

Town of Jaffrey, New Hampshire

# Master Plan Update

2007



**Master Plan Update**  
**January 2007**  
**Amended February 2016**

# ACKNOWLEDGMENTS

The 2006 update of the Town of Jaffrey's Master Plan was completed through the dedication, vision, cooperation, and hard work of the citizens of Jaffrey, New Hampshire. A Master Plan Committee convened by the Planning Board worked with municipal Boards, other residents and the Southwest Region Planning Commission. The process created a Vision for Jaffrey's future; analyzed the recent trends, current conditions and expected future conditions in Jaffrey; and developed a set of goals and objectives by which municipal government and the public can work to make that Vision a reality.

## Master Plan Update Committee, 2005 - 2006

Ed Merrell, Chairman  
Dick Grodin  
Don MacIsaac  
Tom Doane

## Jaffrey Planning Board, 2006 - 2007

Michael Shea, Chairman	Robert Deschene
Richard Grodin, Secretary	John McCarthy
G. Clay Hollister	Tom Doane, Alt.
Don MacIsaac, Vice Chair	Mark Kresge, Alt.
Ed Merrell	

## Jaffrey Citizens Participating in Master Plan Subcommittees

\* Committee Chairperson

**Community Facilities:** Suze Campbell, Jim Dumont, Patty Farmer, Keith Luscombe, John McCarthy

Kevin Sterling, Rob Stephenson\*, Caroline Hollister

**Economic Development:** Jack Belletete, Jim Dumont, Patty Farmer, Brandon Gray, Don MacIsaac\*, Priscilla Palmer, Brad White

**Historical Resources:** Doug Clayton, Janet Grant\*, Don MacIsaac, Chris Pedott, Peter Sawyer, Anne Webb

Note: At the time of publication the Historical Commission was working with consultant: Elizabeth Durfee-Hangen to develop a town-wide Historic Preservation Plan

**Land Use:** Jack Belletete, John O. Field, Tim Foley, Charles Koch, Frank Mieso, Cush Moore\*, Brad White

**Natural Resources:** John O. Field, Owen Houghton, Charles Koch, Pat MacIsaac\*, Josh Penick, Ann Royce

**Population and Housing:** Suze Campbell\*, Linda Cramb, Tim Foley, Charles Marvin, Cush Moore, Priscilla Palmer, Prudence Read

**Recreation:** Jackie Griffith, Mark Kresge\*, Keith Luscombe, Stephanie Minter, Chris Pedott, Tinka Reed

**Regional Context:** Ken Campbell, Pam Gordon, Owen Houghton, Jack Minter, Mary Payson, Rosemary Poole\*  
Cassius Webb

**Transportation:** Laurel McKenzie, Candra Bergeron, Ed Merrell

**Utilities:** Steve Cooke\*, Cliff Ellston, Pam Gordon, Mark Kresge, Charles Marvin, Rosemary Poole, Kevin Sterling

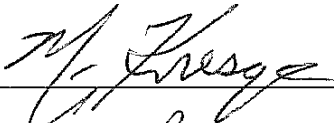
## CERTIFICATE OF ADOPTION

The Planning Board of the Town of Jaffrey, New Hampshire hereby certifies that the "Town of Jaffrey, New Hampshire, Master Plan Update, 2007" was adopted by unanimous vote of the Planning Board on January 4, 2007, and Amended February 10, 2016 as the true Master Plan of the Town of Jaffrey, New Hampshire pursuant to the provisions of RSA 674:2-4, 675:6, and 675:7.

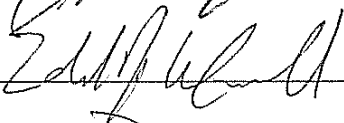
### Traffic and Transportation

February 10, 2016

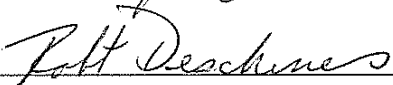
Mark Kresge, Chairman




Ed Merrell, Vice Chair



Robert Deschenes




Shirley Despres



Laurel McKenzie



Matt Devlin



Don MacIsaac, Ex. O.



Jaffrey, New Hampshire  
MASTER PLAN UPDATE  
2007

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## VISION STATEMENT

Per RSA 674:2, the Vision Statement of a Master Plan shall contain a set of statements which articulate the desires of the citizens affected by the master plan. It shall also contain a set of guiding principles and priorities to implement that vision.

The people of Jaffrey have indicated that they want to see Jaffrey remain a small town, with a friendly atmosphere. We envision a Jaffrey that combines controlled growth and development with strong land preservation and environmental protection.

Preservation of open space, forests and fields, and wildlife habitats, all of which are integral to our rural character, is of crucial importance. Mount Monadnock, and our ponds, lakes, wetland areas, and scenic vistas are trusts to be passed unspoiled to future generations.

Jaffrey will encourage the wise use of land and preservation of open space, such as is provided by its present Open Space Development Plan. Jaffrey will focus on concentrating high density housing development or mixed uses in or adjacent to the town's hub where town water and sewer are presently available. The town shall also look at housing needs for elderly, retirees, and the less fortunate, and seek to maintain a stock of workforce affordable housing.

Jaffrey will seek to attract new commerce and industry that will provide good jobs and career opportunities for Jaffrey's youth and work force. Jaffrey shall be a business-friendly community that promotes economic development by supporting a dynamic, diversified economic base consistent with its small town character. This economic base is likely to consist of small and home-based businesses, small retail and service establishments, light industry, and tourism.

The town's future development strategies should respect the value of community resources by preserving historical architecture and other historical features, providing a supportive environment for our cultural, social, and medical support organizations, and ensuring that a program of continuous improvement is instituted for our schools and recreational facilities. Jaffrey's future will include an expanded and prosperous downtown. We envision additional opportunities for safe foot and bicycle travel in and around the town, with improved vehicular flow through the town center.

Jaffrey will welcome industrial park development and provide the necessary zoning, infrastructure, and services that make the town attractive for economic growth, provided that it is compatible with the town's rural environment. This may include improvement of the town's infrastructure, including the provision of adequate water and sewer facilities in those districts zoned for industry. The town should also explore improvements to its communications infrastructure, notably high-speed Internet access, to encourage the development of communications-based and high-tech businesses. The town may need to consider providing additional appropriately zoned areas where municipal services are already available for enhancement and expansion of additional commerce and industry.

# IMPLEMENTATION

## INTRODUCTION

The citizens want to retain Jaffrey's small town atmosphere and protect its rural environs. With a growth rate of between 1% and 2% we can expect to sustain the social character of a "rural town". Key is controlled growth and development with strong land preservation and environmental protection. The Planning Board shall annually review the Master Plan, including implementation, to determine progress and identify issues and report its findings to the town in June each year.

## REGIONAL CONTEXT

- Enhance and protect Jaffrey's valuable tourist, recreational and economic assets, e.g. Mount Monadnock, by reorganizing, clarifying and better defining the terms and conditions of the Mountain Zone ordinance. This should include improving the definitions in the Jaffrey Land Use Plan and creating a dialogue with surrounding communities with regard to land use in the Mountain Zone. The Planning Board should head this effort with assistance from concerned citizens of Jaffrey and representatives of the other Mountain Zone towns.
- Understand Jaffrey's unique place in the regional economy, identify the opportunities and attract those businesses that fit with Jaffrey's Vision.
- Promote development of social capital. Develop a pedestrian friendly downtown. The Planning Board should encourage and promote mixed-use development in the downtown "hub" of Jaffrey aimed at enlivening the center of town and making it a retail and entertainment destination for people from other towns. Correction of the Route 202 dog-leg will be a strong step in that direction.

## POPULATION AND HOUSING

- Target population growth to 1-2% a year to correspond to the town's goal of maintaining a rural atmosphere.
- Develop a strategy to resolve the conflict related to the expansion of the municipal water and sewer, recognizing the wishes of the people of Jaffrey to retain its rural character.
- Identify the current levels of and the need for additional housing that is affordable for elderly, families with school age children, and the town's workforce.
- Identify the type of housing that is appropriate and desired by each of the above mentioned groups relative to the proximity and kind of shopping, services and facilities that each group needs and desires.
- Look for ways for public and private sectors to collaborate to produce affordable elderly housing that is convenient to town shops and services.
- Encourage Open Space Residential Development Plans and interior lot development.

**ECONOMIC DEVELOPMENT**

- The Economic Development Council, Chamber of Commerce, and TEAM Jaffrey, should work in partnership with a focus on using available space and identifying potential new space for relocating businesses to Jaffrey.
- Provide a downtown that is a destination (financially healthy, pedestrian friendly, attractive and culturally active). A Downtown Study Committee is addressing this critical issue.
- Enhance Jaffrey as a tourist destination, e.g. explore synergies between community special events, retail, sports, etc., provide maps, listings of rooms and amenities.
- Recognize the importance of quality schools in attracting new business. The continued upgrading and development of our school facilities and curriculum will improve the abilities of our students and enhance the schools' reputation.
- Promote economic development in the context of protecting our natural resources, e.g. Mt. Monadnock, ponds, lakes, and scenic views, and maintaining our rural character.
- In partnership with the Economic Development Council, TEAM Jaffrey, and Chamber of Commerce, work to create a cohesive downtown (right businesses, right look, right services, right parking). Recognize that the Route 202 throughpass/realignment is a re-design opportunity for downtown
- Expand and describe through Jaffrey's Annual Report, the Downtown TIF to include the project area impacted by the proposed 202 throughpass.

**TRAFFIC AND TRANSPORTATION**

- A vitally important issue facing Jaffrey's future is developing a solution for downtown traffic. Plans (conceptual design, costs, etc.) need to be developed to present to the state Department of Transportation along with a financial plan to attract their attention.
- Identify the transportation needs and opportunities, e.g. existing bus routes, opportunities for van transportation.
- Assess the number, availability, and usage of parking spaces in downtown.

**ELECTRICAL AND COMMUNICATION SERVICES**

- Improve communication services as a part of Jaffrey's infrastructure.
- Investigate Broadband over Power Lines with Public Service and/or investigate wireless service.
- Petition Public Service to begin replacement of high energy usage street lighting with energy efficient color correct light sources designed to light targeted areas and eliminate "sky glow." This is to be supported by town ordinances

## **COMMUNITY FACILITIES AND SERVICES**

- Pursue a water supply and waste water treatment strategy that will best serve Jaffrey by protecting the public health and environment while minimizing adverse impacts on rate and taxpayers without at the same time encouraging inappropriate development.
- Improve the efficiency of managing Jaffrey's assets, i.e. facilities and services by employing GIS mapping and other best practices to maintain and develop town infrastructure.
- Assess and consider the purchase, lease, consolidation, sale, development, construction, renovation and/or expansion of physical facilities to accommodate more efficiently the following Town departments and services:
  - Records storage
  - Fire Department
  - Public works department
  - Recreation department
- Place increased emphasis on matters of conservation, resource management, energy efficiency and "green" approaches when it comes to public investment in building and remodeling, and in purchasing guidelines and facilities operation.
- As an ingredient in any implementation strategy to accomplish the above, assess and consider the potential for increased regional and multi-town sharing of facilities and services as a strategy to more efficiently and cost effectively meet the needs of the citizens, businesses and institutions of Jaffrey.
- Provide fire protection in the most cost effective manner to the Stone Arch TIF district as a means of encouraging industrial development.

## **RECREATIONAL RESOURCES**

- Create a formal recreation resources map for use by residents as well as visitors. Include Class VI roads and Rails to Trails as valuable resources.
- Planning Board should incorporate policies regarding development along Class VI roads as well as view sheds into Subdivision & Site Plan review process. Also consider Class A trails opportunities.
- Continue the development and improvement of Jaffrey's recreational facilities including Shattuck Park, Humiston Field, Rails to Trails, and the Community Center.

## **HISTORICAL AND CULTURAL RESOURCES**

- Include in the Site Plan and Subdivision review processes and in the building codes a review and comment process for historic interests (e.g. VIS, Historical Society, and Historic District Commission).
- Create a historical resources map including stone walls, cellar holes, and cemeteries.



- Advocate for regulations to control development impacting public view sheds or Jaffrey's scenic hillsides and protect the slopes and view sheds of Mt. Monadnock, our community's single most treasured feature.
- Adopt and promote the statewide barn tax abatement program
- Acknowledge and protect the uniqueness of historic areas, such as Squantum and Cheshire Village, by promoting the establishment of Neighborhood Heritage Districts.
- Recognize the historical and cultural significance of Jaffrey cemeteries by continuing a high quality level of grounds maintenance and repair, as well as ensuring that landscaping beyond a cemetery's bounds does not impinge upon or otherwise compromise the usual and traditional solemnity and respectful nature expected of a cemetery.
- Recognize the value of scenic roads in retaining Jaffrey's rural character.

## **NATURAL RESOURCES**

- Develop a plan for open space and agriculture designed to protect Jaffrey's natural resources, open spaces, and rural character.
- Create a natural resources section in the new zoning ordinances. Review all ordinances pertaining to these natural constraints and seek expert opinion on how best to protect them.
- Develop a 3-tiered map, 1st tier Unfragmented Rural Land, 2nd tier Other Rural Lands, including agricultural lands, and 3rd tier Targeted Development Areas. This could be done in conjunction with the JCC and would be a helpful guide for decisions concerning conservation and development.
- Direct mixed-use development to the downtown hub area (possibly enlarging it to accommodate residential and commercial expansion).
- Consider a criterion for Open Space Development Plan that any proposals should include consideration of sensitive land.

## **LAND USE**

- Jaffrey Downtown
  1. Consider creation of a Central Downtown District consisting of mixed use development that will facilitate housing and commercial expansion in the coming decade and beyond (PB, Town).
- Rural Periphery
  1. Clarify and specify the rules governing what constitutes "developable land".
  2. The Planning Board is responsible to review the adequacy of ordinances concerning current roadside buffer zones and setbacks around sensitive environmental assets and viewsheds, especially for the protection of surface water, wetlands, floodplains, visual character, and natural forest vegetation.

- Industrial District  
Encourage industrial park development in areas currently zoned Industrial through improvement of infrastructure (e.g. water, sewer, communications).
- Preserve and protect the natural resources, open space, and rural character of Jaffrey's by encouraging OSDP's.

# BASIC STUDIES

## REGIONAL CONTEXT

### INTRODUCTION

Visible from all the towns in southwestern New Hampshire, Mount Monadnock is the most significant symbol of the entire region. Mountains of this type (a rocky mass rising high over the surrounding plain and low hills) are called “monadnocks” all over the world, namesakes of Mount Monadnock. The 3,165’ peak of the mountain and a large portion of its bulk lie within the borders of Jaffrey. For that reason the town has for decades accepted responsibility for safeguarding Mount Monadnock.

Jaffrey’s environment – its lakes, rivers and ponds, its hills and valleys and mountain, all contribute to the town’s being a destination for tourism and recreation. This is a responsibility that indicates obvious economic opportunities and economic caveats. The natural and scenic environment is one of the hallmark traits associated with the Town of Jaffrey.

### REGIONAL CONSIDERATIONS

The changes brought about over the last half century due to the automobile and increased communications opportunities are reflected in the appearance, for the first time, of a Regional Context chapter in the Town of Jaffrey’s Master Plan update for 2006. The town no longer exists as an independent, self-sufficient entity. Rather it is part of a network of interdependent towns, each with its own attractions, identity, strengths, weaknesses and hopes, and links to the region. Each town in the Monadnock region, in its development, conservation of the environment, transportation, communications, retail, industrial and other changes, affects the other towns.

The Monadnock Region is driven by the central New England economy and is strongly influenced by the economies of the Merrimack Valley and central and eastern Massachusetts

### BACKGROUND AND DATA

#### *Regional Attractions, Features and Links*

To start our regional thinking, here is a list of significant regional attractions features and links that bring people to each town and connect each town to others in the Monadnock Region.

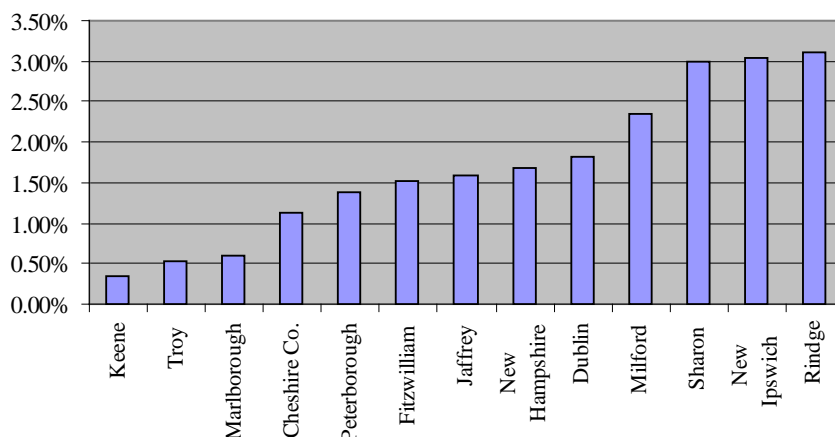
Jaffrey	Mt. Monadnock, Monadnock State Park, Contoocook Lake and River, Thorndike & Gilmore Ponds, the Meetinghouse, Amos Fortune Forum, Scottish Games, TEAM Jaffrey Scarecrows, the Bandstand, the future Park Theater, Belletetes, Shattuck Golf Course, restaurant
Dublin	Mt. Monadnock, Dublin Lake, Yankee Magazine. Links: Mtn. Zone, MAC, ConVal, Routes 202 & 101, St. Reps. w Jaffrey & Rindge, New Ipswich prosecutor, Jaffrey Courthouse, Cheshire Co. Jail, Cheshire Co. Courts, SWRPC.
Fitzwilliam	The Town Common, shops, antiques, B&Bs. Links: MAC, Monadnock Regional HS in Swanzey, St. Rep. with Richmond, SWRPC.
Keene	Shopping center for region including Vermont; car dealers; Cheshire Medical Center; Cheshire County Courts, restaurants, theater, movies, Keene State College, Antioch Graduate School, Franklin Pierce College. Links: Swanzey airport, County Commissioners
Marlborough	Mt. Monadnock, shops. Links: Mtn Zone, MAC, St Rep with Harrisville. Swanzey & Troy; Rtes 102, 124 & 12; SWRPC
Peterborough	Contoocook River, Peterborough Players, MacDowell Colony, Monadnock Music, Monadnock Chorus, Monadnock Lyceum, Monadnock Community Hospital, churches, Specialty stores, EMS, Restaurants,

	Movie theater, Rivermead, Auction house. Links: St. Reps. with Jaffrey
Rindge	Walmart, Hannafords & Market Basket, Cathedral of the Pines, Annett State Forest, Franklin Pierce College, restaurants. Links: J-R Schools, St Rep w New Ipswich; SWRPC
Sharon	Sharon Art Center, SWRPC
Troy	Gap Mountain, Views of Mt. Monadnock. Links: Rte.; 12, Mtn Zone, MAC, Monadnock Regnl School, St Rep with Harrisville & Swanzey, SWRPC

### Population Data for the Region

**Table 1: Average Growth Rates**

TOWN, COUNTY AND STATE	Average rate of growth per year, 1970-2004
<b>Keene</b>	<b>0.34%</b>
<b>Troy</b>	<b>0.53%</b>
<b>Marlborough</b>	<b>0.60%</b>
<b>Cheshire Co.</b>	<b>1.13%</b>
<b>Peterborough</b>	<b>1.38%</b>
<b>Fitzwilliam</b>	<b>1.52%</b>
<b>Jaffrey</b>	<b>1.59%</b>
<b>New Hampshire</b>	<b>1.68%</b>
<b>Dublin</b>	<b>1.83%</b>
<b>Milford</b>	<b>2.34%</b>
<b>Sharon</b>	<b>2.99%</b>
<b>New Ipswich</b>	<b>3.03%</b>
<b>Rindge</b>	<b>3.10%</b>



**Table 1 and Table 2: Average Growth Rates**

Since 1970, Jaffrey has grown faster than Peterborough and Cheshire County, but about half as fast as Rindge. Here's how Jaffrey ranks compared to 10 other towns, the county and state during this period.

**Table 2: Population and Growth Rates for Jaffrey and Surrounding Towns , 1970-2000**

Town, County & State	1970	1980	1990	2000	2004	% Growth from 1970 to 2004	Avg. rate per year 1970-2004
<b>Troy</b>	<b>1,713</b>	<b>2,131</b>	<b>2,096</b>	<b>1,967</b>	<b>2,051</b>	<b>19.7%</b>	<b>0.53%</b>
<b>Marlborough</b>	<b>1,671</b>	<b>1,845</b>	<b>1,939</b>	<b>2,013</b>	<b>2,077</b>	<b>24.3%</b>	<b>0.60%</b>
<b>Peterborough</b>	<b>3,807</b>	<b>4,895</b>	<b>5,257</b>	<b>5,896</b>	<b>6,069</b>	<b>59.4%</b>	<b>1.38%</b>
<b>Fitzwilliam</b>	<b>1,362</b>	<b>1,795</b>	<b>2,014</b>	<b>2,148</b>	<b>2,278</b>	<b>67.3%</b>	<b>1.52%</b>
<b>Jaffrey</b>	<b>3,353</b>	<b>4,349</b>	<b>5,361</b>	<b>5,476</b>	<b>5,733</b>	<b>71.0%</b>	<b>1.59%</b>
<b>Dublin</b>	<b>837</b>	<b>1,303</b>	<b>1,476</b>	<b>1,482</b>	<b>1,552</b>	<b>85.4%</b>	<b>1.83%</b>
<b>Sharon</b>	<b>136</b>	<b>184</b>	<b>293</b>	<b>361</b>	<b>369</b>	<b>171.3%</b>	<b>2.99%</b>
<b>Rindge</b>	<b>2,175</b>	<b>3,375</b>	<b>4,938</b>	<b>5,475</b>	<b>6,137</b>	<b>182.2%</b>	<b>3.10%</b>
<b>Keene</b>	<b>20,467</b>	<b>21,449</b>	<b>23,081</b>	<b>22,589</b>	<b>22,955</b>	<b>12.2%</b>	<b>0.34%</b>
<b>Cheshire Co.</b>	<b>52,364</b>	<b>62,116</b>	<b>70,223</b>	<b>73,993</b>	<b>76,872</b>	<b>46.8%</b>	<b>1.14%</b>
<b>Milford</b>	<b>6,622</b>	<b>8,685</b>	<b>11,828</b>	<b>13,606</b>	<b>14,558</b>	<b>119.8%</b>	<b>2.34%</b>
<b>New Hampshire</b>	<b>737,681</b>	<b>920,610</b>	<b>1,109,252</b>	<b>1,235,786</b>	<b>1,315,000</b>	<b>76.2%</b>	<b>1.68%</b>
<b>New Ipswich</b>	<b>1,803</b>	<b>2,433</b>	<b>4,017</b>	<b>4,345</b>	<b>4,976</b>	<b>176.0%</b>	<b>3.03%</b>

Source: NH Employment Security Community Profiles & US Census (for NH)
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K.D. Campbell, 2006
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## **JAFFREY'S REGIONAL RESPONSIBILITIES**

### ***Mount Monadnock and the Contoocook River***

Jaffrey is the site of Mount Monadnock and the headwaters of the Contoocook River. By geography, Jaffrey is the protector and steward of those two great resources. The Town of Jaffrey's protection of the beauty of Mount Monadnock and the cleanliness of the waters of the Contoocook River will benefit Jaffrey and 66 other towns in the southwestern, central and eastern regions of New Hampshire and the northeast section of Massachusetts.

Because Jaffrey is at the headwaters of the Contoocook River, the US Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services (DES) require that Jaffrey's sewage be extremely clean. Town officials say, for example, that the level of copper in the treated effluent be 1,000 times cleaner than the EPA standard for copper in drinking water. Jaffrey's only lake, Lake Contoocook, is shared with the adjacent town of Rindge.

### ***Recreation***

Mount Monadnock, said to be the world's most climbed peak, is a National Natural Landmark and the region's largest mountain. The mountain has six major trailheads, with parking at each head, that provide hiking access to the mountain.

Mount Monadnock has year round hiking and camping. All trails are open during the spring, summer and autumn months. During the winter there are sixteen miles of backcountry skiing and hiking at the park headquarters. The park headquarters is the only automobile access open, plowed and maintained during the winter months. There are twenty-eight campsites located at the main entrance of Mount Monadnock; 21 of them are family sites and seven are for groups only. Mount Monadnock's busiest season is middle September through middle October when fall foliage is at its peak.

A natural and cultural resource as valuable as Mount Monadnock requires the volunteer support of local citizens from the surrounding communities, in addition to the park rangers based at the mountain's State Park, to ensure the mountain's trails and terrain are safe for travelers and protected from the impact of frequent use.

Communication among the volunteers and municipal officials of the respective communities, park rangers, and the NH Division of Parks and Recreation, will help to ensure that the mountain continues to serve as a clean, safe recreational resource for local residents as well as prospective tourists who may also impact the region's economy.

### ***Regional Trail Network and Class VI Roads***

In 1870 the Monadnock Rail Line was built through the center of Jaffrey. The line was used for passenger and freight. The Monadnock line follows Route 202 from Winchendon, MA to Peterborough, NH where it met the Peterborough and Hillsborough Railroad. After completion the line was leased by the Boston, Barre and Gardner Railroad in 1874, the lease transferred to the Cheshire Railroad in 1880, to the Fitchburg Railroad in 1892 and finally, the line was purchased by the Boston and Maine Railroad in 1900.

The Monadnock line has been abandoned since the 1970's, and has been purchased by the State of New Hampshire. Today it is managed by the NH Department of Revenue and Economic Development. This rail line, like so many others in New Hampshire, is now being used as a multi-use recreational trail for horseback riding, snowmobiling, mountain biking, hiking, cross-country skiing, and other forms of recreation.

The southwest region of New Hampshire is fortunate in that there are several abandoned railroad lines throughout the region, which are slowly being converted into multi-use recreational trails. There are six lines right now that are either completely or partially purchased for such use. Each line that was purchased was paid for with federal transportation money in order to keep the rail lines protected. The NH Department of Transportation purchased the land, and turned over management of the corridors to the Department of Resources and Economic Development. The Jaffrey Rails to Trails begins at the Rindge line and extends to the Monadnock Plaza.

Jaffrey has over 10 miles of Class VI roads. Many of them are used extensively for recreational purposes and crisscross through the Rural and Mountain zones into neighboring towns, often providing unofficial alternatives and adjuncts to maintained trails.

## **ECONOMIC GROWTH, TRANSPORTATION AND COMMUNICATIONS**

The re-creation of a thriving downtown is well underway and will continue, and this development will bring new revenues into the town. The use of tax increment financing (TIF) in Downtown Jaffrey and the Stone Arch Bridge Industrial Area has bolstered economic growth and will continue to do so. Encouragement of industrial growth, when appropriate, will add to Jaffrey's local job base and help make it possible for residents to work in town.

We must assume that Jaffrey residents will travel to Peterborough, Rindge, Keene, Nashua and even Boston for work as well as for much of their retail business. What Jaffrey will offer to the region's residents and seasonal visitors is what has brought many of us here in the first place: a rural and small town atmosphere where "social capital" is high; and lovely views, pristine lakes, rivers and ponds, and well-kept trails.

### ***Air Travel and Jaffrey's Airport***

The airport is an asset for the town, particularly as a magnet for business owners or managers who want to live in this area and locate their company near their home.

### ***Door-to-Door Transportation***

Door-to-door transportation service is available in Jaffrey. Peterborough Taxi (924-3145) will arrange multiple-person round-trip shopping travel from Jaffrey to Rindge supermarkets for a total fare ranging from \$30 to \$40 plus tip.

### ***Bus Service***

There is no bus or train service to Jaffrey. The nearest bus station is in Keene. There is no bus service from Keene to New Hampshire's principal cities, Manchester and Concord.

### ***Bus to New York, Montreal, Other Points***

Vermont Transit ([vermonttransit.com](http://vermonttransit.com)) and other bus lines have service to Montreal, New York, and via various routes to cities in New Hampshire, Massachusetts, Maine, Vermont, Rhode Island, Connecticut and New York State. From Keene to New York City is 5-1/2 hours; from Keene to Montreal is 6 hours and 40 minutes.

### ***Train Service***

The Massachusetts Bay Transportation Authority

([http://www.mbta.com/traveling\\_T/schedules\\_commuter\\_linedetail.asp?line=fitchburg](http://www.mbta.com/traveling_T/schedules_commuter_linedetail.asp?line=fitchburg)) offers train service from Fitchburg, about 30 miles from Jaffrey, to Cambridge, MA (Porter Square) and Boston (North Station). There are 13 in-bound trains, running from 5:45 am to 10:25 pm, and 12 outbound trains from Boston to Fitchburg, leaving North Station between 7:27 a.m. to a midnight train (12:10 a.m.). The 50-mile trip to Boston takes one hour and 18 minutes to one hour and 32 minutes and costs \$6 one way (12¢ a mile) or \$198 for an unlimited monthly pass (which saves money if you make more than 16-1/2 round trips in a month).

### **AMTRAK from Bellows Falls to New York and Washington, DC**

Amtrak (amtrak.com): Take a bus from Keene to Bellows Falls, VT and you can catch a 6-1/2 hour Amtrak train trip to New York's Penn Station for \$50 (adult) or \$42.50 (senior citizen: 62 or older), or a 10 hour nine minute trip to Washington DC for \$88 (adult) or \$74.80 (senior citizen). The train leaves Bellows Falls at 11:56 am and arrives in New York at 6:25 pm and in Washington at 10:05 pm.

## **COMMUNICATIONS**

Within the coming decade, with Broadband-Over-Powerline (BPL) service and other innovations becoming a distinct possibility in this country, the town will be called upon to cooperate with our neighbors to ensure that the Monadnock region is in the vanguard of communications capacity.

## **LAND USE**

### ***The Mountain Zone***

"Mount Monadnock is recognized as the natural and cultural focus of our region." The mountain attracts more than 100,000 hikers and climbers per year, and may well be the most-climbed mountain in the world now that Mount Fuji in Japan provides the alternative of driving to its top.

The Mountain Zone was created by the towns of Jaffrey, Dublin, Marlborough and Troy in 1992 and 1993. This district is unique. It is the only state-wide example of cooperation among towns in regional land use planning and zoning. It is known as the Mountain Zone in Jaffrey, the Mountain District or Mountain Zone in Dublin, the Scenic Rural District in Marlborough, and the Mountain District in Troy. The text of the Mountain Zone Overlay District Ordinance states:

Mount Monadnock is an integral part of what makes our area an attractive place to live, to do business, or simply to visit. The Monadnock Advisory Commission is attempting to coordinate the creation of a regional "Mountain Zone" or "Scenic View Zone" that will be contiguous, and relatively consistent, from town to town. The purpose of such a special zone will be to protect and preserve the rural, scenic beauty of Mount Monadnock and its associated highlands, including Gap Mountain and Little Monadnock. . .

The Southwest Region Planning Commission recommends continued communication among the respective municipal boards and committees to ensure thoughtful development occurring within the municipal Mountain Zone in Jaffrey. It is important to forge strong lines of communication with the Towns of Troy, Marlborough and Dublin to assure that scale and types of development conform to the overarching intent of mountain zones crafted by the Towns. Jaffrey currently has codified language to encourage open space and village plan subdivisions.

RSA 36:55 defines development which may potentially impact on a regional scale. Town of Jaffrey should forge collaborative partnerships with neighboring towns to establish a regional perspective with concern that local land use decisions could impose impacts on other towns within the region. This collaborative relationship can address ways to appropriately mitigate impacts created by land use decisions.

### ***The Southwest Region***

The landscape of the Southwest Region, a 36-town area in Cheshire, western Hillsborough, and Sullivan counties, is mostly forested with rural and suburban residential development dispersed between village centers. More than 98,000 people lived in 42,066 households in the 1,031-square-mile Region of 36 towns in 2000. Town populations ranged from 22,563 in Keene to 201 in Windsor; with the regional average being 2,171 excluding Keene. Population density region-wide has grown from 64 persons per square mile in 1970 to 95 persons per square mile in 2000. For comparison, Hillsborough County's population density in 2000 was 422 persons per square mile, while Cheshire and Sullivan County was 100 and 73 respectively.

The Region's natural and historic rural landscape is prized by residents and considered an asset to be guarded and managed. About 15% of the Region's land area is encumbered against development through deed restrictions, conservation easements and public ownership for protection - including Mount Monadnock and New Hampshire's largest State Park, 13,000-acre Pisgah State Park. There is a strong ethic in the Southwest Region for environmental protection and preservation of the visual community character. The Southwest Region has recently experienced increased pressures to exercise public or private control over the rates and kinds of growth in the Region.

Historic development patterns in the Ashuelot and Contoocook river valleys (separated by the Monadnock Highlands), create a socio-economic geography of two sub-regions: one dominated by Keene as an employment, commercial, and population center at the intersection of NH routes 9, 10, 12, and 101, and the other being a more linear configuration of Contoocook Valley population centers of Rindge, Jaffrey, and Peterborough on the US 202 corridor.

The Region's commerce and employment is dominated by light manufacturing, business and service industries. While seven businesses employ more than 500 workers (1,196 maximum), few of the approximately 4,400 businesses in the Region employ more than 50.<sup>1</sup> Tourism, retail and resource extraction are also important sectors of the economy. There are about 40,000 workers employed in the Region. Almost half of these employees work in Keene (18,000+), 4,700 in Peterborough, 2,700 in Jaffrey, and the average number of jobs in the remaining towns is about 300 in each. The Region has recently experienced two periods of rapid growth: in the early 1970's and again in the late 1980's. Both episodes brought substantial increases in population, commerce and demand for housing and public services.

While a strong sense of local identity defined by town boundaries prevails, there is great variety in the "personal geography" of residents. That is, the map people carry in their minds determined by where they work and shop, where they have social connections, and where they spend leisure time. The Region is as connected with Vermont and Massachusetts, socio-economically, as it is with the rest of New Hampshire. And the Region's population is as highly mobile as any in the U.S. Most residents work and shop outside their towns of residence. Sixty-four percent of the Region's households owned two or more cars in 2000.

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<sup>1</sup> The total number of businesses is difficult to specify due to the absence of a definitive centralized inventory and the dynamic nature of business starts, failures and changes. The figure used is based on a 1998 Dun and Bradstreet Business Inventory.



Southwest Region residents travel for an average of 27 minutes one way for work each day with most (79%) driving alone. Nationwide, the average commute time is 25.5 minutes with a 76% drive alone rate.

The Region's residents and visitors have access to interstate highways and major airports. Interstates 89, 91 and 93 can be reached from most parts of the Region within an hour. Three international airports are also within convenient driving range: Manchester-Boston Regional Airport: 55 miles from the center of the Region; Logan International Airport (Boston): 70 miles; and Bradley International Airport (Hartford): 95 miles.

The Southwest Region is many things: natural beauty, historic villages, Yankee tradition, good jobs, a strong economy, and, perhaps most importantly, a community of capable residents. All of these things that residents enjoy and take pride in are, in part, products of change. While residents have many different visions and hopes for the future, there seems to be consensus that protecting the good things we have and improving our community are priorities.

The development of forests and fields along town and state roads may be the single most common concern among residents and local governments in our region today.

The Monadnock Region's lower cost of living, economic vitality, scenic beauty, access to outdoors, and appeal of small town life will continue to attract new residents and drive the development of new homes and commercial sites. Managing development to create opportunities for positive change, while protecting and mitigating loss, is a principal challenge for the entire Region today. To adequately prepare for continued development it is important to understand that the Southwest Region is on the edge of very powerful engine of change to the south and east – powerful in terms of numbers, number of people, dollars, households, commercial floor space, and jobs.

The intersections of state routes 124 and 202 in Jaffrey have regional impact because of congestion. Reconfiguration of this intersection would significantly improve vehicular movement through Downtown Jaffrey.

The Southwest Region Planning Commission (SWRPC) publishes studies and reports to provide a more developed regional perspective for use by municipal governments. Several of the Commission's reports and research, which are available on the SWRPC website ([www.swrpc.org](http://www.swrpc.org)) or by contacting the Commission, are described below:

*Guiding Change, The Southwest Region at the Beginning of the 21<sup>st</sup> Century* (2002)

Guiding Change, The Southwest Region at the Beginning of the 21<sup>st</sup> Century, is the Region's Master Plan. RSA 36:45 requires regional planning commissions to prepare plans for their respective regions ... "taking into account present and future needs with a view toward encouraging the most appropriate use of land, such as agriculture, forestry, industry, commerce, and housing; the facilitation of transportation and communication, the proper and economic location of public utilities and services; the development of adequate recreational areas; the promotion of good civic design; and the wise and efficient expenditure of public funds."

This Plan, prepared by Commission staff and the SWRPC Board of Directors with input from municipal officials and citizens, considers those qualities and attributes which residents thought defined the Southwest Region, and were considered important to preserve. This list includes the physical environment, the historical and cultural richness, a strong economy, and the public spirit of citizens who have worked together for years to preserve these qualities in the Monadnock Region. The Regional Plan will be updated every five years.

*Southwest Region Trends and Conditions* (June 2003)

The *Southwest Region Trends and Conditions* report presents a brief discussion of housing as a community development issue, including an overview of housing related information at the national, state, regional and municipal levels, and an array of data and statistics relevant to housing and prevailing socioeconomic conditions in the Southwest Region.

*Southwest Region Housing Needs Study* (September 2004)

The Southwest Region Housing Needs Study provides a detailed analysis of housing trends and housing cost burden by income level based on US Census data for the Southwest Region, and develops an approach to estimating future housing production needs for the Southwest Region. The report highlights housing needs and trends in the Southwest Region and its counties, as well as statewide totals. The report uses Census data to analyze changes in population, households by tenure, vacancy rates, and housing cost burden for renters and single family homeowners, and estimates the range of and demand for housing production for the 2000-2010 period.

*Southwest Region Natural Resources Inventory* (October 2003)

The Southwest Region Natural Resources Inventory provides a basic analysis of natural resources and landscape fragmentation on a regional scale that can be used “as is” by municipalities as their first edition NRI, or used as a template to be enhanced with original local research and local knowledge. While a set of topographic maps annotated with information by residents about the character of the forests and ponds, movement of wildlife and viewsapes that define their town is a perfectly acceptable starting point for conservation planning, the Planning Commission offers this analysis of available GIS information. It is hoped that this project can provide a common point of departure for the development of municipal NRI’s in the Southwest Region.

*Southwest Region Transportation Plan* (2001 update)

The Regional Transportation Plan presents policy and technical information relevant to local, regional, and state activity of the planning and management of the transportation system. The Plan facilitates a regional approach among local and state decision makers to planning and decisions regarding transportation, land use, and community development.

*Comprehensive Economic Development Strategy for Southwest New Hampshire* (2005)

The purposes of the Comprehensive Economic Development Strategy (CEDS) for Southwest New Hampshire are to promote greater coordination among communities and economic development interests and to establish eligibility for federal assistance through the U.S. Economic Development Administration. The current CEDS was developed through a year-long effort by the CEDS Advisory Committee, with input from interested stakeholders at a series of public meetings and support from experts in such fields as workforce development, vocational training and housing.

