# Town of Tilton, NH

# Master Plan

**December 2013**

**Prepared By the:**
**Tilton Planning Board**
**257 Main Street**
**Tilton, NH 03276**

## ADOPTION OF TILTON MASTER PLAN UPDATE, 2013

The Tilton Planning Board, having held duly authorized public hearings on the Tilton Master Plan on August 13, 2013 and on September 10, 2013, hereby adopts and certifies the chapters and recommendations contained with the Tilton Master Plan Updates – 2013. The 1985 and 1994 Tilton Master Plan is now superseded by this update, with the exception of the two chapters: Downtown improvement Plan and Historic Resources. These chapter are unchanged by the update, and remain integral parts of the Tilton Master Plan.

The Tilton Planning Board, on December 10, 2013, voted to adopt the Master Plan update, certified by the signatures below.

Eric Pyra, Chairman

Jane Alden, Vice Chairman

Elaine Grace

Judy Tilton

Robert Haberman - Alternate

Sandra Plessner - Ex Officio

Date Copies Filed with Town Clerk: 12/13/2013 Cynthia D. Renard

Certified copies with original signatures on file with the Town Clerk.

**TILTON MASTER PLAN**

Prepared with the assistance of the
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VISION STATEMENT

For more than a decade and a half, Tilton experienced rapid economic growth in the vicinity of the Exit 20 corridor. The primary goal of town stewards during this period was to guide this event and the resulting increased valuation to stabilize the tax base and offset rising costs. The secondary and converse goal was to protect rural areas and agricultural zones from intense residential development. Though largely successful, these goals did not address many fundamental needs of our citizens: needs such as modern recreational facilities, preservation of green corridors and the acquisition of important watershed areas and protection of the town's drinking water supplies.

A vision for the future of Tilton as a thriving community must include positive improvements in the following areas:

1. Improving the quality of life for citizens through community and safety improvements.
2. Actively working to protect the natural resources that buffer the community from the development at Exit 20.
3. Thoughtfully planning for future capital needs of the community so that infrastructure keeps pace with growth trends.

## A. QUALITY OF LIFE

The village area of our community is an important asset, and a concentrated effort should be made to restore the historic character of the area and support its continued economic revitalization. The town needs to foster an appreciation of historic preservation as a vital aspect of the community's character. One way to do this is to develop and implement zoning and site plan regulations that preserve and protect the historic character of Tilton.

Areas of particular concern in the downtown district are safe passage for pedestrians, adequate parking, shopper amenities such as public restrooms and water fountains, public transportation, and the continued revitalization of the downtown buildings in general. Town officials should identify any grant funding opportunities that could be used by the town to support historic preservation efforts. A parking ordinance for the Downtown was created which gives the business owners and employees a place to park so that the main street of the Town is left open for public shoppers. The Town should continue to take advantage of any property that would become available in order to create more parking.

A significant level of public interest has been expressed for the development of recreational facilities aimed at all age groups. These should include such facilities as a town beach or public swimming pool, boating and fishing facilities, and parks and athletic fields. The town should proactively work to create public access for outdoor recreational activities and public access to streams, lakes, and ponds in the community.
In 2009, a dream of what could be took on a life of its own and volunteers worked tirelessly to bring the Senior Center into reality. Many donations, grants and hard work paid off as the Senior Center had its grand opening in May 2012. This was an excellent use of the old Grange Building. Efforts should continue for fund raisers in order to assure a long life to the Center for the benefit of our "seniors".

## B. NATURAL RESOURCES

The creation, preservation, and enhancement of traditional neighborhoods and rural areas are pivotal components in the successful maturation of our community. Neighborhoods are the basic structural

ingredient, which define and characterize the cultural, historical, and natural qualities of Tilton, while rural areas provide a pleasant and tranquil transition from areas of urban expansion and congestion.

Tilton will retain its rural character and charm by increasing the amount of protected lands through land purchases and conservation easements, embracing the use of the cluster housing concept, retaining minimum lot size, and requiring developers to create larger natural buffers,
Due to the growth over the last decade, Tilton must scrutinize future residential and commercial complexes for their potential impact on the quality of life and environmentally sensitive areas of the community. Lands of significant natural value such as aquifers, areas with slopes of 15% or more, and areas identified as significant wildlife habitats or corridors should all be subjected to stringent environmental review and potential impact studies prior to subdivision and/or site plan approval. The importance of future development patterns cannot be overstated. Therefor it is imperative that the planning board review and update local regulations and add those that will be needed such as Steep Slopes and Open Space and Cluster Development. Although the Town has a Cluster Development ordinance, it should be reviewed and adjusted to fit current and future needs of the Town. These regulations can help to guide our future Planning Board members with the creation of new growth.

In 2007, the town adopted a program that marked the completion of several years of hard work by volunteers from Belmont, Northfield, and Tilton. The "Tri-Town Aquifer Project Best Management Practices Guidebook" was officially adopted by the planning board. This guidebook represented years of work to help guide our towns in protecting the quality and quantity of our drinking water resources. Tilton should employ the practices in this guidebook to protect the aquifer resources. As a result of this Best Management Practices Guidebook, the Town did adopt Aquifer Protection Regulations. The town should continue to support and promote educational opportunities to help raise awareness of water quality issues in Tilton. Additionally, Tilton should work with landowners to develop lands located near or on aquifers with safety nets in place for the prevention of contamination. These aquifers represent the town's future drinking water supplies. It is our responsibility to ensure their protection for future generations.

The town should consider amending the Subdivision Regulations so new subdivisions would be required to have a dry hydrant system, a cistern, or a sprinkler system approved by the Fire Department. It would also be prudent to explore the possibility of requiring all new homes that are located 1,000 feet or more from a water source be equipped with a sprinkler system for fire suppression.

The type of growth and the rate at which it occurs will have a serious effect on the character of Tilton. Therefore, every effort must be made to allow changes to be assimilated into the community's fabric at a controlled rate.

## C. CAPITAL IMPROVEMENTS

In 2007 the Tilton Planning Board adopted the Capital Improvement Program, developed by the Capital Improvement Committee, with the assistance of the Lakes Region Planning Commission. The maiden effort of this committee was not entirely embraced by the town fathers or citizens at the March 2007 town meeting, but it was adopted and will be refined and hopefully more fully embraced in the coming years. This plan will help the community plan for infrastructure needs in advance, allowing planning, oversight, and the ability to spread costs over a horizon of 6 years. If utilized, this will prevent lump sum expenditures that greatly affect the tax rate from one year to the next.

With a capital improvement plan in place, impact fee regulations were voted on at the 2012 Town Meeting and approved so that developments that weigh heavily on existing town infrastructure can contribute their fair share to its upkeep and improvements.

Traffic safety and flow is an important issue to the citizens of Tilton. To provide the safest, smoothest traffic flow to accommodate both local and seasonal traffic, the town should work with the State to develop a comprehensive transportation plan. By working proactively and in cooperation with the state, the town can anticipate the future demands made of our roadways.

Transportation enhancement grants should be investigated to fund sidewalks along our roadways to provide safe walkways for pedestrians, thus encouraging foot traffic to local businesses and points of interest throughout town.

The town should strive to finish laying sewer lines so that all but the most rural areas are covered by the availability of municipal sewer and require all new residential and commercial developments to tie into the town's sewer system.

In order to maintain the character of the town and control the rate at which it continues to grow, it is imperative that the Planning Board be diligent about updating the town's regulations for amendments consistent with the needs of the community. Of top priority was the revision of the sign ordinance, which was needed to help eliminate over-signage and light pollution. The board should continue to require setback standards, easements, and rights of way based on design standards that take into account density, traffic generation, safety, and future infrastructure needs and aesthetics. The town seriously considered the downtown parking issues and worked to create Parking Regulations. Although these regulations have helped, the Town should obtain additional parking whenever the opportunity presents itself.

The 1994 Master Plan encouraged commercial growth in the newly created Regional Commercial District. The area along Rt. 3 at the Exit 20 area has blossomed into a variety of retail commercial businesses. The town should now encourage a more professional commercial use in the area, including within the Industrial Park, by promoting Office Complex space. Office space is in short supply in Tilton and would attract professional services and better paying jobs for our citizens.

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## COMMUNITY FACILITIES

In addition to providing a description of Tilton's existing facilities such as police, fire protection, water supplies, waste and sewerage, highway maintenance, and recreation, each section herein contains assessments of their current states and recommendations for needed improvements of each facility category. The final section summarizes areas of significant improvements, areas where improvements are needed, and future expansion plans for the Tilton-Northfield Fire District.

There are relatively few actual standards by which the adequacy of public facilities or services can be measured in a community. In the case of school buildings and educational services, there are minimum state standards for space allocation per pupil. For public buildings minimum construction code requirements may need to be met, but in most other service areas, the community itself must determine what it considers adequate for local demands. Statistics depicting community averages such as public employment per capita are sometimes incorrectly interpreted as standards for service. In reality, demands and perceived needs for local government services differ across the nation and within the State of New Hampshire. The level of service provided by a municipality may vary according to:

1. The fiscal capacity of the community (tax base and household income);
2. Local demographic-based demand or community interest in particular types of services;
3. Service loads placed on the community from the inflow of persons or traffic generated outside the town.

The major public facilities that serve Tilton residents and Tilton public school pupils are listed in Table II-1. It summarizes the major town and school facilities as well as water and sewer utilities serving the town of Tilton today.

Table II-1: Inventory of Community Facilities Serving Tilton

| **Municipal Facility** | **Lot Area (acres)** | **Year Built** | **Use/Function** |
|---|---|---|---|
| Police Station | 0.95 acre | 1990 | Police headquarters |
| Fire Protection | | | |
| Center Street, Tilton | 0.135 | 1950 | Downtown Station |
| Park St. Northfield | 0.6 | 1986 | Main Station |
| Town Office | .06 | 1879 | Town offices |
| Public Works | 7.521 | 2002 | Town highway garage |
| Library; Hall Memorial | 1.37 | 1886 | New wing added in 2000 |
| Former Grange Building | 0.28 | 1835 | Tilton Senior Center |
| **PARKS & RECREATION** | | | |
| Riverfront Park | 1.949 | 2006 | Passive park |

| | | | |
|---|---|---|---|
| Northfield Pines | 5.00 | 1992-1993 | Community center |
| Tilton Arch Hill | 18.00 | 1880's | Park with monument |
| Island Park | 0.75 | 1850's | Gazebo rebuilt 1992 |
| Vest Pocket Park | 0.12 | 2001 | Park with monument |
| Rt. 132 recreation field | 5.00 | 2003 | Football & Softball |
| Buffalo Park | 55 +/- | 2005 | Passive Park |
| **SCHOOLS** | | | |
| Union Sanborn (Northfield) | 4.00 | 1901 | Grade Pre-K thru 3 |
| Sanborn School (Northfield) | See above | 1950's | Grade K thru 5 Addition added 1995 |
| Sanbornton Central (Sanbornton) | | 1948 | K thru grade 5 |
| Southwick (Northfield) | 32.4 | 1994 | Grades 3 thru 5 |
| Winnisquam Regional Middle School (Tilton) | 42.05 | 1974 | Grade 6 thru 8 |
| Winnisquam Regional High School (Tilton) | See above | 1939 | Grade 9 thru 12<br>Both middle and High schools were expanded and renovated in 2002 |

Source: Tilton Town Records, 2013

## A. POLICE DEPARTMENT

Service Demands

Tilton is a main access point for the Cities of Franklin and Laconia. It is also the gateway to the Lakes Region which drives a large amount of traffic off Interstate Route 93 off exit 20 into Tilton each year. This is why Tilton has become one of the major destinations places for shopping, dining, and hotels in Central New Hampshire, especially for those on vacation, visiting the Lakes Region or White Mountains. Because of this fact, Route 3/11, Laconia Road in Tilton has become a very desirable location for new commercial and retail businesses coming to New Hampshire.

The Tilton Police Department typically experiences the greatest demand for service in the late spring, summer, and early fall. The lowest demand on services can occur from January through March. In addition to seasonal variations in populations, higher rates of traffic accidents and crime occur due to the increase in traffic volume for highway-oriented retail and commercial development, particularly in the vicinity of Exit 20. The location of school district facilities on Rt. 3 coupled with a heavy concentration of commercial buildings also tend to influence the above average traffic volume and corresponding increase in traffic related accidents. Increased traffic volume and the increase in the daytime population also produces a higher rate of traffic violations and crime rates in the area.

With additional commercial growth anticipated along the Rt. 3 corridor of Tilton, increased demands for routine patrols and rapid police response can be expected in the more easterly and westerly portions of Rt. 3.

Available Facilities

In 1990, the police department was relocated to a new facility just outside the Downtown area along Route 3. At the time of completion, an additional 925 square feet of unfinished space was available for future expansion. By the year 2002, that additional space had been absorbed as a result of additional staffing and function requirements. The chief of police has indicated that the current police headquarters is experiencing both internal and parking space deficiencies, and is, once again, inadequate to handle the needs of the town. Regrettably, the current police department headquarters cannot be expanded at its present location. In 2005, a Police Department Committee began work on a feasibility study to determine the needs of the police department and a new location for a new station. Talks about building a life safety building were considered but the Fire District was not ready to pursue a life safety building and had placed the feasibility of such a building out another 7 to 8 years. There have been several committees studying the needs of the Police Department and a viable location for such. At the current time, there are no plans to build a police station as it was rejected by the voters at the 2011 Town Meeting. Currently, renovations are being completed for the police station in order to comply with safety issues and legal issues regarding evidence storage.

## B. FIRE PROTECTION

Tilton-Northfield Fire District

The Tilton-Northfield Fire District comprises the two-town area of Tilton and Northfield and is governed by three commissioners. It is a separate taxing district with its own annual meeting and separate tax rate. Costs of the District are apportioned between the two towns according to each town's share of their combined equalized property valuation.

Services

In addition to overseeing the normal functions of the fire district, the fire department works in conjunction with the planning board to ensure compliance with the Life Safety Code during Site Plan review and approval processes.

Water Supplies

Currently the district has 19 dry hydrants dispersed primarily along the Rt. 3/11 corridor and in the downtown area, and 9 fire ponds, which are inspected and maintained on a regular basis. The locations of these hydrants and fire ponds are illustrated in Table II-1. A concern raised during the 1993 Master Plan update and one that persists today is the lack of public water supply in developing areas east of I-93. As a result, large-scale developments must construct private, on-site water storage systems for fighting fires, while older developments still rely on rivers and streams to provide needed water for fire fighting.

**Table II-2: Dry Hydrants & Cisterns**

| **TNFD Dry Hydrant Test Sheet** | | |
|---|---|---|
| **Address/Hydrant Number** | **Type** | **Location Description** |
| 41 Clark Rd (DH-01) | Dry Hydrant | 2/3 the way up the hill on left from W.Main St |
| 139 Winter St (DH-02) | Dry Hydrant | bottom of the emergency access road |
| 322 West Main St (DH-03) | Dry Hydrant | next to Riverfront Place |
| 1 Park St (DH-04) | Dry Hydrant | on Park Street by bridge |
| 298 Main St (DH-05) | Dry Hydrant | back parking lot of Tilton House of Pizza |
| 238 Main St (DH-06) | Dry Hydrant | across the street from Cumberland Farms |
| 9 Shaker Rd. (DH-07) | Dry Hydrant | Next to Shaker Rd. boat launch (OOS- Pipe Damaged ) - Northfield |
| 124 Knowles Pond Rd (DH-08) | Dry Hydrant | on Knowles Pond - Northfield |
| 183 Turnpike Rd (DH-09) | Dry Hydrant | just past pond on right - Northfield |
| 301 Sandogardy Pond Rd (DH-10) | Dry Hydrant | right side of bridge in-between guardrail-Northfield |
| 100 Birch Pond Dr (DH-11) | Dry Hydrant | southern side of J-Jill |
| 86 Lancaster Hill Rd (DH-12) | Dry Hydrant | behind house |
| 100 Autumn Dr (DH-13) | Dry Hydrant | past movie studio on left |
| 1 Paper Trail (DH-14) | Dry Hydrant | on the side of the pump house |
| 120 Laconia Rd (DH-15) | Dry Hydrant | behind suite 100, next to pump room door |
| 101 School St (DH-16) | Dry Hydrant | bottom of the hill in front of the pond |
| 804 Laconia Rd (DH-17) | Dry Hydrant | Rodeway Inn roundabout |
| 740 Laconia Rd (DH-18) | Dry Hydrant | on the beach at Lakes Edge Condo |
| 81 March Rd (DH-19) | Dry Hydrant | 1/3 of the way from School St on right |
| Business Park Drive (DH-20) | Dry Hydrant | Limited water |
| Calef Hill Road (DH-21) | Dry Hydrant | Just past 1st House on left OOS-Gravel in pipe |
| Cross Mill Road (DH-22) | Dry Hydrant | OOS - Sand Filled Strainer |
| Granite Street #1 (DH-23) | Dry Hydrant | OOS - Pipe Broken in Water |
| Granite Street #2 (DH-24) | Dry Hydrant | OOS - Broken off @ Stand Pipe |
| Reservoir Road (DH-25) | Dry Hydrant | OOS - Need To Be Dredged - Northfield |
| Colby Road (DH-26) | Dry Hydrant | OOS - Broken Pipe |
| Shedd Road (DH-27) | Dry Hydrant | OOS - Talk about Installing new DH when pond is rebuilt - Northfield |

Source: 2012 Information provided by the Fire Chief

Apparatus

Table II-3: details the current equipment inventory of the Tilton-Northfield Fire Department.

| Year | Type | Make/Model | Description |
|---|---|---|---|
| 2001 | Engine | Central States/Spartan | 1000 gal tank, 1500 GPM pump |
| 2006 | Engine | Emergency One | 1000 gal tank, 1500 GMP pump |
| 2006 | Tanker | Emergency One/International | 2500 gal tank, 1500 GPM pump |
| 2006 | Ambulance | Road Rescue/Ford | Advanced life support Defibulator., IV, Intubation, meds |
| 2011 | Ambulance | PL Custom/Chevy | Advanced life support, Defibulator, IV, Intubation, Meds |
| 2000 | Rescue | Marion/International | Auto extrication tools, airbags, cribbing, blocking, AED, ice rescue suits, swift/flood water rescue equipment, cascade unit, winch, 10K generator |
| 2013** | Quint | Smeal/Spartan | 75' aerial, 500gal tank, 1500 GPM pump |
| 2003 | Boat | Zodiac | 14' inflatable |
| 2006 | Pickup | Ford F350 | Plow and Skid Unit seasonal tools including forest / brush fire equipment |
| 2006 | Pickup | Ford F350 | Fire Prevention, crew transport, tow vehicle for smoke safety house |
| 2009 | SUV | Ford Expedition | Command vehicle |

**New truck delivered in September

Source: Information provided by the Tilton-Northfield Fire Department.

Fire Stations

The Center Street station in Tilton has approximately 3,000 square feet of garage space on the first floor and about 2,400 square feet of finished space on the second floor that is primarily used for training, meetings, women's auxiliary, and office space. In 2010, a second egress was added to the upstairs of Center Street station as men on duty sleep in the station. The primary and more recently constructed station on Park Street in Northfield is a one-story structure with 4,800 square feet and seven bays. Future expansion is possible at this location.

Response Time

Total response time from time-out to arrival at the emergency scene has a current average of four minutes. Due to a major expansion of commercial development in the I-93 exit 20 area, several new traffic signals were added along Route 3. Emergency response time in this area was not affected due to the addition of the Opticon system to each signal allowing emergency vehicles to proceed without delay.

