COLTON'	53.664
143D	'*MONADNOCK'	1371.933
214A,B	'*NAUMBURG'	113.159
105	'*RUMNEY'	63.611
15	'*SEARSPORT'	12.227
		1707.515
Grand Total		5906.263

SOURCE: SOIL SURVEY OF HILLSBOROUGH COUNTY, NEW HAMPSHIRE, US DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989

* HIGH PROBABILITY OF HYDRIC SOILS-WOULD NEED A PERMIT TO DREDGE AND FILL.

Roadfill soils are distributed virtually all over town, with a few notable exceptions being the northern and eastern sections of town.

Sand

Sandy soils in Temple account for about 5,906 acres. These deposits are distributed throughout most of the town, but with several large areas of town devoid of this resource.

Gravel

Gravel deposits in Temple are distributed in much the same pattern as sand, although to a lesser degree. Overall, the probable resource amounts to just over 2,000 acres (see Table #19).

The percentage of the total land area in Temple accounted for by each of the construction materials is presented below in Table #20. Note that the area in acres of the individual soil types exceeds the estimated land area of Temple; this is because several of the soil types overlap. The accompanying maps identify only the probable sources of sand and gravel.

Thus, according to the county soil survey, about 80% of the town is comprised of roadfill and sandy soils; gravel accounts for less than 15% of the land area.

TABLE #19: GRAVEL SOILS IN TEMPLE

SOIL	SOILNAME	ACRES
22A,B,C	COLTON'	541.489
104	PODUNK'	39.530
558B 559B,C	SKERRY'	217.887
101	ONDAWA'	4.392
22E	COLTON'	53.664
143D	MONADNOCK'	1371.933
105	*RUMNEY'	63.611
Grand Total		2292.506

SOURCE: SOIL SURVEY OF HILLSBOROUGH COUNTY, NEW HAMPSHIRE, US
 DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989
 * HIGH PROBABILITY OF HYDRIC SOILS-WOULD NEED A PERMIT TO DREDGE
 AND FILL.

**TABLE #20:
LAND ACREAGE BY CONSTRUCTION MATERIAL**

Construction Material	Acres	% of Total Acreage of Construction Material
Roadfill, Fair	3,949.83	25.6%
Roadfill, Good	3,296.93	21.3%
Sand, Probable	5,906.3	38.2%
Gravel, Probable	2,292.5	14.8%

■ GROUNDWATER IDENTIFICATION

To further refine the attempt to identify sand and gravel deposits in the Town of Temple, aquifer delineation studies are examined and compared to the SCS soil survey. Inclusion of this information is useful, since the identification of potential groundwater is based in part on the inferred presence of sand and gravel soils - thus, the interpretation that where an aquifer exists, so too, do sand and gravel deposits. Groundwater identification should not, however, be solely relied upon to locate sand and gravel deposits, as these data present only part of the total picture.

The reason for this is that sand and gravel deposits were created by glaciers and rivers, and can be deposited on valley floors, hillsides and hilltops. The aquifer studies identify those soils that were deposited on valley floors - known as stratified drift. The other formations that must also be considered are eskers and deltas, both of which can be prodigious sources of sand and gravel deposits, which are not found in valley floors, but rather on hillsides and hilltops - therefore, they would not show up on an aquifer map. These formations all have something in common, namely that the materials have all been sorted by water; however, while good aquifers are also good sand and gravel sites, good sand and gravel sites are not always good aquifer sites.

The *Aquifers, Hydric Soils & Wetlands Map* found following page 59 illustrates the stratified-drift aquifer boundaries for Temple. Aquifer deposits exist virtually all over town except along the western boundary, which is of course the Wapack Range. The largest single concentrated deposit is in the southern part of town, from Fish Road to Hadley Highway. Note that the aquifer information and the soils information differ in that the pockets of construction materials are identified in many scattered areas around town that do not appear to have aquifer deposits. Overall, the areas associated with aquifers are much smaller than those associated with any of the construction materials.

■ EXCAVATION OPERATIONS IN TEMPLE

As part of this chapter, information on all known existing and abandoned sand and/or gravel pits in town was collected from town records. The locations of these operations are identified on the accompanying map. According to the town records, there are 36 excavation sites in Temple, of which only two are active, two have been reclaimed as house sites, and four have been restored through natural vegetation. The active sites are as follows:

<u>Tax Map/Lot #</u>	<u>Owner</u>	<u>Acres</u>	<u>Location</u>	<u>Use</u>
01-005	Robbins	2½ acres	Converse Road	Gravel, Sand, Fill
05-009	Wegmueller	2 acres	West Road	Sand, Fill

■ **OPPORTUNITIES IN TEMPLE FOR EXCAVATION**

RSA 155-E requires towns to allow some opportunity for earth excavation, as described in the Introduction. The law also allows towns that have adopted a Water Resource Management and Protection Plan consistent with RSA 674:2,VIII to include in their local excavation regulations provisions that are aimed at protecting water resources. The information depicted on the soil maps enables the Planning Board to do just that.

The Temple Zoning Ordinance provides for excavation as a special exception use, subject to certain conditions set forth in the ordinance. No district is specified; therefore this use could presumably occur anywhere in town, although clearly the special exception review process allows the Board of Adjustment to take into consideration abutting land uses, etc. The maps for Temple do indicate that these materials exist all over town; therefore, the zoning provision that allows excavation in all districts is, in fact, consistent with this soil information.

There appears to be an abundance of sand, gravel and fill in many areas of Temple, however land use commitments such as home sites, cemeteries and other uses limit availability, at this time only the two pits noted above are licensed and operating. The Wegmueller pit will probably run out of material within the next two years. The Robbins pit is scheduled to be reclaimed and closed by 2003.

TRAFFIC AND TRANSPORTATION

■ INTRODUCTION

A viable thoroughfare and transportation system is the most significant public investment in the physical development of a town. The existing transportation network, which in the case of Temple refers exclusively to the system of roads and highways, has a profound influence on the location and development of land use throughout the town. All land use activities require access to transportation routes, and are most likely to locate where access is the easiest and least costly. Likewise, transportation improvements have the potential to alter existing land use patterns by opening up once inaccessible areas, either by the construction of new roads or the upgrading of deficient roads.

Because of the financial commitment required for the improvement and maintenance of a road network, and the direct relationship between land use patterns and traffic circulation, the identification and analysis of current transportation needs is crucial to the orderly accommodation of growth and development. This section of the Master Plan is intended to provide such an analysis. By developing an inventory of the existing transportation network, analyzing the impact of regional growth on traffic volume, and identifying road deficiencies, the transportation section can provide necessary data for the road improvement schedule and a Capital Improvement Program.

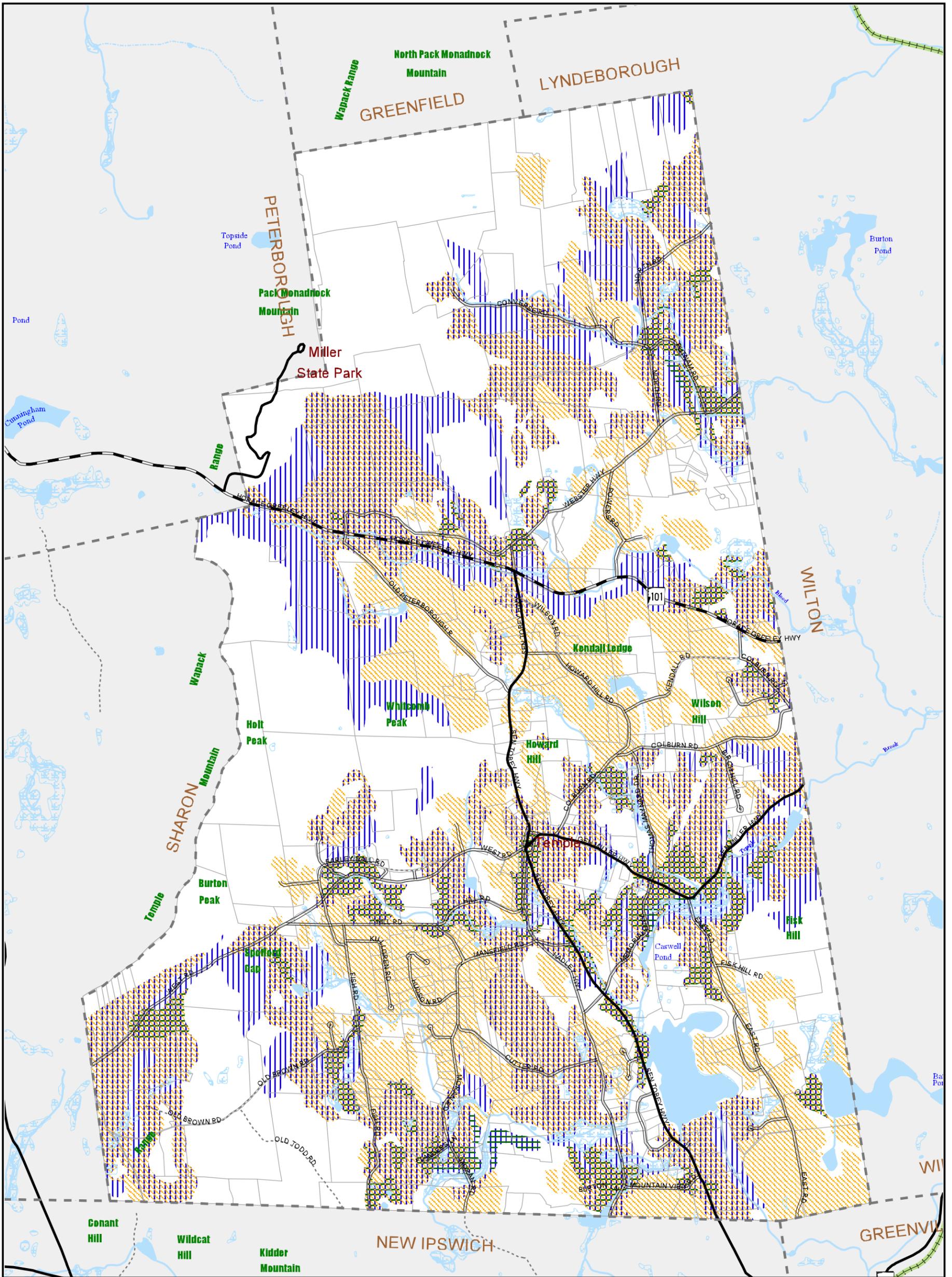
A corollary purpose of this document is to enable the Town of Temple to fully participate in all levels of transportation planning - not only local, but regional, state and federal as well. Transportation infrastructure is heavily dependent on public funds. The New Hampshire Department of Transportation (NH DOT) sets the priorities for infrastructure spending through the development and implementation of a statewide Transportation Plan and Transportation Improvement Program. Both of these were required under 1991 federal legislation known as the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA was replaced in 1998 by the Transportation Equity Act for the 21st Century (TEA-21) which, like the former ISTEA, prescribes the federal disbursements to the states. In order to qualify for New Hampshire's full allocation of funds, the NH DOT must comply with the federal planning requirements.

To accomplish its task, the NH DOT requires each of the nine regional planning commissions in the state to develop a regional transportation plan that describes existing state road conditions, identifies problems and concerns, declares goals and objectives for the regional network, and makes specific recommendations for improvements. The regional plans provide the towns with an opportunity to link municipal planning, state spending and federal policy. This local transportation analysis will, therefore, take the regional issues into account in the process of ensuring that Temple's transportation network supports and promotes the town's overall community plan.

■ HIGHWAY CLASSIFICATION SYSTEMS

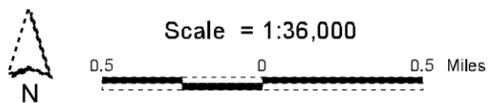
The first step in the evaluation of a transportation network is to define the roads by the type of service they provide or by the funding that is available to build, maintain and repair them. There are three classification systems used to accomplish this - federal, state, and functional use. Only the state and functional systems are herein discussed.

A. STATE CLASSIFICATION SYSTEM



Town of Temple, NH

Construction Materials (Sand, Gravel, & Roadfill)



Map Not Intended For Site Specific Work

- "Probable" Gravel Material
- "Probable" Sand Material
- "Good" & "Fair" Roadfill Material
- Waterbodies
- Wetlands*
- Watercourses
- Municipal Boundaries
- Property Lines
- Railroad/Railtrail
- DOT Road Classes**
- Class I
- Class II
- Class V
- Class VI

* USFWS National Wetlands Inventory & USGS Data

March 2003

Map Prepared By



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Digital base information provided by the
New Hampshire Geographically Referenced Analysis
and Information Transfer System (GRANT)

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This system has been developed by the NH DOT for determining funding levels and maintenance responsibilities. RSA 229:5 specifies the following six classes of roads within the state system:

- **Class I:** Trunk Line Highways belong to the primary state highway system. The state assumes full control and pays costs of construction, reconstruction and maintenance.
- **Class II:** State Aid Highways belong to the secondary state highway system. All sections improved to the state standards are maintained and reconstructed by the state. All other sections must be maintained by the town until brought up to state standards. The same applies to bridges on Class II highways.
- **Class III:** Recreational Roads consist of all roads leading to, and within, state reservations designated by the Legislature. The NH DOT assumes full control of reconstruction and maintenance.
- **Class IV:** Town and City Streets consist of all highways within the compact sections of towns and cities of 7,500 inhabitants and over.
- **Class V:** Rural Highways consist of all other traveled highways that the town has the duty to maintain.
- **Class VI:** Unmaintained Highways are all other existing public ways, including highways discontinued as open highways, highways closed subject to gate and bars, and highways not maintained by the town in suitable condition for travel for five consecutive years or more

Of the six possible state classifications, Temple roads fall into five of these: Class I, Class II, Class III, Class V, and Class VI roads. The Class VI designation is frequently applied to roads that have been abandoned or discontinued, which often leads to confusion as to the ownership of the road. If a vote was taken at Town Meeting to formally discontinue a road (or abandon it or “throw it up”), that road is no longer a public way - it then reverts back to the abutting landowners. Temple’s road network is illustrated on the accompanying maps by these classifications, and described in terms of mileage in Table #21 following.

**TABLE #21:
ROAD NETWORK BY MILEAGE AND STATE CLASSIFICATION**

ROAD	MILEAGE
Class I Road:	
Horace Greeley Highway (Rte.101)	2.12
Class II Roads:	
Gen. Miller Highway	2.12
Sen. Tobey Highway (Rte. 45)	4.23
	6.35
Class III Roads:	
Miller State Park Road	0.93

Class V Roads:	38.15
Class VI Roads: (or sections thereof):	
Kendall Road	0.58
Moran Road	0.34
Old Brown Road	0.30
Old North Cemetery Road	0.08
Old Senator Tobey Highway	0.26
Old Todd Road	0.98
Vinton Lane	0.06
Wilson Road	0.85
Old West Road	0.06
	3.51
TOTAL MILEAGE	51.06

Temple’s road system is typical for most New Hampshire towns, in that the greatest amount of mileage is accounted for by Class V roads. Approximately 36% (14 miles) of the Class V roads have a paved surface, and the remainder a gravel surface. Route 101, while measuring just over two miles of the road system, represents a significant travel corridor for the region, and will be discussed more thoroughly later in this document. Class VI, the unmaintained sections, accounts for about three and a half miles of road. The pressures surrounding development on Class VI roads faced by many towns have not yet become serious issues in Temple. The ownership and condition of these roads can become contentious issues when there is pressure on the Planning Board and Selectmen to allow development on these roads.

B. FUNCTIONAL CLASSIFICATION SYSTEM

A functional classification system identifies roads by the type of service provided and by the role of each highway within the state system, based on standards developed by the US Department of Transportation (DOT). The purpose of this system is to correlate the land planning and traffic planning functions of the Master Plan. Recognition of the principal function that a highway, road or street is intended to serve can reduce potential conflicts between land use activities and traffic movements. For example, from a theoretical standpoint, residential development should not be permitted to indiscriminately locate along major highways. The reason for this is obvious due to the opportunity for direct land use/traffic conflicts. The need for direct access to residential properties causes numerous left turn and crossover movements as well as ingress/egress movements, all of which slow and/or interrupt the smooth flow of traffic and, at the same time, substantially increase the potential for accidents to both pedestrians and vehicles.

According to this system, there are two categories of functional classes: Rural Areas and Urban Areas. In Temple’s case, only the Rural categories apply; they are:

- ◆ *Principal Arterial/Controlled Access*
- ◆ *Other Principal Arterial*
- ◆ *Minor Arterial*
- ◆ *Major Collector*
- ◆ *Minor Collector*

◆ *Local Streets and Roads*

◆ **PRINCIPAL ARTERIAL/CONTROLLED ACCESS**

These highways consist of interstates and some primary state routes. They are designed to move large volumes of truck and car traffic through and between population centers without disturbing local traffic and land uses. Controlled Access is a designation adopted by the DOT, the effect of which is to minimize the frequency of curb cuts, thereby controlling the amount of traffic crossing lanes and stopping on the road.

Temple has no roads that fall into this category.

◆ **OTHER PRINCIPAL ARTERIALS**

These roads carry the largest amount of traffic into and through a region. They may have limited or controlled driveway access, for the purpose of providing unimpeded traffic flow. These roads typically carry high volumes of traffic for medium to long distances and at medium speeds.

NH Route 101 is classified as an Other Principal Arterial. Route 101 is one of three state highways in the Southwest Region with this classification; the other two are Route 9 from the Vermont state line in Chesterfield east through Antrim, and Route 12 south from Keene to the Massachusetts state line in Fitzwilliam.

◆ **THE COLLECTOR SYSTEM (MAJOR AND MINOR)**

The collector system provides land access, service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that collector streets may penetrate residential neighborhoods, distributing trips (traffic) from the arterials through the area to their ultimate destination. Conversely, collector streets also collect traffic from local streets in residential neighborhoods and channel it to the arterial system. These roads typically carry medium volumes of traffic at low to medium speeds for relatively short distances.

NH Route 45, General Miller Highway, and West Road are classified as Minor Collectors. Route 45 carries traffic between Route 101 – an Other Principal Arterial, and Route 31, a Major Collector. West Road connects Route 45 to Route 123 in Sharon, which is a Major Collector. General Miller Highway connects to Routes 45 and 101. (At the Wilton Town Line it becomes Temple Road.)

C. SCENIC ROADS

In addition to the state-aid classifications, there is legislation under RSA 231:157 that allows towns by a vote at Town Meeting to designate any road other than a Class I or II highway as a Scenic Road. The effect of this designation is that, except in emergency situations, there shall be no tree cutting or alteration of stone walls within the right-of-way without the written approval of the Planning Board. This law does not affect the rights of individual property owners; nor does it affect land uses as permitted by local zoning. In 1991, the statute was amended to allow towns to adopt provisions other than what is spelled out in the law. Temple has no Scenic Roads at this time. When the legislation was enacted in 1972, the voters designated East Road as Scenic, and the following year voted to remove the designation.

■ TRAFFIC VOLUMES

The gathering of information relative to traffic volumes helps the Planning Board identify not only how many vehicles a day are using the roads - and therefore impacting the infrastructure, but also where traffic is going. This knowledge is necessary in order to plan for future road improvements and new road construction. The New Hampshire DOT collects traffic counts around the state on a continual basis. Some traffic counter devices are permanently installed and provide figures based on a full-year count, while others are set out on a rotating basis around the state for varying lengths of time, generally during the months of May to October, although counts are occasionally taken during other months. The permanent counters will be placed only on state roads; the temporary counters will be placed on state and local roads. When the counts are recorded, information is collected on days of the week, times of day, and direction of travel. For general public consumption, these numbers are annualized, which means that there will be an average count for any given day of the week. Table #22 on the following page presents the available annualized average traffic counts for Temple.

The table indicates that there is very little trend data for Temple roads, the exception of course being Route 101, for which counts have been taken every year since 1987. At the Wilton Town Line, the average daily traffic on Route 101 has increased by over 22% - from 6,345 to 7,775. (Within the regional network, these counts are lower than the counts for both Route 9 and Route 12.) The other roads in town for which counts have been taken carry significantly less traffic than Route 101, which accounts for almost 67% of all average daily traffic, with the remaining 33% of the traffic distributed over the other six roads inventoried. Reference to the Traffic Counter Location Map following page 47 illustrates that most of the traffic in town is going east and west and north and south between Route 101 and the Village. The traffic counts on Route 45 are nearly 50% less on the section south of the Village than those north of the Village.

■ EXISTING ROADWAY CONDITIONS

In order to adequately plan for future road improvements, it is necessary to first determine the conditions present in the existing road network, and whether or not there are serious deficiencies that need to be addressed. Deficiencies might include such problems as roads with sub-standard width, inadequate or deteriorated bridges, poorly designed intersections, deteriorating road surface and shoulders, and poor drainage.

Discussion with the Temple Road Agent indicates that there are no serious deficiencies with the town roads. The Road Agent works within a set budget each year, and schedules road maintenance and improvements based on the availability of funds. (On average, the town approves \$40,000 for paving work and \$15,000 for gravel maintenance.) Approximately 14 miles of the roads are paved; of those that are not, some have not been paved because of the desire of the residents on the road to keep the surface gravel. When a road is improved or paved, there are always concerns about speeding; that, in fact, is the chief complaint the Road Agent receives about the roads.

In terms of any deficient road conditions that might create traffic hazards, while there are many areas of steep grades, narrow widths and sharp corners, these are features that are common in this landscape, and they do not appear to account for or contribute to any particular hazards. Most of the accidents in town occur on Route 101, and these are at least partly attributable to speed – although there is a section of the road with several “S” curves, the correction of which is on the state highway improvement plan.

**TABLE #22:
ANNUAL AVERAGE DAILY TRAFFIC**

ID Number	Location	1987	1988	1989	1990	1991	1992	1995	1996	1997	1998	1999	2000	2001	% Change
															1998-01
445001	NH 101 @ Wilton TL	6345	6613	6320	6967	6888	7236	7170	7391	7341	7708	7775	8006	7876	2%
445052	Gen. Miller Hwy. @ Wilton TL	*	*	*	1100	*	*	*	*	*	1000	*	*	1200	20%
445053	NH 45 2 miles S of NH101	*	*	*	900	700	*	*	*	*	1200	*	*	1400	17%
445054	Hadley Highway over Temple Brook	*	*	*	*	*	*	*	*	*	540	*	*	650	20%
445055	NH 45 over Temple Brook	*	*	*	*	*	*	*	*	*	730	*	*	940	29%
445057	East Road Over Temple Brook	*	*	*	*	*	*	*	*	*	140	*	*	130	-7%
445058	Webster Highway over Brook	*	*	*	*	*	*	*	*	*	240	*	*	330	28%

SOURCE: NH DEPARTMENT OF TRANSPORTATION, TRAFFIC VOLUME REPORT 2001.

Bridges

Bridges present an ongoing maintenance and repair concern for all towns, oftentimes accounting for a large portion of local highway budgets. Bridges also present the potential for a number of safety hazards in instances where they are severely deteriorated or are significantly narrower than the road that they serve. There are 15 bridges in Temple - 10 are owned by the town and 5 by the state. The locations of these bridges are illustrated on the accompanying map, and the table below presents some of the information collected on bridges by the NH DOT.

Bridges are rated by the NH DOT, using a system based on federal standards for type of construction, widths, surface conditions, ability to handle traffic volumes, etc. Bridges are categorized as either being in good condition, structurally deficient, functionally obsolete and/or red-listed. Structurally deficient bridges no longer meet current highway standards while functionally obsolete bridges do not meet the functional needs of the current highway system. Red listed bridges require more frequent inspections due to known deficiencies, weight restrictions or type of construction.

The federal sufficiency ratings noted in the table are based on the following criteria: width of pavement and shoulders; no-passing restrictions; stopping sight-distance restrictions; substandard curves and grades; surprises (such as abrupt curves, blind intersections); and the general condition of the road itself. In conducting the survey, the roads are inspected by sections. At the end of each section the number of deficiencies is reduced to a number per mile, the proper rating is determined, and the various items totaled to provide the rating for that section.

Using a maximum sufficiency rating of 100 points, the NH DOT has determined that a sufficiency rating of less than 60 points is indicative of a deteriorated bridge with a disproportionate share of deficiencies. A rating of less than 40 points indicates a bridge in very poor or severely deteriorated condition with severe deficiencies. Such a section is in need of immediate repair and/or reconstruction. The ratings should be viewed with caution, however, since they are based on certain criteria even a brand-new bridge in New Hampshire could never meet - for example, a perfectly good wooden bridge would have a low rating because by its very nature it could not meet today's federal design criteria.

That being said, there are five "Red Listed" bridges in Temple; all of which are town-owned. These bridges have the lowest federal sufficiency rating – from 24.7 to 45.7. All of these bridges are posted for a weight limit, and all of them will be improved, as funding becomes available. (For bridge improvements there is federal money available to the town, at a 20% match.)

**TABLE #23:
BRIDGE INVENTORY**

ID#	LOCATION	OWNER	CONDITION ¹	YEAR BUILT	STATUS ²	FSR ³	LAST INSPECTED	TYPE ⁴	YEAR ADT	ADT
094/114	NH101 / Blood Brook	State		1930	A	60.1	Jul-00	CS	1994	7280
095/072	Hadley Highway / Temple Brook	Town		1985	B	85.9	Sep-00	MP	1994	520
099/070	NH 45 / Temple Brook	State		1951,1971	B	55.4	Jun-00	MA	1994	770
099/112	NH 101 / Blood Brook	State		1927	B	65.8	Jul-00	MA	1994	7280
101/144	Converse Road / Brook	Town	FO	1980	B	43.6	Sep-00	CS	1984	20
105/046	Hadley Highway / Gambol Brook	Town		1940 Rebuilt 1997	A	85.9	Sep-00	CS	1994	520
105/113	NH 101 / Blood Brook	State	FO	1931	B	62.7	Aug-99	CTB	1994	7280
107/051	NH 45 /Gambol Brook	State		1968	A	96.9	Jun-00	MP	1994	770
107/117	Powers Road / Blood Brook	Town		1920	P	24.7	Sep-00	IB-C	1984	50
110/141	Converse Road / Brook	Town		1950	B	64.9	Sep-00	MP-A	1984	50
110/143	North Road / Brook	Town	FO	1940	P	45.7	Sep-00	CS	1994	70
114/072	East Road / Temple Brook	Town		1981	B	96.9	Sep-00	MP	1994	160
116/133	Webster Highway /Whiting Brook	Town		1920 Rebuilt 2000	A	93.8	Jun-00	IB-C	1994	200
116/139	Putnam Road / Brook	Town	SD	1930	P	32.3	Sep-00	IB-C	1983	100
117/138	Putnam Road / Brook Overflow	Town		1930	P	29.5	Sep-00	IB-C	1994	100

¹FO= Functionally Obsolete means that the bridge was not designed or built to carry the current traffic loads. SD = Structurally Deficient means that the bridge is in need of repair or replacement for various reasons.

²A = Open, no restrictions. B = Open, posting recommended. P = Posted for load.

³FSR = Federal Sufficiency Rating.

⁴CS = Concrete Slab. MP = Metal Pipe. MA = Masonry Arch. CTB = Concrete "T" Beam. IB-C = I-Beam with concrete deck. MP-A =

Source: NH DOT Bridge Design, 2001 Bridge Summary; NH DOT, Biennial and Interim Inspection of Municipal Owned Bridges, Town of Temple.

Hazardous Locations/Accidents

The road network in Temple is generally safe, meaning that there are no design issues on the town roads that create hazardous conditions or lead to accidents. On Route 101, however, there are a number of issues that contribute to accidents; information on this and other aspects of Route 101 were collected for a Corridor Study, which is discussed in more detail later.

The intersection of Route 101 and Route 45 has a poor safety record, with 11 accidents occurring between 1993 and 1997. In addition, the section of Route 101 between Route 45 and Powers Road contains several “S” curves, and has been the site of 18 accidents – two of them fatal – between 1993 and 1997. The study indicates that accidents on Route 101 tend to be grouped at locations with the following characteristics:

1. Poor sight distance at intersections whereby traffic entering or crossing from side roads can neither see nor be seen by traffic traveling at high speeds on NH 101;
2. Extreme vertical and horizontal curvature of the NH 101 surface causing unsafe conditions at high speeds or under poor weather conditions;
3. Intersections where left turn traffic leaving NH 101 is forced to stand in and negotiate high volumes of high speed traffic; and
4. Road segments with truck climbing lanes where poor judgment and impatience by drivers cause dangerous decisions to attempt to pass slower traffic too near the end of the passing lane or conflict with turning traffic.

In most cases, over-confidence by drivers regarding the safe speed for weather and highway conditions seems to be involved with accidents on NH 101. Unexpected changes in roadway conditions for visitors also may contribute to high accident rates.

■ ROUTE 101 CORRIDOR STUDY

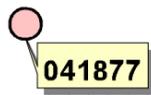
In December of 1999 a report was published entitled “NH 101 Corridor Study”. This study was a cooperative undertaking between the Southwest Region Planning Commission, the Nashua Regional Planning Commission, and the NH Department of Transportation. The purpose of the study was threefold:

- To develop a schedule of local capacity and safety improvements on NH 101.
- To develop recommendations for local land use controls and economic development approaches which are consistent with the protection of highway capacity and public safety (with attention to highway impacts on community life) in the existing NH 101 Corridor.
- To develop a comprehensive strategy shared by state and local decision-makers for the development and use of NH 101 between Keene and Milford – a strategy that addresses NH 101 as a shared public resource.

The study area was the land within 1,000 feet of the centerline of Route 101 between Optical Avenue in Keene and Route 101A in Milford. Workshops were held for local officials in all seven towns for the

Town of Temple, NH

Traffic Counter Locations

 Counter Location and ID
041877

-  Town Boundary
-  Property Lines
-  Perennial Streams
-  Intermittent Stream
-  Waterbodies
-  Wetlands*

* USFWS National Wetlands Inventory & USGS Data

DOT Legislative Class

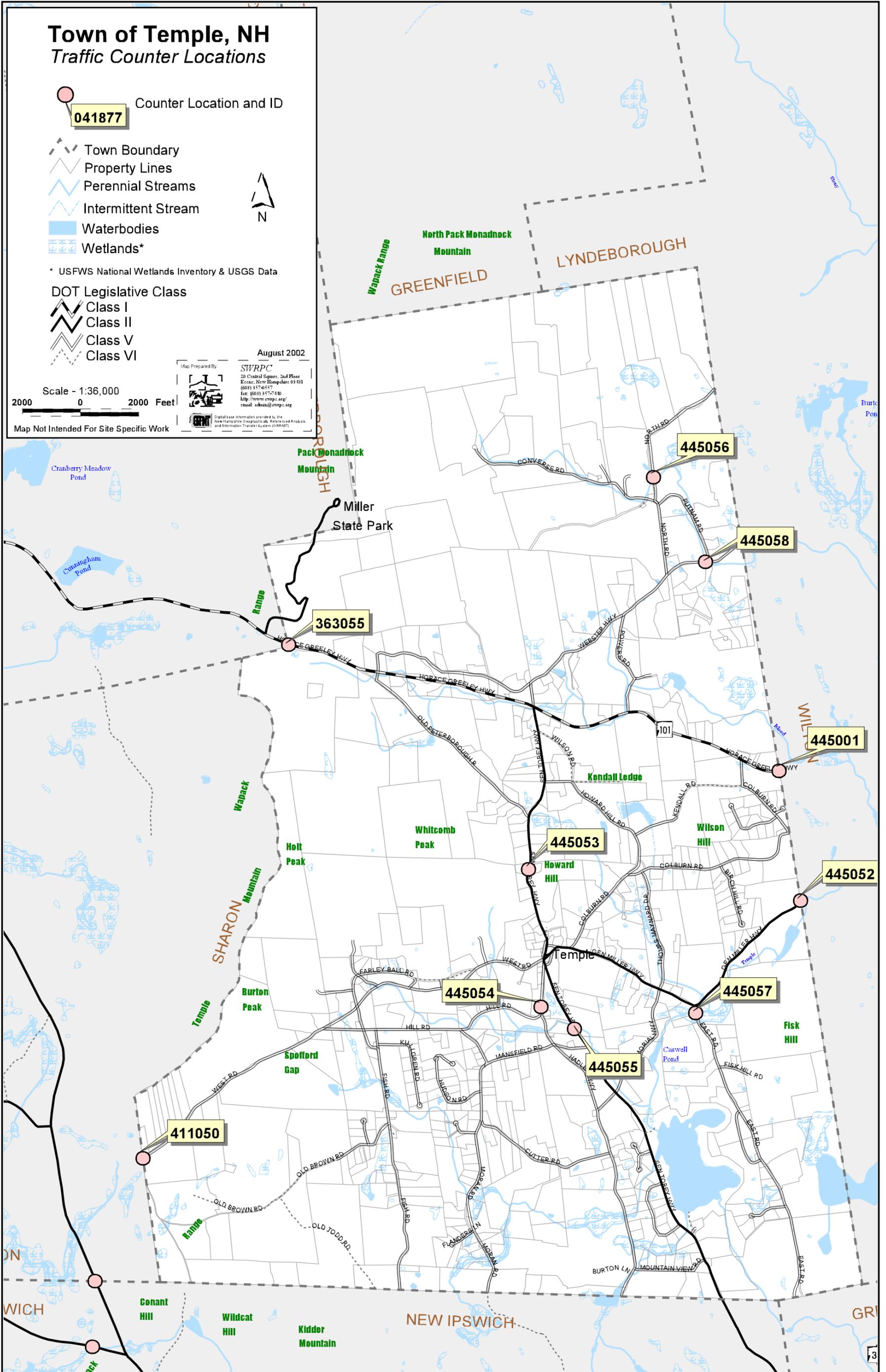
-  Class I
-  Class II
-  Class V
-  Class VI

August 2002

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Scale - 1:36,000
 2000 0 2000 Feet

Map Not Intended For Site Specific Work



purpose of presenting findings and inviting local involvement in identifying problems and developing appropriate responses.

In February of 1999 the Planning Board, at its Workshop, indicated that traffic and land issues regarding Route 101 were not high priorities in Temple, due to the remoteness of the highway from the town center. While the Board believes that topography will limit development along 101 in Temple, there is support for using local access management techniques to preserve highway capacity and improve safety.

A great deal of data were collected for the study, including: traffic counts, travel speed, capacity of intersections, origin and destination surveys, capacity analysis of the road, accident records, existing land use, and demographics and economics. In a review of the draft report in November of 1999, the Planning Board supported the findings of the Corridor Study and a recommendation to eliminate the “S” curves. Further, the Board indicated that, while development pressures have not been strong in Temple as of yet, considering the recent development in Wilton, Milford, New Ipswich and Bedford, pressures could increase in Temple.

The Board acknowledged the tremendous potential for residential and commercial development adjacent to 101 in Temple, and identified a need to develop a defensible access management plan before development pressures arise. The Board is interested in exploring access management standards; for example, limiting curb cuts along Route 101 by sharing driveways or, as feasible, encouraging alternative access to 101 from existing local roads rather than from direct access driveways.

Study Recommendations

1. Reconstruct/realign a segment of Route 101 from Route 45 eastward about one mile to eliminate the “S” curves.
2. Discuss concepts for improving parking and local traffic circulation, including pedestrian and bicycle traffic.

■ HIGHWAY AND ROAD IMPROVEMENT PROGRAM

Local Improvements

- ◆ The only projects other than routine maintenance and repair planned by the Highway Department are the bridges, and this work will be scheduled as funding becomes available. The Road Agent is monitoring development on roads that are not paved, so that when it becomes necessary or feasible, these roads can be scheduled for improvements.

State Improvements

At this time there are two projects on the DOT 10-Year Highway Plan; they are:

- ◆ The straightening of the “S” curves on Route 101, as described in the Route 101 Corridor Study. This project has been recommended for funding by both the Southwest Region Planning Commission and the NH DOT. The project is programmed in the State of New Hampshire's 2003-2012 Ten Year Transportation Improvement Program.
- ◆ Relocate the driveway to Pack Monadnock to the top of the hill, provide turning lanes, and extend the truck lane eastward. This will greatly improve the safety of the driveway.

HISTORICAL RESOURCES

■ INTRODUCTION

This section of the Master Plan is intended to address the “*preservation, conservation, and use of natural and [hu]man-made resources.*” as provided by RSA 674: 2. The essential purpose developing this section of the Master Plan is twofold: (1) to enable the Planning Board to make better-informed decisions as to the development potential or lack thereof of certain land areas; and (2) to supply the Board and the Town with information and knowledge about important historic features that may need special protection. Decisions made on the basis of this information can then be implemented through a variety of techniques such as amendments to the Zoning Ordinance, or design/development standards written into the Site Plan Review Regulations to address specific concerns.

This section identifies and describes known information on a variety of historical resources in town considered special by the residents of Temple. The features identified and described herein are also illustrated on the *Zoning Map/Community Facilities* map following page 15.

A Brief History

Temple is one of the oldest and prettiest villages in Hillsborough County, a town of rustic charm, among hills and woods.

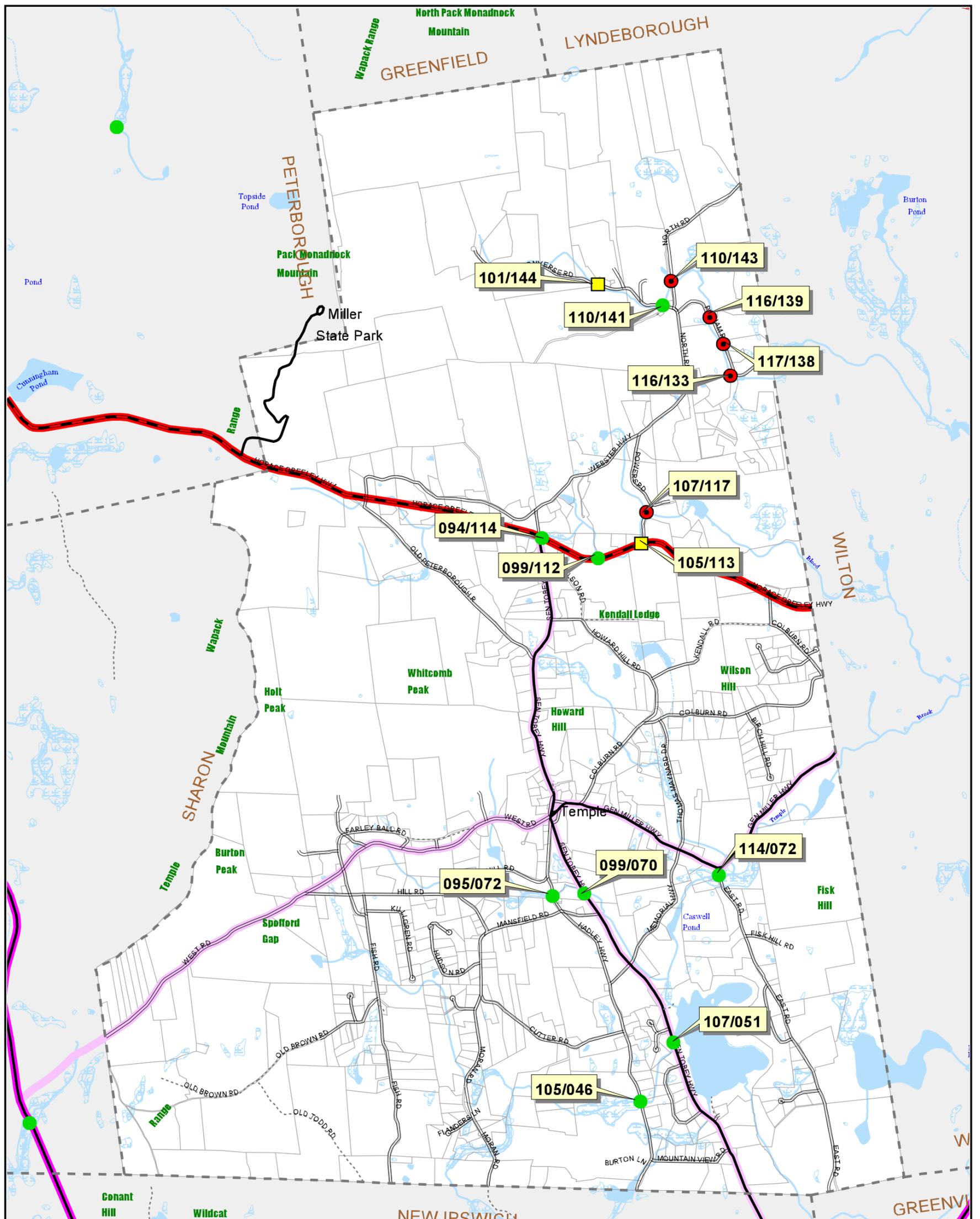
—A History of Temple, New Hampshire, 1768-1976

Temple owes much of its charm to its agricultural roots. At one time almost all of Temple’s land area was devoted to farming. Summer pastures were located on the slopes of Temple Mountain and the other hills. Agriculture and farming reached a peak towards the middle of the 19th century and then started a gradual and steady decline to the present as much of the population moved west beyond New England to new lands that opened up after the Civil War.