**REGIONAL SERVICES**

The Jaffrey community has a number of interdependent relationships with surrounding communities that include education, health care and social services. The following is a list of several services that are either located within the Town of Jaffrey or located elsewhere and used by Jaffrey residents.

***Jaffrey-Peterborough District Court***

Located in Jaffrey the District Court has original jurisdiction over all crimes and offenses committed in the district that involve a fine not exceeding \$1,000, one year in prison, or both.

***Jaffrey-Rindge Cooperative School District***

The cooperative school district oversees Conant High School, Jaffrey-Rindge Middle School and Jaffrey Grade School, all located in Jaffrey, and the Rindge Memorial School located in Rindge.

***Regional Newspapers***

Jaffrey is covered by several newspapers including the Monadnock Ledger-Transcript out of Peterborough, the Monadnock Home Companion out of Keene, and the Keene Sentinel out of Keene.

***Social Services***

There are a number of services available to Jaffrey residents. The Monadnock Community Early Learning Center, a daycare facility is located in Peterborough. Senior services, such as Meals on Wheels and Rural Rides Senior Transportation both service Jaffrey. A homeless shelter is located in Peterborough and plans are underway to build a transitional shelter in Jaffrey through the Shelter from the Storm group based in Jaffrey and Rindge. Food Pantries are located at the United Church of Christ in Jaffrey, the Bread of Life food Pantry in Jaffrey and at The Keene Community Kitchen.

***Medical Services***

Emergency medical services are provided to Jaffrey residents through the Jaffrey-Rindge Memorial Ambulance Service. A visiting nurses program is operated through Home Healthcare, Hospice and Community Services in Keene. Mental Health services are available through Monadnock Family Services with a satellite office in Jaffrey. Cheshire County Medical Center, located in Keene, and Monadnock Community Hospital, located in Peterborough; both provide health care services to residents of Jaffrey.

**REGIONAL RESOURCES**

The following regional and state groups, organizations and agencies are key resources for implementation of the Master Plan:

***Southwest Region Planning Commission***

The Southwest Region Planning Commission (SWRPC) currently serves 36 member-municipalities in Cheshire, western Hillsborough, and Sullivan Counties. SWRPC provides local assistance on a wide range of planning issues to member municipalities through activities including community master planning, site plan review, capital improvement planning, subdivision reviews, ordinance preparation, interpretation of state and local planning requirements, grant administration, cartographic support, and geographic information system (GIS) applications. The agency has a diverse work program made up of six major program areas: Local Planning Assistance, Natural Resources Planning, Community and Economic Development, Transportation Planning, Hazard Mitigation Planning, and Regional and Geographic Information Systems.

***Monadnock Conservancy***

The Monadnock Conservancy is a regional non-profit land trust that assists land owners and municipalities with protecting land through easement, donation or purchase of land. Preservation efforts may include farmland; productive forest; open space; recreational trails; water supply; wildlife corridors; scenic ridgelines above the City of Keene and the Ashuelot River Valley; floodplain, aquifer and wetlands along the Contoocook River; and, scenic forests along the Wapack Trail and the Monadnock-Sunapee Greenway.

***Southwestern Community Services***

Southwestern Community Services, Inc. (SCS) is one of six community action agencies throughout New Hampshire, and part of the larger network of 70 agencies in New England and nearly 900 agencies nationwide. SCS advocates for and assists citizens in need through a variety of program areas including Head Start, fuel assistance, developmental services, economic development, elderly services, weatherization, homeless services, housing rehabilitation, affordable housing, health and nutrition, and workforce development.

***Ashuelot River Local Advisory Committee***

The Ashuelot River Local Advisory Committee (LAC) is one of six LAC's in Southwestern New Hampshire convened by the Rivers Management and Protection Program of the NH Department of Environmental Services. The main responsibilities of this citizen advisory committee is to develop and implement a local river corridor management plan and advise local, state, and federal governing bodies and agencies of activities which may affect the water quality or flow of the protected river or segment. The DES offers the committee technical assistance in developing and implementing the management plan.

***Monadnock Economic Development Corporation***

Monadnock Economic Development Corporation (MEDC) is one of 15 Non-Profit Regional Economic Development Corporations located throughout New Hampshire. MEDC is a private, not-for-profit regional development organization committed to the creation of jobs and the broadening of the tax base for the Southwest corner of New Hampshire. The Board of Directors and staff of MEDC concentrate their efforts on business retention, relocation, expansion, and recruitment projects, as well as downtown revitalization and rehabilitation projects. In addition to its revolving loan fund, its USDA Rural Development Intermediary Re-lending Program and its network of financial institutions, MEDC has access to state and federal funds earmarked for economic development.

***NH Office of Energy and Planning***

The NH Office of Energy and Planning (NH OEP), formerly known as the Office of State Planning, is based in Concord and is legislatively required to plan for the orderly development of the State and the wise management of the State's resources. NH OEP compiles, analyzes, and disseminates data, information, and research services to advance the welfare of the State; encourages and assists with planning, growth management, and development activities of cities and towns; administers select Federal and State grant-in-aid programs; and, participates and advises in matters of land use planning regarding lake and river management programs. NH OEP typically does most of its work with communities through the regional planning commissions.

***NH Department of Resources and Economic Development***

The Department of Resources and Economic Development (NH DRED) consists of four divisions: Forest and Lands, Parks and Recreation, Travel and Tourism Development, and Economic Development. The Division of Forests and Lands protects and promotes the values provided by trees, forests and natural resources (and includes the Natural Heritage Bureau) while the division of Parks and Recreation aims to protect historic and natural resources. Promoting New Hampshire as a travel destination is the mission of Travel and Tourism Development Division. Similarly, the Economic Development Division promotes businesses and the expansion of existing businesses.

***NH Department of Environmental Services***

The goals of the NH Department of Environmental Services (NH DES) are to protect and promote wise management of the State's environment. The Department's responsibilities include ensuring high levels of water quality for water supplies, regulating the emissions of air pollutants, fostering the proper management of municipal and industrial waste, and managing water resources for future generations.

***U.S. Environmental Protection Agency, Region I***

The goal of the Environmental Protection Agency Region I (New England) is to protect human health and safeguard the natural environment where people live, learn, and work in the six New England states: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont. One way to help accomplish this goal is to ensure that communities have access to accurate information sufficient to effectively participate in managing human health and environmental risks. This federal agency is a resource for information on environmental regulation, resource protection, and human health protection.

***NH Municipal Association of the NH Local Government Center***

The New Hampshire Municipal Association was established in 1941 to serve member cities and towns. NHMA has evolved into a service and action arm for New Hampshire local governments. The Association prides itself on its ability to meet the ever-changing educational and training needs of municipal officials and employees, as well as the flexibility to develop new programs designed to meet the needs of local governments. Today, NHMA represents 233 of the 234 Granite State Communities and offers legal and technical assistance, legislative representation, training, workshops, and personnel services.

## POPULATION AND HOUSING

### INTRODUCTION

Jaffrey's population and housing stock characterize it as a medium sized small town, not a city, although it has a fairly densely populated downtown. Repeatedly town residents state their desire to have Jaffrey remain a small town, maintain its rural character and protect those things it holds sacred (mountains, lakes, streams, water supply, viewsheds). The Community Survey results reaffirmed these feelings with approximately 2/3 of the respondents holding these values among the top 5 they wished to protect:

**Small town** feeling can be maintained through continuance of the historic 1%-2% growth rate. The sense of community relies on keeping the population density within the town hub, developing a friendly village, and nurturing a sense of connectivity. Priorities are the provisions for workforce housing, elderly housing, and affordable housing.

**Rural character** is dependent on keeping the higher density within the town hub and limiting housing/development in the Rural Zone. The Community Survey results showed 45% of the respondents do not want water and sewer extended. A sense of community built on social capital helps define the rural character of Jaffrey.

**Preservation of open space** is the third component of Jaffrey's DNA. 2/3 of the Community Survey respondents indicated mountains (esp. Mt. Monadnock), viewsheds, lakes, streams and water supply are among the top 5 priorities they hold dear in Jaffrey.

The purpose of the Population and Housing Section is to assess future needs and requirements for housing in Jaffrey by examining past, present and projected population growth, demographic characteristics and trends, existing residential patterns and sub-regional aspects relative to population and housing. Based upon this statistical information, needs and goals may be identified, and policies recommended, which encourage safe, affordable, and decent housing options for Jaffrey residents. Also informed future decisions can be made about various elements of the town's infrastructure, so that the town's growth will be balanced, sustainable and a benefit to all of its residents.

This chapter addresses population projections and housing challenges and opportunities that may well confront Jaffrey through the year 2020. The analysis relies on two primary sources: the US Census Bureau and the New Hampshire Office of Energy and Planning (OEP).

The value of an analysis of this chapter is an aid in planning for the impact of demographic and population changes. An examination of the past, current and potential population and housing trends may serve to foster new approaches to and solutions for managing the growth of the town of Jaffrey not only in a responsible, practical, efficient way but also in new innovative ways that would make Jaffrey a leader in the sub-region.

### POPULATION ANALYSIS

#### *Past and Current Growth Trends*

Beginning with a population of 2,485 in 1930, the Town grew to 5,780 people in 2005, an overall growth of 133%, or an average of 1.77% per year. The years 1986 and 1988 saw a large growth of 15% and

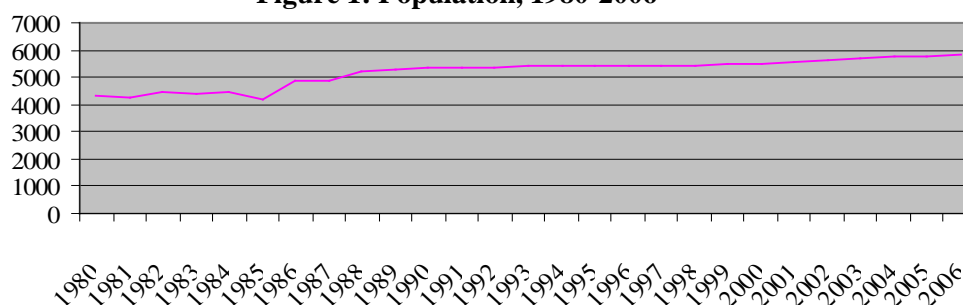
7.7%, respectively. Growth from 1990 to 2005 has been in the range of 0.5% per year.

**Table 3: Population, 1980-2006**

Year	Pop.	% change	Year	Pop.	% change	Year	Pop.	% change
1980	4,349		1990	5,361	1.48%	2000	5,476	0.15%
1981	4,280	-1.59%	1991	5,336	-0.47%	2001	5,557	1.48%
1982	4,427	3.43%	1992	5,368	0.60%	2002	5,602	0.81%
1983	4,414	-0.29%	1993	5,405	0.69%	2003	5,670	1.21%
1984	4,491	1.74%	1994	5,423	0.33%	2004	5,733	1.11%
1985	4,210	-6.26%	1995	5,438	0.28%	2005	5,780	0.82%
1986	4,845	15.08%	1996	5,431	-0.13%	2006	5,830	0.87%
1987	4,872	0.56%	1997	5,447	0.29%			
1988	5,247	7.70%	1998	5,434	-0.24%			
1989	5,283	0.69%	1999	5,468	0.63%			

NH Office of Energy and Planning, 2006

**Figure 1: Population, 1980-2006**



**Table 4: Jaffrey Decennial  
Population Trends 1930 – 2005**

Year	Population	Increase in Decade	Avg. Annual % Change
1930	2485	-	-
1940	2879	394	1.5%
1950	2911	32	0.1%
1960	3155	244	0.8%
1970	3353	198	0.6%
1980	4349	996	2.6%
1990	5361	1012	2.1%
2000	5476	115	0.2%
<b>2005</b>	<b>5780</b>	<b>304</b>	<b>1.1%</b>

NH Office of Energy and Planning

The “**Population Trends**” table shows the relatively slow growth from 1930 to 1970 and the very quick growth from 1970 to 1990. After 1990, the recession caused a slowing of growth through 1995 (and on until 2000). From 2000 to 2005, growth has resumed at an average annual rate of 1.05%, rounded up to 1.1% per year. The 1980 Master Plan projected a growth rate at 2% per year. This level of growth was met in the 1980s but dropped significantly in the 1990s. The OEP statistics presented above are much less than the 2% per year goal set in 1980.

### ***Population Growth Factors***

Population growth is subject to many factors such as:

- **New Industry** – A new, large-scale commercial or industrial development could have significant impacts on population
- **In-migration** – The high cost of housing in neighboring urban areas sends many people to surrounding communities to look for lower cost housing. Jaffrey is impacted by the high cost of housing in Manchester, Nashua, and Keene.
- **Economies** – It is difficult to determine how the regional, state, New England, U.S. and world economies will change over the next five to ten years. Changes in the economic climate impact housing and population in geographic regions for a myriad of reasons, differing from region to region. Maintaining a strong local economy based on community assets will help mitigate impacts on the town created outside of Jaffrey.
- **Fuel costs** – The cost of the fuel for motor vehicles and heating homes will continue to impact housing costs as long trips and large houses are costly to maintain. Increasing or decreasing fuel costs would impact population growth.

Given the undetermined growth factors such as those above, it is reasonable to assume that there could be growth spurts such as those experienced in the 1970's and 1980's. Therefore, it seems reasonable to plan for an average growth rate of 1%, but to expect growth spurts of 2%.

### ***Population Density and Distribution***

Population density in Jaffrey has increased along with the Town's population growth. Density is expressed in terms of people per square mile and is determined by dividing the population (at any given time) by the area of the Town. The US Census density of the town is based on 38.4 square miles of land after subtracting the area of rivers, lakes and ponds of more than 40 acres. In 1970 the population density was 82 people per square mile; by 1980 the density had risen to 107 people per square mile; and in 1990 the figure was 140 people per square mile — a 70% increase in density over a 20-year period. By 2004, the Jaffrey population density was 149 people per square mile. By comparison, New Hampshire was at 145, Rindge at 166, Peterborough at 160, New Ipswich at 152, and Keene at 620.

A sizable portion of Jaffrey's population is concentrated in a half-mile radius from the town center. The remainder of the population is distributed along the numerous roads that access the rural areas of the Town. The area of the one-mile diameter circle around the town center is slightly less than a square mile (0.78 square mile to be exact) and according to the 1990 Census, the population density within the town center (identified in the Census as a "Census Designated Place") was 1,023.2 people per square mile, meaning that 19% of the total population (5,361) resided in less than two percent of the land area. These data become important in deciding where to place the town's infrastructure, esp. water and sewer.

The 2000 Census reported that 54.1% of the population (2,963 people) lived in "Urban Clusters" and 45.9% (2,513) were classified as "rural population." Of the approximately 2,350 total housing units, 58% were classified as "urban housing units" and 42% were classified as rural housing units. However, Jaffrey is not considered an "urbanized area" or a city. In 1990, Jaffrey had the highest population density of all the towns in the region that have an identified Census Designated Place — those being Hinsdale, Jaffrey, Marlborough, Swanzey, and Winchester. Nevertheless, Jaffrey has not yet become a city, demographically speaking, where population densities are much higher. Jaffrey could increase the density of its hub or "urban cluster" and still maintain its small town character. (See Map: Population Density)



## PROFILE OF POPULATION

### *Age Characteristics*

The Table 5 below, “Age Structure of Jaffrey Population, 1970-2000 and Population Density,” shows that the total population increase since 1970 -2000 is 63.3% while the various age groups show (0-17) 36.8%; (18-64) 72.1% and (65+) 88%. According to the figures below, the percentage of the total population accounted for by each age group has not changed appreciably since 1980. The majority of Jaffrey’s population remains in the 18-64 age group. However, the largest percentage increase (88%) in numbers is in the 65+ group.

**Table 5: Age Structure of Jaffrey Population, 1970-2000 and Population Density**

Year	Pop.	Age 0-17	%	Age 18-64	%	Age 65+	%	Pop. Per sq. mi. (38.4)
1970	3353	1041	31%	1855	55%	457	14%	87
1980	4349	1180	27%	2476	57%	693	16%	113
1990	5361	1410	26%	3110	58%	841	16%	140
2000	5476	1424	26%	3193	58%	859	16%	143
Growth 1970-2000	63.3%	36.8%		72.1%		88.0%		

Source: NH OEP

### *Educational Attainment*

The following tables present the available data for Jaffrey’s educational level, comparing data from 1970 through 2000 information and a comparison with neighboring towns.

**Table 6: Educational Attainment in Jaffrey**

	1970	%	1980	%	1990	%	2000	%
Did Not Finish High School	794	41%	803	29%	654	23%	601	16%
Finished High School Only	773	40%	1,062	39%	1,174	42%	1,330	36%
Had 1-3 Years of College	137	7%	301	11%	276	10%	865	24%
Had 4+ Years of College	252	13%	586	21%	665	24%	884	24%

**Table 7: Subregional Educational Attainment as a % of Population as of 2000**

	Population	High School (includes equivalency)	Some College/ Associates degree	Bachelor's degree	Master's, professional or doctorate degree
Dublin	1476	21.8	24.7	26.7	17.9
Fitzwilliam	2141	35.2	27.5	15.9	8.2
<b>JAFFREY</b>	<b>5476</b>	<b>36.1</b>	<b>23.5</b>	<b>16.7</b>	<b>7.3</b>
Marlboro	2009	36.8	23.7	16.7	9.3
N Ipswich	4289	35.2	28.7	15.2	6.9
Peterborough	5883	22	30.2	23.2	18.1
Rindge	5451	34.5	30.1	16.4	8.6
Sharon	360	19.6	27.8	26.9	18.8
Temple	1476	29.3	31	22.2	10.7
Troy	1962	43	22.7	11	4.7
NH		30.1	28.7	18.7	10
USA		28.6	27.4	15.5	8.9

A significant increase in the educational level of the Jaffrey population has occurred since 1970. In 2000, 84% of the population had at least a high school education and 48% had some college, compared to 1970, when 59% had at least a high school education and 20% had some college. Despite the dramatic increase in educational levels, Jaffrey is just competitive with the region and state.

### ***Employment***

The 2000 US Census said the Jaffrey labor force numbered 2,882, of which 1,367 (47.4%) were women and 1,515 were men. The unemployed (2.7%) included only 79 persons, 51 men and 28 women. The number of married couples who both worked was 797 (1,594 people); 200 married couples had only one spouse employed. The following table represents employment trends in Jaffrey since 1970.

**Table 8: Employment Trends, 1970-2000**

	Total Population	Labor Force	Total # Employed ( % of total population)	Total # of Men Employed	Total # of Women Employed	Total # Unemployed (% of labor force)	Total # of Men Unemployed	Total # of Women Unemployed
<b>1970</b>	3353	1549	1517(45%)	892	625	32(2.1%)	0	32
<b>1980</b>	4349	2192	2162(50%)	1144	1018	30(1.4%)	12	18
<b>1990</b>	5361	2897	2709(50.5%)	1439	1433	163(5.6%)	118	45
<b>2000</b>	5476	2882	2803(51.2%)	1515	1367	79(2.7%)	51	28
<b>% Change</b>	63%	86%	90% (6.2%)	70%	119%	147% (.6%)	51%	14%

As a percent of population, the total number of employed residents has increased by 6.2%. Women entered the workforce in significant numbers between 1970 and 1980, nearly equaling the number of men in the workforce in 1990. There was a significant increase in the total number of unemployed in 1990; however, unemployment rates have returned to levels similar to those of 1970.

***Work by Occupation***

Of the 2,882 employed persons in the civilian labor force in 2000, 909 (32%) were in management, professional and related occupations; 629 (22%) were in sales and office occupations; 589 (21%) were in production, transportation and material moving occupations; 355 (13%) were in service occupations; 302 (11%) were in construction, extraction and maintenance occupations; and 19 (0.7%) were in Farming, Fishing and Forestry occupations. Since 1970 Jaffrey residents have shifted to a higher percentage of workers in management, professional and related occupations while there has been an overall loss in production, transportation and material moving occupations as well as construction, extraction and maintenance occupations.

***Work by Industry***

The 2,882 employed persons in 2000 were principally employed in manufacturing (723 people, 25.8% of the work force); retail trade (406, 14.5%); education (262, 9.3%); health care & social assistance, 240 (8.6%), and 1,172 (41.8%) were employed in other industries. Since 1970 there has been a significant decline in those employed in manufacturing (in 1970 approximately 45% of the labor force was employed in manufacturing) and an increase in those employed in “other industries” mainly professional jobs (in 1970 only 30% were employed in other industries).

***Persons in Poverty***

The percent of persons in poverty (at or below the poverty level) rose from 4% in 1990 to 7.6% in 2000. This level is comparable to Cheshire County, but slightly worse than the state. Due to variances in reporting (families vs. individuals), the data bear watching.

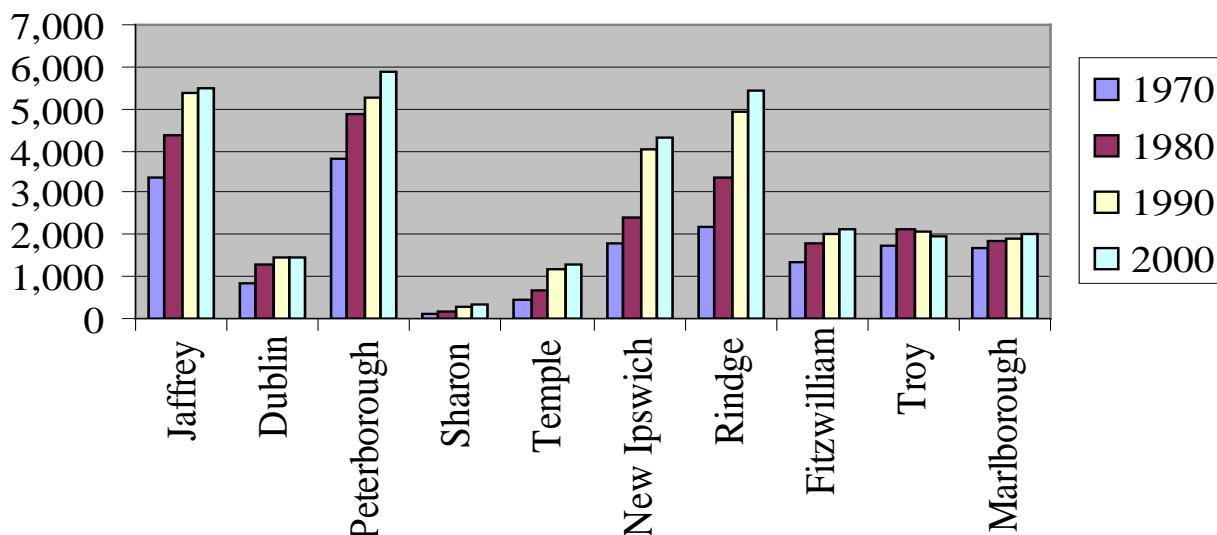
**COMPARISON OF JAFFREY’S POPULATION WITH THAT OF ITS SURROUNDING SUB-REGION**

Since Jaffrey is not an island unto itself but part of a larger region, an examination of population characteristics is not complete without a comparison of Jaffrey’s growth with that of its immediate neighbors. Statistics about percent of growth can be misleading if the towns involved in the comparison vary too greatly in population. For the purpose of this discussion, such a comparison can be used, albeit with caution, since the towns are all somewhat similar in size, with the exceptions of Sharon and Temple.

As the “**Sub-regional Population: 1970-1995 graphs**” below illustrate, Jaffrey’s growth over the 25-year period has been fairly consistent with the sub-regional average for all four time periods: 1970, 1980, 1990 and 2000. Temple and Sharon have experienced the highest percentage increases over the entire period; however, as mentioned earlier, these figures could be misleading as they are based on a much smaller population to begin with. These two towns continue to represent the smallest percentage of sub-regional population.

**Figure 2: Population of Towns within the Sub-Region, 1970-2000**

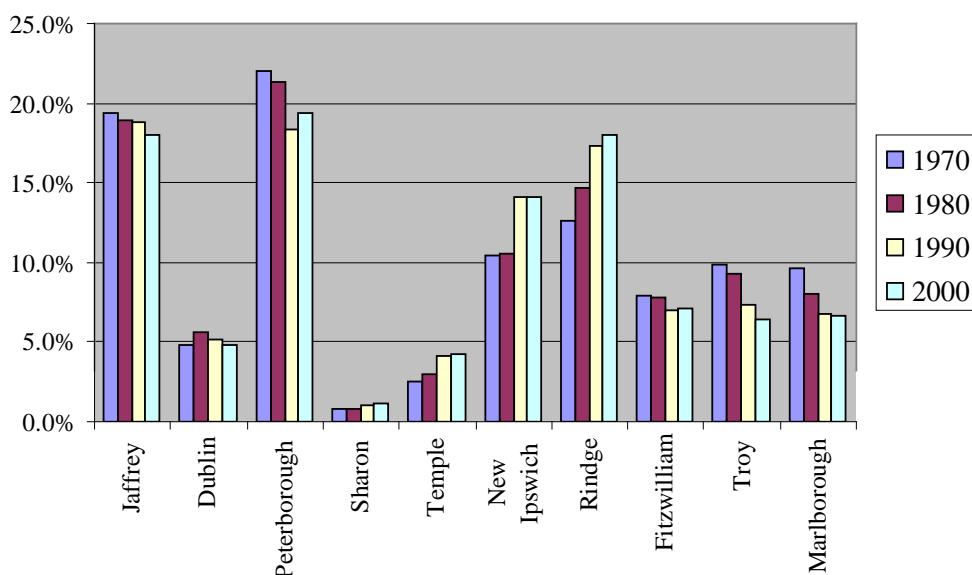
(source: U.S. Census)



Within this sub-region, Jaffrey ranked second in absolute numbers of people after Peterborough, up to the year 1990, at which point Jaffrey surpassed Peterborough by 122 people. Two towns in the sub-region lost population: From 1980 to 1990, Troy's population declined by 0.2 percent (34 people); and between 1990 and 1994, Rindge's population decreased by 1.3% (256 people). By 2004, Rindge had 6,137, Peterborough had 6,060, Jaffrey had 5,733, and New Hampshire had 1,299,500. Figure 10 displays the trend in the percentage of sub-regional population by Town from 1970-2000.

**Figure 3: Population as a Percentage of Sub-Regional Population, 1970-2000**

(source: U.S. Census)



The Census figures further illustrate that Jaffrey has accounted for a fairly level percentage of the sub-regional population since 1970 – between 18 and 19 percent. Both New Ipswich and Rindge have increased their percent of population within the sub-region by significant amounts, while Troy has decreased its percentage of the sub-regional population.

## HOUSING ANALYSIS

### *Housing Trends*

The U.S. Census provides information regarding housing trends, types, and number of units built. The 2000 Census data states that there were 2,120 occupied households and 232 “vacant households” including seasonal residences (a total of 2,352). Using this data, it is possible to estimate the number of occupied households as of 2005 at approximately 2,293 (2,120 “occupied households”) + 173 (total building permits from 2000 to 2005) = 2,293 “occupied households” plus 232 vacant households, for a total of 2,525 housing units.

### *Housing Inventory and Types of Housing Stock*

The housing stock in Jaffrey is a collection of many different styles and ages of construction. For official tracking purposes, the present housing stock is broken down by type: single-family, multifamily, and manufactured housing. The NH Office of Energy and Planning use definitions developed by the US Census, but sometimes combines categories, as follows:

•**Single-family:** A one-unit structure detached from any other structure. This also includes some mobile homes or trailers to which one or more permanent rooms have been added.

•**Multifamily:** Any structure containing two or more housing units (this includes the Census classification of “Single-family Attached” and “Duplex” (any structure containing two units).

•**Manufactured Housing:** Both occupied and vacant mobile homes to which no permanent rooms have been added. The OSP report includes the Census classification of “Other” – units used as living quarters that do not fit any of the previous categories (*e.g.*, houseboats, campers, vans, *etc.*).

Between 1980 and 1990, Jaffrey’s housing stock expanded by 37% — from 1,770 units to 2,426 units. These numbers represent all housing types. Given the potential for miscalculations as definitions change, *etc.*, it is wise to view these numbers merely as indicative of an overall trend and not as an absolute number. The percentages for each type of housing have remained relatively stable one to another in the 20-year period.

**Table 9: Housing Stock in Jaffrey by Type**

	1980 Qty	% of stock	1990 Qty	% of stock	1995 Qty	% of stock	2000 Qty	% of stock	% Change of Units, 1980- 2000
<b>Single Family</b>	1,043	59%	1,539	63%	1,578	64%	1,555	66%	49%
<b>Multi-Family</b>	625	36%	721	30%	707	29%	633	27%	1%
<b>Manufact. Housing</b>	92	5%	166	7%	169	7%	164	7%	78%
<b>Total</b>	1,760		2,426		2,454		2,352		34%

NH OEP and US Census, 2000

Jaffrey had 2,120 occupied housing units and 232 units that were deemed vacant in 2000. Vacant units encompass “seasonal” units, which by Census definition are not available for long-term rental or owner occupancy. That is, they are not considered available in the housing market. Therefore, if these units were removed from the category of vacant units, the vacancy rate in Jaffrey would be seven (7) percent. According to the Census Bureau, of the 2,120 occupied housing units in 2000, 1,422 are owner occupied, while renter occupied units comprised 698 of the total.

Jaffrey’s housing stock is typically single-family dominated, although the town as of 1997 had the second largest number of multifamily units, as well as the largest number of manufactured homes, of all towns in the sub-region.

**Table 10: 1990 & 2000 Regional Housing Comparisons by Type**

	1990				2000				1990-2000
TOWN	SF	MF	MH	TOTAL	SF	MF	MH	TOTAL	% CHG
Dublin	549	68	34	651	619	45	22	686	5.3 %
Fitzwilliam	833	79	119	1,031	865	93	116	1,074	4.1 %
<b>JAFFREY</b>	<b>1,539</b>	<b>721</b>	<b>166</b>	<b>2,426</b>	<b>1,525</b>	<b>663</b>	<b>164</b>	<b>2,352</b>	<b>-3 %</b>
Marlboro	538	260	58	856	588	273	35	896	4.6 %
N. Ipswich	1,044	145	137	1,326	1,173	173	103	1,449	9.2 %
Peterborough	1,393	811	38	2,242	1,533	958	18	2,509	11.9 %
Rindge	1,493	160	128	1,781	1,630	151	82	1,863	4.6 %
Sharon	121	5	2	128	157	3	0	160	25 %
Temple	369	33	27	429	406	31	27	464	8.1 %
Troy	497	244	126	867	509	169	100	778	-10.2 %
Sub-region:	8,376	2,526	835	11,737	9,005	2,559	667	12,231	4.2 %

NH Office of Energy and Planning

In the “**Housing Starts for Jaffrey and sub-region 2004**” table below, housing start figures include single family homes, multi-family homes and manufactured housing. The proportions of housing types were essentially the same in 1980, although the actual percentages have shifted slightly (the percentage of single-family homes has increased, as has manufactured housing, while the percentage of multifamily units has decreased). Jaffrey, like other towns in the region and sub-region, has more single-family houses than either multifamily or manufactured housing; nevertheless, multifamily units comprise nearly one-third of the town’s housing stock.

**Table 11: Housing Starts for Jaffrey and Selected Sub-Region Towns, 2004**

	Total 2000 housing	Total 2004 housing	Total new housing starts	Financial Assistance
Dublin	686	729	43	0
Fitzwilliam	1074	1157	83	0
<b>Jaffrey</b>	<b>2352</b>	<b>2496</b>	<b>144</b>	<b>98</b>
Marlborough	896	944	48	36
Peterborough	2509	2657	148	124
Rindge	1863	2123	260	0
Troy	775	813	38	46

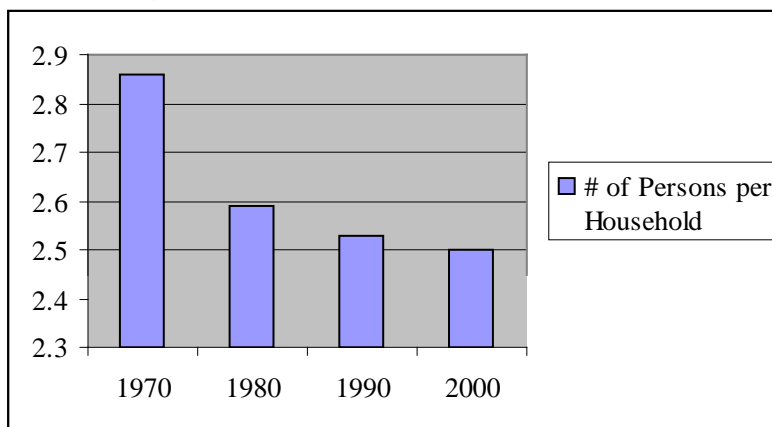
NH Office of Energy and Planning 2005; NH Housing Authority

Note that 68% of the new Jaffrey housing start units are financial assistance units as per the OEP definitions developed by the US Census.

### ***Household Indicators***

A household includes all people living in one housing unit, whether or not they are related. An assessment of the present and future demand for housing in Jaffrey should be based upon household growth, not population growth. Jaffrey's household size has decreased over the past three decades. Smaller household size could be due to families with fewer children, more singles, more retired and/or elderly without children.

**Figure 4: Number of Persons Per Household**



US Census 2000

According to the SWRPC, in 1970, the average Jaffrey household size was 2.86 persons, compared to 2.5 persons in the year 2000. With an average household size of 2.5 in 2000, Jaffrey's household size was slightly less than the average household size of 2.53 for the State of New Hampshire, but more than the average household size of 2.47 persons per household for Cheshire County. The decreasing household size has important implications for analyzing and determining future housing demand. Smaller households mean greater competition for housing resources. However, these households require smaller housing units to meet their needs, which could present opportunities for alternative affordable development techniques and housing types.

### ***Economics of Housing***

#### **Household Income**

The 2000 Census reported a median household income of \$45,033 for the Town of Jaffrey. Jaffrey's median household income is lower than that of the state; however, it is higher than the median income for Cheshire County. Median household income is defined as the mid-point of all the reported incomes. That is, if the reported incomes were sorted by amount, half the number of households had higher incomes and half had lower incomes than the median.

While viewing the incomes of Jaffrey residents, it is important to consider poverty levels. The 1990 income figures indicated that Jaffrey's economic health was quite good, compared to the region as a whole. In 1990, the town ranked 30th out of 35 for "percent of people in poverty," meaning that there were 29 towns out of 35 that had a higher percentage of their population living in poverty; and 26th out of 35 for "per capita income," meaning that there were 25 towns in the region with a lower per capita income than Jaffrey.

Per the following chart the percentage of persons below the poverty level in Jaffrey is higher than the state average, but slightly lower than that of Cheshire County. This is an area that bears monitoring.

**Table 12: Income**

	Jaffrey	Cheshire County	State of NH
Median Household Income	\$45,033	\$42,382	\$49,467
Per Capita Income	\$21,412	\$20,685	\$23,844
Median Family Income	\$48,703	\$51,043	\$57,575
% Persons below Poverty Level	7.8%	8.0%	6.5%
% Families below Poverty Level	3.8%	4.4%	4.3%

US. Census 2000

**Cost of Housing**

The cost of housing has risen significantly, not only in Jaffrey, but also in the state over the last 5 years. However, this is following a decrease in housing values throughout the 1990's. From 2000 to 2005 there was a 58% increase in the value of homes in Jaffrey. Median Rent costs have consistently increased every decade since 1970 regardless of the decrease of housing values during the 1990s.

**Table 13: Median Housing Values, 1970-2000**

	1970	1980	1990	2000
Jaffrey	\$15,193	\$45,300	\$115,600	\$103,900
Cheshire County	\$13,142	\$41,000	\$111,000	\$105,300
New Hampshire	\$14,616	\$48,000	\$129,300	\$133,300

US Census 1970-2000

**Table 14: Median Rent, 1970-2000**

	1970	1980	1990	2000
Jaffrey	\$89	\$207	\$458	\$542
Cheshire County	\$97	\$198	\$449	\$596
New Hampshire	\$97	\$206	\$477	\$646

US Census, 1970-2000

**Affordable Housing**

Affordable housing is gauged by a combination of household income and household size. The Department of Housing and Urban Development definition of "affordable" housing specifies that a cost of no more than 30% of a households' monthly income be devoted towards gross housing costs, which includes utilities. This definition applies to both owners and renters. The SWRPC says there are currently one hundred and twelve (112) affordable housing units available in Jaffrey through subsidy or some other means of cost control. These units are disbursed as follows. In addition financing has recently been approved for 30 new affordable housing units as part of the Jaffrey Mills renovation project.



**Table 15: Affordable Housing Units**

Name	Type	# of units
Gilmore Court	Elderly	28
Jaffrey Housing	Family	44
Village of Jaffrey	Family	36
Section 8 Voucher Units		4
<b>TOTAL</b>		<b>112</b>

Source: NH Housing Finance Authority

Housing Affordability

As noted in the aforementioned Affordable Housing section, there are predominately two components to housing affordability: household income and housing cost. The Tables below, "Percent of Income Spent on Housing," and "Gross Rent as a Percentage of Household Income in 1990," illustrate the costs households pay for housing as a percentage of their monthly income. For 1,029 owner-occupied housing units approximately 23% of households are faced with monthly housing costs of 30% and upward. For the specified 666 rental units, the percentage was slightly higher at 32%. There are approximately 451 households that face housing costs that are considered unaffordable. The income range of these households is not identified.

**Table 16 and 17: Percent of Income Spent on Housing**Selected Monthly **OWNER** Costs as Percentage of Household Income in 1999

PERCENTAGE	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL
Less than 15%	265	28.8 %
15.0 to 19.9 Percent	181	17.6 %
20.0 to 24.9 Percent	180	17.5 %
25.0 to 29.9 Percent	164	15.9 %
30.0 to 34.9 Percent	79	7.7 %
35.0 Percent	160	15.5 %
Not Computed	-	-

Gross **RENT** as a Percentage of Household Income in 1999

PERCENTAGE	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL
Less than 15%	132	19.8 %
15.0 to 19.9 Percent	77	11.6 %
20.0 to 24.9 Percent	136	20.4 %
25.0 to 29.9 Percent	87	13.1 %
30.0 to 34.9 Percent	49	7.4 %
35.0 Percent	163	24.5 %
Not Computed	22	3.3 %

US Census 2000

If a significant number of households spend more than 30 percent of their incomes on housing, it can have negative effects on other sectors of the economy. That is, if limited resources are over-allocated towards housing, it comes at the expense of other economic sectors and a more diversified economy. This relationship between affordable housing and a healthy economy is fundamental to the quality of life in Jaffrey. The projected affordable home for a household earning the median household income of \$45,033

would be approximately \$136,136. This projection does not assume the additional costs of home ownership such as insurance and utilities.

Viewing home affordability in light of the \$213,700 average selling price of a home in Jaffrey in 2004 illustrates the challenges of purchasing a home. The income needed is \$70,685 in 2005, for a \$213,700 house, according to Fannie Mae. About 18% of Jaffrey households in 2000 had incomes of \$75,000 or more. The challenge is to develop housing, which is affordable for the town's workforce and elders on a fixed income.