## C. PUBLIC WORKS

The Public Works function in Tilton involves the maintenance of Town highways, drainage, sidewalks, winter maintenance of Class II state highways, and a recycling operation. The department is also responsible for town road and sidewalk reconstruction as well as maintenance and repairs on town equipment, vehicles, and municipal buildings.

Highways

Table II-4 lists the 2003 Lakes Region Planning Commission (LRPC) inventory of classified highway mileage within the Town. Table II-5 lists the Public Works department inventory of vehicles and major maintenance equipment. The Town is responsible for reconstruction and maintenance on all Class V roads (10.37 miles).

**Table II-4: Classified Highway Mileage**

| Class | Description | Road Miles | Mileage In Tilton |
|---|---|---|---|
| I | Interstate (I-93) & State Primary (Rte. 3) | 13.213 | 34% |
| II | State Secondary* | 13.29 | 34.1% |
| V | Town Streets & Roads | 10.37 | 26.7% |
| VI | Not maintained | 2.03 | 5.2% |
| | **Total Miles** | 38.9 | 100% |

Source: LRPC January 2010

*Detail Of Maintenance Responsibility for Class II Roads:

| Roads with Full State Maintenance | Roads with Town Winter and State Summer Maintenance Arrangement |
|---|---|
| Park Street | Brook Road |
| Route 132 | Calef Hill Road |
| School Street | Church Street (Lochmere) |
| Route 140 | Clark Road |
| | Colby Road |
| | Grange Road |
| | Lancaster Hill Road |
| | River Road |
| | Silver Lake Road |
| | Winter Street |

Source: Town Road Agent

In Tilton, the Town is responsible for winter maintenance on state-owned Class II highways. There are 13.29 miles of Class II highways, constituting 34.1 % of the total highway mileage.

**TABLE II-5: 2013 Inventory of Tilton Public Works Vehicles and Major Equipment**

| Year | Type | Use |
|---|---|---|
| 2006 | Peter Built dump truck | Highway maintenance |
| 1990 | International dump truck | Highway maintenance |
| 2005 | Ford Crown Victoria car | Public Works Director |
| 2008 | GM ¾ ton pick-up | General maintenance |
| 1999 | International dump truck | Highway maintenance |
| 2000 | Ford loader/back hoe tractor | Highway maintenance |
| 2011 | Chevrolet 3/4 ton dump truck | Highway maintenance |
| 2003 | Trackless sidewalk plow | Sidewalk maintenance |
| 2013 | Ford F550 1 ton dump truck | Highway maintenance |

Source: Tilton Public Works Director

Overall highway department staffing currently totals five full time persons. The department is housed in the Tilton Public Works building located on West Main Street (Route 3). The building is 8,000 square feet in area; outbuildings consist of a modern sand/salt shed and enclosed spreader rack capable of housing four suspended salt spreaders. Collectively, these facilities enable the department to safely store and maintain all equipment and supplies inside. A small portion of the property is used for composting leaves and chipped brush gathered during spring clean up. This compost is available to the Town citizens at no cost. Presently, limited recycling is done onsite two days each week. Efforts are underway by a leading waste hauler to create a regional recycling center in the vicinity of Exit 20 with participation of the towns of Tilton, Belmont, and Northfield. If successful, the interim recycling operation at the Tilton Public Works facility would be discontinued.

**Solid Waste.** Currently the town contracts with commercial haulers to collect both residential (curbside rubbish) and non-residential solid wastes that are acceptable to the Concord Regional Solid Waste and Resource Recovery Cooperative in Penacook. The Co-op records all solid wastes received and bills the town for tipping fees based on the tonnage generated within the town. The town, in turn, bills the individual haulers for tonnage generated by local commercial or industrial firms.

**Special Wastes.** Special waste such as asphalt, demolition debris, metals, etc., cannot be burned at the Concord Regional Solid Waste and Resource Recovery Cooperative in Penacook and must be hauled to a state-approved landfill site. While it looks for a permanent solution to the recycling issue, Tilton currently provides for a means to dispose of special wastes two times per year in the spring, mid-summer, and fall. During these two periods, extra roll-off containers are brought in by a commercial hauler to accept all special wastes for transportation to an approved landfill site. There is recycling in the summer only at Business Park Drive.

**Benefits of Recycling.** On August 27, 2009 a committee was formed to look at recycling, the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. The committee learned that recycling can benefit our community and the environment by reducing the amount of waste sent to landfills and incinerators; by conserving natural resources such as timber, water, and minerals; by preventing pollution caused by reducing the need to collect new raw materials; by saving energy; by reducing greenhouse gas emissions that contribute to global climate

change; by helping sustain the environment for future generations; and by helping to create new well-paying jobs in the recycling and manufacturing industries in the United States.

Although people have always reused things, recycling as we know it today emerged as part of the modern environmental movement.

Recycled materials include those used in manufacturing processes and those used in consumer products. The recycled material is often degraded somewhat by use or processing and therefore must be converted to another purpose. For example, the processing of recycled newspaper and other paper wastes usually shortens their fibers, and the material cannot be used to make high-grade paper. Instead, it can be reprocessed to make cardboard or insulation. Recycling helps reduce pollution, prolong the usefulness of landfills, and conserve natural resources.

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. Recycling can benefit our community by,

1. Conserving natural resources such as timber, water, and minerals;
2. Preventing pollution caused by reducing the need to collect new raw materials;
3. Saving energy;
4. Reducing greenhouse gas emissions that contribute to global climate change;
5. Helping to sustain the environment for future generations;
6. Creating new well-paying jobs in the recycling and manufacturing industries.

The mission of the Recycling Committee in Tilton is to find ways to promote recycling efforts in our Town. The committee sponsors the annual Town yard sale and the road-side clean-up efforts. Our Recycling Committee promotes the hazardous waste collection in the spring and the recycling collection of usable products in the fall. After much research, our Committee committed to bringing curb-side recycling to Tilton saw it become a reality in July of 2013. It is in the best interest of the citizens of Tilton to support and encourage recycling as trash tonnage is only going to get more expensive to remove and it is the right thing to do.

Reduce, reuse, recycle.

## D. UTILITIES

The utilities reviewed in this section include the public sewer system operated by the Tilton Sewer Commission and the water supply system owned by the Tilton-Northfield Aqueduct Water District (TNAWD). The provision of water and sewer service to Tilton not only provides environmental benefits but also has a direct bearing on the direction, pace, and density of future development in Tilton. (Also see the Utilities Systems Map)

### Sanitary Sewer

The Winnipesaukee River Basin Project (WRBP) for regional sanitary sewer service was developed in the early 1970s. The main interceptor traverses the developed corridor of Tilton along the Rt. 3 corridor. The Tilton Sewer Commission has been working to implement a plan for sewer system extensions that will

ultimately serve all but the most rural areas of the community. The Utilities System Map illustrates the current extent of the sewer system in the town of Tilton. The current water service area of the TNWD is shown, along with the Lochmere Village Water District.

At present, only about 50 percent of capacity at the Franklin regional treatment plant is utilized, providing substantial growth potential for future users of the system.

An engineering report by Whitman and Howard, Inc. of October 1986 (Wastewater Collection System Feasibility Study, October 1986, by Whitman and Howard, Inc.) describes the history and future needs of the Tilton sewer system. In the 1970s, Tilton's wastewater was discharged to nine outfalls on the Winnipesaukee River. The town had about five miles of sewer mains and two miles of service connections serving people in and adjacent to the village area of Tilton. Most of the sewer mains were of pre-1900 construction with some areas added in the 1930s and 1950s. In the late 1970s, a regional interceptor of 48-60 inches was constructed through Tilton to capture sewage from each of the nine major outfalls.

In 1986, recommendations were made to assign priority areas for extending sewer service. Of those recommendations, the following sewer extensions have been completed:

1. In 1995, the Northern Shores project brought sewer lines into the Ashuelot Drive/Dublin Drive section of Silver Lake.
2. In 1999, the Lower Silver Lake project brought sewer lines into the Manville Road, Andrews Road, Crystal Lane, Ruby Lane, Emerald Lane, Topaz Lane and Pearl Lane area on the southern end of Silver Lake.
3. In 2001, on Rt. 3 west of the village area, approximately 760 linear feet of sewer line was installed from the Town Line Plaza in an easterly direction. (The Tilton Sewer Commission is currently trying to extend this line an additional 720 linear feet. There is an additional 2,000 linear feet of sewer line that could be installed along West Main Street bringing the line down near the Winnisquam Regional High School.)
4. As of January 2007, the Tilton Sewer Commission began the project of installing sewer lines in the Lochmere area. The project encompassed Brook Road, Silver Lake Road, Church Street, River Road, Grange Road, Lower Lancaster Hill Road, Lake Road, Lakewood Road, Sunrise Shores Road, and part of Rt. 3/11. This project, along with replacing Silver lake, Brook Road and River Road was completed in 2010.
5. The Industrial area adjacent to the WRBP interceptor has the ability to connect into the WRPP line.
6. In 2003, "the Route 3 Project" was completed. During this project, approximately 6,325 linear feet of sewer lines were installed along Chapman Road (625 linear feet) and Rt. 3/11 (5,700 linear feet).

The benefits of planned sewer construction include (1) protection of water quality; (2) establishment of a more competitive position for the town in attracting new business and industry; and (3) increasing the development density and taxable value per acre within Tilton's small geographic land area and (4) providing a safe and sanitary community for our residents.

### Tilton-Northfield Aqueduct Water District

The Tilton-Northfield Aqueduct Company was purchased in 2006 by its users and became a water District for the towns of Tilton and Northfield. The District serves between 900 and 1000 connections. The primary service area is comprised of the village and downtown areas of Tilton, with service extending east of Exit 20 to the Hampton Inn and west of I-93 to Jensen's Trailer Park near the Franklin city line. Water usage on the system has slowly increased over the past 15 years with an average consumption at just over 390,000 gallons per day. **(SOURCE: Wells noted as 2351010-003 Gravel Pack Well (GPW) 503 Easterly #1, and 2351010-004 GPW 504 Westerly #2)** A Source Water Assessment was conducted by the New Hampshire Department of Environmental Services 01/16/2001 and the results can be viewed online via the following link:

http://des.nh.gov/organization/divisions/water/dwgb/dwspp/reports/part1.htm Choose Northfield from the dropdown menu.

Current regulations limit total pumping from the 24 acre site to 1,152,000 gallons per day. Additional capacity at the well site is possible. Publi8c water suply7 for domestic consumption and fire protection is available throughout much of the built-up downtown and village areas of Tilton and the developing areas near Exit 20 east of I-93. Current ratepayers should not bear the capital costs of system expansion. Further expansion of the water system for developers would require a capital contribution in aid of construction. Businesses building around Exit 20 expanded the Water District to their newly constructed businesses. By 2009, water was available to several of the new businesses along Rt. 3 at Exit 20 and Sanborn Road. The towns of Tilton and Northfield may have a joint interest in considering funding possibilities for water line extension. In the years 1997 to 2001, considerable improvements to the water system were made in order to comply with the National Safe Drinking Water Act. A new water source was developed together with a new pumping station and a one million gallon storage tank. Approximately 30,000 feet of new water main was installed during that time. In the years 2006-2010, since the Water District was formed, 6,550 feet of new main has been installed and a new booster pump station on Winter Street was constructed.

### Lochmere Village Water District

A 1.3 million dollar project that was completed in 1994, the Lochmere Village Water District serves about 40 homes and a trailer park in the Lochmere area of Tilton. The district is served by two 50,000-gallon-per-day wells that sit on 2.1 acres of land near the Lochmere community beach on Silver Lake in Belmont. The district encompasses approximately two miles of pipe.

The district is capable of expanding to the limit of the precinct. Water mains are 6" pipes and 1 to 1 ½ inch piping is used to connect homes to the water system. The Tilton Nursery's sprinkler system is served by the district, and expanded to include a trailer park with 33 units and 30 condominium units abutting the park.

## E. LIBRARY

### Hall Memorial Library

The public library serving Tilton is the Hall Memorial Library, governed by a joint Board of Trustees elected from the towns of Tilton and Northfield. The Towns share the operating and capital costs for the library equally. The library currently has more than 47,000 annual visits. **(SOURCE: NH Public Library annual report, 2010)**

There are approximately , 2,450 active registered users, representing a bit less than one-third of the total population of its service area. Tilton and Northfield voters approved an expansion which was completed in 2001. With the completion of the addition, the circulation figures increased and have remained stabilized. The Hall Memorial Library now contains about 7,200 square feet of usable space on two floors. The basement houses the mechanical area.

The recent addition has greatly increased the space available for the library's collection and its capacity for various uses. In 1985, the library had about 11,000 volumes. The library's current collection includes more than 33,800 books, newspapers, videos, magazines, and audio recordings.
The library expansion project that was completed in 2001 has kept the Hall Memorial Library a vital part of the community facilities by achieving the following important milestones.

1. It is now handicapped accessible with a lift to all floors.
2. It has space and shelving needs projected to last for twenty years, barring any unforeseen growth.
3. There are currently five public access computers available, and two computers available for catalog searches, which can also be accessed from patrons' home computers. Approximately 13,000 items in the collection have been entered into the database and the completion of this process is a priority.

   Hall Memorial Library is fully automated and accessible from our website: www.hallmemoriallibrary.org Circulation in 2010 was @ 65,000, which includes downloadable materials and items borrowed from other libraries.

The public library is truly an intergenerational part of our community and works to stay that way.

## F. RECREATION FACILITIES

### Pines Community Center

The Towns of Tilton and Northfield jointly contribute (50/50 cost share) to the Pines Community Center to provide year round recreation, social, and structured physical programs and facilities for all age groups within the two towns. The center is operated by a council of adult volunteers from both towns, and augments its budget through fundraising activities. The only full-time paid employees are the recreation and program directors.

The center is an indoor/outdoor facility featuring a game room containing a big screen TV, DVD player, pool table, foosball and numerous other items; a multi-purpose room that can be rented for parties, showers, receptions, etc.; and outside facilities including a basketball court and playground, both of which are open to the public on a not-to-interfere basis with Recreation Center programs. Numerous other programs are conducted off-site using the athletic facilities at the Tilton School, the Winnisquam Regional School District, and the Gunstock Ski Area.

In addition to its regularly updated and widely disseminated booklet of activities, the recreation center produces a monthly news letter. The center also offers a list of events and newsletters through e-mail.

Annual surveys of both communities are conducted by the Tilton-Northfield Recreation Council to verify the popularity of existing programs and to identify new desired programs.

The efforts of the full-time director and volunteer council should provide a full spectrum of activities for all age groups. The Selectmen from Tilton have asked for more programs for the middle school aged children.

**Route 132 Recreation Field**

Through a special 20-year lease with the Catholic Diocese, construction was started in early summer 2003 on a 5-acre public ball field adjacent to the Catholic cemetery. Completed in the fall of 2004, the fenced site provides a recreation football field, softball diamond, on-site parking lot, and concession stand. Its completion marks the first municipally operated recreation field available to the general public. Previously, the only ball fields available to young children and adolescents of Tilton were at the Winnisquam Regional Schools, the Union-Sanborn school playground and the Pines in Northfield. In 2010, the Park Commissioners voted to have a well installed on the ball field in order to be able to better maintain the field. In 2011, the Commissioners voted to purchase an ice skating rink for the ball field so that the Townspeople could ice skate in the winter time.

**Tilton Riverfront Park**

The park was constructed on a nearly two-acre tract of riverfront land on the south side of West Main Street. This former mill site, commonly referred to as the Pillsbury Mill, was awarded an EPA Superfund for reclamation of contaminated soils and final certification for level II decontamination. At a special town meeting in September 2002, the town voted to create a committee to oversee the parks' design and development. In 2006, the park was opened. In 2010, the Park Commissioners voted to have a sprinkler system installed and use river water to water the grass. The park is on a hill and the grass tends to die during dry periods.

**Buffalo Park**

In 2005, as part of wetland mitigation, Konover Development purchased a tract of land known as Buffalo Park and gave it to the Town by reaching an agreement with the Tilton Conservation Commission. Buffalo Park is what we refer to as a Passive Park as it has been left in a natural state other than keeping walking trails open for our residents to enjoy. The Park is totally surrounded by residential homes and has an array of wildlife to watch as one is walking through the park.

**The Winnipesaukee River Trail:**

Construction of the trail started in 2000. Phase One began at the Trestle View Park in Franklin and followed along the river and the former Boston and Main Rail line to a trailhead in Northfield located at the former Surrette Battery site. This section of the trail was completed in 2005. Phase two continued the trail through downtown Northfield and Tilton and connected with the railroad right of way following the river to Exit 20 in Tilton. This section was completed in 2010. Construction is now being planned to connect Northfield and Tilton by building a foot bridge over the river somewhere near the old Ernie's site. The monies used to construct the trails came from DOT and has promoted a healthier lifestyle as people are using the trail as an alternate form of transportation instead of driving everywhere. This is good for the residents and for the environment.

Tilton secured a $200,000 grant from the EPA in order to clean up the "Ernie's site" so that the site could be turned into a green space with parking for people using the Winnipesaukee River trail. When completed, people will also have river access for putting canoes in the water as well as fishing. The

Conservation Commission is purchasing other pieces of property to expand the "Ernie's site" and to have a more suitable place for the footbridge.

The Winnipesaukee River Trail has become very popular with people of all ages. The Trail gives our citizens a safe enjoyable place to walk while admiring the scenery.

Presently there is a committee that plans a fund raiser every year in order to raise monies needed to maintain the trails. This should be continued as the trails can be enjoyed by all for many years to come.

## G. HAZARD MITIGATION PLAN:

The Tilton Hazard Mitigation Plan gives our community preparedness for the hazards that have potential to threaten residents and their property. It also gives us the ability to identify areas of population and property that would be considered high risk and the opportunity to put together a plan for helping those areas the committee would find most vulnerable. The Tilton plan was developed by the Tilton Mitigation Planning Committee with the help of the Lakes Region Planning Commission. An important purpose of the Plan is to be prepared for any emergency event, whether natural or man-made in order to be able to deal with the emergency by alerting the area of a pending disaster such as flooding, fire or storms, chemical spills, explosions or terrorist activities. The Plan includes individuals designated as coordinators in instituting and carrying out plans. These individuals can be police, fire men, Town officials, or those appointed.

Part of the plan will include mapping critical facilities that will be safe and available as shelter for citizens that otherwise would be in harm's way.

A new Hazard Mitigation Committee is updating the town's critical facilities and hazards in order to create a new mitigation plan. By updating our Hazard Mitigation Plan every few years, we will stay prepared for any natural or manmade hazard that we might experience.

## H. SIGNIFICANT FINDINGS AND RECOMMENDATIONS:

With the advent of recreation fields completed on Route 132 and an urban park project completed in the Town center, the Towns' inventory of recreation facilities is increasing.

Despite significant water frontage in Tilton, a site with the potential for a public swimming and picnic area has yet to be identified and developed. At the 2007 Town Meeting, citizens voted to accept the donation of nearly 5 acres of lakefront property on Silver Lake from the Chaille family. This land has the potential to be developed into some sort of town beach, and this possibility should be investigated more thoroughly. Regardless, efforts to create public access for recreational activities, including swimming and an area for a public boat launch, should go forward with vigor.

Several important changes are being sought by the Tilton-Northfield Fire District in order to keep pace with the area's population and economic growth, and enhance response time, and overall safety. According to the Fire Commissioners, the Park Street station is the focal point for the transition from volunteer to full-time firefighters. Currently, Center Street Station was renovated in order to add sleeping quarters by renovating the 2nd floor and a second means of egress was added to enhance the safety aspect

for the men. Eventually, a new substation will be needed in the Tilton area as the District has outgrown the Central Street Station and unfortunately, the Center Street Station cannot be expanded.