The area of Temple was originally the eastern part of Peterboro Slip or “Sliptown” surveyed in October 1750 and bounded by Wilton, Peterborough, Lyndeborough, New Ipswich, Mason, and Jaffrey. The Peterboro Slip was divided along the Temple Mountain range and formed 2 separate townships: Sharon to the west and Temple to the East. Temple became incorporated in 1768 and included an unincorporated strip (1,600 acres) belonging to Wilton. The name was chosen to honor Sir John Temple, a native Bostonian. Additional annexations of land were made from 1781 to 1796.

Temple was founded on an agricultural economy with multiple generations assuming farms and businesses and living on original homesteads. In the early 1800s, when the region turned to development of industry and subsistence agriculture gave way to a cash economy, Temple remained agricultural and isolated.

Unlike many surrounding communities, Temple did not participate in the industrial and commercial development that replaced farming. Much of the land that was devoted to farming reverted to forest, although some was converted to housing. A small amount of agricultural activity continues today. This is mostly made up of small enterprises of dairy, livestock, hay, poultry, vegetables and orchards. Although these small farms are extremely important for the preservation of Temple’s cultural resources, this chapter is concerned primarily with raising awareness of the importance of identifying and protecting the historical remnants of Temple’s agricultural past.



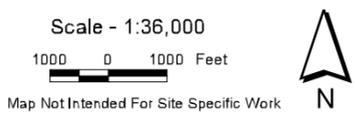
Town of Temple, NH

Transportation Infrastructure Functional Classification

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- NHDOT Functional Classifications**
- PRINCIPAL ARTERIAL (RURAL)
 - MAJOR COLLECTOR (RURAL)
 - MINOR COLLECTOR (RURAL)
- NHDOT Legislative Class**
- Class I
 - Class II
 - Class V
 - Class VI
- Town Boundary
- Property Lines
- * USFWS National Wetlands Inventory & USGS Data

- Abandoned Railroad
 - Active Railroad
 - Inactive Railroad
 - Rail Trail
 - Perennial Streams
 - Intermittent Streams
 - Waterbodies
 - Wetlands*
- Bridge Condition**
- Bridge ID
 - Good
 - Red Listed
 - Functionally Obsolete or Structurally Deficient

■ SIGNIFICANT HISTORIC FEATURES

Historic Village District

Public Buildings:

Town Hall built in 1842.

Church built in 1841–1842; Goodyear Chapel built in 1887. Friendship Hall was built in 1951/52 with an addition in 1998.

Willard's Store and Post Office (formerly a stable) built in 1805, rebuilt after a fire in 1882.

Mansfield Public Library built in 1890, with an addition in 1951 and 2002.

Town Common:

The “original” common was 2 ½ acres in size and was purchased as a meeting house site in 1768. Two meeting houses occupied the site; the first was present until about 1782; the second was razed in 1850. During this time the common area was used as a training ground or muster field for local militia.

The triangle of land now considered the Temple Common was depicted for the first time in the Hillsborough County map of Temple, 1858. The first monument was erected in 1872 and other improvements were made. The Common was officially dedicated on July 4, 1873. Kerosene streetlights were present by 1903. Flagpole in front of the Town Hall was set in a millstone base from Joseph Putnam in 1770 and dedicated to the town by the Barry family in 1895.

The Temple common was reestablished in 1910 to comprise the smaller currently fenced triangular area. Electrical lines were purposely excluded from the area in 1927. Historical uses included weighing hay (weigh station still visible), providing water for animals, and housing the volunteer fire department 1948-1949. The building of the fire department was moved to its present site on Rt. 45. Today, the Common is used for a variety of cultural events and is maintained by the Village Green Committee, and the Highway Department.

Monuments:

Soldier's Monument on Common dedicated on July 4, 1872, to honor Temple's Veterans, 2 cannons and 2 stacks of cannon balls placed in June 1889 on west side of central monument. The balls were cemented in 1962.

Large monument on south end commemorates Revolutionary War soldiers and monument at north end honors 7 soldiers of the War of 1812. Both dedicated in 1901.

Large boulder with bronze plaque to honor WWI veterans and Spanish-American War veterans.

Temple Veteran's Memorial dedicated in 2001 stands in front of the Town Hall to honor veterans from WWI to the present (and future).

National Historic Sites

New England Glass Works established in Temple by Robert Hewes of Boston in 1780-1782 as one of the first glass manufactory sites in the U.S. Site partially excavated in 1970s by Boston University. Temple glass is highly valued today due to its rarity.

National Register of Historic Places

The Birchwood Inn built in 1775 contains murals by Rufus Porter.

Historic Homes

Built in 1700s*:

Ball-Pratt house on Stone Lane
 Barnes-LaPree house on Hill Road
 Cobb-Sylvian house on Rte 45
 Colburn-Weston house on Colburn Road
 Cummings-Lee house on East Road
 Cutter-Hollister house on Vinton Lane
 Cutter-McAdoo house on Cutter Road
 Dinsmore-Sargent house on Fish Road
 Drury-Mirabella house on West Road
 Edwards-Lukas Foundation house on Memorial Drive
 Emery-Phillips house on Moran Road
 Felt-Byram house on Route 45
 Felt-Tobey-Scott house on East Road
 Fiske-Lukas Foundation house (Maynard house/Echo Farm) on Memorial Drive
 Foster-Karl house on Foster Road
 Foster-Fiske house on General Miller Hwy.
 Gardner-Carpenter house on Hadley Hwy.
 General Miller House (Marshall/Edwards-Miller- Friede/Beaudoin) on General Miller Hwy;
 functioned as store and potashery (pearl ashery).
 Goodale-Blood/Caney house on Blood Road
 Griffin-Lewis house on Old Revolutionary Road
 Heald-Bay house on Webster Hwy (constructed from cider mill)
 Heald-Copertino house on Webster Hwy
 Heald-Fox house on Old Revolutionary Road; built from oldest framed building in Temple; timbers
 moved from original location west along road to present location.
 Heald-Hawkins house on Old Revolutionary Road
 Heald-Whiting house on Old Revolutionary Road; functioned as store, inn, and tavern.
 Holt-Moore house on Colburn Road
 Howard-Davis house on Kendall Road
 Jewett-Munk house on Kendall Road
 Johnson-Whitcomb house on Colburn Road
 Killam-Kantner house on Derbyshire Lane
 Killam-Kantner house on Converse Road
 Lowell-Treadwell house on Old Revolutionary Road
 Mansur, Sr.-Bradler and Mansur, Sr.-Bradler houses on East Road
 Marshall-Mazza house Thomas Maynard Drive
 Miles-Guy house/Noah Miles parsonage on Leighton Lane
 Parlin-Pierce house on Mansfield Road
 Perkins-Wegmueller house on Tainter Lane
 Putnam-Barry house on Putnam Road
 Putnam-McDaniel house on Webster Hwy.
 Searle-Monzies house on Mansfield Road
 Severance-Quinn on Cutter Road

Shattuck-Henderson house on Rte 45
Spafford (Spofford)-King house on Webster Hwy.
Spofford-Klinck house on West Road
Stickney-Bigelow/Mansfield house on East Road
Tenney-Wolbers house on Hill Road
Tenney-Ulch house on General Miller Hwy.
Wheeler-Banks house on Main St.

Built in 1800s*:

Barry House on Putnam Road. Functioned as a potashery, store, inn
Child/Heald-Odell house on Old Peterborough Road
Clement-Burnham house on West Road
Drury-Doyle house on Rte 45
Fiske house on General Miller Hwy.
Hadley-Willard on Hadley Hwy
Hawkins-Clements house on Hadley Hwy.
Hawkins-Forrest house on Hadley Hwy.
Howard-Davis house on Kendall Road.
Killam-Head/Miller Head house on Rte 45
Laws-Wright/Culliton house on Hadley Hwy.
Lucy Heald House/Congregational Parsonage and barn on Rte 45
Parkhurst-Sartell house on East Road
Searle-LeBel house on General Miller Hwy.
Searle-Pickman/Downs house on Colburn Road
Shaw-Schubert house (Blacksmith Shop)
Sheldon-Ricci/Lycyniak house on Hadley Hwy.
Spofford-Felt house on Rte. 45; contains building materials from Felt-Tobey-Scott house
Spofford-Areias house on West Road

* Dates are approximate due to uncertainty of original date of construction and alteration and/or modification of original structures.

Historic Schoolhouses

District No. 1 schoolhouse built in 1805 on Hadley Hwy (Davidson-Benotti).
District No. 2 schoolhouse built in 1805 on Fish Road (Sanford-Barnhisel/Bauchat house). An earlier structure was built across the road in the 1700s.
District No. 3 schoolhouse built on East Road in 1799 by Ebenezer Edwards and moved across the road in 1919 to its present site (Leighton-Marchuk house). An earlier structure was built in 1782.
District No. 4 schoolhouse built in 1855 moved to Hwy. 101 as a dwelling (Messing house) in 1931, near Temple Cabins. An earlier structure built in 1806 was moved from Howard Hill Road to Colburn Road before 1855 (part of the Colburn-Chemello house).
District No. 5 schoolhouse built in 1900 on Webster Hwy near Heald-Cupertino residence, moved in the 1930s, and remodeled into Wildes residence on Hill Road.
District No. 6 schoolhouse built around 1820 on Converse Road and moved across road in 1800s. Building was moved to the Village Center in 2001.
Central Schoolhouse built in 1918 on Hadley Hwy (Moses house).

Cemeteries

Village Cemetery/Old Burying Ground with gate dedicated to "The Wives and Mothers of 1776." Many of the first settlers were buried here from 1772 until 1891. Located in the Historic Village District across from the Town Common.

North Cemetery with burials from 1794 to 1822 located on Converse Road.

East Cemetery with earliest burial in 1800. Town tomb is visible at SW corner. Located on Gen. Miller Road.

Miller Cemetery across from East Cemetery obtained in 1898.

Archaeological Districts

Earliest settlement in Spofford Gap area of the Wapack Range (to become Temple and Sharon) on Old Todd Road (the Ashburnham-Peterborough Trail) with numerous cellar holes and mill sites. First deed issued to Joshua Todd in 1758 (first cider-maker in town). School was first kept at the Walton place, now a cellar hole. Area includes Maynard Inn cellar hole and Glassworks site dating to 1780s.

Historic Roads

Old Todd Road was the first road cut through Temple from Groton through Townsend, MA, to New Ipswich and Sliptown (Temple/Sharon) to Peterborough. Originally the Ashburnham-Peterborough Trail). Currently called Old Street Road in Peterborough. Predates the survey of the area Peterboro Slip in 1750 and dates 1738-1739. No longer appears on maps of 1858 and 1892 and so assumed to be abandoned by the early 1800s.

Old Revolutionary Road was cut in 1760 by English Royal Militia headed by Ephraim Heald. Road becomes Bennington Battle Trail in Wilton. Used as a military highway to convey munitions and troops.

Historic Stone Structures

Stone arch bridge on old 101 Hwy across Blood Brook.

Stone arch bridge on Memorial Drive off Rte. 45.

Cut-stone culvert/bridge/canal on Old Peterborough Road.

Cut-stone culvert on Webster Hwy/Revolutionary Road.

Cut-stone canal on Hadley Hwy across Kids/Temple Brook from the Balch, Bacon, and Walton grist, saw, and cider mill site.

Historic Mill Sites (as of 1975)

Souhegan River Tributaries

Whiting Brook:

Whiting mill

Butterfield grist and saw mill

Joseph Putnam grist mill

Jacob Putnam cider and woodworking mill

Farrar grist mill

Elias Boynton grain and saw mill

Blood Brook:

Killam woodworking mill

Boynton mill

Saunders mill
Barnes Brook:
Ball grist and cider mill
Balch, Bacon, and Walton grist, saw, and cider mill
Barnes mill
Gulf Brook:
Snow-Dutton grist mill
Contoocook River Tributaries
Bacon grist mill
Williams's mill
Non-Water sites
Searle first combination grist and saw mill
Colburn cider mill
Cragin woodworking mill
Howard mill

Historic Recreation Areas

Public:

Kendall Ledges for education and picnicking
Pack Monadnock, Miller State Park, picnicking

Private:

Lythia Spring operated from 1891 to 1911 as a picnic grove and place to purchase lithia water. Business was abandoned when it was discovered that lithium was artificially added.

Other Historic Structures

Animal Pound on Colburn Road built in 1815. Original structure on General Miller Hwy built in 1774 has some sections still visible.
Dated marker on Fisk(e) Hill.

Selected References

Blood, Henry Ames. 1860. The History of Temple, NH. Publisher, Boston, MA.
Historical Society of Temple. 1976. A History of Temple, New Hampshire, 1768–1976. Wm. L. Bauhan, Dublin, NH.
Tuttle, Frank. A. 1942. Temple: The Roads, Buildings, and House Sites of a Historic Town in NH. The Cabinet Press, Milford, NH.

NATURAL RESOURCES

■ INTRODUCTION

This section of the Master Plan is intended to address the “*preservation, conservation, and use of natural and [hu]man-made resources.*” as provided by RSA 674:2. The essential purpose developing this section of the Master Plan is twofold: (1) to enable the Planning Board to make better-informed decisions as to the development potential (or lack thereof) of certain land areas; and (2) to supply the Board and the town with information and knowledge about sensitive lands and important natural and/or human-made features that may need special protection. Decisions made on the basis of this information can then be implemented through a variety of techniques, which will be discussed in more detail later, but include such things as amendments to the Zoning Ordinance, or design/development standards written into the Site Plan Review Regulations to address specific concerns.

A corollary benefit of collecting and analyzing these features is that the public becomes educated about just what is significant, sensitive, and valuable to the town as a whole, and to individual residents. This level of knowledge enables people to think about the appropriateness (or inappropriateness) of using certain lands for certain uses. For example, in the not too-distant past, conventional wisdom held that wetlands were “junk” lands and should be filled in, since they couldn’t be used for anything worthwhile. Today, we know that wetlands are widely recognized as providing a variety of benefits and functions to people and the natural environment.

This section identifies and describes known information on a variety of natural resources in town (wetlands, aquifers, soils, steep slopes). Many of the features identified and described herein are also illustrated on maps that are included in this report.

■ SURFACE WATER

The Town of Temple is a hill town and as such is the beginning or the source of streams. The ridge of the Wapack Range, which is the town boundary for much of the western side of town, is also a watershed or drainage divide. Many streams have their origins just to the east of this high elevation ridge, and flow in a generally eastward direction to the lower elevations on the east side of town. As these streams eventually empty into the Souhegan River, most of Temple is in the Souhegan River Watershed. A small portion of Temple is part of the Contoocook River Watershed as an area in the southwest corner of town drains to the west into the Gridley River in the town of Sharon, which in turn empties into the Contoocook River. Also, a small area in the northeast part of Temple, in Miller State Park drains to the west into the Contoocook River.

Many of the streams in Temple are small, unnamed, and intermittent. Intermittent streams do not have water flow all year. They generally have water flow in the spring and wet periods of high rainfall, but dry up in late summer or early fall. There are several perennial streams in Temple. These are the major streams in town that have water flow all year.

There are 3 flood control structures in Temple. A fourth structure is just on the townline in Wilton, but about half of the water impounded behind the dam is in Temple. These structures are earthen dams built by the U.S. Department of Agriculture to store water behind the dams during major storm events to prevent flooding downstream. These 3 structures in Temple, plus several others in nearby towns are part of a flood control project in the Souhegan Watershed to prevent flooding in downstream areas.

Maintenance and authority of the flood control sites is handled by the State of New Hampshire. The largest site with the most water impounded behind the dam is on the east side of Rt. 45 in the southern part of town. This site is also a water supply for the Town of Greenville.

There are many small ponds in the Town of Temple. Some of the ponds are natural, or have been created by beavers. Many of the ponds are human-made. The reasons for constructing the ponds are varied; some are old farm ponds built for the purpose of providing water for farm animals; others are for wildlife or recreation. Some human-made ponds are fire ponds for fire protection, and some are multipurpose ponds. Most of the ponds are in low depressional areas or along streams and are part of a wetland system.

The Town of Temple is fortunate that almost all of the surface water in town originates in town. Very little water flows into Temple from adjoining towns. This means that the people of Temple have control over the quality of the water in town. If this valuable resource becomes polluted or contaminated, it is the responsibility of the people of Temple.

■ WETLANDS

The New Hampshire Wetlands Board defines wetland as “. . . an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support a prevalence of vegetation typically adapted for life in saturated conditions.” “Wetlands” is the collective term for land that serves as a transition zone between surface water and upland sites. Wetlands can be bogs and peatlands, fresh marshes, salt marshes, wooded swamps and riparian areas. The Method for the Comparative Evaluation of Nontidal Wetlands in New Hampshire has been developed for the purpose of evaluating wetlands. This method lists fourteen functional values associated with wetlands; these include wildlife habitat, flood control, groundwater use, nutrient retention, educational potential, water-based recreation and historic value.

There are several methodologies a town can use to define wetlands; most towns, however, use the US Department of Agriculture, Natural Resource Conservation Service (formerly Soil Conservation Service) definition, which categorizes soils as being either very poorly drained or poorly drained. The locations of such wetlands in Temple are identified on a map entitled *Town of Temple, NH Aquifers, Wetlands, & Hydric Soils*. Hydric “A” soils are those that are very poorly drained, and Hydric “B” soils are poorly drained.

In Temple, wetlands constitute about 988 acres, out of the total land area of 14,241⁸ acres, representing a mere 6.9% of the land area. These wetlands, identified as Hydric Soils on the accompanying map, are scattered all around town, with the exception of the western edge of the Wapack Range along the boundary with Sharon and Peterborough.

■ WATERSHEDS

A watershed is the land area made up of a series of connecting higher ridges that drain surface water to the lowest point, which is where a stream or river flows out of the watershed. The network formed by rivers, streams, lakes, and ponds is known as the drainage system of the watershed.

⁸ From the Office of State Planning as determined from USGS digitized data. This number has no legal bearing or significance, and is used for general planning purposes only.

The surface water of the rivers, streams, lakes, brooks and ponds are subject to pollution caused either by hazardous materials located in close proximity to the water or pollutants discharged directly into the water. Surface run-off is therefore considered to be a non-point pollution source because the pollutant travels over the land to the water source, for example uncovered salt piles. A point pollution source discharges directly into the water, for example a malfunctioning sewage treatment plant.

Surface water resources can function as holding areas for floodwaters and seasonal high waters. In addition, they serve as recharge areas and discharge points for groundwater sources, which are areas where surface and groundwater are hydrologically connected. Groundwater discharge replenishes surface water resources, such as water wells.

The Town of Temple falls almost entirely within the Souhegan River Watershed, which is a part of the Merrimack River Basin; there are three small areas on the western town boundary that fall within the Upper Contoocook River Watershed. The Souhegan River Watershed is comprised of approximately 282,900 acres in the towns of Temple, Lyndeborough, Wilton, Milford, Greenville, and New Ipswich.

The natural flow of water in the northern part of town is from the west to the east, with the water eventually draining to the Souhegan River. South of Route 101, the water drains from the west and south into the Reservoir, and from the Reservoir, the water drains south and north, all of which eventually drains into the Souhegan River.

■ AQUIFERS

Aquifers are concentrations of groundwater, occurring in saturated soils and geological formations. They are found where saturated layers are permeable and the storage and transmission of water can take place. Aquifers are resupplied through precipitation, surface water, wetlands, lakes and streams. The water infiltrates the ground through an aerated zone where impurities are filtered out. The water then moves to a saturated zone (aquifer) where the pore spaces between soil particles are filled by the water. It is very important that the surface of the earth be able to transmit water so that a certain percentage can be stored underground. Excessive compaction or extensive covering of the land surface reduces the volume of groundwater which, as stated earlier, affects the supply of water to wells.

The US Geological Survey has recently completed aquifer delineation maps for the entire state. The Temple Aquifer Map, found on the preceding page, was prepared from data from the USGS study. The map is essentially a surficial geology map, showing the distribution of unconsolidated (not bedrock) geologic material on the land surface. There do exist bedrock aquifers, but these were not part of this particular study. Unlike the previous aquifer study by USGS, which identified aquifers having high, medium or low potential yields, this study identifies areas of sand and gravel and measures the rate of transmissivity - that is, the speed with which water passes through the materials, in increments of 1,000 feet squared per day.

The preceding map illustrates aquifer boundaries for Temple and its surrounding area. This map is a result of a statewide aquifer-mapping project by the NH Department of Environmental Services in cooperation with the US Geological Survey, begun in 1985. The goal of the project was to update the reconnaissance level mapping that was completed in the mid-1970s. The new maps identify significant stratified-drift aquifers in terms of their location and aerial extent, as well as their hydraulic properties and internal characteristics. The methodology employed to develop these maps included drilling observation wells at selected sites around the state. These maps show only the boundaries of the aquifer areas; there is more detailed information available on ground water flow, depth of deposits, volume of sediment, etc.

The map shows four discrete areas in town with significant deposits of stratified drift aquifers, and they are all located around the major brooks in town: Whiting Brook, adjacent to Converse Road; Blood Brook, adjacent to Route 101; Temple Brook, which originates by West Road, crosses Hadley Highway and Route 45, then shifts north toward Wilton by the General Miller Highway; and the largest of the aquifer deposits along Gambol Brook is in the southern part of town west of the Reservoir over to Fish Road.

■ LAND

The town lies on glacier-carved ground and has a great variety of topographical features, with high ranges and broad valleys. The highest peak in Temple is Pack Monadnock, with an elevation of 2,280 feet above sea level. It is the highest point in Hillsborough County. The Wapack Range, of which Temple Mountain and Pack Monadnock are a part, continues up from the mountains of Massachusetts. On the western boundary of the town is Temple Mountain, which has several peaks that vary in height from 1,907 feet to 2,081 feet. Other hills in town include Whitcomb Peak, Howard Hill, Quinn Hill, Wilson Hill, Oak Hill, and Fisk Hill. Kendall Ledge is an outcropping of white and rare rose quartz 200 feet long and 100 feet wide that was donated to the town by Abbie Kendall Fish.

■ SOILS

The soils in the Town of Temple are a result of the forces of nature working on the land over a period of time. In Temple, as in the surrounding towns, this has resulted over a time span of roughly 12,000 years, or since the retreat of the ice sheet of the last glaciation. The soil material left behind by the ice, or the melt waters coming off of the retreating ice, is generally a mix of sand, silts, clays, and rock fragments such as gravel, cobbles, stones, and boulders. Over time the soil forming factors have been changing the soil to give them their present day look or their soil properties. Changes in temperature, freezing and thawing, leaching downward of minerals, additions of organic matter from decaying plants, activity of soil microbes, the presence of oxygen in well-drained sites, or the absence of oxygen in saturated soils have all contributed to make the wide variety of soil types that occur in Temple.

By far the most common kind of soil in Temple is glacial till. This is the soil material directly deposited by the ice during or at the end of the last glaciation. In the western part of Temple, at the higher elevations along the Wapack Mountain Range, the glacial till soils are generally a thin deposit of soil over the underlying bedrock. Soil types by the names of Lyman and Tunbridge are dominant in this part of town. Lyman is a well-drained, loamy textured, shallow to bedrock soil; and Tunbridge is a well-drained loamy textured, moderately deep to bedrock soil. These two soils and bedrock exposures that occur on moderately steep to steep land in the western part of Temple, present considerable limitations to many uses.

Marlow and Peru soils are two other types of glacial soils that are common in Temple. Marlow is a well-drained, loamy textured, very deep soil; and Peru is a moderately well-drained, loamy textured, very deep soil. These two soils have a dense and compacted substratum, often referred to as hardpan. The hardpan is considered as a restrictive layer with slow permeability. They occur in many areas of central and eastern Temple on the smooth side slopes and rounded hilltops. It is on these two soils types that much of the land in town was cleared of trees and stone cover for agriculture use. Agriculture has declined in town and many of the cleared areas have gone back to woodland.

Monadnock soils are well-drained, very deep soils formed in glacial till. This commonly occurring soil in Temple has a loamy textured surface and subsoil with a sandy textured substratum with moderately rapid to rapid permeability. Monadnock soils, located in the central and eastern parts of town on side slopes, hilltops, and plains, generally have an uneven (bumpy) topography.

The other kinds of soils that occur in Temple are quite numerous, but are small in area and scattered about town. There are small areas of glacial outwash soils. Outwash soils are formed in water deposited soil materials coming from the melt waters from the retreating glaciers. These sand or sand and gravel deposits are generally at lower elevations, and are usually near the major streams in Temple. The few sand or gravel pits in town are located in these soils because they are a good source of construction material. Colton and Adams are two of the soil types formed in these outwash materials. Also in town are a few small areas of alluvial soils. These are the floodplain soils that occur on flat areas adjacent to a few of the major streams. Podunk and Rumney are two soil types formed in alluvium.

Wetland soils are scattered around Temple. They are in depressions and along drainage ways. There are no large wetland areas in Temple, but the many small wetland areas in town are an important part of the landscape. These wetland areas provide important functions for water storage, water quality, wildlife habitat, and plant diversity. Wetland soils are referred to as hydric soils, and are the poorly and very poorly drained soils. Wetland soils generally have a dark surface layer underlain by gray colored subsoil, or in some areas on the wetter end of the spectrum, the soils are formed in organic deposits.

The soils in the Town of Temple have been identified, classified and mapped. The U.S. Department of Agriculture, Natural Resources Conservation Service has published a soils report for the western part of Hillsborough County that includes the Town of Temple. The publication is dated October 1985, and is the source for this narrative.

Other soil information is depicted on the *Development Constraints Map* (found following page 90), which maps the locations of various soil characteristics in order to understand better where certain kinds of development may not be feasible. This map includes Shallow to Bedrock (less than 40 inches) and Shallow to Water Table (less than one and a half feet) data.

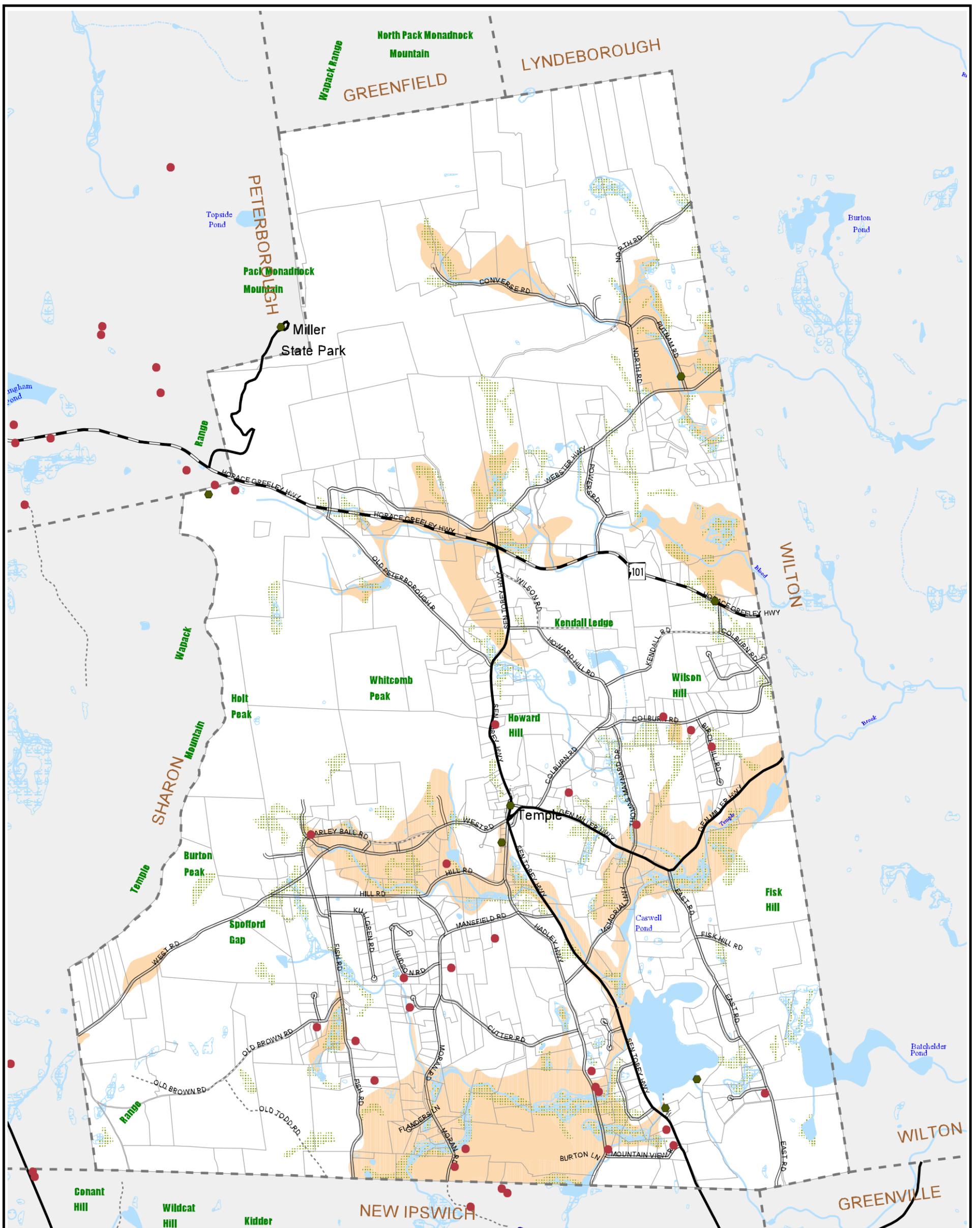
There are a few areas of highly permeable soils scattered about town, but the only significant pocket is located east of the Village, straddling the General Miller Highway. Shallow to bedrock soils are scattered all over town, but are found predominantly along the western boundary.

■ SLOPES

The aforementioned *Development Constraints Map* also illustrates the location of slopes between 15% and 25% gradient as well as between 15% and 50% gradient. These steep slopes are predominant along the western boundary (Temple Mountain) and in the northern part of town (Pack Monadnock and North Pack Monadnock).

■ FORESTS

The Town of Temple is primarily a forest-covered scenic area of the Monadnock Region of New Hampshire. Major forest hardwood types include red oak, beech, maple, ash and birch. Softwood types in abundance are white pine, red pine, hemlock and spruce. Occasionally hardwood species such as



Town of Temple, NH

Aquifers, Hydric Soils, & Wetlands

- Stratified-Drift Aquifer
- Hydric Soil
- Waterbodies
- Wetlands*
- Watercourses
- Municipal Boundaries
- Property Lines

- Private Wells Since 1984
- Public Water Supply
- Wellhead Protection Area

- DOT Road Classes
- Class I
 - Class II
 - Class V
 - Class VI

* USFWS National Wetlands Inventory & USGS Data

Map Prepared By **SWRPC** January 2003
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Digital base information provided by the New Hampshire Geographical Referenced Analysis and Information Transfer System (GRANT)

Y:\projects\temple\master plan\aquifers, hydricsoils, wetlands.apr

Scale = 1:36,000

0.5 0 0.5 Miles

Map Not Intended For Site Specific Work

Map Prepared By:



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Digital base information provided by the
 New Hampshire Geographically Referenced Analysis
 and Information Transfer System (GRANIT)

Y:\Projects\Bennington\Regional Aquifers.apr August 2002

Southwest Region, NH
 Stratified Drift Aquifers with
 Watersheds/Basins

-  Stratified-Drift Aquifer
-  Waterbodies
-  Wetlands*
-  Watercourses
-  Primary Basins
-  River Watersheds
-  Municipal Boundaries
-  Southwest Region

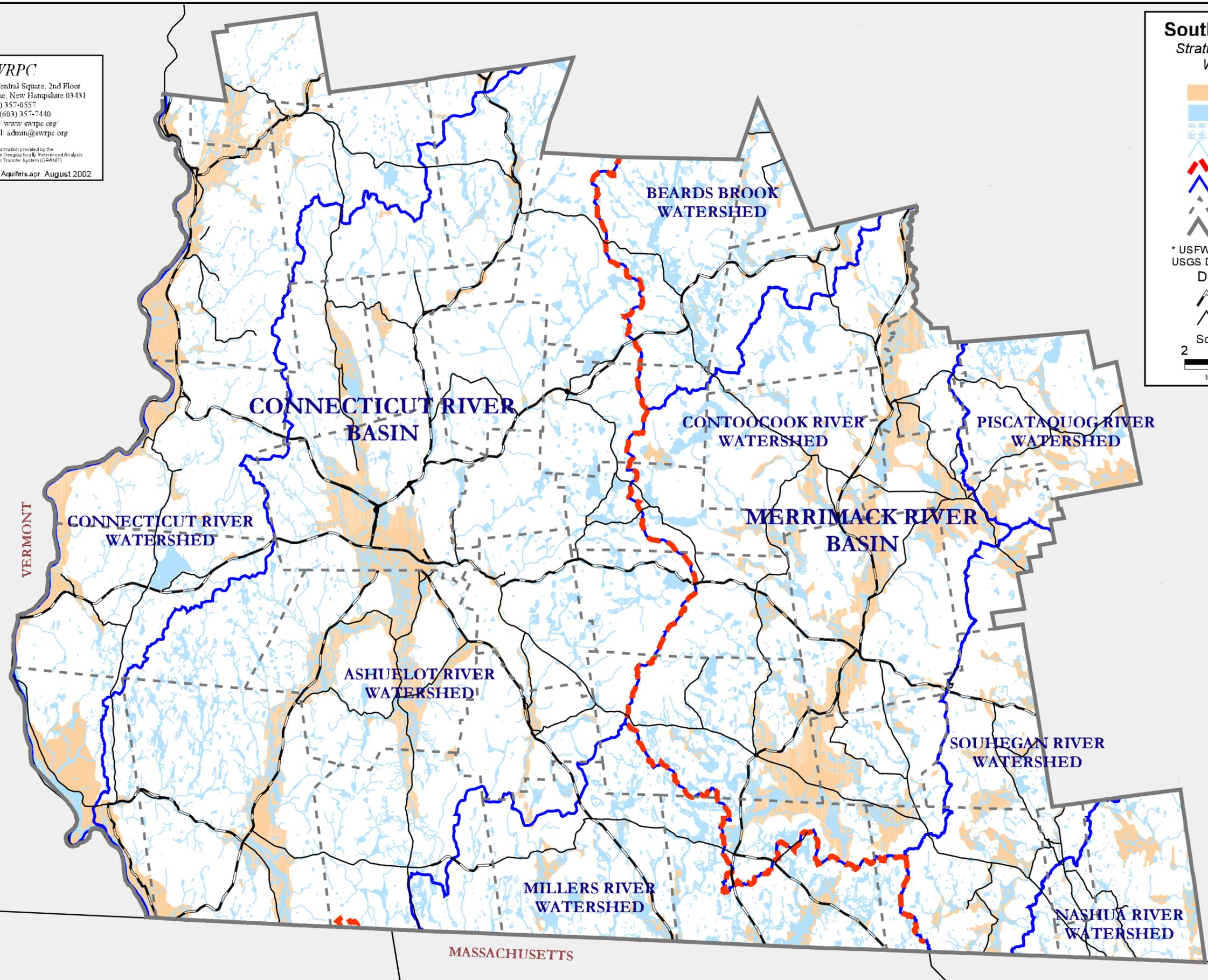
* USFWS National Wetlands Inventory &
 USGS Data

DOT Road Classes

-  Class I
-  Class II

Scale 1:225,000
 2 0 2 Miles 

Map Not Intended For Site Specific Work



poplar, hornbeam, gum, black cherry, locust, butternut, chestnut, elm and hickory are found. A scattering of tamarack, cedar, balsam fir and yellow pine can also be found in some areas.

Temple has exceptional quality of red oak timber that is the basis of many quality hardwood products. Softwood timber can vary in quality as elevation changes and wind becomes a factor in the integrity of the trees. The northern region of Temple has varied hardwoods that give way to spruce cover at the height of the mountains, with only short, scrubby trees surviving the wild weather. In the protected valleys, some white pines up to one hundred feet high can be found. Hardwood types tend to naturally re-grow in cleared areas of town. As a rule, Temple's annual rains produce good tree growth of ¼ to ¾ inches in diameter per year.

Temple forests provide an abundant supply of acorns, beechnuts, softwood cones, and various berries that area wildlife relies upon. Several wetlands and swamps in town have great low bush and high bush blueberry species, as well as mountain ridge bushes. Many forest floors in town are thickly covered with mountain laurel, some having three to four-inch diameter trunks. Other areas are rock and ledge covered, and still others have soft pine needle covered floors.

Around the turn of the twentieth century, Temple enjoyed great views of the mountains, and much of the land was in agriculture, with grassy fields feeding the many cows and sheep. As farming profits dwindled, fields became forests again. Most of Temple's forests are quite young – only about seventy-five to one hundred years old. Some property boundary trees and others scattered around Temple have been deemed to be much older; one red oak measures 15.5 feet in circumference and is probably around two hundred years old.

Several small sugar-bush operations exist in town, adding to the New Hampshire traditional maple syrup resource. The forest-covered mountains in Temple make the town unique. Just a short ride around town would provide you with views that are very similar to the White Mountains areas in the northern part of the state of New Hampshire.

Temple has a town forest that covers 46 acres and is located on North Road. Around 1980, the Conservation Commission sponsored a logging of this forest, choosing a selective-cut type of operation. One fact of interest about the town forest is that large anthills can be found there.

Temple's forests have a good economic value for area residents to enjoy. Over the past six years timber yield taxes have been as follows:

1996	\$10,157
1997	\$9,886
1998	\$25,198
1999	\$11,291
2000	\$8,571
2001	\$25,330

Temple's forests were celebrated at its annual Harvest Festival in 2000. Many exhibits and displays provided a very informative and enjoyable show. Many residents enjoy walking Temples' Wapack Trail system that runs through the mountain region of Temple's forests. Many of Temple's forests are also open to hunting and other passive recreation. Living close to nature is a large part of the appeal of Temple to its residents.

■ **WILDLIFE**

The Town of Temple, with its varied tree and plant species supports many different mammals, birds, reptiles, amphibians, and fish. The topography has many different habitats attracting almost every upland species in New Hampshire.

Temple has an abundant white tailed deer population that relies on the prime bedding areas consisting of hemlocks, pines and spruces. These bedding areas provide shelter from the cold, wind and snow in the winter months. Deer and many other forest mammals rely on mast crops from red oaks, beech and apples for their winter diet. Temple supports quite a variety of wildlife with its varied tree and plant species.

Moose are on the increase in Temple, moving toward the newly timbered areas in the higher terrain. Black bears are staying steady in numbers in town, and rely on mast crops for feeding.