## **HOUSING OPPORTUNITY**

Housing cost is influenced by a wide variety of market and institutional factors. Some of these can be affected by town governments, but most are the result of larger socio-economic issues that are beyond the reach of local policymaking. It is important for Jaffrey to recognize there are limits to the housing issues that can be addressed within the scope of this Master Plan.

### ***Buildout Analysis***

Jaffrey has 19,388 acres of taxable land and 4,571 acres of "tax exempt & non-taxable" land. Most of the tax exempt & non-taxable land is not buildable (owned by town, state, feds, non-profits, PSNH, etc.). Of the 19,388 acres of taxable land, 311 acres are in conservation easements, 14,645 acres are in current use, 3,828 acres are taxed as residential, and 604 acres are taxed as commercial/industrial.

An informal build-out analysis was conducted in 2001, with assistance from the Conservation Commission. According to this analysis, there was the potential for a substantial number of new residential homes that could be built on "buildable" land. Subsequent to the completion of that analysis, a zoning change increased lot size, decreasing the number of new residential homes that could be built. The current number of homes (2005) is approximately 2,300, not including mobile home parks. In the town's General Business and Industrial zones there is the potential for 10 new businesses/industrial operations. These build-out estimates take into consideration zoning requirements, site limitations such as steep slopes, hydric soils and wetlands and do not include publicly owned or Society for the Protection of NH Forests owned lands.

### ***Zoning Regulations and Land Use Plan***

One regulatory mechanism that can influence housing markets is zoning. Zoning districts can regulate minimum lot requirements and specify permitted and prohibited housing types. The Zoning regulations for housing detailed, in the Land Use Plan, are briefly summarized as follows:

One principal structure per lot is allowed unless specifically authorized elsewhere in the ordinance. Two off-street parking spaces per unit are required except in the Main Street program area defined in LUP Section 5.10.

### **DISTRICTS**

- Rural without Town Water: 3 acre lot with 200' road frontage, 60' front setback, 40' side & rear setbacks.
- Rural with Town Water: 1.5 acre lot with 150' road frontage, 60' front setback, 30' side & rear setbacks.
- Residence A: 1 acre lot with 125' road frontage, and 30' setbacks front, side and rear.

•Residence A with Town Sewer or community septic system within an Open Space Development Plan or Village Plan Alternative: 20,000 sq. ft (0.46 ac) with 125' road frontage and 30' setback front, side & rear.

•Residence B: 1 acre lot with 125' road frontage, and 30' setbacks front, side and rear (allows for two family housing for higher densities).

•Residence B with Town Sewer or community septic system within an Open Space Development Plan or Village Plan Alternative: 20,000 sq. ft (0.46 ac) with 125' road frontage and 30' setback front, side & rear.

Open Space Development Plan regulations award bonus points for increased density based on the provision of open space, buffering the periphery, and landscaping the entrance. Provisions have been added to the ordinance that address accessory apartments in single-family homes.

The Zoning map at the end of the chapter shows the different zones in Jaffrey.

Although there are a number of districts which allow a variety of housing types, consideration can still be given to widening housing opportunities, e.g. multi-use zoning in the downtown areas.

### ***Future Housing Need***

Jaffrey's projected 2005-2020 growth rate of 16% (about 1% per year) to a population of about 6,700 is similar to the projected growth rates of adjacent towns. Population projections and average household size can provide some indication of Jaffrey's future housing needs. According to the population projections, Jaffrey will need 360 additional housing units to accommodate the future housing demand up to the year 2020.

**Table 18: Projected Future Housing Needs to 2025**

Population Increase	Population Increase	Person/ Unit	Additional housing Units	Additional housing Units
			TOTAL	PER YEAR
Projected Growth 2005-2020	Projected Growth	Projected Average	Projected Growth	Projected Growth
16%	900	2.5	360	24

US Census 2000; NH Office of Energy and Planning 2005

### ***Housing Strategies***

Assuring that the housing stock remains sound and affordable is a challenge facing many towns within the Southwest Region. Affordable workforce housing and housing for the elderly seem well suited for downtown/multi-use areas where the infrastructure and town services exist. Similarly, Open Space Development Plans seem well suited for those areas where preservation of open space is a priority.

## **SOCIAL CAPITAL**

### ***Location of People and Housing***

Analysis of population and housing growth statistics and trends for the purpose of devising zoning regulations and planning for the appropriate and adequate town services is a classic approach to town management. Other aspects contributing to the character of a well run and congenial, economically viable place to live have to do with the relationships of people and their buildings to one another and the purposes for which they are in a certain location relative to another place and other people. An analysis of the reasons and purposes people live where they live is critical to developing a vision for the town that is consonant with the attitudes and desires expressed in the community survey and in the town ethos.

### ***Jaffrey Spirit, Pride, and Social Capital***

From the great amount of effort and volunteer time that so many people in the town contribute, and from the number of very active organizations and events they maintain and produce, including the Town Meeting form of government, it is obvious that there is a very large and strong quotient of town spirit and pride.

Jaffrey's pride and social capital may be two of the most important indicators of the town's character. The town's Social Capital encompasses the reasons why people find it desirable to move and live here, and suggests why there is the high quotient of town pride. Social capital may have as much bearing on the town's population and housing as all of the statistical data and projections analyzing it.

### ***Arranging People and their Houses***

The town has incorporated concepts, such as Open Space Development and Village Plan Alternative into its zoning ordinances, especially in "Rural Zones" and "The Mountain Overlay Zone." These concepts or philosophies are incorporated into zoning ordinances for the purpose of preserving acreages of land in and around buildings to maintain the feel of a rural place or small town atmosphere.

There are examples of relationally designed groups of people and housing – the more familiar of which are retirement communities, assisted living facilities and other institutions such as schools and hospitals and now Co-housing. These are innovative ways of arranging people together for the purpose of creating an economy and efficiency of living scale by sharing resources, while at the same time maintaining people's privacy and autonomy. Such concepts could merit another look at the town's zoning provisions and land use policies.

Jaffrey Mill and the Park Theater in downtown Jaffrey have the potential to be other places where the benefits of Social Capital will be a major factor in determining the future of the town and how its population and housing increase in the next ten to fifteen years.

## **RECOMMENDATIONS AND CONCLUSIONS**

### ***Growth Rate of 1%***

The consensus of the 2006 Community Survey, 2006 Master Plan meetings, and Master Plan committees' reports is that the rural character or small town feel of Jaffrey should be maintained. The Population and Housing Committee recommends that the town attempt to maintain a goal of 1% growth rate over the next ten years, or until such time that a new Master Plan is written. Considering the spurts in growth rate in the 1970's and 1980's, expect a maximum 2% growth rate spurt. Jaffrey's growth is expected to be similar to what is projected for other towns in the region.

***Maintaining “Rural Character”***

Manage the growth (1% avg.; 2% max) of the town to meet the expectations of its inhabitants that it remain “Rural in character,” yet also be viable as a community. It’s the people that complete the picture of a town with a sense of community, connectivity, and caring.

***Land Use and Population and Housing***

The Population and Housing Committee has concluded that in order to maintain the rural character of Jaffrey, innovative ways of conceptualizing land use needs to occur. For example, the concept of Co-Housing and more multi-use districts should be taken into consideration when revising zoning regulations and ordinances

***Housing***

- Before any future housing and population growth becomes a reality; the town must determine those areas where the density is to be increased, where land is to be protected from dense development, and develop a strategy to manage the expansion of water and sewer.
- Formalize an understanding of Social Capital from the perspective of relationships between people and housing units. The priority is to reinforce a sense of community, enhance the aesthetics of the town, and maintain a rural feel to the town.
- Ascertain what kind of housing might appeal to the elderly population of Jaffrey. A survey should be conducted to find out such things as: Is there real interest in a kind of housing such as a retirement village? How dependent upon transportation, private or public would people in elder housing be? How important is emergency health care or the availability of assisted living facilities, and what other services are required? How important are shared facilities? Would a restricted community of 55 and older vs. a mixed age grouping of people be more satisfactory? Would co-housing be an appealing alternative?
- Assess the situation of people in Jaffrey who have incomes below the poverty level and determine whether to address this on a town or regional basis.
- Address the priority for affordable workforce housing. The statistics in this report do not provide a basis for concluding that a certain specific amount of low and moderate income housing needs to be built, but the situation bears monitoring.

***Natural Resources***

Projected population growth, and therefore the need for more housing, in Jaffrey and the sub-region will have an impact on the area’s natural resources. There is a balancing act required to protect our natural resources and open space and yet accommodate the inevitable growth of the town.

## JAFFREY ECONOMIC DEVELOPMENT

### EXECUTIVE SUMMARY

The Economic Development Plan represents Jaffrey's commitment to strive toward manageable economic growth. The plan begins with a history and current assessment of where we are now, and concludes with an overview of the policies and objectives that will lead us into the future. The following vision statement was adopted:

Jaffrey should be a business friendly community that promotes economic development by supporting a dynamic, diversified economic base consistent with its small town character.

**Achievement of the following three goals will help us to realize this vision:**

*A contemporary economy in Jaffrey that is developed through business-friendly policies.*

*A dynamic, diversified economy that is based upon the qualities that make Jaffrey special.*

*Economic growth that respects Jaffrey's small town character and rural setting.*

**The following actions are necessary to work towards these goals:**

- The Economic Development Council should work in partnership with the Chamber of Commerce and TEAM Jaffrey to maintain a business-friendly atmosphere and to influence town policy.
- Promote Jaffrey as a place to locate a business.
- Use the synergy of existing businesses to attract similar businesses.
- Work to ensure that the town's retail base offers an adequate cross-section of goods and services to meet the needs of Jaffrey and the surrounding communities.
- The Economic Development Council, Chamber of Commerce, and TEAM Jaffrey need to focus on using available space and identifying potential new space for relocating businesses to Jaffrey.
- Enhance Jaffrey as a tourist destination. Develop synergy between community special events, retail, sports, etc.
- Improve availability of utilities (especially water and wastewater) to the Industrial and Commercial Districts.
- Improve availability of high quality data transmission network (Broadband, DSL).
- Recognize the importance of quality schools in attracting new business.
- Utilize and enhance that which makes our town unique, work to our strengths by focusing on the things that make Jaffrey special.
- Provide a downtown that is a destination: financially healthy, pedestrian friendly, attractive and culturally active.
- Develop a list of needed businesses to make a "destination" and set about recruiting those required new businesses or expansion of existing businesses.
- Promote economic development in the context of protecting our natural resources, e.g. Mt. Monadnock, ponds, lakes, and scenic views, and maintaining our rural character.
- Work with the Economic Development Council, TEAM Jaffrey, and the Chamber of Commerce to create a cohesive downtown that focuses on the Route 202 through-pass/realignment.
- Manage the Town's TIF districts to attract and retain businesses.


### ***Historical Background***

The Town of Jaffrey is located in the Monadnock Region on the eastern border of Cheshire County in Southwestern New Hampshire. A full 20% of Jaffrey's land area consists of Mount Monadnock and its surrounding land base. Incorporated in 1773, Jaffrey began as an agricultural community with a small industrial base that evolved over time. Founded in 1871, the White Brothers Mill manufactured woolen, rayon and denim cloth in the center of what is now downtown Jaffrey. During the early half of the 1900's, other manufacturing operations were started including DD Bean and Sons Match Company, WW Cross tack factory, Bean and Symonds box factory and Annett Forest Products. Jaffrey became more industrialized and commercial activity quickly followed. Access first by stagecoach, and then the railroad that opened in 1871, helped create an active summer tourism business. As the automobile became more popular, residents began to travel outside of Jaffrey to shop at larger malls and stores. This led to a gradual decline in retail business that lasted into the 1990's. Today there are many new businesses that have opened in the downtown area, leaving little space for retail expansion. In keeping with the changing economy, the Jaffrey Mill is in the process of converting to housing units and retail spaces. Industrial zoned areas were formed in 1981 with new industries that began to occupy these areas, offering a diversified industrial base for the community. Major employers today include Millipore, Teleflex, Johnson Abrasives, New England Wood Pellet, Atlas Pyrotechnics, Printegra and DD Bean.

### ***Population & Growth***

During the 1990's, the population of Jaffrey grew more slowly than in surrounding communities. Growth was more in line with other towns during the first five years of this decade, but still lagged that of the State as a whole. Due to a downward correction in the housing market beginning in late 2005, it is likely that residential growth will pause over the next couple of years. It is reasonable to expect that Jaffrey's population will continue to grow at approximately 1% annually through the remainder of the decade. In the 1970's and 1980's, average annual growth was 2.9% and 2.4%, respectively, compared to significantly slower rates over the past 15 years. Thus, it is reasonable to plan for a maximum growth rate of around 2%.

### **Population Growth Rate Comparison**



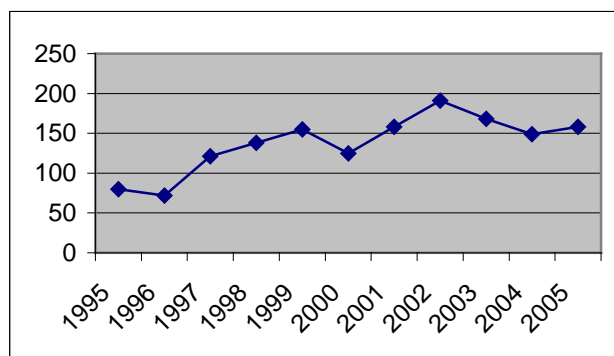
						<b>Annual Growth Rate</b>			
<b>Town</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2004</b>	<b>1970's</b>	<b>1980's</b>	<b>1990's</b>	<b>2000-2004</b>
Jaffrey	3,353	4,349	5,361	5,476	5,733	2.93%	2.35%	0.24%	1.16%
Peterborough	3,807	4,895	5,257	5,896	6,069	2.83%	0.80%	1.28%	0.32%
Rindge	2,175	3,375	4,938	5,475	6,137	5.00%	4.32%	1.16%	2.90%
New Ipswich	1,803	2,433	4,017	4,345	4,976	3.38%	5.72%	0.88%	1.52%
Cheshire Cty	52,364	62,116	70,223	73,993	76,872	1.91%	1.37%	0.58%	0.43%
State of NH	737,681	920,610	1,109,252	1,235,786	1,299,500	2.49%	2.09%	1.21%	0.56%

NH Office of Energy and Planning

Most of the homes being developed on new residential properties in Jaffrey are well beyond the means of regular working people who are employed by our manufacturing facilities and retail establishments. While it is often the case that a growing population leads to a growing labor pool, this is not the case in Jaffrey. The labor pool that exists in town is generally considered to be talented and hard working, but is not considered to be particularly abundant. Finding workers is a challenge for Jaffrey businesses. It is critical that quality, affordable housing be available in our region to support our local economies. In

Jaffrey's case, a considerable amount of workforce housing will be created if the Mill rehabilitation project proceeds in 2006.

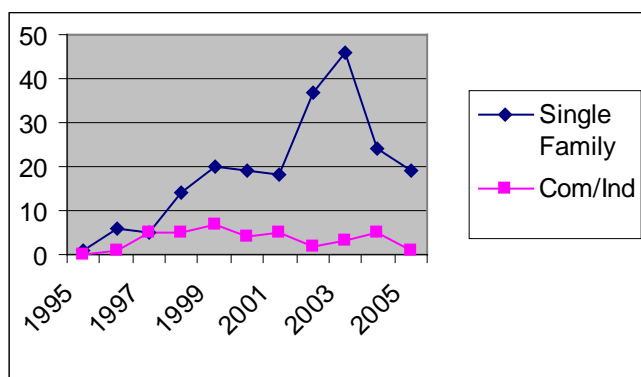
**Total Building Permits Issued  
1995 - 2005**



Source: NH OEP

**Figure 5**

**Single Family & Commercial Permits Issued  
1995 - 2005**



Source: NH OEP

**Figure 6**

The total number of building permits issued by the Town of Jaffrey has consistently remained between 150 – 200 permits annually. In addition to single family and commercial buildings, this total includes additions, barns, remodeling work, sheds, decks, and other structures. This stabilization in commercial and residential property improvements further confirms a very modest increase in population over the past six years and suggests little change in the personal financial status of Jaffrey residents.

Single family homes are being built today at roughly the same rate as the period 1999 to 2001. The spike in permits issued in the years 2002 and 2003 reflect the construction that occurred in the Coburn Woods Development, off of Amos Fortune Road. The development consists of 42 units. Without factoring in Coburn Woods, the number of single-family homes constructed would have been very consistent over the past seven years or so, as illustrated by the chart at left. Nonetheless, multi-family units comprise nearly one-third of the town's housing stock.

The number of business-related building permits has been relatively low, since bottoming out in the mid-1990's. Like many towns in the region, Jaffrey has existing industrial space available for purchase or lease. Fewer building permits are being issued due to this surplus.

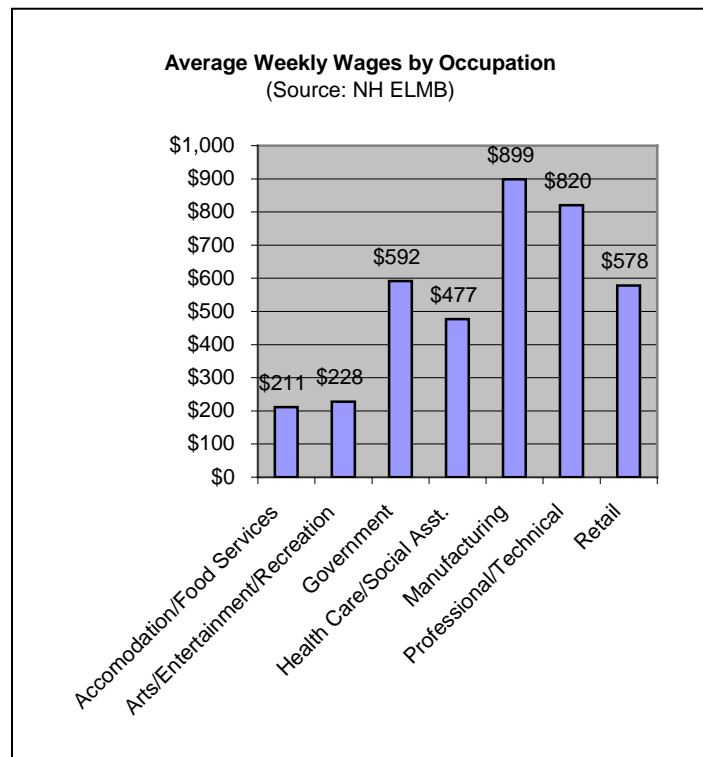


### Employment & Wage Structure

According to 2004 data from the NH Economic & Labor Market Information Bureau (NH ELMB), Jaffrey has a labor force of 2,425 people and an unemployment rate of 4.0 %. The occupation breakdown for this labor force is as follows:

Manufacturing	37.2%
Government (all levels)	16.9%
Retail Trade	11.0%
Accommodation/Food Service	8.7%
Health Care/Social Assistance	6.3%
Arts/Entertainment/Recreation	3.6%
Professional/Technical Services	1.7%
Other	14.6%

**Figure 7**



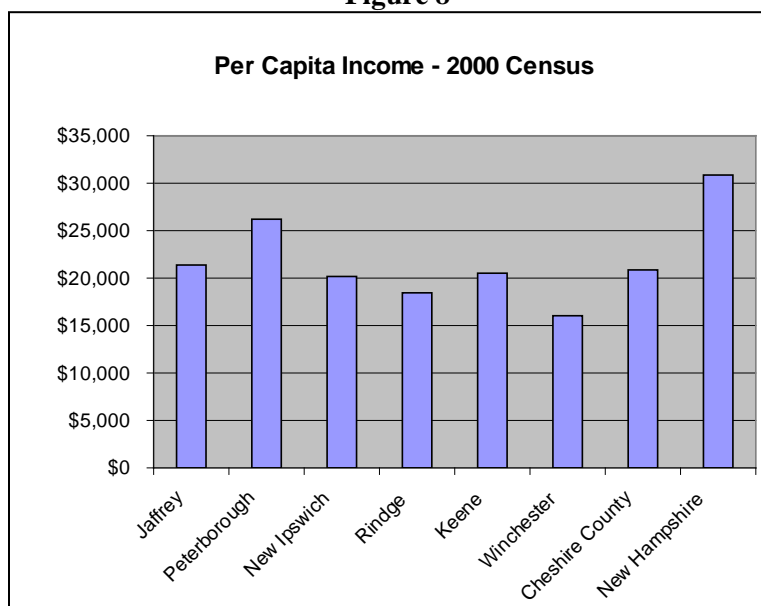
A key ingredient of our economy is manufacturing, with over 37% of the labor force engaging in some type of manufacturing activity. In comparison, only 13% of Peterborough's labor force and 17% of the labor force in Cheshire County is engaged in manufacturing. On average, this sector pays the highest wages in town, surpassing even the "professional & technical" industry category.

Due to the number and quality of jobs existing in the manufacturing sector in Jaffrey, it is critical that everything be done to retain manufacturing firms in town. The key to retaining these firms is open communication between company heads and economic development professionals. It should be town policy that annual business visitations be conducted with Millipore, TFX Medical, DD Bean, New England Wood Pellet, Medefab, Johnson Abrasives, Northeast Reel, High Standard, Graphicast, Printegra, and Atlas. These companies should be the first priority of the business visitation program, though not to the exclusion of retail and service sector firms, which also make an important contribution to the overall town economy.

Business attraction efforts have a much lower rate of success than retention efforts. It is therefore especially important that the time and money put into business attraction be highly focused and efficient. One way to do this is to identify manufacturing industries that are thriving in New England overall, but have yet to make significant inroads in New Hampshire. According to the published literature, such industries include the instrumentation industries (especially electro-medical equipment), communication equipment and relays, and chemical industries (plastic materials and resins, pharmaceutical preparations, diagnostic substances, and industrial organic chemicals). There are some synergies between these industries and existing firms in Jaffrey. We need to find these companies, establish communication, and work hard to make Jaffrey their new home.

Per Capita Income is a measure of the total income of a particular population divided by the number of people within that population. For example, if a town of 5000 people earned \$100 million a year as a group, that town would have a per capita income of \$20,000. Analyzing per capita income over time, either controlled for inflation or in comparison with other populations, is one way to measure fluctuations in the average standard of living. Per capita income for the Town of Jaffrey increased 5.1% between 1990 and 2000, and 48.9% between 1970 and 2000. This compares to 11.6% and 81.7%, respectively, for the State as a whole. Though income growth has lagged behind New Hampshire's growth overall, Jaffrey's performance is strong compared to regional rates.

Figure 8



The Jaffrey labor force consists of an unusually large percentage of manufacturing employees when compared to other towns in the region. Though manufacturing jobs are in decline across the state, and the country, such jobs pay wages significantly higher than in the retail or service sectors. Because of this, special attention must be paid to retaining the manufacturing firms we have in Jaffrey. Because these good jobs are getting increasingly scarce, attracting such firms to one's town is becoming increasingly competitive. It is important that our business attraction program be funded at a level that enables the town to take advantage of a business attraction grant offered by the State, which requires a minimum of \$2,500 in matching funds to be awarded. Such funds need to be used to attract highly targeted companies that play to Jaffrey's strengths. A professional marketing plan needs to be completed to increase our chances that the business attraction program is successful.

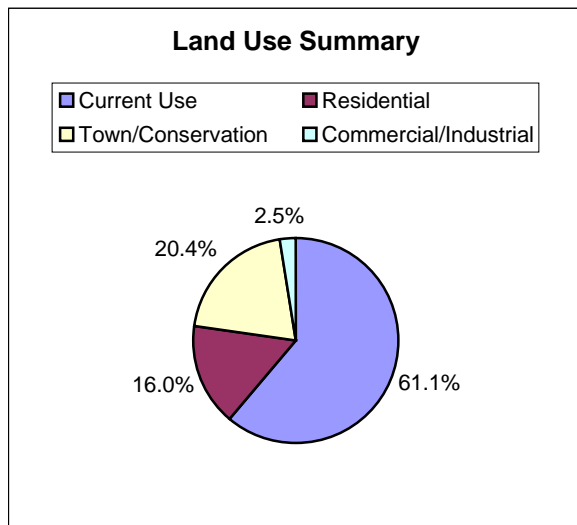
There are approximately 300 businesses in Jaffrey. These businesses range in size from single proprietorships to large manufacturing plants. An electronic list of all known businesses in Jaffrey is posted on the Town's Economic Development website. Keeping this list current is the first step in helping to grow the economic base of Jaffrey and to develop complementary relationships. Some of Jaffrey's largest employers include:

Employer	Product	Employees
Millipore	Industrial Filters	516
TFX Medical	Medical Tubing	257
Jaffrey/Rindge School District	Education	130
DD Bean & Sons	Matches	125
Good Shepherd Nursing Home	Nursing Home	85
Printegra	Business Forms	85
Belletetes	Building Supplies	70
Town of Jaffrey	Government	65
Medefab	Medical Devices	50
Johnson Abrasives	Coated Abrasives	45
Graphicast	Precision Castings	33

### Land Use

Jaffrey is subdivided into approximately 2,600 parcels and zoned into six districts:

- Rural
- Residence A
- Residence B
- Main Street
- Commercial and General Business
- Industrial



**Figure 9**

According to Jaffrey's Land Use Plan, lot size requirements for Commercial/General Business and the Industrial zones are 1 acre and 2.5 acres respectively. The Rural zone is 3 acres or 1.5 acres if town water is available. Residence A and Residence B are 1 acre or .46 acres (20,000 sq ft.) if town sewer or a community sewer hookup is available. The Main Street District is defined by a map prepared by Southwest Region Planning Commission. There are no minimum lot sizes or frontage within this district, creating an opportunity for increased density within the downtown area. Ideally, this District could be used to ease the burden of continuing growth that is being experienced in the rural and residential districts.

The chart to the left is based upon the 2005 MS-1 Summary Inventory Evaluation for Jaffrey. About 19% of the land in Jaffrey (Residential + Business) is taxed for 98% of total revenue. The 2.5% of the land that is zoned Commercial and Industrial pays 11.6% of the taxes.

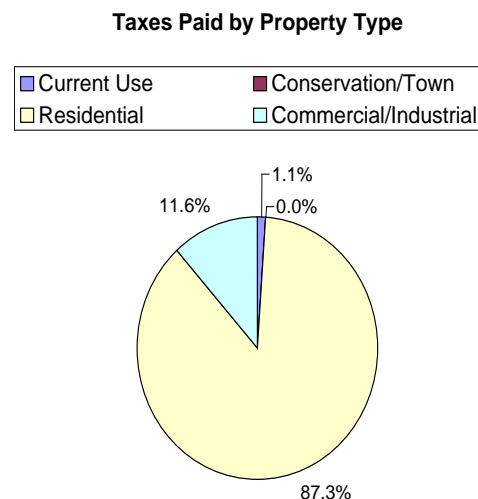
According to a recent Cost of Community Services Study using 2004 Jaffrey data, for every \$1.00 in tax revenue collected by the Town from a particular land use category:

- \$1.15 was spent in services to residential properties
- \$0.68 was spent in services to open space lands
- \$0.49 was spent in services to commercial and industrial properties.

Strategically, it is important to maintain a commercial and industrial core that moderates the residential tax burden.

There are currently about 1,800 homes in the residential zones. These build-out estimates took into account zoning requirements, site limitations, hydric soils, and wetlands. They do not include publicly owned or Society for the Protection of NH Forests lands.

**Figure 10**



A high density downtown with a mix of uses has been shown to reduce sprawl, ease traffic congestion, and promote a vibrant main street area. This district should be expanded as the need arises. The Mill building, located in the heart of the Main Street district, could one day be the quintessential smart growth project. The space is suitable for a combination of housing, retail, offices, studio space, and other creative uses, all in an historical building suited to high density uses. The Town should do everything possible to assist the eventual developer to ensure that the Mill is being used to its full potential for many years to come.

Another important project will be the WW Cross Building site. This site is ideally located in the downtown area, yet is also far enough from Route 202 to begin to get away from strip zoning. A preliminary plan is in place to use this property for a mix of uses, possibly senior housing and retail. Such uses would necessitate a change in zoning for this parcel, from industrial to General Business. Considering that Monadnock Business Ventures spent nearly two years unsuccessfully trying to attract an industrial business to the site, it is unlikely that any kind of meaningful industrial activities will occur on this property in the future. It seems logical that this parcel be re-zoned commercial and a study performed to determine the requirements to explore its potential.

A likely area for growth is the land adjacent to Blake and Union Streets. This would be a natural extension of the downtown area, with the initial focus being the Rail/Trail, a ball field, and later on, a Community Center. The current property at the end of Blake Street is an excellent location for a small retail development, a project that the Downtown TIF District might be able to help jumpstart at some point.

A major contributor to economic vitality will be the full occupancy of buildings and land in our industrial parks. This can be accomplished by promoting Jaffrey to outside manufacturing firms and by helping to grow existing Jaffrey businesses to the point that this space is needed for expansion. Providing infrastructure to Old Sharon Road businesses, including water service and road improvements, will be necessary if this area is to survive as an industrial park. It should be remembered that the Stone Arch TIF District was initially set up for two purposes only: to construct a new bridge near the 202 intersection (completed in 2002), and to install water lines for fire protection for Old Sharon Road businesses. Bringing water to this area is necessary to support existing businesses.

According to the Cost of Community Services Study, economic development delivers the most cost-efficient dollars to the Town's bottom line. It must also be recognized, however, that commercial enterprises can result in accelerated population growth, environmental issues, increased traffic, and stress on the town's infrastructure. The challenge is to identify those types of commercial entities that would minimize such impacts. A company that requires a relatively small, high income work force, and is an environmentally friendly, financially stable business, would be ideal.

## **INFRASTRUCTURE**

### ***Water and Wastewater***

The Jaffrey water and wastewater systems currently serve approximately 1,550 and 855 customer accounts respectively, which include commercial, industrial and residential users. Rates for both water and sewer are among the highest in the State. Since there are no special rates for high volume users such as industrial plants, companies such as DD Bean and Millipore have installed wells on their properties. The Town needs a third water source to supplement Contoocook and Turnpike Wells, our only two water sources. The Town is currently under an administrative order from the NH DES and the US EPA to meet more stringent effluent quality standards. A new wastewater treatment plant is one possible solution;

however, the total costs of construction and fixed operating costs for this project have the potential to severely impact the Town's economic viability.

#### ***Utilities/Communications***

Verizon provides local telephone service to all of Jaffrey and DSL service to residents living within 18,000 feet of a central office or substation. Public Service Company of New Hampshire is our electrical supplier. Comcast offers both cable television and broadband internet access to approximately 50% of residents. Cellular phone service is supported by U.S. Cellular Corporation, Verizon and Nextel Communications. A thorough study exploring all broadband internet options should be conducted, as such access is becoming a necessity to an increasing number of businesses. The objective would be to offer the best, most technologically advanced service that is financially feasible.

#### ***Transportation/Roads***

Jaffrey is served by State routes 124, 137, and 202, all of which converge in the downtown area. Jaffrey does not have rail service but is served by a private airport, Silver Ranch, which offers charter service and hanger space for business and private use. Public transportation via bus or taxi is not available in Jaffrey. An inter-town public transportation system for the region needs to be explored and implemented. The Route 202 "dogleg" road alignment that runs through downtown is dysfunctional and needs to be fixed. This major transportation issue is discussed below.

#### ***Education***

A 1997 study by William Bogart and Brian Cromwell concludes that housing values are higher in school districts with a good reputation. Further, the study shows that similar houses garner higher prices in school districts with higher expenditures per pupil. Personal interviews reveal that the quality of education is a major factor affecting businesses and employees. Per our Community Survey, 53% of respondents mentioned quality of schools as one of the top five things they would like to see changed. This is especially meaningful considering that only 36% of respondents had children. Our goal should be to provide the best possible education while developing the tax base to support it.

#### ***The Golden Triangle***

The Town, Chamber of Commerce, and TEAM Jaffrey constitute a "golden triangle" of organizations in town that share the goal of promoting economic and community development in Jaffrey. These organizations have made a modest effort to work together in the past (e.g., the Rails to Trails Development, the establishment of a welcome center), yet more collaboration amongst the groups is necessary. A perfect opportunity for collaboration is the correction of the Route 202 dogleg problem. Each group has different strengths that it could share to move this project forward.

TEAM Jaffrey, the Chamber of Commerce, and the Town should develop a list of six events that are known as "town events" and develop a town theme centered around these activities. Working together on zoning and ordinance improvements is another opportunity to work together for the good of the town, as is a comprehensive business recruitment program. There is no benefit to the relative isolation in which the three groups work. While differences in mission will and should remain, a golden triangle working together toward a handful of significant common goals will surely be a benefit to the town as a whole.

#### ***Downtown***

Jaffrey has a flawed downtown that has the potential for great things.

One day, the Jaffrey Mill complex will bring housing and economic activity to our downtown. The Community Center will serve as a social gathering place to watch a ballgame, learn, play, and receive services. The 39 Webster Street site will be a successful mixed-use development, replacing an old dilapidated factory that is hardly being used. Blake Street will become a center of activity, with the depot

expanding and additional retail being added to the South. The Park Theatre will be refurbished, offering up movies, plays, music, and other entertainment to enthusiastic crowds. Aylmer's Grille will expand, while restaurants of similar quality will find a home on Main Street.

These scenarios are entirely possible. Most of these developments, however, will fail to reach their full potential (or just plain fail) if the fundamental flaw of our downtown, the route 202 "dogleg" road configuration, is not corrected. The current traffic configuration has reached its capacity and strongly discourages pedestrians. A traffic study completed by the engineering firm VHB recommends the construction of a bridge over the Contoocook River, just south of the current Main Street Bridge, and a roundabout to replace the five-way intersection. These improvements would move higher volumes of traffic through the downtown than traffic lights and would be much more pedestrian friendly. In addition to quality of life improvements, the suggested traffic configuration would have a positive impact on the economic development of downtown. Property values would increase and rents would rise as the retail and service businesses in downtown experienced increased sales volume. This would discourage the use of downtown space by firms and organizations better suited to other parts of town, further increasing the quality and variety of main street shops.

Our downtown should have an adequate cross-section of retail establishments as defined by a consensus of stakeholders. Once this cross-section is defined, the Golden Triangle should work together to bring these establishments to Jaffrey. Specialty shops and services are a possible focus because these establishments can effectively compete with the big box stores by offering superior quality, selection, and service. An adequate cross-section of stores will help make downtown a destination for shoppers and tourists alike. Again, achieving this vision is highly dependant upon the successful implementation of the Route 202 dogleg solution.

### ***Tools***

#### What we have:

- *Tax Increment Finance Districts*

The Town of Jaffrey has two tax increment finance (TIF) districts. Much of downtown is located within the Downtown TIF District, while Stone Arch Bridge TIF District encompasses an area around Old Sharon Road. A *TIF* is a special tax district used to promote commercial and industrial development. A *TIF* provides financing for public improvements (sewer, water, roads, etc.) using new tax revenue created by new, expanded, or renovated commercial property within the district. After defining the *TIF* district area, the current assessed values and taxes are set as a baseline. Any increase in property values within the district (through new construction, expansion, or renovation) will result in an "incremental" increase in taxes above the baseline. All or part of this increase is used to pay for infrastructure improvements (sewer, water, roads, etc.) within the district. When used properly, these districts can be used to encourage businesses to locate and expand in Jaffrey.

The Stone Arch Bridge TIF District should be used to bring water to businesses on Old Sharon Road. The Downtown TIF District should continue its support of TEAM Jaffrey. Future considerations for the Downtown TIF District might include funding to correct the Route 202 dogleg, development of additional retail space on Blake Street, renovating the east side of the Mill building for mixed use, and/or developing the Elite Laundry site

- *Marketing Budget*

In 2005, the town began appropriating \$1,000 annually to market Jaffrey as a business destination. The State of New Hampshire has a matching grant program that will match our marketing budget 1:1, provided that we have at least \$2,500. The economic development marketing budget should be increased to \$2,500 in order to take advantage of this matching grant program. This would provide a total of \$5,000 for business attraction, an amount that should yield positive results. A marketing plan should be developed by a professional consultant prior to any marketing efforts, to ensure we receive the biggest bang for our buck. Any marketing effort should include a strong focus on synergies with existing businesses, including potential suppliers. Promotion of a medical device manufacturing cluster would make sense, based upon businesses in Jaffrey and the region.

- *Revolving Loan Fund*

In 2004, a revolving loan fund was established with a \$46,000 grant from the U.S. Department of Agriculture (USDA). The loan fund is used to provide working capital or financial assistance for the purchase of equipment or real estate. Funds are available for existing Jaffrey businesses and for businesses that are willing to relocate to Jaffrey. To be eligible, the business must have fewer than 50 employees and less than \$1 million in gross annual revenues.

Our first loan was made to Fit-Plus, a fitness center located in the former business incubator operated by Monadnock Business Ventures. Fit-Plus soon defaulted on the loan, and the collateral was liquidated. Though this first loan failed, it is believed that the loan fund will serve as an important tool to assist small and emerging businesses in Jaffrey into the future.

- *Website*

The town maintains a website dedicated to economic development, '[JaffreyBusiness.com](http://JaffreyBusiness.com)'. This site includes information such as available commercial properties in town, general information about Jaffrey, a business listing, maps, relocation information, business assistance programs, and more. Though the site is useful, the look and feel of the website could be improved by contracting with a professional website developer. Updates could still be managed by the Economic Director. It is imperative that the economic development website appear as a link on all Monadnock area websites.

- *CROP Zones*

In an effort to encourage revitalization and create jobs, communities and employers may take advantage of New Hampshire's new CROP Zone Program. The Community Reinvestment Opportunity Program (CROP) is a new incentive for businesses to create new jobs.

With the CROP Zone Business Tax Credit Program, companies may be eligible for tax credits to be used against the Business Profit Tax and Business Enterprise Tax in a qualifying CROP zone project area. Jaffrey has successfully applied for three zones: Drumlin Industrial Park, Stone Arch Bridge Industrial Park, and the old W.W. Cross

property. Companies in these zones may apply for tax credits when jobs are created and new equipment is added to their facility. All businesses within the areas identified above are eligible.

- *Outside Resources*

A countless variety of free and very low cost businesses assistance programs are available to Jaffrey businesses, from regional development corporations, semi-public and not-for-profit organizations, and state and federal sources. Many of these sources are listed on the economic development website, yet awareness of these programs must be expanded in Jaffrey. The establishment of a monthly e-mail “newsletter” would help to keep business owners, large and small, informed about the resources that exist to help them succeed and grow.

What we need:

- *Strategic Abatements*

Business attraction is a highly competitive process. Any town that absolutely refuses to use the tax abatement tool, no matter the circumstance, puts itself at a grave disadvantage. It should be town policy that tax abatements be granted to businesses locating to Jaffrey or to businesses that are significantly expanding in town. An abatement policy that contains a cost/benefit formula and other rules for abatements must be developed in order for Jaffrey to become more competitive in business attraction and retention. A standardized policy will guarantee that whatever tax money is lost “up front” will be repaid by the businesses many times over in the future, to the benefit of the taxpayers.