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Natural Resources

- Introduction
- Resource Inventory
- Water Resources
    - Surface Water Resources
    - Wetlands
    - Floodplains
    - Groundwater Resources
- Agricultural Lands and Soils
- Forested Lands
- Fish and Wildlife Resources
- Steep Slopes
- Open Spaces
- Summary Findings

## Introduction

Tilton's natural resources have long defined this small community in the Lakes Region. Lake Winnisquam, Silver Lake, and the Winnipesaukee River form the southern boundary of the town, bringing recreation and tourism to the area. People who drive through the town are afforded views of the river, while other visitors can experience the river firsthand by kayaking or canoeing. Forested lands comprise 55% of the community while 22% of the land is found in agricultural fields and open habitat, providing Tilton with its rural character and quality of life. Even the commercial development at Exit 20 finds itself surrounded by wetlands and wildlife corridors as well as the nearby stratified aquifer which provides drinking water to many of the residents in the community.

The Tilton Conservation Commission has, as part of its mission statement, the responsibility

"to identify and establish the proper utilization and protection of the natural resources as well as the protection of watershed resources in our town." In addition, the town adopted a wetlands ordinance which was updated in 2005 to include a wetland buffer. Working with representatives from Northfield and Belmont in 2006, the Tri-Town Aquifer Project – Protecting Shared Drinking Water Resources – has been adopted to assist the towns in safeguarding their drinking water.

Although Tilton has seen a dramatic rise in commercial development near the I-93 exit, the town continues to be a place for families to enjoy a rural location. There is still an opportunity to continue to plan wisely for a future that balances environmental protection with economic development, tourism, and an increasing population. Preserving natural assets is a key to reaching this goal.

## A. Resource Inventory

The town of Tilton has a Natural Resources Inventory which was prepared in 2006, by Vanasse Hangen Brustlin in order to "identify important natural resources through description and mapping." The (NRI) identifies "areas of high ecological value and ... examines relationships between land use in the town of Tilton and the natural resources within the vicinity." Such information can provide a factual basis for any land development regulations that may be enacted to protect natural areas and should be referenced by local boards and commissions.

## B. Water Resources

### 1. Surface Water Resources

Surface water resources include lakes, ponds, streams, rivers, and wetlands. They can provide water storage, water supply, wildlife habitat, and aquifer recharge. The town of Tilton is located within the watershed of the Merrimack River, one of five major drainage basins within the State of New Hampshire. The entire land area of the town lies within the Winnipesaukee River sub-basin, which together with the Pemigewasset River comprise the headwaters of the Merrimack. Within Tilton, there are a number of minor surface drainage basins surrounding perennial and seasonal streams that carry runoff from north to south into the Winnipesaukee River or to Lake Winnisquam and Silver Lake. The Legislative Classification of all surface waters in the Winnipesaukee watershed in Tilton is Class B. Class B waters are considered acceptable for swimming and other recreational uses, and, if appropriately treated, may be used for public water supplies.

Ground elevations range from 866 feet on Calef Hill to a low point of approximately 400 feet on the banks of the Winnipesaukee at the Franklin town line.

Lake Winnisquam, the third largest water body in the Lakes Region, has a surface area of 4,264 acres. It is fed by an outlet from Lake Winnipesaukee to the north, and empties into the Winnipesaukee River and then travels to the Merrimack River. The lake's level and outflow are regulated by Lochmere Dam, located in the Lochmere channel of the Winnipesaukee River and operated by the NH Water Resources Bureau. Tilton shares the lake with four other communities. It is currently used for fishing, boating, and swimming.

Silver Lake in the Lochmere section of Tilton is about 216 acres and is described by the NH Department of Environmental Services as " a classic example of a 'pond in a river' as it is a rather wide expanse of water that is actually the Winnipesaukee River." The level of the lake is regulated by the hydraulic rating of the natural river channel about 1.5 miles downstream. This lake therefore is subject to considerable variation in surface elevation with changes in riverflow. Typical surface levels range between 464 and 467 feet with occasional peaks in excess of 468 feet and lows of approximately 463 feet. Flooding occurs when periods of heavy runoff coincide with increased discharges from Lochmere Dam. Low flow occurs when discharges from the Lochmere Dam are decreased to maintain the level of the lake. It is managed for lake trout and landlocked salmon.

A smaller pond with some historical significance is Ice House Pond which is located close to Exit 20. This water body currently has a conservation restriction placed on it. The Tilton School also has a small pond near School Street. Both Ice House Pond and the Tilton School Pond are a source habitat for wildlife and provide recreation.

The Winnipesaukee River includes both the Lochmere channel, a narrow 0.6 mile reach of the river connecting Winnisquam and Silver Lakes, and approximately 5 miles of river from the Silver Lake outflow to the Franklin/Tilton line. In Lochmere, prior to impoundment, the Winnipesaukee flows dramatically over an extensive reach of rapids, reflecting the 15-foot fall in elevation between the outlet of Lake Winnisquam and the head of Silver Lake. Currently, the Lochmere Dam impoundment fills a large part of the channel and rapids are only visible below the dam.

Downstream of Silver Lake, the river passes through "the Plains", a flat gradient natural storage reach about two miles in length. From the Route 140 bridge to the Franklin line, the river flows through a winding channel with alternating sections of flatwater and rapids. Through cooperative efforts with abutting towns, a recreational trail follows these waterways for use by the public. The section which flows through downtown Tilton is impounded by the Clement Dam, a hydroelectric dam, located on the west side of the village. From the outflow of Silver Lake to Route 140, the river's normal elevation falls slightly, from 464 to 454 feet above mean sea level. From Route 140 to the Franklin line, the elevation drops from 454 to about 390 feet above mean sea level.

New Hampshire's Shoreland Water Quality Protection Act, originally enacted in 1991, and later revised and renamed in 2011, "establishes minimum standards for the subdivision, use, and development of shorelands adjacent to the state's public water bodies." The law includes standards for structures, buffers, setbacks, impervious surface limitations, and a permitting process for activities within the shoreland.

### 2. Wetlands

The federal definition of wetlands states, in part, that they are areas "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support... a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Wetlands are valued for their ability to help in maintaining the quality of surface waters and groundwater through the filtering of surface runoff, the provision of wildlife habitat, flood control, erosion and sedimentation control, and aquifer recharge. Because of the importance of wetlands, they are regulated at all levels of government.

Satellite mapping has revealed wetland systems along surface water courses including Hunt, Gulf, Packer, and Bamford Brooks. Some wetlands lie adjacent to Lake Winnisquam, Silver Lake, and the Winnipesaukee River. There are also some various isolated upland wetlands which all together provide complex wildlife habitats. The Natural Resources Inventory which was prepared by Vanesse Hagen Brustlin, Inc. also includes wetland data. ***See Map

Tilton has adopted a Wetlands Conservation District as part of its Zoning Ordinance. The ordinance was updated in 2005, and now provides for a wetland buffer and restricts uses in and around wetlands. Special Use permits may be granted by the Planning Board in order to get relief from these restrictions. In order to protect our wetlands these permits should only be issued after due diligence and under extreme circumstances.

### 3. Floodplains

Floodplains are those lands adjacent to surface waters that are periodically subjected to inundation by those surface waters at intervals coinciding with precipitation, spring runoff, and freshets. Undeveloped floodplains store and absorb floodwaters. As development encroaches on the floodplain with structures and pavement, runoff is increased and storage and absorptive capacity is lost, and flood waters can spread to other lands and homes that were not previously inundated.

One-hundred-year floodplains were mapped for communities which were then required to adopt regulations as a prerequisite to qualifying for flood insurance. A one-hundred-year floodplain is the area that would be inundated by a storm that would theoretically occur once

in a hundred years, or has a one percent chance of occurring in any given year. Tilton has experienced flooding from severe storms over the past five years.

Tilton has adopted floodplain development regulations as part of its zoning ordinance, pursuant to the requirements of the National Flood Insurance Program, which is administered by the Federal Emergency Management Agency (FEMA).

### 4. Groundwater Resources

Groundwater is a critical natural resource which is used for public drinking water. A stratified aquifer is defined as a layer of water sandwich between layers of rock and sediment. Based on data from the U.S. Geological Survey NH/VT office, there are four stratified aquifers in Tilton identified as high, medium, and low yield, all of which have the potential to serve as a source of municipal water supply. The largest of these stratified aquifers, classified as high-yield, lies just to the east of I-93 along Gulf Brook, broadening to include almost the entire shoreline of Silver Lake. These aquifers are part of a stratified drift aquifer which lies beneath the towns of Northfield and Belmont to the south and serve as a primary drinking water source (29%) for all three towns. In Tilton there is a large area zoned commercial and industrial located directly above the aquifer (the direct recharge area) which follows the major roadways and comprises 29.2 % of the recharge area. The Rural Agricultural District has the highest percentage of aquifer area in a single district at 30.2%.

In 2006, a collaboration between the three communities - with the assistance of the Lakes Region Planning Commission - resulted in a handbook, "Protecting Shared Drinking Water Resources - Best Management Practices", that is designed for community officials, developers, business owners, other professionals, and homeowners. Other goals of the project include facilitating the exchange of information and ideas across town boundaries and exploring collaborative initiatives to protect shared water resources.

In both the Tri-Town Aquifer project report and the Tilton NRI, concern is expressed that there has already been extensive exposure to harmful contaminants in this sensitive area, and there is a question whether more threats may occur in the future. Of primary concern is the location of many of the major roads in the three towns which are situated directly over the aquifer recharge area. Primary traffic ways exist adjacent to and over the aquifer increasing the threat to this drinking water source. Land use activities which take place in the recharge area have the potential to directly impact groundwater quality and quantity.

Careful planning will be necessary to balance the needs of Tilton together with the varied needs of Northfield and Belmont for growth and economic development against the long-term

protection of the aquifer. Once groundwater becomes contaminated, it is very costly to clean, and if recharge is inadequate, quantity can diminish over time.

A review of Tilton's Zoning, Site Plan review, and Sub-division regulations all provide positive indications that Tilton acknowledges the importance of keeping groundwater free from pollution although no specifics are provided for making this determination. While provisions are found throughout the regulations that collectively mitigate the potential for stratified drift aquifer contamination, a comprehensive aquifer protection district, incorporating the Aquifer Map and more specific regulations would provide a reference for future zoning and development plans as well as the processing of residential, commercial, and industrial permits.

### C. Agricultural Land and Soils

Approximately 22% of Tilton's land area consists of agricultural fields and other open habitat. Agricultural soils are an important natural resource which is both highly productive and limited in quantity. Farmland soils are identified by The Natural Resources Conservation Service (NRCS) with degree of importance as prime, statewide, and local. The Natural Resources Inventory lists soil types found in Tilton as fitting all three designations. Prime farmland has the best combination of physical and chemical characteristics for agriculture. Farmland of statewide or local importance is utilized for the production of food, feed, fiber, forage, or oilseed crops.

Since areas with good agricultural soil are often cleared and accessible, they are also easily developed. Once lost, farmland cannot be replaced.

### D. Forested Lands

The Tilton Natural Resources Inventory states that 55% of the town (4,192 acres) is forested, with mostly mixed forest but with a considerable amount of coniferous forest. Besides adding to the rural aesthetics of the community, these forested lands serve as a critical habitat for wildlife as well as buffers between differing developed areas. Equally important, they provide open space for recreation and outdoor activities. Forests are an important part of renewable resources. It is important to manage these natural resources in a way that will benefit the entire community and as well as using best management practices as prescribed the publication "Good Forestry in the Granite State".

### E. Fish and Wildlife Resources

The Winnipesaukee River and its tributaries are significantly important to the fish and wildlife resources. The waterways serve as home to a myriad of wildlife and a source of year-round

recreation. Shallow, undeveloped areas along the shoreline provide excellent food and cover for fisheries, waterfowl, and numerous species of both large and small animals. New Hampshire Fish and Game, as part of its Wildlife Action Plan, states that shorelines in Tilton fall into the category of highest ranked habitat in New Hampshire. Other areas in town received the highest ranked habitat in the biological region for terrestrial and wetland habitats. (http://www.wildnh.com/Wildlife/Wildlife_Plan/WAP_town_maps.html)

A 2006 study by NH DES and NH Fish and Game refers to Silver Lake as having "an abundant warmwater fish population" as well as being a "major migration route for eels". The NH Natural Heritage Bureau lists rare and endangered species that have been found in Tilton. The bald eagle and osprey have been reported in the Silver Lake and Lochmere areas.

http://des.nh.gov/organization/divisions/water/wmb/exoticspecies/documents/silver_lake_tilton.pdf

The Natural Resources Inventory prepared by Vanasse Hagen Brustlin references a "healthy fish community, including trout" in the Buffalo Park Conservation area, which consists of fifty-five acres of forested habitat. Described as a "diverse habitat", the conservation easement on Buffalo Park allows hunting in the park. The NRI also references surface waters, state routes, and town roads which provide important edge habitats and hunting corridors for many birds of prey and bats.

### F. Steep Slopes

There are a number of concerns associated with development on steep slopes, hillsides, and ridgelines. Health, safety, and environmental issues arise when planning development on steep slopes, as is the possible adverse effect on water quality as a result of increased erosion and sedimentation.

As slopes increase, the suitability of the land for development decreases. In areas of steep slopes, the velocity of runoff and, therefore, the erosion potential, increases. The ability of the soil to filter septic system leachate is decreased. Overcoming site constraints becomes increasingly costly. Generally slopes ranging between 8 and 15 percent are considered to have moderate capacity for development. Slopes of 15 to 25 percent present significant constraints, but may support low-density residential uses with proper controls. Slopes exceeding 25 percent slope are considered unbuildable. Road construction and maintenance is a problem in these slopes as is the siting of on-site disposal systems. Erosion is always a concern as is snow removal. Accessibility for fire apparatus and emergency equipment is a substantial problem. With the availability of other, more readily developable, land in Tilton, steep slopes should be more carefully evaluated and considered in planning decisions.

## G. Open Spaces

The preservation of open space is important not only for the enjoyment of the general public but, more importantly, for the protection of our environment and the prevention of pollution. Open spaces may be in the form of wooded forestland, protected shorelines, manicured and un-manicured fields, courts, and parks. Whatever the form, open spaces are an essential element in creating and maintaining a healthy environment for humans, wildlife, drinking water resources, and natural food supplies needed to sustain all life.

Aesthetics and scenic views are often a bonus of open space and provide the community with a sense of character, an improved quality of life, recreational opportunities, as well as an economic boost. It is important, therefore, that open space be given special consideration in any land use planning or approval process.

Tilton has acquired the 55-acre Buffalo Park and has added Riverfront Park next to the Winnipesaukee River to its list of open space parks and properties. The Winnipesaukee River Trail Association in conjunction with the town has developed a walking trail from Route 140 almost to downtown Tilton. It is hoped that the trail will continue to the downtown and will eventually cross the river to connect with Northfield's portion of the trail.

Another open space opportunity is the need for public access to the public waters of the town. Water frontage is a physical and visual link to the resources which give the region its identity. However, Tilton still does not have a public beach for its citizens even though the town lies in the Lakes Region and other nearby communities do have town beaches. Tilton also could benefit from one or more canoe and boat launch areas.

According to the Natural Resources Inventory prepared for the town, Tilton has only about 229 acres of public conserved lands or about 3% of the town's area. This is a rather small percentage in comparison to the state average of about 23%. The Natural Resources Inventory concludes that ""...in future planning, the Town's high potential for habitat management and protection should be considered."

Regulatory techniques, such as zoning, sub-division regulations, and site plan review regulations are some means for protecting natural resources when the purpose is to avoid environmental hazards. The main purpose of these regulations is the prevention of a public harm such as water pollution, flood damage, erosion, siltation.

**Summary Recommendations:**

**Water Resources:**

- Manage invasive species (milfoil) actively
- Road Salt identify non-point source pollutants
- Runoff issues

****A list of significant surface water sources and impoundments is included in Table A at the end of this document. Table B is as reference to the Natural Resources Inventory.

**Wetlands:**

- Maintain identified wetlands
- Educate the town's board, commission and public on the importance of wetlands and their natural purpose/function
- Request the town consistently enforce the local wetlands ordinance

**Floodplains:**

- Undeveloped floodplains need to be protected.

**Ground Water Resources:**

- Continue and improve the monitoring of all aquifers
- Try to limit further development within and adjacent to all aquifers
- Explore any potential contamination of ground waters by the use chemicals
- Work on defined collaborative initiatives with the other towns

**Agricultural Land and Soils:**

- Support ordinances that sustain farm land and open habitat.
- Discourage the subdivision and development of "prime farmland".
- Establish an "Agricultural Commission"

**Forested Lands:**

- To access this publication, go to this link: http://extension.unh.edu/goodforestry/assets/docs/GoodForestry2010FINALreducedsizeSECURE.pdf
- Utilize existing forested parcels to act as a buffer between developed parcels to maintain and preserve wildlife corridors.

**Fish and Wildlife Resources:**

- **Work to reduce the existence of invasive species (milfoil etc.)**
- **Continue to foster the habitats of rare and endangered species.**

**Steep Slopes:**

- **Create and pass an ordinance to protect steep slopes from development.**
- **Develop a steep slopes overlay map for the town.**

**Open Spaces:**

- **Educate land owners of the importance of open space and maintaining the rural character of the community**
- **Continue to acquire land and easements to preserve open space**

**Table A: Description of Significant Surface Water Sources and Impoundments.**

| Name | General location | Confluence | Comments |
|---|---|---|---|
| Packer Brook | Calef Hill to down town | Winnipesaukee River | Start elevation: 800 ft.<br>Ending elevation: 440 ft. Termination point: west of Park Street Bridge.<br>Distance: 2.25 miles Impoundment: behind NH Veterans Home. |
| Hunt Brook | School St. to down town | Gulf Brook (East of I-93) | Descent: 160 feet |

| | | | |
|---|---|---|---|
| | west of I93 | | Distance: 1.5 miles<br>Impoundments: two, both inactive, on Sanbornton town line. |
| Gulf Brook | East of I93 to Exit 20 | Winnipesaukee River East of Route 140 | Start elevation: 700 feet<br>Distance: 2.25 miles<br>Impoundments: Three earthen ponds north of Rt. 3 / 11. |
| Bamford Brook | Lancaster Hill to Silver Lake | Silver Lake | Start elevation: 800 feet<br>Distance: 2 miles<br>Impoundments: None |
| Danforth Brook Town Line | Sanbornton town line | Winnipesaukee River | Start elevation: 700 feet<br>Distance: 1 mile, approximately. |
| Wadleigh Brook (a.k.a. Chapman Brook) | Tilton / Sanbornton town line | Lake Winnisquam @ Jay's Marina | No data available |
| Wadleigh Brook (a.k.a. Chapman Brook) | Tilton / Sanbornton town line | Lake Winnisquam @ Jay's Marina | No data available |
| Winnisquam Lake | East Tilton | Winnipesaukee River | Total area: 4,264 acres<br>Level & outflow is regulated by the Lochmere Dam.<br>Normal elevation: 482 feet.<br>Shared by Sanbornton, Belmont, Laconia & Meredith. |
| Silver Lake | Belmont / Tilton Town line south of Lochmere | Winnipesaukee River | Total area: 177 acres Level is regulated by natural downstream river hydraulic action. Subject to flooding |

| | | | |
|---|---|---|---|
| | Dam | | based on Lochmere Dam discharges & heavy runoff events.<br>Normal elevation: 464-467 feet.<br>Shared by Tilton & Belmont. |
| Winnipesaukee River | Southern border of Tilton | Merrimack River | Distance: 5.6 miles to Franklin town line. Shared by Belmont and Northfield.<br>Impoundments: Lochmere Dam between Winnisquam & Silver Lakes and Clement Dam on west side of Tilton Village.<br>Normal elevation: 464 to 390 feet, a drop of 60 feet origin to Franklin. |

Note: All elevations are above mean sea level.