From the spruce mountaintops to the hardwood ridges, many brooks, streams, and fields attract the following species:

MAMMALS

Beaver
 Big Brown Bat
 Black Bear
 Bobcat
 Coyote
 Deer Mouse
 Eastern Chipmunk
 Eastern Cottontail
 Eastern Striped Skunk
 Ermine
 Fisher
 Gray Fox
 Gray squirrel
 Hairy Tailed Mole
 Hoary Bat
 House Mouse
 Little Brown Bat
 Long Tailed Shrew
 Long Tailed Weasel
 Lynx
 Martin
 Masked Shrew
 Meadow Vole
 Northern Flying Squirrel
 Northern Long Eared Bat
 Norway Rat
 Otter
 Porcupine
 Pygmy Shrew
 Raccoon

Moose
 Red Fox
 Mink
 Red Squirrel
 Smokey Shrew
 Snowshoe Hare
 Southern Flying Squirrel
 Star Nosed Mole
 Virginia Opossum
 White Footed Mouse
 White Tailed Deer
 Woodchuck
 Woodland Vole
 Woodland Jumping Mouse

REPTILES

Common Garter Snake
 Milk Snake
 Black Racer
 Rough Green Snake
 Common Water Snake
 Ring Neck Snake
 Timber Rattle Snake
 Snapping Turtle
 Blanding's Turtle
 Painted Turtle
 Spotted Turtle
 Wood Turtle
 Eastern Box Turtle
 Red Belly Snake

FISH

Largemouth Bass
 Bluegill
 Brown Bullhead
 Yellow Bullhead
 Creek Chub
 Northern Red Belly Dace
 Swamp Darter
 Black Nose Dace
 Yellow Perch
 Chain Pickerel
 Pumpkinseed
 Black Nose Shiner
 Golden Shiner
 Common Shiner
 White Sucker
 Black Nose Shiner
 Golden Shiner
 Common Shiner
 White Sucker

Brook Trout
 Red Breast Sunfish

AMPHIBIANS

Common Gray Tree Frog
 Pickerel Frog
 Wood Frog
 Bull Frog
 Green Frog
 Northern Leopard Frog
 Eastern Newt
 Spring Peeper
 Blue Spotted Salamander
 Spotted Salamander
 Red Black Salamander
 Four Toed Salamander
 Spring Salamander
 Dusky Salamander
 Two Lined Salamander
 American Toad
 Fowlers Toad

BIRDS

The bird population of a given area is largely determined by the topography, vegetation, surface water, climate, and elements that enhance or pose risks to habitat. Temple's varying elevations with hills, forests, meadows, and wetlands contribute to a rich diversity of bird-life. Many species nest locally, while others visit feeding grounds, frequent feeders, or migrate through with regularity. Pack Monadnock/Miller State Park is a major observatory of the spring and fall hawk migrations drawing birders from far and near. There is one small area in the center of Temple near the Town Common that has been designated a "bird sanctuary", an open meadow now containing a relocated historic schoolhouse.

Accurate records of Temple's bird population are sketchy. The Audubon Society makes results available of its surveys, but there have been years when Temple was not covered except for sporadic reports of unusual birds. Several residents have compiled informal records of their sightings and some are joining a research study sponsored by Cornell University to record species visiting residential feeders.

The Audubon Society probably published the most accurate survey of birds available in 1994 entitled *The Breeding Birds of New Hampshire*, which records several years of nesting birds observed in designated areas in the state. This publication records the following birds confirmed to nest near or in Temple, while others are *probably nesting, or +possibly nesting.

Great Blue Heron	American Bittern *
Canada Goose	Wood Duck
American Black Duck	Mallard
Hooded Merganser	Turkey Vulture
Northern Goshawk	Red Shouldered Hawk *
Broad Winged Hawk *	Red Tailed Hawk
American Kestrel *	Ring Necked Pheasant +

Ruffed Grouse	Wild Turkey
Virginia Rail+	Killdeer
Spotted Sandpiper +	American Woodcock
Rock Dove	Mourning Dove
Black Billed Cuckoo	Yellow Billed Cuckoo +
Great Horned Owl +	Barred Owl
Northern Saw-Whet Owl *	Whip-Poor-Will
Chimney Swift	Ruby Throated Hummingbird
Belted Kingfisher	Yellow Bellied Sapsucker
Downy Woodpecker	Hairy Woodpecker
Northern Flicker	Pileated Woodpecker
Olive Sided Flycatcher +	Eastern Wood-Pewee
Alder Flycatcher	Least Flycatcher
Eastern Phoebe	Great Crested Flycatcher
Eastern Kingbird	Tree Swallow
Northern Rough-Winged Swallow	Bank Swallow
Cliff Swallow	Barn Swallow
Blue Jay	American Crow
Common Raven	Black-Capped Chickadee
Tufted Titmouse	Red Breasted Nuthatch
White-Breasted Nuthatch	Brown Creeper
House Wren	Winter Wren *
Golden Crowned Kinglet *	Eastern Bluebird
Veery	Hermit Thrush
Wood Thrush	American Robin
Gray Catbird	Northern Mockingbird
Brown Thrasher *	Cedar Waxwing
European Starling	Solitary Vireo
Warbling Vireo *	Red eyed Vireo
Nashville Warbler	Yellow Warbler *
Chestnut-Sided Warbler	Magnolia Warbler *
Black Throated Blue Warbler	Yellow Rumped Warbler
Black Throated Green Warbler*	American Redstart
Oven Bird *	Northern Waterthrush *
Louisiana Waterthrush*	Common Yellow Throat
Canada Warbler +	Scarlet Tanager *
Northern Cardinal	Rose-Breasted Grosbeak
Indigo Bunting	Rufous-Sided Towhee
Chipping Sparrow	Field Sparrow
Savannah Sparrow*	Song Sparrow
Swamp Sparrow	White Throated Sparrow
Dark Eyed Junco	Bobolink
Red Winged Blackbird	Common Grackle
Brown Headed Cowbird	Northern Oriole
Purple Finch	House Finch
Red Crossbill *	Pinesiskin
American Gold Finch	House Sparrow

■ NATURAL RECREATION LANDS

Recreation facilities, for citizens of all ages are an essential element of the services provided by any well-planned community. A variety of public structured and unstructured recreational activities are available to Temple residents.

Town-owned natural recreation lands include Kendall Ledge, the Temple Town Forest, the Chris A. Weston Conservation Area, and the Brooks Quinn Memorial Bird Sanctuary.

Other recreation lands include the Wapack Trail, Miller State Park, the Joanne Bass Bross Preserve, the Heald Tract, the Cabot Memorial Forest, the Wapack National Wildlife Refuge, and the Temple Mountain Ski Area.

◆ **Kendall Ledge**

This unusual 16-acre area includes a beautiful outcropping of white and rare rose quartz, and offers spectacular easterly views. The area is managed by the Conservation Commission and is used for hiking, picnicking, and nature study.

◆ **Temple Town Forest**

The Town Forest is a 46-acre parcel located on North Road and is managed for harvest and recreation by the Conservation Commission. Upcoming plans for the property include a loop trail and a sign to identify the property.

◆ **Brooks Quinn Memorial Bird Sanctuary**

This property is located on the south side of the village and is cared for by the Village Green Committee and the Historical Society. It holds several birdhouses that attract blue birds, swallows, and sparrows. The Historical Society has recently relocated School House #6 from its original location on North Road to this site and is in the process of its renovation. Recently, the Village Green Committee dedicated two memorial benches for this property – in the memory of Wilfred Weston and Albert Quinn who were two of the founding members of the Village Green Committee.

◆ **Wapack Trail**

The Wapack Trail is a 21-mile (8 miles of which are in Temple) skyline footpath along the scenic north-south ridge of the Wapack Range. It begins at the base of Mt. Watatic in Ashburnham, MA and reaches altitudes of 2,200 feet before it ends at the foot of North Pack Monadnock Mt. in Greenfield, NH. The Wapack Trail is managed and maintained by the volunteer organization Friends of the Wapack.

◆ **Miller State Park**

This state park is located on the summit of Pack Monadnock and is the oldest state park in New Hampshire. 344 acres of this 544-acre park are located in Temple. The park contains three main hiking trails and a seasonal auto road to the summit. Picnic tables and an old fire tower (now used for viewing) can be found at the summit. The summit offers a panoramic view of the surrounding countryside. Mount Monadnock, 3,165 feet high can be seen twelve miles to the west. The park is named for General James Miller, long-time resident of Temple who fought in the War of 1812.

◆ **Joanne Bass Bross Preserve**

Owned by The Nature Conservancy, this new preserve consists of approximately 501 acres on Pack Monadnock in Temple and Peterborough. It connects the protected lands of Miller State Park and the Wapack National Refuge creating an important “core forest” conservation area. The Nature Conservancy’s vision is to see the long-term viability of many plant and animal species, such as forest interior dwelling birds and large mammals that require large core forest areas. The Wapack Trail passes through this property as it runs along the Pack Monadnock ridge.

◆ **Cabot Memorial Forest**

This 966-acre parcel has 308 acres located in Temple. It is owned and maintained by the New England Forestry Foundation. The Wapack Trail runs through the property.

◆ **The Heald Tract**

This recreation area is owned mostly by the Society for the Protection of New Hampshire Forests as a gift from Philip and Ross Heald and Helen (Heald) Rader. This 410-acre property is located mostly in Wilton, but includes about 26 acres in Temple. Of particular interest on this property are the great herons with their rookery on the Tract. Heald Pond also provides a prime feeding area for other water birds, and beaver activity is common there. An extensive trail system can be found on the Heald Tract, and the area is restricted to hiking, fishing and observing wildlife. Also of note is that portions of the trails system pass over private lands by permission from the landowners.

◆ **Wapack National Wildlife Refuge**

Established in 1972 by the U.S. Department of Interior, Fish and Wildlife Service and managed as a wilderness area, this 1,672-acre refuge is located in Temple (475 acres), Lyndeborough, and Greenfield. The refuge is suitable for hiking, snowshoeing, cross-country skiing, and wildlife observation. Hunting, trapping, camping, and motor vehicles are prohibited. This is a popular bird-watching area with cliff and bare ledge habitats.

◆ **Temple Mountain Ski Area**

Located on Route 101 at the Temple-Peterborough line, this has been a privately owned winter recreation area open to the public. In the past, this winter recreation area offered alpine and cross-country skiing, hiking and other activities. The ski area is currently closed and for sale.

◆ **Chris A. Weston Conservation Land**

Located on the east side of Route 45 north of the town center, the parcel is diverse with wetlands, forest, and fields. The 25.19-acre parcel is managed by the Conservation Commission and was officially dedicated in 2000. Owned by the Town of Temple.

■ **EASEMENTS**

Conservation easements are permanent deeded restrictions against future land development granted to a municipality or private conservation organization to encourage the preservation of open space, thus providing a healthful and attractive outdoor environment for work and recreation of the state’s citizens.

Easements maintain the character of the state's landscape and conserve the land, water, forest, agricultural and wildlife resources.

♦ **Stone Easement**

Located off West Road, the Stone property totals 147 acres on three contiguous parcels. This conservation easement was placed on the property through the LCIP program, and allows agricultural uses, but no further residential building. Stewarded by the Conservation Commission. Private ownership.

♦ **Banks Easement**

Located strategically within Temple's historic district, this 28-acre parcel is managed by the Monadnock Conservancy and promotes critical preservation in the historic district. Private ownership.

♦ **Sullivan Easement**

This easement protects 113 acres in Temple; however, it allows agricultural-related improvements to be made. Stewarded by the Monadnock Conservancy. Private ownership.

♦ **Banker Meadow Easement**

Located on the corner of West and Hill Road, this 5.3-acre easement conserves the rural landscape. Stewarded by the Conservation Commission. Private ownership.

♦ **Isobel Karl Easement**

Located between Foster Road, Blood Road and Perkins Lane, this easement protects 25.5 acres of meadows and woods along Temple's West Road. Private ownership.

♦ **Holt/Lockwood Conservation Easement**

This property is located at the end of Perkins Lane and consists of the Former Lackey Homestead of 92 acres, plus the 290-acre "Holt Mountain Pasture" parcel. Managed by the New England Forestry Foundation. Privately owned.

♦ **Souhegan Watershed Site 26**

This is a state of New Hampshire water flow easement on a flood control dam. This privately owned 11-acre parcel has no public access.

♦ **Souhegan Watershed Site 25B**

This property is in state fee ownership for a flood control dam on 79.5 acres, located partially in Temple. State ownership.

♦ **Souhegan Watershed 12A**

This property is in state fee ownership of 106 acres for reservoir and surrounding protective grounds (Greenville Reservoir) and is located on Route 45. The reservoir is a water supply source for the Town of Greenville. State ownership.

◆ **Doyle Easement**

Located on the easterly side of NH Route 45 (Senator Tobey Highway) and Cemetery Lane, the 7.7 acre property is important scenic open space in the center of town. The easement, held by the Monadnock Conservancy, ensures that the open fields remain unforested and available only for agricultural use.

■ **CURRENT USE**

The Current Use Taxation program reduces local real estate tax assessments for qualifying undeveloped land to a low range set by the Current Use Advisory Board, a state regulatory agency affiliated with the Department of Revenue Administration. The result of enrolling land in the program is, in most cases, a radical reduction in the municipal property tax bill. The price of this favorable treatment is a 10% penalty tax (10% of the Fair Market Value) when the property is later changed to a non-qualifying use.

This program was enacted in 1973 to promote the preservation of open land in the state by allowing qualifying land to be taxed at a reduced rate based on its current use value as opposed to a more extensive use. The minimum land area currently needed to qualify is 10 acres.

In comparing conservation easements to current use taxation, easements are permanent, while current use may be reversed by change to a non-qualifying use and payment of the Use Change Tax. Thus, current use may satisfy the goals of a landowner who cannot afford to permanently abandon future development value, but desires current property tax relief. If it becomes financially necessary to subdivide, the use change tax becomes an element of the development costs.

In Temple’s specific case, the monies collected from the Use Change Tax (10% of the Fair Market Value of a piece of land taken out of current use and sold for development) goes to the Conservation Commission for the acquisition of land and/or conservation easements. The Town of Temple has a total land area of 14,241 acres, of which 10,714 are in current use.

The current use designation, authorized by RSA 79-A, provides the town other benefits as well. This designation encourages landowners to maintain traditional land-based occupations such as farming and forestry. This promotes open space, preserving natural plant and animal communities, healthy surface and groundwater as well as providing opportunities for skiers, hikers, sightseers and hunters.

■ **AGRICULTURE**

Temple was a largely self-sufficient community rooted in agriculture from the time of its first settlement in 1755 until after World War I. In 1921, only 32 farmers still lived in Temple and the shift towards off-farm employment and the purchase of goods and services beyond Temple’s borders was well under way. By 1980, there were not more than five farms providing a living for their owners. In 2002, only one farm falls in that category.

Agricultural land area:	<u>1950</u> , 1,944 Acres.	<u>1970</u> , 1,679 Acres.	<u>1979</u> , 1,315 Acres
As % of total land:	13.7%	11.8%	9.2%
Total land (and water) area in Temple:	14,241 Acres.		

Prime agricultural soils in 1979 on undeveloped lands (not used for agriculture, but could be so used): 599 acres.

Active agricultural land according to the 1995 Souhegan study (acres taken from aerial photos): tilled 77 acres, untilled 1,359 acres, orchard 372 acres, total 1,808 acres. 2003 tax assessing records indicate that Temple has 964 acres in agricultural use.

FUTURE LAND USE PLAN

EXISTING LAND USE ANALYSIS

■ INTRODUCTION

A land use analysis is an important element of community planning. Once raw land is converted to a particular use, it is usually committed to that use for a very long time, if not indefinitely. It is extremely difficult to change a pattern of development once it takes hold. Therefore, decisions about future land use should be made carefully, with a studied eye to the potential ramifications of those uses. A well-conceived land use plan allows for new growth and development while it protects and preserves the integrity of neighborhoods, businesses, transportation routes, and the environment.

This chapter describes the pattern of existing land uses in Temple and analyzes the changes that have taken place in the land use pattern since 1984, the date of the last land use analysis for Temple. Maps are used to identify the areas of town that have been developed, the kind of development that has occurred, and the relationship of one land use to another. This information provides the baseline necessary to evaluate the appropriateness of future development and the availability of suitable land for such development.

The development of a land use plan forms the basis of land use regulations, which are effected through zoning ordinances, subdivision, and site plan review regulations. The land use plan describes the goals and objectives envisioned by the town; the regulations are the means to put those goals into place. For instance, if in the process of describing present land use patterns in Temple, recommendations are made to encourage more commercial activity in a particular area, the zoning ordinance should be amended to permit that kind of activity in that location - if it does not already do so. Or, by the same token, the land use plan might recommend that the zoning ordinance be made more restrictive in particular areas, for the purpose of protecting and preserving certain natural features in town.

■ LAND USE CATEGORIES

The first step in the land use analysis is to classify the various land uses that exist in Temple. A classification system describes these activities. The second step is an analysis of tax assessing data from Temple using Geographic Information System (GIS) technology. Existing land uses and activities are recorded on a map to illustrate an interpretation of the land use pattern.

In general, land is classified according to its physical characteristics and/or the present activity that occurs on it. The two major divisions in a land use classification system are "Developed" and "Undeveloped" uses. Each of these divisions can be further subdivided into specific land uses. The following is a listing and description of the standard land use categories used to prepare a land use plan:

- ◆ **Residential:** All land and/or structures used to provide housing for one or more households. These include site-built single family homes, manufactured homes (previously known as mobile homes), factory-built modular homes, duplexes, apartment buildings, condominiums, and seasonal residences.
- ◆ **Public/Semi-public:** Establishments and facilities supported by and/or used exclusively by the public or non-profit organizations, such as fraternal, religious, charitable, educational and governmental facilities.

- ◆ ***Agricultural:*** Lands that are utilized for the cultivation of crops, the raising of livestock and poultry, and nurseries for horticultural purposes.
- ◆ ***Commercial:*** All lands and structures that supply goods and/or services to the general public. This includes such facilities as restaurants, motels, hotels, service stations, grocery stores, furniture and appliance sales, as well as establishments which are primarily oriented to providing a professional and/or personal service to the public, such as medical offices, banks and financial institutions, personal care establishments, etc.
- ◆ ***Industrial:*** Land and/or facilities used for mining, construction, manufacturing, treatment, packaging, incidental storage, distribution, transportation, communication, electric, gas and sanitary services, and wholesale trade.
- ◆ ***Home-Based Business:*** A residential property that houses a home occupation or home-based business. The residence continues to be the principle use of the land, and the occupation is by definition secondary and incidental.
- ◆ ***Road network:*** All public and private rights-of-way that are designated for carrying vehicular traffic. This includes Class VI roads that are no longer maintained by the town and do not carry public traffic.
- ◆ ***Protected Lands:*** Included in this category are all federally-owned lands, all state parks and forests, land protected under the State Land Conservation Investment Program (LCIP), land protected and/or owned by the town, sensitive land and wildlife habitats protected by the NH Audubon Society, land held by the Society for the Protection of NH Forests and the Monadnock Conservancy.
- ◆ ***Undeveloped:*** All lands that are not developed for any of the above uses, regardless of the reason - whether it be because the land is not usable due to environmental constraints, or there has been no demand to develop.

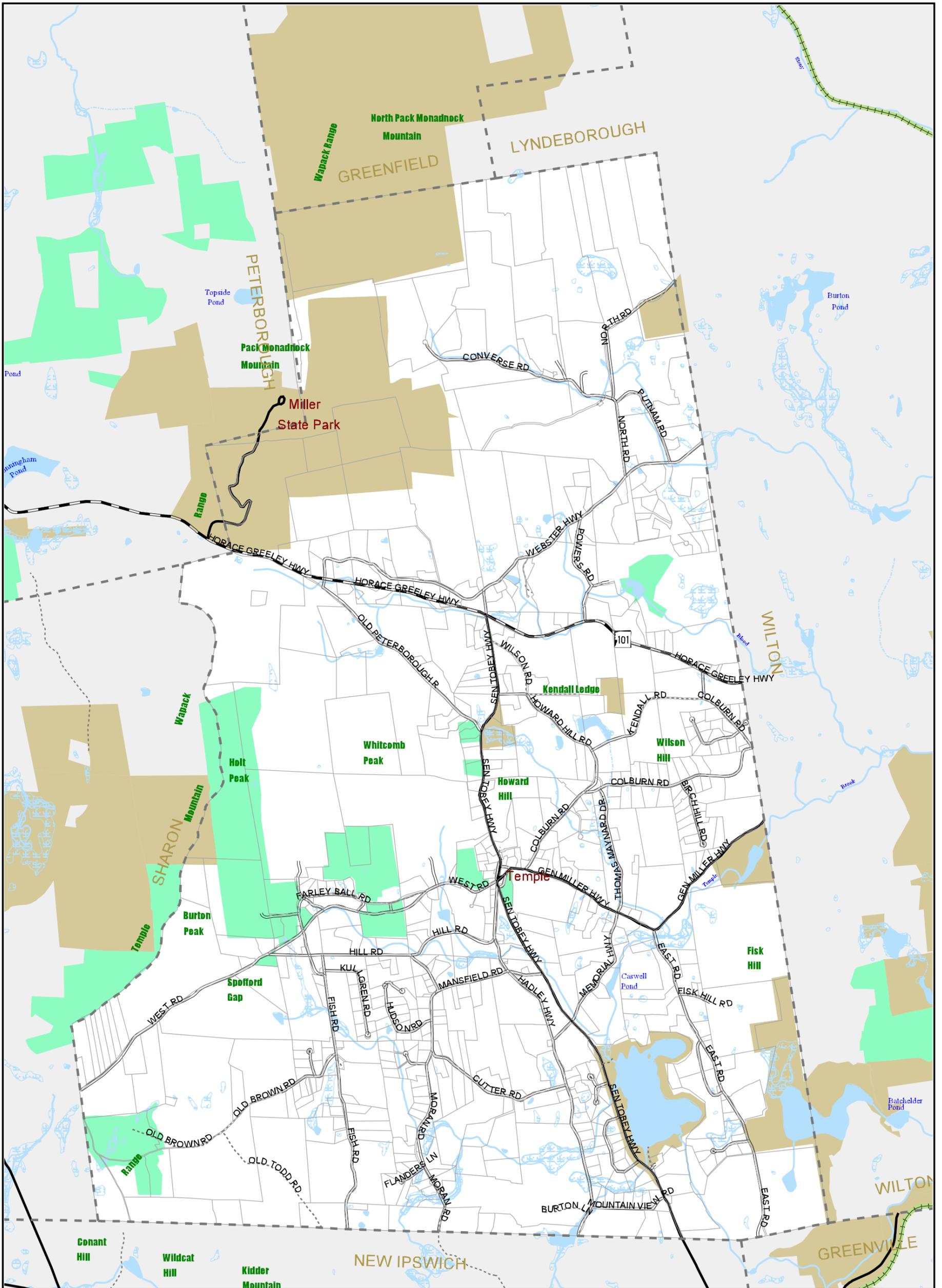
■ FACTORS THAT INFLUENCE LAND USE

Various factors influence growth and development in a town. The major physical and topographic features are the primary factors that influence the initial as well as the subsequent development of land. Secondary factors usually consist of human-made features such as roads, railroads, utilities and major commercial, industrial, or recreational facilities that attract and/or stimulate new or expanded development. The following factors have played an important role in the development of Temple:

History

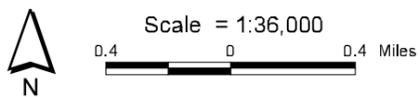
The land upon which Temple lies was part of an enormous tract granted, in 1622, by the English King, James I, to Captain John Mason of Hampshire County, England. With the English Revolution under Cromwell, ownership of this grant fell into dispute. In 1746, one of Mason's heirs was awarded title to the land. Immediately, the heir sold his title to a group of Portsmouth, New Hampshire businessmen who came to be known as the "Masonian Proprietors."

Much of the land included in the Mason Grant was already settled when the Proprietors made their purchase. They confirmed all those settlements and, on the unincorporated land, continued to grant new townships.



Town of Temple, NH

Conservation Lands/Easements



Map Not Intended For Site Specific Work

- | | | | |
|--|---------------------------|--|------------------|
| | Fee Ownership - Protected | | DOT Road Classes |
| | Conservation Easement | | Class I |
| | Waterbodies | | Class II |
| | Wetlands* | | Class III |
| | Watercourses | | Class IV |
| | Municipal Boundaries | | Class V |
| | Property Lines | | Class VI |
| | Railroad/Railbed | | |

* USFWS National Wetlands Inventory & USGS Data

Map Prepared By

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Digital base information provided by the New Hampshire Geographic Information System (GRANT)

Bounded by the older townships of Mason, New Ipswich, Peterborough, Jaffrey, Greenfield, Lyndeborough, and Wilton, was an unincorporated “slip” of land, irregular in shape, which was surveyed by the Proprietors in 1750. This “slip” was named “Peterboro Slip”, and included the present-day townships of Sharon and Temple. This “slip” was divided almost in half by the range of mountains now called the Temple Mountains.

Sale of shares in Peterboro Slip began in November, 1750, and settlement must have ensued shortly thereafter. A share of land usually consisted of three lots (one lot was 80 x 160 rods), and each shareholder was required to meet certain terms of settlement. For instance, three acres per share were to be brought to tillage as soon as possible and, within one year, each of the forty shares in the township was to have “a house built of a room sixteen feet square...fitted and furnished for comfortable dwelling in, and some person resident therein (for three ensuing years) with the additional improvements of two acres each year for each settler.”

The earliest settlers on the Temple end of Peterboro Slip arrived circa 1755-56. Before a score of years had passed, the Temple end of the “slip” was heavily settled, with about fifty families living on the land. These were mostly families of relatively young people, who came primarily from the Massachusetts north shore communities.

The late 1760’s found Peterboro Slip still unincorporated and still short of fulfilling its requirements of settlement (such as building a meeting house and the settling of a minister). The barrier of the mountain chain made travel and social connection between inhabitants of the two ends of the “slip” very difficult. In 1768, the people of the east (Temple) end of the “slip” petitioned the legislature to allow them to establish a town corporate. They were, after much negotiation, granted their request and, in addition, one half mile of Wilton’s land. The town charter was granted on August 26, 1768; the first town meeting was held on September 7, 1768, and in 1771 the new township had built a meeting house and settled an “orthodox and learned minister.”

The township was named for Sir John Temple, Lt. Governor of the New Hampshire colony, a native of North America, and a supporter of the cause of American liberty. The original approximately 8,500 acres of land (*History of Temple, N.H.*, by Henry Ames Blood), the geographical center of which was about where today’s White Village stands, was later added to by various additions and annexations: about 375 acres from New Ipswich; about 400 acres known as “Boreland’s Farm” which was bounded on one side by a 600 acre addition from Peterborough and about 900 acres from Lyndeborough. With the Lyndeborough Addition (1796) the borders of the township of Temple were finally fixed.

For most of its history, Temple has been an agricultural community. An attempt was made, during the Revolutionary War, to establish a glass factory in the township, but that attempt failed. No other large-scale industry was ever tried in Temple. There were small mills, powered by water, which operated to provide for local needs of an agrarian society.

In 1810, the population of Temple peaked at nearly 1,000 persons. From that year until the late 1930’s, the trend was one of population decline which was interrupted by periods of relative population stability. The population size was regulated primarily by the ability of local agriculture to sustain only a given number of people at any one time, for Temple was, for most of the time between its first settlement and the post-World War I era, a self-supporting economy. Few goods or services were imported into the township. Population and the economic base upon which the community existed were in relative equilibrium.

Pressure did increase upon local farmers, however, and most found that subsistence farming was no longer sufficient to sustain them. Many developed side-lines, which gave rise to poultry farms, dairy

farms, orchards and the like. By 1921, only 32 farmers remained in Temple. By 1980, there were not more than five farms providing a living for their owners.

This is evidence of the radical shift in the economic basis of the community in the years following World War I. Since 1917, Temple has moved from an almost entirely self-supporting, relatively stable, agricultural community to an almost entirely dependent, rapidly growing community which looks increasingly beyond its borders for virtually all goods, services, and sources of employment.

Location

Temple is located in Hillsborough County in the Southwest Region of the state. The town is bordered on the north by Greenfield and Lyndeborough, on the east by Wilton, on the south by Greenville and New Ipswich, and on the west by Sharon and Peterborough. Temple is 29 miles from Keene, 31 miles from Manchester, 49 miles from Concord, 25 miles from Nashua, 80 miles from Portsmouth, and 72 miles from Boston.

Temple today, as are many towns bordering the Peterborough-Jaffrey or Milford-Nashua-Manchester areas, is rapidly becoming a bedroom community.

Topography & Soils

To some extent, topography and soils also play a role in any town's development. Historically, people built houses and roads on land that was most easily accessed; and soil type and characteristics influence what kind of development will occur - farming, for example, and where that development will take place.

The topography of Temple is characterized by a large north-south ridge on its western border. The high point of this ridge is almost 2,200 feet above mean sea level near the summit of Pack Monadnock Mountain. The ridge includes Temple Mountain, elevation 2,081 feet. The remaining land slopes downward to the east to just over 800 feet. Elevation at the town hall is 1,060 feet.

■ EXISTING LAND USE

An analysis of the present land use pattern in a town is one of the first steps in the formulation of a land use plan. Since the type and intensity of existing land uses have a strong influence on future development patterns, it is important to understand how land and other resources are used within a given area before recommendations can be developed relative to future land uses.

Temple has a total land area of approximately 22.3 square miles, or 14,241⁹ acres. Surface water accounts for approximately 185 acres. Of this land area, roughly 26 percent is presently developed for one of the uses described earlier in this text. The following table compares the estimates of land use between 1979 and 2002.

Attempting to calculate exact acreages for land uses - particularly residential usage, is difficult and time-consuming. Therefore, a commonly-used methodology is to simply assume two acres per each dwelling unit or use other than commercial, public/semi-public, farmland, and undeveloped land. For residential uses, this takes into account that multi-family units will typically occupy much less than an acre and most

⁹ From the Office of State Planning as determined from USGS digitized data. This number has no legal bearing or significance, and is used for general planning purposes only.

single family homes much more than an acre. It is common for more of a lot to be taken up by a non-residential use than is generally observed for residential uses. The analysis of existing land use in Temple in 2002 was performed using Geographic Information System (GIS) technology with 2002 tax assessing data from the town. The 2002 tax assessing data from the Town of Temple breaks land uses into the following categories:

- ◆ Single-Family Residential
- ◆ Two-Family Residential
- ◆ Three-Family Residential
- ◆ Four-Family Residential
- ◆ Commercial
- ◆ Exempt – Federal
- ◆ Exempt – State
- ◆ Exempt – Municipal
- ◆ Farmland
- ◆ MGD Other Woods
- ◆ UNMGD Other Woods

The land area taken up by roads and highways is calculated by assuming a 50-foot right-of-way, multiplied by the number of miles of road.

This methodology was used to develop the 2002 portion of the following table. An attempt has been made here to compare the uses of land in 1979 to that of 2002. A direct comparison, however, is not possible, due to differences in methodology. The largest percentage by far of land in Temple remains undeveloped and, based on certain criteria, remains undevelopable.

**TABLE #24:
EXISTING LAND USE IN TEMPLE, 1979 AND 2002**

LAND USE	TOTAL ACRES		% OF DEVELOPMENT		% OF TOTAL LAND	
	1979*	2002	1979*	2002	1979*	2002
DEVELOPED:						
Residential (Single & multi-family)	255	1,312	9.7	35.6	1.8	9.2
Commercial/Industrial	11	312	0.4	8.5	0.1	2.2
Public/Semi-Public	195	195	7.4	5.3	1.4	1.4
Recreational	560	596	21.2	16.2	3.9	4.2
Agricultural	1,315	964	49.8	26.1	9.2	6.8
Roads and Highways	305	309	11.5	8.4	2.1	2.2
TOTALS	2,641	3,688	100	100	18.5	26.0
TOTAL AREA	14,241	14,241			100	100
TOTAL DEVELOPED LAND	2,641	3,688			18.5	26.0
TOTAL SURFACE WATER	185	185			1.3	1.3
TOTAL UNDEVELOPED LAND	11,415	10,368			80.2	72.7

* - Existing land uses and their acreages are “best estimates”. They are based on on-site examinations, maps,

measurements, and/or assessment records.

Sources: 1981 Master Plan for Temple, 2002 Tax Assessing Data from the Town of Temple

The greatest concentration of land uses and the greatest mixture of these uses occur in the general area considered to be the Village Center, at the intersection of Route 45 and General Miller Highway. The remaining development occurs along road frontage, fairly evenly disbursed around town.

The predominant land use in Temple is residential, which includes single family, two family, and multi-family housing. Most of this development is in year-round single family homes, with some two family homes and multi-family dwellings spread throughout town. Residential uses are located throughout the town, with the greatest concentration of smaller lots located in the southern half of town.

As mentioned previously, Temple was, for most of the time between its first settlement and the post-World War I era, a self-supporting agricultural economy. After World War I, most of the local farmers found that subsistence farming was no longer sufficient to sustain them. Many developed side-lines, which gave rise to poultry farms, dairy farms, orchards and the like. By 1921, only 32 farmers remained in Temple; by 1980, there were not more than five farms providing a living for their owners; and by 2002, the tax assessing records from the Town showed only one farm providing a living for the owners. Much of this farmland has been converted to residential use or is no longer actively farmed.

Public and semi-public uses are clustered in and near the Village area of town and consist of the Town Hall/Fire Station/Police Station, the library, elementary school, chapel, church, and post office. These uses are identified on the *Existing Land Use Map* (following page 80) as being tax exempt.

Commercial/Industrial activity in Temple is sparse, with a few uses located on the Temple-Sharon town line on the eastern portion of town.

Temple currently has about ten acres of park and recreation facilities including the facilities at the elementary school. These include a ball park, tennis courts, park (or common) and playground that also includes provisions for band concerts and picnics. Of major importance in assessing recreational facilities are several privately owned and/or commercial facilities that play a role in outdoor recreation not only in Temple, but in the region. There are several town-owned parcels used for open space and passive recreation in Temple that consist of Kendal Ledge or White Ledge, Temple Town Forest, and the Chris A. Weston Memorial Conservation Land.

Roads and highways, while not typically thought of as a "use" per se, do take up nearly 309 acres of land.

The Current Use Taxation program was enacted in 1973 to promote the preservation of open land in the state by allowing qualifying land to be taxed at a reduced rate based on its current use value as opposed to a more extensive use. The minimum land area currently needed to qualify is ten acres. The price of this favorable treatment is a 10 percent penalty tax (10% of the Fair Market Value) when the property is later changed to a non-qualifying use.

In comparing conservation easements to current use taxation, easements are permanent, while current use may be reversed by change to a non-qualifying use and payment of the Use Change Tax. Thus, current use may satisfy the goals of a landowner who cannot afford to permanently abandon future development value, but desires current property tax relief. If it becomes financially necessary to subdivide, the use change tax becomes an element of the development costs.

In Temple, the monies collected from the Use Change Tax (10% of the Fair Market Value of a piece of land taken out of current use and sold for development) goes to the Conservation Commission for the

acquisition of land and/or conservation easements. The Town of Temple has a total land area of 14,241 acres, of which 10,713.98 acres are in current use and 2,322.51 acres of those are in recreational current use.

The current use designation, authorized by RSA 70-A, provides the town other benefits as well: it encourages landowners to maintain traditional land-based occupations such as farming and forestry; promotes open space, preserving natural plant and animal communities, healthy surface and groundwater; and provides opportunities for skiers, hikers, sightseers, and hunters.

■ LIMITATIONS TO DEVELOPMENT

The data concerning the existing land use pattern reveals that roughly 26 percent of Temple's total land area is currently developed, leaving some 10,368 acres undeveloped. Not all of this land, however, is suitable for development. Limiting factors to development include steep slopes, certain soil types, wetlands, aquifers, and other sensitive lands or features. In addition to these physical constraints, development is limited by the public's desire to protect the quality of life and property values of existing residents. This public will is ideally expressed in the town's land use regulations, and is the central purpose of this planning document.

Two maps have been created using Geographic Information System technology showing limitations to development in Temple: *Aquifers, Hydric Soils, & Wetlands* and *Development Constraints*. These maps identify the seven constraints to development that are related to the ability of the soil to accommodate septic systems, road or building construction.

**TABLE #25:
LIMITS TO DEVELOPMENT**

Constraint	Total Acres	% of Total Land Area	Undeveloped Acres	% Undeveloped Area
Total land area	14,241	--	10,368	72.8%
Slopes between 15% - 25%**	203.2	1.4%	5.1	0.05%
Slopes between 15% - 50%**	5,655.0	39.7%	4,462.4	43.0%
Poorly/very poorly drained (Hydric soils)	987.8	6.9%	760.0	5.3%
Wetlands*	366.1	2.6%	271.9	2.6%
Aquifer	2,239.8	15.7%	1,767.7	12.4%
Shallow to bedrock soils (Less than 40 inches)	3,858.2	27.1%	2,923.1	28.2%
Shallow to water table (Less than 1.5 feet)	2,023.7	14.2%	1,525.7	14.7%

* U.S. Fish & Wildlife Service National Wetlands Inventory & USGS Wetlands Data

** Note: The Soil Survey for Western Hillsborough County does not break down slopes by 25% or greater, it only breaks down slopes by 15% or greater. The Planning Board only wants to regulate development on slopes of 25% or greater.

Source: SWRPC Geographic Information System

Reference to the following maps illustrates that one or more of these development constraints exists virtually all over town. There are in fact, only a few areas on the map that appear to have no limitations at all. It is interesting to note that the built up area of the Village Center is one of the areas in town with few limitations to development which was probably a primary reason why the area was in fact built out. The northern and eastern portions of town have many steep slopes due to the location of North Pack Monadnock and Temple Mountains. There are only a few areas in Temple with no or few limitations to development that have not been developed at this time.

In comparing limitations to development to the *Existing Land Use Map*, it can be seen that, while the development does follow almost every road in town, the areas shown as having the greatest constraints have not been developed. How much of this pattern is due to the natural constraints of the land or to other factors such as road access is not known.

FUTURE LAND USE

■ INTRODUCTION

Land is Temple's most basic resource. As such, its use determines the character and quality of community life. The rate of growth, type and location all directly affect the physical appearance of the town, the need for certain public services and facilities, and the cost of providing these services. Change is inevitable so Temple should be prepared to manage this change.

Thus, in creating a Master Plan to guide Temple's growth, it is the Future Land Use Plan that is the core of a comprehensive planning program. It is this document that reflects the best thinking and wishes of Temple residents regarding all future development in town.

Certain assumptions are made in anticipating future development in Temple. Based on the data collected and analyzed in the preceding sections:

- ◆ If the past 20 years can serve as an indicator, Temple should continue to experience a moderate rate of growth in population.
- ◆ The only projects other than routine maintenance and repair planned by the Temple Highway Department are the bridges, and this work will be scheduled as funding becomes available. At this time there are two projects on the NHDOT 10-Year Highway Plan; they are: reconstruct/realign a segment of Route 101 from Route 45 eastward about one mile to eliminate the "S" curves; and relocate the driveway to Pack Monadnock to the top of the hill, provide turning lanes, and extend the truck lane eastward. This will greatly improve the safety of the driveway.
- ◆ NH Route 101 will continue to serve as a principal arterial and the other roads carrying traffic through Temple, i.e., NH Route 45, General Miller Highway, and West Road will continue to serve as subregional minor collectors.
- ◆ Temple residents will continue to participate at a high level in the labor force and regional economy; managerial and professional occupations will expand, with increased reliance on telecommuting.
- ◆ Agriculture, as traditionally defined, will not be a notable land use, nor will it be a significant contributor to the local economy.
- ◆ Because of its proximity to larger industrial/commercial employment centers, and its accessibility by good roads and highways, Temple has been and will continue to develop as a residential community in a rural setting.