- *Internal Review – Planning Board*

The Economic Development Director should be on the internal review list for the Planning Board, as part of the site plan review process, when the meeting involves any type of commercial or industrial development. The Economic Development Director would package the comments with input from TEAM Jaffrey and the Chamber of Commerce, as appropriate. Economic development should be considered in planning board decisions as much as input from the conservation commission, police, fire, DPW, and other departments and commissions are considered.

### ***Rural Character***

There are many people who work out of their homes either as a home-based business or as an employee who telecommutes. Numerous national and regional studies indicate that the number of people working from their home is steadily increasing. Working from home has many impacts on the economy including reducing the need for certain types of infrastructure (such as road capacity) and increasing the need for others (such as high speed Internet connection).

Working from home also helps support the retail shops, services, and restaurants in town, supporting commercial endeavors close to home. Agricultural and home-based businesses should be recognized and encouraged as part of Jaffrey’s economic development program. Micro-Credit New Hampshire is one example of an excellent resource for small businesses that is not as widely known as it might be. The availability of such resources should be better advertised by the town to small, home-based businesses.



Jaffrey has yet to take advantage of Mt. Monadnock's full economic potential. The mountain is the 2<sup>nd</sup> most climbed in the world, yet much too little is being done to get the word out that before or after climbing the mountain, Jaffrey should be your destination. The Town, TEAM Jaffrey, and the Chamber should work together to create a significant marketing tool promoting the mountain and the services available in Jaffrey. Grant money is available from the State for this endeavor.

## RECOMMENDATIONS

### VISION

Jaffrey should be a business friendly community that promotes economic development by supporting a dynamic, diversified economic base consistent with its small town character.

### GOALS

- Create a contemporary economy in Jaffrey through business friendly policies.
- Support a dynamic, diversified economy based upon the qualities that make Jaffrey special.
- Promote economic growth while respecting Jaffrey's small town character and rural setting.

### ACTIONS

- *Create a contemporary economy in Jaffrey through business friendly policies.*
  - a. The Economic Development Council should work in partnership with the Chamber of Commerce and TEAM Jaffrey to maintain a business-friendly atmosphere and to influence town policy.
  - b. Promote Jaffrey as a place to locate a business by vigorously promoting the [www.JaffreyBusiness.com](http://www.JaffreyBusiness.com) website.
  - c. Use the synergy of existing businesses to attract similar businesses.
  - d. Work to ensure that the town's retail base offers an adequate cross-section of goods and services to meet the needs of Jaffrey and the surrounding communities.
  - e. Economic Development Council, Chamber of Commerce and TEAM Jaffrey to focus on using available space and identifying potential new space for relocating businesses to Jaffrey.
- *Support a dynamic, diversified economy based upon the qualities that make Jaffrey special:*
  - a. Enhance Jaffrey as a tourist destination. Develop synergy between community special events, retail, sports, etc.

- b. Improve the availability of utilities (esp. water, wastewater) to the Industrial and Commercial Districts. A Utilities Committee is addressing this critical issue.
  - c. Improve availability of high quality data transmission network (Broadband, DSL).
  - d. Recognize the importance of quality schools in attracting new business. The continued upgrading and development of our school facilities and curriculum will improve the abilities of our students and enhance the schools' reputation.
  - e. Make Jaffrey "Special".
- ***Promote economic growth while respecting our small town character and rural setting:***
    - a. Provide a downtown that is a destination (financially healthy, pedestrian friendly, physically and culturally active). A Downtown Study Committee is addressing this critical issue.
    - b. Promote economic development in the context of protecting our natural resources, e.g. Mt. Monadnock, ponds, lakes, and scenic views, and maintaining our rural character.
    - c. Empower the Economic Development Council, Chamber of Commerce, ZBA and Planning Board to address the max size and site of any retail proposal to maintain its rural setting.
    - d. Work with the Economic Development Council, TEAM Jaffrey, and Chamber of Commerce to create a cohesive downtown. The focus of this work should be the Route 202 throughpass/realignment.
    - e. Preserve those qualities that bring individual business owners to Jaffrey, both large (e.g. Millipore, Kimball Farm, NE Wood Pellet) and small (e.g. software and mechanical engineers, artisans, farmers).

## **References**

The following reference sources were used for data collection:

*Town of Jaffrey – Department of Public Works – Water and Wastewater Mapping Base*

*Town of Jaffrey Master Plan 1990 and 1997 Update*

*Southwest Region Planning Commission Data Base*

*New Hampshire Department of Employment Security*

*New Hampshire Department of Revenue Administration*

*New Hampshire Department of Resources and Economic Development*

*US Census – 1990 and 2000*

**Supplemental Information****Property Tax Payers – 2006**

<b><u>Valuation</u></b>	<b><u>Name</u></b>	<b><u>Nature of Business</u></b>	<b><u>Taxable</u></b>
1.	Public Service of New Hampshire	Utility/Electricity	\$8,113,066
2.	Millipore Corporation	Manufacturing	\$6,429,318
3.	Belletete's Inc.	Retail	\$4,490,411
4.	Forest Park Tenants Association	Mobile Home Park	\$2,923,223
5.	Teleflex, Inc.	Manufacturing	\$1,812,748
6.	New England Wood Pellet	Manufacturing	\$1,792,874
7.	Jaffwood Apartments	Apartments	\$1,766,838
8.	P&G Family Trust	Apartments (Pine East)	\$1,301,027
9.	Grand View Realty Trust	Inn	\$1,189,290
10.	Sterling Golf LLC	Golf Course	\$1,103,849

**Water Users – 2005****Annual Usage--Gallons**

1.	Millipore Corporation	Manufacturing	3,976,000
2.	Forest Park Tenants Association	Mobile Home Park	2,543,000
3.	Belletete's Inc. (Clothes Line)	Laundromat	2,115,000
4.	NH Catholic Charities	Nursing Home	1,758,000
5.	P&G Family Trust	Apartments (Pine East)	1,699,000
6.	Jaffwood Apartments	Apartments	1,417,000
7.	McDonalds Corporation	Restaurant	764,000
8.	Relbic Realty Trust	Car Wash (Mr. Mike's)	651,000
9.	MTD Rental Properties	Apartments	577,000
10.	Fylex Housing Associates	Apartments	518,000

**Sewer Users -- 2005**

1.	Millipore Corporation	Manufacturing	27,448,000
2.	Forest Park Tenants Association	Mobile Home Park	2,543,000
3.	Belletete's Inc. (Clothes Line)	Laundromat	2,115,000
4.	NH Catholic Charities	Nursing Home	1,758,000
5.	P&G Family Trust	Apartments (Pine East)	1,699,000
6.	Jaffwood Apartments	Apartments	1,417,000
7.	D. D. Bean and Sons	Manufacturing	1,100,000
8.	McDonalds Corporation	Restaurant	1,068,000
9.	Soaps & Suds	Laundromat	661,000
10.	Relbic Realty Trust	Car Wash (Mr. Mike's)	651,000

## TRAFFIC AND TRANSPORTATION

Update February 10, 2016

### INTRODUCTION

The state statute that deals with Master Plans, RSA 674:2, III, calls for 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.” In addition to roads, the Town may consider park and ride facilities, bicycle paths and community transportation alternatives. Good transportation planning is important because of its capital-intensive nature: streets and highways typically represent the most significant public investment in a town’s infrastructure.

The primary goal of this section, then, is to identify current issues and/or needs crucial to orderly development and the safe and efficient movement of traffic. A corollary purpose is to assist the Town of Jaffrey in fully participating in all levels of transportation planning. Transportation infrastructure is heavily dependent on public funds, and the NH Department of Transportation (DOT) sets the priorities for spending through the development of a statewide Transportation Plan and Transportation Improvement Program. Both of these are required under federal legislation that prescribes the disbursements to states; in order for New Hampshire to qualify for its full allocation of funds, the NH DOT must comply with federal planning requirements.

To accomplish this task, the NH DOT requires each of the nine regional planning commissions in the state to develop a regional transportation plan that describes existing state road conditions within its region, identifies problems and concerns, declares goals and objectives for the regional network, and makes specific recommendations for improvements or new construction. Any local concerns relative to state-maintained roads must be addressed through the Regional Transportation Plan in order to be included in the State Plan. This section, therefore, takes the regional issues into account in the process of developing local goals for a safe and efficient transportation network. The Southwest Region Transportation Plan can be found here ([create link](#)) and the State’s Ten Year Plan is found here ([NH TYP 2014](#))

### ROAD CLASSIFICATIONS

#### *State Classifications*

Public roads are defined by DOT by the type of service they provide and/or by the funding that is available to build, maintain, and repair them. New Hampshire statute RSA 229:5 specifies the following roads within the state system:

- Class I: Trunk Line Highways. These belong to the primary state highway system, and the state assumes full control and responsibility for construction and maintenance.
- Class II: State Aid Highways. These belong to the secondary state highway system. The DOT assumes full control and responsibility for construction and maintenance.
- Class III: Recreational Roads. These consist of all roads leading to and within state reservations designated by the NH Legislature. The DOT assumes full control and responsibility for construction and maintenance.

- Class III-a: Boating Access Roads. These consist of roads that lead to public waters from any existing highway. The DOT assumes full control and responsibility for these roads.
- Class IV: Town and City Streets. These consist of all sections of road that fall within urban compact areas of towns and cities with populations greater than 7,500. The municipality assumes full control and responsibility for construction and maintenance.
- Class V: Rural Highways. These consist of all other maintained roads that are not in the state system. They are town-owned and maintained.
- Class VI: Unmaintained Highways. These are all other existing public roads that are not maintained by the town and have not been for at least five years. The road may be closed subject to gates and bars, but it continues as a public roadway.<sup>2</sup>

Of these seven state road classifications, Jaffrey roads fall into five, as follows: Route 202 is the only Class I highway; Route 124, Route 137, and Dublin Road are Class II state highways; Poole Road is a Class III Recreation Road; all other roads in town are Class V and Class VI town roads. These are illustrated on the accompanying map, and the number of miles comprised by each classification is described below.

#### ROAD MILEAGE BY STATE CLASSIFICATION

Road Classification	Mileage
Class I	4.643
Class II	16.318
Class III	0.793
Class IV	0.000
Class V	60.652
Class VI	10.519
<b>Total Mileage:</b>	<b>92.925</b>

Source: NH DOT

#### FUNCTIONAL CLASSIFICATION

A functional classification system identifies roads by the type of service provided and by the role of each highway within the state system, based on standards developed by the US DOT. The purpose of using such a system is to correlate the land planning and traffic planning functions of the Master Plan. Recognition of the principal function that any road is intended to serve can reduce potential conflicts between land use activities and traffic movements. For rural areas such as Jaffrey, the following categories are identified by the US DOT:

##### *Other Principal Arterial/Controlled Access*

These consist of Interstates and some primary state routes. They are designed to move large volumes of truck and car traffic through and between population centers without disturbing local traffic and land uses.

<sup>2</sup> The Class VI designation is frequently applied to roads that have been abandoned or discontinued, which often leads to confusion as to the ownership of the road. If a vote was taken at Town Meeting to formally discontinue a road, that road is no longer public – it then belongs to the abutting landowners. If it is closed subject to gates and bars, it means that the landowner may enclose premises (historically this was done to contain cattle), but may not lock out the public, which still has the right to pass. These class VI roads are an asset to our community in terms of recreational access.

Controlled Access is a means of minimizing the number of curb cuts, thereby controlling the amount of turning movements along the roadway. There are no Principal Arterials located in Jaffrey or in the Southwest Region.

### ***Arterial System – Major and Minor***

These are the streets and highways that connect communities and regions. They are designed to move large volumes of traffic to and from large traffic generators without disturbing local traffic and land uses. Minor arterials distribute traffic to smaller geographic areas, and place more emphasis on providing land access than the major arterials.

There are no arterial highways in Jaffrey. Routes 12 (south of Keene), 101 and 9 are the only rural arterials in the Southwest Region.

### ***Collector System – Major and Minor***

Major Collectors are designed to move medium traffic volumes at low speeds between or within communities. They differ from the Arterial system in that collector streets go through residential neighborhoods, distributing traffic from the arterials through the area to its ultimate destination. Minor Collectors provide alternate routes to Major Collectors.

In Jaffrey, Route 202 is a major collector and Routes 124 and 137 are minor collectors.

### ***The Local Street System***

This consists of all streets not classified in one of the other higher systems. Its primary function is to provide direct access to abutting properties and to other roads and highways. It offers the lowest level of mobility.

## **SCENIC ROADS**

In addition to the state and federal classifications, RSA 231:157 allows towns, by a vote at Town Meeting, to designate any road other than a Class I or II highway as a Scenic Road. The effect of this designation is that, except in emergency situations, there shall be no tree cutting or alteration of stone walls within the right-of-way without approval of the Planning Board, after a duly-noticed public hearing. The law does not affect the rights of individual property owners; nor does it affect land uses as permitted by local zoning. The statute also authorizes towns to adopt provisions dealing with Scenic Roads that are different from, or in addition to, those that are spelled out in the law. One road has been approved as a scenic road by a vote of the Town, Thorndike Pond Road from Gilson Road to the Dublin town line; this road was formerly known as Slade Road.

## **TRAFFIC PATTERNS**

### ***Traffic Counts***

Information on traffic volume is collected by the NH DOT through the placement of traffic counting devices at various locations around the state. Some of these are permanently installed under the roadway and provide figures based on a full year count, while others are set out on a rotating basis for varying lengths of time – generally during the months of May to October for a seven-day period. Permanent counters are used only on state roads, while the temporary counters are used on both state and local roads. Table 19 presents average annual daily trips (AADT) counts for traffic at 18 locations in Jaffrey.

**TABLE 19. AVERAGED ANNUAL DAILY TRAFFIC COUNTS, 2006-2014<sup>3</sup>**

Location	Functional Classification	2005*	2006	2007	2008	2009	2010	2011	2012	2013	2014
NH 124 WEST OF HIGHLAND AVE	Minor Arterial (Rural)	*	*	5,100	*	*	4,900	*	*	5,100	*
NH 124 WEST OF GILMORE POND ROAD	Minor Arterial (Rural)	*	*	*	*	*	*	*	*	*	*
NH 124 AT TROY TL	Minor Arterial (Rural)	1,913	*	1,700	*	*	2,000	*	*	2,000	*
NH 137 AT DUBLIN TL	Minor Arterial (Rural)	1,178	*	*	*	1,000	*	*	1,000	*	*
US 202 AT PETERBOROUGH TL	Major Arterial (Rural)	7,793	*	*	*	7,700	*	*	7,800	*	*
NH 124 AT SHARON TL	Minor Arterial (Rural)	3,245	*	3,400	*	*	3,400	*	*	3,400	*
FROST POND RD AT DUBLIN TL	Local Street	*	*	*	*	*	*	*	*	*	*
US 202 & NH 124 EAST OF NH 137	Major Arterial (Urban)	12,440	*	16,000	*	*	13,000	*	*	13,000	*
PRESCOTT RD AT MILL POND OUTLETT	Local Street	*	*	*	*	2,200	*	*	3,500	*	*
DUBLIN RD NORTH OF FIRST TAVERN ROAD	Minor Collector	*	*	860	*	*	1,000	*	*	970	*
NH 124 EAST OF DUBLIN RD	Minor Arterial (Urban)	*	*	3,500	*	*	3,600	*	*	3,500	*
OLD FITZWILLIAM RD WEST OF FITZWILLIAM RD	Local Street	*	*	*	*	*	*	*	*	*	*
SQUANTAM RD EAST OF STRATTON RD AT SILVER RANCH (HUNT RD)	Minor Collector	*	*	*	*	*	*	*	*	*	*
ANNETT RD EAST OF SQUANTAM RD	Local Street	*	*	*	*	*	*	*	*	*	*
GILMORE POND RD SOUTH OF SAWTELLE RD	Local Street	*	*	*	*	980	*	*	640	*	*
OLD PETERBORO RD (NUTTING RD) OVER THE CONTOOCOOK RIVER	Minor Collector	*	*	*	*	2,000	*	*	1,900	*	*
FITCH RD OVER CONTOOCOOK RIVER	Local Street	*	*	*	*	330	*	*	390	*	*
HADLEY RD OVER CONTOOCOOK RIVER	Local Street	*	*	*	*	90	*	*	60	*	*

Source: NHDOT – AADT counts 2006-2014

<sup>3</sup> The highlighted roads no longer have traffic counts.



Population increases in the southwest region of New Hampshire between 1997 and 2005 resulted in increased demand on state highways and local streets. Roads with the highest 7-day traffic volumes, as shown in Table 19, include: US 202/NH 124 east of US 202/NH 137, US 202 north of NH 124, US 202 at the Rindge town line, and US 202 south of NH 124. As population has stabilized between 2005 and 2014 traffic shows minor changes at these locations. Additional traffic counts and turning movements are planned for 2015/2016.

## **COMMUTING PATTERNS**

The US Census collects information on commuting patterns of the labor force – that is, where people go to work from their town, and where people come from to work in a particular town. According to these 2010 Census figures, Jaffrey has an estimated 3,004 workers; of these, 1,631 (54.3 %) commute out of town to work. The number of all people who work in Jaffrey, regardless of residence, is estimated to be 3,231; of these, 1,858 (57.5 %) commute into Jaffrey from somewhere else. The following tables illustrate where Jaffrey residents go to work, and where nonresidents working in Jaffrey come from.

TABLES 20 A-D  
COMMUTING PATTERNS  
COMMUTING IN (3,231)

TABLE 20 A

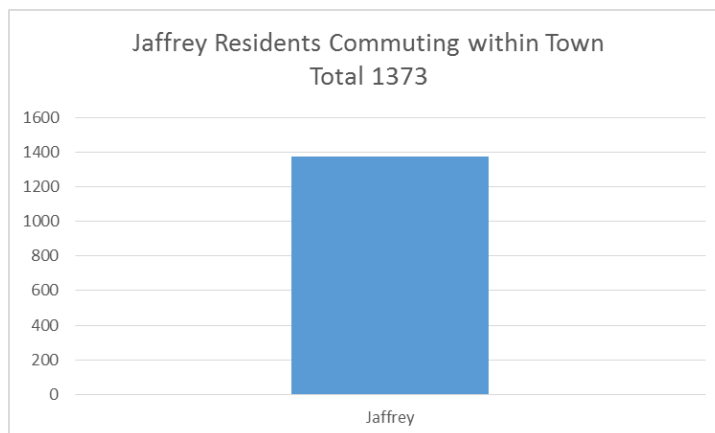


TABLE 20 B

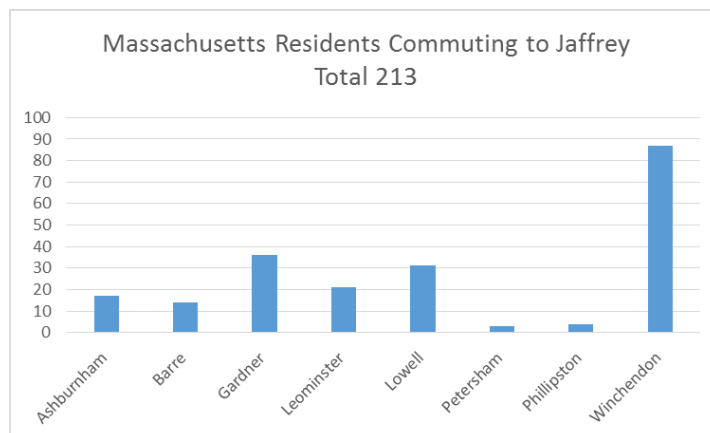
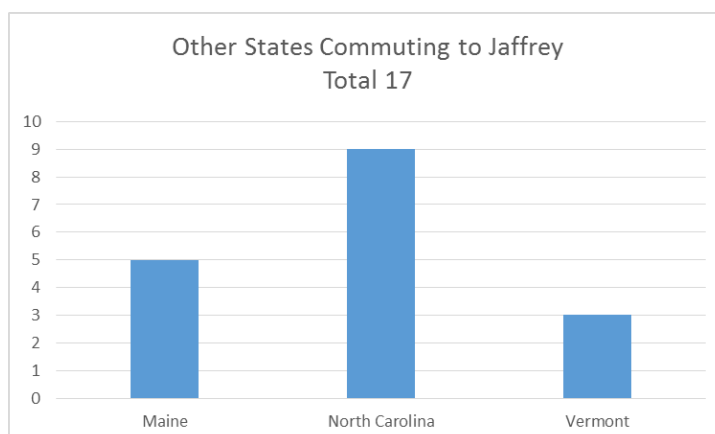
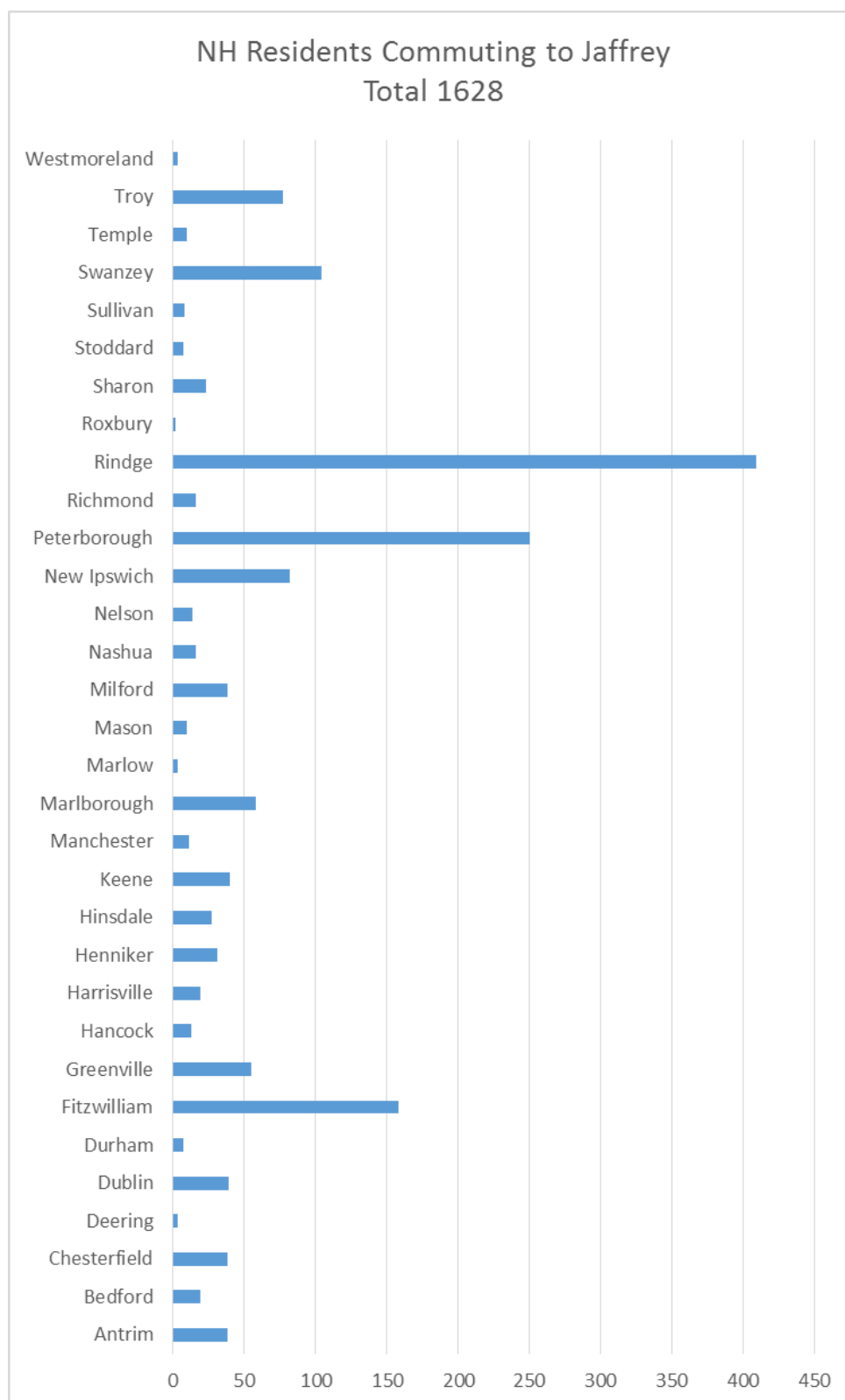


TABLE 20 C



Source: US Census, 2010  
Commuting Patterns:  
Journey to Work and  
Place of Work.

TABLE 20 D



TABLES 20 E-F  
 COMMUTING PATTERNS  
 COMMUTING OUT (1,631)

TABLE 20 E

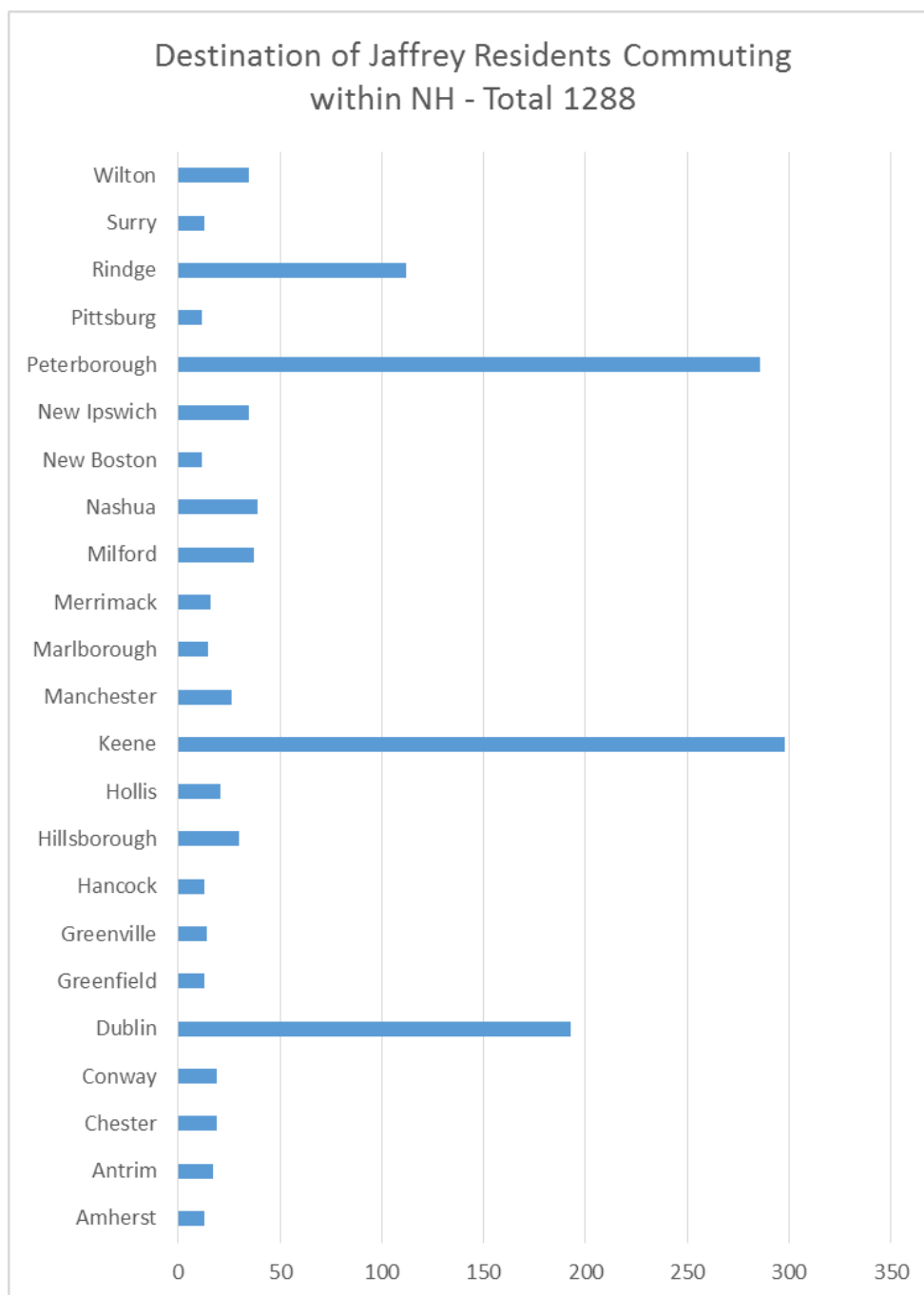
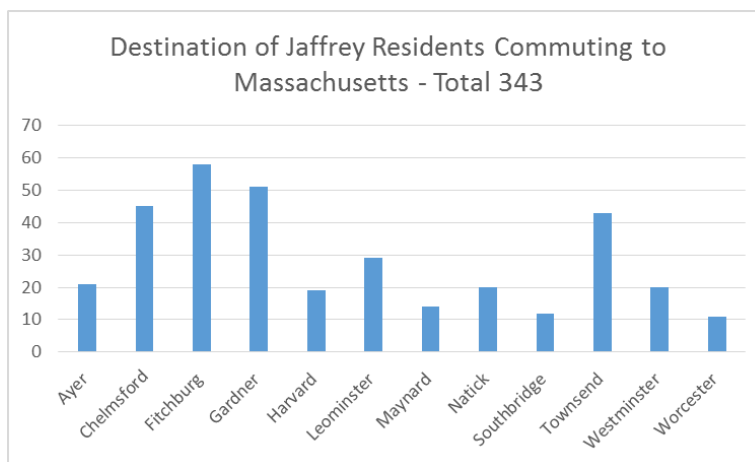


TABLE 20 F



As the figures in Table 20 illustrate, the largest percentage of Jaffrey's workers commuting out of town go to Keene and Peterborough. 35.8% of all commuters. While the majority of commuters who commute in from a single town 22%, are from Rindge. It would appear that Route 124 and Route 202 carry the greatest amount of commuter traffic each day - both in and out of town (US Census 2010, Commuting Patterns: Journey to Work and Place of Work).

## TRAFFIC GENERATORS


Travel can be defined by a wide variety of characteristics, including the purpose of the trip, the time the trip was made, the mode that was used, and the length of the trip. A starting point in all transportation studies is the number of trips generated for a particular land use. This measure is called trip generation and is usually described in terms of person trip generation or vehicle trip generation.

A trip is one way movement from origin to destination. Each trip has two trip ends. Although the term round-trip is often used to describe travel that starts and ends at home it is not a technical term and is considered to be two or more separate trips. Trip generation is always given for a specific period of time which is generally a single hour (normally a peak hour) or a full day. Trip generation may be given for a weekday and/or a weekend day. Since the vast majority of travel is conducted by automobile, most trip generation data are provided in terms of vehicles trips. Vehicle occupancy varies by the purpose of the trip. Work trips tend to have low occupancies which relates to the high percentage of commute trips which are drive-alone types.

Most of Jaffrey's traffic is residential, since that is the primary land use in Town. There is of course some amount of truck/ commercial traffic that services the businesses, as well as travel through Jaffrey to and from neighboring towns; Routes 124 and 202, in fact, carry a significant amount of through truck traffic.

In 2004, DES developed a statewide GIS coverage to identify appropriate indicators for sprawl and changing development patterns in New Hampshire. SWRPC together with DES, UNH, and OEP developed a methodology to generate data on destinations and city/town/village centers for each community. Below are the destinations identified for the Town of Jaffrey.

**TABLE 21. DESTINATIONS (See Map)**

<b>Destination Type</b>	<b>Destination Name</b>
Recreational Trails 	Rail Trail
	Mount Monadnock
	Children's Woods
	Cheshire Pond Conservation Area
	Annette State Park
Camping 	Monadnock State Park (2 areas)
Historic Resources 	Jaffrey Center
	Squantum Village
	East Jaffrey (Downtown)
	Cemeteries
Beaches 	Thorndike Pond
	Gilmore Pond
	Contoocook Pond
Recreational Fields 	Humiston Field/Rink
	Community Field
	American Legion Field
Schools 	Jaffrey Grade School
	Jaffrey-Rindge Middle School
	Conant High School
	Victory High School
Civic 	Town Office
	Library
	Police Department
	Post Office
	Fire Department
Industrial Parks 	Drumlin
	Stone Arch Bridge
	Turnpike Road
	Webster Street
	Squantum

Aside from the residential and local business traffic, Jaffrey has a few large traffic generators, including EMD Millipore, located on Route 124 east of the downtown, which employs 700 people. Other top employers include the Jaffrey-Rindge School District with 264 employees, TFX Medical, Inc. with 303 employees, DD Bean & Sons with 51 employees, Good Shepard Nursing Home with 69 employees, and Belletetes with 55 employees. While New England Wood Pellets employees 39, it generates significant traffic from Old Sharon Road north and southbound on Route 202.

## **ROAD AND BRIDGE CONDITIONS**

### **SURFACE WIDTHS & CONDITIONS**

Roads in Jaffrey are of varying widths and surface conditions. The width of a road is not necessarily related to the ownership – i.e., the state roads are not always wider than the town roads, although they are more likely to have wider shoulders.

The NH DOT has developed standards for road construction, published in December 2003, titled “Suggested Minimum Design Standards for Rural Subdivision Streets”. The specifications recommended for minimum width and materials are based on average daily traffic – in other words, the more traffic a road carries, the wider the traveled way and shoulders, the deeper the base and top coat, etc.

According to these standards, the minimum width for the least-traveled road should be 18 feet, plus a two-foot shoulder; this is for a road carrying no more than 50 vehicle trips per day. Most roads in New Hampshire towns do not meet this standard and, even with new construction, many small towns will approve an 18-foot width for a Class V town road carrying more than 50 vehicle trips per day.

Jaffrey DPW is currently working on a road pavement and maintenance plan which will aid in the prioritization of repairs and reconstruction of town maintained roads.

Some of the narrower roads in Jaffrey contribute to the Town’s rural character. Consequently, even though these narrow roads are shown to be of deficient width, there is no apparent reason to widen the more scenic and less traveled roads.

### **BRIDGES**

Bridges present an ongoing maintenance and repair concern for all towns, oftentimes accounting for a large portion of local highway budgets. Bridges also present the potential for a number of safety hazards in instances where they are severely deteriorated or are significantly narrower than the road they serve. Bridges are rated by the DOT, using a system based on federal standards for type of construction, widths, surface condition, and ability to handle traffic volume, etc. Table 23 points out the problems concerning the bridge network.

### **ACCIDENT LOCATIONS**

The NH DOT collects data from the local Police Departments on accident locations throughout the state. The most recent years for which this information is available for the Town of Jaffrey is 2003 - 2014; nearly 40% of all accidents occurred in the town center along US 202 or Main St. See Table 22.

**TABLE 22:  
JAFFREY ACCIDENTS BY INTERSECTION 2003 -2014**

<b>Intersection</b>		<b>Total # of Accidents</b>
US 202	NH 124	35
US 202	Nutting	43
US 202	US 202	31
NH 124	Goodnow	22
NH 124	Milliken	53
NH 124	Fitzwilliam	4
US 202	Charlonne	31
US 202	Gilmore Pond	8
US 202	Lacy	5
US 202	Webster	18
NH 124	Prescott	15
US 202	Hillcrest	8
NH 124	Dublin	14
NH 124	Fitzgerald	7
NH 137	Parker	1
US 202	Cross	15
US 202	Tyler Hill	7
NH 124	Charlonne	0
NH 124	Sawtelle	12
Dublin	Gilson	0
NH 124	Witt Hill	7
NH 137	Crestview	2
Nutting	Letourneau	2
US 202	Adams	3
US 202	Stratton	5
<b>Total</b>		<b>348</b>

## PROBLEM AREAS

The Jaffrey Public Works Director, Fire Chief and Police Chief responded to the planning committee request to update the Transportation Problem Matrix (Table 23 below) which documents existing transportation problems in Town and ranks those problems in order of priority. The matrix focuses on the problem and location, description, additional comments, and possible solutions to problems such as road width, surface type, speed limit, accidents, other safety hazards, bridge deficiencies, drainage, pedestrian access, parking, vehicle class, snow and ice, and other maintenance issues. Table 24 presents a summary of recommended transportation management projects which address town-wide maintenance needs rather than location-specific hazards. Additional information regarding transportation hazards and problem areas can be found in the Town's Hazard Mitigation Plan.