**Table B: Natural Resources Inventory Prepared by VHB for the Town of Tilton**

**Table: III-2 Steep Slopes**

Slope is a very critical consideration in land use planning because it affects the capability and suitability of land to support development, as it relates to the site and the building, septic system and building design costs, and environmental impacts. Environmental impacts include such things as runoff, erosion, sedimentation, and pollution. The town should preserve and protect steep slopes through its regulations and ordinances.

Slope is the ration of change in vertical elevation in relation to the change in horizontal distance, multiplied by 100 percent. (there is a diagram here) There are four slope classifications which are presented below. In Tilton, the majority of land has a slope of less than 25%. There are, however, a few areas with steep slopes that should be protected.

| Slope Classification | Description |
|---|---|
| Gently Sloping (1-10%) | Suitable for many uses; are not prohibitive for Development and make for excellent natural drainage conditions. |
| Moderately sloping (11-25%) | May be restrictive for certain land uses; low density Residential development is feasible. |
| Steep slopes (25-35%) | Excavation and grading are almost always required; Development not intensive in its coverage may be Accommodated with limited environmental impact. |
| Very Steep Slopes (Over 35%) | Subject to adverse environmental impacts and heavy Construction costs; intensive use of land should be Done cautiously. |

Careful development of land with steeper slopes is important to reduce the potential negative impact on storm water runoff, wildlife habitat and abutting properties. For further information, see the "Steep Slope and Ridgeline Protection" draft chapter from Innovative Land Use Planning Techniques: A Handbook for Sustainable development

**Goal:**
To ensure that land with steep slopes is developed in a way to minimize negative environmental impacts the Planning Board should encourage developers to protect the naturally occurring steep slopes with slope easements. The Planning Board should adopt slope development criteria to ensure the protection of the environment and public safety in both the short and long term.

***Erosion controls:***

Erosion is the process by which soil is carried by water or wind. When water carries soil into a waterbody, it not only fills in the waterbody but contributes nutrients that algae and aquatic weeds need to grow. When vegetation is removed or ground is disturbed, erosion accelerates, overloading the waterbody with nutrients and sediment. This can often contribute to excessive algae and aquatic weed growth, reducing the clarity and quality of the water.

Erosion at construction sites is a leading cause of water quality problems in New Hampshire waterbodies. Soils become vulnerable to erosion when construction activity removes or disturbs vegetative cover. These vegetative covers shield soil surface from the impact of rain, reduce the velocity of runoff, maintain the soil's capacity to absorb water, and hold soil particles in place. By limiting and phasing vegetation removal during construction, soil erosion can be significantly reduced.

Problems caused by sediment include:

**Lower Property Values:** Property values may decline when a lake, pond, or stream fills with sediment. Shallow areas encourage weed growth and create boating hazards.

**Loss of Tourism:** Shallow, mucky lakes, ponds and streams are not attractive to tourists or local residents.

**Local Tax Impacts:** Cleaning up sediment in streets, sewers and ditches adds extra costs to local government budgets.

**PREVENTING EROSION**

Erosion control is important to protect the quality of New Hampshire's public waters. The materials needed are easy to find and are relatively inexpensive: hay bales or silt fence, stakes, mulch, gravel, and grass seed.

Putting these materials to use is a straight forward process. Only a few controls are needed on most sites.

**Silt Fence or Hay Bales:** These are used to trap sediment on the down slope side of the lot. Proper installation is the key to success.

**Hay/Straw Mulch:** This is used to cover disturbed soil and prevent erosion, promotes seed growth.

**Temporary Diversions:** These structures route clean water from up slope areas around the site.

**Soil Pile Location:** Locate erodible materials away from any roads or waterways.

**Gravel Drive:** Use gravel to limit the tracking of mud onto streets. Use of geotextiles under gravel stops pumping of gravel into underlying sediment and saves on maintenance.
**Cleanup:** Reclaim sediments that are carried off site by vehicles or storms.

**Downspout Extenders:** These prevent erosion from roof runoff and safe outlets to prevent scour. Vegetation, stone basins, and level spreaders are useful in outlet protection.

**Vegetation:** Preserving existing trees and vegetation where possible to prevent erosion.

**Re-vegetation:** Replant and seed sites as soon as possible with natural or native species. Do not underestimate the success of frost seeding and mulch as an alternative to leaving a slope bare until spring planting season.

**HAY BALE OR SILT FENCE**
Put up before any other work is done.

Install on down slope side(s) of site with ends extended up side slopes a short distance.

Place parallel to the contour of the land to allow water to pond behind the fence.
Entrench 4 inches deep (see back page). Stake (2 stakes per hay bale or 1 stake every 3 feet for silt

fence).

Leave no gaps between hay bales or sections of silt fence.
Inspect and repair once a week and after every ½ inch rain. Remove sediment if deposits reach half the fence height.

Maintain until lawn is established or soil is stable.

**HAY/STRAW MULCH**

Place sufficient amount on disturbed soils as soon as possible so that surface of soil is not visible.

On small areas hold mulch by wetting, stakes, or string.

Required for seeding outside normal seeding season.

**TEMPORARY DIVERSION OF RUNOFF**
Install diversion up slope of disturbed areas where runoff is coming onto property from up slope areas.

Should be 1 to 2 feet deep with 1 foot bottom width and 3:1 side slope.

Do not use to intercept intermittent or perennial streams or dam wetland areas.

Stabilize with erosion control matting prior to use.

Install diversions that divert runoff into vegetated areas.

**SOIL PILES**
Locate away from steep slopes, any down slope street, driveway, stream, lake, wetland, ditch, or drainage way.

Temporary mulch seed such as annual rye, oats, or winter (cereal rye) is recommended for topsoil piles.

Slash piles are not allowed within 50 feet of the reference line of any waterbody.

**GRAVEL DRIVE**

Install a single access drive using 2 to 3 inch aggregate.

Lay gravel 6 inches deep and 7 feet wide from the foundation to the street (or 50 feet if less).

Use to prevent tracking dirt onto the road by all vehicles.

Maintain throughout construction.

**SEDIMENT CLEANUP**

By the end of each work day or after a storm, sweep or scrape up soil tracked onto the road or use a gravel buffer strip between construction site and paved road.

**DOWNSPOUT EXTENDERS**

Ground gutters (lined outlets on the ground under the drip eaves) work well also.

Highly recommended for sites with steep slopes.

The key to either system is an adequately protected outlet.

Install as soon as gutters and downspouts are completed.

Route water to a vegetated area.

Maintain until lawn is established or soil is stable.

**REVEGETATION**

Seed, sod or mulch bare soil as soon as possible.

Replant with native or naturalized species.

If using light mulch (prone to wind movement), use a tuckifier or krimp by tracking with a bulldozer to keep mulch in place.

Erosion control blankets, although more costly, are extremely effective and can be purchased already impregnated with seed.

**SEEDING AND MULCHING**

Spread 6 inches of topsoil.

Fertilizer cannot be used within 25 feet of public waters. Plant a buffer that does not require fertilizers.

Twenty-five feet beyond the reference line, low phosphate, slow release nitrogen fertilizer or limestone, may be used on lawns or areas with grass.

**TIMING IS CRUCIAL**

Fertilization should not be done until vegetation has germinated. If site is fertilized in winter and planted in spring, all value of fertilizer will have leached by the time of planting.

Seed with an appropriate mix for the site (see table).

Rake lightly to cover seed with 1/4" of soil. Roll lightly.

Mulch with hay or straw (70-90 lb. or one bale per 1000 sq. ft.).Tack mulch if prone to wind erosion.

Anchor mulch by punching 2 inches into the soil with a dull, weighted disk or by using netting or other measures on steep slopes.

Water gently every day or two to keep soil moist. Less watering is needed once grass is 2 inches tall. (This is when fertilizer should be applied.)

**SODDING**
Spread 6 inches of topsoil and lightly water the soil.

Lay sod. Tamp or roll lightly.

On slopes, lay sod starting at the bottom and work toward the top. Peg each piece down in several places.

Initial watering should wet soil 6 inches deep (or until water stands 1 inch deep in a straight-sided container).
Then water lightly every day or two for 2 weeks.

If construction is completed after September 15, seeding or sodding may be delayed. Applying mulch or temporary seed (such as rye or winter rye) is recommended if weather permits. Hay bales or silt fences must be maintained until final seeding or sodding is completed in the spring (by June 1) or until all soils are stable.

**PRESERVING EXISTING VEGETATION**

Wherever possible, preserve existing trees, shrubs, and other vegetation.

To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
Use top diameter of canopy as guideline to root width.

Under the Shoreland Protection Act, stumps cannot be removed within 50 feet of the reference line.

Place plastic mesh or snow fence barriers around trees to protect the trees and the area directly below their branches-using canopy diameter as the guideline for distance from the trunk needing protection.

| Seed | Seeding Rates (Lbs./1000sq.ft.) | Seeding Rates (Lbs/Ac.) | Recommended Seeding Dates |
|---|---|---|---|
| Winter Rye | 2.6 | 112(2.0bu) | 8/15-10/1 (FALL) |
| Oats | 2 | 80(2.5bu) | 4/1-7/1 8/15-9/15 |
| Annual Rye grass | 1 | 40(1.0bu) | 4/1-6/1 |
| Perennial | 0.7 | 30(1.5bu) | 4/1-6/1 8/15- |

| | |
|---|---|
| Rye grass | 9/15 |

**Goal:**
To ensure water quality and maintaining the ecology of plant life in our waterways, erosion control methods must be required of all construction sites and other land movement activities to minimize negative environmental impacts. The Planning Board should adopt erosion control criteria to ensure the protection of the environment and public safety in both the short and long term.

**Table: III-2: Conservation Easements**

| |
|---|
| **Wetlands on John Mansville Road:**<br>R-22, Lot 17. Conservation easement given by RR Kingsburg, Inc., to the Town of Tilton, consisting of 23.931 acres. The easement is to ensure that the property will be retained forever in its undeveloped, scenic and open space condition and to prevent any use of the property that would significantly impair or interfere with the conservation values of the property.<br>**Recorded 5/8/98; Book 1468, page 71** |
| **Land at Home Depot:**<br>R-20, Lot 19. Conservation easement donated by Tilton Mac Cal, Inc., to the Town of Tilton. Easement consists of 18.31 acres as a wildlife corridor and wetland and stream corridor for the preservation of the quality of groundwater and surface water resources.<br>**Recorded 8/27/01; Book 1678, Page 201** |
| **Infinity Sherwood (Walmart & Ice House Pond):**<br>R-24, Lot 22. Conservation restriction donated by Infinity Sherwood Properties, LLC, to the Town of Tilton stating the intent to retain a conservation area predominantly unimproved and open condition which covers about 5.182 acres on a portion of tax map R-24 Lot 22.<br>**Recorded 7/21/94; Book 1304, Page 760 and Book 1304, page 764; Amended 9/4/03: Book 1945, Page 241** |
| **Rogers Development Company.**<br>R-18, Lot 25. Conservation restriction (lot 5 of subdivision) donated by Rogers Development to the Town of Tilton. Easement consists of 13.047 acres upon which the builder will not construct or place buildings, mobile homes, or any kind of structure, parking lot, or paved roadway. Conservation restriction does not give the general public any right to enter the area; only the grantee has the right of entry for the purpose of inspecting the area to assure compliance with the terms of the conservation restriction.<br>**Recorded 7/21/1994; Book 1304, page 739** |
| **Lochmere Golf Course**<br>R-21, Lot 1. Discretionary easement from Gerald and Anne Marie Chaille to the Town of Tilton giving permission for hiking, skiing, and other outdoor activities that would not cause damage to the greens or fairways. Hunting, horse back riding, and the use of motorized vehicles are not permitted activities. Activities are permitted from December 1 to April 1. |

| |
|---|
| **Recorded 10/27/94; Book 1315, Page 545. Amended 6/29/99; Book 1538, Page 214** |
| **Winnisquam Regional School District:**<br>U-8, Lot 15. Conservation easement from the Winnisquam Regional School District to the Town of Tilton deeding 3.6 acres of wetland and 8 acres of upland as open space conservation providing healthful and attractive outdoor environment for work and recreation.<br>**Recorded 12/20/02; Book 1827, Page 179** |
| **Market Basket:**<br>R-24, Lot 7. Conservation easement for 8.746 acres donated by Market Basket to the Town of Tilton to preserve and protect natural vegetation, soils, hydrology, natural habitats, and scenic and aesthetic character of the property.<br>Recorded 9/10/02; Book 1788, Page 678 |
| **Nickerson property.**<br>R-20, Lot 1.1. A deeded conservation restriction for a 19-acre swamp that has conservation value as undeveloped open space that includes wetlands and other natural habitat in which wildlife live.<br>**Recorded 7/31/95; Drawer L23, Plan #61** |
| **Buffalo Park.**<br>R-17, Lot 20. Property has conservation value as undeveloped woodlands given to the town as part of mediation of wetlands for a commercial venture by Konover Development. Conservation covenants and restrictions will allow the property to remain a natural habitat that will allow walking, running, skiing, snowshoeing, educational or similar activities, but no motorized vehicles of any kind. Property contains 55 +/- acres. **Recorded 3/28/05; Book 2154, Page 509** |
| **Winnisquam Village Condominium:**<br>R-7, Lot 11-100. Deeded conservation easement given by RJ Moreau Communities, LLC for the purposed of preserving and protecting in perpetuity the natural vegetation, soils, natural habitats, and the scenic and aesthetic character of the property. The easement is granted for 35.34 acres of the property.<br>**Recorded 12/28/05; Book 2257, Page 228** |

**Source: Belknap County Registry of Deeds, Belknap County, NH**

## ECONOMIC AND DEMOGRAPHICS

This chapter examines the economic state as well as residential, commercial and industrial development trends for Tilton during the 20-year period from 1990 to 2010, together with the various factors that influence their increase or decline. This is followed by a brief overview of Tilton's available assets, which will likely attract future development.

Factors that detract from development such as the lack of municipal water supplies, sewer services, and parking in the downtown area are addressed in the Recommendations section.

## A. ROLE OF POPULATION ANALYSIS IN PLANNING

The analysis of population trends is the traditional method of evaluating community needs for public services and facilities and for anticipating the demands of growth on municipal infrastructure.

While the number of persons residing in a community, their ages, and their geographic distribution are significant factors of demand on local services, populations are but one of several dimensions of growth and development. Other factors include employment growth, household formation, total housing units (including seasonal), the pattern of commercial-industrial development, and regional traffic inflow, all of which have an impact on local services in Tilton.

### Population Density

The population density characteristics of Tilton are somewhat unique within the Lakes Region, owing to the small physical land area of the town. With only 11.5 square miles of land area, Tilton is among the smallest towns in New Hampshire; most of the other communities with comparably small land areas in the state are in the seacoast region. Within central and northern New Hampshire, the closest physically comparable town in land area is the Grafton County town of Ashland with 11.3 square miles.

During the 1980-1990 period, Tilton had a comparative slowdown in growth due primarily to zoning regulations being amended in the early 1980's to discourage rapid development of rural areas. Additionally, other towns had a greater supply of accessible, developable land area. The lack of an extensive road network in the rural portions of town and the low density zoning probably resulted in limited growth in those areas as well. Population density remains the highest around the urban village center of Tilton. The town exhibits more urban density characteristics than many of the small towns in its size class in the region.

Development and rapid commercial expansion experienced in the area of Exit 20 along Rt. 3 was one of the reasons for growth from 1990-2008. This resulted in over 1,000 new jobs being created. The total population in Tilton increased by 239 persons between 1990 and 2000. The difference between total population change and natural increase was attributed to net migration. Figures show that population increased in Tilton by 227 persons from 2001 to 2004 and in 2011, figures show Tilton had a population of 3,574 or a total increase of 10.1%.

## B. ECONOMIC BASE

The Master Plan must be prepared with the intent of guiding development, which, among other objectives, will "promote health, safety, order, convenience, prosperity, the general welfare as well as efficiency and economy in the process of development." (RSA 674:3, I) Convenience, prosperity and general welfare may be served by several economic contributions of the master plan:

1. Provisions for job creation and retention within the community and the region to sustain the personal income of resident households and
2. Strategies for increasing taxable valuation, especially in the form of commercial/industrial development or seasonal/recreational housing, which generally contribute more to the local tax base than they consume in municipal services, and
3. A mix of uses that provide for the essential consumer goods and services needed by residents within a convenient distance, and
4. Affordable housing to support the continuing commercial, mostly retail, development that has grown up in the area.

Just as the land capability analysis of development constraints within the Land Use chapter centers on identifying and protecting certain lands from development, the economic base chapter provides a focus on market opportunities for development, which are also advantageous to the community. These opportunities may then be reflected in plans for future land use, with the goal of balancing a reasonable amount of economic development with other community needs.

## C. LOCAL JOB BASE AND RESIDENT EMPLOYMENT

Employment data for Tilton has been analyzed in two ways. The first is a comparison of the occupations and industries in which local residents are employed and how the sectors of resident employment appear in 2010; and second is a breakdown of the income ranges by households. A profile of the education characteristics is also given.

Table IV-1: Employment Characteristics

| EMPLOYED CIVILIAN POPULATION | NUMBER | PERCENT |
|---|---|---|
| 16 years and over | 1,631 | 100 |
| **OCCUPATION** | | |
| Management, professional, and related occupations | 498 | 32.2 |
| Service occupations | 243 | 15.7 |
| Sales and office occupations | 329 | 21.3 |
| Farming, fishing & forestry occupations | 4 | 0.2 |
| Construction, extraction, & maintenance | 118 | 7.6 |
| Production, transportation & material moving | 359 | 23.2 |

| **INDUSTRY** | | |
|---|---|---|
| Agriculture, forestry, fishing, hunting & mining | 12 | 0.7 |
| Construction | 92 | 5.9 |
| Manufacturing | 285 | 18.4 |
| Wholesale trade | 26 | 1.7 |
| Retail trade | 240 | 15.5 |
| Transportation, warehousing & utilities | 47 | 3.0 |
| Information | 32 | 2.1 |
| Finance, Insurance, real estate & rental and leasing | 48 | 3.1 |
| Professional, scientific, management, administrative & waste management services | 157 | 10.1 |
| Educational, health & social services | 404 | 26.1 |
| Arts, entertainment, recreation, accommodation & food services | 92 | 5.9 |
| Other services (except administration) | 17 | 1.1 |
| Public administration | 107 | 6.9 |
| **CLASS OF WORKER** | | |
| Private wage & salary workers | 1,209 | 78.2 |
| Government workers | 273 | 17.6 |
| Self-employed workers in own not incorporated business | 65 | 4.2 |
| Unpaid family workers | 8 | 0.5 |

Source: U.S. Bureau of the Census, Census 2010

Table IV-2: Tilton Wage Characteristics

| INCOME RANGES | NUMBER | PERCENT |
|---|---|---|
| By Households | 1,160 | 100 |
| Less than $10,000 | | 5.3 |
| $10,000 to $14,999 | | 7 |
| $15,000 to $24,999 | | 19 |
| $25,000 to $34,999 | | 8.9 |
| $35,000 to $49999 | | 6.9 |
| $50,000 to $74,999 | | 15.6 |

| | | |
|---|---|---|
| $75,000 to $99,999 | | 18.1 |
| $100,000 to $149,999 | | 13.0 |
| $150,000 to $199,999 | | 4.7 |
| $200,000 or more | | 0.6 |
| Median household income (dollars) | $51,059 | |

Source: US Bureau of the Census, Census 2010

Table IV-3: Profile of Educational Characteristics

| EDUCATION ATTAINMENT | NUMBER | PERCENT |
|---|---|---|
| Population 25 years and over | 2,810 | 100 |
| Less than 9th grade | | 5.1 |
| 9th to 12th grade, no diploma | | 14.7 |
| High school graduate (includes equivalency) | | 37.3 |
| Some college, no degree | | 19.6 |
| Associate degree | | 8.4 |
| Bachelor's degree | | 11.5 |
| Graduate or professional degree | | 7.2 |
| Percent high school graduate or higher | | 84 |
| Percent bachelor's degree or higher | | 18.7 |

Source: US Bureau of the Census, Census 2010

Census data for 2000 indicate that just over 84 % adults 25 years or older had graduated from High School of which 18.7% went on obtain a bachelors degree or higher.