■ THE FUTURE LAND USE PLAN

In any planning process, it is inevitable that some goals will conflict with others. Residential and commercial development, for example, invariably conflicts with agricultural use and open space preservation. One of the purposes of this Plan is to set policies and establish clear objectives, where

appropriate, that will guide future growth in a manner that best accommodates both protection and development.

In small towns such as Temple, it is sometimes more appropriate to base future land use decisions on development policies, rather than specific objectives. In such towns, where future growth is not anticipated in large numbers, the form in which most growth takes place is the development of individual properties. The Plan, then, expresses a general concept of development and is considered to be a realistic means of managing future growth.

Land Use

Overall, land use patterns in Temple are dominated by residential development of mostly single family detached homes and manufactured housing, with an infrequent occurrence of two family and multi-family housing. This general pattern is not expected to change, although the Planning Board is very concerned about development occurring in a sprawling pattern along the roads throughout town.

Agriculture, which continues to be a concern, both for the economic activity as well as for the protection of the prime farmlands, does not play a significant role in the local economy. It is unlikely that this will change in the foreseeable future, due as much to national trends in farming as to anything else. Therefore, how far land use regulations can or should go to protect farmland that is not being farmed must be carefully considered.

As noted earlier in this Plan, while Temple appears to have sufficient resources of construction materials, there are only two active pits, and these are not expected to be in operation much longer. Unless an application for a new site is received in the near future, Temple will have no local source of sand, gravel or fill after 2003, which means that all road and other construction materials will have to be trucked in from out of town increasing the cost of road construction and/or repair.

Community Facilities

Based upon the information collected in the Basic Studies Section, Temple does not currently meet the community facilities needs of its residents. The Town Municipal Offices have been located at the current site since 1986, when the former Fire Station was moved to this site and renovated into office and meeting space. Building additions were constructed at this time to house the Fire Department, bathrooms, mechanical room and an office. Interior renovation has occurred since then to provide additional office space within the former firehouse. However, due to increased demand, municipal office space is now insufficient to meet the needs of the town.

Generally, the Fire Department is in good shape and meets the current needs of the town. The biggest problem faced by the Department is one that many small towns share, and that is finding volunteers who can give the time not only to serve, but also to be away for certification training.

The town could, however, expect to have a large proportion of its population in need of services for seniors. Reference to the *Population and Housing* chapter illustrates that the largest age category as of 2000 was the 35-54 year-olds. As they work their way up the pyramid (other factors such as out-migration, etc, notwithstanding) in 20-30 years the age structure in Temple could look quite different.

The potential impact of the current New Hampshire education crisis on Temple's school system and tax rates is still very uncertain. Money to fund education in New Hampshire comes primarily from local property taxes. Costs for education are currently at the center of a major state-wide debate, in the Court as well as in the Legislature. The Legislature has authorized a state education tax that collects money in

the form of a surcharge on property tax and disburses it to towns that meet the criteria for need. This tax has been in place for a few years, but is the subject of challenge, and it is unclear at this time what the result will be.

It is expected that the voters of Temple will continue to support the varied local and regional educational, historic and cultural activities, as well as health-care.

Economic Development

The Town of Temple does not presently have a great deal of commercial or industrial development. However, the added impact of new families through residential growth to be served may require limited expansion of commercial and/or industrial development. While it is not intended to encourage large commercial enterprises in Temple, the designation of a location on Route 101 or other area in town for these types of uses should not be ignored, in order to provide a moderate amount of facilities and services geared to the traveling public.

The existing land use analysis does demonstrate that Temple has a very limited amount of commercial or industrial development. Temple is predominantly a rural, residential, somewhat agricultural community. Most of its working residents commute out of town. Others are engaged in home occupations or home-based businesses. This plan continues to recognize the importance of home occupations and home-based businesses, and supports the continuation of relevant provisions for such uses in the Temple Zoning Ordinance.

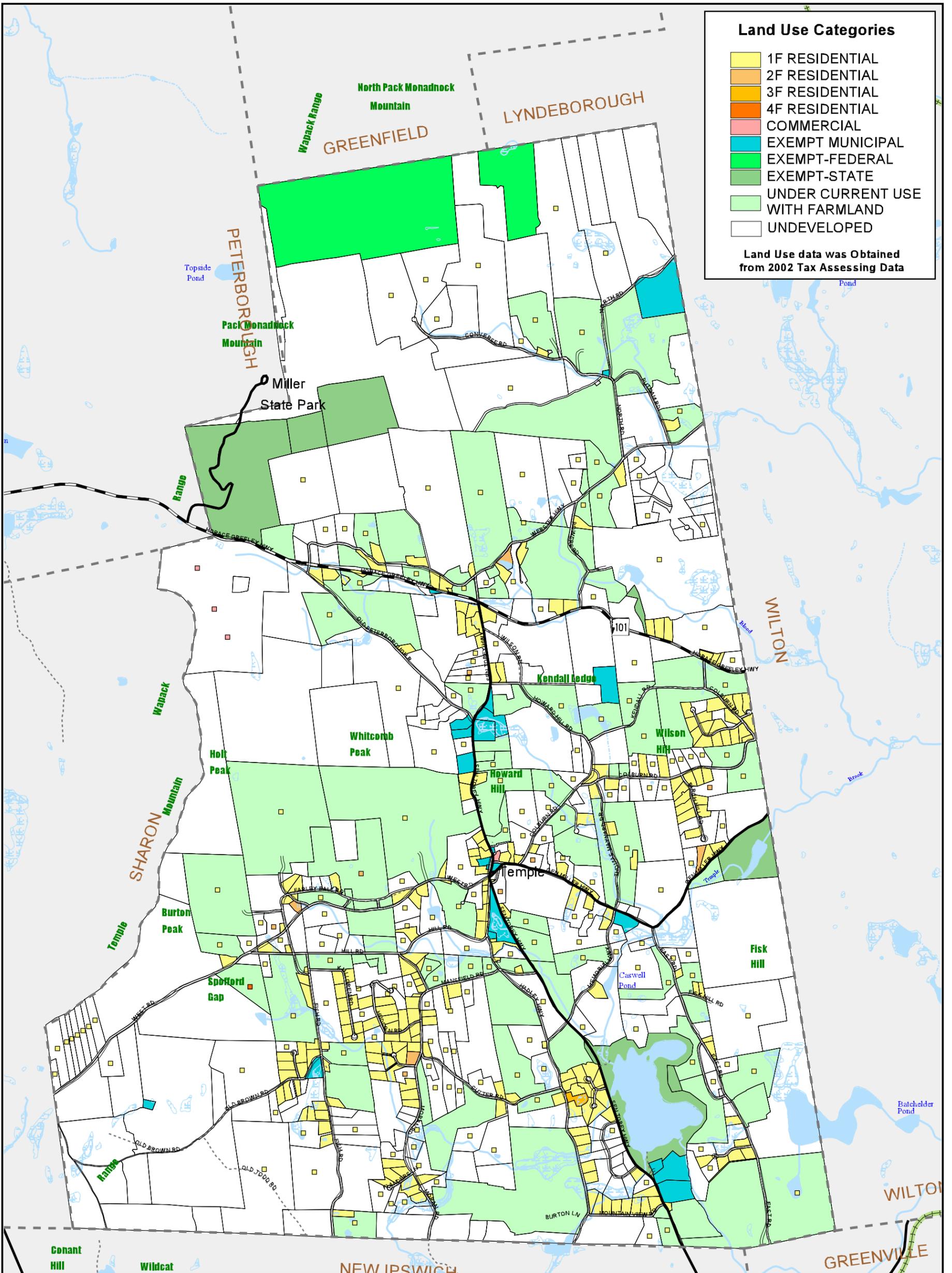
An area within easy access of a major transportation route could provide the opportunity for modest industrial development in keeping with the rural character of the town. The use of the "Special Exception" provision of the Zoning Ordinance to insure that proposed industrial development is consistent with a rural and agricultural community is recommended.

Traffic and Transportation

In earlier times, roads developed as the shortest and/or easiest distance between two or more areas. In the recent past, the pattern of local streets was left largely to individual land developers who may have been required to meet some specific construction design requirements, but no overall plan. Temple's road network, however, is long established; virtually every road in use in town today has been in existence for the better part of the century or longer. The analysis of the transportation system, both in and around Temple, does not identify any particular problems that require either dramatic changes in the way roads are improved and maintained in town, or the construction of any new roads.

Any potential impacts on the local road network will be the result of increased population since Temple is mostly a residential community. As mentioned previously, Temple does have one road (NH Route 101) classified as an Other Principal Arterial that typically carry high volumes of traffic for medium to long distances and at medium speeds. Temple also has three roads that are classified as Minor Collectors, which are designed to move medium traffic volumes at low speeds between or within communities. The town may experience an increase in through traffic on these roads, especially truck traffic, as traffic through the Southwest Region increases in general. Based upon the population statistics, the town is not expected to experience any significant population increase that would unduly impact the local road network.

Nevertheless, development in remote or inaccessible areas of town should be monitored and discouraged or prohibited, where appropriate. Applications for building permits on Class VI roads is a good case in point, where even low density minor development can create problems for the town if the road network is



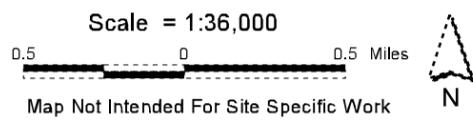
Land Use Categories

- 1F RESIDENTIAL
- 2F RESIDENTIAL
- 3F RESIDENTIAL
- 4F RESIDENTIAL
- COMMERCIAL
- EXEMPT MUNICIPAL
- EXEMPT-FEDERAL
- EXEMPT-STATE
- UNDER CURRENT USE WITH FARMLAND
- UNDEVELOPED

Land Use data was Obtained from 2002 Tax Assessing Data

Town of Temple, NH

Existing Land Use Map



- Waterbodies
- Wetlands*
- Watercourses
- Municipal Boundaries
- Property Lines
- Railroad/Railtrail
- DOT Road Classes**
- Class I
- Class II
- Class V
- Class VI

* USFWS National Wetlands Inventory & USGS Data

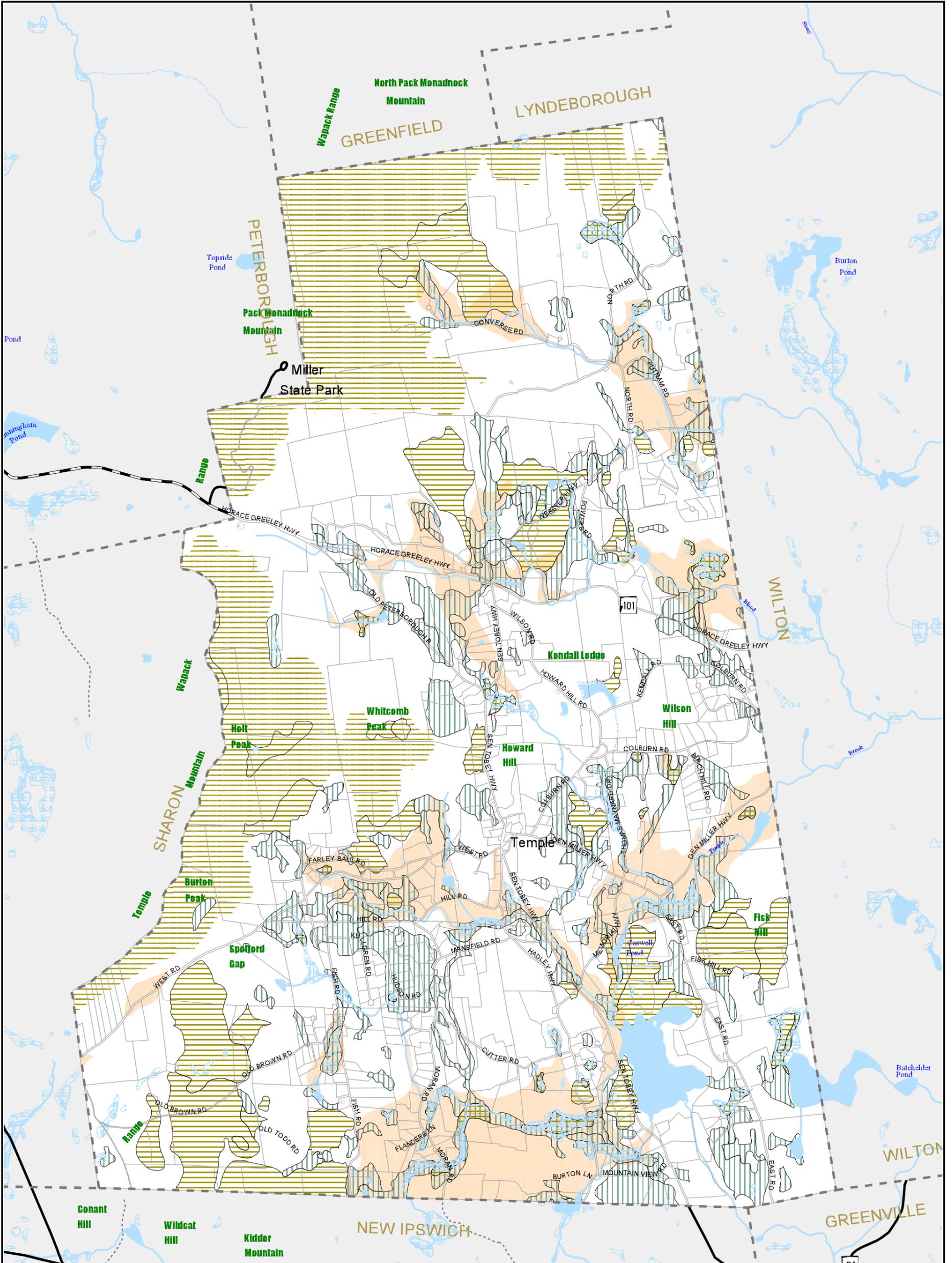
Note: Land use was obtained from municipal tax assessor's database. For parcels less than or equal to 5 acres, the land use is assigned to the entire parcel. For parcels greater than 5 acres, the land use is assigned to a 2-acre square within the parcel.

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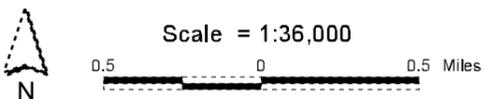
Digital base information provided by the New Hampshire Geographically Referenced Analysis and Information Transfer System (GRANIT)

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Town of Temple, NH

Development Constraints



Map Not Intended For Site Specific Work

DOT Road Classes

- Class I
- Class II
- Class V
- Class VI

- Shallow to Bedrock (< 40')
- Shallow to Water Table (< 1.5')
- Waterbodies
- Wetlands*
- Watercourses
- Municipal Boundaries
- Property Lines

* USFWS National Wetlands Inventory & USGS Data

December 2003

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not able to accommodate traffic. Further, the Planning Board should closely scrutinize all development proposals to determine their possible impact on all the roads in the area, and the ability of the town to adequately maintain them. The Selectmen may wish to consider the adoption of a Road Policy that would provide guidance to them and the Planning Board during an application review process.

As mentioned earlier in this Plan, bridges present an ongoing maintenance and repair concern for Temple, oftentimes accounting for a large portion of the local highway budget. Bridges also present the potential for a number of safety hazards in instances where they are severely deteriorated or are significantly narrower than the road that they serve. There are 15 bridges in Temple - 10 are owned by the town and 5 by the state. There are five "Red Listed" bridges in Temple; all of which are town-owned. These bridges have the lowest federal sufficiency rating – from 24.7 to 45.7. All of these bridges are posted for a weight limit, and all of them will be improved, as funding becomes available.

A technology available to road agents to help in evaluating local roads is called the Road Surface Management System (RSMS). It was created by the Technology Transfer Center of the University of New Hampshire. The system provides a means to visually inventory and evaluate a number of various road surface problems such as surface cracking, inadequate drainage, etc., and then factors in costs of repairs and approximated traffic volumes for each road. The results of the visual inventory, cost, and traffic factors are then tabulated through the use of the RSMS computer program in order to create a priority list of road improvements. The Selectmen and the Road Agent might consider using this methodology to aid them in planning future road improvement projects.

Route 101 Corridor Study

- The Planning Board supports the proposed improvements to the segment of NH 101 eastward of Route 45 to eliminate the "S" curves.
- The Board supports the use of local access management as a tool to improve safety and preserve capacity on NH 101.
- Consideration should be given to examining the zoning and land use regulations that are applicable to the Route 101 corridor, and determine whether any zoning proposals would be in order to minimize conflict along the highway between land uses and traffic.

Following are examples of policies and planning techniques available to the town to support good transportation planning; some of these are already in place, others are set forth here as recommendations of the Route 101 Corridor Study:

1. ROAD STANDARDS

The Planning Board has the opportunity, through the road standards developed by the Road Agent and encapsulated in the Subdivision Regulations, to ensure that new roads are appropriate in design and type for the particular area and for the town as a whole.

2. CAPITAL IMPROVEMENTS PROGRAM

A town has the opportunity, as enabled by state statute, to prepare a CIP, which is a schedule of projects or purchase of capital equipment over a period of at least six (6) years. The Planning Board can be authorized by the voters to create a CIP, the purpose of which is to aid in the consideration of the annual budget. Upon completion, the Planning Board shall submit it to the Selectmen or the Budget Advisory Committee for consideration as part of the annual budget.

As of this writing, neither the Planning Board nor the Selectmen have developed or maintained a CIP for major road projects. The historic procedure is for the Road Agent to request an appropriation at Town Meeting for any projects whose cost would exceed the normal budget for the Highway Department.

3. SWRPC TRANSPORTATION ADVISORY COMMITTEE

The Town of Temple continues to participate in the Southwest Region Planning Commission's Transportation Advisory Committee (TAC). As noted earlier, involvement in this committee is essential if the Town is to have a role in regional transportation planning.

4. ACCESS MANAGEMENT TECHNIQUES FOR ROUTE 101

The Route 101 Corridor Study identified a number of techniques that can be used for managing traffic and access along a busy highway. These techniques range from various driveway standards and requirements to the use of medians, signalization and signage; for more detail, refer to the NH 101 Corridor Study, December 1999.

Housing

There are two primary functions of the Housing Plan: (1) respond to the statutory requirement that local master plans address current and future housing needs of residents at all income levels; and (2) guide the location of development, while at the same time minimize impacts of the development not only on the character and environment of the town, but also on town services and facilities. In addressing the first function, that of the statutory requirement, reference here is made to two documents - the Regional Housing Needs Assessment, and the Temple Zoning Ordinance.

In 1988 the New Hampshire Legislature amended RSA 36:47, making it a requirement that all regional planning commissions undertake a regional housing needs assessment. The study was intended to indicate whether individual towns within the region are providing their fair share of housing for low- and moderate-income residents.

The Southwest Region Planning Commission conducted such a study in 1989. This study was partially updated in 2003; however, there is a need to revisit the basic assumptions and types of data that were deemed appropriate for the methodology. The State has retained a consultant to establish a new methodology for regional planning agencies to use in doing their housing needs assessments which is scheduled to be completed in the spring of 2003. One critical factor was not taken into account in the recent update, and that is the opportunity afforded by a town's zoning ordinance to develop a variety of housing types. Examination of the Temple Zoning Ordinance reveals the following provisions relative to housing opportunity:

- ◆ Single family homes are permitted by right in all districts.
- ◆ Duplex dwellings are not permitted.
- ◆ Multi-family units are not permitted.
- ◆ Manufactured housing on individual lots is permitted in the Rural Residential and Agricultural District.

- ◆ Accessory Apartments are permitted in all residential districts.
- ◆ Backlot development is not permitted.
- ◆ There are no provisions in the Zoning Ordinance for Elderly housing.
- ◆ Planned Residential Development (cluster development) is permitted in the Rural Residential and Agricultural District and Mountain District.

Based on this review of the zoning ordinance, it appears that there are not adequate provisions for the development of a variety of housing types to meet a range of income levels and needs, including special needs of the elderly. Two-family and multi-family housing is currently not allowed in town at all, and manufactured housing is only allowed on individual lots in the Rural Residential and Agricultural District. Allowing manufactured housing on individual lots in all residential districts in town would provide greater opportunities for residents to own their own homes.

The establishment of provisions for accessory apartments does provide a means for the elderly to stay in their homes - either by renting the apartment for income or for services in kind, or by moving into the apartment and renting the larger house. However, additional opportunity for the elderly can be provided through the inclusion of congregate housing for the elderly as a permitted use in the zoning ordinance. This type of housing allows many senior citizens a place to live with others who, for various reasons can no longer manage on their own, but are not in need of nursing care. This will become a greater consideration in the future as the number of elderly people in Temple increases over time.

In order to estimate what the potential need for housing will be in the future, population projections are used to determine how many housing units might be needed, based on a projected future population. Population projections are prepared by the Office of State Planning on an interim basis, using the most recent Census data; the following table presents projections out to the year 2025 for Temple and towns around and near Temple.

POPULATION PROJECTIONS, 2005 - 2025

Town	2000	2005	2010	2015	2020	2025	% Change 2000 – 2025
Temple	1,297	1,420	1,510	1,590	1,660	1,720	32.6%
Greenfield	1,657	1,760	1,880	1,980	2,070	2,150	29.8%
Lyndeborough	1,585	1,720	1,850	1,950	2,050	2,140	35.0%
Mason	1,147	1,240	1,320	1,390	1,450	1,510	31.6%
New Ipswich	4,289	4,710	4,970	5,190	5,420	5,590	30.3%
Sharon	360	390	410	430	450	470	30.6%
Peterborough	5,883	6,250	6,630	6,940	7,250	7,500	27.5%
Wilton	3,743	4,010	4,260	4,490	4,710	4,880	30.3%
Amherst	10,769	11,590	12,340	12,980	13,620	14,120	31.1%
Brookline	4,181	4,600	5,030	5,420	5,800	6,100	45.9%
Hollis	7,015	7,650	8,240	8,770	9,300	9,720	38.6%
Milford	13,535	14,600	15,600	16,460	17,320	18,000	33.0%

SOURCE: NH OFFICE OF STATE PLANNING, MARCH 2003

Compared to the changes experienced over the last 40 years, Brookline is expected to continue to be the fastest growing town in the region. Amherst, on the other hand, which was equal to Brookline in the past, is expected to grow by only 31.1%. Although these projections range from 27.5 % for Peterborough to 45.9% for Brookline, Temple is projected to have the average growth (33%) for the area over the 25 year period of all the towns.

Temple's future housing needs can be estimated based on the projected population for 2025 by simply dividing population by housing units to reach a person-per-unit figure. Since 1980 this figure for Temple changed very little, from 2.75 in 1980 to 2.74 in 1990 and 2.79 in 2000. Taking an average of these figures results in a person-per-unit number of 2.76; applying this to the projected population for Temple of 1,720 in the year 2025 results in an estimated 623 housing units that would be needed to provide for the projected population. This represents an additional 158 units above what currently exists; over a 25-year period this amounts to about 6 new units a year. This rate is much less than what Temple experienced during the 1980s, when there was an average of 18 new units added per year, but double that of the slow growth of the 1990s, when the average was only three new units per year.

Municipalities use various methods to guide residential development - from complete prohibition in designated areas to the administration of performance standards for construction. In Temple, as in most New Hampshire towns, the customary approach has been to allow residential development in all areas of town, subject to certain conditions or the meeting of certain standards. For example: no construction is allowed in a wetland; driveways, septic systems and building sites must conform to set standards; and development around shorelands must be in conformance with state regulations.

Attempting to limit the location of development based on information such as that on the *Development Constraints Map* is impractical, due to the scale and general margins of error in mapping of this type. Rather, maps such as these can indicate where (or where not) one might expect problems, and regulate accordingly. This allows each site to be developed based upon its particular characteristics, as determined by on-site examination.

Conservation and Preservation

The community survey conducted for this Plan showed that conservation and open spaces are very important to the residents of Temple. Preserving critical open space areas is vital to maintaining not only the environmental health of Temple, but also the natural identity, rural character, and recreational opportunities that are so closely connected to the town. Quite a bit of land is already protected in some fashion, either through public or private conservation efforts, or deed restrictions. This Plan recommends continued support of the efforts of the Conservation Commission to preserve and protect significant and sensitive lands and water bodies in Temple.

The desirability of maintaining open space and natural areas, both aesthetically and environmentally, is a necessary element of the Future Land Use Plan and every consideration should be given to implementing this policy through innovative land use controls and alternatives to conventional residential development. Specifically designed land use controls such as open space (cluster) development and planned unit development are among the methods which Temple should investigate to assure the retention of open space as well as environmentally sensitive areas.

■ **ADMINISTRATION AND IMPLEMENTATION**

The Future Land Use Plan set forth in this document and its accompanying maps envisions a comprehensive program for the Town of Temple to direct the development of the Town in an orderly and thoughtful manner. Unless the proposed goals, policies, and objectives are adopted and implemented, the Plan will probably not accomplish its purpose.

The term "administration" refers here to those activities that direct and manage the Town's municipal affairs. Temple is administered by a three-member Board of Selectmen. The Town Meeting is the legislative body of the Town, and the Selectmen represent the executive, or administrative, arm of that body. In addition to the Selectmen, other local boards participate in municipal government, i.e., the Planning Board, Board of Adjustment, Conservation Commission, and other appointed entities. This form of government relies heavily on part-time and volunteer officials serving in a wide range of capacities. Some of these functions relate directly to the goals, policies, and objectives of this Master Plan, others less so.

The Future Land Use Plan contains three levels of planning components:

1. Broad, general goals to be followed for the Town's future development.
2. Policies related to the Basic Studies in:

Land Use	Community Facilities
Economic Development	Traffic and Transportation
Housing	Open Space and Preservation
3. Specific objectives for action that will help the Town achieve the goals and policies.

Implementation of the goals, policies, and objectives can be accomplished in a number of ways; some items would require no more than official endorsement by the Selectmen. Others, however, would require amendments to the Zoning Ordinance and/or the Subdivision and Site Plan Review Regulations in order to be realized.

Purpose

The purpose of this Plan is to make and document recommendations for the desirable development of the community, including:

- ◆ Streets and transportation facilities.
- ◆ Location of public buildings, properties, and utilities.
- ◆ A zoning plan for control of the uses and siting of private, commercial, and public structures, and of population density.
- ◆ Steps necessary to preserve valued features, clean water, and a safe environment.

The Plan provides guidance for the accomplishment of coordinated and harmonious development in order to promote:

- ◆ Health, safety, security, and general welfare.
- ◆ Efficiency and economy in the process of development.
- ◆ Good civic design.
- ◆ Wise and efficient expenditure of public funds.

Today, southern New Hampshire is experiencing rapid and accelerating growth. Predictions are that Temple's population will increase by approximately thirty-three percent over the next twenty-five years. How this will affect Temple's land, natural resources, housing, and town services is a serious concern of residents. Only by a comprehensive planning effort, can all of these factors be taken into account to preserve Temple as the town most of its citizens want it to be.

The collection of studies, maps, and reports accompanying this Plan represents a data-base from which to visualize long-range growth in Temple. By understanding past trends and future potentials, solutions to the problems of growth become clearer.

The Plan is intended not as an edict, but rather to serve as a guide for the community as a whole to use in shaping its future over a period of years to come. It is therefore sufficiently general to permit wide interpretation without damage to its basic intent, sufficiently flexible to allow modification as conditions change, and reasonable enough to encourage good, enforceable legislation with due respect to the rights of all.

The Master Plan is not a town regulation, and has no power in law. However, if well-framed and practicable, it should suggest laws, regulations, or ordinances which may serve to carry out its prime purposes. It does not embody solutions to all municipal problems; rather it is a guide to aid town officials in addressing these problems. Unless it is understood and used, unless it is consulted often and amended when necessary, it will be of little value to the town's future generations.

General Policies

1. Protect the health, safety, security, and welfare of all inhabitants of Temple.
2. Accommodate growth and development in such a manner as to preserve and enhance the rural character, charm, and visual appeal of Temple.
3. Assure that development occurs in an orderly, progressive manner, considered in relation to its impact on the services and economy of the town.
4. Assure that the town's government is conducted in an efficient and economical manner, and in the best interest of its citizens.
5. Encourage the greatest possible public awareness and citizen participation in town affairs.
6. Encourage cooperation and coordinate planning efforts with surrounding communities.

Land Use

GOAL: *Promote land use activities that accommodate the needs of the residents of Temple while at the same time protect and preserve the natural, cultural, scenic, and historic resources of the Town.*

POLICIES:

1. Ensure that Temple has a diverse mix of residential, recreational, agricultural, commercial and light industrial uses consistent with the goals, policies and objectives of this Master Plan.

2. Ensure that the Village Center area allows for a mix of residential and commercial uses, to include mixed use buildings.
3. Ensure that development occurs at a rate consistent with the capability of the land to support it and the town's ability to provide services.
4. Balance new development with protection of Temple's sensitive and significant natural, cultural, and historic resources.
5. Ensure that telecommunications facilities have the least possible visual and environmental impact, while providing adequate opportunity for these facilities.
6. Ensure the use of Best Management Practices (BMPs) for storm water runoff.
7. Encourage the use of shared driveways and interconnecting driveways between developments where feasible.

OBJECTIVES:

1. Assess each subdivision and site plan proposal regarding the scale and location of the proposed development in order to evaluate impacts on the Town. PLANNING BOARD
2. Review the Zoning Ordinance on an annual basis, in conjunction with the other Town Boards, to ensure that it reflects goals and objectives of the Master Plan and meets the needs of current local conditions. PLANNING BOARD, CODE ENFORCEMENT OFFICER
3. Review and amend the Zoning Ordinance as necessary to ensure that "sprawl development" is minimized and mitigated. PLANNING BOARD
4. Ensure, to the greatest degree possible through local regulations, that telecommunications facilities be camouflaged, or hidden in or on existing structures. PLANNING BOARD, CODE ENFORCEMENT OFFICER
5. Promote innovative development concepts such as conservation subdivision design, planned residential and/or open space (cluster) developments which encourage variety in residential architecture and landscape design, in conjunction with the preservation of open space and critical resource areas. PLANNING BOARD, CONSERVATION COMMISSION
6. Explore the requirements and methods for growth management strategies pursuant to RSA 674:21 and 22. PLANNING BOARD
7. Amend the Subdivision and Site Plan Review Regulations to require the use of Best Management Practices (BMPs) for storm water runoff. PLANNING BOARD
8. Amend the Subdivision and Site Plan Review Regulations to include provisions for shared driveways and interconnecting driveways between developments. PLANNING BOARD
9. Amend the Subdivision and Site Plan Review Regulations to require Site Specific

Soil Mapping Standards. PLANNING BOARD

10. Amend the Subdivision and Site Plan Review Regulations with criteria for Developments of Regional Impact. PLANNING BOARD

Community Facilities

GOAL: *Ensure that residents of the Town of Temple have access to effective local services and facilities, and that the administration of local government is responsive to the needs of the residents.*

POLICIES:

1. Coordinate the operations and expenditures of town governance, through routine communication among department heads, in order to provide services in a cost-effective manner.
2. Recognize that Temple does not wish to create a need for public utilities such as water and sewage disposal services.
3. Support the buying or sharing of equipment, materials and/or services with other towns, as feasible.
4. Anticipate the demands that new growth will place on town services and facilities, and plan accordingly.
5. Locate community facilities in the Village Center area, design such facilities to reflect traditional character, and encourage the re-use of existing structures/lots rather than developing “greenfield” sites for public uses.
6. Recognize the need to continue support of an excellent educational system and coordinate plans and needs with the school district.

OBJECTIVES:

1. Conduct an annual review of municipal operations. SELECTMEN, DEPT. HEADS
2. Ensure adequate staffing and support for municipal government regarding maintenance of infrastructure and facilities, including training and establishing “best practice” procedures. SELECTMEN
3. Develop and implement annual and long-range plans for all departments of municipal government regarding the administration and duties of each department. SELECTMEN, DEPT. HEADS
4. Routinely analyze the need and opportunities for the future addition and/or expansion of municipal services and facilities with public input. SELECTMEN, PLANNING BOARD, DEPT. HEADS, PUBLIC INFORMATION MEETINGS
5. Establish and maintain a municipal Capital Improvements Program with a minimum planning horizon of six years. PLANNING BOARD

Economic Development

GOAL: *Promote Economic Development in Temple as a way to Protect and Enhance the Town's Quality of Life in a manner consistent with the Master Plan and Temple's history.*

POLICIES:

1. Create and maintain a balanced tax base by increasing certain commercial and industrial base that reduces the tax burden borne by individual home owners.
2. Promote a wide range and number of local employment opportunities.
3. Increase educational opportunities for Temple residents to promote a more educated work force.
4. Encourage home occupations and home-based businesses.
5. Encourage agricultural and forestry businesses.
6. Enhance the appearance and economic vitality of the Village Center area by upgrading its public infrastructure and encouraging fuller utilization of more Main Street properties.
7. Ensure the housing stock and residential development opportunities in Temple support Temple's economic development goals.
8. Recognize the essential role that telecommunications plays in today's economy.
9. Promote the development of tourism-based businesses.

OBJECTIVES:

1. Continually monitor the Zoning Ordinance to ensure that it reflects the changing nature of home occupations and businesses. PLANNING BOARD, SELECTMEN, CODE ENFORCEMENT OFFICER
2. Investigate establishing an agricultural/forestry overlay district that would favor agricultural and forestry uses over other land uses, through the regulation of lot sizes, buffering, sales of agricultural and forestry products, etc. PLANNING BOARD, SELECTMEN, CODE ENFORCEMENT OFFICER
3. Encourage formal municipal-level participation in regional economic development organizations, such as Monadnock Business Ventures, Inc. SELECTMEN
4. Evaluate parcels town-wide to identify sites suitable for future industrial and/or commercial development. Consider any rezoning, as necessary. CONSERVATION COMMISSION, PLANNING BOARD
5. Review zoning and other land use regulations of neighboring towns periodically to assess Temple's industrial/commercial uses. PLANNING BOARD

6. Develop partnerships between regional educational institutions and local businesses to develop training and re-training programs to build appropriate skills for employment in the local economy. SELECTMEN
7. Improvements of municipal facilities, infrastructure or services or other publicly funded activity as may be recommended should be taken under consideration in the development of the town's Capital Improvement Program. SELECTMEN, PLANNING BOARD

Traffic and Transportation

GOAL #1: *Ensure that the transportation system in and through the Town of Temple functions as safely and efficiently as possible.*

POLICIES:

1. Develop a transportation system/network that supports alternatives to motorized modes of travel.
2. Restrict growth of the town road network to the minimum necessary to serve the essential transportation needs of the town's population.
3. Establish standards of construction, maintenance and improvements that balance the need for safety on the roads with residents' concern for maintaining a rural atmosphere.
4. Coordinate management of the transportation system with Regional travel and development trends of neighboring towns.

OBJECTIVES:

1. Provide for pedestrian walkways wherever warranted by traffic and development. PLANNING BOARD
2. Create a pedestrian-friendly Village Center area, through the development of pedestrian and bicycle facilities and the management of motorized-traffic behavior. PLANNING BOARD
3. Ensure, through site plan review, that adequate off-street parking is provided for in all future developments. PLANNING BOARD
4. Use the State of New Hampshire's Transportation Enhancement Program (through the auspices of the Southwest Region Planning Commission) to fund future Downtown improvements. SELECTMEN, PLANNING BOARD
5. Ensure long-range planning for the maintenance of all town roads and bridges by preparing a schedule of road and bridge maintenance improvement projects. SELECTMEN, ROAD AGENT
6. Establish standards of design and operating procedures for the maintenance, improvement and construction of municipal roads to protect the rural character of

Temple while providing a safe and efficient road network, including protection of roadside trees, preventing destruction of stone walls and minimizing roadway width, and changes in radius of vertical and horizontal curves. SELECTMEN, ROAD AGENT, PLANNING BOARD

7. Consider the adoption of an Access Management Plan for NH Route 101 through Temple. PLANNING BOARD
8. Evaluate the use of the Scenic Road designation for certain roads in Temple, pursuant to RSA 231:158, II. SELECTMEN, CODE ENFORCEMENT OFFICER
9. Support the continued participation by the town in the Transportation Improvement Program planning process carried out by the Southwest Region Planning Commission and State of New Hampshire. SELECTMEN, ROAD AGENT, PLANNING BOARD

Housing

GOAL: *Ensure that adequate, safe, and sanitary housing for all existing and future residents is achievable in Temple.*

POLICIES:

1. Implement and administer the land use regulations so that there are no regulatory barriers to the provision of a range of housing types in a variety of price categories.
2. Support the preservation and maintenance of the existing and future housing stock through public and private actions.
3. Encourage the private sector to remove or rehabilitate all substandard housing.
4. Provide for diversity and flexibility in residential development without compromising rural character.
5. Support the development of adequate elderly housing.

OBJECTIVES:

1. Periodically conduct a housing inventory within Temple, including characteristics such as the number of single and multi-family houses; the age and condition of houses; trends in the area real estate market; and rental versus ownership rates. SELECTMEN, PLANNING BOARD
2. Assess the impact of regional development and land use regulations in neighboring towns on housing demands for Temple. PLANNING BOARD
3. Amend the Zoning Ordinance to allow congregate housing for the elderly in residential areas. PLANNING BOARD

Conservation and Preservation

GOAL #1: *Guide new development to insure protection of the Town's sensitive and significant natural, cultural, and historic resources.*

POLICIES:

1. Preserve and protect agricultural lands and environmentally sensitive lands and protect wildlife corridors to enhance the open space characteristics of the town.
2. Develop natural feature overlay zoning districts that can prevent or minimize development activity that could be harmful to environmentally sensitive areas and wildlife corridors.
3. Promote good stewardship of forested private land through public education regarding the benefits to the owners and the community of forest management, and professional and technical resources available to land owners for forest management.
4. Support the development of long-range plans for the various large tracts of open space, in preparation for any potential change in ownership.
5. Encourage the use of lands for agricultural and forestry uses.
6. Support "Friends of the Wapack."

OBJECTIVES:

1. Develop and maintain a Natural Resource Inventory. CONSERVATION COMMISSION
2. Promote the connection of the publicly owned trail system to the regional trail network. CONSERVATION COMMISSION
3. Explore the use of an Aquifer Protection District Ordinance, or a Groundwater Protection Health Ordinance. PLANNING BOARD, CONSERVATION COMMISSION
4. Explore the use of a Shoreland Protection District Ordinance, or Surface Water Resources Protection Overlay District. PLANNING BOARD, CONSERVATION COMMISSION
5. Develop and maintain an Open Space Plan for the Town of Temple. PLANNING BOARD, CONSERVATION COMMISSION, SELECTMEN
6. Establish a Conservation Reserve Fund to support public activities such as the acquisition of easements for land conservation or trail access and the acquisition of real property for conservation or multiple uses. CONSERVATION COMMISSION
7. Adopt Conservation Subdivision regulations. PLANNING BOARD, CONSERVATION COMMISSION

GOAL #2: *Strive to improve the aesthetic quality and visual impact of the man-made environment as well as preserve and enhance the attractive visual features of the natural environment.*

POLICIES:

1. Protect the scenic elements of the town's natural environment such as steep slopes, hilltops, waterbodies, streams, rivers, fields, and viewsheds.
2. Encourage the use of aesthetically pleasing landscaping practices to enhance the visual and auditory quality of the man-made environment. In appropriate cases, the Planning Board may request landscaping plans to be submitted as part of development applications.
3. Encourage the underground placement of utilities when and where practical; and when underground placement is not practical, utilize design and landscaping techniques to blend such facilities with the natural environment to minimize their obtrusiveness.
4. Encourage aesthetics and attractive designs of signs in terms of number, type, size and location.