**TABLE 23:  
TRANSPORTATION PROBLEM MATRIX**

	<b>Problem</b>	<b>Location</b>	<b>Description</b>	<b>Additional Comments</b>	<b>Possible Solutions</b>	<b>Priority (High, Med., Low)</b>
<b>1</b>	Volume, level of service, pedestrian movements	Main Street: 4- way and 5-way intersections	<ul style="list-style-type: none"> <li>Traffic/pedestrian interaction needs attention</li> <li>Very limited time for pedestrians to cross the street</li> <li>Tight turning corner (especially for trucks)</li> <li>3 state routes converge</li> <li>Cars cut through back streets to avoid back-up</li> </ul>	<ul style="list-style-type: none"> <li>Concerns regarding a possible roundabout for pedestrian safety</li> <li>NHDOT is initiating a traffic study</li> </ul>	<ul style="list-style-type: none"> <li>Install "DO NOT BLOCK INTERSECTION" signs</li> <li>Reconfigure Rte. 202 to by-pass intersection/re-routing to new bridge – considering road geometry and terrain.</li> <li>Consider closing, or changing Stratton Road to one-way out of intersection</li> </ul>	High
<b>2</b>	Traffic/ pedestrian concentration	Stratton Road in front of middle and high school campuses	<ul style="list-style-type: none"> <li>High level of pedestrian activity</li> <li>Off-site student parking with rush of traffic</li> <li>Buses and vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Morning less of an issue</li> <li>Limited resources to police high volume times</li> <li>Added crossing guard (2004) to assist pedestrians across Stratton to the only sidewalk</li> </ul>	<ul style="list-style-type: none"> <li>Provide sidewalks on both sides of street (ROW assessment for work is planned).</li> <li>Provide second crossing guard during school dismissal</li> </ul>	High
<b>3</b>	Volume and speed of traffic, pedestrian movements	Goodnow Street from Rte. 137 to Rte. 124; Main Street to Charlonne	<ul style="list-style-type: none"> <li>Used as a by-pass to Rte. 124 (W), Rte. 202 via School St.</li> <li>Accidents at Main and Goodnow Streets (poor sight lines)</li> <li>Periods of pedestrian traffic (school dismissal)</li> <li>Downtown parking movements</li> <li>Traffic backs up from River Street to St. Pat's</li> </ul>	<ul style="list-style-type: none"> <li>Visibility is poor when turning onto Main Street from Goodnow and Charlonne because of parking spaces on Main Street</li> <li>Limited sight distance turning from River St onto Charlonne St.</li> </ul>	<ul style="list-style-type: none"> <li>Remove one parking space each side of Main Street at Goodnow and Charlonne.</li> <li>Make Goodnow Street one-way away from Main Street (Northbound only) – this would allow for increased (angle) parking</li> <li>Close Goodnow from Main to Town Office parking lot, turn that stretch into a parking lot.</li> <li>Modify grade in yard at Main Street and Charlonne</li> </ul>	High
<b>4</b>	Volume of traffic	River Street (US 202) from Main Street to Gilmore Pond Road	<ul style="list-style-type: none"> <li>Concentration, speed and volume of traffic</li> <li>Narrow sidewalk</li> <li>Limited site distance</li> </ul>	<ul style="list-style-type: none"> <li>Shoulder is very narrow</li> </ul>	<ul style="list-style-type: none"> <li>Build sidewalks both sides of street</li> <li>Re-route 5-way intersection</li> </ul>	Medium

	<b>Problem</b>	<b>Location</b>	<b>Description</b>	<b>Additional Comments</b>	<b>Possible Solutions</b>	<b>Priority (High, Med., Low)</b>
<b>5</b>	Level of service, speed	Old Sharon Road, Nutting Road intersection onto US 202	<ul style="list-style-type: none"> <li>Heavy truck traffic off Old Sharon Road</li> <li>Location of town transfer station, New England Wood Pellets, and commercial/industrial traffic.</li> <li>Speed on US 202</li> </ul>	<ul style="list-style-type: none"> <li>Trucks waiting to turn onto Rte. 202 from Old Sharon Road slow movement through intersection</li> <li>Trucks using Hadley Road to bypass intersection and Rte. 202 hill</li> </ul>	<ul style="list-style-type: none"> <li>Install "NO TRUCKS" signs at Hadley Road and Davidson Road</li> <li>Install flashing caution light (may not be justifiable based on traffic data)</li> <li>Reduce Rte. 202 speed limit to 45 mph</li> </ul>	Medium
<b>6</b>	Volume, non-local users unfamiliar with conditions	Mountain Road	<ul style="list-style-type: none"> <li>Poor pavement and road camber</li> <li>Hilly/curves—inclement weather</li> <li>Variations in speed limits</li> <li>Mt. Monadnock visitors (3,000-5,000 per day in the Fall)</li> </ul>	<ul style="list-style-type: none"> <li>Requires significant patrol</li> <li>No shoulder</li> <li>DOT does not permit additional signage even seasonal</li> </ul>	<ul style="list-style-type: none"> <li>Work with NHDOT to rebuild the road</li> <li>Additional signage</li> <li>Speed monitor trailer – Jaffrey Ctr</li> <li>Additional traffic enforcement during peak periods</li> </ul>	Medium (Higher during inclement weather)
<b>7</b>	Concentration of traffic	Peterborough Street from Main Street to MacDonald's	<ul style="list-style-type: none"> <li>Concentration of cars and pedestrians</li> <li>Number of car turning movements</li> <li>Speed</li> </ul>	<ul style="list-style-type: none"> <li>Transition of rural area to commercial</li> <li>lack of familiarity with area</li> <li>Police priority, speed reduced</li> </ul>	<ul style="list-style-type: none"> <li>Build sidewalks both sides of street</li> <li>Relocate / add crosswalks to reduce jay-walking</li> <li>Traffic calming devices (i.e. islands) might mitigate</li> </ul>	Low-Medium
<b>8</b>	School-related traffic, cut-thru Mountain Road to River Street	School Street	<ul style="list-style-type: none"> <li>Traffic speeding by elementary school to get to River Street; limited visibility due to road width, resident parking</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Install "15 MPH DURING SCHOOL HOURS" sign with flashing yellow</li> <li>Install speed bumps during non-snow months</li> </ul>	Medium
<b>9</b>	Visibility, speed, pedestrian crossing	Turnpike Road	<ul style="list-style-type: none"> <li>Summer traffic and pedestrians at Kimball's Farm</li> <li>Millipore shift change increases volume</li> </ul>	<ul style="list-style-type: none"> <li>Witt Hill Road and Prescott Road sight lines need work</li> <li>Speed recently reduced along portion of road</li> </ul>	<ul style="list-style-type: none"> <li>Post "NO PARKING" signs on north side of road at Kimball's, and enforce, to eliminate pedestrians crossing there.</li> <li>Cut embankment at Witt Hill Road to increase sight lines.</li> </ul>	Medium, Low
<b>10</b>	Design of intersection	Prescott and Squantum Roads	<ul style="list-style-type: none"> <li>Roads meet at oblique angles</li> <li>Commercial park businesses adding to traffic</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Rebuild Prescott Road to frame into Squantum Road at a right angle.</li> </ul>	Low

	<b>Problem</b>	<b>Location</b>	<b>Description</b>	<b>Additional Comments</b>	<b>Possible Solutions</b>	<b>Priority (High, Med., Low)</b>
<b>11</b>	Speed	Gilmore Pond Road, 1 <sup>st</sup> ¼ mile off River Street	<ul style="list-style-type: none"> <li>Concentration of homes requires significant police attention</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Speed control</li> <li>Additional patrols</li> </ul>	Low
<b>12</b>	Seasonal volume, design of Intersection	Hunt/Stratton and Howard Hill and Squantum intersections	<ul style="list-style-type: none"> <li>Seasonal traffic volume (June-Sept.)</li> <li>Homes in close concentration in Rindge must use these roads for access</li> </ul>	<ul style="list-style-type: none"> <li>At intersection difficult to tell who has the right of way versus stop requirement</li> </ul>	<ul style="list-style-type: none"> <li>Add "STOP AHEAD" signs</li> <li>Add 3-way stop signs at these intersections</li> </ul>	Low

## **PUBLIC/ALTERNATIVE TRANSPORTATION MODES**

### **PUBLIC TRANSPORTATION**

Public transportation plays a very small role in the overall service network. Community transportation for special needs populations is available from a number of social service organizations on an as-needed basis; some of these services are also open to the general public.

### **BICYCLE/PEDESTRIAN TRAVEL**

The focus of this analysis has been on vehicular, private transportation. Alternative travel is limited in this region, although it has certainly seen resurgence over the last several years. Most roads were designed and built with little or no consideration for anything but vehicles; pedestrians and bicyclists must share the road with cars and trucks. In recent years there has been an increase in both pedestrian and bicycle traffic, and with it a recognition of the potential dangers of mixing these activities with vehicular traffic. These issues can be partly addressed at the local level by designing new roads with attention to alternative traffic. With existing roads the problems are more difficult, since the Highway Department is dealing with a circumscribed width in most cases; warning signs and speed limits are the traditional techniques for ameliorating the conflicts, although not always effective.

### **RAIL/TRAILS**

The Monadnock railroad was acquired by NH DOT for use as a recreational trail from the Massachusetts state line in Rindge through Rindge and Jaffrey. The trail continues through Peterborough and into Hancock. The rail trail essentially parallels US 202 through Jaffrey and passes through downtown at the intersection of NH 124, US 202 and Stratton Road at the east end of the “202 dogleg”. The rail trail is used through four seasons by walkers and cyclists, cross country skiers and snowmobiles. Though not a problem unique to Jaffrey, rail trail use by ATV’s can create conflicts among trail users and trail abutters. Currently the trail is missing one bridge to cross a stream crossing of a tributary to Cheshire Pond across US 202 from the rest area at the Pond.

### **SIDEWALKS**

Walking is the most basic form of transportation. Every trip we make, even by car, we begin and end as pedestrians. Sidewalks serve as critical links in the transportation network by providing pedestrian access to commercial districts, schools, businesses, government offices, and recreation areas. Sidewalks with curb ramps and benches invite strolling and shopping. In addition, a broader range of consumer, social, and recreational opportunities are available in areas catering to pedestrians.

Villages with well-designed sidewalks are generally safer because more people are out walking in the community. In addition, the safety and convenience of pedestrian travel is an important factor in quality of life. Downtown Jaffrey has good potential for sidewalks on main streets. Jaffrey’s ongoing downtown enhancements include completed and planned pedestrian improvements such as crossing signals, benches, curb ramps.

## OTHER TRANSPORTATION SERVICES

Many human service agencies in southwestern New Hampshire provide transportation to elderly, low-income and disabled residents. Most of the need is to access agencies' services or for employment, medical appointments, shopping, etc. Agencies such as Home Health Care, Red Cross, New Hope/New Horizons provide such transportation. Many agencies feel that their transportation service to their own clients is limited because of the costs in the frequency of service (service is usually weekdays only) and in geographic coverage (residents in outlying communities cannot be as frequently transported).

Thomas Transportation Services, Inc. offers service to airports and throughout the Northeast. Service is available 24 hours, including private vehicle service, courier service, charter and connections. Thomas Transportation provides approximately 20,000 round trips annually, employing 45 persons in the region.

Contoocook Valley Transportation Company provides of volunteer rides and ride share opportunities. Currently 400 to 500 trips are provided monthly. Clients are businesses and corporations with some medical trips to regional hospitals (Dartmouth-Hitchcock-Keene and Massachusetts General Hospital). Monadnock at Home also provides rides as well as other services through a membership model.

Student Transportation of America provides service for public school in Cheshire County (excluding Westmoreland) including special transportation for handicapped students (20 vehicles), sports and extra-curricular activities.

Community Transportation serving the Jaffrey Rindge communities carries 1,453 students on 40 vehicles. Their fleet includes 7 wheelchair vans. Adventure Limousine & Transportation, located in Swanzey, offers limousine and mini-van service for corporate clients and special events with 4-5 trips/week (50/50 corporate/special events). Regarding its future, Adventure reports a potential for increased demand for inter-city service (e.g. Keene to Jaffrey).

Swanson Limousine Service, located in Keene, provides stretch limousines for weddings, special events and airport trips (corporate customers) averaging six trips/month. Demand is highest in May and October, and lowest in January.

## RESULTS OF A COMMUNITY SURVEY "GETTING AROUND TOWN"

Over this past summer (2015) the Planning Board through its Master Plan subcommittee distributed a survey to solicit feedback on transportation issues and access to downtown. It was available through direct email solicitation, Facebook shares and was posted on the Town website. In addition print copies were available at the Library, Civic Center and Chamber of Commerce. The survey was tallied through Survey Monkey and the paper copies were hand entered into the database. Of the 193 survey responses, 18.1% were non-residents who visit town on a regular basis.

When responding to the question of how easy is it to get to downtown destinations, in general the responses to the rating scale ranged from moderately easy to extremely easy. But in examining the question further through more specific follow-up questions, as in how easy is it for schoolchildren or the disabled to get around downtown, the answers began to skew toward moderately easy to not at all easy, particularly for the disabled. When asked about the sufficiency of bicycle paths downtown, the responses clearly indicated an interest in developing additional access.

In terms of the perception of traffic congestion, 75% of respondents indicated moderate to extremely congested conditions while 25% indicated slightly to not at all congested conditions downtown. To further explore respondents' sense of traffic impact and accessibility two open ended questions were

asked. In general the responses were that either the respondents didn't have a business or the traffic flow did not impact business to a great extent. However, there were indications for needed additional parking, and better pedestrian access. Further, regular commuters reported avoiding downtown intersections due to traffic tie-ups. The follow up question asking whether accessibility limited participation in downtown events revealed that about half of the respondents did not feel that downtown had limited accessibility. However, the remaining half had specific concerns about access to parking, handicapped accessibility, and traffic impact on pedestrian access at lights and crosswalks.

The concluding questions asked what changes would most improve downtown and if the respondent had any other comments. Of the 151 respondents to the question of what changes would you like to see downtown, the primary response (70) was addressing traffic flow through the route 202/124 intersection (dogleg). Ancillary comments included a need for additional parking (26 responses) and improvements to sidewalks and bike lanes (24 respondents). A need for improving the appearance of downtown buildings and facades was evident as well as bringing in more local shops, a grocer and services (37 respondents). Eight respondents identified no change is needed. The final question asking for additional comments reinforced the results of the earlier questions.

## **TECHNIQUES FOR ADDRESSING TRANSPORTATION ISSUES**

### **PLANNING STRATEGIES**

#### ***Focus development in the Downtown***

Concentrate the mixed uses and higher densities in the Downtown rather than in the outlying parts of Town.

#### ***Identify Appropriate Land Uses***

Existing land uses can be monitored and the Zoning Ordinance consulted to ensure that development will be compatible with the road system. Applications for development must always be reviewed with the scale of proposal relative to the road network and abutting land uses in mind.

#### ***Plan for Pedestrian and Bicycle Connections***

The Town can make sure that it is always at the table when the NHDOT is considering plans involving the state routes, and make every effort to see that all due consideration is given to the accommodation of non-motorized traffic.

#### ***Develop and adopt a Road Policy***

The Planning Board, in conjunction with the Board of Selectmen, can develop a road policy that would guide development in town based on the status of existing roads and any future plans for roads. This can go far to ameliorate potential questions and problems when applications are submitted for the upgrading of a road, or for a building permit on a Class VI road.

#### ***Capital Improvements Program***

A Capital Improvements Program (CIP) that sets forth the planned capital expenditures over a six year period can also help to guide road development. In conjunction with a Road Policy, the CIP can set the schedule as well as the degree and type of road improvements.

## **SWRPC TRANSPORTATION ADVISORY COMMITTEE**

Participation in this Committee provides an opportunity for the Town to be involved in the development of the Region's 10-Year Highway Plan.

Encourage citizen participation in the Monadnock Region Transportation Management Association and Monadnock Region Coordinating Council.

## **REGULATORY STRATEGIES**

### ***Road Standards***

Included in the Subdivision Regulations administered by the Planning Board are standards for road construction. These were updated in 2014 to address minor subdivisions, development on private roads and class VI roads. The standards address width of the traveled way, width of shoulders, type of materials to be used and depth of each level, it is very important that all road design undergo an intensive review by the Planning Board before the subdivision receives approval.

### ***Driveway Standards***

The Planning Board is allowed by state statute to adopt and administer regulations for the construction and permitting of driveways along public and private roads. The NH DOT regulates curb cuts on state roads; towns are allowed the same authority for town roads. Also updated in 2014, the driveway regulations encourage safe and efficient transportation corridor management through provisions that:

- reduce the number of curb cuts along a road;
- separate curb cuts and intersections;
- provide for safe sight distance of at least 200 feet;
- relate driveway design such as width, length and curb radii, to travel speed and traffic volumes;

### ***Development of Backlots***

Backlot development is a zoning technique that allows the subdivision and/or development of lots that cannot meet the frontage requirement for the district. Jaffrey allows for this type of development which gives the town the opportunity to set standards for the access that serve these backlots, and require that the backlot share an access with the front lot, when appropriate.

### ***Scenic Roads***

Jaffrey has one scenic road, Thorndike Pond Road from Gilson Road to the Dublin town line. This designation, in and of itself, does not affect land use or traffic along the road, but it could serve as the basis for developing a Scenic Road Corridor, in which land use and traffic would be reviewed in concert with the objectives of the designation.

### ***Access Management Techniques***

These techniques range from various driveway standards and requirements to the use of medians, signalization and signage. Access is managed through the town Site Plan and Subdivision regulations and Driveway regulation.

***Subdivision and Site Plan Considerations***

During the subdivision or site plan review process the Planning Board has an opportunity to review all proposals based on the transportation issues identified in this section. Some of the pertinent issues include:

**VIEWING THE WHOLE PARCEL**

It is always important to step back from an individual plan and look at it in relation to the neighboring properties and land uses. If the lot fronts on more than one road, decisions can be made about which roads would better serve as access, how the parking should be laid out, etc.

***Lot Layout***

When the opportunity presents itself through a multi-lot subdivision, the subdivision design should consider shared driveways or an interior street, with lots fronting off of the interior rather than the main roads.

***Parking Lot Location and Design***

There are a number of issues with parking lots for commercial uses, such as:

- locating the building(s) close to the road and putting the parking on the side or in the rear of the parcel;
- requiring shared parking, when feasible;
- planning for future shared parking by designating reserved areas on the plan;
- prohibiting parking and loading that requires backing out onto the street; and
- the use of vegetative buffers between parking lots and roads.

The Town updated the Design Guidelines for non-residential development along the gateways and general business district in town in 2014.



**TABLE 24:  
RECOMMENDED TRANSPORTATION MANAGEMENT PROJECTS**

	<b>Project</b>	<b>Description</b>	<b>Comments</b>	<b>Priority (High, Med., Low)</b>
<b>1</b>	Implement Main Street/Route 202 "through-pass"	Re-route 202 dogleg from Main Street	From a transportation standpoint the single most significant issue facing the town of Jaffrey is the Main Street/Route 202 "dogleg". Survey results confirm the earlier Master Planning efforts which seek a solution to the dogleg.	High
<b>2</b>	Maintenance and upgrade of Class V roads	Upgrade and reconstruction needed	Develop cost effective, equitable, fair maintenance process, through DPW Pavement Management Plan	Medium-High
<b>3</b>	Develop a Sidewalk Management Program	Plan for new sidewalks Maintain and repair existing	Participate in the Complete Streets Program and Transportation Alternatives funding program of DOT	Medium-High
<b>4</b>	Continue Rails to Trails from Webster Street to Peterborough town line	Enhancing some of the downtown paved portion. Extending to Old Sharon Rd. Extending to Peterborough town line	Continue efforts to secure funding possible low-level lighting will promote safe travel between businesses and shopping. Complete bridge requirements Enlist help from recreational clubs	Medium
<b>5</b>	Develop a GIS Inventory of Transportation Infrastructure	Complete GIS inventory of infrastructure (signs, culverts, bridges, sewer, waterlines, etc.) Ensure accurate base maps for planning purposes	Helpful for understanding municipal transportation inventory and more accurately estimate cost of repair, maintenance, and new construction  Will assist with gauging development projects and proposed projects	Medium

## ELECTRICAL AND COMMUNICATION SERVICES

### INTRODUCTION

Presence and availability of adequate utilities is vital to the welfare of the community. The availability of certain utilities can also support the community's goals for economic development.

To meet these needs, private utilities presently being provided in the Town of Jaffrey include electricity and 3-phase power, and telecommunications infrastructure (broadband, cable television, telephone/wireless communications, internet service). Because of their diverse nature, each of these is considered separately in the following sections. It will be seen that, due to the rural nature of the Town, not all utilities are available throughout the community, such as 3-phase power and broadband. However, electricity and certain telecommunications services are somewhat easier to distribute and are available virtually everywhere in the Town. All electrical and telecommunications infrastructure in Jaffrey are currently provided by private business entities.

### ELECTRICAL INFRASTRUCTURE

#### *Electricity*

Public Service of New Hampshire (PSNH) is the main electricity supplier for the Town of Jaffrey. PSNH is the state's largest electric utility, providing service to more than 447,000 homes and businesses. PSNH is a wholly-owned subsidiary of Northeast Utilities, a utility holding company based in Connecticut. With three fossil-fuel fired generating plants and nine hydroelectric facilities, PSNH has over 1,110 megawatts of generating capacity.

In Jaffrey, PSNH provides service to homes, commercial and industrial businesses and all streetlights. Distribution and transmission lines, which are placed along roadways, carry power throughout the Town to the individual customers. The voltage from these lines is stepped down to the voltage that is used by the specific customer by way of transformers.

Electricity in Jaffrey is distributed through one major substation, located off of Route 124. Two circuits originate from the Jaffrey substation. The 382/313 line spans from the Monadnock Substation in Troy to the Jaffrey Substation. The line continues as the 313 to the Jackman Substation in Hillsborough. The 382/313 lines have three (3) 34.5Y/19.92 kV taps in Jaffrey, which include;

- The 382X2 which starts near the Jaffrey Substation and crosses Highland Avenue. The line runs through the right-of-way in a southerly direction along Mountain View Drive and onto Route 202 near Old Jaffrey Road in Rindge.
- The 313X3 begins along Amos Fortune Road running in an easterly direction onto Dean Farm Road. The circuit feeds west and north from Highway 137 to the coterminous town border of Jaffrey and Dublin.
- The 313X2 originates off of Lehtinen Road and feeds to Route 202. The line toward Jaffrey becomes the 18X1 and continues to Downtown Jaffrey. Power from this line supplies the east quadrant and Contoocook Lake areas.

PSNH anticipates being able to provide current and future electricity demands of the Town of Jaffrey. There are currently no plans to expand operations.

### ***3-Phase Power***

Public Service of New Hampshire has indicated that three-phase service, required for manufacturing operations, is available along a majority of Route 202 and Route 124. Additionally, 3-phase is available along portions of Old Sharon Road, Webster Street, Knight Street, Fitzgerald Drive, Plantation Drive, Squantum Road, Prescott Road, Woodbound Road, Stratton Road, Charlonne Street, and Nutting Road. Customers requesting 3-phase power service are reviewed on a case-by-case basis. PSNH indicates that the projected revenue from a new customer requiring three-phase service would be reviewed and may be used to reduce customer contribution for the upgrade.

## **TELECOMMUNICATIONS INFRASTRUCTURE**

### ***Broadband (a.k.a. High-Speed Internet) Technology***

Broadband is the common term for a high bandwidth internet connection one that can send or download information many times faster than with a standard telephone and modem. You can do everything you want to do online more quickly and more easily with broadband including logging-on, working from home through network connections, downloading files and music, and more.

There are different ways of delivering broadband services over telephone lines, cable connections, via one or two way satellite systems and even by radio and there are many companies who offer these services. High speed or Broadband Internet connectivity, when locally available, is provided either through a Local Exchange Carrier (LEC), typically a phone carrier, or an Internet Service Provider (ISP).

The capability of existing infrastructure in the Town of Jaffrey to provide broadband service such as DSL (Digital Subscriber Line) through telephone lines, cable service, satellite cable, and wireless to individual homes and businesses is described in the sections below.

### ***Cable Television***

Comcast is the current cable provider in Jaffrey and offers analog and digital video services, high-speed internet access and other advanced services over its broadband networks.

Jaffrey currently has cable television with expanded cable service capabilities. The expanded cable suite includes additional programming such as movie channels and additional features such as “On Demand” in limited areas of Town. Satellite cable television is available to individual residences and businesses throughout the community, provided a southeasterly exposure is available, and is an alternative cable service for those areas not served with cable options through Comcast. There are a number of satellite cable providers and installers serving the area.

### ***Telephone and Wireless Communications***

Landline phone service is provided for new and existing residences and businesses in Jaffrey by Verizon. Long distance calling service through landline phones is available through a number of service providers. A list of Authorized Toll Providers is available from the NH Public Utilities Commission at <http://www.puc.state.nh.us/Telecom/telecom.htm>. In addition, Verizon, U.S. Cellular, and various other telecommunications companies provide cellular and personal wireless service to the area.

Based on the 2003 US FCC Towers database distributed by the New Hampshire Office of Energy and Planning, there are currently three wireless facilities in Jaffrey (see Utilities and Public Service Map). Table 27 identifies existing telecommunications towers in Jaffrey:

**Table 27: Telecommunications Towers**

<b>Location</b>	<b>Height/Type</b>	<b>Owner</b>
20 Webster Street	80-foot monopole	U.S. Cellular Corporation
141 Old Sharon Road	125-foot monopole	Crown Atlantic LLC
365 Turnpike Road	50-foot silo	Nextel Communications

Source: NH OEP Cell Tower Database, November 2003

Federal law regulates the placement of cellular towers in a given community; however, emphasis has been placed on balancing the need for telecommunications infrastructure with a community's desire to maintain community character. The Telecommunications Act of 1996 preserved state and local regulatory authority for the placement, construction or modification of wireless facilities. However, local zoning and regulations may not prohibit wireless services within the community or address the potential effects of non-ionizing electromagnetic radiation and unreasonably discriminate among providers of functionally equivalent services.<sup>4</sup>

## INTERNET CONNECTIVITY

### *Telephone Lines*

Internet connections over telephone lines are provided by a combination of a Local Exchange Carrier (LEC, aka "the Phone Company") and an Internet Service Provider (ISP). These two functions can be provided by one company, but for residential customers are more commonly provided by two separate companies. LECs typically provide bandwidth and contract with ISPs to market and sell connectivity. ISPs also typically offer value added products including web-hosting space, web design assistance, email and access to news groups and other services. For competitive reasons, LECs and ISPs offering services in Jaffrey change frequently. An up-to-date list is provided by the NH Public Utilities Commission at: <http://www.puc.state.nh.us/Telecom/internetbroadband.htm>.

Dialup connections over telephone lines are universally available in Jaffrey, with a maximum available bandwidth of approximately 52 kilobits per second (kbps).

Digital Subscriber Line (DSL) high-speed computer internet service is the most widely available high-speed telephone connection type in the region, and currently provides a maximum available bandwidth of approximately 3000 kbps (download). DSL phone service may be available to individual residential and business customers in Jaffrey, depending on the residential or business location's proximity to the Verizon central office located on River Street in downtown Jaffrey. DSL broadband has a limited service area of 18,000 feet from the central office or substation providing service, and the maximum bandwidth available on the line decreases as the distance from the central office increases. All DSL services in Jaffrey are provided over Verizon telephone lines, but may be resold through a competing LEC or ISP.

High-speed data services are also available in the form of commercial-grade T-1 connections. Again, these connections are typically provided over Verizon lines, but may be resold by a competing LEC. These data lines are not subject to the same distance limitations as DSL connections, but due to high cost are not generally a viable option for residences.

<sup>4</sup> Source: Telecommunications Act of 1996, 47 U.S.C. 332(c)(7).

***Cable***

High-speed Internet connections are available to customers in town currently served by Adelphia/Comcast. The connection is established on the same physical cable as the cable TV, and currently provides a maximum bandwidth of approximately 4000 kbps (download). The available bandwidth is governed more by competitive considerations than technological limitations, however, and may change in the future.

***Satellite***

High-speed Internet connections are available via satellite, provided the property has a clear view to the southeastern horizon. Typically, this type of connection provides maximum bandwidth of approximately 1000 kbps (download). Satellite service is more expensive than DSL or Cable connections, but less expensive than a commercial T-1 line. Some applications experience problems on satellite connections due to the latency (delay) associated with the long round trip distance between ground and satellite.

***Wireless***

High-speed Internet connections via microwave radio transmissions may be available in certain areas of Jaffrey with a clear view to the summit of Mt. Pack Monadnock. This type of connection typically provides a maximum bandwidth of approximately 1000 kbps, but is limited to locations with a clear line-of-sight between the transmitter and receiver. Land-based wireless connections usually have less latency-related problems than satellite services.

Wireless networking is an area of particularly rapid technological innovation. In the future, the line-of-sight limitations may be reduced, thus making wireless services available to broader areas of town.

**FUTURE ELECTRICAL NEEDS/RECOMMENDATIONS**

In many areas of Jaffrey, street lighting utilizes technologies dating back 20-30 years or more. In some areas street lighting produces annoying glare by shining into pedestrian or driver fields of view. Excessive and unwanted light shines directly on property beyond the intended target and unwanted atmospheric lighting contributes to sky glow. Older lighting technologies utilizing mercury vapor lamps and high pressure sodium lamps offer poor color rendering qualities as compared to more modern metal halide systems.

Today's lighting systems employ design and efficiency features that were virtually unknown as little as 10 years ago such as optical controls that maximize lighting in targeted areas while minimizing undesirable glare and light "trespass". Modern lighting technologies are producing lamps that are more energy efficient by utilizing "pulse starting systems" and moving away from incandescent and mercury vapor lighting to more efficient and color balanced metal halide systems.

Returns on modern street lamping capital costs whether new or retrofitted are more quickly realized because of reduced energy usage and proper layout design reduces the frequency of lamps required for the same level of lighting in a targeted area.

A well planned street lighting program to replace and/or retrofit existing old technology lamping would be a desirable venue to pursue for Jaffrey and the accelerated return on investment would be well worth the initial capital cost.

**FUTURE COMMUNICATIONS NEEDS/RECOMMENDATIONS**

Digital content via the internet is rapidly demanding wider bandwidth than dial-up access can provide. While it is true that Satellite internet access is available to many in Jaffrey who cannot access the internet

by any other means than dial-up, the service is expensive (on the order of \$600.00 up front to purchase necessary equipment and approximately \$60.00 minimum per month subscription fees). In comparison to DSL or cable, satellite internet is nowhere close in speed or reliability.

Availability of high speed Internet access is an important issue for Jaffrey because it directly impacts the town's economic vitality. Jaffrey's 2004 Economic Development Plan points out the need for encouraging a diverse base of economic activity. Towns traditionally use infrastructure services such as water, sewer, electrical, and communications services to lure new businesses. Given Jaffrey's current situation of having relatively high water and sewer rates, which is expected to extend into the future, these will no longer be positive incentives for a business looking to relocate or start up in Jaffrey. This increases the importance of providing good communications services, particularly for smaller entrepreneurial enterprises that might wish to locate outside of the main commercial centers in town, and for residents that could work from home as telecommuters.

Unfortunately, there appear to be no plans by cable or DSL providers to expand services to residences or small businesses beyond current limits of distribution in Jaffrey. It is becoming obvious that alternative means of internet access may be the only hope of providing high speed internet access at reasonable cost for outlying areas of the town.

Two alternative technologies are gaining acceptance nationally and internationally that might be applicable to providing service to underserved areas are Broadband-over-Power Line (BPL) and Wireless Broadband. Implementing Internet access over power lines utilizes the existing power distribution infrastructure, but the concept would require buy-in from PSNH, and would likely be a regional solution rolled out broadly across their service area. Wireless broadband access could be either a regional scale solution if implemented by a large communications provider, or could be implemented at the town level as a municipal utility. In either case, the town should continue to play a role in sparking conversations with surrounding towns and demonstrating an active interest in bringing these types of services to the Monadnock region.

Recent developments in our State Legislature also provide a basis for towns such as Jaffrey to expend public funds to expand broadband facilities.

HB653 was approved in the New Hampshire Senate on March 9, 2006 and went into effect on July 31, 2006. This bill grants bonding authority to municipalities wishing to implement broadband access as a public utility in areas where no commercial broadband access is available.

## COMMUNITY FACILITIES AND SERVICES

### INTRODUCTION

This Section of the Master Plan identifies public and semi-public facilities and services that serve the residents and property owners of Jaffrey. RSA 674:2:III.c recommends including a community facilities section which “identifies facilities to support the future land use pattern..., 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.”

An important function of town government is to provide residents and property owners with a level of service commensurate with taxes and fees paid that meet the current needs of the populace. In Jaffrey's case, these include public safety (police, fire, and ambulance), public works (water, sewer, roads, solid waste disposal, and cemetery maintenance), schools, recreation, cultural facilities, health and welfare services, and the town government operations (selectmen, property maintenance, and assessment).

The degree to which these facilities are developed has a significant impact on the quality of life and general character of a community. This Chapter of the Master Plan presents an inventory of such facilities and services, an assessment of the adequacy of the current level of service, and any plans or recommendations to expand, improve, or add to an existing facility or service.

#### ***Town Hall/Town Government***

The Town Offices building located at 10 Goodnow Street is a 2,800 square foot, two-story, wood-frame building that houses the offices of the Selectmen/Town Manager, Town Clerk, Tax Collector, Property Records, Building Inspector, Finance, Economic Development and the Overseer of Public Welfare. The Selectmen/Town Manager, Property Records, Building Inspector, Finance, and Economic Development offices are open Monday through Friday 8:30 a.m. to 5:00 p.m. The Town Clerk and Tax Collector offices are open Monday through Thursday 8:30 a.m. to 3:30 p.m., on Thursday from 6:00 p.m. to 8:00 p.m., and on Fridays from 8:30 a.m. to 12:00 p.m. The Overseer of Public Welfare is available by appointment in the evenings.

A large meeting room is located on the ground floor and is available for use by all Town boards and committees. The Town Office building is handicap accessible.

#### **Future Needs and Plans**

Proper and secure storage space for Town records is presently lacking.

#### ***The Meetinghouse***

The Meetinghouse in Jaffrey Center, built in 1775, was originally used for Town Meetings and church services. It is now used for a variety of public and private events from spring through fall. It is overseen by a three-person Meetinghouse Committee. In 1991 a Meetinghouse Trust Fund was created at Town Meeting into which all revenues from events are placed and from which major capital costs are paid.

#### **Future Needs and Plans**

A multi-year maintenance program and budget should be developed to avoid major unexpected expenditures.

***Public Safety***

The Jaffrey Police Department, located at 26 Main Street is a two-story, 5,280 square foot brick building that was constructed in 1954 as the Town Offices. Police protection is under the direction of a full-time Chief with a force of ten full-time officers and one full-time administrator. The Police Department provides 24-hour coverage; two officers are on duty 24 hours a day, 7 days a week. Multiple training programs are available on a regular basis both within the Department and from outside agencies. There are two highly traveled state highways in Jaffrey, US 202 and NH 124 that have several locations of concern. The intersection of these two highways is especially problematic. Additional information regarding problem road areas is included in the Transportation Chapter.

**Future Needs and Plans**

The police headquarters building is in good condition and is of sufficient size to accommodate current and future police activities.

Many equipment items were upgraded through federal grants in 2000 and 2001. They are now outdated and approaching the need for replacement. Since there is no capital reserve fund in place, replacing these items will result in a significant impact on the budget when it occurs. Funds will need to be allocated in 2006 or 2007 to replace the equipment.

Lack of adequate staffing is an immediate concern which needs to be corrected as soon as possible.

***Fire and Rescue Services***

Fire protection is provided by a full-time Fire Chief, one on-call Assistant Fire Chief, and 25 on-call Firefighters. On-call Firefighters are compensated approximately \$11.50/hour. 13 Firefighters are certified Level One Firefighters and 11 Firefighters are certified Level 2 Firefighters. 15 Firefighters are also trained as Emergency Medical Technicians.

The Jaffrey Fire Station, constructed in 1981, is located at 138 Turnpike Road in an 8,400 square foot, concrete block and brick building with a steel roof structure. The facility includes a dispatch office and a Fire Chief's office, a large meeting room that is used for fire department training and for state and local meetings and trainings, two bathrooms, a kitchen, 6 bays with overhead doors and room for a 7<sup>th</sup> vehicle.

Increasingly the Fire Department is responding to non-fire emergencies such as motor vehicle accidents. This is a trend nationwide.

The former Jaffrey Center Fire Station a 1,500 square foot building with two garage bays is located west of Jaffrey Center village on Mountain Road (Route 124) and is now used for storage by the Department of Public Works.

**Future Needs and Plans**

The existing Fire Station is nearing capacity. All but one of the equipment bays are full. As the Fire and Building Inspection Departments presently work together closely, consideration might be given to combining the two. The Fire Station will need to be expanded at some time in the future.

There is a need for municipal fire hydrants on Old Sharon Road to protect industrial sites.

Consideration should be given to whether or not the Jaffrey Center Fire Station should be reopened.

The only fire apparatus that is planned for replacement in the next five years is the Rescue Truck. This 1991 vehicle was used on over 40% of the calls in 2005. It is presently carrying more equipment than it was designed to carry and this has led to safety and handling concerns.



***Highway Department***

The Jaffrey Highway Department is located at 23 Knight Street. The building, erected in 1964, is a one story, 6,040 square foot (4,400 square foot of storage/mechanic space) structure. It is not handicap accessible. Also on the site is a Salt Shed, Equipment Warehouse and plow storage structure. Sand, stone and various equipment and supplies are stored outside on the site.

The staff of the Highway Department consists of eight full-time employees. There is one seasonal (winter) per diem employee. Current equipment is reported to be in satisfactory condition. Staffing is adequate for current demands at this time.

Current traffic, transportation and roadway issues identified by the Department include the following:

- Traffic control and movement issues at the Route 124 / 202 / 137 intersection
- Limited level of service capabilities at various intersections (i.e. Old Sharon Roads and US 202, Prescott Road and Squantum Road, Witt Hill Road at Route 124)

There is one designated scenic road in the Town of Jaffrey, Thorndike Pond Road (a two mile section of roadway from Gilson Road to the Dublin Town line).

In the past five years only one new road has been accepted by the Town.

The Town of Jaffrey owns several dams which are regularly inspected by the NH Department of Environmental Services. These are:

- Contoocook Lake Dam
- Bullet Pond Dam
- Contoocook River / Main Street Dam
- Mountain Stream Dam
- Poole Reservoir
- Wastewater Treatment lagoons

Inspections of these dams have shown that maintenance and repairs are necessary. This work is included in the CIP.

**Future Needs and Plans**

- Equipment: A schedule for equipment replacement has been prepared by the Town mechanic and the Department recommends carefully following this schedule which is included in the Capital Improvement Program.

- Energy and environmental considerations should be considered in the choice and operation of vehicles and equipment.

- Facilities: The Town Highway Garage is 40 years old and in need of a significant upgrade and/or replacement.

- Operations: Staffing is adequate for current demands at this time.

***Roads as they relate to Community Character***

- Roads with special visual qualities and viewsheds should receive careful attention and consideration so as not to have these qualities diminished or compromised by excessive widening, regrading, shouldering, etc. Guidelines could be developed to assist in this.

- Jaffrey's present road layout, particularly in new subdivisions, should be evaluated as to their effect on the avowed master plan goal of 'preserving rural character.'

### ***Solid Waste Disposal***

The Town of Jaffrey maintains a Transfer Station/Recycling Center on Old Sharon Road. The facility includes an uninsulated, 4,000 sq.ft. metal utility structure. The Center employs three full-time and one part time staff. Hours of operation are Tuesdays, Wednesdays and Fridays 9:00am – 4:00pm and Saturdays 8:00am – 3:00pm.

Also at the site is a 'Swap Shop,' an 800 square foot building erected in 1996 which serves as a place to both drop off and pick up, free of charge, a variety of household items.

The Town accepts municipal solid waste (MSW) and recyclables from Jaffrey residents only through an individual drop-off process. Commercial concerns can use the recycling portion only.

The Town's most pressing problem with MSW disposal today is the disposal cost per ton which is high compared to similar sized communities. After the failure at the 2003 Town Meeting to adopt a new solid waste fee system, a Transfer Station/Recycling Center Committee was appointed to study the situation and make recommendations. A citizen survey was distributed; the facilities of other towns were visited and a number of meetings were held. The Committee made 14 recommendations. Of the 14, the following four seem to be the most relevant for master planning consideration:

"2) The facility needs physical improvement to include better toilet facilities, heated work areas, safety barriers at the demolition dumpsters, and improvement of the access road.

6) Provide shelter from the weather for construction and demolition containers.

12) The Town should consider regional household hazardous waste disposal.

13) The Town should consider ways to improve awareness of risks and opportunities for disposal of household hazardous waste. Although this is done from time-to-time at the Keene facility, that is too distant to be a reasonable option. Combining with neighboring towns and more actively publicizing the day should be considered in an attempt to increase usership. Possibly encouraging local churches and organizations to pool their members' waste for transport should be explored."

### ***Water System***

The Water Department is presently located at 104 Turnpike Road, occupying a single-story, brick veneer building erected in 1983. The Department is staffed by two full-time employees. The water system for the Town of Jaffrey consists of two gravel packed wells (Turnpike Well and Contoocook Lake Well), two finish water storage tanks having a total capacity of 1,250,000 gallons, a booster pumping station, and associated distribution system, piping and appurtenances. The water system serves the village area of Jaffrey, west along NH 124 through Jaffrey Center, north to Harkness Road, east along NH 124 to Squantum Village, and south along Hunt Road to the Woodmere and Little Michigan area in Rindge. The Town's water system has approximately 1,500 connections serving approximately 3,600 current users in Jaffrey and Rindge. The average daily demand for the system was 343,000 gallons in 2004. In 2005, the average daily demand was 361,000 gallons.