## D. OVERVIEW OF HOUSING CHANGES:

Table IV-4 summarizes some of the key housing characteristics for the town of Tilton based on 1990 and 2009 census data. The total number of households (occupied units) grew by only 19 during the entire decade, an increase of only 1.1 percent. There was also a decline in household size; only one, two and three-person households showed net growth in Tilton during the decade, while the number of households with four or more persons declined.

A comparison of growth in housing during the past two decades in Tilton evidences relatively slow growth in the 1990s. Data indicates that about 11 percent of Tilton's housing stock is oriented toward units occupied only seasonally or occasionally. Housing demand is shaped by regional economic and

employment trends and by several demographic factors including age distribution, household size and income.

Housing data from the more recent period of 2000-2009 (most recent data available) shows an increase equal to that of the entire previous decade. In addition, building permits issued in the past 16 years have increased markedly, indicating the potential for a slight increase in population in the next several years. Building permits did fall drastically from 2008 until now due to the economic decline. Table IV-5 reflects the building permits issued through 2011.

Table IV-4: Housing Resources for the Town of Tilton, 1990-2009

| | 1990 | 2000 | Change No. | 1990-2000 % | 2009 | Change #.over 2000 |
|---|---|---|---|---|---|---|
| Total housing units | 1,612 | 1,631 | 19 | 1.1% | 1696 | 65 |
| | | | | | | |
| HOUSEHOLDS | 1,288 | 1,360 | 72 | 5.6% | | |
| By age of Head: | | | | | | |
| Under 65 | 984 | 1,077 | 93 | 9.5% | | |
| Age 65+ | 304 | 283 | (21) | (6.9%) | | |
| Percent 65+ | 23.6% | 20.8% | --- | --- | | |
| By Tenure | | | | | | |
| Homeowners | 842 | 858 | 16 | 1.9% | | |
| Renters | 446 | 502 | 56 | 12.6% | | |
| Percent Renters | 34.6% | 36.9% | --- | --- | | |
| TOTAL HOUSEHOLDS | 1,288 | 1,360 | 72 | 5.6% | | |
| By Persons in Unit | | | | | | |
| One | 350 | 382 | 32 | 9.1% | | |
| Two | 461 | 498 | 37 | 8.0% | | |
| Three | 200 | 217 | 17 | 8.5% | | |
| Four | 166 | 153 | (13) | (7.8%) | | |
| Five or More | 111 | 110 | (01) | (0.9%) | | |
| UNITS BY STRUCTURE TYPE | | | | | | |
| Single Family | 859 | 885 | 26 | 3.03% | 1,013 | 128 |
| Multi Units | 256 | 284 | 28 | 2.23% | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 or more Units | 164 | 127 | (37) | (22.56%) | | |
| Mobile Home & Other / Unclassified | 324 | 331 | 7 | 2.16% | 321 | -10 |
| TOTAL | 1,612 | 1,627 | 15 | .93% | | |
| Percent 2+ family units | 26.6% | 25.3% | --- | --- | | |
| Percent Mobile Home & Other | 20.1% | 20.3% | --- | --- | | |
| Vacant Units | 324 | 271 | (53) | (16.35%) | | |
| Seasonal/Migrant/ & Occasional Use | 145 | 186 | 41 | 28.28% | | |
| For rent | 94 | 38 | (56) | (59.57%) | | |
| For sale | 51 | 22 | (29) | (56.86) | | |
| Rented/sold awaiting | | | | | | |
| Occupancy & other | 34 | 25 | (9) | (26.47%) | | |
| Renter Vacancy rate | 17.4% | 7.00% | --- | --- | | |
| Owner vacancy rate | 5.7% | 2.5% | --- | --- | | |

Source: U.S. Census, 1990 and 2009

Table IV-5: Permits Issued Annually

| Year | No. of Permits Issued |
|---|---|
| 2012 | 6 |
| 2011 | 2 |
| 2010 | 3 |
| 2009 | 6 |
| 2008 | 4 |
| 2007 | 19 |
| 2004 | 32 |
| 2003 | 25 |
| 2002 | 32 |
| 2001 | -2 |
| 2000 | 10 |
| 1999 | 6 |

| | |
|---|---|
| 1998 | 6 |
| 1997 | 8 |
| 1996 | 8 |
| 1995 | 4 |

Source: N.H. Economic & Labor Market Information Bureau, 2011

## E. EXISTING COMMERCIAL-INDUSTRIAL DEVELOPMENT PATTERN

Industrial development east of Interstate 93 has decreased due to the commercial development that has taken place in that area. Two industrial sites remain for future development.

Commercial uses are now concentrated in the area of Exit 20 and scattered along other portions of Rt. 3/11. The general pattern indicates a concentration of retail and service oriented use near Interstate 93 with other commercial uses to the east of Interstate 93 oriented toward recreational and seasonal uses.

The Downtown area remains centered around small scale retail and service types of business.

## F. TILTON TAX BASE AND TAX RATE

Equalized Municipal Tax Rates

The Department of Revenue Administration (DRA) sets equalized tax rates. Each year the DRA surveys property sales throughout the state, and based on the selling prices of the property, the local tax rates are adjusted to reflect changes in the property value. The tax rates that reflect this adjustment are called "Equalized Tax Rates". Equalized tax rates reflect the true market value of property in municipalities so the rates are comparable among municipalities. Local tax rates are not comparable among municipalities. Table IV-6 shows the history of net assessments and the tax rate equalization ratio from 1999 through 2012. In 1999, the New Hampshire legislature passed the State Education Property Tax. Each town contributes an amount equal to $6.00 per $1,000 of total equalized value of property in the town using the local assessment process currently in place. The net assessed value on which state property tax is set is also reflected on Table IV-6.

Table IV-6: Town of Tilton Net Assessments, Tax Rate Equalization Ratio, 1999 - 2012

| YEAR | NET ASSESSED VALUE ON WHICH RATE IS SET | NET ASSESSED VALUE ON WHICH STATE PROPERTY TAX IS SET | TAX RATE | EQUALIZATION RATIO |
|---|---|---|---|---|
| 1999 | $ 235,698,620.00 | $226,226,120.00 | $ 22.47 | 97% |
| 2000 | $ 248,048,640.00 | $237,721,400.00 | $ 23.69 | 99% |
| 2001 | $ 263,236,451.00 | $251,646,251.00 | $ 24.58 | 90% |
| 2002 | $ 282,243,222.00 | $270,832,822.00 | $ 25.60 | 77% |

| | | | | |
|---|---|---|---|---|
| 2003 | $ 298,084,735.00 | $286,907,735.00 | $ 25.73 | 77% |
| 2004 | $ 313,354,672.00 | $302,412,072.00 | $ 28.50 | 66.01% |
| 2005 | $ 519,135,211.00 | $502,872,716.00 | $ 17.30 | 99.03% |
| 2006 | $ 534,901,237.00 | $ 601,740,017.00 | $ 18.96 | 94.3% |
| 2007 | $ 551,334,918.00 | $ 630,473,684.00 | $ 20.55 | 91.3% |
| 2008 | $ 548,655,338.00 | $ 540,343,538.00 | $ 19.44 | 100.1% |
| 2009 | $ 523,243,674.00 | $530,582,871.00 | $ 20.92 | 99.1% |
| 2010 | $ 517,673,185.00 | $506,072,314.00 | $ 20.41 | 97.3% |
| 2011 | $514,065,006.00 | $489,626,106.00 | $ 20.37 | 102.4% |
| 2012 | $517,240,940.00 | $492,251,040.00 | $ 20.14 | 108.7% |
| | | | | |

Source: Assessors Office, Tilton, NH

## G. INFRASTRUCTURE

Tilton's principal infrastructure assets center on its highway network, including excellent regional accessibility via Interstate 93, at a location which provides a significant inflow of seasonal traffic to the region and the town, as well as easy access for trucking and distribution.

Tilton's second major infrastructure advantage is ample capacity for new sewer connections and an expanding program of sewer main installation, which will ultimately serve most of the town. For commercial-industrial development sites, the town has relied upon landowners and developers to pay all the costs of extending sewer mains to service their sites. The potential exists for public investment in supporting the extension of utilities to new industrial or commercial sites in desired locations.

In 2005, the citizens of Tilton and Northfield that were customers of the water supplier for the area, the Tilton-Northfield Aqueduct Company, voted to form a water district and purchase the privately owned water company. This process was completed in 2007, and Tilton is now served by a municipal, not-for-profit entity controlled by its users. Many sites that have developed in recent years along Rte. 3 have relied on development of on-site water supplies, which reduce the efficiency of land development and reduce their relative attractiveness to water-using industries. Lack of public water supply in these areas mean that each developer of a new site must either pay for all capital costs of the service extension to the site, or make arrangements for individual, on-site water (fire ponds or cisterns) for fire fighting capacity. The lack of a public water supply in an area of high market potential could reduce the efficiency of development. The elected commissioners of the water district are working with developers to extend service to serve both new developments as well as the community. As a result, service expanded further down Route 3 east of Exit 20 to the Hampton Inn that was being built at the site of the former Tilton 500.

## H. LOCATION ADVANTAGES

Tilton's location at the gateway to the Lakes Region provides the economic opportunity for the town to host businesses serving the seasonal influx of travelers to the region. The area east of Interstate 93 captures a significant amount of through and seasonal-oriented traffic. While Tilton only has a small base of seasonal and second homes, it contains a number of businesses serving seasonal residents, as well as vacation weekend travelers and boaters. Recent development for sites on Rt. 3/11 near Interstate 93

reflect increasing interest in business investments designed to capture a portion of retail and seasonal traffic trade.

In addition, the retail development of recent years has made Tilton the center of commerce for many communities to its west. Those who used to travel to Concord now can be found shopping and working in Tilton's retail developments.

## I. DEVELOPABLE LAND RESOURCES

Tilton has land resources suited to commercial and industrial development. There is an industrial park on Sanborn Road that, up until now, has been slow to develop. One reason for this is the lack of water service to the area.

Commercial growth around Exit 20 has blossomed during the past 16 years. Although a large portion of the area along Rt. 3 has been developed, there are still small parcels that are developable. The area of Rt. 3 west of Exit 20 has a large track of land available for commercial development. Further to the east of Exit 20 are additional lands, some with lake frontage, lake views and access via Rt. 3/11, with good potential for seasonal uses for tourism and recreation. Though there are fewer parcels of undeveloped land remaining due to recent development activity, redevelopment of exiting older sites has begun and will likely continue along Route 3 east of Exit 20. The citizens of the town have indicated their desire to prevent development from creating a sea of neon by enacting sign ordinances that limit the use of moving and multi-colored signage, and further development should be mindful of this. Doing so will keep Tilton an appealing destination for quality developments and prevent the town from turning into a place that visitors shop in but choose not to reside in, due to quality of life issues.

There are some lands west of the high school along Rt. 3/11 with the potential for commercial development. Existing sites are also now being redeveloped. Major road improvements to this stretch of Route 3/11 by the State Department of Transportation, as well as a recently approved cluster housing development on nearby Clark Road might impact the types of businesses that choose to settle on that stretch of road. This particular area could be a combination of local retail and service oriented business as well as public or institutional type business such as churches, schools, hospitals, nursing homes and public works facilities. However, at the present time, there is no municipal sewer service available west of the high school. Providing sewer services west of the high school would create a more desirable area for development in that area as well.

## J. TILTON DOWNTOWN NATIONAL HISTORIC DISTRICT

The Tilton downtown is a center for mixed uses including office, retail, government use, and the location of the Tilton School. The Tilton Downtown National Historic District comprises a portion of the downtown between Church Street and the Winnipesaukee River, and includes several nineteenth century buildings on Main Street. The Winnipesaukee River represents a positive visual amenity for the downtown and its historic structures.

The Tilton downtown has experienced a resurgence of evolving retail business activity and services. Through the hard work of determined citizens, Tilton was accepted into the Main Street program in May of 2000. The Tilton Main Street Program was designed to improve economic management, strengthen participation, and make downtown a place that people want to visit in its own right. A vital Main Street can mean the establishment of profitable businesses, the creation of jobs, and a stronger tax base for the community.

Through promotion and organization, people witnessed a steady growth in Tilton's downtown, with many of the empty storefronts being occupied to help create a more viable and interesting downtown for patrons as well as shop owners.

While the Main Street Program was in Tilton, the directors and volunteers worked to create grants for helping local business in various ways, create a small park on the corner of Main and Park Street, write and distribute informational and news flyers, hold fund raising events, plant flowers for the beautification of the downtown area and numerous other services geared toward the betterment of the Tilton downtown. The Main Street organization and merchants undertook the enhancement of Tilton's downtown to help make it more attractive as a location for professional offices and small specialty retail uses. Private investment in buildings helped improve these assets.

TMS program made great strides toward revitalizing historic downtown Tilton since its inception in 2000. Though many businesses came and went since 2000, there has been no shortage of individuals willing to set up shop in Tilton in an effort to find the right fit. The achievements of the Tilton Main Street Program were recognized by the National Trust for Historic Preservation's National Main Street Center. In August 2005, it awarded the Tilton Main Street Program national accreditation. Among other factors, this accreditation was based on the economic progress and preservation of historic buildings that was accomplished by the program. The economic progress reported by the NH Main Street Center, a delegate organization of the Community Development Finance Authority, is shown in Table IV-7.

Table IV-7: Reinvestment in Historic Downtown Tilton 2000- 2005

| Year | Public Improvement Reinvestment ($) | Building Improvements ($) | New Construction ($) | Real Estate Sold ($) | No. New Businesses | No. New Jobs Created |
|---|---|---|---|---|---|---|
| 2000 | 4,600 | 403,900 | 0 | 222,000 | 3 | 4 |
| 2001 | 612,850 | 467,000 | 0 | 325,000 | 5 | 9 |
| 2002 | 0 | 13,062 | 0 | 590,000 | 5 | 6 |
| 2003 | 0 | 205,478 | 196,000 | 715,000 | 7 | 33 |
| 2004 | 6,155 | 33,175 | 0 | 642,000 | 4 | 7 |
| 2005 | 0 | 176,996 | 0 | 0 | 9 | 26 |
| **Total** | **623,605** | **1,299,611** | **196,000** | **2,494,000** | **33** | **85** |

Source: NH Main Street Center, Community Development Finance Authority, State of NH.

Various improvements such as the small park, façade improvements, future walking trails linking the river and historic sites, and interpretive guidepost signs to historic buildings made the downtown more attractive for office locations, local specialty retail and restaurant uses serving area residents and tourists. Unfortunately, due in part to poor economic times, the Main Street Program ceased to exist. In order to continue the good work of the program, merchants, owners and volunteers will have to organize to continue improvements and marketing the downtown to potential new businesses.

To serve local office and retail, as well as visitor-oriented markets, the downtown must maintain a pedestrian friendly environment integrated with the surrounding village residential areas. The historic character of individual downtown buildings should be retained by façade restoration, and a cohesive sense of place should be conveyed by the relationship between buildings and public space (parks, pedestrian ways, and parking). Public improvements which encourage local foot traffic from within the village centers of Tilton and Northfield to the downtown, supported by adequate public parking for visitors and clients of local businesses can leverage new private investment in downtown buildings. Finally, efforts to make downtown Tilton a destination rather than a thoroughfare to other locations should be supported and encouraged.

## K. LOCAL GOVERNMENT CAPITAL IMPROVEMENTS PROGRAM

Prior to 2004, Tilton had not engaged in a coordinated program of capital improvements designed to support economic development. However, the Lakes Region Planning Commission was retained to assist Tilton in developing a Capital Improvement Plan. The voters indicated that the Planning Board should form a subcommittee and work to develop this plan and make recommendations to the Selectmen. The committee was established and invitations for submitting projects were mailed out. Public investments may be in the form of direct property acquisition, industrial park development, and property redevelopment activities, as well as expenditures for community facilities and public amenities that provide incentives for private investment. Public expenditures for the extension of sewer lines or the construction of roads to access industrial sites are direct methods of investment to achieve economic development objectives. Investments may be leveraged through more indirect means such as development of public parking in and near the downtown, acquisition and development of passive park space, and construction of pedestrian amenities.

## L. TILTON OVERALL ECONOMIC STRATEGY

While Tilton cannot plan the future regional economy, it can channel economic growth opportunities through strategic capital investments and land allocation. The economic strategy must be aimed at creating diversity of economic opportunities and should not rely upon a single economic sector.

While capturing a share of manufacturing jobs remains important to the Tilton-Northfield area, manufacturing employment is expected to supply only a small fraction of future job growth in New Hampshire. All net gain in employment within the two towns during the last decade has been the result of growth in non-manufacturing employment.

### Industrial Centers

A potential land use conflict may occur if heavier industrial uses are permitted alongside areas with regional retail potential. Buffers between industrial and commercial uses should be considered in order to preserve the appeal of the area to the traveler while allowing for industrial development less visible from the highway. In general, land development with direct Rts. 3/11 frontage has been oriented toward retail, lodging, and recreational uses which would need highway exposure. There is an ample supply of industrial land in Tilton to sustain anticipated future development.

### Retail, Lodging Services and Recreation Focus

The portion of Rt. 3/11 east of the Lochmere Country Club to the Mosquito Bridge already has an orientation toward seasonal homes, resort, and recreational development. The area contains developable parcels with lake frontage and recreational/commercial potential. This area should continue to emphasize uses and land regulations which support seasonal tourism and recreation, but which also act to protect and enhance the amenity value of open space, lake frontage, and lake views. The town should also acquire

land or leverage public access to a public swimming area, preferably on Lake Winnisquam as appropriate sites for public beach uses are few and need to be explored before public options are precluded by new private development.

Retail and Services with Local Market Focus

A portion of areas along Rt. 3/11 should provide for limited convenience retail and service needs of local and area residents. Parts of Rt. 3/11 between the Franklin line and the Winnisquam Regional High School provide potential locations for smaller retail and service oriented businesses.

Future planning for the easterly portion of town should allow for a cluster of retail/service uses serving Lochmere village area and the "East Tilton" area. These areas represent a concentration of residential uses that may benefit from local convenience stores as well as a multi-purpose center.

Downtown Office and Specialty Retail: Historic Focus

Tilton needs to improve the overall character of the prestige value of the downtown in order to attract and retain a core of professional offices, business services, and small specialty retail uses. The attraction of the downtown to support professional and small specialty retail uses can be re-enforced by investment in the restoration of the existing historical buildings as well as the buildings not listed on the National Registry. These investments will be essential to the future of the downtown area. A detailed parking inventory should also be made and compared to the overall parking demand for downtown uses assuming maximum utilization of the downtown buildings.