OBJECTIVES:

1. Consider the adoption of a Steep Slopes Ordinance. PLANNING BOARD
2. Consider the adoption of a Scenic Viewshed Protection Ordinance. PLANNING BOARD
3. Conduct a critical review the town's existing Sign Ordinance. PLANNING BOARD, CODE ENFORCEMENT OFFICER
4. Amend the Temple Subdivision and Site Plan Review Regulations to require the underground placement of utilities where practical; and when underground placement is not practical, utilize design and landscaping techniques to blend such facilities with the natural environment to minimize their obtrusiveness. PLANNING BOARD
5. Consider the adoption of a Noise Ordinance. SELECTMEN, PLANNING BOARD

The Temple Planning Board hereby certifies that the preceding document adopted on December 3, 2003, is the true Master Plan of the Town of Temple, New Hampshire and was prepared and adopted in accordance with the provisions of RSA 674:2-4, 675:6, and 675:7.

Bruce Kullgren, Sr., Chairman _____

Randall Martin _____

Richard Whitcomb _____

Martin Connolly _____

Rae Barnhisel _____

Allan Pickman _____

Theodore Petro _____

Certified on December 17, 2003

2004–2005 Natural Resources Inventory Town of Temple, New Hampshire

Prepared by the
Temple Conservation Commission

With the assistance of
Alex A. Gonyaw, Antioch New England Graduate School

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1.0. Background

The 1963 New Hampshire law establishing conservation commissions, RSA 36-A, mandates that each commission “shall keep an index of all open space and natural, aesthetic or ecological areas . . . with the plan of obtaining information pertinent to proper utilization of such areas.” In fall 2000, the Temple Conservation Commission (TCC) considered how it might produce such an index, also known as a Natural Resources Inventory (NRI). Two TCC members attended an NRI workshop sponsored by the Southwest Region Planning Commission (SWRPC) in early 2001. At that time, only three of the 36 towns belonging to the SWRPC had completed NRIs.

In fall 2003, the TCC sent a request to the University of New Hampshire (UNH) and Antioch New England Graduate School for skilled student help in producing an NRI for Temple. The request described a medium-level NRI that would draw mainly on existing data, photos, and maps. It would include some field work on wildlife and farmlands and involve citizen participation from the TCC, town boards, and other volunteers. The project would culminate in a draft report designed for periodic updates and expansion as well as public presentations. The goals were (a) to produce a document that could serve as a basis for land-use planning, Conservation Plan development, and specific land-protection work; and (b) to provide information for Temple residents about their natural environment.

In December 2003, the TCC contracted with Alex A. Gonyaw, a professional environmental consultant and Antioch graduate student, to produce an NRI for Temple. He was to complete the project in the first half of 2004 as part of the practicum requirement for his master’s degree.

The description called for identifying Temple natural resources in the following categories:

- *Water*—ponds, streams, wetlands, shorelands, aquifers, watersheds, sources of contamination
- *Open space*—forests, farmlands, unfragmented lands, conservation lands, recreation lands
- *Flora, fauna, habitat*—plant and animal species, rare species, wildlife corridors, deeryards, food sources
- *Geological and topographical features*—bedrock, soils, elevations, slopes, south-facing slopes
- *Cultural sites*—historical, scenic, special community interest

The TCC met with Alex three times, and one TCC member acted as his field supervisor and liaison to the TCC. Alex completed a draft of the NRI at the end of June 2004. After editing by TCC members, this first edition of the NRI was approved by the TCC on August 22, 2005.

The TCC wishes to thank Alex Gonyaw for his good work and volunteer service to our community.

2.0. Overview

This NRI gives a broad picture of Temple's physical environment and its botanical, animal, and human inhabitants. The inventory begins with a brief description of the town's geography and climate, demographics, and human settlement patterns and history. The main body is divided into two parts, terrestrial and aquatic resources, which describe the plants, animals, and natural features that form the essential living character of Temple. The final part of the inventory returns to the human interaction with, and impact on, the physical place.

What do the data collected in this NRI suggest? Section 10.0, Implications of the Data, lists three major planning and conservation challenges. All three involve protecting the town's sources of water. Temple has a relatively small area of wetlands, smaller even than is indicated in the Master Plan. The capacity of Temple's aquifers to supply water for an expanding population is limited. Only one large tract of land is a permanently protected wildlife corridor. The Master Plan section on future land use already calls for consideration of an Aquifer Protection District ordinance and a Shoreland Protection District ordinance. The data in this NRI indicate that a Wetlands Buffer ordinance should also be considered. And preserving additional large tracts of land will be important for protecting water resources as well as for preserving wildlife habitat.

This NRI is meant to be used in conjunction with the Temple Master Plan. The Master Plan section on natural resources contains some information not in this NRI, particularly regarding birds and other wildlife, while the NRI adds significant data that are intended to become part of the Master Plan.

As a "living" document, the NRI offers opportunities for ongoing contributions by residents, professional consultants, and town officials as well as by the TCC. Areas that the TCC would like to expand in the near future include

- Collection of fieldwork data on farmland, animal species, wildlife corridors, and unfragmented lands
- Compilation of co-occurring resources on composite maps to show several data fields—work that can greatly assist in identifying sensitive resource areas
- More accurate mapping of wetlands

The TCC looks forward to using this NRI as a foundation for developing a Conservation Plan for the town. The plan will include a description of land-protection priorities, resource-protection goals, and recommended actions. The UNH Cooperative Extension recommends incorporating the NRI and the Conservation Plan in the town's Master Plan.

*Temple Conservation Commission
August 22, 2005*

3.0. Introduction

3.1. What Is a Natural Resources Inventory?

A Natural Resources Inventory (NRI) lists, categorizes, and describes the resources occurring within a given area, generally a watershed, town, or city. In its simplest form, an NRI is a compilation of existing data on natural resources (UNH, 2001). For this NRI, data were modified by field efforts in areas where the existing data were limited, unavailable, or outdated.

NRIs generally consist of maps, data, and descriptive narratives that attempt to paint a landscape picture of a locality such as a watershed, town, or parcel. Maps may include a variety of forms, including aerial photos, USGS topographic maps, and bedrock geology maps. An NRI provides a broad and relatively complete view of a locality's natural resources, pattern of land use, and the ways in which the various aspects fit together to form its unique character. An NRI also attempts to identify trends in the use of land and other natural resources to help support informed decisions about development.

Data used in completing this NRI were drawn from a number of sources, including personal accounts, published species records, government and private studies, field efforts, and Internet resources. Geographic information systems (GIS) were used extensively in the preparation of this report. Data layers were obtained from GRANIT, the State of New Hampshire GIS clearinghouse, as well as from the Southwest Region Planning Commission. Additional data, such as deer wintering areas, were obtained from a variety of sources, including Temple residents, the U.S. Department of Agriculture Natural Resources Conservation Service, and nonprofit groups such as the New Hampshire Chapter of The Nature Conservancy.

The narrative in each of the following sections describes, in as much detail as is available, the current state of knowledge about Temple's natural resources.

3.2. Why Is a Natural Resources Inventory Important?

Since 1960, New Hampshire has led the Northeast in population growth rate, a trend that is expected to continue well into the next two decades. More than 60% of New Hampshire's population growth occurred in Hillsborough and Rockingham counties, according to the New Hampshire Office of Energy and Planning (OEP). In 2004, the OEP projected a 28% increase in New Hampshire's population from 2005 to 2025, with over half of the state's population projected to be living in Hillsborough and Rockingham counties during this period. More recently, the U.S. Census Bureau projected a 33% increase in New Hampshire's population from 2000 to 2030. At the municipal level, the OEP has projected Temple's population growth from 2005 to 2025 at 24%.

Such population growth increases pressure on natural resources, not only by displacing wildlife and fragmenting habitat, but also by compromising "direct use" resources such as groundwater and air quality. Having access to useful data in an NRI gives community planners an opportunity to minimize negative impacts of current decisions about developing land and using natural resources as well as an opportunity to maintain options for the future.

4.0. Town of Temple Description

4.1. Geography and Climate

The Town of Temple (Figure 1) is located in extreme southern New Hampshire on the eastern slope of Temple Mountain at N 42° 48' and W 71° 51'. Comprising 14,241 acres (22.3 square miles), Temple is similar in area to surrounding communities. Elevation above mean sea level ranges from 800 feet to 2,198 feet. This range in elevation may have implications from a land-use perspective owing to differences in vegetation, soils, and wildlife populations between the elevation extremes. Median temperatures range from 20°F in January to 69°F in July. The annual average precipitation is 37.2 inches.

4.2. Present Land Use

Temple is a small “bedroom” community with primarily single-family housing and little agricultural or commercial-industrial use of land. Currently, a single commercial dairy and several smaller agricultural enterprises operate in Temple, and small-scale grazing of stock animals is apparent in numerous locations. Hardwood forests are quickly replacing the farmland historically used for orchards, grazing, and hay production. Demand for housing in the next few decades will result in some impact on the forests and remaining unforested land.

From 1990 to 2000, Temple added 103 residents, increasing population by 8.6% to 1,297. At the end of 2004, the population was 1,417. This represents a density of 64 people per square mile, which places Temple in the “exurban” land class (36–144 people per square mile). In 2000, the median age was 36, with 30% of the population under age 18 and 8% age 65 and older (U.S. Census 2000). As of April 1, 2000, Temple had 464 total housing units, a density of 21 units per square mile. Building permits issued for new houses totaled 14 in 2000, 14 in 2001, 21 in 2002, 11 in 2003, and 20 in 2004; 5 building permits were issued for new houses in the first 6 months of 2005.

5.0. Town History

5.1. Settlement

The town was originally known as Peterborough Slip when it was first granted town status in 1750. The Town of Temple was incorporated in 1768 and named in honor of New Hampshire Lieutenant Governor John Temple, who served under Governor John Wentworth. The town was settled in a pioneering fashion, with families assuming homesteads and clearing land for agriculture.

5.2. Agriculture, Forestry, and Industry

The current state of Temple's natural environment is due mainly to its pre-Civil War agricultural heritage. Prior to the large-scale decline of New England agriculture in the latter half of the 19th century, Temple was almost entirely deforested, with pastureland extending onto the slopes of Temple Mountain. Businesses and agricultural operations were generally multigenerational, operating on original homesteads. Forestry first took place in an effort to clear land. Small-scale harvesting followed and continues to the present. Following the decline of livestock operations, orchards were planted in abundance. The remains of those orchards can still be seen growing along roadsides and in the understory of today's maturing hardwood forest.

5.3. Residential Development and Future Land Use

Unlike many of its neighboring communities, Temple did not experience a shift to industrial and associated commercial activities following the regional decline of agriculture; the town's elevation is too high for creating the large water flows required by 19th-century industry. Current land-use pressures in Temple appear to focus on slowly expanding residential development, which is fragmenting the forests and former pastureland. Future land use is likely to continue focusing on residential development unless an expanding population base creates pressure for more commercial and industrial development.

6.0. Natural Resources Inventory Methods

6.1. Data Sources

Data compiled for use in this NRI were taken from a variety of printed and electronic sources. Because government documents are often subjected to an administrative review process, agency publications were relied upon heavily. Electronic resources included documents and GIS data layers. Survey data on plants were collected from a variety of nonprofit and government agencies in addition to survey work done by residents of Temple.

6.2. Data Quality

Data used in this NRI are presumed to be reasonably accurate. Certain data, particularly vegetation and wildlife data, should be interpreted with some degree of caution. Such data are often collected on small spatial scales at single points in time. Moreover, because they are often collected at wildlife refuges or state forests, they may not be representative of an entire parcel of land. Thus, although a species may be listed as present in Temple, it may be unique to a particular location and not common to the entire town. Given these caveats, the data do show presence or absence of species within a boundary and provide valuable information about species diversity and the extent of the species pool.

Similarly, other data collected on large spatial scales, such as maps showing the extent of stratified drift aquifers, should be interpreted as having somewhat blurred boundaries in reality. Small-scale surveys conducted to determine these boundaries were extrapolated over a much wider area, so some degree of error should be expected.

6.3. Data Verification

Field checking was the primary method of data verification, done primarily in an effort to assess the accuracy of the National Wetlands Inventory GIS layer. Small, isolated wetlands, especially those under tree cover, may be missed during interpretation of aerial photographs. Additional data collected in the field were used to supplement data where verification appeared necessary.

7.0. Terrestrial Resources

7.1. Vegetation

Vegetation studies conducted within the bounds of Temple have focused primarily on conservation land, although smaller scale field efforts have been conducted on a small number of private lands. Various surveyors—including private citizens whose efforts were coordinated by Temple resident Linda Bollinger, nonprofit groups, and government agencies— have identified a total of 244 plant species (Table 1). This number does not include all of the plant species within Temple, particularly rare species, fungi, lichens, and many mosses.

In Table 1, plants are categorized by type—tree, shrub, or forb/herb/vine—representing the vertical structure of the forest. The species wetland indicator status, a graduated assignment from “water-liking” to “water-disliking,” predicts the conditions in which the plant is likely to occur. For instance, a plant that is designated as a “facultative” wetland species is more likely to be found in soils that are periodically saturated than in a well-drained upland site. Similarly, a plant that is an “obligate” wetland species is only very rarely found in dry conditions. Following are the formal definitions of wetland indicator categories from the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987):

- *Obligate Wetland* (OBL) group includes plants that almost always occur in wetlands (99% of the time).
- *Facultative Wetland* (FACW) group includes plants that usually occur in wetlands (67%–99% of the time).
- *Facultative* (FAC) group includes plants that are just as likely to occur in wetland or nonwetland areas (34%–66% chance of occurring in wetlands or nonwetlands).
- *Facultative Upland* (FACU) group includes plants that occasionally occur in wetlands (1%–33% of the time).
- *Upland* (UPL) group includes plants that almost always occur in uplands (99% of the time).

Plants in Table 1 are also categorized by whether they are native or introduced to the region. Introduction takes place either intentionally (for instance, through farming or gardening activities) or accidentally (such as through passive transport with other goods). Of the 240 known plant species, 22 (9.3%) have been introduced to the vegetation community of Temple (Table 2).

7.1.1. Woody Plants

Trees probably represent the most complete subgroup in the vegetation section; 41 tree species were observed in the various surveys. Birch, maple, oak, and ash species dominate the forest. This is typical of the area and is due in part to the age and land-use history of the forest. A shift toward coniferous forests tends to occur at the highest altitudes, a function of mean annual temperatures, soil conditions, and a variety of other factors related to forest condition. Surveys have recorded an additional 51 shrub species, which form the understory of the forest and the

dominant layer in recently cut forests. These species are especially important as nesting sites for migratory and resident birds as well as for forage for deer and moose.

7.1.2. Nonwoody Plants

Nonwoody plants include grasses, herbs, forbs, vines, and a variety of nonvascular plants, such as mosses. In total, 14 graminoids (grasslike plants) were observed in surveys. Many of these plants are typical wetland species, such as sedges and rushes, that are likely to be affected disproportionately by compromised wetland integrity. The remaining 124 species make up the other categories. The diverse group of nonwoody plants is undoubtedly much larger than shown, as many species occur in a very limited range or in relatively inaccessible habitats.

7.1.3. Rare or Unique Communities

Wetland habitat constitutes 526 acres—only 4% of the land area in Temple—making this habitat relatively rare (Figure 2, National Wetlands Inventory map of Temple). Much of this habitat occurs along or in riparian (streamside) zones and low-lying areas. In addition, vernal pools that hold ponded water during some portion of the year are fairly common in Temple. These pools are often breeding sites for amphibians that use the surrounding woodlands as habitat during the drier portions of the year. It should be reiterated that the National Wetlands Inventory might not include very small or heavily obscured wetlands owing to the use of aerial-photo interpretation. However, despite relatively minor drawbacks, the National Wetlands Inventory gathers a large proportion of the data on the nation's wetlands and can be assumed to be reasonably accurate for the purposes of this initial, larger scale survey of Temple. No additional rare or unique communities have been reported for Temple (NHNHB, 2004).

Of the known plant species in Temple, 58 (24%) are likely to occur in wetland habitat, being either facultative wetland or obligate wetland species in this region. Approximately 4% of the land area of Temple is thus likely to maintain nearly 25% of the plant species pool. In addition to plant species diversity, Temple's wetlands are likely to house a complementary, diverse assemblage of invertebrate and vertebrate animal species. From the standpoint of species protection, existing wetlands in Temple represent an excellent opportunity to maintain species diversity while sacrificing little in the way of opportunity cost for development.

7.1.4. Threatened or Endangered Species

No federal- or state-listed threatened or endangered species were found in the known surveys of Temple (NHNHB, 2004). This does not mean that these species are not present but most likely reflects the low natural abundance and restricted distribution of the rare species as well as the limited spatial extent of current survey data. Care should be taken to minimize the risk of loss of rare, threatened, or endangered species by identifying critical habitats for listed species. Of the 28 state-listed plant species for New Hampshire that have been given threatened or endangered designations, 16 (57%) were likely to be found in wetlands. Thus, protection and maintenance of wetland areas in Temple are likely to result in some protection of any currently undiscovered threatened or endangered species.

7.2. Wildlife

Very little information specific to wildlife was available from verifiable sources. The New Hampshire Department of Fish and Game maintains records of winter deeryards. These are areas where young growth of eastern hemlock and balsam fir allow for winter browse by white-tailed deer and occasional moose. In total, 1,112 of Temple's 14,241 acres (8%) are utilized as winter browsing yards (Figure 3). Anecdotal information about the presence of various species of wildlife, especially birds, is available in the Temple Master Plan.

The United States Geologic Survey (USGS) has conducted studies on the distribution of butterfly species in the entire United States. Although town-level data were unavailable, countywide data from USGS sources were used to obtain a general idea of what species may be found in and around Temple (Table 3). In total, 81 species from five butterfly families have been recorded for Hillsborough County. Given the relatively low level of urbanization, it is likely that a fairly large subset of this list occurs in the vicinity of Temple.

Given the forested nature of Temple's wildlife habitat, it is likely that a "typical" assemblage of mammals, amphibians, reptiles, and birds could be found if surveys were performed. This section of the NRI has many data gaps, and baseline studies of species abundance and distribution would benefit the overall quality of information on which resource-management decisions will be based.

7.3. Soils

Data on soils in Temple come from the 1985 county soil survey prepared by the USDA Natural Resources Conservation Service (Table 4) as well as from GIS layers supplied by the Southwest Region Planning Commission (SWRPC), Keene, New Hampshire. Geologic and descriptive soil information applies to the western portion of the county.

Forest soils in New Hampshire are categorized by drainage class, soil type, and ability to support varied tree species. A "soil unit" is a map delineation representing an area of the landscape that is dominated by one or more kinds of soils; soil units are named according to taxonomic classification of soils. Following is a description of forest soil types found in New Hampshire, with Temple-specific data gathered from the GIS database (Table 5). A total of 661 individual soil units were identified and classified in Temple from a total of 14,664 acres of soil units; percentages in the following forest soil group descriptions use these totals. Figure 4 shows the distribution of types of forest soil units in Temple.

- *Forest Soil Group IA*: 289 soil units (44% of total soil units), 5,067 acres (35% of total soil acreage).

Soils belonging to this group consist of the deeper, loamy-textured, moderately well-, and well-drained soils. Generally, these soils are more fertile than others and have the most favorable moisture relationships. Forest successional trends on these soils are toward stands of shade-tolerant hardwoods, usually beech and sugar maple. Hardwood competition is severe on these soils. Softwood regeneration is usually dependent upon persistent hardwood control efforts. On this soil type, sugar maple is favored by selection-cutting methods, white ash and yellow birch are favored by group and strip cutting, white ash is favored by shelterwood cutting, and white birch is favored by clear-cutting.

- Forest Soil Group IB*: 135 soil units (20%), 4,193 acres (29%).
Soils assigned to Group IB are generally sandy or loamy over sandy textures and slightly less fertile than soils in Group IA. Soil moisture is adequate for good tree growth but may not be quite as abundant as in Group IA soils. Forest successional trends on these soils are toward shade-tolerant hardwoods, predominantly beech. Hardwood competition is moderate to severe on these soils. Successful softwood regeneration is dependent upon hardwood control. On Group IB soils, white birch is favored by clear-cutting, yellow birch is favored by group and strip cutting, hemlock and red spruce are favored by selection cutting, and white pine is favored by shelterwood cutting.
- Forest Soil Group IC*: 61 soil units (9%), 722 acres (5%).
The soils of this group are outwash sands and gravels. Soil drainage is excessively drained to moderately well-drained. Soil moisture is adequate for good softwood growth but is limited for hardwoods. Forest successional trends on these coarse-textured, somewhat droughty and less fertile soils are toward stands of shade-tolerant softwoods, especially red spruce and balsam fir. Balsam fir is a persistent component of stands on this soil type, but is shorter lived than red spruce. Hardwood competition is moderate to slight on these soils. Owing to less hardwood competition, these soils are ideally suited for softwood production; white pine can be maintained and reproduced with modest levels of management. Because these soils are highly responsive to softwood production, they are ideally suited for forest management. On these soils, white pine is favored by group and strip cutting or shelterwood cutting, red spruce and balsam fir are favored by selection cutting or shelterwood cutting, and hemlock is favored by selection cutting.
- Forest Soil Group IIA*: 40 soil units (6%), 3,626 acres (25%).
The soils in this group have physical limitations that make forest management more difficult and costly. Limitations include steep slopes, bedrock outcrops, erosive textures, surface boulders, or extreme rockiness. Usually, productivity of these soils is not greatly affected by their physical limitations. However, management activities such as tree planting, thinning, and harvesting are more difficult and more costly. Temple has a relatively small number of large tracts of this soil type, predominantly on its western half.
- Forest Soil Group IIB*: 80 soil units (12%), 726 acres (5%).
Soils assigned to this group are poorly drained. The seasonal high-water table is generally within 12 inches of the surface. Productivity on these poorly drained soils is generally lower than on soils of other groups. Forest successional trends are toward shade-tolerant softwoods, such as spruce and fir. Owing to abundant natural reproduction, stands on these soils are generally desirable for production of spruce and fir, especially to produce pulpwood. However, because of poor soil drainage, forest management is somewhat limited. Severe windthrow hazard limits partial cutting, frost action threatens survival of planted seedlings, and harvesting is generally restricted to periods when the ground is frozen. On this soil type, spruce and fir are favored by clear-cutting (to release existing advanced regeneration), red spruce is favored by shelterwood cutting, hemlock is favored by selection cutting or shelterwood cutting, and red maple may be favored by stump-sprout culture.
- NC (Not Classified)*: 56 soil units (8%), 331 acres (2%).
These soils are unsuitable for timber harvest due to steepness, rockiness, erodibility, wetness, or highly variable conditions within the soil unit.

Table 5 also includes various other soils from the GIS data. Temple has 79 soil units of prime farmland (12% of total soil units) making up 531 acres of soil (4% of total soil acreage). The U.S. Department of Agriculture defines prime farmland as highly productive land or unique soils and climates where table fruits, grapes, nuts, vegetables, flowers, and other specialty crops are grown. Temple's prime farmland is located predominantly in low-lying areas subject to development due to proximity to roads and convenient services. (See Figure 5.)

Hydric soils include 125 separate soil units (19% of total soil units) and make up a relatively small percentage of total soil acreage (7%, or 988 acres). This distribution of hydric soils reflects the fact that a large number of small wetland areas are scattered throughout Temple. It should be noted that although a soil may be hydric, the soil unit does not necessarily meet the criteria for wetland as defined by the U.S. Army Corps of Engineers. Care should be taken when any development activity is undertaken to ensure that small, isolated wetlands are protected and that their capacity to improve biological diversity and the quality of surface water and groundwater is maintained. (See Figure 6.)

Soils from which sand deposits may potentially be extracted include 262 soil units (40% of total soil units), or 5,397 acres (37% of total soil acreage). Soils with the potential to produce gravel are substantially less common, including only 81 soil units (12%) and 856 acres (6%).

7.4. Surficial Geology

During the last glacial event, 14,000 years ago, the Laurentide Ice Sheet covered New England and other portions of the United States as well as the majority of Canada. This vast ice sheet, often a mile thick, scraped and smoothed the land surface, picking up and transporting huge quantities of material, including clays, silt, sand, gravel, rocks, and boulders. During the glacial melt, this material was deposited by gravity or running water. Gravity deposits, simply dropped in place, were "unsorted," meaning that they were a mixture of various particle sizes ranging from very large boulders to fine clay, now called glacial till. This blanket of glacial till, which varies in thickness from a few inches to hundreds of feet, forms the majority of material on the landscape. In Temple, the glacial-till blanket averages 20 feet thick in upland areas (NRCS, 1985). These glacial tills tend to have limited water yield due to the relatively poor transmissivity of the material. Thicker glacial till is present in low-lying areas, whereas steeper slopes tend either to be bare (such as the hill slope north of Spofford Gap) or to have a very thin covering.

In contrast to gravity deposits, materials deposited by running water typically consist of sand and gravel carried into low-lying areas. These deposits formed the stratified drift aquifers (layered sand and gravel) now used for large water withdrawals and productive domestic wells. Stratified drift aquifers have been surveyed statewide by the USGS using drilling and data extrapolation methods (Medalie and Moore, 1995). The USGS report indicates that Temple has 3.3 square miles—14.7% of its land area—of stratified drift aquifers (Figure 7). Aquifer thickness is generally less than 100 feet and does not appear to be able to support large water withdrawals due to transmissivities of less than 2,000 square feet per day. This information has important implications for Temple's drinking water. Preservation of the town's drinking water supply, and drinking water quality, should be a priority in discussions about managing the town's future growth.

Gravel deposits exist at four locations in Temple. Data were gathered from the NRCS soil survey and digitized onto a GIS layer (Figure 7). These gravel sources are generally located within the boundaries of stratified drift aquifers where gravel and sand near the soil's surface have been exposed by weathering.

7.5. Bedrock Geology

The soils in the western part of Hillsborough County are underlain by metamorphic and igneous rock. The bedrock, which is from the Devonian period, is 365–400 million years old (NRCS, 1985). Metamorphic rock consists of Littleton Formation coarse-grained gray mica schist. Igneous Kinsman Quartz Monzonite intruded through the Littleton Formation schist, creating heterogeneity in the topography of the land and its weathering rate. This weather-resistant igneous formation can be seen in the stone walls built of rocks gathered by settlers and in the boulders dotting the fields and forests of Temple. Scattered throughout the Kinsman Quartz Monzonite are crystals of white feldspar.

8.0. Aquatic Resources

8.1. Fish and Wildlife

Verifiable data are lacking on fish and aquatic wildlife; no studies were found describing the aquatic biological resources in Temple. Further research is necessary to determine the species that use aquatic systems in Temple.

8.2. Surface Waters

8.2.1. Streams

Using GIS mapping techniques, 22 miles of stream were identified within Temple (Figure 2). This equates to a stream density of nearly one mile of stream per square mile of land area. The 22-mile number includes both seasonal and permanent streams that are displayed on a 1:24,000 USGS topographic map. It does not include washes, small rivulets, or streams that may flow only during the heaviest of hydrologic events. These streams generally run from east to west, down gradient toward the Souhegan River mainstem or toward the Senator Tobey Reservoir in the southeast portion of the town. The majority of wetland area in Temple lies along (or in close proximity to) the stream corridors. Given the interchange of water between these systems, it seems likely that wetland systems in Temple may mitigate water quality degradation. Care should be taken to understand the relationship between the impact of land-use activities on wetlands, surface water and groundwater quality parameters, and any planned development in Temple.

8.2.2. Lakes and Ponds

In total, 236 acres of pond and lake area in Temple make up 1.7% of the total surface area (Figure 8). The largest lake area, at 122.6 acres, is the Senator Tobey Reservoir for drinking water. The smallest pond areas identified on GIS data layers were 0.3 acre. The 27 bodies of water that have some degree of nonvegetated open water include four that exceed the 10-acre minimum for “great pond” designation by the state. The remaining 23 bodies of water are each smaller than 8 acres and make up less than 25% of the total lake surface area in Temple.

9.0. Land Use

Land use in Temple is undergoing a slow progression from abandoned farmland and relatively young forest to a more densely residential community. In order to assess the current state of land use in Temple, a survey was conducted to determine the use of each parcel. TCC members and other Temple residents surveyed each tax map parcel and assigned proportions to one or more land-use categories. For example, on a given property, 30% might be used for grazing, 40% for residential purposes, and 30% for established forest. Different people assigned values to different parcels, so some measure of error is involved; data quality and individual perceptions of proportions influenced the accuracy of the data. Given the large scale of the survey, the data give a general picture of land use in Temple, not a scientifically detailed description. Obtaining more accurate data will entail a much greater effort. The data have been summarized in Table 6. A total of 232 parcels were surveyed; the most common land use was established hardwood forest, with 195 parcels being so classified at least partially. The next most common land use was residential (153 parcels averaging 22% in residential use). The third most common land use was hay field (63 parcels averaging 55% hay-field coverage). The acreage estimates made in these surveys were not considered sufficiently accurate and complete for inclusion. These important data will be verified and added in the next edition of this NRI.

9.1. Residential

Residential land use in Temple is shifting toward a higher density residential community. During the last 30 years, approximately 1,200 acres of agricultural and forested land have been developed, generally being broken up into lots smaller than 15 acres (Figure 9). From 1970 to 2001, the number of housing units increased 339%, from 137 to 465 (SRD, 2003). During the last decade (1990–2000), the number of housing units increased 8% as residential development slowed.

9.2. Agricultural

Only a small amount of agricultural land use exists in Temple. Aside from the single remaining dairy operation, several small specialty farms, and small-scale activities for local residential use (such as haying, small plots of row crops, or livestock kept for personal use), agricultural activities have been virtually abandoned in Temple. This has left many fields and orchards to begin the process of secondary succession and reversion to forest land.

9.3. Commercial

Very little commercial activity currently exists in Temple. A few small businesses are scattered throughout the town and next to the common in the historic and geographic center of Temple.

9.4. Forestry

Forestry in Temple exists primarily as small-scale timber harvests on private property. Currently, data are unavailable for yields (by species or total yield) specific to the town. Countywide data are available in Frieswyk and Widmann (2000).

9.5. Undeveloped Land

For the purposes of this NRI, undeveloped land is defined as parcels exceeding 15 acres in size. At the present time, there are 131 such parcels averaging 67.4 acres in size. Large sections of contiguous land in private ownership exist in the northern, western, and southern portions of Temple (Figure 10). Sections of land most likely to undergo the development process, owing to the proximity to general services (such as convenient road access), topography, and neighboring land use, include the white parcels in Figure 10 that are near the geographic center of Temple and south toward New Ipswich.

10.0. Implications of the Data

This first edition of Temple's NRI highlights several important challenges to conservation within the town:

- Temple includes large uplands and mountainous areas, but its wetlands are significantly more limited—both in number and in aggregate size—than is typical for southwestern New Hampshire. When Temple's permanently preserved natural areas are mapped against the wetlands, the lack of protection for these sensitive areas is immediately obvious.
- Several areas within the town include soils favorable to supporting stratified drift aquifers. However, no sites within the town have been identified by the New Hampshire DES as adequate to support a municipal water well. Protecting the aquifers within the town will be crucial to assuring an adequate supply of drinking water into the future.
- Although 1,252 acres in the northwest corner of Temple along the Wapack Range are preserved, there are no other large tracts of permanently protected land within the town. In order to preserve the town's limited wetlands and aquifers as well as to provide land for wildlife habitat (particularly corridors) and for passive recreation, additional carefully selected natural areas need to be placed under permanent protection.

11.0. References

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Figure 1. Map of Temple showing topographic features, roadways, and parcels.

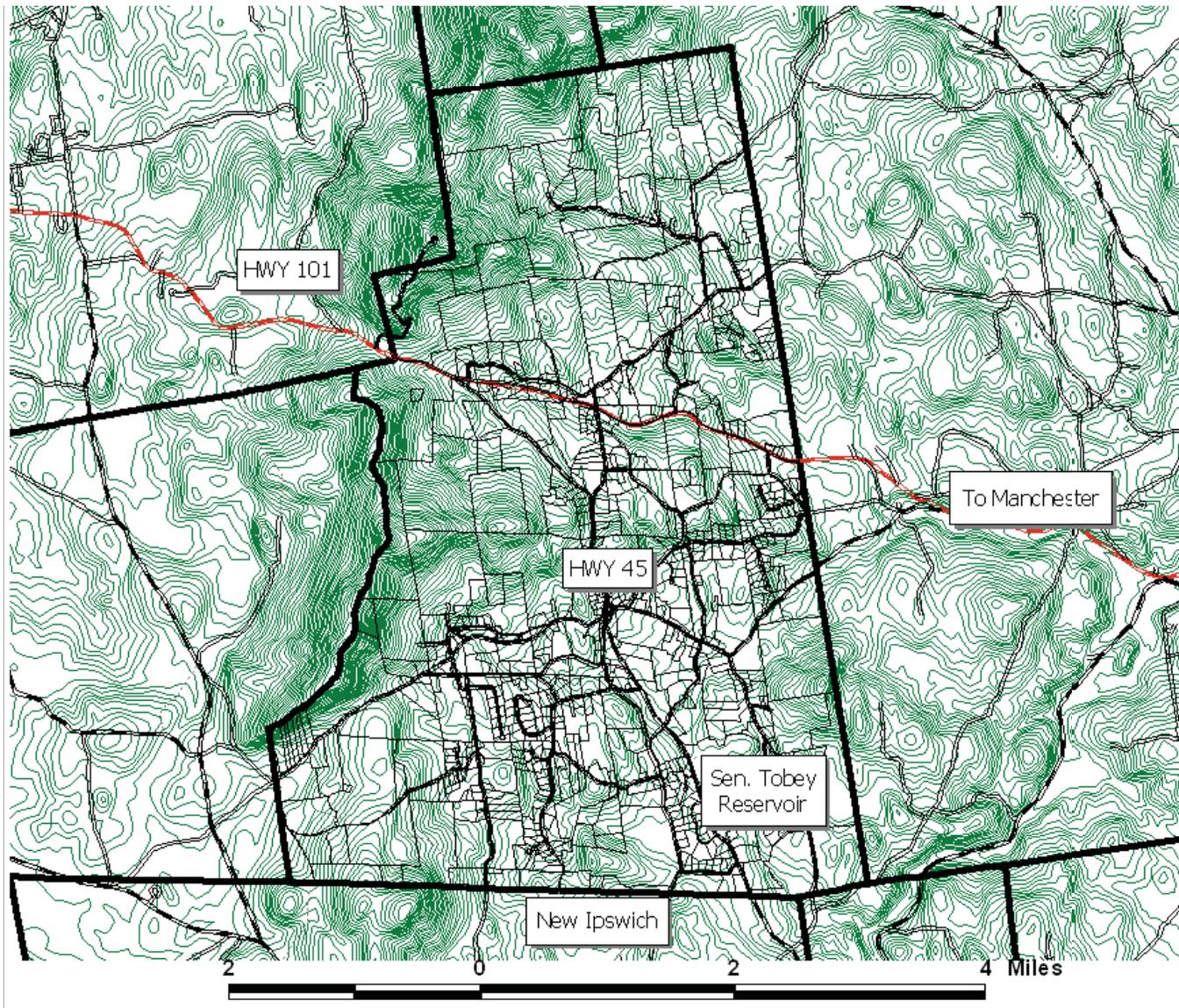


Figure 2. National Wetlands Inventory map of Temple. Blue indicates stream corridors. Red indicates wetlands habitat identified on the NWI database.

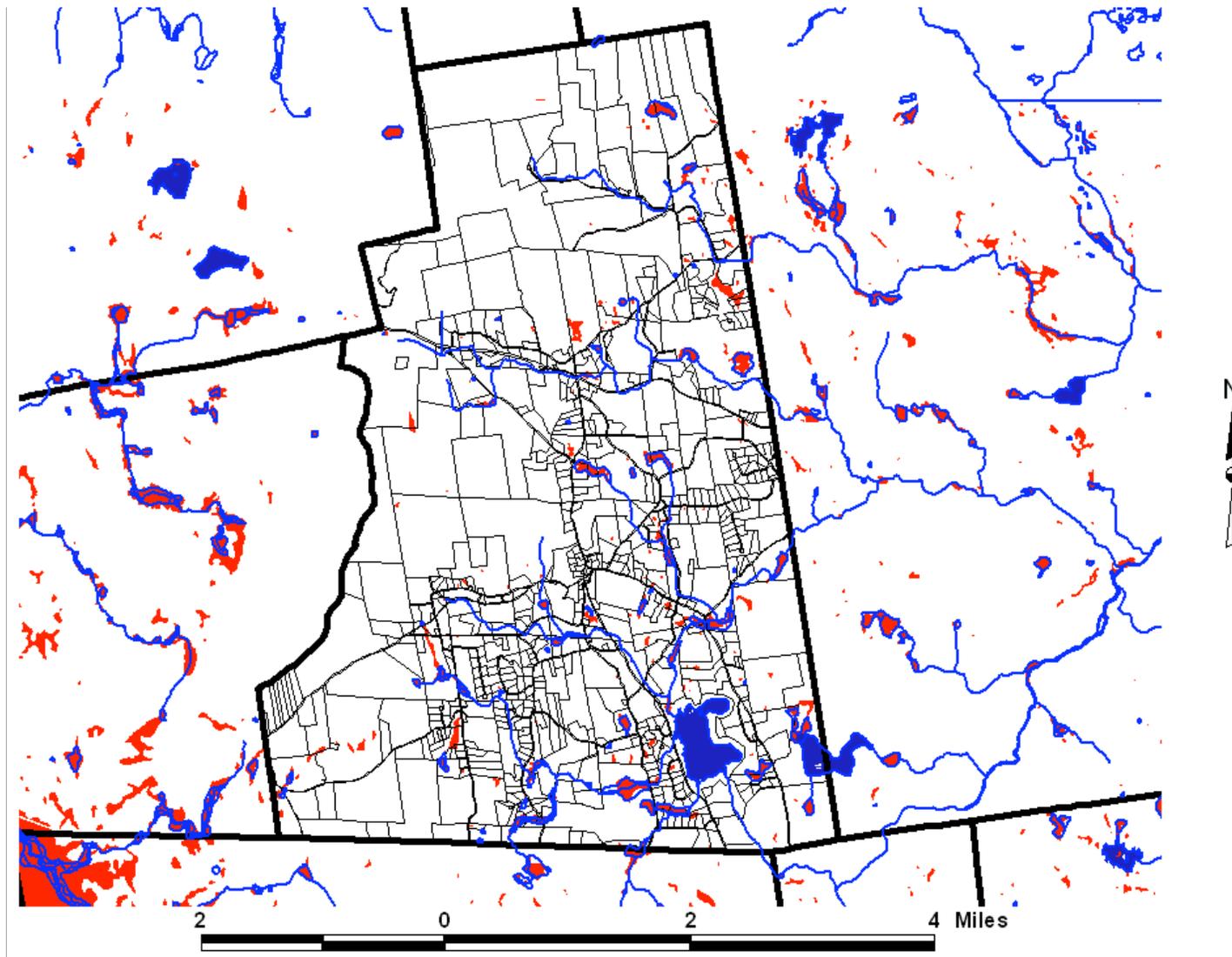


Figure 3. Winter deeryards and conservation areas.