At this time the Jaffrey water system is satisfactory but the level of service is not commensurate with the cost.

**Source Protection**

Jaffrey must continue to investigate and develop additional water sources and protect all potential water sources. The Contoocook Lake Well is a gravel-packed well having a reported capacity of 350 gallons per minute (252,000 gallons per day when pumping for 12 hours). DES has approved plans to increase production in stages while monitoring for any changes in water composition. The effort to increase Contoocook well production will be carried out during the second half of 2006. There are also plans to install a backup well in this aquifer to provide mechanical redundancy.

The Turnpike Well is located on the south side of NH 124. The well has an estimated capacity of 325 gallons per minute (234,000 gallons per day when pumping for 12 hours)

Fire Protection is one of the benefits of a public water system, and the ability to provide fire protection is seen as an economic development incentive that helps to attract and keep business and industry. However the town of Jaffrey does not charge for fire protection, despite some very significant capital, operations and maintenance costs associated with providing it. Jaffrey maintains a water main to provide fire protection to the Millipore Company, even though Millipore switched to their own private water supply for, non potable uses.

**Wastewater System**

The Wastewater Department is presently located on Old Sharon Road. The Wastewater Department is staffed by one full-time and one part-time employee retained through a contract with Aquarion Operating Services (AOS).

The treatment facility, constructed in 1986, consists of a 2,325 square foot administrative building, three aerated lagoons and 15 miles of collection sewers and six pump stations.

The system services 800 connections. The system is designed to treat approximately 2,085 pounds of total suspended solids per day, and has a total capacity of 1.25 million gallons with an average daily flow of approximately 500,000 gallons. A significant portion of this flow comes from industrial users that take water from private wells but rely on the Jaffrey treatment plant for their sewer effluent.

**The Cost of Sewer**

Jaffrey's sewer system is part of a reliable infrastructure of the town that serves the downtown business and residential districts as well as the historic district of Jaffrey Center and beyond. Jaffrey is among a handful of towns in the Monadnock Region that provides a sewage disposal system to its residents and businesses. This fact has given rise to a center of town that has attracted more than 250 businesses in less than one square mile. Jaffrey's sewer system has one of the ten highest costs of service in the state.

The town is under an EPA Administrative Order to upgrade its current facilities which will both improve the existing infrastructure and significantly increase sewer rates in future years. Some are predicting that Jaffrey's sewer rates could double in coming years if the planned advanced wastewater treatment plant is built. While an increase in rates may present problems for some Jaffrey residents and businesses, the installation of state-of-the-art facilities to meet long-term future needs of the community will be an asset to the economic development and growth management of the town with possible positive or negative implications. With the construction of this new facility there will also be an incentive and an opportunity to add more connections. The question of whether this will result in an undesirable pace or appropriate level of development will be the subject of discussion for citizens and town planners.

**Future Needs and Plans**

Existing facilities and staffing are adequate at this time to collect and treat wastewater to secondary standards. However, the Town is under an Administrative Order from the U.S. Environmental Protection

Agency (EPA) to upgrade the treatment plant to meet stringent discharge limitations. A new treatment plant has been designed although the town is still in the process of determining other solutions to this situation. It will entail a very large expense and when built and in operation will likely have important implications for planning and public policy far into the future.

Additional projects anticipated in the next five years include:

- Continuation of the Infiltration/Inflow program which involves a lining or reconstruction project each year,
- Continuation of the sewer collection system inspection and cleaning which is conducted on 1/3 of the system each year,
- Updating the sewer system mapping,
- Development of a sewer system facilities plan to investigate expansion of the collection system,
- Preparing a GIS map of the system including locating all wastewater system structures, and
- Revising or updating the current Sewer Use Ordinance to ensure it includes defensible local limits.

Future needs and plans include an assessment of staffing needs with the current contractor (AOS) once the new treatment facility is constructed and on-line as well as pump station rehabilitation (River Street and Hillcrest Road pump stations).

### ***Library***

The Jaffrey Public Library, located at 38 Main Street near the center of downtown, is a three-story, 14,190 sq.ft. brick structure constructed in 1896. The addition, which houses a new children's area and meeting room, opened in 1990. Library hours of operation are Mondays, Wednesdays, Fridays 11:00am – 5:30pm, Tuesdays and Thursdays 1:00pm – 8:00pm, and Saturdays 9:00am – 1:00pm. Library staff consists of two full-time and three part-time employees and four to five volunteers. Administration is carried out by an elected five-member Board of Trustees, who set the policy, oversees the maintenance of the facility, and serves as a link between the library and the community.

Library resources include a book collection of over 31,000 volumes, an audiovisual collection of 1,636 items including DVDs, CDs, audiotapes and videotapes, over 100 puppets and 59 magazines and newspapers. Special collections include the Amos Fortune Papers and an historical collection focusing on Jaffrey and New Hampshire history.

### **Future Needs and Plans**

As the Library's circulation of materials increases and services are expanded, the most serious issue will be insufficient staffing. Over the next few years, Library staff plan to assess current hours of operation to determine whether an increase or change is warranted to serve the community better. As part of that effort, staff hopes to increase staffing to provide consistent service during all hours of operation.

In addition, machines and software need to be upgraded on an annual basis to remain current with expanding technology. The Town has an Information Technology plan in place and Library staff is hopeful that funding will be made available to allow for the implementation of this plan.

During 2006, the library plans to do an audit of the heating system. Based on the results, a proposal will be developed for a more efficient method of heating and cooling the library building. Once this has been accomplished, the Town will be asked to establish a Capital Reserve for this project.

### ***Recreational Facilities and Services***

Jaffrey's Parks & Recreation Department, located at 31 Howard Hill Road, provides a number of year-round recreation programs and services. Recreation facilities include the following:

#### ***Contoocook Lake Beach***

The Contoocook Lake Beach has approximately 4,000 youth and adult users annually. The facility includes a swimming area, changing rooms, restrooms, concession stand, swimming lessons, volleyball court, horseshoe pit, and covered picnic pavilion. The facility is open seasonally, at which time it is staffed by a number of part-time lifeguards and concession stand operators. Facility and staff are adequate at this time.

#### ***Shattuck Park at Thorndike Pond***

The Shattuck Park at Thorndike Pond has approximately 2,000 youth and adult users annually. The facility includes a swimming area, grills, picnic pavilion and tables, boat landing, and portable toilets (seasonal). The facility is open from dawn to dusk seasonally, and is staffed by part-time lifeguards

#### ***Humiston Field***

Humiston Field has approximately 3,900 youth and adult users annually. The facility includes a playing field (multi-sport), playground, basketball courts, skating rink, office, youth center, and parking lot. The facility is open from dawn to dusk seasonally with some evening events, and is staffed by a full-time Director, part-time Assistant Director, full-time maintenance support, and part-time clerical support.

#### ***Rails to Trails***

Rails to Trails is a relatively new recreational opportunity available in Jaffrey. Trails meant for multiple forms of recreation including walking, biking and snowmobiling are available for use by youth and adults.

#### ***Children's Woods***

Children's Woods is an area set aside for trail usage and encompasses 71 acres.

The Parks and Recreation Department oversees over 100 acres of park and recreation areas in Jaffrey.

### **Future Needs and Plans**

#### ***Humiston Field***

Secure the property adjacent to field (currently owned by Mr. Hunt) when possible to expand facility (final expansion of the area). This is the last parcel of property that is necessary to provide maximum multiple usage of the facility and will extend the field from Howard Hill Road to Squantum Road. The addition of this parcel will provide more field space (more adequate right field for baseball) as well as more storage space (keep the garage currently on the property) for equipment. Additionally a baseball / softball batting cage could be added to the area in front of the parking lot on Howard Hill Road, allowing teams to practice batting without using the entire field.

#### ***Rails to Trails***

Expand the trail from the center of downtown Jaffrey towards Peterborough.

In addition, the Town of Jaffrey recently purchased a site located in downtown Jaffrey for use as a future Community Center. The area, approximately 9 acres in size, borders the Rails to Trails path and the Contoocook River. The site is also in close proximity to Children's Woods. Immediate plans include the construction of a ball field. A \$40,000 Land and Water Conservation Funds grant from the New Hampshire Division of Parks and Recreation was secured in 2004-2005 for that purpose. Construction of the field is expected to be completed in 2007. Future plans for the site include the addition of a Community Center for use by all Jaffrey residents.

### ***Educational Facilities***

Jaffrey is a member of the Jaffrey-Rindge Cooperative School District which serves the towns of Jaffrey and Rindge. The District is administered by School Administrative Unit (SAU) #47 located at 10 Main Street in Jaffrey.

The Jaffrey-Rindge Cooperative School District offers a comprehensive program for preschool through grade 12. The facilities serving Jaffrey residents include the Jaffrey Rindge Preschool, Jaffrey Grade School, Jaffrey-Rindge Middle School, and Conant High School, all of which are located in Jaffrey. Further, Jaffrey residents may utilize the special needs preschool located at the Rindge Memorial School (the second elementary school within the cooperative District.)

### ***Jaffrey-Rindge Inclusive Preschool***

The Jaffrey-Rindge Inclusive Preschool, located at Rindge Memorial School at 58 School Street in Rindge, provides services to children three and four years of age. As of December 21, 2005, 19 children were enrolled, 14 of whom were from Jaffrey, the remaining from the Town of Rindge.

### ***Jaffrey Grade School***

The Jaffrey Grade School, located at 18 School Street in Jaffrey, serves children in kindergarten through grade 5. The school had 409 pupils attending as of October 3, 2005, of which 397 are Jaffrey residents while the remaining students are residents of the Town of Rindge. (Note: Students in the "Little Michigan" section of Rindge attend the Jaffrey Grade School due to bus routes.) The school employs 1 administrator, 32.9 professionals, 5 Special Education professionals, and 15.5 support staff members. None of the teachers share responsibilities at the other schools.

### **Future Needs and Plans**

Present equipment and facilities are used to capacity. Classes are generally an acceptable size, with some variation year-to-year based on each cohort. Should the overall student population grow, additional classrooms would be warranted. Also, due to the limited land parcel on which the school resides, parking and playing field size are inadequate. The school district should consider the acquisition of adjoining properties. This should be done with caution so as not to overwhelm the local neighborhood.

Staff and programs are often displaced to accommodate other uses. For example, the music and art teachers cannot utilize their rooms during school-wide testing or during book fairs.

### ***Jaffrey-Rindge Middle School***

The Jaffrey-Rindge Middle School, located at 1 Conant Way in Jaffrey, serves students in grades 6-8. As of October 2005, 412 students were enrolled of which 205 are Jaffrey residents. The remaining population is from the Town of Rindge.

In March 2005, citizens of Jaffrey and Rindge passed a \$678,425 bond to address critical maintenance needs.

Since passage, the following items have been addressed:

- Installation of PA/phone system in each office and classroom
- Installation of controls to fix heating issues (CO2 controls, relays, wiring, etc.)
- Replacement of non-functioning/worn out outside doors

#### Future Needs and Plans

Another bond was approved in 2006 for \$9,445,500 and since that time that school has been working on the following projects and will continue this work in the future:

- 8 new classrooms (a 15,900 s.f. addition)
- 400 s.f. cafeteria/kitchen core expansion
- Upgrade mechanical and electrical systems throughout
- Replace windows
- Renovate 2 science labs; create 1 lab
- Reconfigure office for better entry monitoring
- Upgrade finishes
- Asbestos abatement
  - Miscellaneous exterior repairs (repointing, caulking, brick replacement, etc.)
- Gym Floor and Track

#### *Conant High School*

Conant High School, located at 3 Conant Way in Jaffrey, serves students grades 9 through 12. School enrollment is 484 (October 3, 2005 data) of which 242 are Jaffrey residents while the remaining students are residents of the Town of Rindge.

The School is staffed with 2 administrators, 36.3 professionals, 10.2 Special Education professionals, and 12.5 support staff members. The music teacher has shared responsibilities at both the middle and high school. (*Note: Kitchen staff is not included in the support staff numbers as they are employed through contracted services, Chartwells.*)

The facility consists of 31 full-size classrooms and two modulars which create six classrooms. In addition, the facility includes an Industrial Arts room and Pratt Auditorium and exercise room that are shared with Jaffrey-Rindge Middle School.

The future of the site on Route 202 at the Jaffrey-Rindge border that was purchased as a location for a new high school should be assessed.

In March 2005, citizens of Jaffrey and Rindge passed a \$678,425 bond to address critical maintenance needs. Since passage, the following items have been addressed:

Replacement of outside doors/frames

- Installation of a new fire system (with addressable system) and new scalable security system
- Installation of HVAC for interior classrooms
- Restroom installation in the modulars
- Replacement of all heating convectors
- Window replacement
- Installation of PA/phone system in each office and classroom
- Purchase portable handicap lift for access to stage.

Future Needs and Plans

Overall, the existing equipment and facilities are poor for the needs of the students and staff. The school was built to accommodate 400-420 students, though current student population is at 484 and expected to increase to 530+ students. Specifically, special education program space has been in demand since 1973 while current technology requires additional storage needs. Handicap accessibility improvements are also required.

Additional needs and plans projected for the next five to ten years include:

- Space for alternative programs for “at-risk” students;
- Modern science labs;
- High school regulation gym;
- Modern auditorium;
- Athletic fields/track and physical education storage space;
- Storage space for all academic departments;
- Classrooms to accommodate all staff
- Modern family consumer science, health, and food / nutrition programs;
- Art, music, and industrial arts space, storage and staffing; and,
- Vocational programming space, storage and staffing.

In March 2006, voters of Jaffrey and Rindge passed a \$9,445,500 bond article for Phase I of renovation/addition projects at Jaffrey-Rindge Middle School and Conant High School. Key features of the bond, affecting the high school include:

- Addition of sprinkler system
- Replacement of guard rails and frames
- Renovation of 4 science labs
- Addition of ramp to boys’ locker room
- Construction of a 400 meter track and soccer field
- Make existing restrooms handicap-accessible
- Renovation of nurse’s area (add restroom)
- Replace gym floor and bleachers
- Miscellaneous space changes
- Asbestos abatement

***Cemeteries***

Public cemeteries in the Town of Jaffrey include:

Cemetery	Established	Location	(acres)	Plots	Remaining for sale
Village (Baptist) Cemetery	1829	NH 124	1.9	363	None remaining
Cutter Cemetery	1858	Harkness Rd	1.3	72	None remaining
Old Burying Ground	1784	Blackberry Ln	1.8	1,100	None remaining
Phillips Cemetery	1789	Fitzwilliam Rd	1.4	300	21
Phillips-Heil Cemetery	1985	Fitzwilliam Rd		135	113
Conant Cemetery	1860	Stratton Rd	12.8	1,418	381
Cutter Extension	2004	Harkness Rd	1.5	637	637
Smallpox Cemetery	1792	Off Fitch Rd	<1	6	None remaining
<b>TOTAL</b>			ca.21	4,031	1,152

Source: Department of Public Works and Jaffrey Cemetery Committee



Up until 2002 the cemeteries were maintained by Town employees. The cemeteries are now maintained by a contractor. In 1991 a Cemetery Committee was established to advise the Town on the operation, maintenance and preservation of Jaffrey's public cemeteries. At the 2000 Town Meeting a trust fund was established to cover the cost of monument repair and restoration.

The only private cemetery in Jaffrey is St. Patrick Cemetery on Route 202 at Hillcrest Road. It dates to 1890, is approximately seven acres in size and serves the Roman Catholic community.

#### Future Needs and Plans

Cemetery needs identified by the Department of Public Works and the Cemetery Committee include 1) improving cemetery record keeping; 2) restoring the iron fencing in Conant Cemetery; 3) commencing the development of the Cutter Cemetery extension—road and wall building—and the sale of lots there; and 4) selected removal of trees posing hazards; 5) developing pedestrian access to the Smallpox Cemetery, possibly using volunteers.

Instances of recent development close to cemetery boundaries resulting in adverse visual impact need to be addressed.

### ***Other Municipal Community Facilities and Services***

#### *Streetlighting*

The lighting along Jaffrey's streets is maintained and operated by Public Service of New Hampshire which charges the Town an electrical rate based on size and type of fixture. There are presently 241 fixtures, 212 of which are of the type known as mercury vapor.

The policy of the Town is to have streetlights at intersections and along roads that have sidewalks.

There is a growing concern in Jaffrey and elsewhere over light pollution which, among other things, can obscure the nighttime sky and give rise to objectionable glare affecting neighbors, drivers and pedestrians. Private flood and security lighting needs to be better controlled to avoid glare and overlighting. The Town itself employs lighting on some of its facilities that does not need to be continuously on, but rather could be motion-activated.

#### *Town Commons*

There are five public greens, squares, parks or commons that are owned and maintained by the Town.

- The first and oldest is the Meetinghouse Common which provides the setting for the Meetinghouse.
- Village Square, now referred to as Memorial Park. The park, approximately 20,000 square feet, includes: the Bandstand, the Buddies Monument, the World War II Gold Star Mothers memorial, the Town Elm.
- The Library Green, on which stands the Soldiers' Monument.
- Charity Square, a triangular open space of approximately 10,000 square feet that stands in front of the Post Office.
- Bissell Alderman Park, located on a strip of land of 5,663 square feet running from the corner of Turnpike Road and Peterborough Street, along Peterborough Street, bordering the Rite-Aid parking lot.

### Future Needs and Plans

The five Town commons are important and historic open spaces and should be well maintained, protected and preserved.

### *Public Art and Memorials*

Among the public art and memorials in Jaffrey are the Soldiers' Monument, Buddies Monument, World War II – Gold Star Mothers memorial, Humiston Memorial Park, Jaffrey War Memorial Park, the Watering Trough, Baptist Church cornerstone, and the headstones in Jaffrey's cemeteries.

### *Municipal Parking Lot*

The stand-alone Parking Lot located on Blake Street is .73 acres and can accommodate 37 vehicles (7 spaces are designated for overnight parking). It's the only public facility for legal overnight parking. This lot is owned by The State of New Hampshire.

### *Town Clocks*

There are two tower clocks in Jaffrey that are owned by the Town. They are located in the Cutler Memorial (Jaffrey Woman's Club), and the Meetinghouse tower.

## **NON-MUNICIPAL COMMUNITY FACILITIES AND SERVICES**

The Town of Jaffrey provides funding support to a variety of non-municipal community facilities and services. This is most often done as specific warrant articles presented at the annual Town Meeting. The organizations so supported in the past five years include:

- a. Home Health Care, Hospice and Community Services
- b. Monadnock Family Services
- c. Monadnock Community Early Learning Center
- d. The Community Kitchen
- e. Southwestern Community Services
- f. Jaffrey-Rindge Memorial Ambulance. (see below):

Jaffrey-Rindge Memorial Ambulance, Inc. (JRMA) is a private, non-profit corporation that provides emergency and non-emergency response for the Towns of Jaffrey and Rindge. JRMA is also a part of the Mutual Aid Service that includes all the communities in the towns of Southwestern New Hampshire. JRMA service coverage area extends for 77 square miles and includes about 12,000 year-round residents and the students and employees at Franklin Pierce College.

## **COMMUNITY COMMITTEES AND ORGANIZATIONS**

The Town has many committees and organizations that have physical facilities used by the public or otherwise have a role to play in providing community services and in bettering life in Jaffrey. Among those that are important in complementing the community facilities and services of the Town are:

- a. The churches of Jaffrey
- b. The Boy Scouts , Girl Scouts and similar organizations
- c. Jaffrey Chamber of Commerce
- d. Jaffrey Woman's Club
- e. The Lions Club
- f. The Jaffrey-Rindge Rotary Club
- g. American Legion
- h. Veterans of Foreign Wars
- i. Korean and Vietnam Memorial Park

- j. TEAM Jaffrey (see below)
- k. Jaffrey Civic Center (see below)
- l. Jaffrey Historical Society (see below)
- m. Jaffrey Center Village Improvement Society (see below)

Several of these are included below in more detail:

### **TEAM Jaffrey**

TEAM Jaffrey is chartered under the state and national “Main Street Programs” under the sponsorship of the National Trust for Historic Preservation. Main Street’s four-point, eight-principle approach addresses the following four areas of concern and combines activities in these areas to develop a community’s individual strategy for redeveloping the downtown. The four points are organization, promotion, design, and economic restructuring and the eight principles are comprehensive, incremental, self-help, public/private partnership, identifying and capitalizing on existing assets, quality, change, and action-oriented. TEAM Jaffrey’s mission is “to enhance, revitalize, and aesthetically improve the downtown area of Jaffrey, NH; to promote tourism, support the existing commercial establishments and encourage new business opportunities.”

### **Jaffrey Civic Center**

The Jaffrey Civic Center is located at 40 Main Street in a 7,500 sq.ft., brick building constructed in 1965. The Civic Center offers programs and activities to support the artistic, cultural and civic needs of the Monadnock Region and is funded through private sources. The Civic Center employs a full-time Director, part-time assistant and many part-time volunteers.

The Center supports local artistic, cultural and civic needs including hosting art displays, poetry readings and meetings, providing youth activities such as historical lectures, scout meetings and art classes, and maintaining an auditorium which holds up to 125 people.

#### Future Needs and Plans

Potential issues for the Center over the next five years include the need for additional funding and staff. In addition, the facility may be renovated to become fully handicap accessible, including installation of an elevator.

### **Jaffrey Historical Society**

The Jaffrey Historical Society was founded in 1958 and is fortunate to have modern facilities for storage and display of its collections in the basement level of the Jaffrey Civic Center on Main Street. On the Common close to the Meetinghouse stands the ca. 1822 Little Red Schoolhouse which is owned by the Town but is maintained and managed by the Society.

The Old Fire Station on Main Street in Jaffrey Center is owned by the Society and houses Jaffrey’s fire museum. Among the collection are several very early pieces of fire apparatus.

The Society presents a series of public programs throughout the year. Membership in the Society is open to all. The Society is a not-for-profit organization.

#### Future Needs and Plans

The Society would like to increase its membership and is particularly anxious to have more participation from the younger persons. Outreach to the local schools is a long-range goal.

**Jaffrey Center Village Improvement Society**

The Jaffrey Center Village Improvement Society is a not-for-profit organization founded in 1906. Its mission is “to improve and to ornament the streets and public grounds of Jaffrey Center ... [and] to maintain and protect Melville Academy and its contents...” It owns and maintains seven properties, all of which are for the benefit of the public. Melville Academy is maintained as a local history museum and features artifacts and exhibits portraying the history of Jaffrey.

Future Needs and Plans

The Society will continue to protect and preserve its properties and to act as an advocate for the Jaffrey Center village and its historic and cultural resources.

## RECREATIONAL RESOURCES

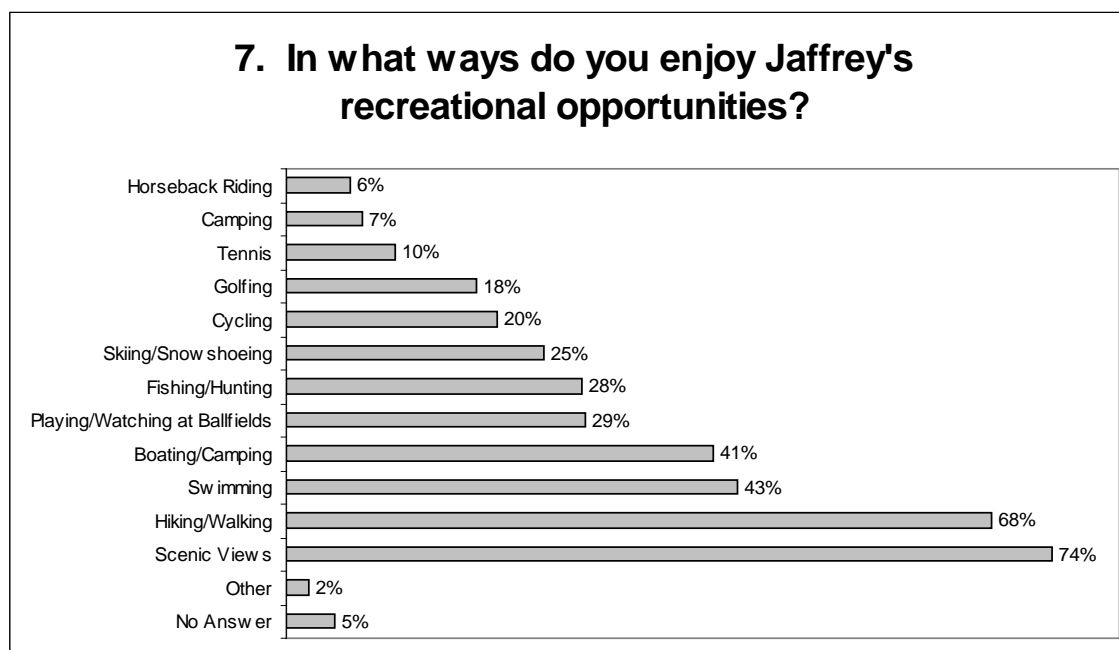
### INTRODUCTION

Recreational and community resources are important to the life and vitality of any community. In Jaffrey, the two are linked more often than not. Jaffrey is the town that is host to Southwestern New Hampshire's name and symbol: Monadnock. Jaffrey has a direct interest and future stake in the recreational opportunities that Mount Monadnock and its environs have to offer.

The Town's devotion to recreational opportunities can be summarized through the mission statement adopted by Jaffrey's Recreation Department, "To create and sponsor recreational opportunities for all community members, which enhance the quality of life and provide a positive and safe environment for body, mind and spirit."

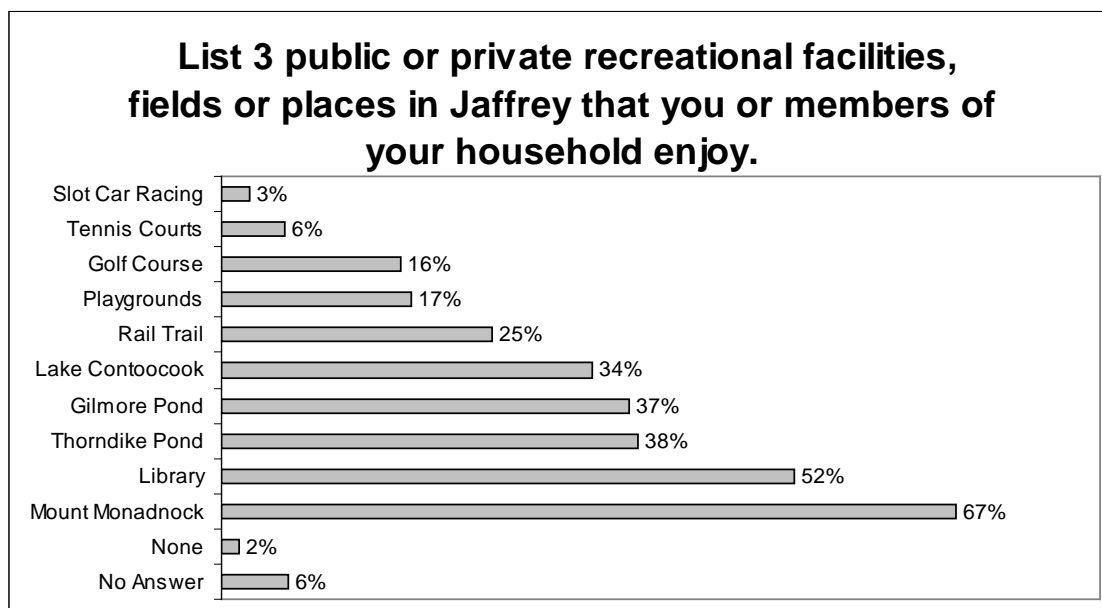
Jaffrey's 2005 Community Survey contains responses and valuable information indicative of trends on how people in Jaffrey spend their recreational time. When asked, "In what ways do you enjoy Jaffrey's recreational opportunities?" citizen responses were as follows:

**Figure 11**



The 2005 Jaffrey Community Survey also asked residents to list a total of three recreational facilities (public or private) enjoyed by their household. When compiled, the responses reveal that Mount Monadnock, the Jaffrey Public Library, Thorndike and Gilmore Ponds, and Lake Contoocook comprise the overall majority of "enjoyed recreational facilities".

Figure 12



When asked, “Is the town doing enough or not enough to protect natural, cultural, and historic resources in Jaffrey?” approximately three quarters of the responses were almost evenly split between “Enough” at thirty-six percent and “Not Enough” at thirty-eight percent. Seventeen percent had “No Opinion” and roughly two and a half percent stated that the Town does “Too Much” in its protection of natural, cultural, and historic resources.

## INVENTORY OF RECREATIONAL FACILITIES

### *Parks and Recreation Department*

Jaffrey’s Parks & Recreation Department, located at 31 Howard Hill Road, provides a number of year-round recreation programs and services. The Department is staffed by a Recreation Department Director, Program Director, Administrative Assistant, Maintenance Supervisor, Senior Program Coordinator, and A.F.T.E.R. Coordinator, as well as a number of seasonal staff to support programs offered by the Department. Recreational facilities include the following:

#### *Humiston Field*

Humiston Field has approximately 3,900 youth and adult users annually, many of whom come from other communities. The facility includes a playing field (multi-sport), playground, basketball courts, skating rink, office, youth center, and parking lot. The facility is open from dawn to dusk seasonally with some evening events, and is staffed by a full-time Director, part-time Assistant Director, full-time maintenance support, and part-time clerical support. Recent renovations include the addition of a covered pavilion and picnic tables in 1998, parking lot addition and repaving of the court surface in 1999, and addition of an irrigation well in 2003. The facility is publicly funded at a cost of \$30,000 annually.

#### *Contoocook Lake Beach*

The Contoocook Lake Beach has approximately 4,000 youth and adult users annually. The facility includes a swimming area, changing rooms, rest rooms, concession stand, swimming lessons, volleyball court,

horseshoe pit, and covered picnic pavilion. The facility is open seasonally, at which time it is staffed by a number of part-time lifeguards and concession stand operators. Recent renovations include the addition of the Concession stand and covered pavilion in 1998, and the volleyball court and horseshoe pit in 2001. The facility is publicly funded at a cost of \$22,000 annually. Facility and staff are reported to be adequate at this time.

#### *Shattuck Park at Thorndike Pond*

The Shattuck Park at Thorndike Pond has approximately 2,000 youth and adult users annually. The facility includes a swimming area, grills, picnic pavilion and tables, boat landing, and portable toilets (seasonal). The facility is open from dawn to dusk seasonally, and is staffed by part-time lifeguards. Recent renovations include improvements to the access road in 1997 and renovation of the covered picnic pavilion in 2005. The facility is publicly funded at a cost of \$7,500 annually. Facility needs include the addition of permanent restroom facilities.

In addition to those facilities outlined above, the Recreation Department offers a number of programs, some of which are seasonal, including youth sports (i.e. basketball, ski club, baseball, swim lessons, etc), summer camps, spring break and winter day programs, and special events (such as a bus trip to a holiday show in Boston).

#### *American Legion Field*

This baseball/softball field is located on private property adjacent to the American Legion Post on Webster Street. Use of the field, along with some of the maintenance and operating costs for the field are donated by the American Legion to the community group that organizes youth baseball in Jaffrey and Rindge. Legion Field is the primary field for approximately 15 Cal Ripken League baseball and Jenny League softball teams of players aged 12 and under.

#### *Jaffrey Civic Center*

The Jaffrey Civic Center is a regional host to many activities and events such as art displays, poetry readings and meetings, historical lectures, scout meetings and art classes. Further information on the Civic Center may be found in the Community Facilities chapter.

#### *Jaffrey Meetinghouse*

The Meetinghouse in Jaffrey Center, built in 1775, was originally used for Town Meetings and church services. Today, the Meetinghouse is still publicly owned and continues to be used for meetings as well as entertainment and plays. The Meetinghouse can be rented by private organizations and individuals for special events, subject to certain use restrictions (no food or drink, etc.) due to its historic nature. Further information on the Meetinghouse may be found in the Community Facilities chapter.

#### *The Jaffrey Public Library*

The Jaffrey Public Library is used for presentation of a film series, book discussion groups, story hours, special programs, internet access, school visits, and a meeting room for community use. Further information on the library may be found in the Community Facilities chapter.

#### *Mount Monadnock State Park*

Six major trailheads with parking at each trailhead provide hiking access to the mountain from the towns of Jaffrey and Dublin. Four of these trailheads are located in Jaffrey; the Marlborough Trail Head, Old Toll Road Trail Head, Main Park Entrance, and Gilson Pond Picnic Area. A fifth trailhead in Jaffrey is also planned for the Royce Trail on the south side of the mountain.

Mount Monadnock has year-round hiking and camping. All trails are open during the spring, summer and autumn months. During the winter there are sixteen miles of backcountry skiing and hiking at the park

headquarters. This is the only automobile access open, plowed and maintained during the winter months. There are twenty-eight campsites located at the main entrance of Mount Monadnock; ten of the sites are by reservation only; 7 are for youth group reservations; and 11 are for first-come/first-served campers.. Mount Monadnock's busiest season is middle September through middle October with all of the beautiful fall foliage.

#### *Rails to Trails*

The Monadnock railroad was acquired by NH DOT for use as a recreational trail from the Massachusetts state line in Rindge through Rindge and Jaffrey. The trail continues through Peterborough and into Hancock. The rail trail essentially parallels US 202 through Jaffrey and passes through downtown at the intersection of NH 124, US 202 and Squantum Road at the east end of the "202 dogleg". The rail trail is used through four seasons by walkers and cyclists, cross country skiers, equestrians and snowmobiles. Although motorized uses are prohibited during the summer, unauthorized rail trail use by ATV's can create conflicts among trail users and trail abutters. Currently the trail is missing one bridge to cross a stream crossing of a tributary to Cheshire Pond across US 202 from the rest area at the Pond.

The initial trail construction phase completed in 2003 includes 1.5 miles of hard-packed trail from the Rindge town-line to Downtown Jaffrey. The initial project was funded through Transportation Enhancement funds from the NH Department of Transportation. The trail is planned to expand from downtown Jaffrey toward the Town of Peterborough. Funds have been acquired for the short stretch of trail through the downtown area, ending behind the former W.W. Cross building. Construction of this stretch of trail is planned for 2007. The trail is maintained by the Jaffrey Recreation Department.

#### *Future Community Center*

The Town of Jaffrey recently purchased a site located in downtown Jaffrey for use as a future Community Center. The area, approximately 9 acres in size, borders the Rails to Trails path and the Contoocook River. The site is also in close proximity to Children's Woods. Immediate plans include the construction of a ball field. A \$40,000 Land and Water Conservation Funds grant from the New Hampshire Division of Parks and Recreation was secured in 2004-2005 for that purpose. Construction of the field is expected to be completed in the Fall of 2006. Another grant application for completion of a feasibility study, estimated to cost \$12,000, will be submitted in 2006. Future plans for the site include the addition of a Community Center for use by all Jaffrey residents. The vision statement for development of the Community Center is "To develop a multi-purpose, flexible, expandable and timeless facility created by the community as a gathering place for the youth, young adults, parents and grandparents of the community."

#### *The Shattuck Golf Club*

The Shattuck Golf Club is a country club that is open to the public and is located on Dublin Road in Jaffrey.

#### *The Woodbound Inn*

The Woodbound Inn is a four-season family resort and convention center located on Contoocook Lake, straddling the boundary between the towns of Jaffrey and Rindge. It offers a restaurant, par 3 golf course, nature walks, hiking trails, swimming, tennis, and cross-country skiing.

#### *Kimball Farm Ice Cream*

This regionally-known restaurant and ice cream stand attracts visitors for the food, as a social meeting spot, and for Cruise Night events showcasing classic cars during the summer months. It is also a destination for "fly-in" gatherings due to its location adjacent to the Jaffrey Municipal-Silver Ranch Airport.

#### *Jaffrey Municipal-Silver Ranch Airport*

This airport provides services for charter and private small aircraft. Seasonally, charter aircraft are available for scenic rides around the Monadnock area.



*Silver Ranch Livery Stable*

This equestrian center offers horseback riding, horse-drawn carriages and seasonal hayrides and sleigh rides.

*The Grandview Inn & Resort*

The Grandview Inn is a four-season resort and function center located adjacent to Mount Monadnock in Jaffrey. It offers dining and banquet services, hiking, cross-country skiing, snowshoeing, day spa services and an equestrian center.

*Monadnock Bible Conference*

The Bible Conference is a youth group and function center located adjacent to Monadnock State Park. Its function rooms and swimming pool are available for group rentals, and the swimming pool is also available for fee-based community use from September to June.

**LOCAL ACTIVITIES***Trail-Oriented Activities*

Many of the recreational activities enjoyed by Jaffrey residents and visitors revolve around the use of trails and unmaintained roads located on conservation lands or other undeveloped areas of the town. These activities can include hiking, cross-country skiing, snowshoeing, and mountain biking on most conservation lands. Class VI town roads are also utilized for these activities, as well as snowmobiling and ATV riding. The primary conservation lands and Class VI roads appropriate for these activities are listed below:

<b>Conservation Land</b>	<b>Protecting Agency</b>
Monadnock State Park & Vicinity	NH Dept. of Resources & Economic Dev. (DRED) Society for the Protection of NH Forests Town of Jaffrey
Gap Mountain Reservation	Society for the Protection of NH Forests
Meade Brook Land	The Monadnock Conservancy
Andrews/ Fairbanks/Russell Lands	Society for the Protection of NH Forests
Blaine Forest	Society for the Protection of NH Forests
Children's Woods & Carey Park	SAU 47 & Town of Jaffrey
Bradley-Draper Memorial Forest	New England Forestry Foundation
Morgan Forest	Society for the Protection of NH Forests
Haven State Forest	NH Dept. of Resources & Economic Dev. (DRED)

*Class VI Roads*

The following roads are also used to varying degrees for recreational purposes:

- Brigham Rd
- Chadwick Rd
- Chamberlain Rd
- Fiske Rd
- Gap Mountain Rd
- Gibbs Rd
- Jaquith Rd
- Milliken Rd
- Mower Rd
- Old County Rd
- Red Gate Rd
- Sanders Rd

- Scott Pond Rd
- Turner Rd
- Woodbury Hill Rd

***Boating***

Jaffrey has one lake and a number of small to medium-sized ponds suitable for small boats and fishing activities. Public access boat launches are located on Mountain Brook Reservoir, Thorndike Pond, Gilmore Pond and Frost Pond and on the Contoocook River in downtown Jaffrey.

***Camping***

Camping opportunities are available in Jaffrey both in campground settings and at youth-oriented summer camps. Campgrounds are located at Monadnock State Park (summer and winter camping) and at the private Emerald Acres Campground on Cheshire Pond. Summer camps include Camp Wa-Klo, Camp Wanocksett Boy Scout Camp, Monadnock Environmental Dance Camp (at Monadnock State Park), and Camp Sunshine at the Monadnock Bible Conference.