To make downtown Tilton a destination rather than a thoroughfare to other destinations, and to court or simply attract viable businesses that will draw traffic downtown, the town would benefit greatly by addressing several issues. These are identified in the recommendations section.

## M. SUMMARY OF FINDINGS

Tilton's taxable valuation per capita has improved as a result of the economic growth of commercial development. This has established a relatively strong tax base. Tilton's chief economic assets include its location and accessibility, as well as its position at the gateway of the Lakes Region, hosting a significant amount of visitor traffic. Tilton also has several major developable industrial and commercial sites with good regional accessibility. These advantages should be strengthened by the extension of public water and sewer services to maximize the efficiency of new development, to enhance the competitiveness of Tilton sites, and to improve public safety and fire protection services.

A unique, irreplaceable asset for Tilton's economic future is its downtown, the core of which comprises a National Historic District with river frontage. The downtown offers a strategic economic asset.

Increases in commercial development required the town to increase its efforts to maintain good traffic control and visual quality in and around the Rt. 3/11 corridor near Exit 20. Improved signage regulations and more specific site development standards were put into place to help preserve the community character.

Development is expected to continue increasing due to the migration of the population into the area seeking lower priced land along with the willingness of developers to subdivide and build new roads.

## N. RECOMMENDATIONS:

The town will need to maintain and continue to develop the adopted Capital Improvement Plan in order to plan for those infrastructure improvements that continued growth will require. These items will likely include sewer expansion, school improvements, police and fire department improvements, quality of life improvements such as recreational spaces, and improvements to the historic downtown, as well as other important projects identified throughout the town.

The town should continue to support efforts to protect and grow the town's economic resource that is its historic downtown. Efforts to explore the possibilities of protection and preservation of our historic resources should be undertaken; the town should work to identify any grant and funding opportunities that can be used in this effort.

The town should seriously consider taking steps to make the historic downtown a destination for shoppers and residents by addressing the following issues:

- Safety: Encourage town to increase downtown police presence to give the shoppers the feeling that they are safe and not at risk while shopping downtown.

- Parking solutions: Create additional municipal parking as opportunities present themselves.

- Speed limit reduction: Work in conjunction with the state to reduce the speed limit through methods available in order to alleviate the dangerous traffic flow that currently runs through downtown.

- Alternative transportation: Long range plans should include encouragement of some sort of alternative such as a bus stop on an existing route (like GLTA).

In order to develop housing for all incoming ranges, density incentives for affordable housing should be incorporated into town zoning ordinances. And so that the town is prepared for the future, it would be wise for Tilton to begin to explore how best to manage the rate of growth to minimize the impact on the town's infrastructure and to make sure it does not detract from the stability of the community.

Finally, it will be important for the town to continually promote commercial and industrial opportunities in the designated zones for job creation and to allow members of the community the opportunity to sustain personal income.

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## LAND USE

This chapter provides a brief review of existing zoning districts within the town, an analysis of land use patterns and trends, and illustrates the effects of land use changes as well as factors influencing development constraints. The final section includes recommendations specifically targeting each of the ten municipal zones plus several general recommendations.

## A. INTRODUCTION

Perhaps the most important section of a master plan is the land use section. Specifically, the future land use plan is the point of integration for the community's articulated goals, its needs as identified through analysis of the community as it exists today, and the demands created by the projections of future growth.

The land use element of the master plan provides general guidance for the preparation of a zoning ordinance and becomes a critical basis for defending that ordinance from legal challenge. The land use plan also guides a community's decision making with regard to public development and redevelopment activities. New or expanded community facilities and economic development activities all require land use decisions that should be guided by the plan.

## B. EXISTING LAND USE

### Methodology

Current land use patterns in 2010 reflect the numerous zoning revisions made from 1994 to the present, including those made in September 1999, as recommended by the 1993-1994 Master Plan. The zoning changes reflect the growing residential and commercial population of Tilton, as well as our need to preserve open space. These zoning districts include:

Village Residential District (VR) - designed to accommodate single- and two-family dwelling units in an area that is already extensively developed, served by local streets, with water and sewer services available.

Mixed Use District (MU) - designed to accommodate single- and two-family dwelling units together with small scale retail and service uses, in developing areas along Routes 3/11 where water service is available and sewer service is planned.

Medium Density Residential District (MR) - designed to accommodate single-family dwelling units served by collector and local streets where utilities are limited or not now present, but sewer service is planned.

Rural Agricultural District (RA) - designed for single-family dwelling units, as well as a wide range of agricultural uses, on local roads in areas where no utilities exist or are planned.

Downtown District (DN) - designed to accommodate a wide range of office, retail, service, restaurant, public, institutional, and high density residential uses in an area extensively developed with structures of historic significance.

Regional Commercial District (RG) - designed for large scale retail and service uses, restaurants, and accommodations in recognition of a location at the interchange of a limited access and arterial highway in an area where sewer service is available and extensions planned. Intersections, curb cuts, and traffic controls are vital to the safe and orderly development of this area.

Resort Commercial District (RC) - designed for recreation, restaurant, and accommodations, together with small-scale retail and service uses along Routes 3/11 adjacent to Silver and Winnisquam Lakes. Sewer is planned but not yet available to much of this area, and traffic controls are important to safe and orderly development along the arterial highway.

General Commercial District (GC) - designed for a wide range of commercial uses in an area along an arterial highway where utilities are either available or planned.

Industrial Park District (IN) - designed to accommodate a range of manufacturing, warehousing, and office uses in areas served by arterial or collector streets with sewer service available or planned.

The location of the existing zones is presented in the Appendix A, Vannasse Hangen Brustlin, Inc.: *Wetland Resources Map of Tilton*, NH, 2007.

## C. LAND USE PATTERNS

The picture presented of Tilton is one of multiple imagery, depending on direction and perspective. Two major roadways, NH Routes 3/11 and Interstate 93, bisect the town. There is a major split of rural and urban land use on a north/south basis, and an urban, suburban, commercial, and recreational use shift from west to east within the southern section of the town.

The northern portion of Tilton bordering Sanbornton is of a rural character with predominately agricultural and forested land. Single-family homes front the existing roads. This pattern continues south to the edge of the downtown in the area west of I-93, and to a point south of Lancaster Hill Road in the area east of Route 132.

Over the past 10 years, commercial development in the town has grown, including both large and small businesses. The majority of the commercial development in the town of Tilton fronts Routes 3/11. Exit 20 and the downtown area, our commercial centers, consist of high-density commercial development. Areas to the east of the downtown are a mix of commercial and residential uses, and the area to the west of Exit 20 has considerable commercial, residential, and resort commercial development.

### Land Use Trends and Changes

According to information provided in the Lakes Region Planning Commission's Annual Report "Development Activity in the Lakes Region," single-family residential growth, in some areas of the Lakes Region (Laconia, Alton, Moultonborough), has out paced that of the rest of the state. Tilton, however, has experienced only moderate residential growth, and ranks 21st out of 30 Lakes Region towns for residential permits issued. Residential growth has generally taken place within the rural agricultural and resort commercial areas of the community. In 2009 6 residential permits were issued and 2010, 2 residential permits were issued which reflects the slowdown in the economy.

In 2004, the Lakes Region experienced its ten-year high in commercial permits issued. These permits included new construction and change in use of both commercial and industrial space. From 2000 to 2004, Tilton issued 13 of these commercial permits, which is the fifth highest number of commercial permits issued in the Lakes Region. Of these 13 permits, 7 were issued in 2004. These numbers indicate that the Lakes Region on a whole, as well as Tilton, experienced a significant amount of commercial growth. The growth in Tilton largely consisted of retail and service facilities for the benefit of tourist activity and increased residential growth within Tilton and surrounding areas. There has been very limited commercial growth of office space and professional buildings within the town. The increased growth slowed significantly during 2008, 2009, and is only slowly starting to slightly increase in 2010.

Industrial areas in Tilton are limited to the Nickerson Industrial Park located on the east side of 132, and properties on Manville Road, to the south of NH Routes 3/11. A few grandfathered industrial properties are also present throughout the town. Industrial development in the Lakes Region and in Tilton has been minimal. From 2000 to 2009 Tilton did not issue any industrial building permits. In 2012 the Town of Tilton sold the property located in the industrial district at 61 Business Park Drive to Sealite USA, LLC. This is the first building to be used as industrial in many years.

Public and institutional uses include town- and state-owned property, as well as churches and the holdings of the Tilton School and the Winnisquam Regional School District. The majority of these properties are concentrated in and around downtown. Information provided by the 2010 Schedule of Town Property indicates Tilton has ownership of the following parcels:

Table V-1: Town Owned Properties

| Map & Lot | Property Location | Description | Assessed Value |
|---|---|---|---|
| R05-7 | Simmons Court | 2.50 Acres Vacant Land | $ 58,200 |
| R09-30 | Off Beach Street | .94 Acres Vacant Land | $ 1,600 |
| R09-54 | 11 Grange Rd – Tilton Senior Center | .28 Acres Land & Building | $ 208,900 |
| R17-20 | 101 High Street – Buffalo Park | 57 Acres Land | $ 189,200 |
| R20-1-6 | Business Park Drive | 1.44 Acres Vacant Land | $ 57,900 |
| R21-15 | Wolf Road | 5.79 Acres Vacant Land | $ 154,600 |
| R26-70 | 581 W. Main Street – DPW Garage | 6.19 Acres Land & Building | $ 854,900 |
| R26-70B | 130 Clark Road | 1.33 Acres Vacant Land | $ 52,900 |
| U03-47 | Ashuelot Drive | .28 Acre Vacant Land | $ 55,300 |
| U04-5 | 179 E. Main Street- Police Station | .95 Acre Land & Building | $ 376,800 |

| | | | |
|---|---|---|---|
| U04-71 | 180 E. Main Street | .80 Acre Vacant Land | $ 107,500 |
| U04-72 | 190 E. Main Street | .94 Acre Vacant Land | $ 35,800 |
| U05-1 | E. Main Street | .10 Acre | $ 6,100 |
| U05-1A | 223 E. Main Street | .10 Acre | $ 6,100 |
| U05-2 | E. Main Street | .09 Acre | $ 5,400 |
| U05-21 | Main Street Parking Lot | .30 Acre Land | $ 96,000 |
| U05-24 | 304 Main Street – Vest Pocket Park | .12 Acre Land | $ 87,300 |
| U52-40 | Main Street – Parking Lot | .08 Acre Land | $ 51,500 |
| U05-42 | Center Street – Parking Lot | .19 Acre Land | $ 38,400 |
| U05-44 | Center Street – Parking Lot | .27 Acre Land | $ 45,300 |
| U05-50 | Academy Street | .03 Acre Land | $ 800 |
| U05-52 | Prospect Street – Parking Lot | .11 Acre Land | $ 3,000 |
| U05-113 | 257 Main Street – Town Hall | .06 Acre Land & Buildilng | $ 666,000 |
| U05-117 | 6 Mechanic Street – Parking Lot | .08 Acre Land | $ 23,400 |
| U05-120 | Mechanic Street – Vacant Land | .12 Acre Land | $ 26,300 |
| U06-3 | 336 W. Main Street – Riverfront Park | 1.57 Acres Land & Buildilng | $ 272,200 |
| U06-4 | 336 W. Main Street – Parking Lot | .38 Acre Land | $ 8,100 |
| U06-20 | W. Main Street - Statue | .19 Acre Land | $ 8,200 |
| U07-24 | 25 Highland Avenue | .28 Acre Land | $ 34,000 |
| U07-41A | School Street – Vacant Land | 2.90 Acres Land | $ 18,000 |
| U08-5 | 414 W. Main Street – Park Cemetery | 23 Acres Land | $ 206,600 |

## D. DEVELOPMENT CONSTRAINTS AND DEVELOPABLE LAND

While 65% of Tilton's land remains undeveloped or uncommitted to public and institutional ownership, not all of the more than 4742 acres are readily developable or even desirable for development. A number of environmental factors make development physically arduous, economically prohibitive, socially undesirable, and legally difficult. These environmental factors are considered to be development constraints. The factors so considered include:

### Wetlands

Wetlands are a regulated resource at the town, state, and federal levels and must be considered a development constraint. Known wetlands within Tilton are depicted in Appendix A, Vannasse Hangen Brustlin, Inc.:*Wetland Resources Map of Tilton*, NH, 2007. However, unmapped wetlands are also subject to regulation and a survey to determine the location of wetlands is required prior to development.

Special Flood Hazard Areas

Special flood hazard areas within Tilton are defined as areas that have flood, mudslide, or flood-related erosion hazards (zones A1-A30) and are depicted and described in Appendix B: Federal Emergency Management Agency. *Flood Insurance Study for the Town of Tilton* and its associated Flood Insurance Rate Map, 1997. Development within the special flood hazard areas is regulated by both the town and federal government, but is not prohibited. These special flood hazard areas represent a development constraint due to the potential flood impacts to structures developed thereon.

Aquifer Protection

A significant amount of the land area of Tilton, including much of the general commercial and industrial zones, overlays a stratified drift aquifer. This aquifer provides a drinking water source with high storage capacity and transmissivity to the area. Tilton does have regulations specific to aquifer protection and reviews development plans over the aquifer on a case-by-case basis and requires aquifer protection practices be implemented as part of the approval process. In 2007, Tilton officially adopted the "*Aquifer Protection Best Management Practices Guidebook*", the final product of the Tri-Town Aquifer Project (Belmont, Tilton, and Northfield) that was developed by the Lakes Region Planning Commission in 2006. This guidebook provides best management practices for commercial and residential development over the aquifer. The location of the stratified drift aquifer is depicted in Appendix A, Vannasse Hangen Brustlin, Inc.: *Wetland Resources Map of Tilton*, NH, 2007. Development in the areas above the stratified drift aquifer is considered constrained due to the cost of implementing the best management practices and the undesirable nature of the placement of some businesses over the aquifer.

Steep Slopes

Tilton does not have regulations specific to steep slopes; however, for safety reasons, the town does review and restrict development on steep slopes. Therefore, steep slopes are a development constraint.

## E. FUTURE LAND USE

Currently Tilton does not have a plan for future development. The trend of development falls generally along the Routes 3/11 corridor, and it is presumed that development along Routes 3/11 will increase in the future, particularly to the east of Interstate 93. This area will present some significant developmental problems due to traffic flow, highway constrictions, wetlands, and aesthetic considerations. The recent adoption of the Aquifer Protection and Best Management Practices may further constrain this development.

Extension of the public utilities into the MU and MR zones will likely increase future development in those zones. Future development of the RA district will be limited by the lack of public utilities and zoning restrictions.

In recent years the town has focused on obtaining recreation and conservation land whenever possible and should continue to do so in the future.

## F. SUMMARY OF FINDINGS

Tilton is generally commercial in nature along Routes 3/11. The remaining areas of the town are primarily residential. Commercial development over the past 10 years has generally consisted of retail and service facilities. There has been no significant professional office space development in the town over that time period.

There is a broad range of residential land uses in Tilton, including various densities of single family, two-family, multi-family, seasonal dwellings, and a substantial supply of mobile and manufactured homes. Residential development in the town is on the rise.

Industrial uses include the Nickerson Industrial Park on Rt. 132 and properties on Manville Road. There are small, previously existing industrial uses scattered through out the town.

Public and institutional uses include town and state property, as well as churches and the holdings of the Tilton School and the Winnisquam Regional School District. The majority of these properties are concentrated in and around downtown.

Some 65% of Tilton's land remains undeveloped but may be subject to development constraints such as wetlands, floodplains, aquifer protection, and steep slopes.

The future land use patterns will focus development along Rt. 3/11 east of Exit 20. This area will present some significant developmental problems due to traffic flow, highway constrictions, wetlands and aesthetic considerations. Future improvements to public utilities will also open up other areas for increased residential; and commercial development.

## G. RECOMMENDATIONS

Taking the current zoning districts into consideration, the following recommendations are suggested to help accommodate the future needs of the community.

### Village Residential District

Due to the aging characteristics and the failure to properly maintain many of the structures in this area, any efforts to upgrade or repair should be fully encouraged. The establishment of off street or underground parking should also be encouraged, with attention being given to green space areas. Emphasis should be placed on building architecture to reflect historical surroundings.

### Mixed Use District

The expansion of sewer and water service in areas of the district not already serviced should be encouraged as much as feasibly possible.

### Medium Density Residential District

The expansion of sewer and water service should be encouraged as much as feasibly possible. Additionally, residential cluster development with open space to conserve infrastructure should be encouraged.

### Rural Agricultural District

Residential cluster development with open space to conserve infrastructure should be encouraged. Additionally, Tilton should adopt rules and regulations that encourage the preservation of existing farmland and farm buildings.

### Downtown

Due to the shortage of parking areas and the failure to allow for additional parking with any increased expansion and development, as a capital improvement, the town should address parking issues and encourage parking alternatives.

The town should strongly encourage all future utility installation projects be placed underground; when any repairs to utilities are made, the town should lobby for burying said utilities.

Although the Main Street Program is no longer in existence, the town should continue efforts to attract sustainable and compatible businesses to the downtown district. Additionally, the town should encourage cultural activities and venues within the downtown area.

Regional Commercial District

Traffic controls in this area need to be addressed by the New Hampshire Department of Transportation (NHDOT). Traffic controls should include defined turning lanes and highway barriers to limit left hand turns in congested areas. The adequacy of Fire and Police protection also needs to be addressed in this area.

Resort Commercial District

There are a variety of issues for the town to consider in this district. Firstly, due to the amount of pedestrian traffic in this district, installation of sidewalks by NHDOT should be encouraged. Secondly, traffic controls in this area need to be addressed by the NHDOT. Traffic controls should include defined turning lanes and highway barriers to limit left hand turns in congested areas.

As mentioned when discussing other districts, the adequacy of fire and police protection needs to be addressed. Finally, the expansion of sewer and water service should be encouraged as much as feasibly possible.

General Commercial District

The expansion of sewer and water service should be encouraged as much as feasibly possible. And due to the amount of pedestrian traffic in this district, installation of sidewalks by NHDOT should be encouraged.

Industrial Park District

Completion of municipal services should make development of the industrial areas more desirable.

All Districts

Tilton should actively seek partnerships with other governmental entities to bring municipal services to the areas of town that are not currently serviced. Now that the town has adopted a capital improvement programs and impact fees, it should move toward using impact fees to offset infrastructure cost increases as a result of future development.

Tilton should encourage or even lobby professional businesses to establish offices within the town to increase the employment potential for area residents. Town officials should work to develop an image campaign for the town which may aid in attracting professional businesses to located in Tilton.

There are several goals that the planning board should work toward in the coming years:

- Develop a comprehensive plan that maps potential and current growth within the town
- Develop a strategy and zoning regulations to encourage the preservation of agricultural land through density transfer or by other means.
- Alter the current zoning regulations to better define and regulate cluster development.
- Redefine manufactured and modular housing, and their uses and appropriate zones.
- Review and update signage regulations.
- Clarify rules and regulations concerning the preservation of wetlands and groundwater protection areas.

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TRANSPORTATION

This section provides an overview of the status of alternative modes of transportation available to the Tilton residents as well as the Town's role in developing or improving the roadway network. Recommendations include the need for dedicated bus stops and long- and short-term parking for existing public transportation; close coordination with the New Hampshire Department of Transportation in regard to future development of Rt. 3/11 towards Mosquito Bridge, and emphasis on the need to upgrade Rt. 3/11 east of Exit 20 to improve turning safety.