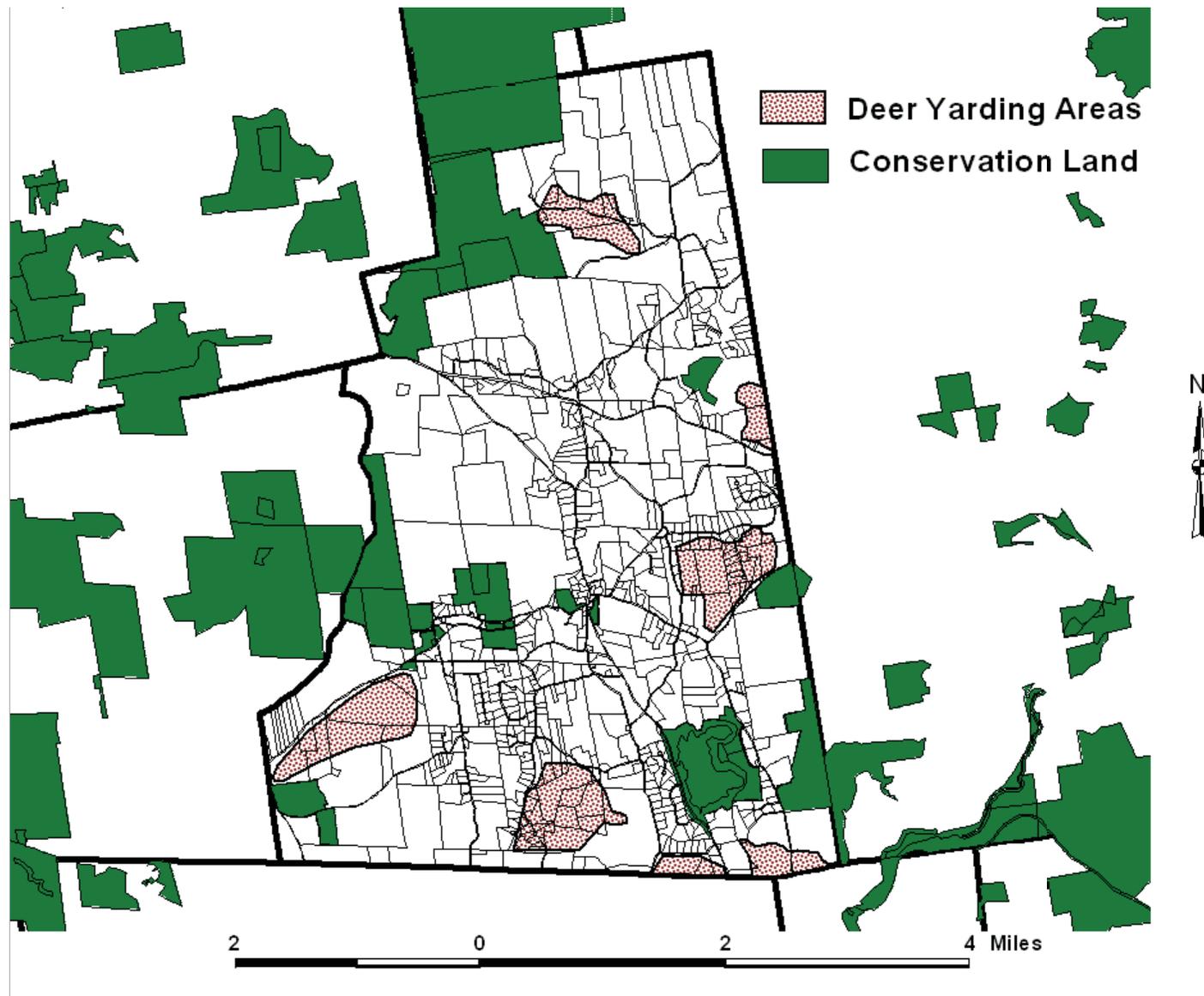


Figure 4. Forest soils and conservation land in Temple.

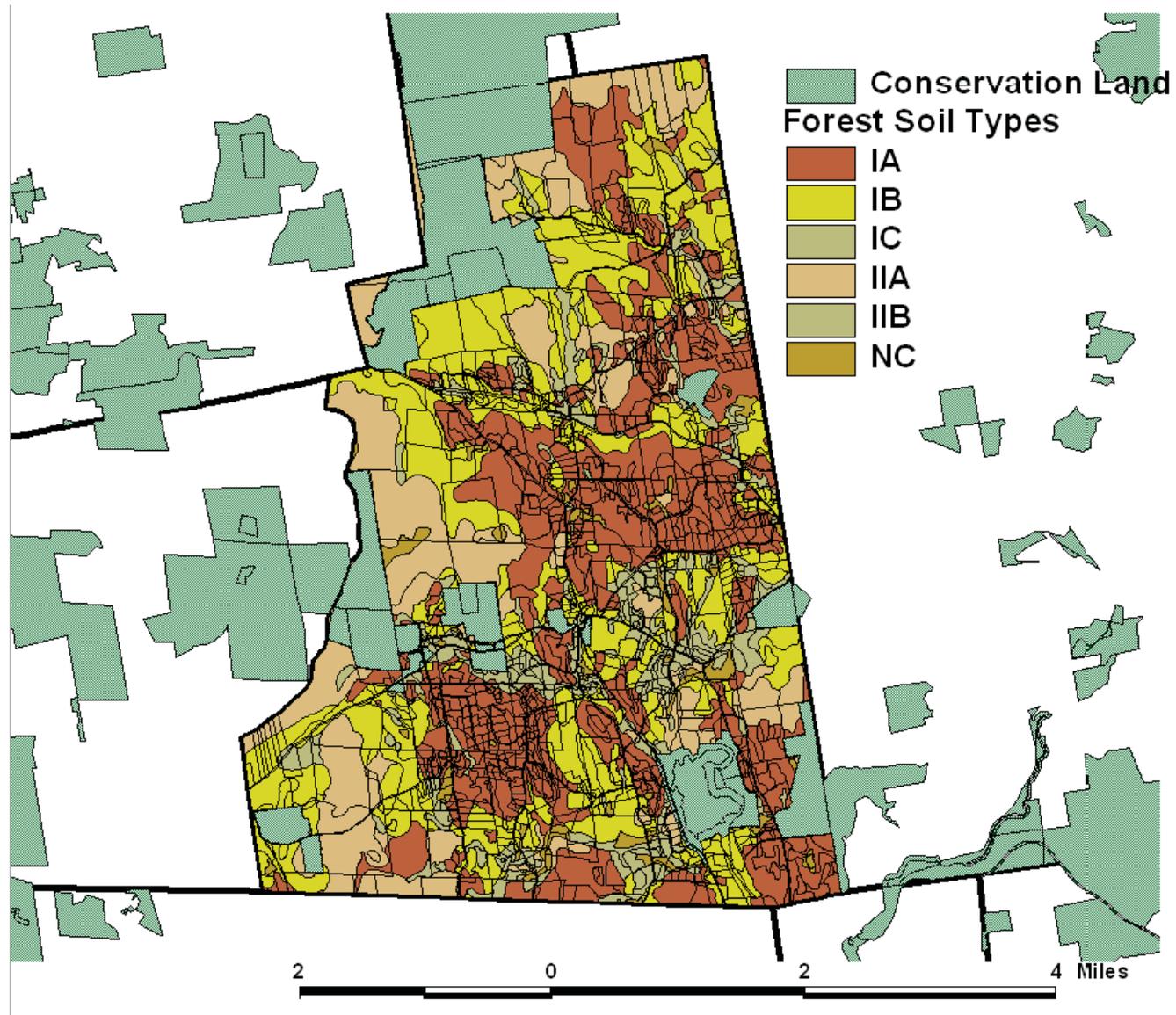


Figure 5. Prime farmland and conservation land in Temple.

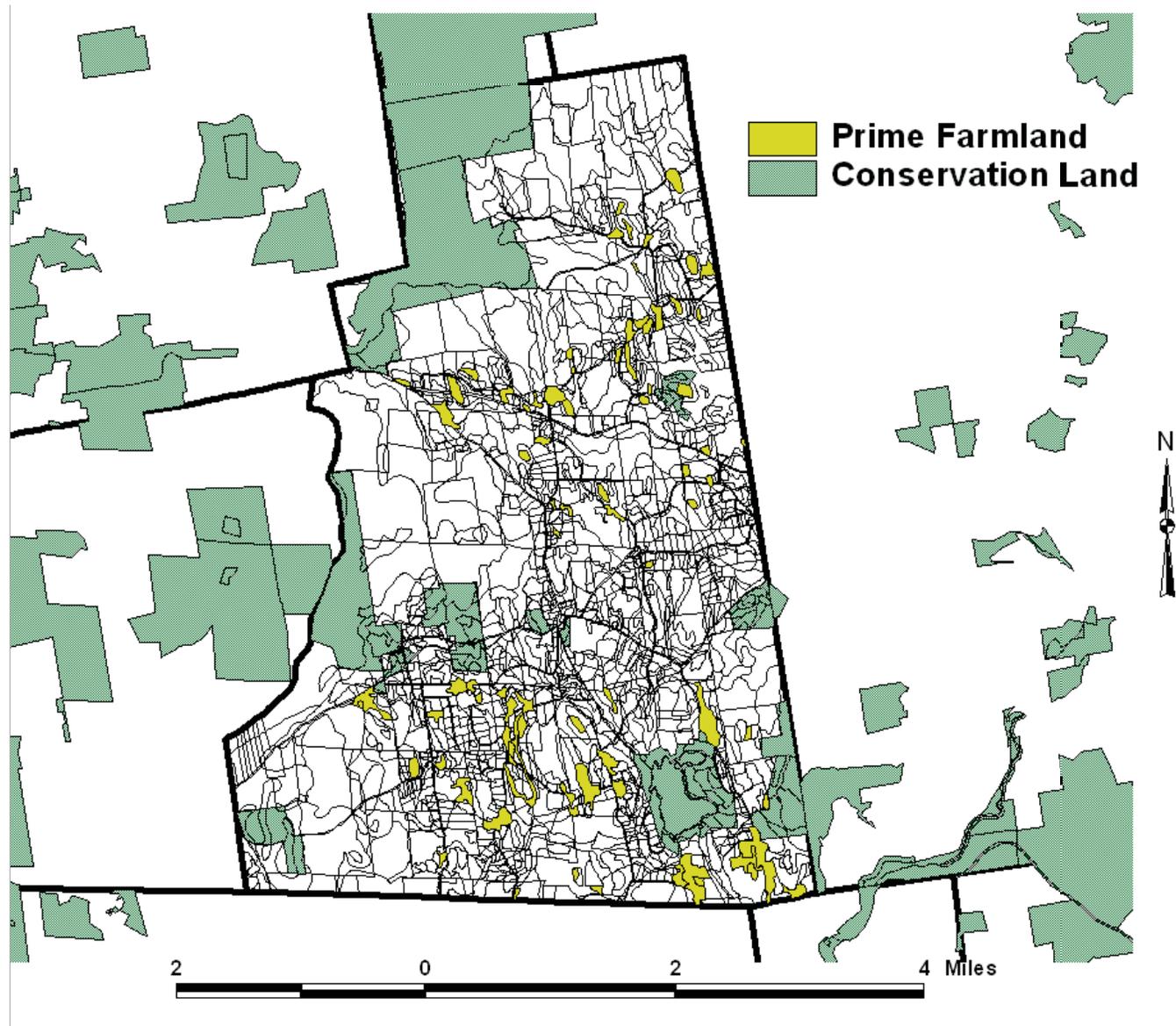


Figure 6. Hydric soils and conservation land in Temple.

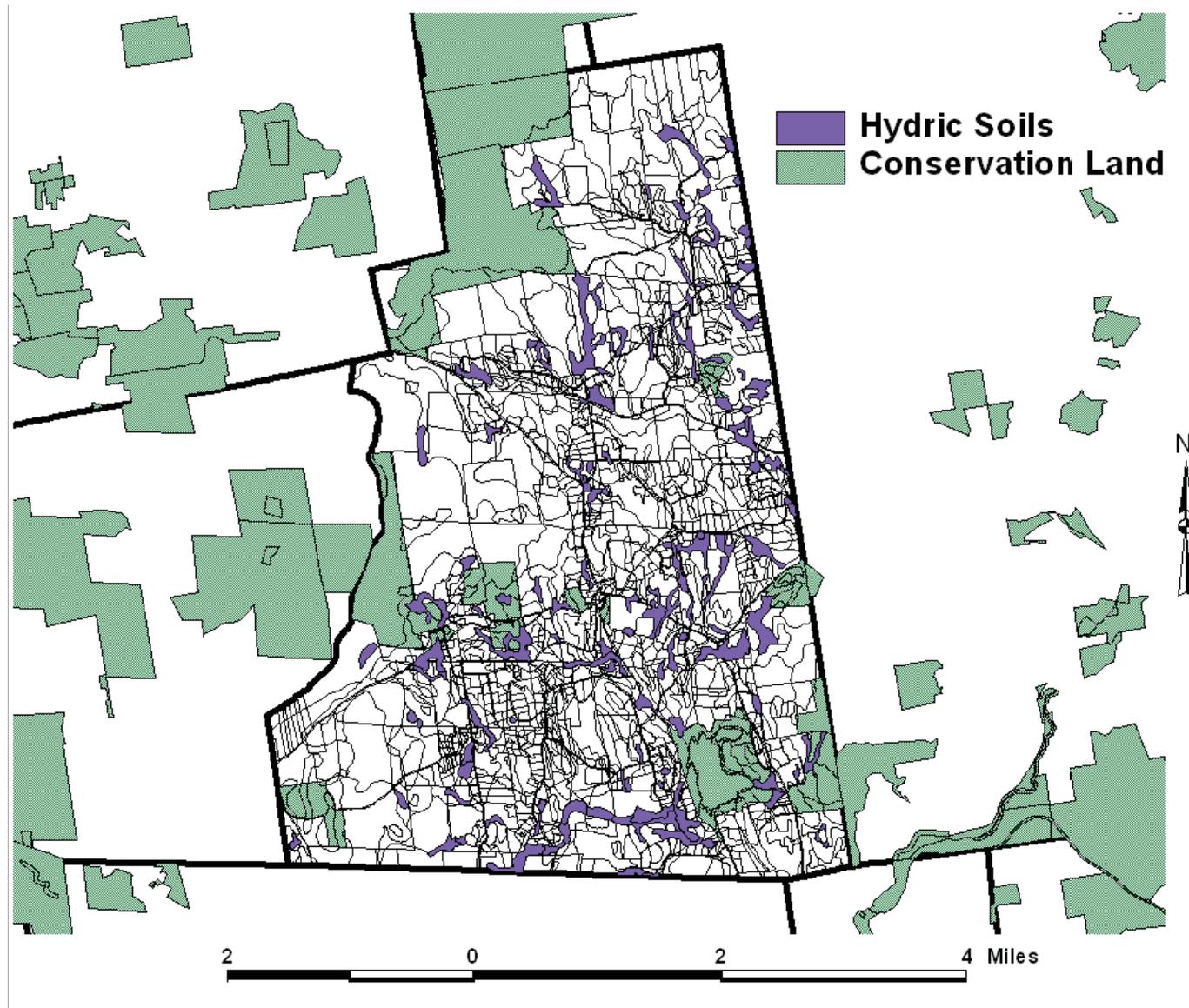


Figure 7. Approximate extent of stratified drift aquifers in Temple and location of gravel pits found in NRCS County Soil Survey. *Adapted from Medalie and Moore (1995).*

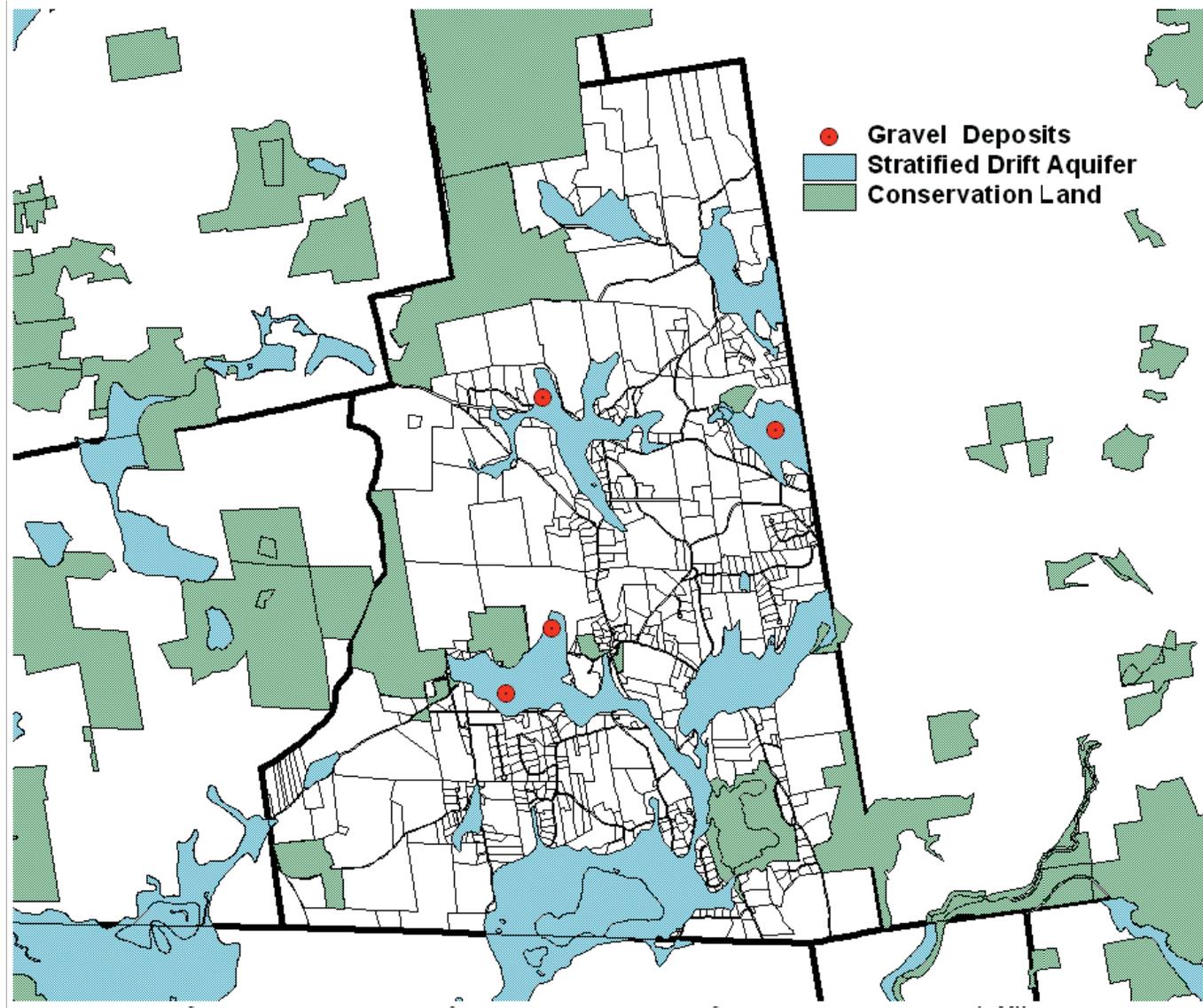
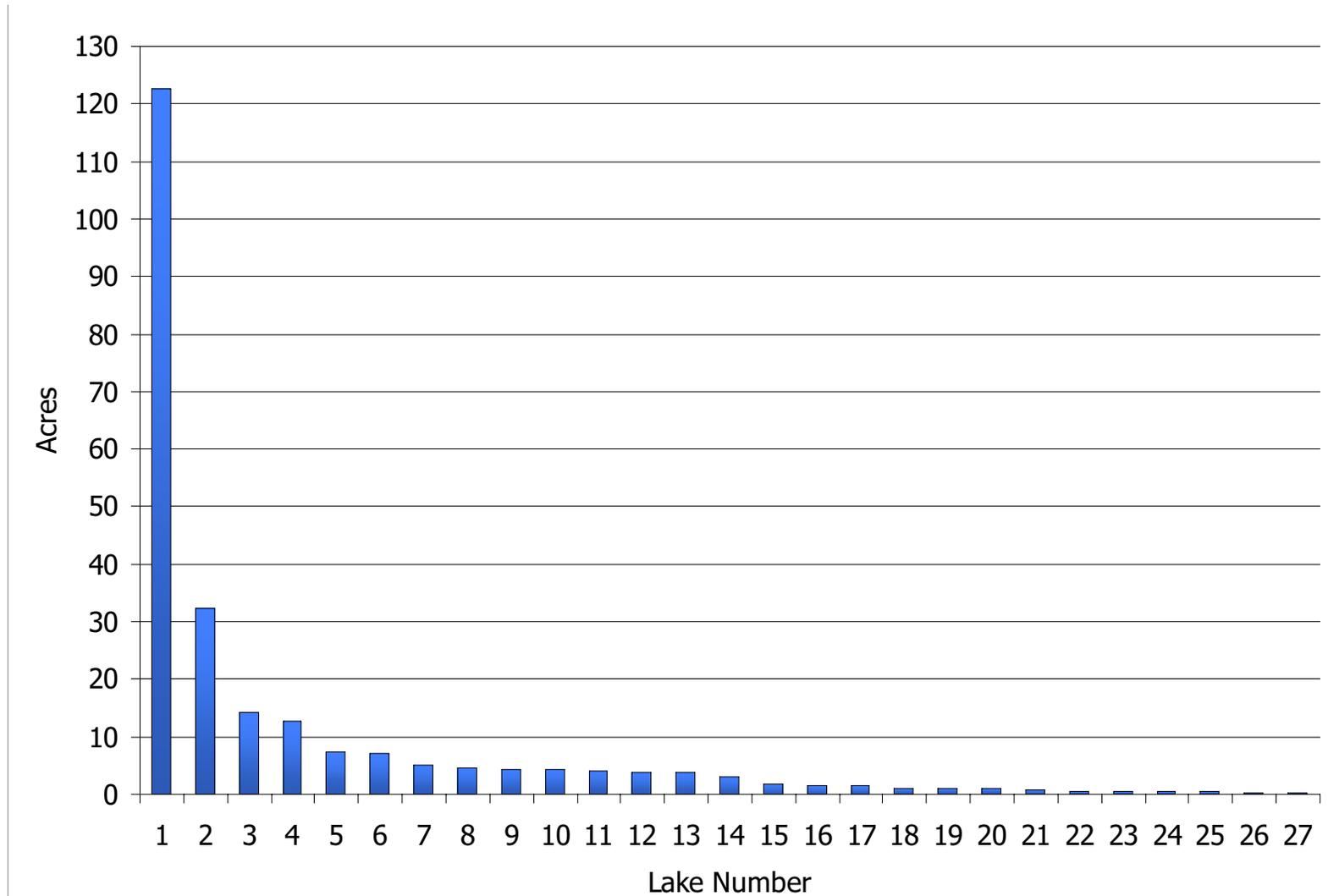


Figure 8. Size range of bodies of water in Temple.



Largest body of water is Senator Tobey Reservoir. Second largest is the portion of Batchelder Pond that crosses the Temple border in the southeast corner of the town. The remaining bodies of water lack official names.

Figure 9. Residential development, conservation land, and town-owned land.

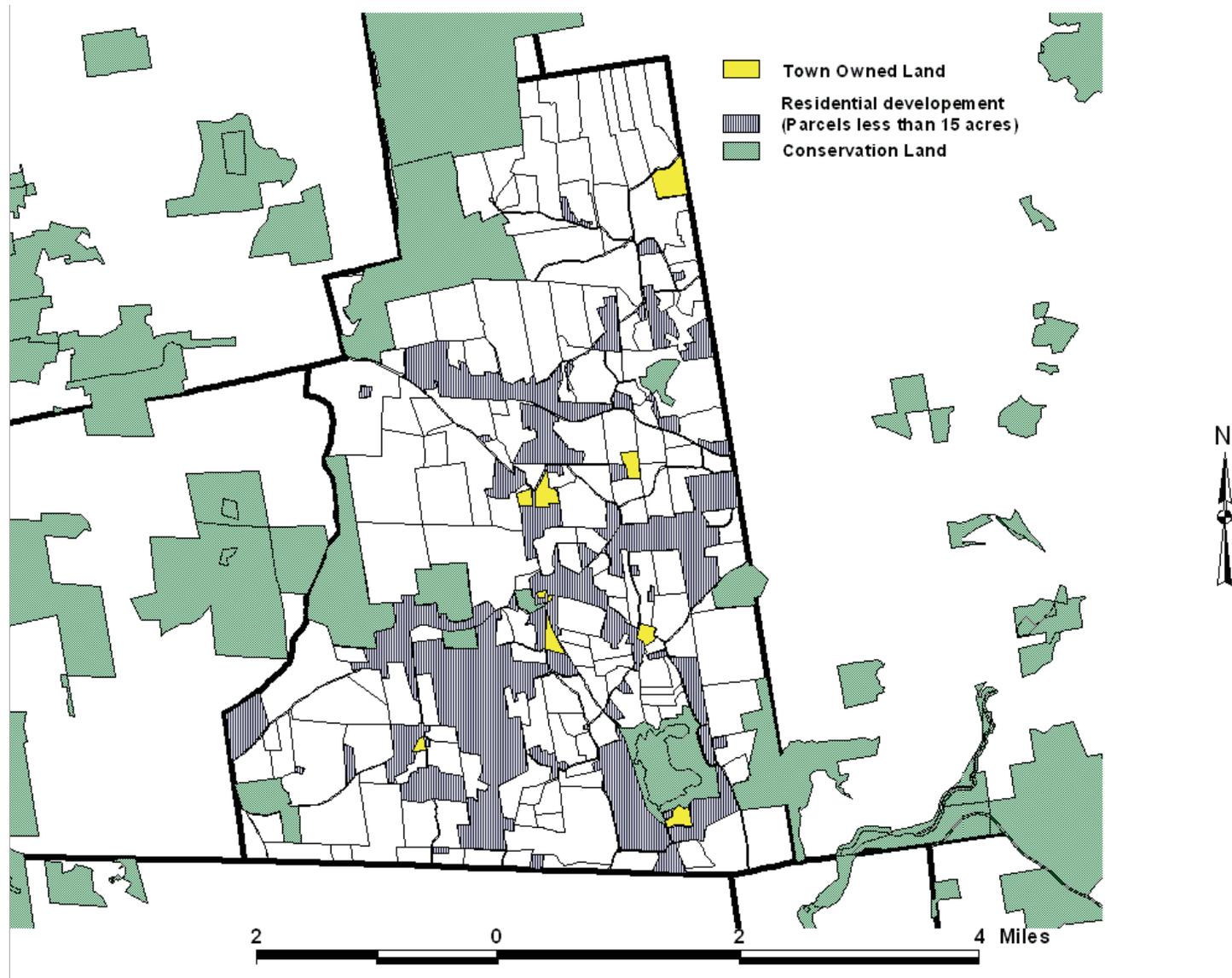


Figure 10. Land-use patterns in Temple.

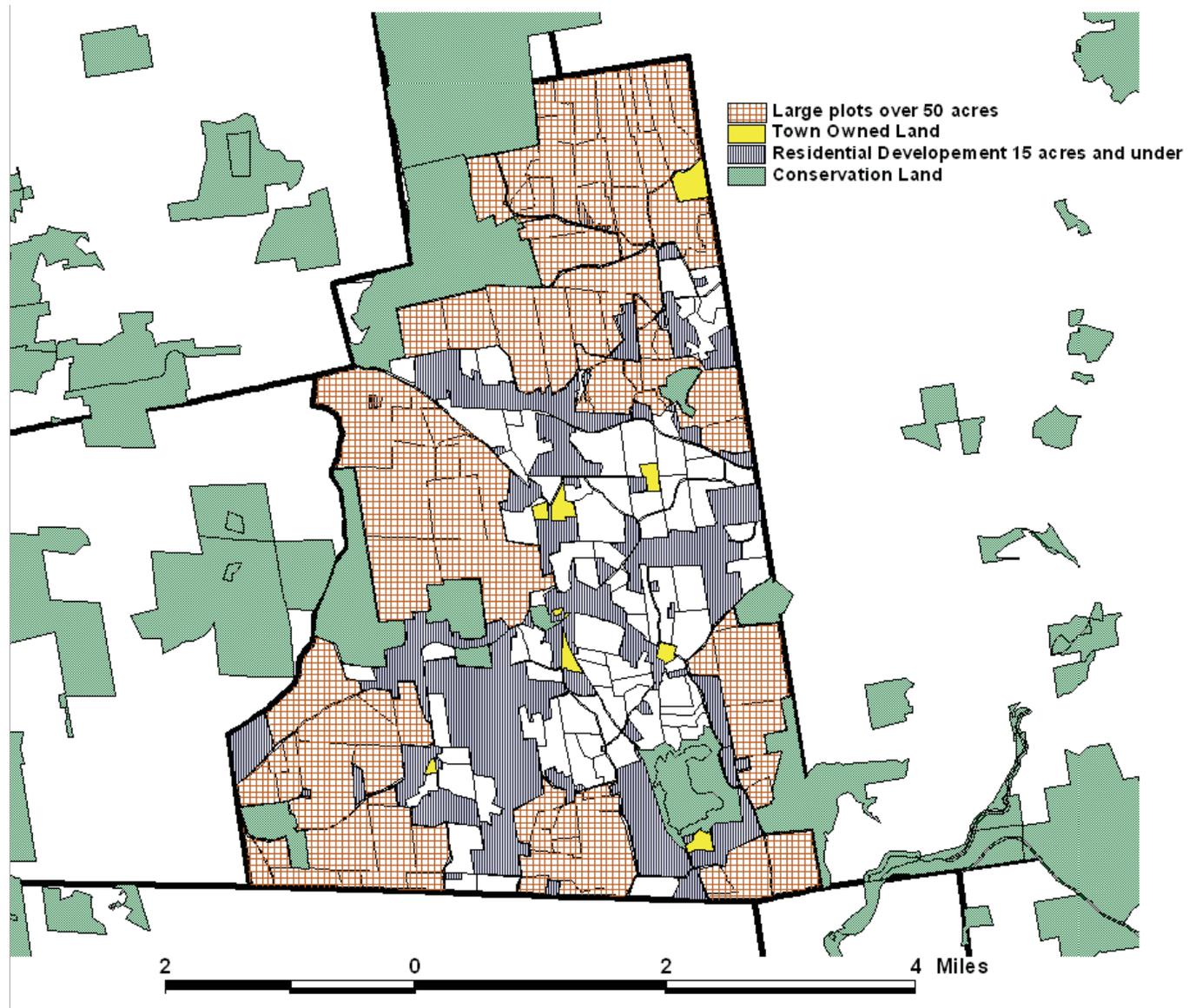


Table 1. Plant Species Observed During Surveys Conducted on Public and Private Lands in Temple, 1999–2000

TREE			
Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Abies balsamea</i>	balsam fir	Native	FAC, FACW / FAC
<i>Acer pensylvanicum</i>	striped maple	Native	FACU-, FACU / FACU
<i>Acer rubrum</i>	red maple	Native	FAC / FAC
<i>Acer saccharum</i>	sugar maple	Native	UPL, FACU / FACU-
<i>Alnus rugosa</i>	speckled alder	Native	FAC, OBL / FACW+
<i>Betula alleghaniensis</i>	yellow birch	Native	FACU+, FAC / FAC
<i>Betula lenta</i>	sweet birch	Native	FACU / FACU
<i>Betula papyrifera</i>	paper birch	Native	FACU, FACU+ / FACU
<i>Betula papyrifera</i> var. <i>cordifolia</i>	heartleaf paper birch	Native	
<i>Betula populifolia</i>	gray birch	Native	FAC / FAC
<i>Castanea dentata</i>	American chestnut	Native	
<i>Cornus alternifolia</i>	alternate-leaf dogwood	Native	
<i>Fagus grandifolia</i>	American beech	Native	FACU / FACU
<i>Fraxinus americana</i>	white ash	Native	FACU / FACU
<i>Fraxinus nigra</i>	black ash	Native	FACW, FACW+ / FACW
<i>Fraxinus pennsylvanica</i>	green Ash	Native	FAC, FACW / FACW
<i>Hamamelis virginiana</i>	American witch-hazel	Native	FACU, FAC- / FAC-
<i>Ilex verticillata</i>	common winterberry	Native	FACW, OBL / FACW+
<i>Juniperus communis</i>	common juniper	Native	
<i>Juniperus virginiana</i>	eastern red cedar	Native	FACU-, FACU / FACU
<i>Kalmia latifolia</i>	mountain laurel	Native	FACU-, FACU / FACU
<i>Larix laricina</i>	American larch	Native	FACW / FACW
<i>Lindera benzoin</i>	northern spicebush	Native	FACW-, FACW / FACW-
<i>Ostrya virginiana</i>	eastern hop hornbeam	Native	FACU-, FACU+ / FACU-
<i>Picea mariana</i>	black spruce	Native	FACW-, FACW / FACW-
<i>Picea rubens</i>	red spruce	Native	FACU / FACU
<i>Pinus strobus</i>	eastern white pine	Native	FACU / FACU
<i>Populus grandidentata</i>	bigtooth aspen	Native	FACU-, FACU / FACU-

TREE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Populus tremuloides</i>	quaking aspen	Native	
<i>Prunus pensylvanica</i>	fire cherry	Native	FACU-, FAC- / FACU-
<i>Prunus serotina</i>	black cherry	Native	FACU / FACU
<i>Prunus virginiana</i>	common chokecherry	Native	FACU-, FAC / FACU
<i>Quercus alba</i>	white oak	Native	FACU-, FACU+ / FACU-
<i>Quercus prinus</i>	chestnut oak	Native	UPL, FACU- / UPL
<i>Quercus rubra</i>	northern red oak	Native	FACU-, FACU+ / FACU-
<i>Quercus velutina</i>	black oak	Native	
<i>Sassafras albidum</i>	sassafras	Native	FACU-, FACU / FACU-
<i>Sorbus americana</i>	American mountain ash	Native	FACU, FAC+ / FACU
<i>Tilia americana</i>	American basswood	Native	FACU / FACU
<i>Tsuga canadensis</i>	eastern hemlock	Native	FACU / FACU
<i>Ulmus americana</i>	American elm	Native	FAC, FACW / FACW-

SHRUB

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Amelanchier</i> spp.	serviceberries	Native	Various
<i>Berberis vulgaris</i>	European barberry	Introduced	UPL, FACU / FACU
<i>Chamaedaphne calyculata</i>	leatherleaf	Native	FACW, OBL / OBL
<i>Chimaphila umbellata</i>	pipsissewa	Native	
<i>Cornus canadensis</i>	Canada bunchberry	Native	FACU, FAC / FAC-
<i>Corylus cornuta</i>	beaked hazelnut	Native	UPL, FACU / FACU-
<i>Diervilla lonicera</i>	northern bush honeysuckle	Native	
<i>Epigaea repens</i>	trailing arbutus	Native	
<i>Euonymus alata</i>	winged burning bush	Introduced	
<i>Eupatorium maculatum</i>	spotted joe-pye weed	Native	
<i>Gaultheria hispidula</i>	creeping snowberry	Native	FACW / FACW

SHRUB

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Gaultheria procumbens</i>	teaberry	Native	FACU / FACU
<i>Gaylussacia baccata</i>	black huckleberry	Native	FACU / FACU
<i>Huperzia lucidula</i>	shining clubmoss	Native	
<i>Kalmia angustifolia</i>	sheep laurel	Native	FAC / FAC
<i>Lonicera canadensis</i>	Canadian fly honeysuckle	Native	FACU / FACU
<i>Lycopodium</i> spp.	clubmoss	Native	Various
<i>Lycopodium annotinum</i>	stiff clubmoss	Native	FACU, FAC / FAC
<i>Lycopodium clavatum</i>	running pine	Native	UPL, FAC / FAC
<i>Lycopodium complanatum</i>	trailing clubmoss	Native	UPL, FAC / FACU-
<i>Lycopodium obscurum</i>	tree clubmoss	Native	FACU-, FACU / FACU
<i>Lycopodium sempervirens</i>	pink clubmoss	Native	
<i>Lyonia ligustrina</i>	maleberry	Native	FACW / FACW
<i>Myrica gale</i>	sweetgale	Native	OBL / OBL
<i>Nemopanthus mucronatus</i>	catberry	Native	OBL / OBL
<i>Pyrola elliptica</i>	shinleaf wintergreen	Native	
<i>Pyrus arbutifolia</i>	red chokecherry	Native	
<i>Pyrus melanocarpa</i>	black chokecherry	Native	
<i>Ribes glandulosum</i>	skunk currant	Native	FACU, FACW / FACW
<i>Rhus hirta</i>	staghorn sumac	Native	
<i>Rosa</i> spp.	roses	Native	Various
<i>Rubus allegheniensis</i>	Allegheny blackberry	Native	UPL, FACW / FACU-
<i>Rubus flagellaris</i>	northern dewberry	Native	UPL, FACU- / UPL
<i>Rubus hispidus</i>	bristly blackberry	Native	FACW / FACW
<i>Rubus idaeus</i>	red raspberry	Native	UPL, FAC / FAC-
<i>Salix discolor</i>	pussy willow	Native	FACW / FACW
<i>Sambucus.canadensis</i>	common elder	Native	UPL, FACW / FACW-
<i>Sambucus racemosa</i>	red elder	Native	FACU, FACU+ / FACU
<i>Spiraea alba</i>	white meadowsweet	Native	FACW, FACW+ / FACW+
<i>Spiraea tomentosa</i>	steeplebush	Native	FACW / FACW
<i>Taxus canadensis</i>	Canada yew	Native	FACU, FAC / FAC
<i>Vaccinium angustifolium</i>	lowbush blueberry	Native	FACU-, FACU / FACU-

SHRUB

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Vaccinium corymbosum</i>	highbush blueberry	Native	FACW-, FACW / FACW-
<i>Vaccinium myrtilloides</i>	velvetleaf blueberry	Native	FACU, FACW- / FAC
<i>Vaccinium pallidum</i>	Blue Ridge blueberry	Native	
<i>Vaccinium vacillans</i>	early lowbush blueberry	Native	
<i>Viburnum</i> spp.	viburnums	Native	Various
<i>Viburnum acerifolium</i>	mapleleaf viburnum	Native	UPL, FACU / UPL*
<i>Viburnum alnifolium</i>	hobblebush	Native	
<i>Viburnum lentago</i>	nannyberry	Native	FACU, FAC+ / FAC
<i>Viburnum recognitum</i>	northern arrowwood	Native	FACW-, FACW / FACW-

GRAMINOID

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Carex debilis</i>	white-edge sedge	Native	FAC, OBL / FAC
<i>Carex folliculata</i>	northern long sedge	Native	
<i>Carex gynandra</i>	nodding sedge	Native	
<i>Carex intumescens</i>	bladder sedge	Native	FACW, OBLFACW+
<i>Carex lurida</i>	shallow sedge	Native	FACW+, OBL / OBL
<i>Carex novae-angliae</i>	New England sedge	Native	FACU / FACU*
<i>Carex trisperma</i>	three-seed sedge	Native	OBL / OBL
<i>Deschampsia flexuosa</i>	wavy hairgrass	Native	
<i>Dulichium arundinaceum</i>	three-way sedge	Native	OBL / OBL
<i>Eleocharis</i> spp.	spikerush	Native	Various
<i>Glyceria canadensis</i>	Canada manna grass	Native	OBL / OBL
<i>Juncus effusus</i>	soft rush	Native	FACW+, OBL / FACW+
<i>Leersia</i> spp.	cutgrasses	Native	Various
<i>Scirpus atrocinctus</i>	black-girdle bulrush	Native	FACW+, OBL / FACW+