***Swimming***

Outdoor swimming is provided at seasonally supervised beaches on Lake Contoocook and Thorndike Pond, as well as at unsupervised locations on many of the ponds in town. Indoor swimming is available to the public for a fee at the Bible Conference swimming pool during the winter months.

***Rock and Ice Climbing***

The summit of Mount Monadnock includes selected short pitches appropriate for technical rock and ice climbing.

**LOCAL EVENTS**

Annual and ongoing events in Jaffrey include the following:

- Monadnock Arts Auction
- Jaffrey Winter Carnival
- Easter "Eggstravaganza"
- Memorial Day Parade & Honoring of War Vets at town cemeteries
- Riverfest, Downtown
- Annual Booksale, Jaffrey Public Library
- Jaffrey Farmer's Market, Saturday mornings 9am-12noon, Monadnock Plaza
- July 4th in Jaffrey: Reading of the Declaration of Independence, Ice Cream Social, Strawberry Shortcake Bazaar, Band Concert & other events held throughout town
- Annual Jaffrey Garden Tour
- United Church of Jaffrey Annual Fair
- Amos Fortune Forum at the Jaffrey Meetinghouse
- Concerts on the Common, Downtown
- First Church Annual Fair, Jaffrey Meetinghouse Common
- Festival of Fireworks, Jaffrey Airport
- Oktoberfest & Golf Tournament
- Scarecrows on the Common
- Community Spring & Fall Cleanup Days
- "Christmas in Jaffrey" - a full week of seasonal community activities including house tours,
- Tree lighting, entertainment, church bazaars and other events held throughout town
- Southern NH Scottish Games and Celtic Music Festival at Silver Ranch

- Annual Polo Game at the Grandview Inn
- Annual International Dinner at the Shattuck Golf Club
- May Day Festivities

## LOCAL LODGING

### *The Benjamin Prescott Inn*

Surrounded by picturesque 500-acre farm., the Benjamin Prescott Inn offers fine hospitality in a beautifully restored 1853 home. The Inn is located at 433 Turnpike Road, Route 124.

Telephone: (603) 532-6637

Toll Free: (800) 952-6637.

More Information: [www.benjaminprescottinn.com](http://www.benjaminprescottinn.com)

Email: [innkeeper@benjaminprescottinn.com](mailto:innkeeper@benjaminprescottinn.com).

### *The Currier's House*

The Currier's House is an 1810 country bed and breakfast. Located in Jaffrey Center at 5 Harkness Road.

Telephone: (603) 532-7670

More Information: [www.thecurriershouse.com](http://www.thecurriershouse.com)

Email: [curriers@monad.net](mailto:curriers@monad.net)

### *The Grand View Inn & Resort*

The Grand View Inn & Resort is a 19th-century country mansion set on 330 acres at the base of Mount Monadnock. Located at 580 Mountain Road, it also offers a restaurant, day spa services and an equestrian center.

Telephone: (603) 532-9880.

More Information: [www.TheGrandViewInn.com](http://www.TheGrandViewInn.com)

### *The Inn at Jaffrey Center*

The Inn at Jaffrey Center is within sight of Mount Monadnock and is open through out the year.

Located at 379 Main Street.

Telephone: (877) 510-7019; (603) 532-7800.

More Information: [www.TheInnAtJaffreyCenter.com](http://www.TheInnAtJaffreyCenter.com)

### *The Woodbound Inn*

The Woodbound Inn is a family resort located on Lake Contoocook providing views of Mount Monadnock.

Located at 62 Woodbound Road in Rindge.

Telephone: (800) 688-7770, (603) 532-8341.

## LOCAL RESTAURANTS

Athens Pizza House

86 Peterborough St

Telephone: 603-532-4466

Aylmer's Grille, LLC

21B Main Street

Telephone: (603) 532-4949

Web Site: [www.aylmersgrille.com](http://www.aylmersgrille.com)

E-Mail: [aylmer@aylmersgrille.com](mailto:aylmer@aylmersgrille.com)

Jade Ocean  
5 Main St  
Telephone: (603)532-6727

Jaffrey Pizza Barn  
6 Blake Street  
Telephone: (603) 532-8383  
More Information: [www.jaffreypizzabarn.com](http://www.jaffreypizzabarn.com)  
E-Mail: [npanagiotes@webryders.com](mailto:npanagiotes@webryders.com)

Kimball Farm  
PO Box 382, Jaffrey, NH 03452  
Telephone: (603) 532-5765

McDonalds of Jaffrey  
85 Peterborough Street  
Telephone: (603) 532-4517

Jaffrey's Country Café  
172 Peterborough St, Jaffrey, NH  
Telephone: (603) 532-6885

The Inn at Jaffrey Center  
79 Main St, Jaffrey, NH Telephone: (603)532-7001

O'Brien's Food and Spirits  
10 Turnpike Road  
Telephone: (603) 532-9596

## HISTORICAL AND CULTURAL RESOURCES

### INTRODUCTION

The Town of Jaffrey enjoys a rich cultural, agricultural and industrial heritage – a heritage that defines its distinctive small town character. To a remarkable extent, the history of Jaffrey can be told through the wide range of its surviving historical resources – houses, civic and educational buildings, religious structures, mills, cemeteries, farmsteads and surrounding open lands, stone walls, bridges and other transportation structures, and cellar holes – many of which owe their existence to Mount Monadnock or the water power afforded by the Contoocook and smaller streams. All of these resources are unique to Jaffrey and key to differentiating it from other communities. In order to ensure the character of Jaffrey is maintained, it is critical that the community plan for the future of these resources. With carefully managed growth, Jaffrey can retain its distinctive historic character while still meeting the myriad needs of the community.

This chapter includes an overview of how historical events have shaped Jaffrey's landscape (a more detailed narrative can be found in the Appendix), a description of historic preservation efforts to date, a presentation of prior and current preservation-related issues, and current goals to ensure future preservation of the town's historical resources.

While the focus of the chapter is on historical resources, the intertwined relationship of Jaffrey's historical and natural resources cannot be ignored, and many of the goals acknowledge that the future character of the town is tied to careful management of both.

### AN OVERVIEW OF JAFFREY'S HISTORICAL DEVELOPMENT

*(Condensed from "A Brief Description of Jaffrey's Historical and Architectural Development" found in the Appendix)*

Jaffrey was laid out as a township in 1749 and incorporated in 1773, one of three Monadnock townships of that period. Farms and small mills were dispersed fairly evenly around the township, but early on a small mill village emerged in Squantum. In 1775 residents built a meetinghouse in what became a hilltop town center, Jaffrey Center, the hub of village affairs for over fifty years. When the Third New Hampshire Turnpike (present-day Route 124) opened in 1802, it passed through Jaffrey Center.

By the late 1830s, East Jaffrey (also on the turnpike) was home to a growing commercial and residential district oriented around a cotton mill and other industries. The railroad's arrival boosted its development, and East Jaffrey evolved into today's downtown. Various diverse village industries sustained the town's vitality throughout the 1900s and fueled the growth of East Jaffrey's neighborhoods and commercial district.

For nearly 200 years, agriculture was the mainstay for most Jaffrey households. Cattle grazing on the slopes of Mount Monadnock made several farmers wealthy men, but most farms were subsistence operations. For a period in the 1830s and '40s, large amounts of potatoes were raised to supply the local starch mills (which, in turn, supplied New England textile mills). Land clearing peaked in the 1850s, after which farming began a slow decline. In the late 19<sup>th</sup> and first half of the 20<sup>th</sup> century, dairy farming was a leading activity; a few farms developed specialties in poultry.

As early as the 1820s, summer tourism became an integral piece of the local economy. The lure of Monadnock and the town's many ponds drew artists, literary figures and academics. Many purchased former farms and renovated them into gracious summer homes with attractive landscaping and painstakingly maintained views of the mountain. A few summer residents developed model gentleman farms, and others played active roles in the town's history.

## **HISTORICAL RESOURCES SURVEY**

Under the auspices of the Historic District Commission, Jaffrey has surveyed most of its historical resources, including residences, churches, schools, civic buildings, mills, farms and outbuildings, and cemeteries. A survey of the town's bridges, historic archeological sites, historic rural roads and significant stone walls is not yet complete.

### ***Jaffrey Historical Resources Survey***

This survey, undertaken in 1986, covered the entire town and provides minimum documentation for most of the historical and architectural resources erected prior to 1940. Each resource is documented on a form that includes a photograph, address, approximate construction date, brief architectural description and some historical information. The survey also includes an overview history of Jaffrey, a town map locating each resource, and recommendations for preservation planning. The survey is on file at the Clay Library.

### ***Jaffrey Agricultural Survey***

In 1996, all of the agricultural resources currently or formerly associated with an active farm and erected prior to 1936 were recorded on survey forms. The data includes addresses, photographs, sketch maps, approximate construction dates, and brief descriptive information for each property. The survey also included a summary of Jaffrey agriculture; an overview of the types of agricultural resources that survive; a town map locating each resource; and detailed documentation for three farms: Sawyer Farm (survey #89), Milliken Tavern/Chiselhurst Farm (#5) and Stevens Farm (#39). The survey is on file at the Clay Library.

### ***Significant Historical Resources***

- Mount Monadnock
- Jaffrey Meetinghouse and town clock
- All six town cemeteries (Conant, Cutter, Old Burying Ground, Phillips-Heil, Village and Small Pox)
- Downtown Jaffrey listed on the National Register of Historic Places (includes early residential structures that preceded the later commercial/institutional development, mills, commercial blocks, churches, civic buildings, school and later residences). Key resources include Clay Library, White Bros. Mill, Common, Cutler Memorial Building and town clock, Jonas Melville House (stone house at 74 Main St.), bandstand.
- Squantum Historic Area (includes Common, row of five early 19<sup>th</sup> c. workers' dwellings, brick industrial building, and several mill owners' houses, including one with Rufus Porter murals)
- Jaffrey Center Historic District (includes Common, Meetinghouse, horse sheds, school house, Old Burying Ground, Cutter Cemetery, Melville Academy, inn, and residences)
- Cheshire Village (includes unusual group of early 19<sup>th</sup> c. mill housing)
- Amos Fortune House, 76-78 Amos Fortune Road (in private ownership)
- Jaffrey's agricultural landscape (includes farm houses and outbuildings, stone walls, open spaces, and views)
- Grand hotels (Mountain Shade House, The Ark and former Monadnock Inn)

- Summer cottages and camps (particularly around Thorndike, Contoocook and Gilmore Ponds)
- Stone-arch bridges (located at Squantum, Old Sharon Road, and two on Old Peterboro Road) and railroad bridges (at least three near Route 202, in vicinity of DD Bean)
- Rural roads

## **SUMMARY OF PAST PRESERVATION ACTIVITY**

### ***Community Groups Involved in Historic Preservation***

- Jaffrey Historic District Commission (HDC): municipal land use body with a regulatory function within the Jaffrey Center Locally Designated Historic District and advisory role throughout entire town
- Jaffrey Historical Society (JHS): non-profit, membership organization that is committed to preserving local history and historical artifacts
- Jaffrey Center Village Improvement Society (JCVIS): non-profit, membership organization committed to maintaining and sustaining a vibrant and historic New England village
- TEAM Jaffrey, part of the NH Main Street Program, established 1999

### ***Community Historic Preservation Efforts***

- One of first towns in NH to introduce a Preservation Chapter in Master Plan
- Most of the town's historical resources surveyed at a reconnaissance level
- First town to undertake a town-wide agricultural survey
- Design guidelines adopted for Jaffrey Center
- Design guidelines adopted for downtown
- Downtown plaque program initiated, using data from the Downtown Jaffrey National Register nomination
- Distinctive street signs utilized within the Downtown Jaffrey National Register Historic District and within Jaffrey Center
- Meetinghouse restored
- Little Red Schoolhouse restored
- Horse Sheds restored
- Park Theater rehabilitated (in progress)
- Historic cemeteries well maintained (ongoing)
- Certified Local Government designation obtained through the NH Division of Historical Resources, enabling Jaffrey to receive technical assistance and training and to apply for matching grants. To date, Jaffrey has received grants for the following projects:
  - Historical Resources chapter for Master Plan, 2006
  - Jaffrey Center Design Guidelines, 1996
  - Agricultural Survey, 1996
  - Conference on meetinghouses and window restoration, 1994
  - *Jaffrey Then and Now*, 1994
  - Historical Resources Survey, 1986
  - Meeting House Window Restoration, 2004-2005
  - Jaffrey Center Walking Tour Guide, 2006

## HISTORIC DISTRICTS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES

### *Downtown Jaffrey, 2002*

Includes over 125 properties and encompasses historic limits of downtown (historically known as East Jaffrey)

### *Jaffrey Center Historic District, 1975*

Includes 36 buildings and associated open space

*NB: The boundaries of the locally designated and the National Register district boundaries for Jaffrey Center coincide.*

## INDIVIDUAL PROPERTIES LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES

### *Jaffrey Mills, 41 Main Street, 1982*

(also known as Stone Brothers & Curtis (White Brothers) Mill)

*NB: Since included within bounds of Downtown Jaffrey Historic District*

## LOCALLY DESIGNATED HISTORIC DISTRICTS

### *Jaffrey Center Historic District, 1970*

Includes 36 buildings and associated open space

*NB: The boundaries of the locally designated and the National Register district boundaries for Jaffrey Center coincide.*

## RECENT PUBLICATIONS RELATING TO LOCAL HISTORY

“A Walk Around Downtown Jaffrey.” (TEAM Jaffrey and Jaffrey Historical Society, 2004)

*Design Guidelines for Jaffrey Center Historic District* (Jaffrey Historic District Commission, 1996)

*Jaffrey Then and Now: Changes in Community Character* (Jaffrey Historic District Commission, 1994)

*Jaffrey Roads and Streets 1773-1980.* (Jaffrey Historical Society, 1982)

*Jaffrey Center, New Hampshire. Portrait of a Village.* (Jaffrey Center Village Improvement Society, Inc., 1976)

## ISSUES AND GOALS

### *Status of Conservation & Preservation Issues Identified in 1997 Master Plan*

This status report was prepared on behalf of the Jaffrey Historical Society by a private consultant in historic preservation specializing in historic building research, community preservation plans, design review guidelines and feasibility studies.

<b>Diminishment of rural landscape:</b>	<b>Better</b>	<b>Same</b>	<b>Worse</b>
Jaffrey's countryside and historic agricultural and rural landscapes need protection			xx
Viewsheds, esp. along major roads, are being lost			xx
Open space is disappearing			xx
Strip development is redefining major roadways		xx	
Existing dirt roads are at risk of becoming paved		xx	



<b>Diminishment of rural landscape:</b>	<b>Better</b>	<b>Same</b>	<b>Worse</b>
New construction occurs without regard to its context, both in terms of design characteristics and setting			xx
Vistas of key sites, such as Mount Monadnock and the Meetinghouse, are not being maintained			xx
<b>Downtown:</b>			
Building rehab is not sympathetic to original building design	xx		
Storefront renovations are often unsympathetic to the historic design	xx		
Contoocook River aesthetics are threatened and/or unrealized	xx		
Traffic/parking tend to dominate/overwhelm downtown			xx
New development is out of character with neighboring structures			xx
Residential buildings are unsympathetically converted to commercial uses	xx		
Above-ground utilities are unattractive		xx	
<b>Town-owned properties:</b>			
There is no mechanism to ensure that additions and alterations to historic buildings in public ownership do not adversely affect their character		xx	
Cemeteries are not inventoried and lack a maintenance/restoration plan	xx		
Key public buildings, such as the Meetinghouse, lack an earmarked reserve fund for capital improvements	xx		
<b>General:</b>			
Landmark resources important to the community could be affected by development pressure (Mt. Monadnock, town commons, cemeteries, library and Meetinghouse specifically cited)		xx	
Planning Board lacks a mechanism to consider the impact of proposed projects on historical resources		xx	

### *New Issues Identified*

- Historical resources are found throughout town and should not be considered limited to Jaffrey Center
- Jaffrey is losing green space, including farmland
- The future of all viewsheds is uncertain
- There is new construction on scenic hillsides
- The protection of views and green space needs greater attention
- Barns are disappearing at a rapid rate
- The role of scenic roads to the rural and historic character of Jaffrey needs stronger acknowledgement
- Jaffrey's ponds play a key role in the town's historic and rural character. Their ecology and viewsheds need to be protected; and the scale, screening and siting of structures along the shore need to be carefully monitored

- An inventory of Conant Cemetery was either never undertaken or has been lost
- Stone walls are always at risk

Issues pertaining to downtown Jaffrey:

- As residences are converted to commercial use, there is no mechanism to ensure their historic character is retained
- There is no trigger in Planning Board review for identifying historical resources and inviting review and comments by the HDC

### **Goals**

- Continue to advocate for the preservation and sensitive development of Jaffrey's significant historical resources and landscape
- Continue to advocate and educate citizens on the importance of Mount Monadnock to the community – as a primary cultural, historic, economic and water resource
- Improve tools to protect Jaffrey's rural character
- Insure stone walls are protected
- Encourage development that reflects and respects the existing landscape
- Conservation Commission will continue to identify critical conservations sites, determine the feasibility of purchase of those sites, and continue to find financial support to maintain the fund.
- Identify historic archeological sites (cellar holes/foundations of houses, outbuildings, mills, etc.)
- Maintain the character of Jaffrey's roads, especially their vistas, historic architecture, and archeological sites
- Promote the protection and preservation of historic barns and other significant agricultural outbuildings
- Acknowledge the uniqueness of Squantum and Cheshire Villages
- Identify cohesive heritage neighborhoods and consider ways to manage future change
- Preserve scenic viewsheds

## **DESCRIPTIONS OF PRESERVATION PLANNING PROGRAMS**

### ***National Register of Historic Places***

The National Register of Historic Places is the nation's official list of historical resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. Resources can be buildings, districts, sites, landscapes, structures or objects that are significant in American history, architecture, archeology, engineering, or culture. Properties can be listed in the Register either individually or as part of an historic district. If a property is part of a district, it will be designated either a contributing or a non-contributing resource. Each contributing resource has all the same benefits of listing as individually listed properties.

Benefits of listing on the National Register, whether individually or as part of an historic district, are as follows:

- Recognition that a property is of significance to the nation, the state, or the community
- Some protection from impacts caused by state or federally funded, licensed or assisted projects
- Eligibility for federal tax benefits if undertaking an approved rehabilitation project and the property is income-generating
- Qualification for federal assistance for historic preservation, when funds are available

- Special consideration or relief in application of access, building and safety codes
- Strong marketing tool for owners and businesses
- Leverage for the community when working with developers, in that listing publicly recognizes a significant community asset.
- Promotion of the unique features of buildings helps owners make sound decisions on rehabilitation and maintenance issues
- No restrictions on using or altering the property, as long as only private funds are involved

### ***State Register of Historic Places***

New Hampshire's State Register of Historic Places recognizes and encourages the identification and protection of historical, architectural, archeological and cultural resources. Resources may be buildings, districts, sites, landscapes, structures or objects that are meaningful in the history, architecture, archeology, engineering or traditions of New Hampshire residents and their communities.

A resource must meet at least one of the following four criteria for listing:

1. Tell a story about an event(s) that is meaningful to a community's history
2. Have an association with a person(s) who made important contributions to a community, professional or local tradition
3. Represent a local architectural or engineering tradition; exemplify an architectural style or building type; or serve as a long-standing focal point in a neighborhood or community
4. An identified, but unexcavated and unevaluated archeological site that is likely to yield significant information about the lives, traditions and activities of former residents

Generally, an eligible resource must be at least fifty years old. It must also retain enough of its historic character and physical attributes to illustrate what it is being nominated for.

Properties that are listed on the State Register:

- Are publicly recognized for their significance to a community
- Are considered in the planning phase of local or state-funded or assisted projects
- Qualify for state financial assistance for preservation projects, when such funds are available
- Receive special consideration or relief in application of access, building and safety codes

Owners of properties:

- Receive a complimentary one-year membership to the New Hampshire Preservation Alliance
- Are not restricted from using or altering the property, as long as only private funds are involved

### ***National Register Historic District***

A National Register historic district is group of related properties that, instead of listed individually, are listed as a grouping. Contrary to popular belief, there is no regulatory oversight of National Register districts: owners are free to make alterations of any type without seeking approval. For more information, see *National Register of Historic Places* above.

### ***Locally Designated Historic District***

A locally designated historic district is one of the most effective and comprehensive mechanisms to manage change in a historic area. Its purpose is to preserve the significant character of an area, while accommodating and managing change and new construction in accordance with regulations developed by local consensus.

A locally designated historic district is a zoning (usually overlay) district. They are created at the local level by a town majority vote and administered by a historic district commission that approves exterior

alterations, new construction and demolition within the district, using officially adopted regulations and guidelines.

### ***Neighborhood Heritage District***

A neighborhood heritage district (also known as a neighborhood conservation district) is similar to a locally designated historic district in that both are zoning districts, but the heritage district operates under more flexible, less stringent standards. A heritage district is a group of buildings and their settings that are architecturally and/or historically distinctive and worthy of protection based on their contribution to the architectural, cultural, political, economic or social history of the community. Sometimes a heritage district lacks sufficient significance or integrity to be designated as a traditional historic district. Other times, the neighborhood or political climate favors looser standards.

Overall, heritage districts seek to limit the detrimental effect of alterations, additions, demolitions and new construction on the character of the community through a combination of binding and non-binding regulatory review as allowed by RSA 674:44B.

There is a high degree of citizen participation in creating a heritage district. The neighborhood initiates the process, with support and assistance from the historic district commission and planning board/staff. Residents develop the standards under which the district is administered, by deciding what the special qualities of the neighborhood are, and what type of change they wish to avoid. Once established, neighborhood representatives sit on the review board.

### ***Demolition Review Ordinance***

A demolition review ordinance (often called a demolition delay ordinance) can help prevent the loss of historically and architecturally significant buildings. While such an ordinance does not prevent demolition, it provides a valuable time-out to explore alternatives, and many communities with the ordinance report a high success rate in saving important buildings. The ordinance can apply to an entire community or only to designated areas. Some municipalities impose a longer delay for resources listed on the National or State Registers.

Generally, the ordinance is adopted as an amendment to the building code. It may be administered by the Town with input from the Heritage Commission. The delay period can be for any specified period of time, but usually runs from thirty to ninety days, or a sufficient time period to evaluate the significance of the building, meet with the owner to discuss concerns and options, hold a public hearing, document the structure and perhaps salvage distinctive architectural features. The criteria for triggering the ordinance typically requires that the building (or structure) be at least fifty years old; be visible from a public right-of-way; and be at least 250 square feet. However, if a qualifying building has been determined by the building inspector to be a public hazard, it is exempt from the ordinance. In crafting a demolition review ordinance, it is advisable to structure it so it can run in tandem with the timeframe imposed by other permits that might be required.

### ***Preservation Easement***

A preservation easement is a voluntary legal agreement that protects a significant historic, archaeological, or cultural resource. It provides assurance to the owner of an historic or cultural property that the property's intrinsic values will be preserved by subsequent owners. An easement grants partial interest in a property, through sale or donation, to a qualifying local governing board or non-profit historical organization (the grantee). With a preservation easement, the owner gives that second party the right to protect and preserve the historic and architectural features of the property. The property remains in private ownership, and the town continues to receive annual tax revenue.

***Barn Easement***

Under state law passed in 2002 (RSA 79-D), municipalities can grant property tax relief to barn owners who can demonstrate the public benefit of preserving their barns or other old farm buildings and agree to maintain their structures for a minimum of ten years by means of a preservation easement. The statute defines agricultural structures to include barns, silos, corn cribs, ice houses and other outbuildings, as well as the land on which they sit. The structure must currently or formerly have been used for agricultural purposes and be at least seventy-five years old. At last count, nearly 200 New Hampshire barns and other agricultural buildings in forty-eight towns had been protected in this manner.

The law is based on widespread recognition that many of New Hampshire's old barns and agricultural outbuildings are important local scenic landmarks and help tell the story of agriculture in the state's history. Yet many of these historic structures are being demolished or not maintained because of the adverse impact of property taxes. The law is intended to encourage barn owners to maintain and repair their buildings by granting them specific tax relief and assuring them that assessments will not be increased as a result of new repair and maintenance work. It is strictly voluntary on the part of the property owner, and it combines established criteria and guidelines at the state level with decision-making and implementation at the local level.

***Community Revitalization Tax Relief Incentive (Downtown Tax Incentive)***

Newly passed by the legislature, the Community Revitalization Tax Relief Incentive (HB 657) encourages investment in downtowns and village centers by temporarily granting property tax relief in exchange for properties that have been substantially rehabilitated and on which the owner has granted an easement, ensuring there is a public benefit to the easement. Qualifying properties must be located downtown and undergo a rehabilitation costing at least 15% of the building's pre-rehab assessed value, or \$75,000, whichever is less. The rehabilitation must be consistent with the municipality's master plan or development regulations.

## HISTORICAL RESOURCES CHAPTER APPENDIX

### A BRIEF DESCRIPTION OF JAFFREY'S HISTORICAL AND ARCHITECTURAL DEVELOPMENT

#### *Geographic Context*

The Town of Jaffrey is located on a ridge that forms the watershed between the Connecticut and Merrimack River valleys. Its landscape is dominated by the slopes and 3,165-foot summit of Mount Monadnock. Rolling hills, whose good drainage and sunny slopes provided fine dwelling sites for its early settlers and later for summer residents, characterize the rest of the town. Within the town's bounds are a number of bodies of water, including Thorndike, Gilmore, Cummings, Bailey, Cheshire, Garfield and Parker, Jones, and Gilson ponds, as well as a section of Contoocook Lake and Mountain Reservoir. The Contoocook River forms a major waterway, originating in Contoocook Lake and flowing through downtown Jaffrey, where it powered nineteenth-century industry. In addition to the river, there are numerous brooks, many of which provided water power for early, smaller mills.

#### *Historical and Architectural Development*

Jaffrey is one of three contiguous towns collectively known as the Monadnock townships (the others are Rindge and Dublin) that were laid out in the 1740s, shortly after the boundary line between Massachusetts and New Hampshire was resolved. Each was granted by the Masonian Proprietors, a group of wealthy Portsmouth citizens who operated essentially as a speculative land company and granted many of southern New Hampshire's towns. The recipients of Jaffrey's thirty-five-square miles of primeval forest in 1749 were forty individuals, most of them residents of Dunstable (now Nashua and Hollis). Their new settlement was known variously as "Monadnock No. 2," "Middle Monadnock," or "Middletown." The township was divided into 220 lots, of an average 100 acres each.

Scattered settlers were in Jaffrey even before it was set aside as a township, though until the cease of the French and Indian War in 1763, most were transient. A saw and grist mill stood in Squantum as early as the mid-1740s. By the late 1760s, some thirty settlers, nearly all of Scotch-Irish descent, had made Jaffrey their permanent home. In 1773, with the addition of another ten families, Jaffrey was incorporated as a town, named for George Jaffrey, a member of the governor's council and Masonian Proprietor. These early families initially lived in low, roughly constructed dwellings that do not typically survive.

As the town grew, saw and grist mills appeared alongside streams, providing early residents with lumber to construct buildings and edible grain. In addition to the mills at Squantum, a saw mill was erected on the Contoocook at Hadley's Crossing (near the intersection of Lehtinen Road and Old Route 202) prior to 1768. Another early saw mill stood on Mountain Stream, north of Gilmore Pond, in an area later called Mineral Spring Village or Ballou City; it was at this mill that lumber for the Meetinghouse was sawn. At Slab City, located on Gilmore Lane and the east shore of Jones Pond, were grist and saw mills, as well as the town's first carding mill. Other small-scale (and somewhat later) mills included clothespin and chair stock mills on Mountain Stream at Bailey Mills and a woodenware shop at Hodge Mill on Tyler Brook.

In 1775, residents fulfilled one of the primary requirements for the new town – erecting a meetinghouse. Located in the geographic center of town, the meetinghouse became the focal point of a small town center – Jaffrey Center. Citizens established a burial ground behind it and built a minister's residence nearby. Private dwellings far more substantial than those built in previous years and a system of streets that radiated out from the hilltop village quickly followed. With the opening of the Third New Hampshire Turnpike in 1802 (present-day Route 124), and the substantial trade it brought, Jaffrey Center enjoyed a spurt of growth that continued for several decades.

By the late 1830s, East Jaffrey—today's downtown and also located on the turnpike—had begun to eclipse Jaffrey Center in importance. Its proximity to the Contoocook River and water power ripe for large-scale industrial development soon made it a thriving village that became the center of local affairs. Although town meeting remained in the Center until the early 20<sup>th</sup> century, East Jaffrey was home to a growing commercial and residential district, oriented around a major cotton mill and smaller industries, mostly based on wood products. Just east of the village – and contributing to its economy—was another cotton mill, Cheshire Mill, that was accompanied by an unusual group of corporate workers' housing – all known as Cheshire Village. When the Monadnock Railroad arrived in 1870, it gave a boost to growth in the greater village, which continued to expand well into the 20<sup>th</sup> century.

For nearly 200 years, agriculture was the mainstay for the bulk of Jaffrey households outside of the three major villages (Squantum, Jaffrey Center and East Jaffrey). Farms were scattered throughout the entire community, as all but the upper reaches of Mount Monadnock proved arable or suitable for grazing. Thirteen district schools, each with its own schoolhouse, served the scattered farm families. The original 100-acre lots granted in 1749 were divided into tillage land, pasture land and woodlot. The Third New Hampshire Turnpike, which bisected the town, brought an enormous potential for prosperity; wagons loaded with beef, pork and farm produce crowded the roads as teamsters brought farm goods to urban markets, trading them for molasses, sugar, cloth and other city products. Large droves of animals – especially cattle – also traveled the route, in the spring to local and farther afield pastures for summer grazing, and returning in the fall, fattened and ready for the Brighton slaughterhouses. Though sheep was the principal livestock in much of New Hampshire between 1815 and 1840, Jaffrey specialized in cattle that grazed on the lower slopes of Monadnock. As pasture land in urban areas became too pricey for such use, cattle raisers looked to the slopes of distant mountains to graze their animals, and Mount Monadnock offered particularly fertile pasture land. As many as 5,000 acres around the mountain accommodated 2,000 cattle in the 1870s, and the owners of these mountain pastures profited greatly. In addition to these summer cattle, several local farmers maintained sizeable herds.

Most of Jaffrey's farms, however, were small-scale subsistence operations with various specialty crops coming in and out of fashion. Large amounts of cheese and butter, products with ready markets in urban areas, were produced on local farms. In the 1840s, potato production surged for three reasons: (1) Irish immigration was at its height, and many immigrants settled on local farms; (2) the vegetable grew readily in the local soil; and (3) potato starch manufacturing, taking advantage of crop surpluses, had become a major local industry in the 1830s and 1840s. In 1811, a Wilton scientist was the first to commercially produce starch from potatoes. The usefulness of starch was quickly recognized by New England's textile mills, and the new industry took off. The Prescott family, who had made substantial sums of money in cattle grazing, financed a substantial starch factory in Squantum in the early 1830s. Both Jaffrey's potato production and starch industry declined ca. 1850, when a potato disease discouraged local planters, and local mills could not compete with the larger-scale production in Maine's factories.

After the railroad came to Jaffrey in 1870, agricultural production changed. Refrigerated cars, invented in 1881, allowed many farmers to shift from butter and cheese production to more profitable milk, which could be shipped without spoilage to distant urban centers. Nearly all of Jaffrey's milk came from four farms.

Land clearing for agriculture peaked in the decade prior to the Civil War, after which farming as an occupation began a slow decline. New England farms could not compete with the lure of western lands and factory work, to say nothing of the other opportunities revealed to young soldiers in the course of their war travels. Fields and pastures slowly grew over, and some farms were altogether abandoned. Between 1870 and 1880, the number of farms dropped from 165 to 153.

Dairy continued to be an important industry into the early decades of the 20<sup>th</sup> century, supplying both local and distant markets. In 1933, there were still forty-nine active farms. During that decade, however, local agriculture began to change quickly. Several farms ceased operations and others shifted their focus to produce what could be sold from roadside stands. A few farms developed specialties in poultry during the 1930s, a period when poultry raising gained strong interest throughout much of New Hampshire. The industry peaked locally in the late 1960s; with 30,000 hens and an accompanying egg hatching business, the Coll Poultry Farm was the largest such operation in the region by the 1970s. By the early 1960s, only five dairy farms remained in Jaffrey; in 2006 there are none.

As early as the 1820s, summer visitors came to Jaffrey, drawn chiefly by the lure and beauty of Mount Monadnock, making the town one of the first mountain resorts in New England. Visitors hiked up the mountain and stayed at one of the many spots on or near its slopes offering food and shelter. Authors wrote extensively of the mountain's lore and allure; among those so inspired were literary greats Henry David Thoreau, Ralph Waldo Emerson, Hawthorne, Mark Twain, William Ellery Channing, Edwin Arlington Robinson, Willa Cather and Rudyard Kipling. The mountain also drew scores of artists. Monadnock has been called one of the world's best-loved mountains.

After the Civil War, tourism picked up markedly. There were no fewer than six grand hotels, and numerous private homes opened their doors to summer visitors, frequently adding porches or wings to accommodate the guests. Many visitors returned to purchase older houses, often rescuing them from deterioration, adding porticos, porches, fieldstone or cobblestone chimneys and foundations, and roof dormers. They also designed extravagant gardens with hedges, formal plantings, and granite walls, and created gracious, tree-lined drives and walkways. Of paramount importance, however, was opening up – or maintaining – the vistas of Mount Monadnock. Some summer residents maintained active farms, either reusing earlier barns or building larger, more modern barns. Some half-dozen model farms existed at the turn-of-the-20<sup>th</sup>-century, where cattle or horses were maintained year-round with the assistance of full-time managers, who followed the most up-to-date and innovative technology in animal husbandry.

Jaffrey's various bodies of water complemented Mount Monadnock in drawing summer residents. In the 1870s, after the arrival of the Monadnock Railroad transformed travel, the first attempt at promoting recreation on the shores of Contoocook Lake was made. A steamer offered lake cruises, and a trotting course provided the opportunity to ride or watch equestrian events. Summer residents from New York City first settled Gilmore Pond, prized for its beauty and serenity, in the late 1880s. At about the same time, professionals and merchants from Boston gravitated toward Thorndike Pond. Word of Jaffrey's beauty and cultural life spread among academic and professional circles, drawing clusters of New England college graduates.

Jaffrey was fortunate that, by the Depression, its manufacturing base had expanded beyond textiles. At a time when most New England communities were devastated by the loss of major employers, Jaffrey continued to prosper as a regional employment center.

In 1897 the Granite State Tack Company (later renamed W.W. Cross & Company and yet later a division of PCI) was founded; by 1930 it was the largest manufacturer of tacks in the world, and a small neighborhood known as KK Village developed around the mill just east of East Jaffrey. Bean and Symonds produced box hooks from 1912 into the 1960s. In 1938, D.D. Bean & Sons Company was established to manufacture matchbooks; the business continues to operate today. Other local industries in the post-World War Two era included several woodworking and electronic plants. Millipore Corporation began producing industrial filters in Jaffrey in 1972, and TFX Medical, Inc., has made medical tubing here since 1980. More recent industries of note include Medefab, makers of medical devices since 1990; Johnson Abrasives, producers of coated abrasives since 1979; and New England Wood Pellet, established in 1998.



## JAFFREY'S MAJOR VILLAGES

### *Squantum*

Located in the southeast corner of Jaffrey, Squantum is a small village that included some of the town's first settlers who erected saw and grist mills in the 1740s. In the 19<sup>th</sup> century, starch, potash, woodturning, pail and clothespin factories and shops operated here, followed by Thomas Annett's manufactory of round, veneer boxes. In the early 20<sup>th</sup> century, Annett expanded production to include baskets, toys, wood finish-trim and boxes of all types. Though none of the historic mills survive, a cluster of buildings, including a brick structure that appears to be a former office for a mill, mill owners' houses, and an unusual row of Federal-style workers' dwellings, continue to convey the village's early history.

### *Jaffrey Center*

Jaffrey Center is the original town center. In 1775 residents raised the Meetinghouse, which was used for town meetings and church services. Behind the Meetinghouse, the settlers laid out a large burying ground, and across the street they erected a house for the minister. A system of roads radiated out from the village. After the Third New Hampshire Turnpike (Route 124) opened, Jaffrey Center became an important stagecoach stop for travelers headed between Boston and Walpole. The village's two taverns, three stores and several shops prospered from the traffic, as well as from the merchants, wealthy farms and professionals who resided there. Cutter's tannery and currier shop operated throughout the first half of the 19<sup>th</sup> century. The first half of the 19<sup>th</sup> century brought fine examples of the Georgian, Federal and Greek Revival residential styles to the Center. Melville Academy, erected in 1832, drew students from throughout New England, many of whom boarded in local homes. By the 1830s, East (downtown) Jaffrey started to draw commerce and civic activity away from the Center, though town meeting continued to be held in the Meetinghouse until 1914.

Jaffrey Center played a critical role in the town's early tourism industry. In the post-Civil War era, many summer visitors stayed in the Center's inns, and more than a few residents opened their homes to seasonal boarders. The Center became an enclave for professionals and academics, a large number of whom had been classmates at Amherst College. They purchased abandoned farms and historic houses, which were often altered with Colonial Revival features, and painstakingly preserved the vistas toward Mount Monadnock. In 1906 a group of public-spirited citizens established the Jaffrey Center Village Improvement Society which, over the years, has played a leading role in restoring key properties, such as the Meetinghouse, horse sheds and Little Red Schoolhouse, and improving open space and vistas within the Center.

In 1970, the citizens of Jaffrey recognized the historic and architectural significance of Jaffrey Center by designating it a local historic district. Five years later, the village was also listed on the National Register of Historic Places.

### *Downtown Jaffrey (East Jaffrey)*

The first mill in downtown Jaffrey was erected ca. 1770 on the Contoocook River by John Borland, whose lot included a large part of the downtown. This saw and grist mill was soon joined by a linseed oil mill. East Jaffrey remained a minor village until the Third New Hampshire Turnpike passed through it, bringing with it travel and goods from points northwest and into Vermont. In 1814 a cotton mill was erected, completed only six years after the state's first such mill was built in nearby New Ipswich. Around the mill and the adjacent river crossing emerged a small commercial center, with stores, shops, church, parsonage, several hotels and dwellings. The Turnpike remained the spine of the village, but side streets soon joined it. In the 1840s the village acquired a school and post office, and its name was changed from Factory Village to East Jaffrey (in 1946, citizens voted to drop "East" from the village name).

During the mid-19<sup>th</sup> century, East Jaffrey enjoyed a spurt of growth, with additional streets, businesses and dwellings. In 1868, a brick cotton mill replaced the old wooden building, and a few years later, the facility added another brick building on the opposite bank of the river to house a boiler room, machine shop, picker room and dye house. Over 100 employees worked in the cotton mill or one of the company's other mills, which included grist, saw, planing mills that produced shingles, lath, finished lumber and boxes. Just north of East Jaffrey, but influencing its development, was Cheshire Mill, built in 1823 on the Contoocook River. Originally a cotton mill, it was rebuilt in 1828; a cluster of housing for its workers stood behind the mill. The owners of Jaffrey Mills ultimately bought this factory. In 1938 D.D. Bean & Sons purchased it for the production of book matches, an industry that continues to operate today.