## A. INTRODUCTION

Pursuant to RSA 674:2 (IV), a transportation section should include analysis of "facilities for all modes of transportation" and should provide for "the efficient movement of people and goods into, about, and through the municipality." The transportation network provides the linkage between places of residence and places of employment, commerce, service, and recreation. Accessibility to the transportation network is a critical variable in the land use and development plans and policies of a municipality. While substantial and valuable land is devoted to supporting the transportation system, the system itself confers value and utility to adjacent lands.

Beyond the basic issue of accessibility for land development, the transportation system must be of adequate capacity and design to ensure the safe and efficient movement of people and goods. Inadequate capacity has an economic cost in the delays in the delivery of persons and goods, while substandard designs have costs measured in terms of both dollars and injuries.

As required by statute, this section will review the status of alternative modes of transportation available to Tilton, but the main focus will be on travel by private vehicle over the roadway network, the predominant mode of travel in Tilton. The current attributes, existing deficiencies, and future needs of the roadway network within the Town will be addressed as will the Town's role in developing and improving the network.

## B. ALTERNATIVE MODES OF TRANSPORTATION

The transition from automobile and truck as a primary mode of transportation must be driven by outside influences, not as a matter of choice, for most travelers continue to favor the automobile. Probably the most important influence of all is convenience. Commuters, in particular, will resist the change unless the convenience of their personal automobile can be replaced by an alternative mode of equal or greater convenience together with equal or greater reliability and reduced cost.

As optional intermodal forms of transportation slowly become available, whether provided by federal, state, or regional governments or commercial entities, it is incumbent upon our community to provide the fundamental infrastructure of facilities and promotional support that will encourage its usage.

Buses

The Greater Laconia Transit Agency runs from Franklin Hospital through to the Gilford Wal-Mart and back, 5 days a week during the daylight hours. Anyone can ride the bus. The fare is one dollar and does not cover the cost of the system so it relies on raising money through the Federal, State and Local Government. This is an excellent but little known service that has the potential for increased ridership through promotion and community support.

The Central New Hampshire Transportation program offers door to door service for individuals that are unable to access the existing fixed schedule. Customers schedule rides at least 24 hours in advance. Rides are scheduled based on availability.

The Winnipesaukee Transit System provides service to 5 municipalities including Tilton. The service is designed as a fixed route system with predefined stops and estimated arrival times. It will also pick up people who live within one quarter of a mile from the route if scheduled by 4 P.M. the previous day. While this system is a welcome facility for those who need to schedule rides, it may be possible to provide better service to commuters and people who do not own a vehicle with a fixed route service with more rigid schedules.

Rural Transportation System operated by Belknap Merrimack CAP provides a link to community services for seniors (aged sixty and over) and disabled individuals using a wheel chair or other devices intended to aid the user. This program is offered to those seeking to maintain independence while facing the challenge of limited physical mobility, financial resources or lack of personal transportation. Rides are available Monday thru Friday. Vehicles are routed through many communities and are planned from specific pick up areas to rider selected medical offices and shopping centers in the destination zone. Routes are tailored to offer door to door service and assistance with loading and unloading.

RECOMMENDATIONS

1. Conduct a town wide survey to determine awareness, potential ridership, desired pick-up points, and destinations. Coordinate with G.L.T.A. and construct covered bus stops with provisions for posting bus schedules. Make bus schedules available at the town offices and other key locations around town.
2. Concord Trailway, an intercity and interstate bus system, provides daily service through Tilton on a route linking the White Mountains and Lakes Region to Concord, Manchester, and Boston. The Trailway's ticket office and bus stop is currently located at the Evans Express Mart on Rt. 3/11, adjacent to Exit 20 at I-93, a central location for all Tilton residents. There is, however, no designated area or provisions for short- or long-term parking.
3. Ridership might be greatly enhanced if a suitable short- or long-term parking area was created and Concord Trailways agreed to relocate their ticket office accordingly.
4. Taxi service is available in the Tilton-Northfield area and regionally available in Franklin and Laconia. Given that current estimates of population growth are relatively low, this service is unlikely to expand much over current levels.
5. In recent years, highway planners have focused on Transportation Demand Management (TDM), which encourages car and van pooling as a means of increasing the capacity of existing roads without actually expanding these roads with new lanes. In areas with strong commuting patterns, "park and ride" lots have been constructed

to facilitate a convenient meeting place for car pools. These facilities exist in New Hampshire along the commuting corridor I-93 . There is a park and ride lot located on Rt. 3/11 east of Rt. 132.

6. Another recent trend in transportation planning is the provision of services for the "transportation disadvantaged," those individuals who do not own or operate a vehicle due to cost or inability. There are a number of social service agencies in the Lakes Region that now assist the transportation disadvantaged. As this category of individuals grows, there may be proportional changes in some of the smaller existing services.
7. In concert with the U. S. Department of Transportation, the N.H. Department of Transportation Rail and Transit Division is placing increased emphasis on rail travel as an alternative to the automobile. While their primary focus is on major high-speed (90 mph plus) routes, which can cross multiple state, province, and international borders, the N.H. Railroad Revitalization Association, formed in 1994, is actively engaged in the restoration of the existing in-state infrastructure to recreate intercity rail transportation. In 2001, a high-speed rail line was activated between Boston, MA and Portland, ME. Ridership exceeded expectations, which has led N.H. Department of Transportation, under the auspices of U.S. Department of Transportation, to conduct a feasibility study for a second high-speed line from Boston, MA, to Montreal, Canada. Intended stops along this second line include Nashua, Manchester, Concord, Franklin, and Lebanon. If, in coming years, this line becomes a reality and travelers are made aware of its expected presence, the challenge for Tilton leaders and planners will be to satisfy the need for convenience. Assuming the railway system is able to meet the cost and reliability factors, getting travelers to and from the Franklin station in a timely and efficient manner could mean the difference between success and failure in furthering the reduction of automobile usage.
8. Extensive air transportation and airfreight services are available at the Manchester Boston Regional Airport, approximately 45 minutes south of Tilton. These services will expand with the growth of these facilities.

## C. THE ROADWAY NETWORK: ADMINISTRATIVE AND FUNCTIONAL CLASSIFICATION

The major component of Tilton's transportation system is the roadway network for which the town shares administrative and maintenance responsibilities with the state of N.H. Interstate 93 and the state's primary and secondary highways comprise 68.6% of the total road mileage in Tilton. The State, through its Department of Transportation (NHDOT), assumes full maintenance responsibilities for I-93 and Rts. 3/11 which are considered Class I, highways pursuant to RSA 229:5. Class II or State Aid Highways are also maintained by the NHDOT, with the exception of snow removal and other winter maintenance activities, which are the responsibility of the Tilton Public Works Department. The town is fully responsible for all aspects of Class V or town roads. There is a relatively minimal length of Class VI roads in Tilton which have been closed or discontinued and for which neither the State nor the Town is responsible.

While not prescribed by statute, components of the road network are generally assigned a functional classification as a transportation system planning mechanism. The functional

classification relates to the type of access allowed, number of lanes, speed limits, traffic volumes carried, types of intersections, and adjacent land uses served. The functional classifications of roads in Tilton are listed below.

Limited Access Highways

This category includes four-lane, divided highways to which access is limited to grade-separated interchanges. These roads carry high volumes of through traffic at maximum speed limit. No curb cuts are allowed and parking is prohibited. I-93 is the only highway in Tilton in this classification.

Arterial Highways:

These roads carry high volumes of both local and regional traffic at speed limits of 30 to 50 miles per hour. The roadways are undivided with two to four lanes, and at-grade intersections, which are channelized and may be signalized. Access to adjacent land uses is controlled, and on-street parking is generally not desirable.

Rts. 3/11 fall in this category, although the section in downtown Tilton is clearly serving another function as a local shopping and service destination point where on-street parking is critical to the adjacent land use patterns.

Collector Streets

Moving local traffic from individual developments or subdivisions to and from the arterial highways is the primary function of collector streets. These are two-lane, undivided roads with at-grade intersections controlled by stop signs on the streets or driveways entering the collector street. Speed limits are generally 30 to 40 miles per hour, access is available to adjacent land, and parking is permitted, although often unnecessary due to available off-street parking. Included in this category are Route 140, Route 132 (Sanborn Road), and School Street.

Local Streets

These undivided two lane streets provide access to adjacent land uses. Generally used by low volumes of local traffic at speed limits of 30 miles per hour in urban areas and 40 miles per hour in rural areas, these roads have at-grade intersections controlled by stop signs, and parking is unrestricted. All streets in Tilton not otherwise classified are considered to be local streets.

## D. TRAFFIC CHARACTERISTICS

Because the two most heavily used highways (I-93 and Rt. 3/11) in Tilton are under state jurisdiction, detailed analysis of traffic on these roads dates back to the 1950s when I-93 was planned as part of the national system of "Defense Highways." In early 1960, as I-93 was being extended north from Tilton, the state acquired land northerly of Exit 20 for a future Exit 21 at an interchange with a relocated Rt. 3/11. The relocated Rt. 3/11 was to have been a controlled access road linking Franklin and Laconia. It was intended that Exit 20 would remain available to serve local access needs on the existing Rt. 3/11 in Tilton. Exit 21 has not materialized due to financing problems and to some local opposition.

## Traffic Volumes: Trends and Projections

Historical data reveal some very clear trends about traffic flow in Tilton. Traffic, both north and south of Exit 20 on I-93, has increased significantly in the past 10 years. Due to considerable development east of Exit 20, traffic flow on Rt. 3/11 east of Exit 20 has increased about 20%. Rt. 3/11 from Franklin / Tilton town line to Exit 20 has also steadily increased. Although there is insufficient data to give an accurate traffic count, it appears that the increase is in the neighborhood of 20 to 30% over the last 10 years. Traffic on I-93 adjacent to Exit 20 is expected to continue to increase.

## Traffic Volumes: Monthly and Daily Variations

Variations in traffic flow occur seasonally, daily, and hourly. Certain days of the week and hours of the day exhibit higher traffic volumes and less desirable travel conditions than other times. Tilton's location in the Lakes Region makes it a prime candidate for seasonal traffic flow variations. Studies indicate that I-93 and Rt. 3/11 east of I-93 achieve weekly peak flows on Sundays and weekday peak hours are in the late afternoon. For Rt. 3/11 west of I-93, the seasonal and weekday peaks are not as significant and daily traffic has two peaks encompassing the morning and evening commuter traffic.

**Table VI-1: Past And Present Daily Traffic Volumes At Locations In Tilton**

| LOCATION | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| I-93 at crossover at Mile post 56.0 between exits 19-20 (NB-SB) | 26448 | 27280 | 26441 | 27159 | 27152 |
| US 3/NH 11 132 east of Bittern Lane | | | 16000 | | |
| Silver Lake Rd. over Winnipesaukee River | | 1700 | | | 1600 |
| US 3/11 South of Brook Rd | | | 18000 | | |
| US 3/11 West Main St. | | | 15000 | | |
| School St. S. of Range Rd. | | 1400 | | | 740 |
| River Rd. under NH railroad | | | 800 | | |
| School St. over NH Railroad | | 1400 | | | 4700 |
| Bridge St. over Winnipesauke River | | 5000 | | | |
| NH 140 over Winnipesaukee River | | | 9300 | | |
| US 3/11/NH132 west of exit 20 off ramp | | 18000 | | | |

Source: State of New Hampshire Department of Transportation

## Safety Characteristics

The frequency of traffic accidents at a given location is often indicates design and capacity problems. Because accidents take a financial and human toll, locations with higher than average accident rates are worthy of further analysis. Table VI-2 lists locations for which data was gathered for this Master Plan.

**Table VI-2: Accident Location and Rate of Occurrence on Route 3/11 In Tilton**

| LOCATION | 1988-1990 | 2000 | 2004 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Laconia Road | | | | | 11 | 12 |
| Park Street | 3 | 2 | 3 | 3 | | 1 |
| School Street | 5 | 3 | 1 | 4 | | 3 |
| Exit 20 Ramps (I-93) | 6 | 2 | 8 | 11 | | |
| Rt. 140 | 5 | 1 | 17 | 20 | 4 | 3 |
| Rt. 132 | 4 | 5 | 8 | 5 | 5 | 4 |
| Church Street | 3 | 1 | 0 | 0 | 0 | 0 |
| Lowes Drive | | | | | 1 | |
| Prospect Street | | | | | 9 | 2 |

Source: Tilton Police Department, 2013

## E. SUMMARY OF FINDINGS

The following are the most significant observations and findings relative to the transportation system in Tilton.

1. While other limited modes of transportation are available in Tilton, travel by private vehicle is predominant. However, opportunities do exist for expansion of the use of other modes.

2. The State of New Hampshire controls the majority of road mileage in Tilton, as well as all of the most heavily used roads.

3. Current analysis confirms past conclusions that traffic growth on Route 3/11 has surpassed the roads current configuration and this situation will continue to deteriorate with future development. Possible solutions to the problems include future development of a full interchange at Exit 19 in Northfield, including a bypass from Franklin to Exit 19 and from Exit 19 to Route 140.

4. The majority of traffic going through downtown Tilton is through traffic. On Rt. 3/11 east of I-93, the percentage of through traffic varies significantly depending on the time of day and the season.

5. The Town should work closely with N.H. Department of Transportation in the planning of proposed future development that takes place along Route 3/11 from Home Depot to Mosquito Bridge.

6. Due to the widening of Rt. 3 east of Exit 20, a median strip should continue east from the Tilton Diner to the Home Depot as left turns, other than those at signalized intersections,

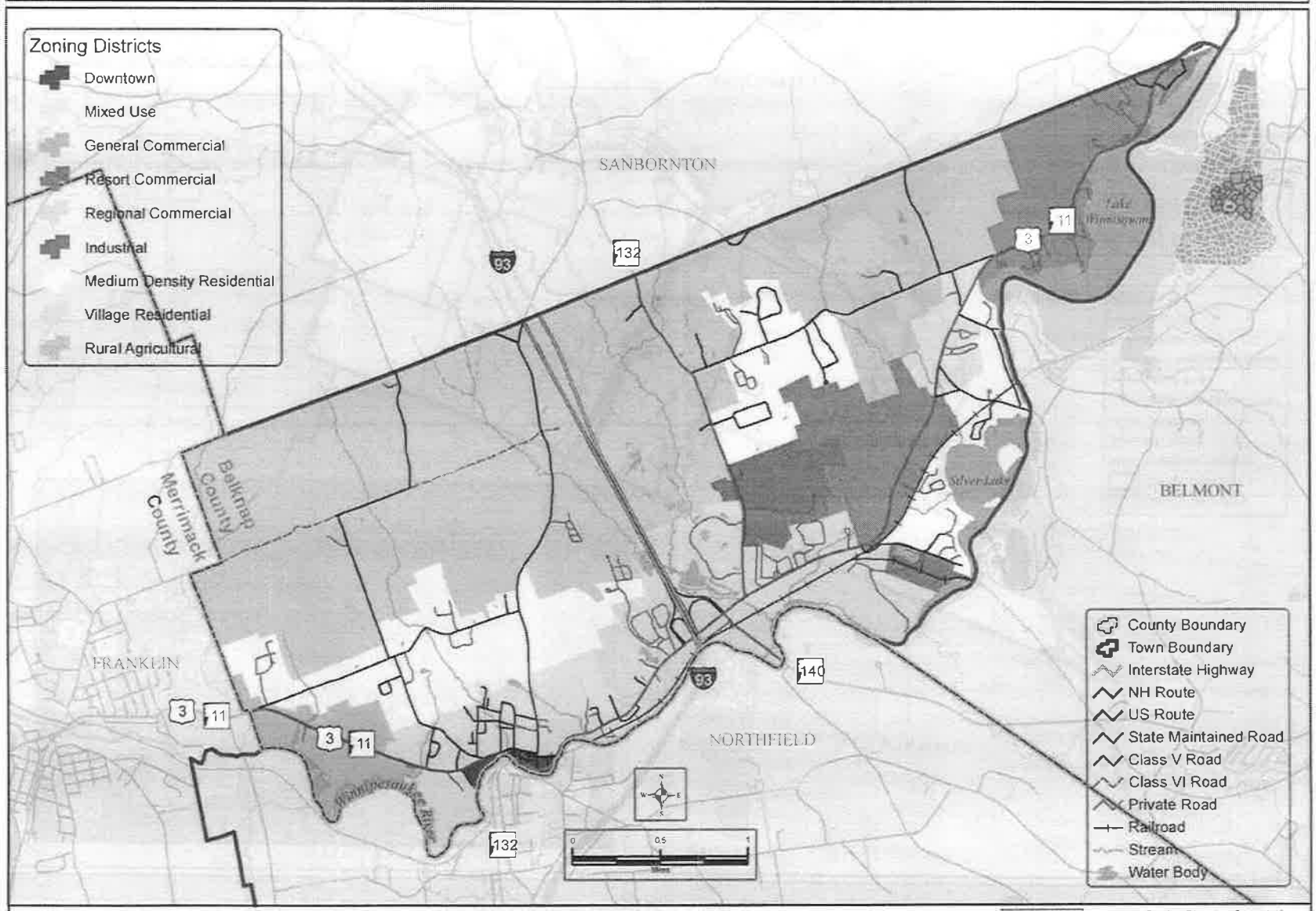
present a significant safety problem in addition to interfering with traffic flow.

7. A comprehensive traffic study should be done for Route 3/11 between Exit 20 and Home Depot. The most recent traffic data available is for the sections West and East of this area only, as the increase in traffic and widening of the roadway have made it difficult to accurately monitor the area.

8. The use of connector roads and driveways to move vehicles between developments should be required along the Route 3/11 corridor. This would help reduce the number of vehicles accessing Route 3/11, thus reducing the volumes on this already heavily congested roadway. They should also be utilized wherever businesses abut in areas where there is a potential for traffic congestion and increased accidents.
9. The Town and the State need to work together to come up with an agreement to repair all Class two state aid highways as the conditions of these roads are in dire need of significant maintenance.