FORB / HERB / VINE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Abutilon theophrasti</i>	velvetleaf	Introduced	UPL, FACU- / UPL
<i>Achillea millefolium</i>	common yarrow	Nat. & Intro.	FACU / FACU
<i>Amphicarpaea bracteata</i>	American hogpeanut	Native	FACU, FACW / FAC
<i>Aquilegia</i> spp.	columbines	Native	Various
<i>Aralia hispida</i>	bristly sarsaparilla	Native	
<i>Aralia nudicaulis</i>	wild sarsaparilla	Native	FACU, FAC / FACU
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	Native	FAC, FACW / FACW-
<i>Asclepias</i> spp.	milkweeds	Native	Various
<i>Aster acuminatus</i>	whorled aster	Native	
<i>Athyrium filix-femina</i>	lady fern	Native	FAC, FAC+ / FAC
<i>Brassica rapa</i>	field mustard	Introduced	
<i>Calla palustris</i>	water arum	Native	OBL / OBL
<i>Celastrus scandens</i>	American bittersweet	Native	UPL, FACU / FACU-
<i>Celastrus orbiculatus</i>	Oriental bittersweet	Introduced	UPL / UPL*
<i>Chamerion angustifolium</i>	fireweed	Native	
<i>Chelone glabra</i>	white turtlehead	Native	OBL / OBL
<i>Chenopodium album</i>	lambsquarters	Introduced	FACU, FAC / FACU+
<i>Cichorium intybus</i>	chickory	Introduced	
<i>Circaea alpina</i>	small enchanter's nightshade	Native	FAC, FACW / FACW
<i>Circaea lutetiana</i>	broadleaf enchanter's nightshade	Native	FACU / FACU
<i>Cirsium</i> spp.	thistles	Nat. & Intro.	Various
<i>Clematis</i> spp.	leatherflowers	Native	Various
<i>Clintonia borealis</i>	bluebead	Native	FACU, FAC+ / FAC
<i>Coptis groenlandica</i>	goldthread	Native	
<i>Corallorrhiza maculata</i>	spotted coralroot	Native	UPL, FAC- / FACU
<i>Corallorrhiza trifida</i>	yellow coralroot	Native	FAC, FACW / FACW
<i>Coronilla varia</i>	purple crown vetch	Introduced	
<i>Corydalis sempervirens</i>	pale corydalis	Native	
<i>Cypripedium acaule</i>	pink lady's slipper	Native	FACU, FACW / FACU

FORB / HERB / VINE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Dalibarda repens</i>	robin-run-away	Native	FACU-, FACW+ / FAC
<i>Dennstaedtia punctilobula</i>	hay-scented fern	Native	
<i>Desmodium nudiflorum</i>	naked-flower tick trefoil	Native	
<i>Drosera rotundifolia</i>	roundleaf sundew	Native	OBL / OBL
<i>Dryopteris carthusiana</i>	spinulose woodfern	Native	
<i>Dryopteris intermedia</i>	intermediate woodfern	Native	FACU, FAC / FACU
<i>Dryopteris marginalis</i>	marginal woodfern	Native	FACU-, FACU / FACU-
<i>Epifagus virginiana</i>	beechdrops	Native	
<i>Epipactis helleborine</i>	broadleaf helleborine	Introduced	
<i>Equisetum fluviatile</i>	water horsetail	Native	OBL / OBL
<i>Equisetum hyemale</i>	rough horsetail	Native	FAC+, FACW / FACW
<i>Eupatorium perfoliatum</i>	common boneset	Native	FACW+, OBL / FACW+
<i>Fragaria virginiana</i>	Virginia strawberry	Native	UPL, FAC / FACU
<i>Galium palustre</i>	common marsh bedstraw	Native	OBL / OBL
<i>Goodyera pubescens</i>	downy rattlesnake plantain	Native	UPL, FAC / FACU-
<i>Goodyera repens</i>	lesser rattlesnake plantain	Native	UPL, FACW / FACU+
<i>Gymnocarpium dryopteris</i>	oak fern	Native	UPL, FAC / UPL
<i>Hepatica nobilis</i> var. <i>acuta</i>	sharp-lobed hepatica	Native	
<i>Hydrocotyle americana</i>	American marsh pennywort	Native	OBL / OBL
<i>Hypericum canadense</i>	Canadian Saint-John's-wort	Native	FACW / FACW
<i>Hypericum mutilum</i>	slender Saint-John's-wort	Native	FACW, FACW+ / FACW
<i>Hypericum perforatum</i>	common Saint-John's-wort	Introduced	
<i>Impatiens capensis</i>	jewelweed	Native	FACW, FACW+ / FACW
<i>Iris versicolor</i>	harlequin blueflag	Native	OBL / OBL
<i>Juncus</i> spp.	rushes	Native	Various
<i>Lactuca biennis</i>	tall blue lettuce	Native	FACU, FAC+ / FACU
<i>Leontodon autumnalis</i>	fall dandelion	Introduced	
<i>Lonicera</i> spp.	honeysuckles	Native	Various
<i>Lycopus americanus</i>	American bugleweed	Native	OBL / OBL
<i>Lycopus</i> spp.	bugleweeds	Native	Various
<i>Lycopus uniflorus</i>	Northern bugleweed	Native	OBL / OBL
<i>Lysimachia terrestris</i>	swamp loosestrife	Native	OBL / OBL
<i>Macleaya cordata</i>	plume poppy	Introduced	

FORB / HERB / VINE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Maianthemum canadense</i>	wild lily-of-the-valley	Native	FACU, FAC / FAC-
<i>Medeola virginiana</i>	Indian cucumber	Native	
<i>Melampyrum lineare</i>	narrowleaf cownwheat	Native	FACU, FAC / FACU
<i>Mentha spicata</i>	spearmint	Introduced	FACW, OBL / FACW+
<i>Mentha</i> spp.	mints	Nat. & Intro.	Various
<i>Mitchella repens</i>	partridgeberry	Native	FACU, FAC / FACU
<i>Monotropa hypopithys</i>	pinemap	Native	
<i>Monotropa uniflora</i>	Indian pipe	Native	UPL, FACU / FACU-
<i>Onoclea sensibilis</i>	sensitive fern	Native	FACW / FACW
<i>Osmunda cinnamomea</i>	cinnamon fern	Native	FACW, FACW+ / FACW
<i>Osmunda claytoniana</i>	interrupted fern	Native	FAC, FAC+ / FAC
<i>Osmunda regalis</i>	royal fern	Native	OBL / OBL
<i>Oxalis montana</i>	mountain wood sorrel	Native	UPL, FAC- / FAC-
<i>Packera aurea</i>	golden ragwort	Native	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	Native	FACU, FAC / FACU
<i>Parthenocissus vitacea</i>	woodbine	Native	FACU, FACW- / FACU
<i>Phegopteris connectilis</i>	long beech fern	Native	
<i>Pilea pumila</i>	clearweed	Native	FAC, FACW / FACW
<i>Polygonatum pubescens</i>	hairy Solomon's seal	Native	
<i>Polygonum cilinode</i>	fringed black bindweed	Native	
<i>Polygonum sagittatum</i>	arrowleaf tearthumb	Native	OBL / OBL
<i>Polygonum scandens</i>	climbing false buckwheat	Native	FACU, FACW / FAC
<i>Polygonum</i> spp.	smartweeds	Native	Various
<i>Polypodium virginianum</i>	rock polypody	Native	
<i>Polypodium vulgare</i>	common polypody	Native	
<i>Polystichum acrostichoides</i>	Christmas fern	Native	UPL, FAC / FACU-
<i>Polytrichum</i> spp.	haircap mosses	Native	
<i>Potentilla norvegica</i>	Norwegian cinquefoil	Native	FACU, FAC / FACU
<i>Potentilla simplex</i>	common cinquefoil	Native	UPL, FACU / FACU-
<i>Prenanthes</i> spp.	rattlesnake roots	Native	Various
<i>Prunella vulgaris</i>	common self-heal	Native	FACU, FACW / FACU+
<i>Pteridium aquilinum</i>	bracken fern	Native	FACU, FAC- / FACU
<i>Ranunculus</i> spp.	buttercups	Native	Various

FORB / HERB / VINE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Rhus radicans</i>	climbing poison ivy	Native	
<i>Rubus pubescens</i>	dwarf blackberry	Native	FAC, FACW+ / FACW
<i>Rumex acetosella</i>	common sheep sorrel	Introduced	UPL, FACW / UPL
<i>Sagittaria latifolia</i>	broadleaf arrowhead	Native	OBL / OBL
<i>Sedum telephium</i> subsp. <i>purpureum</i>	witch's moneybags	Native	
<i>Sicyos angulatus</i>	one-seed burr cucumber	Native	FACU, FACW- / FACU
<i>Silene latifolia</i>	bladder campion	Introduced	
<i>Smilacina racemosa</i>	feather false Solomon's seal	Native	FACU-, FAC / FACU-
<i>Smilax rotundifolia</i>	common greenbrier	Native	FAC / FAC
<i>Solidago bicolor</i>	white goldenrod	Native	
<i>Solidago graminifolia</i>	lanceleaf goldenrod	Native	
<i>Solidago rugosa</i>	wrinkleleaf goldenrod	Native	FAC, FAC+ / FAC
<i>Solidago</i> spp.	goldenrods	Native	Various
<i>Sphagnum</i> spp.	sphagnum mosses	Native	
<i>Spiranthes</i> spp.	ladies' tresses	Native	Various
<i>Streptopus lanceolatus</i>	twisted stalk	Native	
<i>Streptopus roseus</i> var. <i>perspectus</i>	rosy twisted stalk	Native	FACU, FAC / FAC-
<i>Symphyotrichum patens</i>	late purple aster	Native	
<i>Symphyotrichum</i> spp.	asters	Native	
<i>Taraxacum</i> spp.	dandelions	Introduced	Various
<i>Thalictrum polygamum</i>	tall meadow rue	Native	
<i>Thelypteris noveboracensis</i>	New York fern	Native	FAC, FAC+ / FAC
<i>Thelypteris simulata</i>	Massachusetts fern	Native	FACW / FACW
<i>Tiarella cordifolia</i>	heartleaf foamflower	Native	FAC- / FAC-
<i>Toxicodendron</i> spp.	poison ivies / oaks / sumacs	Native	Various
<i>Triadenum virginicum</i>	marsh Saint-John's-wort	Native	OBL / OBL
<i>Trientalis borealis</i>	starflower	Native	FAC, FAC+ / FAC
<i>Trifolium pratense</i>	red clover	Introduced	FACU-, FAC / FACU-
<i>Trifolium repens</i>	white clover	Introduced	FACU-, FAC / FACU-
<i>Trillium erectum</i>	purple trillium	Native	UPL, FACU / FACU-
<i>Trillium</i> spp.	trilliums	Native	Various

FORB / HERB / VINE

Scientific Name	Common Name	U.S. Nativity	National / Regional Wetland Indicator Category
<i>Trillium undulatum</i>	painted trillium	Native	FACU-, FACU / FACU*
<i>Typha latifolia</i>	broadleaf cattail	Native	OBL / OBL
<i>Uvularia sessilifolia</i>	wild oats	Native	FACU-, FAC+ / FACU-
<i>Veratrum viride</i>	green false hellebore	Native	FACU, OBL / FACW+
<i>Verbascum thapsus</i>	common mullein	Introduced	
<i>Veronica</i> spp.	speedwells	Native	Various
<i>Viola</i> spp.	violets	Native	Various
<i>Vitis</i> spp.	wild grapes	Native	Various

Table 2. Confirmed Introduced Plant Species in Temple

Scientific Name	Common Name	Regional Wetland Indicator Category
Shrub		
<i>Berberis vulgaris</i>	European barberry	FACU
<i>Euonymus alata</i>	winged burning bush	
Forb/Herb/Vine		
<i>Abutilon theophrasti</i>	velvetleaf	UPL
<i>Achillea millefolium</i>	common yarrow	FACU
<i>Brassica rapa</i>	field mustard	
<i>Celastrus orbiculatus</i>	Oriental bittersweet	UPL*
<i>Chenopodium album</i>	lambsquarters	FACU+
<i>Cichorium intybus</i>	chickory	
<i>Cirsium</i> spp.	thistles	Various
<i>Coronilla varia</i>	purple crown vetch	
<i>Epipactis helleborine</i>	broadleaf helleborine	
<i>Hypericum perforatum</i>	common Saint-John's-wort	
<i>Leontodon autumnalis</i>	fall dandelion	
<i>Macleaya cordata</i>	plume poppy	
<i>Mentha spicata</i>	spearmint	FACW+
<i>Mentha</i> spp.	mints	Various
<i>Rumex acetosella</i>	common sheep sorrel	Upland
<i>Silene latifolia</i>	bladder campion	
<i>Taraxacum</i> spp.	dandelions	Various
<i>Trifolium pratense</i>	red clover	FACU-
<i>Trifolium repens</i>	white clover	FACU-
<i>Verbascum thapsus</i>	common mullein	

Table 3. Butterfly Species in Hillsborough County Identified in USGS Surveys

Scientific Name	Common Name
Family PAPILIONIDAE	SWALLOWTAILS
Subfamily Papilioninae	Swallowtails
<i>Papilio canadensis</i>	Canadian Tiger Swallowtail
<i>Papilio glaucus</i>	Eastern Tiger Swallowtail
<i>Papilio troilus</i>	Spicebush Swallowtail
Family PIERIDAE	WHITES AND SULPHURS
Subfamily Pierinae	Whites
<i>Pieris oleracea</i>	Mustard White
<i>Pieris rapae</i>	Cabbage White
Subfamily Coliadinae	Sulphurs
<i>Colias eurytheme</i>	Orange Sulphur
<i>Colias philodice</i>	Clouded Sulphur
Family LYCAENIDAE	GOSSAMER WINGS
Subfamily Miletinae	Harvesters
<i>Feniseca tarquinius</i>	Harvester
Subfamily Lycaeninae	Coppers
<i>Lycaena epixanthe</i>	Bog Copper
<i>Lycaena phlaeas</i>	American Copper
Subfamily Theclinae	Hairstreaks
<i>Callophrys [incisalia] augustinus</i>	Brown Elfin
<i>Callophrys [incisalia] niphon</i>	Eastern Pine Elfin
<i>Callophrys [incisalia] polios</i>	Hoary Elfin
<i>Satyrium acadica</i>	Acadian Hairstreak
<i>Satyrium calanus</i>	Banded Hairstreak
<i>Satyrium edwardsii</i>	Edwards' Hairstreak
<i>Satyrium liparops</i>	Striped Hairstreak
<i>Satyrium titus</i>	Coral Hairstreak
<i>Strymon melinus</i>	Gray Hairstreak
Subfamily Polyommatainae	Blues
<i>Celastrina ladon</i>	Spring Azure
<i>Celastrina neglecta</i>	Summer Azure

Scientific Name	Common Name
<i>Everes comyntas</i>	Eastern Tailed-Blue
<i>Glaucopsyche lygdamus</i>	Silvery Blue
Family NYMPHALIDAE	BRUSHFOOTS
Subfamily Heliconiinae	Heliconians and Fritillaries
<i>Boloria selene</i>	Silver-Bordered Fritillary
<i>Euptoieta claudia</i>	Variegated Fritillary
<i>Speyeria aphrodite</i>	Aphrodite Fritillary
<i>Speyeria atlantis</i>	Atlantis Fritillary
<i>Speyeria cybele</i>	Great Spangled Fritillary
<i>Speyeria idalia</i>	Regal Fritillary
Subfamily Nymphalinae	True Brushfoots
<i>Chlosyne harrisii</i>	Harris' Checkerspot
<i>Junonia coenia</i>	Common Buckeye
<i>Nymphalis antiopa</i>	Mourning Cloak
<i>Nymphalis [Aglais] milberti</i>	Milbert's Tortoiseshell
<i>Nymphalis vau-album</i>	Compton Tortoiseshell
<i>Phyciodes tharos</i>	Pearl Crescent
<i>Polygonia comma</i>	Eastern Comma
<i>Polygonia faunus</i>	Green Comma
<i>Vanessa atalanta</i>	Red Admiral
<i>Vanessa cardui</i>	Painted Lady
<i>Vanessa virginiensis</i>	American Lady
Subfamily Limenitidinae	Admirals and Relatives
<i>Limenitis archippus</i>	Viceroy
<i>Limenitis arthemis</i>	Red-Spotted Admiral
<i>Limenitis arthemis arthemis</i>	White Admiral
<i>Limenitis arthemis astyanax</i> (incl. <i>arizonensis</i>)	Red-Spotted Purple
Subfamily Satyrinae	Satyrns
<i>Cercyonis pegala</i>	Common Wood Nymph
<i>Coenonympha tullia</i>	Common Ringlet
<i>Enodia anthedon</i>	Northern Pearly Eye
<i>Megisto cymela</i>	Little Wood Satyr
<i>Satyroides eurydice</i>	Eyed Brown

Scientific Name	Common Name
Subfamily Danainae	Monarchs
<i>Danaus plexippus</i>	Monarch
Family HESPERIIDAE	SKIPPERS
Subfamily Pyrginae	Spread Wings
<i>Achalarus lyciades</i>	Hoary Edge
<i>Epargyreus clarus</i> (incl. <i>huachuca</i>)	Silver-Spotted Skipper
<i>Erynnis baptisiae</i>	Wild Indigo Duskywing
<i>Erynnis brizo</i>	Sleepy Duskywing
<i>Erynnis horatius</i>	Horace's Duskywing
<i>Erynnis icelus</i>	Dreamy Duskywing
<i>Erynnis juvenalis</i>	Juvenal's Duskywing
<i>Erynnis lucilius</i>	Columbine Duskywing
<i>Erynnis martialis</i>	Mottled Duskywing
<i>Pholisora catullus</i>	Common Sootywing
Subfamily Hesperinae	Grass Skippers
<i>Amblyscirtes hegon</i> (=samoset)	Pepper-and-Salt Skipper
<i>Amblyscirtes vialis</i>	Common Roadside Skipper
<i>Anatrytone logan</i> (=delaware)	Delaware Skipper
<i>Ancyloxypha numitor</i>	Common Least Skipper
<i>Atrytonopsis hianna</i> (incl. <i>loammi</i>)	Dusted Skipper
<i>Carterocephalus palaemon</i>	Arctic Skipper
<i>Euphyes bimacula</i>	Two-Spotted Skipper
<i>Euphyes conspicua</i>	Black Dash
<i>Euphyes vestris</i> (=ruricola)	Dun Skipper
<i>Hesperia leonardus</i> (incl. <i>pawnee</i>)	Leonard's Skipper
<i>Hesperia metea</i>	Cobweb Skipper
<i>Hesperia sassacus</i>	Indian Skipper
<i>Poanes hobomok</i>	Hobomok Skipper
<i>Poanes massasoit</i>	Mulberry Wing
<i>Polites mystic</i>	Long Dash
<i>Polites peckius</i> (=coras)	Peck's Skipper
<i>Polites themistocles</i>	Tawny-Edged Skipper
<i>Pompeius verna</i>	Little Glassywing

Scientific Name	Common Name
<i>Thymelicus lineola</i>	European Skipper
<i>Wallengrenia egeremet</i>	Northern Broken-Dash

Table 4. Soil Units Found in Temple

Soil Unit Name	County Soil Survey Map Nr	Total Acreage	Proportion of Total Soil Acreage	Slope Class or Pondered	Prime Farmland	Hydric Soil	Forest Group	Sands	Gravels
SEARSPORT MUCK	15	12.2	0.09%		No	1	NC	Yes	No
ONDAWA FINE SANDY LOAM	101	4.4	0.03%		No	0	IA	Yes	No
PODUNK FINE SANDY LOAM	104	39.5	0.28%		No	0	IA	Yes	Yes
RUMNEY LOAM	105	63.5	0.45%		No	1	IIB	Yes	No
BOROHEMISTS	197	126.2	0.89%	PONDED	No	1	NC	No	No
GREENWOOD MUCKY PEAT	295	2.5	0.02%		No	1	NC	No	No
PITS	298	5.7	0.04%	GRAVEL	No	0	NC	No	No
UDORTHENTS	299	9.0	0.06%	SMOOTHED	No	0	NC	No	No
CHOCORUA MUCKY PEAT	395	76.2	0.54%		No	1	NC	Yes	No
ROCK OUTCROP	399	54.3	0.38%		No	0	NC	No	No
OSSIPEE PEAT	495	3.9	0.03%		No	1	NC	No	No
PEACHAM STONY MUCK	549	40.6	0.29%		No	1	NC	No	No
MONADNOCK FINE SANDY LOAM	142B	129.1	0.91%	3%–8% SLOPES	Yes	0	IB	Yes	No
MONADNOCK FINE SANDY LOAM	142C	176.3	1.25%	8%–15% SLOPES	No	0	IB	Yes	No
MONADNOCK STONY FINE SANDY LOAM	143B	551.6	3.90%	3%–8% SLOPES	No	0	IB	Yes	No
MONADNOCK STONY FINE SANDY LOAM	143C	1974.8	13.95%	8%–15% SLOPES	No	0	IB	Yes	No
MONADNOCK STONY FINE SANDY LOAM	143D	1258.8	8.89%	15%–35% SLOPES	No	0	IB	Yes	No
TUNBRIDGE-LYMAN-MONADNOCK	160B	2.9	0.02%	3%–8% SLOPES	No	0	IB	No	No

Soil Unit Name	County Soil Survey Map Nr	Total Acreage	Proportion of Total Soil Acreage	Slope Class or Pondered	Prime Farmland	Hydric Soil	Forest Group	Sands	Gravels
COMPLEX STONY									
TUNBRIDGE-LYMAN-MONADNOCK COMPLEX STONY	160C	68.3	0.48%	8%–15% SLOPES	No	0	IB	No	No
TUNBRIDGE-LYMAN-MONADNOCK COMPLEX STONY	160D	0.2	0.00%	15%–25% SLOPES	No	0	IB	0	No
LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX	161C	918.5	6.49%	3%–15% SLOPES	No	0	IIA	0	No
LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX	161D	2653.6	18.75%	15%–35% SLOPES	No	0	IIA	No	No
NAUMBURG FINE SANDY LOAM	214A	73.2	0.52%	0%–3 SLOPES	No	1	IIB	Yes	No
NAUMBURG FINE SANDY LOAM	214B	40.0	0.28%	3%–8 SLOPES	No	1	IIB	Yes	No
COLTON LOAMY SAND	22A	95.3	0.67%	0%–3% SLOPES	No	0	IC	Yes	Yes
COLTON LOAMY SAND	22B	111.2	0.79%	3%–8% SLOPES	No	0	IC	Yes	Yes
COLTON LOAMY SAND	22C	335.0	2.37%	8%–15% SLOPES	No	0	IC	Yes	Yes
COLTON LOAMY SAND	22E	53.6	0.38%	15%–50% SLOPES	No	0	IIA	Yes	Yes
LYME LOAM	246B	90.5	0.64%	0%–5% SLOPES	No	1	IIB	No	No
LYME STONY LOAM	247B	346.3	2.45%	0%–5% SLOPES	No	1	IIB	No	No
ADAMS LOAMY SAND	36A	2.5	0.02%	0%–3% SLOPES	No	0	IC	Yes	No
ADAMS LOAMY SAND	36B	22.7	0.16%	3%–8% SLOPES	No	0	IC	Yes	No
ADAMS LOAMY SAND	36C	36.1	0.25%	8%–15% SLOPES	No	0	IC	Yes	No
ADAMS LOAMY SAND	36E	16.8	0.12%	15%–50% SLOPES	No	0	IIA	Yes	No
SKERRY FINE SANDY LOAM	558B	46.6	0.33%	3%–8% SLOPES	Yes	0	IA	Yes	Yes
SKERRY STONY FINE SANDY LOAM	559B	115.1	0.81%	0%–8% SLOPES	No	0	IA	Yes	Yes

Soil Unit Name	County Soil Survey Map Nr	Total Acreage	Proportion of Total Soil Acreage	Slope Class or Ponged	Prime Farm-land	Hydric Soil	Forest Group	Sands	Gravels
SKERRY STONY FINE SANDY LOAM	559C	59.7	0.42%	8%–15% SLOPES	No	0	IA	Yes	Yes
CROGHAN LOAMY FINE SAND	613A	55.7	0.39%	0%–3% SLOPES	No	0	IC	Yes	No
CROGHAN LOAMY FINE SAND	613B	47.2	0.33%	3%–8% SLOPES	No	0	IC	Yes	No
PILLSBURY LOAM	646B	15.9	0.11%	0%–5% SLOPES	No	1	IIB	No	No
PILLSBURY STONY LOAM	647B	96.5	0.68%	0%–5% SLOPES	No	1	IIB	No	No
MARLOW LOAM	76B	259.2	1.83%	3%–8% SLOPES	Yes	0	IA	No	No
MARLOW LOAM	76C	421.2	2.98%	8%–15% SLOPES	No	0	IA	No	No
MARLOW LOAM	76D	172.4	1.22%	15%–25% SLOPES	No	0	IA	No	No
MARLOW STONY LOAM	77B	195.9	1.38%	3%–8% SLOPES	No	0	IA	No	No
MARLOW STONY LOAM	77C	985.3	6.96%	8%–15% SLOPES	No	0	IA	No	No
MARLOW STONY LOAM	77D	1619.2	11.44%	15%–35% SLOPES	No	0	IA	No	No
PERU LOAM	78B	96.2	0.68%	3%–8% SLOPES	Yes	0	IA	No	No
PERU STONY LOAM	79B	476.9	3.37%	0%–8% SLOPES	No	0	IA	No	No
PERU STONY LOAM	79C	98.4	0.70%	8%–15% SLOPES	No	0	IA	No	No

Table 5. Soil-Unit Types Found in Temple, NRCS County Soil Survey

	Soil Units	% of Total Soil Units	Total Soil Acreage	% of Total Soil Acreage
All soil parcels	661	100	14,664	100
Forest groups				
IA	289	44	5,067	35
IB	135	20	4,193	29
IC	61	9	722	5
IIA	40	6	3,626	25
IIB	80	12	726	5
NC	56	8	331	2
Prime farmland	79	12	531	4
Hydric soil	125	19	988	7
Sand	262	40	5,397	37
Gravels	81	12	856	6

Table 6. Distribution of Land-Use Parcels in Temple

	Grazing	Orchard	Abandoned Orchard	Hay Field	Abandoned Hay Field	Row Crops	Established Forest	Forest Cut in Last 5 Years	Stone Meadow	Residential	Gravel Pit	Commercial Use
Number of parcels	6	2	6	63	13	1	195	2	3	153	2	1
Average % of parcel	42	55	43	55	58	10	75	88	30	22	35	10
Minimum % of parcel	20	10	10	10	10	10	10	75	20	5	10	10
Maximum % of parcel	80	100	100	100	100	10	100	100	50	100	60	10

A Plan for the Protection of Open Space

Town of Temple, New Hampshire

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A Plan for the Protection of Open Space Town of Temple, New Hampshire

INTRODUCTION

This Open Space Plan provides the information and policy basis for setting priorities and action plans for land protection in concert with other community goals. By Open Space we mean the permanent conservation of forests, farms, fields, riparian areas, historic resources, water supply protection lands, and other natural areas. Open space protection can be an effective tool for preserving community character, protecting the environment, and enhancing quality of life. Open space protection in community planning is critical to our way of life in Temple.

BACKGROUND AND CONTEXT

In 2007, New Hampshire remained the fastest-growing state in the Northeastern United States. Along with the many positive aspects of this growth come challenges and stresses on the environment. Statewide, it is estimated that 15,000 acres of open land are developed every year.

Many communities have found that conversion of these lands for development results in lost opportunities for recreation, degraded water supplies, undermining of traditional economic uses such as forestry and agriculture, disruption of plant and animal habitat, and diminishment of quality of life. In some regions, especially the Merrimack Valley and Southeastern New Hampshire, towns are going to great lengths to save the remaining undeveloped land, in some cases spending large sums of public money.

Temple is feeling the pressures of this growth. In response, the 2003 Master Plan emphasized the need to preserve the “rural character” of the community. As listed below, the Master Plan called for action to identify and protect high priority open spaces in town.

PURPOSE

This Open Space Plan supports the Future Land Use recommendations of the “Temple Master Plan 2003,” including the conservation and preservation of open spaces which was viewed as being vital to maintaining not only the environmental health of Temple but also the natural identity, rural character, and recreational opportunities that are so closely connected to the Town.

This Plan recommends specific actions that Town officers undertake to support the criteria, goals and recommendations set forth herein in order to improve its public policy toward land conservation. This policy acknowledges that regulating development of certain properties will protect or enhance a set of “resource values” described here under “Findings,” and that it is fitting for Town government to facilitate the conservation of certain lands that exhibit these values. At a minimum, this Plan directs the Town of Temple to promote land conservation and to be vigilant about opportunities for land conservation. To that end, the Town may, 1) change its regulations to take into consideration the goals of this Plan. For example, in March 2008, the Town of Temple

passed a new Mountain District Conservation Development ordinance, 2) provide stringent reviews for certain property types mentioned in this plan, and 3) work to ensure development requests meet the goals of this Plan. The role of Town government in this area is also to educate landowners about the topic, to network among landowners and lands trusts, and to acquire land or conservation easements.

APPROACH AND PROCESS

The Temple Conservation Commission developed this Open Space Plan with assistance from the Open Space Committee. Members of this Committee are listed in [Appendix 5](#).

As directed by the Temple Master Plan, the Open Space Committee undertook a study to identify how and where land conservation could best serve the public interest. During bi-weekly meetings in the summer and fall of 2007, the Committee reviewed information and maps regarding land use patterns, distribution of natural resources (e.g. aquifers and wetlands), and threats to Temple's natural resources. To solicit public input, the Committee held a public forum on December 10, 2007 to solicit residents' input on the Committee's findings and recommendations.

The Committee reached consensus on a set of *Resource Values* that can be protected by conserving open space and *Land Conservation Priority Areas* and *Specific Places* in Temple where those resources are most prevalent and therefore worthy of consideration for protection. In all cases, the values and places were determined to be essential to community well-being in some basic way, or are part of how residents define Temple's community character. Ultimately, all are basic to environmental quality and quality of life.

FINDINGS

The Committee determined that the following Resource Values should be protected or restored by Open Space:

- Passive recreation and public access to open space
- Active agriculture/forestry and prime soils
- Rural and community character/natural beauty
- Large unfragmented tracts for habitat diversity to support native species of wild plant and animal life
- Historic and archeological areas and sites
- Water sources and water quality
- Air quality including carbon sequestration

Land Conservation Areas That Are a Priority for Protection. Specific examples cited include but are not limited to:

1. Forested hills throughout Town: Especially visible land along ridgelines, hilltops, and summits.
 - Willard Hill
 - The Temple Mountain range, including Holt Peak, Whitcomb Peak, Pack Monadnock, North Pack

- Fiske Hill
 - Howard Hill
2. Stream Corridors and Wetlands: Riparian lands and buffers along the shoreline of all of Temple's streams, ponds and wetlands.
 - Temple Brook
 - Greenville Reservoir
 - Gambol Brook
 - Blood Brook
 - Chris Weston Conservation Area wetlands
 - Fish Road wetlands
 - Whiting ("Pack Walk") Brook
 3. Open Fields and Farmland throughout Town.
 - Willard field off Hadley Highway.
 - Fields on the east side of Rt 45 just north of Memorial Drive
 - Holt Lane fields
 - Middleton fields on Old Peterborough Road
 - Whitcomb fields on Colburn Road
 - New Field Farm
 - Salisbury Farm
 - Connolly Brothers Farm
 - Pony Farm
 - Herban Living Farm
 - Autumn Hill Farm
 - Kantner Derbyshire Farm
 - Barry Farm
 - Sartell Farm
 - Scott fields
 - Cromwell fields
 - Flynn Hill
 4. Bedrock and Gravel Aquifers
 5. Recreational Trails
 - Town Forest
 - Kendall Ledge
 - Chris Weston Conservation Area
 - Wapack Trail
 - Beaudoin easement trail
 - Weston Farm trail to caverns
 6. Large Unfragmented Tracts
 - Bradler/Viocal LLC land (on West Road)

- Fisk Hill/Cromwell/Sartell/Hadley (on Fisk Hill Road, East Road and General Miller Highway)
- Lee/Heald/Bradler land (on East Road)
- Atter/McAdoo/Winship/Re/S. Quinn (on Hadley Highway and Cutter Road)
- Blood/Kieley/Dorothea Guy (on West and Old Peterborough Roads)
- Barry/Jones/Kantner/Walker/Willette /Devereaux/Mann/North Pack Lodge (on North and Converse Roads)
- Weston/P. Quinn/Willard/Foley/Davis/Whitcomb/Houck/McMillan (between Colburn Road and Route 45)

7. Managed Forestry and Silviculture

- Foley Tree Farm
- Connolly Brothers Tree Farm
- Dorothea Guy
- Kieley Tree Farm

8. Historic and Archeological Sites

- Glass Works
- Fisk Hill Monument
- North Road Cemetery
- Old Revolutionary Road Canal
- Old cellar holes including Maynard Inn
- Old wells including town well along Route 45
- Village backdrop and view shed
- Village Green
- Route 45 triangle
- Stone walls
- Stone Arch Bridges

See [Appendix 1](#) for list of areas in Temple that are protected as of June 2008.

The chart below exhibits how the Resource Values can be sustained by protecting the kinds of places identified by the process.

Resource Values	Kinds of Places							
	Forested Hills	Streams, Corridors and Wetlands	Open Fields and Farmland	Aquifers	Recreational Trails	Large Unfragmented Tracts	Managed Forestry	Historical and Architectural
Recreation and Public Access	●	●	○	✕	●	●	○	●
Active Agriculture and Forestry, Prime Soils	●	○	●	✕	✕	●	●	✕
Rural and Community Character and Natural Beauty	●	●	●	✕	●	●	○	●
Large Unfragmented Tracts	●	●	●	●	○	●	●	○
Historic and Architectural	○	○	●	✕	●	○	✕	●
Water Sources and Water Quality	●	●	●	●	✕	●	●	✕
Air Quality and Carbon Sequestration	●	○	○	✕	✕	●	●	✕

Key:

- Indicates the resource is prevalent
- Indicates the resource is present but not prevalent
- ✕ Indicates that the resource is not present.

OVERVIEW OF LAND CONSERVATION

There are two primary ways to protect land for conservation purposes: *Regulation* and *Conservation Land Transactions*. An example of regulation is the Mountain District Conservation Development ordinance authored by the Temple Planning Board and approved by the town March 2008. This plan will focus primarily on the latter, *Conservation Land Transactions*, which involves working directly with interested landowners. The two most common Conservation Land Transactions are acquisition of land and acquisition of development rights through conservation easements.

Conservation Land Transactions occur in two fundamental ways:

Proactive and strategic:

This involves identifying high priority parcels and actively seeking to purchase or encourage donation of land or conservation easements. When successful, these projects

have the greatest potential to achieve agreed upon goals. However, these projects may require significant investments of money if the owners are not in a position to make donations or sell at a significant discount.

Vigilance and responsiveness to opportunity:

Most land protection accomplishments come as the result of being ready to respond to opportunities for land conservation. These opportunities can be, but are not limited to land for sale, land being considered for development, and people interested in protecting the land they own. Having the Open Space Plan in place will help guide decisions when these opportunities arise. It will also help create opportunities through education and outreach.

RECOMMENDATIONS

1. That the Planning Board adopt the Open Space Plan as a chapter in the Town Master Plan.

2. That the Town inventory existing properties that are currently owned by the Town, other public entities, and private institutions to determine the level of protection against development of each parcel. Some Town, State and Federal owned properties presently are designated as permanent conservation land on some maps, despite having no deed restrictions or other legal prohibitions regarding development. Each of these parcels should be identified with one or more of the following designations:
 - a. State and Federal-owned with conservation restrictions
 - b. State and Federal-owned without conservation restrictions
 - c. Town-owned with conservation restrictions
 - d. Town-owned without conservation restrictions
 - e. Owned and protected by a conservation organization such as The Nature Conservancy.
 - f. Protected by a conservation easement by a conservation organization such as the Monadnock Conservancy or the Society for the Protection of NH Forests (SPNHF)
 - g. Owned by a private institution for the stated purpose of conservation, but not legally protected for those purposes
 - h. Owned by other public or private entities for public purposes

That from this inventory and the Findings section of this plan, the Town will determine which parcels deserve formal protection. To begin, the Town may choose to convey permanent conservation easements on land it owns to a qualified land trust such as the Monadnock Conservancy. The Town should open a dialogue with other institutions to determine their willingness to consider permanent conservation agreements on their holdings.

3. That the Conservation Commission establish a list of Temple soil types and locations and water resource types and locations. The resulting data will give

insight and guidance to natural resources in Temple. The Commission may use geologists to identify and categorize these resources.

4. That the Selectmen's Office maintains a detailed list of all protected open space in Temple. This list should detail existing Planned Residential Development (PRD) developments, open space protection as well as any other types of protected land. The list shall include details such as allowable public activities.
5. That the Conservation Commission establish a plan for contacting and educating individual owners of land conservation priority areas listed in the Findings section of this report. This could include newsletters, other mailings, field trips to existing protected lands, educational forums with land protection experts, etc.
6. That in carrying out their responsibilities, the Board of Selectmen, Planning Board, Conservation Commission, Zoning Board of Adjustment and Historic District Commission should look for ways to actively integrate the Open Space Plan into their deliberations and plans. These might include Master Plan updates, zoning changes, subdivision regulations, subdivision reviews, site plan regulations and reviews, placement and extension of infrastructure, economic development, emergency management, scenic roads and facility siting. In addition, the Boards should explore the use of innovative development concepts that incorporate open space conservation. For example, Temple's Planned Residential Developments and Mountain District Conservation Development ordinances could require easements on their open space areas. The Open Space maps should be posted in Temple's Municipal Building so they are available to consult during Board meetings.
7. That the Town continue to invest in its Conservation Fund through Current Use change tax payments and, as appropriate projects come forth, through special appropriations. This Fund should be used for:
 - a. Acquisition of land or conservation easements
 - b. Reimbursement to private landowners for the direct costs of donating land or conservation easements
 - c. Other purposes related to this Open Space Plan and allowed by State law
8. That the Conservation Commission and the Recreation Commission work together to develop potential corridors for a network of passive recreation trails.
9. That the Conservation Commission meet with the Planning Board and Select Board bi-annually to review and update the Open Space Plan.

ACTION STEPS

After adoption of this plan the Conservation Commission will:

1. Adopt an Open Space Plan Project Conservation Land rating system to evaluate opportunities (see draft attachment).
2. Identify all owners of parcels within the Land Conservation Priority Areas. The list should include total acres by parcel. This list should indicate allowable public access and activities, if the land is protected land.
3. Publicize the Open Space Plan to the public, landowners in Priority Areas, and interested groups such as the Lions Club, sportsmen's groups and the Temple Economical Energy Committee.
4. Meet with other Temple Town Boards to review the Open Space Plan and Action steps.
5. Sponsor a landowner education workshop with an established conservation group.
6. Conduct an evaluation of Temple's gravel and bedrock aquifers to assist both in the identification of lands most appropriate for protection and siting of wells and septic systems as lands in Temple are developed.

Annually:

1. Clearly define the actions that need to be taken throughout the year to implement the Open Space Plan. These could include expanding the Conservation Fund in order to secure easements or acquire specific parcels.
2. Hold a landowner education workshop on conservation options.
3. Meet with the Planning Board and Select Board to review progress toward implementation.

Biennially:

1. Review the Open Space Plan (including appendices) and revise, if necessary.
2. Acquire updated maps from Southwest Region Planning Commission showing conservation lands, natural resources, and other related features.

CONCLUSION

The Temple Master Plan of 2003 clearly calls for action to identify and protect important open space throughout Temple. This Open Space Plan provides guidance for such action. It should be the responsibility of the Conservation Commission to ensure that the Open Space Plan is understood by the public and all municipal officials, and regularly updated.

APPENDIX 1
Temple's Protected Lands

Town owned:

Properties with deed restrictions:

“White Ledges”
Tennis courts
Memorial ball field

Currently managed by the Conservation Commission:

Chris Weston Conservation
North Road Town Forest

Planned Residential Development (PRD) Open Space:

Stonegate Farm I
Stonegate Farm II
Ross (Brown/Fish Road)
Lukas Foundation
Brooke Estates
Five Gates Farm/Tamposi (pending)
Laurel Pastures

State owned:

Miller State Park
Temple Mountain State Reservation

Sites controlled by DES Water Resources:

Tobey Reservoir
General Miller Highway flood control dam area
Route 101 flood control dam area

Federal owned:

Wapack National Wildlife Refuge

Institution owned:

Bass Bross Preserve (The Nature Conservancy)
Cabot Memorial Forest (New England Forestry Foundation)
King Brook Reservoir (Society for the Protection of NH Forests)

Individually owned:

Weston easement	Sullivan easement	Wolbers easement (pending)
Beaudoin easement	Sargent easement	
Banks easement	Scott easement	
Karl easement	Lockwood easement	
Stone easement	Kieley easement	
Doyle easement	Banker/Clayton easement	

APPENDIX 2
Temple Open Space Plan Project Rating Sheet

Project or Parcel Name: _____ Acres: _____

Location in town: _____ Current Owner: _____

Type of Place: Forested Hillside Stream Corridor/Wetland Field / Farmland
 Bedrock/Gravel Aquifer Recreational Trail
 Plant and animal habitat Historic and Archeological

Brief summary of project or parcel:

RESOURCE VALUES

Rank all values present or prevalent on property from 1 – 5, with 5 being highest

RECREATION / ACCESS

Comments

- Existing Trails _____
- Potential for Trails _____
- Water Access _____
- Appropriate for hunting and fishing _____
- Remoteness / Sense of isolation _____
- Total Points* _____

ACTIVE AGRICULTURE/FORESTRY

- Prime soils (state, local or federal significance) _____
- Valuable or active farm now or potential _____
- Valuable or active forestry/silviculture now or potential _____
- Total Points* _____

RURAL AND COMMUNITY CHARACTER

- Highly scenic from public ways _____
- Natural beauty _____
- Prominent view shed _____
- Unique views _____
- Good views from property _____
- Total Points* _____

PLANT AND ANIMAL HABITAT

- Natural Heritage site or rare natural community _____
- Diversity/quality of habitat on site is significant _____
- Part of corridor _____
- Linkage to other conservation lands _____
- Un-fragmented area _____
- Total Points* _____

HISTORIC AND ARCHEOLOGICAL SITES

- Cemetery _____
- Wells/Cellar Holes _____
- Stone Walls/bridges _____
- Total Points* _____

WATER SOURCES / QUALITY

<input type="checkbox"/> Public drinking water supply	_____
<input type="checkbox"/> Pond frontage	_____
<input type="checkbox"/> Stream frontage	_____
<input type="checkbox"/> Wetlands	_____
<input type="checkbox"/> Aquifer or Wellhead Protection	_____
<input type="checkbox"/> Total Points	_____

AIR QUALITY

<input type="checkbox"/> Carbon Sequestration	_____
<input type="checkbox"/> Total Points	_____

CHARACTERISTICS OF PROJECT OR PARCEL

YES	NO	DON'T KNOW	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meets criteria as priority area in the Open Space Plan
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Included as specific example of priority area in Open Space Plan
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abuts, enlarges, or provides linkages to other protected land
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear potential to stimulate future projects
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Benefits wide range of people
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Access for public recreational uses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Opportunities for environmental or other educational uses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Opportunities for historic or cultural activities and public uses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Absence of actual or potential safety hazards
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Title is clean and unencumbered
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Potential for private land trust to assist
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Imminently threatened by change of use that would undermine Resource Values
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is affordable for Town and will advance other priorities

Other Comments:

APPENDIX 3
Use of Temple's Conservation Fund

Under RSA 36-A, New Hampshire towns may establish conservation funds for the purpose of land acquisition including conservation easements. Through Town Meeting, Temple established a Conservation Fund and has allocated monies to it from Land Use Change Tax payments. There are three steps for approval for the use of Conservation Funds, i.e., Conservation Commission approval, a noticed public hearing, and the Board of Selectmen approval.

In recent years, Temple has used these monies to secure easements on the Doyle fields in the center of Town, on the Beaudoin Herban Living Farm, and on the Colburn Weston Farm. A similarly funded easement on the Wolbers property on Hill Road is expected to close shortly. The Town also made a contribution to the State's purchase of the former Temple Mountain Ski Area through this fund.

APPENDIX 4
Selected Sources of Assistance and Information

Monadnock Conservancy

PO Box 337
Keene, NH 03431
(603) 357-0600

www.monadnockconservancy.org

Information for landowners, technical assistance, land conservation transactions

**Society for the Protection of New Hampshire Forests /
Center for Land Conservation Assistance**

54 Portsmouth Street
Concord, NH 03301
(603) 224-9945

www.spnhf.org

General information on land conservation, publications on municipal funding for land conservation, technical assistance, land conservation transactions

NH Land and Community Heritage Investment Program

10 Dixon Avenue
Concord, NH 03301
(603) 224-4113

www.lchip.org

Grants available to fund land conservation projects

Land Trust Alliance

1331 H Street NW
Suite 400
Washington, DC 20005-4734
(202) 638-4725

www.lta.org

Information, workshops, publications, updates on land conservation

Southwest Region Planning Commission

20 Central Square
Keene, NH 03431
(603) 357-0557

www.swrpc.org

Planning and technical assistance, mapping, information, education

Federal Farm and Ranch Protection Program (FRPP)

National:
Natural Resources Conservation Service
Attn: Legislative and Public Affairs Division
P.O. Box 2890
Washington, DC 20013

Local:
Hillsborough County Service Center

468 Route 13 S
Milford, NH 03055-3476
(603) 673-2409 ext 4
(603) 673-0597 Fax
www.nrcs.usda.gov/programs/frpp

Land and Water Conservation Fund

Office of Recreation and Resource Services
P.O. Box 1856
Concord, NH 03302-1856
Tel: 603-271-3556
www.nps.gov/ncrc/programs/lwcf

NH DES

NH Department of Environmental Services,
29 Hazen Drive,
Concord, NH, 03301.
FAX (603)271-7894
www.des.state.nh.us/

NH DES Water Protection Assistance Program

<http://www.gencourt.state.nh.us/RSA/html/l/4-C/4-C-22.htm>

NH DES Drinking Water Supply Land Grant Program

"Water Supply Land Grant Program was established to promote the permanent protection of critical water supply lands."

Holly Green
(603) 271-3114
hgreen@des.state.nh.us.
www.des.state.nh.us/asp/Grants/index.asp?gotoGrants=1&grants=dwsl

NHDES Drinking Water Source Protection Program

"This grant program is available to public water suppliers for source water protection."

Johanna McKenna
(603) 271-7017
jmckenna@des.state.nh.us.
www.des.state.nh.us/asp/Grants/index.asp?gotoGrants=1&grants=dwsp

NH DES Watershed assistance

"Grant funds are available to identify and address nonpoint source pollution problems through watershed management, including assessment, planning, and implementation."

Eric Williams, Supervisor,
Watershed Assistance Section
(603)271-2358
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APPENDIX 5
Open Space Plan Committee

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Energy Chapter for Temple Master Plan



Introduction

The purpose of the Energy Chapter is to connect Temple’s land use policies and vision with the goals approved by our citizens in Warrant Article 16 at the 2007 Town Meeting—“to save energy and reduce green house gas emissions.”

It will serve to guide Temple toward lowering its overall energy consumption in the community, thereby reducing both its overall energy costs and the release of environmental pollutants.

It will further address the issues of energy stability and sustainability for our community to reflect the lessons learned from the costly and devastating Ice Storm of 2008.

State Statutes Related to Energy and Planning

State Statutes outlines the purpose of land use regulations which are implemented by Planning Boards. Pertinent sections which relate to environment and energy include the following two sections:

RSA 672:1

- III. Proper regulations enhance the public health, safety and general welfare and encourage the appropriate and wise use of land.”
- III- a. Proper regulations encourage energy efficient patterns of development, the use of solar energy, including adequate access to direct sunlight for solar energy uses, and the use of other renewable forms of energy and energy conservation. Therefore, zoning ordinances should not unreasonably limit installation of solar, wind, or other renewable energy systems or the building of structures that facilitate the collection of renewable energy, except where necessary to protect the public health, safety, and welfare.”

New Hampshire Climate Action Plan

The 2009 NH Climate Action Plan was developed by the state-authorized, bi-partisan Climate Change Policy Task Force that was composed of representatives from all sectors of the NH community. It aims at achieving the greatest feasible reductions in greenhouse gas emissions while also providing the greatest possible long-term economic benefits to the citizens of New Hampshire.

It concluded that the most significant reductions in both emissions and costs will come from substantially increasing energy efficiency in all sections of the economy, continuing to increase sources of renewable energy and designing our communities to reduce reliance on automobiles for transportation. The Climate Action Plan recommends that New Hampshire strive to achieve long-term reductions in greenhouse gas emissions of 80 percent below 1990 levels by 2050. The Climate Change Policy Task Force also recommends 67 specific actions to achieve the following goals:

- Reduce greenhouse gas emissions from buildings, electric generation, and transportation;
- Protect natural resources to maintain the amount of carbon sequestered;
- Support regional and national initiatives to reduce greenhouse gases;
- Develop an integrated education, outreach and workforce training program; and
- Adapt to existing and potential climate change impacts.

It is envisioned that with participation from all communities, the NH Climate Action Plan will benefit the economy, increase state and regional energy security, and improve environmental quality. In order to meet the recommended goal of reductions in GHG emissions statewide, it states that NH communities must engage in local energy planning that includes strategies for decreasing their emissions overall.

Energy Efficiency and Conservation

Energy conservation is the wise use or management of energy. Energy efficiency refers to achieving a desired goal, such as powering a building, while reducing the amount of energy used in the process. Reusing, reducing, and recycling are also essential aspects of the conservation equation. Energy savings can be achieved through energy efficiency measures that reduce the amount of energy used for a task or through substituting technologically more advanced equipment to produce the same level of end-use service.

Temple's municipal efficiency lighting upgrade in 2007 and the retrofitting project for our Municipal Building/FD and Mansfield Library are excellent examples of energy efficiency measures which will save energy and lower the tax burden. Another efficiency measure is to simply use less energy through behavioral changes. These can be encouraged through energy conservation education within the community and the adoption of upgraded zoning ordinances and town regulations. Examples are: 1) weatherizing our buildings and homes 2) turning off electrical equipment and lights when not in use; 3) installing programmable thermostats to reduce energy loads when buildings and homes are not in use; 4) purchasing Energy Star equipment; 5) walking and biking instead of driving when possible; 6) adopting a no-idling policy for appropriate municipal vehicles; 7) recycling, composting, line drying laundry, ride-sharing, trip reduction, installing CFLs, etc. 8) reusing and refurbishing buildings rather than removing them to build new ones; and 9) facilitating the establishment of home businesses to reduce commuting through upgraded zoning ordinances and increasing the availability of high speed Internet service throughout the town. Creating local requirements that exceed the State Energy Code is also worth considering. This would require setting the standard for new structures in Temple higher than that required by the Code, and as a result getting units that use less energy and are cheaper for the users to operate annually for no additional construction costs. Overall, energy efficiency is achievable by a combination of all the conservation and efficiency measures.

Planning for Our Community

Reducing energy consumption has been part of good planning for several decades. Smart growth has become a buzzword and has many components which address energy conservation measures, such as mixed use-development, compact village centers, reducing the number and length of vehicle trips between shopping areas and where residents live. Similarly, alternative transportation reduces vehicular traffic and subsequently carbon dioxide emissions. What is newer to community planning is the regulation of resources used to construct and power buildings and upgrading municipal systems to more efficient models.

Temple's 2008 energy-focused land use audit overlapped with the goals of smart growth and other natural resource oriented efforts. The intention of its findings and recommendations was to suggest that our town find ways to foster development patterns that use land in town efficiently, while protecting natural resources and reducing residents' reliance on energy from fossil fuels. Energy and climate change issues need to be considered as factors in planning for development in a manner similar to natural resource planning. It would be reasonable and prudent for Temple to take this long range view as it engages in its planning efforts.

Although the rate of growth in Temple is fairly low, we are currently promoting a pattern of low density residential sprawl that is very auto-dependent.

The 2008 audit process also identified inconsistencies, from an energy perspective, between the Master Plan and the Zoning Ordinances, Site Plan Regulations, and Subdivision Regulations. Its purpose was to ensure that development could be fostered that would reduce energy consumption, particularly from fossil fuel sources. So where inconsistencies exist, it is important to address them before it is too late to achieve the stated vision of the Master Plan. **If the ordinances do not assist with the implementation of the Vision in the Master Plan, that Vision is not likely to be achieved.**

There are also policy elements of the Master Plan that actively promote consumptive patterns of development. These need to be addressed to reflect the citizen-approved 2007 Warrant Article specifying Temple's intention to conserve energy and reduce greenhouse gas emissions. Our landscape of natural resources, including farm and forest lands, is critical to our community's long term sustainability. Many of these resources ensure clean drinking water, a sustainable fuel source, and are supportive of our produced food. Although the rate of growth in Temple is fairly low, we are currently promoting a pattern of low density residential sprawl that is very auto-dependent and relies largely on the surrounding communities for services. This suburban pattern of development could change Temple in significant and costly ways over time, and eliminate many of the natural resources residents treasure now and will need in the future.

Two items that appear to need attention in the near future are:

-Land Use Patterns – Nodes of mixed use development (residential, commercial, and civic uses) surrounded by lower density clusters of residential development and natural resources would allow for reduced travel requirements--reduced fuel usage and costs.

-Mix of Uses - Again, a greater mix of uses at key locations (like the Village) would allow for a reduction in vehicles trips, and would encourage walking and biking. It would also create a greater density of activity that might warrant a future transit stop or a simple park- and- ride option for our residents.

Renewable Energy

Considerations in Our Region:

The NH Office of Energy and Planning estimates that, on average, at least 85% of our state's heating energy comes from imported sources. This nonrenewable fossil fuel based energy accounts for 69% of total energy use in the state, while the cost of petroleum products has been increasing since 2005, and the average resident consumed 9% more energy in 2004 than in 1990. (See the Appendix for relevant charts and graphs.)

Since 2005, along with the petroleum price increases, the average electricity price per kilowatt hour has been increasing steadily. The five cent increase from 2005 to 2008, for instance, from \$0.11 to \$0.16 is actually a 45% increase. Since electricity makes up a large percentage of the energy use in the Monadnock region, this results in a dramatic increase in energy costs for Temple residents and businesses.

The University of New Hampshire has been a leader in researching the impacts of climate change for our region. It has determined that the weather in NH has become wetter, more extreme, and warmer overall. Looking into the near future, climatologists have predicted an increase in damaging storms for the Northeast, including more ice storms for NH, as a result of the changes in our climate.

Since Temple and the rest of the Monadnock region are primarily reliant on fossil fuels to meet their energy demands, it is important to acknowledge a number of realities. The global supply of fossil fuels is dwindling; their costs are volatile and have been rising overall; these fuels need to be imported to NH from other states or countries; their use becomes limited to fueling generators during power outages; and they are harmful to the environment. For these reasons, Temple needs to establish a more diverse supply of energy sources--ones which are reliable, affordable, and environmentally responsible.

Renewable Energy for Temple:

As a consequence of the devastating Ice Storm of December, 2008 with its 14-day power outage in Temple, the value of diversified and “off the grid” energy sources to provide stability during such emergencies became clear.

Renewable energy sources offer that stability.

- They can provide energy assurance by adding diversity and independence from centralized grid outages.
- They are inexhaustible, though sometimes limited in the energy available per unit of time.
- They provide long term energy security, because indigenous energy sources are not subject to geopolitical influences.

Renewable energy sources’ additional benefits:

- They provide environmental protection by reducing pollution and other negative impacts on air, water, and land while meeting energy demands in ways that can be maintained indefinitely.
- They provide opportunities to create economic stability and growth. Renewable technologies retain dollars in-state, create new jobs, and stimulate local and regional economies.

Since 2007 an increasing number of renewable energy incentives have become available from the state and federal government as well as from some utilities. These programs are anticipated to be expanded over time, and could greatly reduce the upfront cost for small-scale installations. Similarly, the NH Regional Greenhouse Gas Initiative (RGGI) is providing municipal grants to support both energy efficiency projects and installations of renewable energy systems. In 2010, the NH Community Development Finance Authority (CDFA) established a revolving loan fund for municipal energy efficiency projects and installations of renewable energy systems. Their loan agreements facilitate a financing process for municipalities which is geared to be readily workable and structured to be “cash neutral”-- repayable solely through energy savings.

While there are a host of benefits from renewable energy installations, including reduced emissions and decreased transmission losses via the use of a decentralized energy grid, there are a few potential negative impacts to consider. Placed in certain locations, wind turbines can produce a noise disturbance, impact wildlife habitat, and create visual changes to the landscape. Both the positive and negative impacts need to be weighed before educated decisions can be made about the expanded use and locations of renewable energy systems in Temple.

Transportation

Since transportation constitutes such a large portion of energy usage and costs for Temple residents and municipal operations, there are references to it embedded throughout this chapter. In a nutshell, until there is either an adequate supply of affordable hybrid or energy efficient vehicles on the market or a plentiful supply of affordable, safe and sustainable non-

fossil based fuels to run our vehicles, the only ways to reduce vehicular energy usage and emissions are to travel less and to make better use of alternative transportation.

Temple’s 2010 zoning ordinance upgrades, designed to positively impact the options for home businesses, will help to serve that end. The efforts underway to increase high-speed Internet service throughout the town add further support for home businesses. Residents also need to be encouraged to utilize the existing public transportation services and ride sharing programs such as the CVTC and the Boston-Nashua Express Bus service. Installing walking and bike paths in town would also reduce vehicular fuel consumption locally.

One of the most effective actions we could take to reduce some of the need for traveling out of town would be to expand the number and quality of conveniences and activities available in our own village area, where and when possible. It is helpful that Town Hall is being used for an increasing number of meetings and events and that the Village Green is used for the Harvest Festival, the Half-Marathon, the Farmer’s Market and other activities. It is advantageous for many reasons that Temple’s own Farmer’s Market was established in 2009 for our many farmers, bakers and craftspeople to showcase their produce and wares while our residents gain an enjoyable local shopping option. Sustaining it will add to the benefits and quality of life in Temple well into the future.

Recommendations

There is no simple answer to stabilizing energy issues and their environmental impacts. Through implementing a combination of available solutions, our community can play a direct role in reducing its energy use and in controlling its impact on the environment. Temple can encourage different scales of renewable energy generation, improve energy efficiency in the built environment, and continue to promote smart growth principles that concentrate development in the village area where feasible. These efforts will improve the efficiency of the community, support a sustainable environment, and reduce fuel costs and the tax burden.

Below are suggested actions for Temple to implement as we work toward reducing greenhouse gas emissions and energy usage within our community.

Initiating, Acting Agent	Potential Actions
Planning Board	<ul style="list-style-type: none"> ▪ Implement the viable policy recommendations from the 2008 energy audit of the Master Plan and Zoning Ordinances. Most notably, this involves the challenge of eventually expanding the uses available in the village center to encourage local activity and reduce travel.
Planning Board	<ul style="list-style-type: none"> ▪ Adopt ordinances that encourage and improve energy efficient private development including green building design and small wind, geothermal and solar energy systems.

<p>Planning Board, TEEC, BOS</p> <p>BOS and TEEC</p> <p>BOS and TEEC</p> <p>BOS and TEEC</p> <p>Highway Department and TEEC</p> <p>Town Meeting and TEEC</p>	<ul style="list-style-type: none"> ▪ Adopt energy conservation and efficiency measures for municipal buildings and operations. This could include creating local energy building requirements that exceed the State Energy Code. ▪ Reduce barriers to, and promote the development and installation of appropriate thermal and electric renewable energy sources in all sectors of the community. ▪ Implement a municipal buying strategy of Energy Star equipment and eco-friendly office products, as costs permit, and implement awareness campaigns to encourage the consumption of such equipment and products within the broader community. ▪ Join with nearby towns to form a single, eco-friendly purchasing contract to provide economy of scale for all. ▪ Evaluate ways to reduce fuel usage with Temple’s vehicle fleet – analyzing routes, usage, and creating a strict anti-idling policy where feasible. ▪ Create an Energy Savings Trust Fund to be used in the future for energy saving initiatives within a 5 year payback. Submit this Fund for majority vote at a Town Meeting.
<p>TEEC</p>	<ul style="list-style-type: none"> ▪ Encourage residents to reduce, reuse, recycle, and compost, as well as to use clotheslines and wooden drying racks to reduce the energy usage of clothes dryers. ▪ Encourage car pooling, ride-sharing, bike riding, and the use of mass transit where possible. ▪ Promote voluntary efforts to insulate buildings, homes and businesses and replace incandescent bulbs with energy efficient lighting, etc. to reduce the amount of energy consumed for heat and electricity.

APPENDIX

Temple Municipal Energy Use

In 2008, a municipal energy inventory of Temple’s energy usage and energy costs for the year 2005 was conducted by the Temple Energy Committee and then processed and analyzed using the Clean Air Climate Protection software and the EPA Portfolio Manager Benchmarking software. The results of the inventory and analyses were compiled in a Municipal Inventory Report, presented to the Select Board and available for residents to read at Mansfield Library. The following tables summarize the energy usage, cost and emissions associated with Temple’s various municipal sectors, buildings and operations in 2005.

Table 1 - Energy use, equivalent carbon emissions¹, and costs, by municipal sector

Municipal Sector	Energy Use (MMBtu) ₂	Energy Use (%)	Equivalent CO ₂ (tons)	Equivalent CO ₂ (%)	Energy Cost (US\$)	Energy Cost %
Municipal Buildings	1,033	48	59	37	13,046	41
Vehicle Fleet	1,129	52	98	62	18,219	57
Street Lights	1	0	0	0	96	0
Water & Sewage	0	0	0	0	0	0
Waste	0	0	2	1	630	2
Total	2,163	100	159	100	31,991	100

Source: Temple Municipal inventory, 2008

Generated by CACP Software

¹ According to the Clean Air and Climate Protection software, “Equivalent CO₂ (eCO₂) is a common unit that allows emissions of greenhouse gases of different strengths to be added together. For carbon dioxide itself, emissions in tons of CO₂ and tons of eCO₂ are the same thing, whereas for nitrous oxide, an example of a stronger greenhouse gas, one ton of emissions is equal to 310 tons eCO₂.”

² The Clean Air and Climate Protection software presents energy use in MMBtus, which is one million British Thermal Units, a common measure of energy consumption (see [www.energyvortex.com/energydictionary/british thermal unit \(btu\) mbtu mmbtu.html](http://www.energyvortex.com/energydictionary/british%20thermal%20unit%20(btu)%20mbtu%20mmbtu.html)).

Name of Building	Energy Use (MMBtu)	Energy %	CO2 emissions (tons) ³	CO2 %	Energy Cost (US\$)	Energy Cost %
Town Hall	80	8	8	15	2,058	16
Muni Bldg - Fire	379	37	30	58	6,898	52
Library	143	14	11	21	3,215	25
Town garage	430	41	3	6	876	7
Total	1032	100	52	100	13,047	100

Table 2. Carbon emissions, energy use, and costs, by municipal building

Source: Temple Municipal Inventory, 2008

Carbon data generated by EPA Portfolio Manager Program; energy use generated by CACP software.

The tables above indicate the vehicle sector is the most significant sector in Temple in terms of energy use and energy cost, and especially in terms of carbon equivalent emissions. The vehicle sector comprised 52% of energy use and 57% of energy costs, but a full 62% of emissions. The building sector is the only other significant energy sector in Temple, using 48% of the energy and comprising 41% of the energy costs, as well as contributing 37% of the carbon equivalent emissions. For the municipal sector in Temple, the town's four buildings and thirteen vehicles offer the greatest opportunities for energy savings.

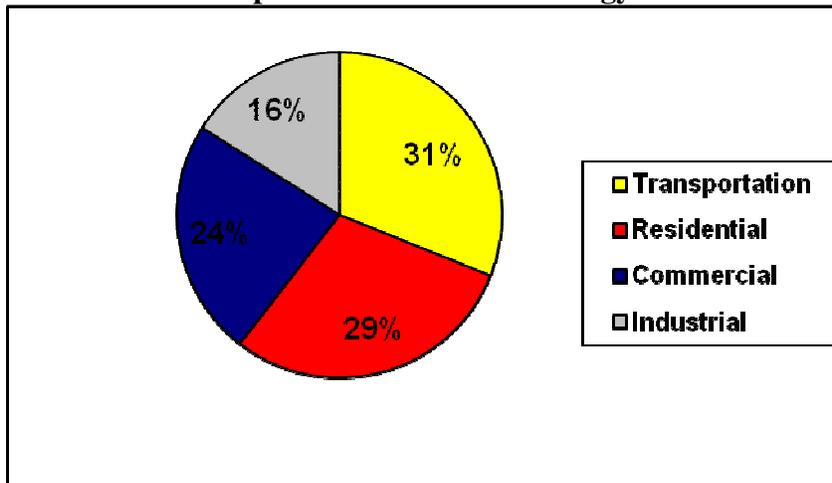
In terms of buildings, the highway department garage and the Municipal Building/FD used the most energy at 41% and 37% respectively. The library and Town Hall used less energy at 14% and 8%, respectively. However, the town garage had very low energy costs and carbon emissions relative to the amount of energy used, as it only accounts for 6% of carbon emissions and 7% of the energy costs despite occupying 41% of the energy use. This was due to the fact that it largely burns wood, which is low in carbon emissions and obtained free from local downed trees. The Municipal Building/FD, on the other hand, accounted for a full 58% of the carbon emissions and 52% of the energy costs despite occupying only 37% of the energy use. The library, with 14% of the energy use, occupied 21% of the carbon emissions and 25% of the energy costs. Town Hall, with the relatively small 8% of energy use, accounted for 15% of carbon emissions and 16% of costs. The library, Town Hall, and Municipal Building/FD have higher proportions of carbon emissions compared to their share of energy use. As stated above, a closer look at the data would explain that the proportions of energy use, emissions, and costs are affected by the fact that the town garage used primarily wood heat which was obtained cost free to the town. Wood heat provides a larger amount of energy with lower carbon equivalent emissions.

Regional and Community Energy Use

A regional energy and greenhouse gas assessment was conducted for the Monadnock region. The Monadnock Region is geographically defined by Southwest Region Planning Commission's (SWRPC) Planning District. The regional assessment is based on the 2005 facts and figures from the New Hampshire state inventory that was derived from the Energy Information Administration (EIA). The EIA evaluates residential, commercial and industrial buildings, transportation, and electricity production. The regional assessment included the figures and information on the relevant sectors for the Monadnock region. These sectors included residential, commercial, industrial, transportation as well as a section on waste.

For the purposes of the regional assessment, electricity was included as an end use factor versus being separated out in electricity generators, since there are no electricity generator facilities in the Monadnock region and it was important to look at end use in buildings.

Chart 1 New Hampshire 2005 Units of Energy in Sectors



As shown in the chart above, transportation is the largest consumer of energy as well as the largest producer of CO₂ in the state of New Hampshire. After transportation, residential uses are second largest consumer of energy and producer of CO₂ followed by the Commercial and Industrial sectors. Finally, waste accounts for a nominal amount of the energy consumption and CO₂ emissions in the region and is not depicted in the state energy chart. It is important to note that if you combine Residential, Commercial and Industrial sectors together, which accounts for buildings, the buildings sector constitutes 69% of energy usage and CO₂ emissions. These figures and percentages fairly represent the Monadnock region's energy portfolio. The state inventory indicates that oil and electricity are the main sources of energy in the residential and commercial sectors. In the industrial sector, the highest energy usage is electricity.

In Temple, commercial square footage is very small compared to residential square footage. Industry is also absent in Temple. Therefore, the two primary sectors of concern for the Temple community are transportation and residential buildings. Within these two sectors, heating oil, electricity and vehicle gasoline are the dominant forms of energy.

New Hampshire Energy Supply

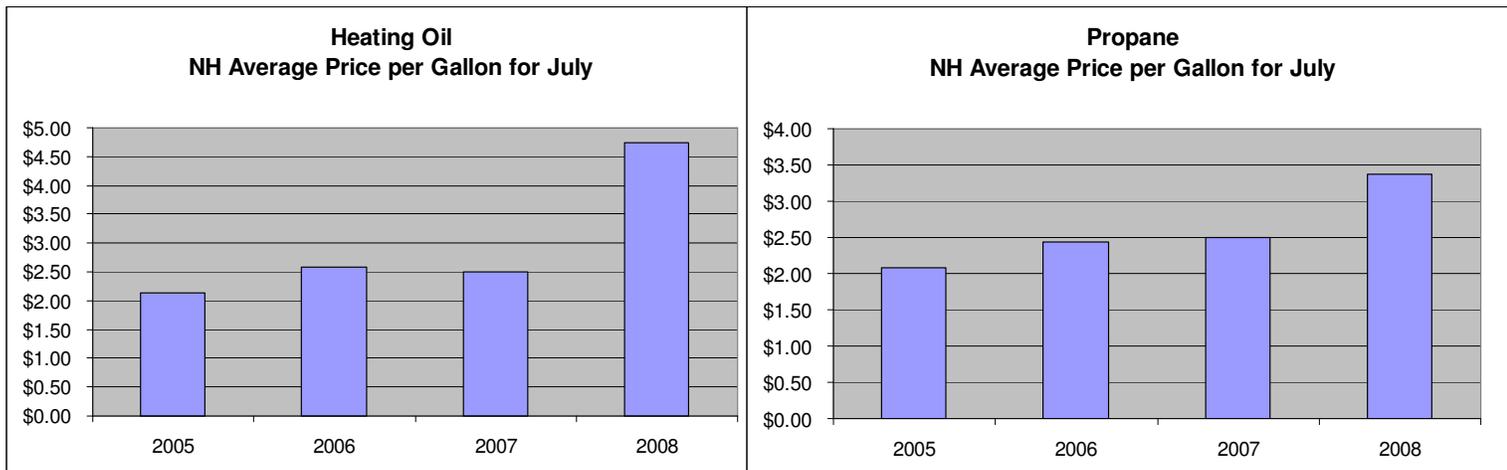
As stated in the main text of the chapter, nonrenewable fossil fuel based energy accounts for 69 % of the total energy use in New Hampshire. The gross energy use includes all of the energy imported into the State, plus all of the energy produced with resources from within the state. The calculation of gross energy use is important to consider because the production of energy, regardless of where it is ultimately used, has economic and environmental ramifications.

In 1990, total energy consumption in New Hampshire was 264.6 trillion British Thermal Units (BTU) and the state population was 1,109,117. On a per capita basis, each resident consumed 239 million BTUs. By 2004, the energy consumption grew by 28.7% to 340.6 trillion while population grew only by 17.1%. The energy consumption per capita in New Hampshire rose to 262 million BTUs. Thus, the average resident in New Hampshire consumed 9% more energy in 2004 than they did in 1990.

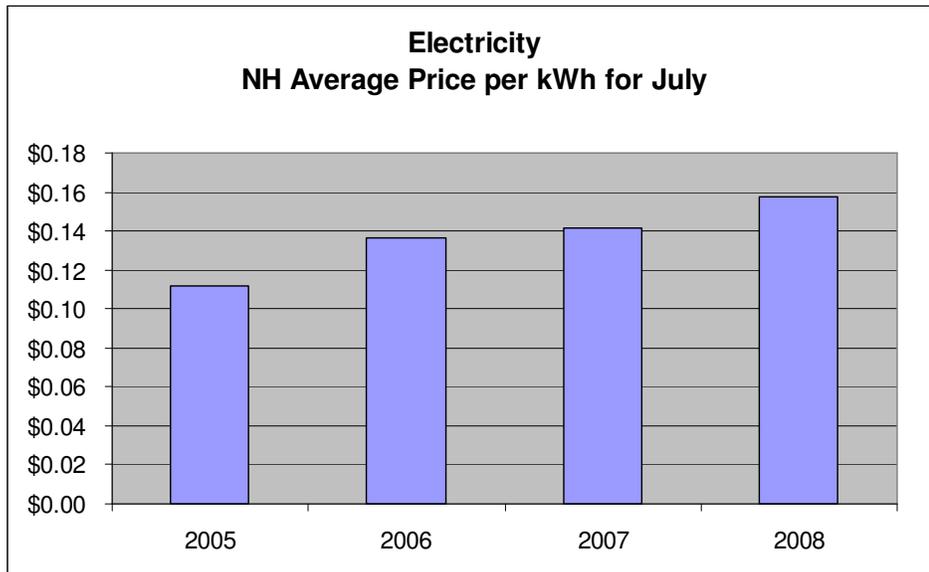
There is a heavy reliance on petroleum products in NH, the region and the nation. The percentage of natural gas contribution toward total energy consumption varies minimally between the state, region and nation. However, both New England and New Hampshire are more reliant than the United States on natural gas as a fuel source for electricity. Regarding coal, there is also a difference across these three geographic regions. Across the United States, coal produces close to 50% of the country's electricity. However in New England, it drops to a mere 15.1% and only slightly higher numbers in New Hampshire.

At 17.1 %. Nuclear in NH is substantially larger than the U.S. because of the Seabrook nuclear power plant. This is less revealing, because the electricity from that plant enters the New England power grid and the electricity from Seabrook is not necessarily confined to being used in New Hampshire. As a matter of fact NH exports 34.2% of the energy generated in the state.

Graph 1 and 2 NH Average Heating Oil and Propane Price per Gallon July 05-08



Graph 3 NH Average Electricity Price per kWh July 2005-2008



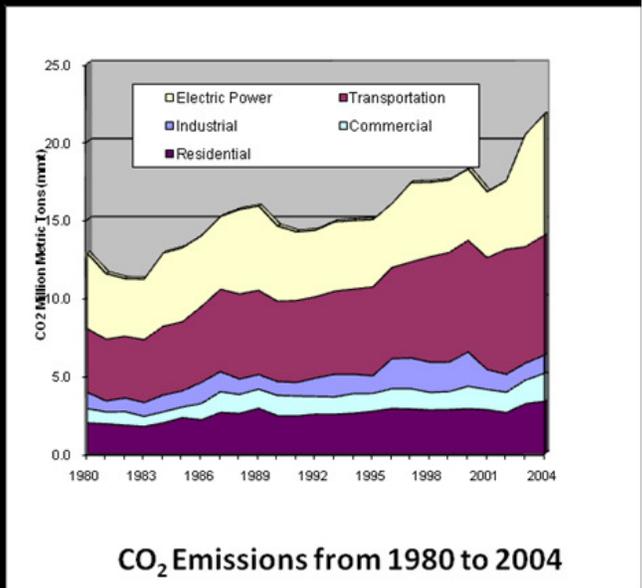
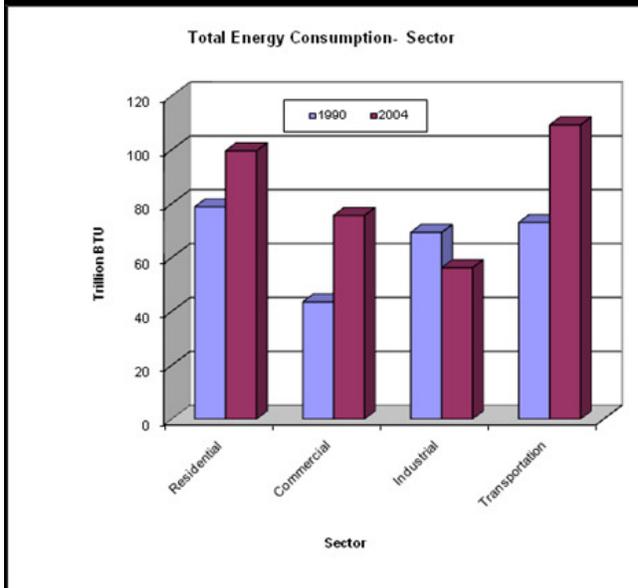
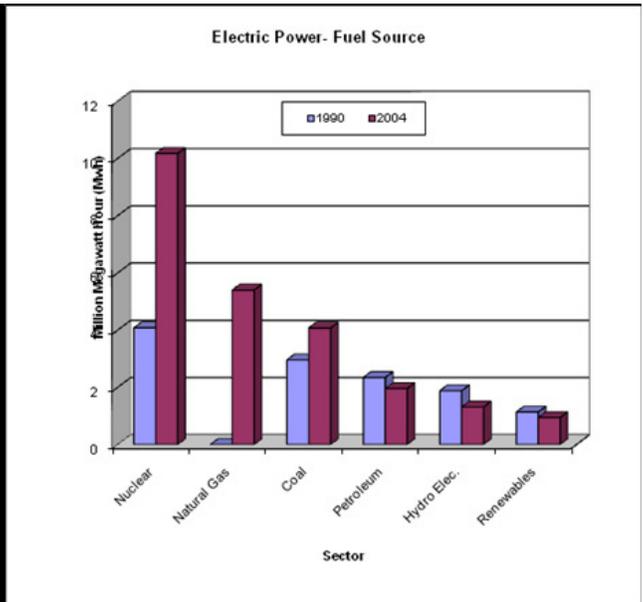
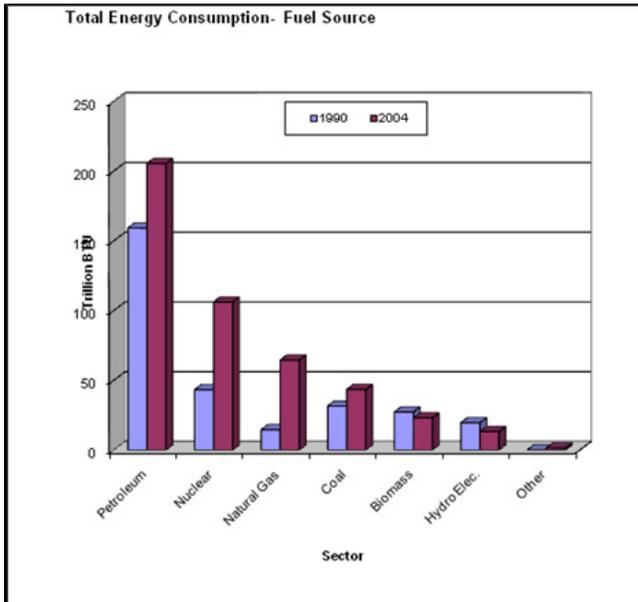
Regarding electricity, rates in New England are substantially higher than the national average, which is largely due to the limited availability of coal to the New England region. Coal is an affordable fuel source for many areas with rich deposits of the mineral, but New Hampshire is not one of these regions. It is also important to note that this lower cost does not take into consideration the significant damage to human health and the environment that are frequently linked to coal. The result in New Hampshire is a heavier reliance on natural gas and nuclear for power generation. As stated in the main text of the chapter, although it may not seem like a lot, the five cent increase in the cost of electricity from \$0.11 to \$0.16 since 2005 is actually a 45 % increase. Given the fact that such a large percentage of the energy use in the Monadnock region is from electricity, this will result in a dramatic increase in energy costs for residents as well as businesses in this region.

It is important to note that these rate increases for electricity were prior to and independent of any impact from the Regional Greenhouse Gas Reduction Initiative (RGGI) Cap and Trade program. In New Hampshire, the RGGI program did not become operational until 2009, a year later than the 2008 statistics used in this report. Furthermore, it has been clearly documented that the Cap and Trade system being used in New Hampshire to regulate the RGGI program will have only a minimal effect on potential rate increases for our electricity in Temple. It has been shown in numerous studies and analyses that when the money from a Cap and Trade program is reinvested in energy efficiency programs and projects within a state, rather than used to reduce utility rates, it stimulates the economy, produces more in-state jobs, and decreases the tax burden

on residents through lower municipal utility costs. It is an overall economic gain, rather than a financial detriment for utility consumers.

The NH Climate Action Plan calls for a reduction in emissions of 20 percent below 1990 levels by 2025, and 80 percent below 1990 levels by 2050. In order to meet these reduction goals statewide, NH communities must engage in local energy planning that includes strategies for decreasing their emissions overall.

Energy use and carbon dioxide emissions by energy sector in New Hampshire from 1990 to 2004 [Source: New Hampshire Climate Action Plan (2008)]



Renewable Energy Use by Type and Sector in New Hampshire

As the charts below indicate, the two largest sectors using renewable energy in NH are electricity generation (47%) and industry (40%).