# Zoning

Tilton, NH



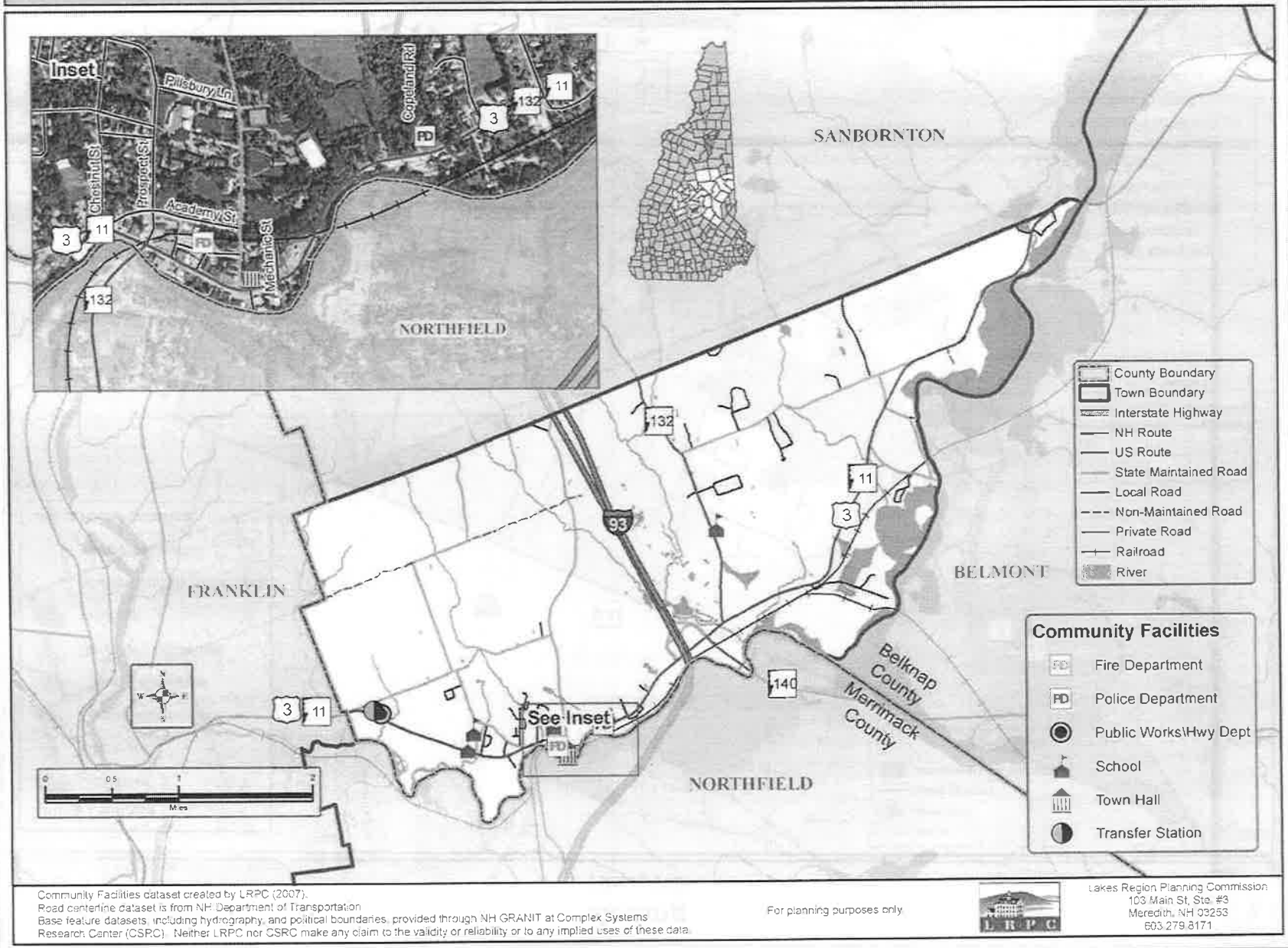

Zoning created by LRPC, updated 2006. Road centerline dataset is from NH Department of Transportation. Base feature datasets, including hydrography, and political boundaries, provided through NH GRANIT at Complex Systems Research Center (CSRC). Neither LRPC nor CSRC make any claim to the validity or reliability or to any implied uses of these data.

For planning purposes only.


Lakes Region Planning Commission
103 Main St, Ste. #3
Meredith, NH 03253
603.279.8171 : lakeslrpc.org

# Community Facilities

Tilton, NH




Community Facilities dataset created by LRPC (2007).
Road centerline dataset is from NH Department of Transportation
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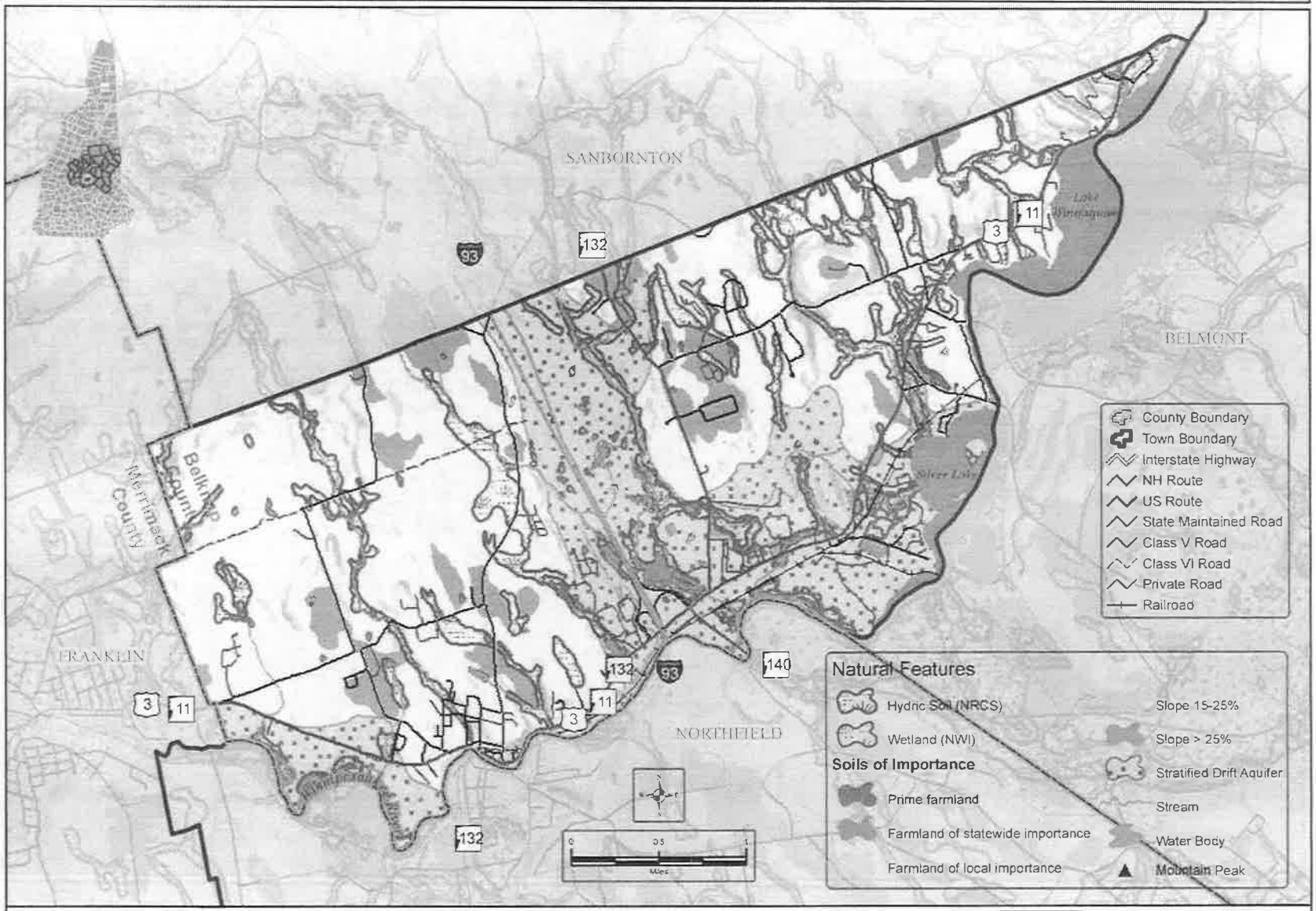
# Natural Resources

Tilton, NH




Wetland (NWI) from GRANIT. Slope from SPNHF. Aquifer from NH DES. Soils of Importance and Hydric Soil from NRCS. Mountain Peak from ESRI. Road centerline dataset is from NH Department of Transportation. Base feature datasets, including hydrography, and political boundaries, provided through NH GRANIT at Complex Systems Research Center (CSRC). Neither LRPC nor CSRC make any claim to the validity or reliability or to any implied uses of these data.

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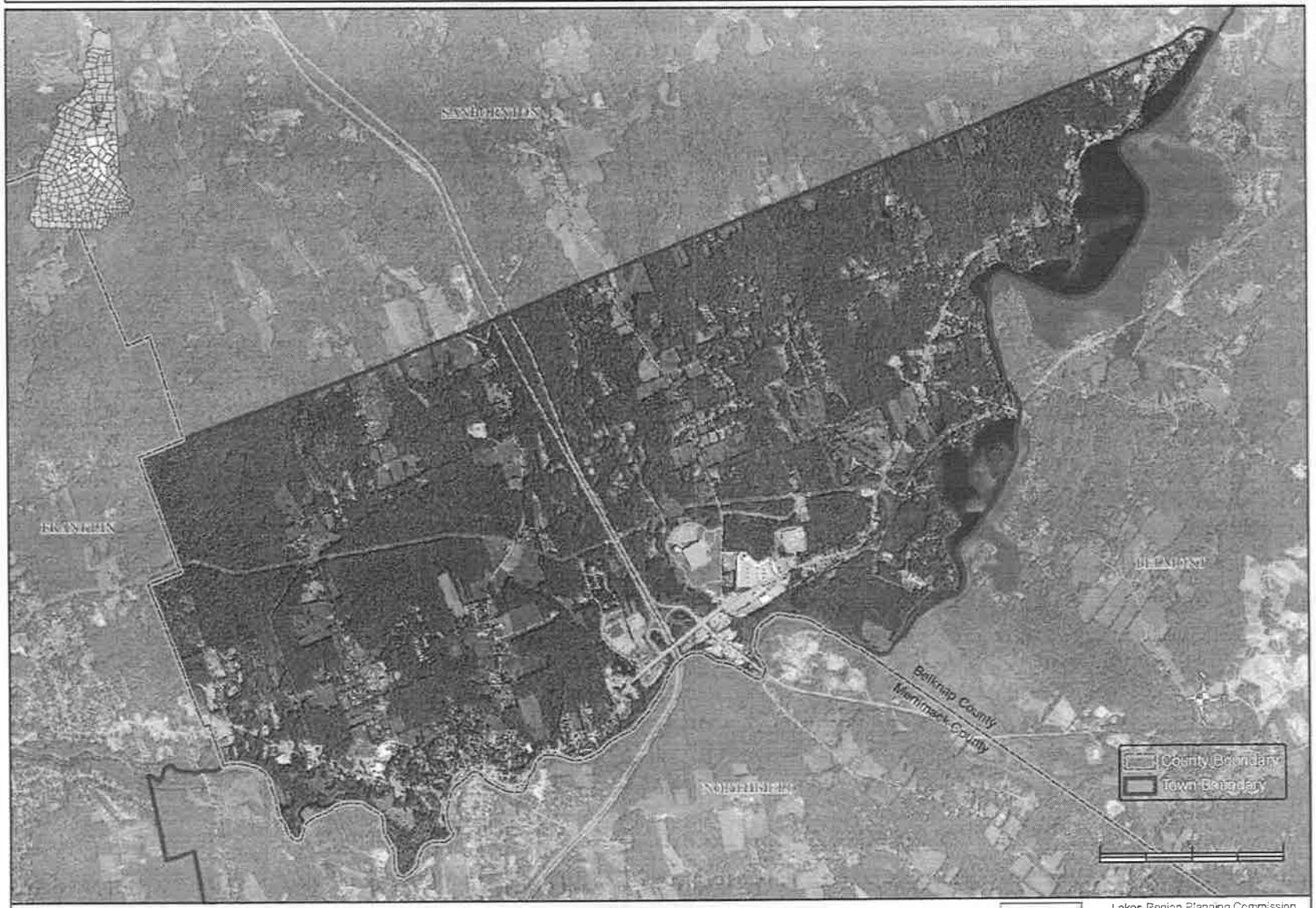
# Aerial Photography

Tilton, NH




Aerial photography (2003) and political boundaries provided through NH GRANIT at Complex Systems Research Center (CSRC). Neither LRPC nor CSRC make any claim to the validity or reliability or to any implied uses of these data

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# TITLE LXIV
# PLANNING AND ZONING

## CHAPTER 674
## LOCAL LAND USE PLANNING AND REGULATORY POWERS

### Master Plan

#### Section 674:1

**674:1 Duties of the Planning Board. –**

I. It shall be the duty of every planning board established under RSA 673:1 to prepare and amend from time to time a master plan to guide the development of the municipality. A master plan may include consideration of any areas outside the boundaries of the municipality which in the judgment of the planning board bear a relation to or have an impact on the planning of the municipality. Every planning board shall from time to time update and amend the adopted master plan with funds appropriated for that purpose by the local legislative body. In preparing, amending, and updating the master plan:

(a) The planning board shall have responsibility for promoting interest in, and understanding of, the master plan of the municipality. In order to promote this interest and understanding, the planning board may publish and distribute copies of the master plan, or copies of any report relating to the master plan, and may employ such other means of publicity and education as it may deem advisable.

(b) The planning board shall also have authority to make any investigations, maps and reports, and recommendations which relate to the planning and development of the municipality.

II. The planning board may:

(a) From time to time report and recommend to the appropriate public officials and public agencies programs for the development of the municipality, programs for the erection of public structures, and programs for municipal improvements. Each program shall include recommendations for its financing. It shall be part of the planning board's duties to consult with and advise public officials and agencies, public utility companies, civic organizations, educational organizations, professional organizations, research organizations, and other organizations, and to consult with citizens, for the purposes of protecting or carrying out of the master plan as well as for making recommendations relating to the development of the municipality.

(b) Upon request advise the governing body as to whether proposed ordinances and bylaws regarding the maintenance and operation of stormwater systems under RSA 149-I:6, I-a are consistent with the master plan.

III. Members of the planning board, when duly authorized by the board as a whole, may attend municipal planning conferences or meetings, or hearings upon pending municipal planning legislation. The planning board may by majority vote authorize the payment of reasonable expenses incident to such attendance.

IV. The planning board, and its members, officers, and employees, in the performance of their functions may, by ordinance, be authorized to enter upon any land and make such examinations and surveys as are reasonably necessary and place and maintain necessary monuments and marks and, in the event consent for such entry is denied or not reasonably obtainable, to obtain an administrative inspection warrant under RSA 595-B.

V. The planning board may, from time to time, recommend to the local legislative body amendments of the zoning ordinance or zoning map or additions thereto.

VI. In general, the planning board may be given such powers by the municipality as may be necessary to enable it to fulfill its functions, promote municipal planning, or carry out the purposes of this title. Such powers shall not include regulating timber harvesting operations that are not part of a subdivision application or a development project subject to site plan review under this chapter.

**Source.** 1983, 447:1. 1991, 231:12. 2011, 85:3. 2015, 247:2, eff. Sept. 11, 2015.

# Section 674:2

**674:2 Master Plan; Purpose and Description.** –

I. The purpose of the master plan is to set down as clearly and practically as possible the best and most appropriate future development of the area under the jurisdiction of the planning board, to aid the board in designing ordinances that result in preserving and enhancing the unique quality of life and culture of New Hampshire, and to guide the board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning, and wise resource protection.

II. The master plan shall be a set of statements and land use and development principles for the municipality with such accompanying maps, diagrams, charts and descriptions as to give legal standing to the implementation ordinances and other measures of the planning board. Each section of the master plan shall be consistent with the others in its implementation of the vision section. The master plan shall be a public record subject to the provisions of RSA 91-A. The master plan shall include, at a minimum, the following required sections:

(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.

(b) A land use section upon which all the following 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.

III. The master plan may also include the following sections:

(a) A transportation section which considers all pertinent modes of transportation and provides a framework for both adequate local needs and for coordination with regional and state transportation plans. Suggested items to be considered may include but are not limited to public transportation, park and ride facilities, and bicycle routes, or paths, or both.

(b) A community facilities section which identifies facilities to support the future land use pattern of subparagraph II(b), meets the projected needs of the community, and coordinates with other local governments' special districts and school districts, as well as with state and federal agencies that have multi-jurisdictional impacts.

(c) An economic development section which proposes actions to suit the community's economic goals, given its economic strengths and weaknesses in the region.

(d) A natural resources section which identifies and inventories any critical or sensitive areas or resources, not only those in the local community, but also those shared with abutting communities. This section, which may specifically include a water resources management and protection plan, shall provide a factual basis for any land development regulations that may be enacted to protect water resources and other identified natural areas. A key component in preparing this section is to identify any conflicts between other elements of the master plan and natural resources, as well as conflicts with plans of abutting communities. Nothing in this subparagraph shall be construed to permit municipalities to regulate surface or groundwater withdrawals that they are explicitly prohibited from regulating.

(e) A natural hazards section which documents the physical characteristics, severity, frequency, and extent of any potential natural hazards to the community. It should identify those elements of the built environment at risk from natural hazards as well as extent of current and future vulnerability that may result from current zoning and development policies.

(f) A recreation section which shows existing recreation areas and addresses future recreation needs.

(g) A utility and public service section analyzing the need for and showing the present and future general location of existing and anticipated public and private utilities, both local and regional, including telecommunications utilities, their supplies, and facilities for distribution and storage.

(h) A section which identifies cultural, archeological, and historic resources and protects them for rehabilitation or preservation from the impact of other land use tools such as land use regulations, housing, or transportation. Such section may encourage the preservation or restoration of stone walls, provided agricultural practices, as defined in RSA 21:34-a, are not impeded.

(i) A regional concern section, which describes the specific areas in the municipality of significant regional interest. These areas may include resources wholly contained within the municipality or bordering, or shared, or

both, with neighboring municipalities. Items to be considered may include but are not limited to public facilities, natural resources, economic and housing potential, transportation, agriculture, and open space. The intent of this section is to promote regional awareness in managing growth while fulfilling the vision statements.
(j) A neighborhood plan section which focuses on a specific geographical area of local government that includes substantial residential development. This section is a part of the local master plan and shall be consistent with it. No neighborhood plan shall be adopted until a local master plan is adopted.
(k) A community design section to identify positive physical attributes in a municipality and provide for design goals and policies for planning in specific areas to guide private and public development.
(*l*) A housing section which assesses local housing conditions and projects future housing needs of residents of all levels of income and ages in the municipality and the region as identified in the regional housing needs assessment performed by the regional planning commission pursuant to RSA 36:47, II, and which integrates the availability of human services with other planning undertaken by the community.
(m) An implementation section, which is a long range action program of specific actions, time frames, allocation of responsibility for actions, description of land development regulations to be adopted, and procedures which the municipality may use to monitor and measure the effectiveness of each section of the plan.
(n) An energy section, which includes an analysis of energy and fuel resources, needs, scarcities, costs, and problems affecting the municipality and a statement of policy on the conservation of energy.
(o) A coastal management section which may address planning needs resulting from projected coastal property or habitat loss due to increased frequency of storm surge, flooding, and inundation.

**Source.** 1983, 447:1. 1986, 167:2. 1988, 270:1. 1989, 339:28; 363:15. 2002, 178:2. 2007, 40:1. 2008, 269:1. 2011, 224:118. 2013, 76:1, eff. Jan. 1, 2014; 189:1, eff. Aug. 31, 2013; 202:1, eff. Sept. 7, 2013.

## Section 674:3

**674:3 Master Plan Preparation. –**
I. In preparing, revising, or amending the master plan, the planning board may make surveys and studies, and may review data about the existing conditions, probable growth demands, and best design methods to prevent sprawl growth in the community and the region. The board may also consider the goals, policies, and guidelines of any regional or state plans, as well as those of abutting communities.
II. Revisions to the plan are recommended every 5 to 10 years.
III. During the preparation of the various sections of the master plan, the board shall inform the general public and the office of strategic initiatives and regional planning commissions and solicit public comments regarding the future growth of the municipality in order to involve citizens in the preparation of the master plan in a way which is most appropriate for the municipality.

**Source.** 1983, 447:1. 2002, 178:3; 229:9. 2003, 319:93. 2004, 257:44, eff. July 1, 2004. 2017, 156:64, eff. July 1, 2017.

## Section 674:4

**674:4 Master Plan Adoption and Amendment. –** The planning board may, according to the procedures required under RSA 675:6, adopt the master plan as a whole, or may adopt successive sections or parts of the plan. Sections or parts of the plan shall correspond with major geographical sections or divisions of the municipality, or with the functional elements of the plan, and may incorporate any amendment, extension, or addition to the plan.

**Source.** 1983, 447:1, eff. Jan. 1, 1984.