The village's prosperity during the mid-19<sup>th</sup> century is still reflected in the dozens of houses built in the Greek Revival style. An influx of Irish and French Canadian immigrants to work in the mills resulted in the construction of the first St. Patrick's Church in 1887, to serve the Catholic population. The village continued to expand in the late 19<sup>th</sup> and early 20<sup>th</sup> century, with a wide range of domestic architectural styles spanning the economic spectrum, including a spurt of tenement and apartment construction between 1910 and 1920, a library (1896), a doubling of the cotton mill complex, and additional commercial buildings, many of which replaced or significantly updated earlier structures. A tree-planting program initiated in 1860 introduced maples on both sides of Main Street, some of which survive today.

During the Depression, the town undertook several municipal improvement projects, including a fire station, war memorial, and school. Both the 1936 flood and 1938 hurricane/flood caused tremendous damage to the village and fundamentally changed its appearance. To ensure against future such disasters, a dam was built on the Contoocook River next to the newly replaced Main Street bridge in 1938. This between-the-wars era was also one of increased automobile traffic, and three service stations were constructed within four years. Automobile use brought about the cease of passenger rail service in 1953.

Downtown Jaffrey illustrates the evolution of a village center over a 200 year period. It evolved without a deliberate plan, but its appearance today forms an intact and diverse small New Hampshire townscape. The village retains a wide range of distinctive civic, religious, commercial and industrial resources. Its residences represent a cross-section of architectural styles from the early 19<sup>th</sup> through the mid-20<sup>th</sup> century and include Federal, Greek Revival, Italianate, Second Empire, Stick, Queen Anne, Colonial Revival, Craftsman, and Moderne – and variants on each. In 2002, Downtown Jaffrey's historic and architectural significance was recognized when the entire village was listed on the National Register of Historic Places.

## NATURAL RESOURCES AND CONSERVATION

### INTRODUCTION

The Natural Resources chapter of the Master Plan reviews the topography, soils, natural communities, and water resources in Jaffrey to inform deliberations regarding the potential for various types and densities of development in Jaffrey. Although natural features can enhance site-specific or area-wide development potential, they can also impose significant constraints to development. Moreover, while the location of roads and highways is an important factor in the location of development, the natural features of the land may be more fundamental to all aspects of development patterns and private land use choices.

This chapter explores Jaffrey's natural environment and the following three core issues:

1. The *fragility* of the Town's natural resources;
2. The threat to ecosystems from land *fragmentation*; and
3. The implications for both the environment and Jaffrey's rural character posed by increasing housing and human *density* in the Rural District.

In today's conservation community, minimizing further disturbance of the physical landscape and avoiding further fragmentation of the unique mosaic of plant and animal communities are considered essential. Protecting the persistence and integrity of natural communities as well as extractive resources (e.g. timber, water, agricultural production, and construction materials) and the fundamental natural processes (e.g. the hydrologic cycle, ecological succession, biodiversity, and even photosynthesis) on which our economic and physical welfare depends is imperative.

Jaffrey has exceptional natural features and resources that make the Town a very desirable place to live, and the Town has maintained a typical New England character with its historic Jaffrey Center and its 19<sup>th</sup> Century downtown "mill town." These are surrounded by a rural countryside of fields, homes and businesses dispersed along back roads, and by thousands of acres of forested backcountry. This Master Plan chapter will serve to inform and assist the community and its Planning Board in determining how best to preserve the natural environment that the residents currently enjoy while planning for growth.

### JAFFREY'S HISTORY OF CONSERVATION EFFORTS

Much of what defines Jaffrey's unique rural character is found in its natural resources: its forests, farmland, lakes and ponds, and – of course – its famous mountain. The people of Jaffrey are stewards of the landscape that identifies our Town.

This was recognized early on by the Town Fathers who in 1883 claimed the summit of the mountain for public ownership and protection. Ever since, individuals and groups alert to threats of commercialization and development have worked tirelessly to conserve large tracts of land on Mount Monadnock and neighboring Gap Mountain. Today over 5,824 acres of conservation land is owned both publicly and privately. Most of it is open to the public for recreational use.

The State of New Hampshire has five tracts within the Town of Jaffrey that comprise 1,346 acres. The largest tract is Monadnock State Park, which is 650 acres. The remainder is state forest property.

The Society for the Protection of New Hampshire Forests owns approximately 2,580 acres, 80% of which may be found along the southern flank of Mount Monadnock. This land is located north of Route 124 and west of Dublin Road. The remainder of the SPNHF parcels are located east of Thorndike Pond, along Great Road, and Old County and Gap Mountain roads.

The Town of Jaffrey owns five parcels that comprise approximately 530 acres. Two of these parcels are located on Mount Monadnock, and a third – Carey Park (which is one of the Town’s forests) – is located along the eastern bank of the Contoocook River and approximately one mile south of the downtown area. The fourth parcel (also a Town forest) is the 4.3 – acre Lacey Lot located on Lacy Road. A fifth parcel of about 13 acres is the Bixler Town Forest located off Fitzwilliam Road. The Town also owns water rights around Mountain Brook Reservoir, and these “rights” extend to an elevation of 1,022 feet or to the 1,022 contour line that surrounds the reservoir. The land included in this water area is approximately 120 acres.

Total Town-protected acreage is 634 acres. The remainder of the protected lands is under private conservation easements (600 acres), and the Town of Troy has a 161-acre reserve for its town reservoir, well, and adjacent watershed. Ownership of public and private lands under conservation easement should be monitored annually by following up with the Society for the Protection of New Hampshire Forests, the New England Forestry Foundation and the Monadnock Conservancy.

As of 2006, much of the northwest quadrant of Jaffrey is protected from future development. Moreover, most of the unprotected land in the extreme northwest corner adjacent to Troy and Marlborough is unsuitable for development due to steep slopes, poor soil conditions, or lack of access. Consideration should be given to adding these lands to the adjacent protected parcels. A particularly attractive area is Perkins Pond, which is located at the base of Mount Monadnock, straddling the Troy/Jaffrey town line, offering a broad view of the mountain.

In the years ahead, greater priority should be given to conservation and land protection in other parts of Jaffrey’s Rural District, particularly to the north, northeast, and southwest of the downtown area. These lands have received less attention than the mountain has to date. Yet they contain rich ecosystems that are under increasing stress along with an extraordinary beauty which complements that of the mountain itself while also contributing to the rural character of Jaffrey so prized by its citizens

Conservation easements and the Current Use Tax Incentive program are two means by which open land can be maintained. It is important to note that at Town Meeting in the last few years, citizens have voted to develop a viable conservation fund to further invigorate and sustain Jaffrey’s land conservation efforts. Requests of this fund will be subjected to a rigorous application process.

The Society for the Protection of NH Forests and the Monadnock Conservancy encourage landowners to place permanent conservation easements on their land. Easements maintain land in private ownership, yet protect the land from any future development. Easements conserve unfragmented acreage and thus assure open views to and from Mount Monadnock, continuous forest, and ponds and lakes encircled by woods.

Under the Current Use program, land parcels over ten acres are taxed on their present use rather than their potential use. An additional 20% tax relief is given when that land is kept open for public recreational use. However, when the use of that land is changed, such from farmland or forestry to house lots, a 10% tax penalty based on the value of the land at that time is imposed.

As noted by Paul Bofinger, former President/Forester of the Society for the Protection of NH Forests, “If you’re going to use anything as a role model for how you protect other good things, (Mount) Monadnock is the best example.” With this in mind, the Town of Jaffrey has a unique opportunity, in its new Master

Plan Update, to take the lead in conserving its other valuable resources – open water sources, aquifers, views and vistas, and valuable farmlands.

Land conservation is a development constraint – it is a legal barrier to development of individual properties.

The following table presents the numbers of properties and acreage of land subject to some manner of “protection” from development in Jaffrey and its neighboring towns, which are depicted in the figure following the table:

**Table 28: Protected Property in Jaffrey and Surrounding Towns**

<b>TOWN</b>	<b>Number of Protected Properties</b>	<b>Acres of Protected Land</b>	<b>Acres contiguous with Jaffrey *</b>	<b>Percent of Town by Area</b>
Jaffrey	56	5,824	- na -	23%
Dublin	70	4,824	1,903	26%
Fitzwilliam	18	1,260	0	5%
Marlborough	23	1,128	66	9%
Peterborough	102	5,606	72	23%
Rindge	34	3,579	2,163	14%
Sharon	42	4,036	181	40%
Troy	11	1,584	816	14%
<b>Total</b>	<b>356</b>	<b>27,842</b>	<b>5,201</b>	<b>18%</b>

\* Acres contiguous with Jaffrey quantify only properties immediately adjacent to Jaffrey, rather than groups of conservation properties.

The 5,824 acres of conservation land in Jaffrey are augmented by more than 22,000 acres of conservation land in the neighboring towns. There are some general trends in the distribution of protected land, and in Jaffrey and neighboring communities: 1) most protected land is at elevations above 1,100 feet, 2) there is very little land conservation near or adjacent to major rivers and streams, and 3) almost half of the land conservation in this subregion is clustered around Mount Monadnock.

The first two trends are typical in New Hampshire – most land conservation is found in higher elevations. Much of the land conservation activity to date has resulted from a rather random coincidence of property owner interests and the availability of an easement holder, rather than on a planning process that might consider variables such as ecological integrity, special habitats, soil resources, community character, or recreational opportunities. The exception to the “accident of connecting willing sellers and willing buyers” has been land conservation driven by popular interest in protecting special places such as Mount Monadnock, Gap Mountain and Little Mount Monadnock.

**Figure 13: Conservation Land in Jaffrey and Surrounding Towns**

The pages that follow review Jaffrey's natural resources and indicate why many of them are appropriately regarded as constraints on further development.

## **JAFFREY'S NATURAL LANDSCAPE**

### ***Terrain***

The terrain of most of the land area in Jaffrey, while irregular, has relatively low relief. The average vertical change in elevation over the distance of a mile is approximately 180 feet. In contrast, Jaffrey's most prominent landmark, Mount Monadnock, is also the namesake of a kind of geomorphic feature: "a mountain of rocky mass that has resisted erosion and stands isolated in an essentially level area."<sup>5</sup> This combination of landforms results in Jaffrey's having the greatest range of elevation within any of the 36 Southwest Region towns. Within Jaffrey, elevation ranges from less than 880 feet above sea level at the point where the Contoocook River flows into Peterborough to 3,165 feet at the peak of Mount Monadnock. Mount Monadnock and the ridge of uplands that bridge Monadnock and Gap Mountain in Troy (a landform known as a saddle: two high points connected by a lower ridge) are distinctly different

<sup>5</sup> Excerpted from The American Heritage Dictionary of the English Language, Third Edition (Houghton Mifflin, 1996).

from the low-relief hills elsewhere in Jaffrey that are pocked with ponds, lakes, and wetlands. That saddle also creates a watershed boundary between the Ashuelot River to the west and the Millers and Contoocook Rivers to the south and east, respectively.

The landforms of Jaffrey are artifacts of the interaction of glaciation and the granite bedrock. Some of the many small hills of central and eastern portions of Jaffrey are small promontories of granite covered with glacial till (a dense mixture of sand, silt, clay, and stones). Others are mounds of till called “drumlins,” that were created by the slow-motion turbulence of the flowing glaciers which had carried sand, silt, clay, gravel, and stones southeasterly over Jaffrey for hundreds of thousands of years before melting away only 12, 000 years ago.

Almost all of Jaffrey is covered with a layer of glacial till, varying in thickness from fractions of an inch to several yards. The exceptions are areas of exposed bedrock, e.g. the summit and ridges of Mount Monadnock, and the sand and gravel deposits of the Contoocook Valley. It is understood that the deep sand and gravel throughout most of New Hampshire’s river valleys are deposited by melt water running out of the melting glaciers. Geological material sorted by running water is known as “stratified drift.” Some stratified drift deposits were formed in streams and lakes that formed on or within the massive glaciers as they melted, and were finally laid on the land as the ice vanished. The deposits in Jaffrey are continuous and have hydrological connections with deposits in Rindge, Sharon and Peterborough; and they extend continuously northward in the Contoocook Valley to the village of Contoocook. The extent of these deposits is widely believed to be the extent of an ancient shallow lake: Glacial Lake Contoocook. The Lake drained when the natural dam of till and ice impounding it was finally eroded. Today Jaffrey’s extensive stratified drift is well known as an important source of both groundwater and sand and gravel for construction materials. Stratified drift can often be identified on the landscape by the flat topography and dense stands of white pines that thrive in the sandy soil where other species cannot.

### ***Scenic Views***

Jaffrey’s most prominent physical feature is Mount Monadnock, located in the extreme northwest corner of the Town. With a height in excess of 3,100 feet, the mountain peak is visible from numerous locations throughout the Town. The distinct profile of the mountain provides many scenic views, and these views - whether they are uninterrupted vistas of the mountain from key locations such as Perkins Pond or fleeting glances through the trees as one travels the numerous roads in Jaffrey -- are an important part of Jaffrey’s heritage. So too are foreground features such as lakes, swamps, streams, forest, and rolling countryside, which – even when viewed alone – are a delight to the eye.

Special vistas, views and scenic areas contribute significantly to a community by enhancing the quality of life and increasing the value of property, while also creating a desirable place to live and work. Consequently, it is important that these views and vistas be protected for future generations and to perpetuate the Town’s scenic majesty.

### ***Farmland***

Although Jaffrey’s farmland is relatively small, it is visually attractive while also being commercially attractive as prime real estate for alternative uses.

Agricultural production is a special category of land use that, together with timber management, requires sustaining the physical and chemical properties of the soil as the basis for economic gain – more so than with other developed land uses. The Cheshire County Soil Survey classifies 89 acres (0.3%) of Jaffrey as “prime farmland soil”, consisting of seven different soil types in 149 discrete patches.<sup>6</sup>

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<sup>6</sup> See Appendix **Table 30: Soils** for these soil types. The designation is based on the soil’s ability to (1) perennially support pasture, forage, or tilled crop production with little or no nutrient or other soil supplement inputs, and (2) sustain physical

The prime farmland soils in Jaffrey occur at elevations below 1,320 feet, which excludes them from the slopes of Mount Monadnock and the Monadnock – Gap Mountain saddle. Prime farmland soils are most abundant in a crescent extending from the Jaffrey-Rindge line south of Mountain Brook Reservoir and Gilmore Pond northerly to between Jaffrey Center and downtown, diminishing toward the eastern side of Thorndike Pond. The largest concentration of contiguous prime farmland soil units is found on the Sawyer farm, bounded by Old Sharon Road, Witt Hill Road, and Route 124.

Farmland poses two issues that are in conflict. One issue is the value to the community of preserving farmland as open space, a small but meaningful – and strategically located – component of Jaffrey’s scenic splendor. The second issue is the economic incentive to convert farmland into other forms of developed use, an issue hardly unique to Jaffrey but one that has salience here, as elsewhere.

How Jaffrey resolves the inexorable decline of agriculture and attendant pressures to develop agricultural land with new housing and commercial enterprise will help define the Town’s character in coming decades. Yet attempts to save farmland as open space may prove costly and also counterproductive to the local economy. This is especially so in light of the several constraints on development analyzed in Section III of this chapter, which constraints significantly limit opportunities for future land development in Jaffrey. The result is a thorny dilemma.

### ***Streams and Water Bodies***

The irregular topography and dense glacial till of Jaffrey create a high density of streams, wetlands, ponds, and lakes typical of the Monadnock Highlands. Of the 25,565 acres bounded by Jaffrey’s town line, 1,142 acres (4%) are water bodies. The U.S. Geological Survey (USGS) identifies 103 separate water bodies in Jaffrey with a total of 42 miles of shoreline. Please refer to Section III of the U.S. Geological Survey for a description of Jaffrey’s major water bodies (10 acres or more) presented in **Table 29: Great Ponds in Jaffrey**. Some of these larger water bodies have heavily developed shorelines; others are pristine; all are shallow. Jaffrey’s many smaller ponds are also shallow, not much less developed, and emergent vegetation is quite common.

There are approximately 40 miles of perennial streams in town. The Contoocook River is Jaffrey’s largest stream. The Contoocook originates in Rindge as Contoocook Lake, which in turn is created by a dam located in Jaffrey. While only 6 miles of the Contoocook run through the southeast corner of Jaffrey, the River was a formative force in the development of Jaffrey’s downtown as a 19<sup>th</sup> Century mill town and a regional employment and population center. The Contoocook is unusual among rivers in New England in that it flows northward for its 71-mile run to the Merrimack in Concord, NH. The Contoocook is one of fourteen rivers enrolled in the New Rivers Management and Protection Program. This status has resulted in the development of a Contoocook River Management Plan by the Contoocook & North Branch Local Advisory Committee. That Plan can be viewed at the NH Department of Environmental Services’ “Rivers Program” website.

### ***Wetlands***

Wetlands are a valuable, environmentally sensitive resource. They provide an important means of flood and erosion control and pollution filtration. Additionally, they are a source of water, serve as a wildlife habitat, support recreation, and aesthetically enhance Jaffrey’s rural ambiance.

The Cheshire County Conservation District describes wetland soils as those soils that are poorly drained or very poorly drained, including muck and peat. They are difficult to quantify given the several disparate

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management practices (e.g. machinery or livestock) without loss of the soil’s physical properties important to agricultural production.



sources of electronic data about wetlands, a fact which warrants brief explanation. Wetlands appearing in the USGS topographic maps were delineated from aerial photographs in the 1980s and typically include only non-forested wetlands. The U.S. Fish & Wildlife Service developed the National Wetland Inventory (NWI) in the early 1990s also using aerial photography. The NWI data tend to match the USGS wetlands and also include some additional forested wetlands. The USDA Natural Resources Conservation Service (formerly the Soil Conservation Service) uses a soil classification “hydric soils” to identify soils that are “formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic [lack oxygen] conditions in the upper part.” Due to technical aspects of soil mapping, the hydric soils delineations tend to overstate the extent of actual jurisdictional wetlands, defined by the State and Federal governments as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The acreages of wetlands identified in Jaffrey by these three sources range from 917 acres (USGS) to 2,056 acres (NWI), and 3,931 acres (USDA). In summary, wetlands are common in Jaffrey. The actual amount of land area occupied by wetlands is somewhere between 917 acres and 3,931 acres – probably more accurately between 2,056 and 3,931 acres - and the USGS wetlands data also indicate 94 separate occurrences.

The State of New Hampshire allows communities to designate “Prime Wetlands.” This designation means that the NH Wetlands Bureau, when receiving applications for dredging or filling wetlands, will apply an extra layer of rules defined by state law to applications involving wetlands designated by the town as “prime.” The first step in the designation process is an inventory and assessment of the town’s wetlands using the “NH Method.” Jaffrey does not possess prime wetlands.

### ***Forest Lands***

The landscape in Jaffrey is further typified by the prevalence of forest cover. The mosaic of soil and topographic conditions in Jaffrey supports a variety of natural communities of plants and animals, comprising myriad types and species from microbes and algae to white pine and moose. Most of the forest here is likewise a mosaic of distinct plant community types. A Hemlock-Hardwood-Pine “matrix forest habitat” is the dominant forest habitat for approximately 45% of New Hampshire<sup>7</sup> and most of Jaffrey. The communities comprising this larger habitat are diverse, ranging from red maple-sphagnum moss swamps and dense hemlock forest to blueberry thickets and hillside forests of sugar maple, American beech and red oak. These occur throughout Jaffrey with the exception of the steepest slopes and top of Mount Monadnock. Despite the prevalence of the Hemlock-Hardwood-Pine forest habitat, the NH Fish & Game Department considers it to be one of the State’s “most at-risk habitats.” This is due primarily to the habitat’s occurring in areas that are also suitable for residential and commercial development and due to invasions of non-native plant and invertebrate species. Preserving the integrity of matrix forest habitats is a necessary goal in conservation planning.

The second most abundant matrix forest habitat occurring in Jaffrey is Lowland Spruce-Fir Forest. This group of communities is found in western Jaffrey, with concentrations on the southeastern slopes of Mount Monadnock through a range of elevations and slope steepness, but away from the Contoocook River. This habitat occurs in relatively small patches throughout the Monadnock Highlands and Wapack Mountains of southwestern New Hampshire northerly through the Sunapee Highlands. The forest communities here are characterized by wet and seasonally flooded, acidic soils and coniferous tree species, although northern hardwoods and alders also occur.

Two other matrix forest habitats occur only on Mount Monadnock: Northern Hardwood-Conifer Forests on the steep and rocky slopes below the peak of Monadnock, especially on the Pumpelly Ridge, and High

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<sup>7</sup> Source of habitat descriptions throughout: NH Fish & Game Department. 2006. New Hampshire Wildlife Action Plan.

Elevation Spruce-Fir Forests at the top of Monadnock among the outcrops and boulders. While the Northern Hardwood-Conifer matrix forest habitat increases in prevalence northward through Dublin to the Sunapee Highlands and dominates medium elevations in the White Mountains, Mount Monadnock, Little Monadnock Mountain in Fitzwilliam and the ridgeline of the Wapack Range west of the Contoocook Valley are the southernmost occurrences in New Hampshire. The summit of Monadnock hosts the lone example of High Elevation Spruce-Fir Forest in Cheshire County, one of five probable locations south of the White Mountains, and the most southerly example in New Hampshire. The communities in this relatively rare habitat are dominated by fir trees, spruce trees, and sphagnum moss in wet, rocky terrain.

Two other terrestrial habitat types are known to occur in Jaffrey: Grasslands, and Rocky Ridges and Talus Slopes. Grasslands occurring in Jaffrey and most of New Hampshire are, of course, man-made. Existing grasslands are associated with current or past land uses such as agriculture, airports, sand and gravel mining, and recreation. In Jaffrey, grassland habitat is found in the farm fields north and east of downtown Jaffrey and the airport.

Like the High Elevation Fir-Spruce Forest habitat, Rocky Ridges and Talus Slopes are restricted to Mount Monadnock and very small isolated occurrences on the topographic saddle to Gap Mountain. Talus slopes are steep slopes often at the base of rock outcrops that are strewn with fallen rocks ranging in size from large stones to small boulders. While Talus Slopes often host a great variety of hardwood and coniferous tree species, and some plant and animal species found nowhere else, they can be unstable and prone to rock slide.

### ***Plant and Wildlife Habitats***

The many wetlands, streams, lakes, and ponds in Jaffrey provide aquatic habitats and create riparian habitats on their shores. Wetlands habitats in Jaffrey and throughout central New England are broadly categorized as being Marsh and Shrub Wetlands, Peatlands, or Vernal Pools. Marsh and Shrubland Wetlands include a variety of plant communities and hydrologic conditions. These range from wet meadows of grasses and sedges, cattail marshes, and alder-dogwood-arrow wood thickets in standing water, to red maple forests flooded periodically each year. Moreover, all of these can occur at the edge of waterbodies, in the course of streams wending through the forest, or isolated from other surface water in low spots on the landscape. Most of the many small and large wetlands observed in Jaffrey are Marsh and Shrub Wetlands Habitats.

Peatlands are characterized by acidic water chemistry. The special plant and animal communities associated with that often include sphagnum moss and carnivorous plants, but also a wide variety of herbaceous plants, shrubs and trees. Their assemblages are peculiar to Peatland habitats. Peatland wetlands are not uncommon in Jaffrey, but tend to be smaller and are considerably less common than Marsh and Shrub Wetlands, and as such can be considered at risk.

Vernal Pools are essentially depressions where water ponds form in the spring during snow melt and spring rains due to topography and soil conditions. The duration of ponding is sufficient to support the aquatic phase of the life cycles of a number of invertebrates and amphibians – and, in fact, are essential to the same. In the glacial till uplands of New England, vernal pools are many and small, often only several square yards in area. While the water table may be sufficiently near the surface in and around vernal pools throughout the year to support indicator plant species, it more often is not, leaving the location of vernal pools difficult for the untrained eye to identify when not flooded.

The aquatic habitats of Jaffrey's lakes, ponds and streams are classified as part of a larger group: the Southern [NH] Upland Watersheds, which begin with the land draining to the South Branch Ashuelot River in Fitzwilliam and Troy, Lake Monomonac in Rindge, and the Gridley River in New Ipswich. They

extend northward through the Monadnock and Sunapee Highlands and beyond. These include riparian habitats along stream channels and the near-shore and open water habitats of and lakes and ponds. Riparian habitats are transitional between water and upland and often support unique species. Riparian habitats may extend only a few feet from the water's edge or hundreds of yards (e.g. floodplains) and in general are easily lost to development.

Considering the earlier estimates of 42 miles of waterbody shoreland and 40 miles of perennial streams, and assuming a conservative average width of 25 feet for riparian habitats adjacent to streams, lakes and ponds, Jaffrey could have something on the order of 488 acres of riparian habitat. Of course, much of this shoreland is developed today, particularly on the Great Ponds and the Contoocook River in the downtown area.<sup>8</sup>

### *Wildlife*

The landscape in Jaffrey is also teeming with animal life, from microscopic invertebrates living in the film of water between soil particles to moose and black bear ranging across thousands of acres of forest. It is important to remember that the land, water and plants are not inert media in which animals live but rather that each is a part of the whole, an interactive system that is at once constant and yet is constantly being changed by what happens next.

The animals found in Jaffrey are typical throughout central New England. Mammals inhabit or use all habitats in Jaffrey. Some are far ranging and can use or require parts of many different habitats in the course of their year and lives, such as moose, black bear, bobcat, coyote, and fisher. Others have smaller home ranges and more limited preferences or requirements of habitat conditions, such as white-tailed deer, otter, porcupine, fox and other fur-bearers, including beaver, muskrat, mink, and weasel. Rodents can have broad habitat requirements, such as white-footed deer mice and other species of woodland mice, meadow voles, chipmunk, and red and gray squirrels. Still others have more limited requirements of habitat conditions, such the northern flying squirrel, red-backed vole, and several species of bat. And so it goes for the variety of bird species, reptiles, amphibians, fishes, and the myriad invertebrates from snails and insects to crayfish and freshwater mussels.

The NH Natural Heritage Inventory Bureau reports that one reptile species, two insect species, seventeen plant species, and two plant communities that are considered endangered, threatened or warranting monitoring in New Hampshire are known or suspected to occur in Jaffrey. Half of these are associated with Mount Monadnock and Gap Mountain. Reported or suspected occurrence of the others is widely dispersed. The Bureau prohibits publishing the names of species and communities of concern by geography in order to protect the resource from disturbance or collection. It should also be noted that some of the reported occurrences date from the 19<sup>th</sup> Century and have not been corroborated since then, and that the Bureau's inventory is not the result of systematic area-wide research and therefore under-represents the numbers and variety of species and communities of concern in Jaffrey.<sup>9</sup>

The variety, distribution and requirements of plants and animals across Jaffrey's terrain, points to the urgency of preserving the mosaic of landscape conditions. Maintaining landscape conditions in tact, where possible, will help to accommodate the full range of changes through seasons and years. The goal

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<sup>8</sup> For a more detailed inventory of habitats please see "Natural Communities Expected to Occur in the Town of Jaffrey" in "Natural Communities of New Hampshire" published by the NH Natural Heritage Inventory Bureau

<sup>9</sup> The NH Fish & Game Department published in 2006 the "New Hampshire Wildlife Conservation Action Plan" which provides a description of habitats which are at risk or are associated with plant and animal species at risk in New Hampshire. **[NOTE: GIS data from that report is available for use in local planning from SWRPC.]** See the NH Natural Heritage Inventory Bureau and NH Fish & Game Department for inventories and further information about plant and animal species of concern.

must be to avoid or minimize further fragmentation of the natural landscape by development and other disturbances.

### *Summary*

As revealed in several surveys, including the one conducted in December 2005, open space and the Town's rural character are highly valued by the citizens of Jaffrey. Preserving both in the face of pressures for development is an important challenge to town planning.

Open space provides many benefits:

- Maintenance of rural character
- Preservation of pleasant scenery
- Revenue from tourism
- Keeping land unfragmented and providing buffers between developments
- Wildlife habitat and corridors protection
- Groundwater protection, water retention, and groundwater recharge
- Flood control
- Food production
- Air purification and the production of oxygen
- Recreational opportunities
- Low maintenance costs and a net cash flow favorable to the Town

It is essential that Town Planners recognize the role that open space plays in giving Jaffrey its character. Strategies must be developed that will best maintain this rural character within a framework of future economic growth while also contributing to the long-term sustainability of the community.

The next section examines the significance for development of five features of Jaffrey's landscape: steep slopes, wetlands, floodplains, aquifers, and surface water.

## **DEVELOPMENT CONSTRAINTS**

Landscape conditions can impose limitations on development by requiring extraordinary costs for engineering, construction and/or maintenance of developed land uses. Development under some landscape conditions may also jeopardize or diminish public interest in natural resource values, such as water supply, clean air, and productive farm land, or more esoteric matters such as scenic qualities and biodiversity.

Physical conditions that may render areas less desirable for development include steep slopes, seasonally wet soils, wetlands, floodplains, and soils that are shallow to bedrock or water table. The Soil Survey of Cheshire County, New Hampshire, published by the US Department of Agriculture Soil Conservation Service, 1982 and the Soil Potential Ratings for Development; Cheshire County, NH, prepared by the Cheshire County Conservation District in 1984 are reliable, comprehensive source of information regarding development constraints.

In addition to difficult or sensitive landscape conditions, other conditions to be considered here include important farmland soils, stratified drift aquifers, and properties that are legally protected from development (a.k.a. conservation lands). Approximately 68% of Jaffrey is subject to one or more development constraints.

### ***Steep Slopes***

Slope is a major consideration for Jaffrey's future development. Generally speaking, the steeper the land, the greater the possibility for erosion and sedimentation, and the more problems can be encountered in siting wells and septic systems.

Steepness is measured in terms of slope, which is defined as the change in elevation (vertical distance) over horizontal distance; the more abrupt the change in elevation, the steeper the slope. Slope is measured and expressed as a percentage that represents the relationship between elevation and horizontal distance.

Typical categories that might be seen on a slope map are 0-8%, 9-15%, 16-25%, and over 25%. Land in the 0-8% slope category is generally preferred for all types of development. Gradual slopes are most favorable for building roads, and public water and sewer facilities can be installed at the least cost to the community. Also, excavations for most structures can be done at a minimal cost, and the erosion associated with such work can be reduced easily on-site. The exceptions to this would be wetland areas and floodplains because they occur primarily in the 0-5% slope range. An examination should be made as to the environmental function of such wetland and floodplain areas, as well as the risks that might be inherent in development before such lands are utilized for building sites.

As slopes increase to 9-15%, the land is more suited to less intensive forms of development. Carefully placed residential dwellings and some agricultural uses (orchards and field crops) may be suitable for this terrain. As development approaches a 15% gradient, it requires more careful consideration for all types of development. Once a slope exceeds a 15% gradient, all forms of development require special consideration before permitted, and slopes greater than 25% are especially problematic. Steepest slopes often harbor special plant and animals communities as well. Disturbance of steep slopes by deforestation or excavation, and even timber harvest, can create erosion problems. Forestry practices on such slopes must be confined to low-impact operations, including minimal basal area cutting and skid roads designed for steep slope harvesting with proper erosion controls in place.

When developing steep terrain, the potential for environmental damage increases as the slope gradient increases. Steep slopes consisting of sands and gravels left after the excavation of an area will quickly gully and erode. Erosion control barriers should be in place at the time of excavation, and prompt re-seeding and re-grading should take place afterwards. The Surface water run-off rates and erosion factors increase as slope steepness increases. This will cause sedimentation of the surface waters down slope and will clog stream channels and rivers if no erosion controls are in place.

In terms of development, slope is a significant limiting factor in Jaffrey. Approximately 7,800 acres (30% of the Town's total area) consist of slopes that are 15% or greater, requiring significant review, on a case by case basis, of all development in these areas or, above a 25% gradient, virtually no capacity. Moreover, while Mount Monadnock accounts for more than half of this total, there are steep slopes throughout the Town, notably along its eastern perimeter and in the southwestern quadrant. The Steep Slopes Map shows the location of these slopes<sup>10</sup>.

It bears emphasizing that the principal conservation issue concerning steep slopes is not soil quality but soil erosion. Many of the Town's steep sloping areas contain soil properties that are rated high in terms of development potential. Many areas along the Town's side slopes contain deep, well-drained soil deposits. Despite having favorable soil properties, these areas should still be considered unsuitable for development due to their erosion potential. In effect, slopes and soils are not proxies for each other. And

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<sup>10</sup> See Table 31: Steep Slope Soils in the Appendix and the Steep Slope Map

where steep terrain and soils with low infiltration rates combine together to produce high surface water runoff rates, the erosion potential is especially severe.

To be sure, there are several large land areas scattered throughout Jaffrey that have both good soil properties and minimal slopes. These lands are located primarily in the southern half of Jaffrey. However, much of this land is already developed; and the prospects for future development are limited by the fact that abutting the Town's existing road network are many wetland areas and hills with steep slope gradients.

The situation described above makes the issue of hillside development a critical one for Jaffrey. Hillside development should be evaluated in terms of potential soil erosion, septic system placement, water well placement, roadway and driveway construction, surface water runoff, and general aesthetics. In such areas, the presence of municipal water and sewer can be a slightly mitigating factor in terms of construction impact. However, other aspects of construction (e.g., driveways, lot preparation) still present the potential for erosion; therefore, strict erosion controls need to be in place. Soil properties should be considered in conjunction with slope gradients when evaluating a site's erosion potential.

### ***Wetland Soils***

The Cheshire County Conservation District describes wetland soils as those soils that are poorly drained or very poorly drained (including muck and peat). Jaffrey has a moderate amount of wetland soils areas that are scattered throughout town (Mount Monadnock being the only exception). Only 3,870 acres (or approximately 15% of the Town's total land area) can be described as having wetland soil characteristics. This wetland acreage total can be broken down further into 1,028 acres of poorly drained soils and 2,842 acres of very poorly drained soils<sup>11</sup>. The locations of the town's wetland soil areas are delineated on the accompanying Wetland Soils Map.

As stated earlier in this chapter, wetlands serve a number of important functions that are not only beneficial to the environment but to people as well. Wetlands act as buffers along shoreline and control erosion and sedimentation; they serve as flood abatement and protection areas; wetlands filter pollutants from water, are fish and wildlife habitats and are a recreational resource for fishing, hiking, canoeing and many other activities. Wetland protection is a vital step in creating healthy, sustainable communities. Regulatory practices used to preserve wetlands create constraints on development, such as where septic tanks can be located, permitting requirements for roads crossing wetlands, use restrictions within wetlands and wetland buffers, and building setbacks from wetlands.

### ***Floodplains***

Floodplains are land areas that are characterized by annual or periodic flooding. Preserving floodplains in a natural state preserves the plant and animal communities there and provides natural storage of floodwater, thereby avoiding or minimizing downstream flooding and erosion. However, due to floodplains typically being level ground with sandy loamy soils, they are also often suitable for development, at an earlier time for cropland and today for residential and commercial uses. Yet development on floodplains displaces natural communities, displaces natural flood storage and puts buildings, infrastructure and people in harm's way in the event of a flood.

Floodplains actually have two parts: the floodway and the floodway fringe. The floodway includes the channel and an additional area that often carries excess flow. The floodway fringe (more commonly known as the 100-year floodplain or the Special Flood Hazard Area) is a broader area over which floodwater may spread, but where the flow velocity is slower. This is an important distinction for land

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<sup>11</sup> See Table 32: Wetlands Soils in appendix

use planning, since some uses can safely occur in the Special Flood Hazard Area, but not in the floodway, such as agriculture, parking and recreation.

The Federal Emergency Management Agency (FEMA) maps floodplains for municipalities. The boundaries of the floodplains are estimated by interpolated between data associated with cross sections of stream channels, based on observations of past flooding. Flood Insurance Rate Maps define the 100-year floodplain (meaning there is a 1 out of 100 chance of flooding in any given year), and an area of 500-year floodplain (a 1 out of 500 chance of flooding in any given year).

New Flood Insurance Rate Maps (FIRM) for Jaffrey became effective May 23, 2006. Jaffrey participates in the National Flood Insurance Program by adopting the FIRM and a local Floodplain Development Ordinance, thereby qualifying homeowners in the floodplain to purchase federal flood insurance for their property. The Ordinance requires that the lowest enclosed floor in new construction or substantial improvements to homes located in the Special Flood Hazard Area must be at or above the base flood elevation.

Floodplain soils comprise about 1,019 acres in Jaffrey, or 4% of the Town's land area<sup>12</sup>. Although found throughout the Town, there are four major concentrations of floodplain soils, as revealed in Water Resources Map: (1) at the northern end of Contoocook Lake and along the Contoocook River, both below and above downtown Jaffrey; (2) just north of the Black Reservoir (3) along Mountain Brook above Laban Ainsworth Pond and between it and the northern inlet of Mountain Brook Reservoir; and (4) between White's Pond and Bailey Pond.

The USDA soil survey also identifies soils that are prone to flooding, typically during spring run-off, and during annual or periodic flooding. They consist of fine particles of sand, silt and organic matter deposited by floodwater and are almost always level ground. As noted in the Land Use Chapter, these same soils are often excellent agricultural soils by virtue of their structure and nutrient content.

### ***Aquifers***

Aquifers are geologic formations (either sand and gravel, referred to as stratified drift or bedrock) that by virtue of their physical structure and location on the landscape can provide water through drilled wells in sufficient quantities to support human uses. Characteristics of high-value aquifers include being situated down stream in a watershed, being in a watershed with a preponderance of natural forested land cover, and having a physical structure that is highly permeable – open spaces between particles of sand and gravel or interconnected networks of cracks in bedrock to both store and transmit water. Aquifers are re-supplied primarily by water falling as precipitation. Rain and snow melt move downward through soil, sand and gravel and/or cracks in bedrock to a saturated zone where the spaces between particles and cracks in rock are filled with water.

Aquifers of low to high value occur in southwestern New Hampshire as unconsolidated deposits of sand and gravel, or in bedrock fractures. The unconsolidated deposits in this region are principally stratified drift deposits (sand and gravel sorted and deposited by running water from the melting glaciers) that are usually in valley floors. These materials have abundant pore space to store water, and pore space may amount to more than 30 percent of the total volume of the deposit. Consequently, stratified deposits at the bottom of watersheds are good aquifers. The U.S. Geologic Survey and the NH Department of Environmental Services completed a comprehensive study of the extent and aquifer potential of stratified drift in the State in 1993. While the USGS study can be enhanced with further site- or area-specific investigation, the findings are considered reliable and much more accurate than previous reconnaissance studies.

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<sup>12</sup> See Table 33: Floodplain Soils in Appendix

The USGS study indicates extensive stratified drift deposits throughout southeastern Jaffrey. These deposits are continuous with stratified drift “upstream” or, more accurately, up-gradient in Rindge and Sharon and “downstream” in Peterborough. Potential yields from the deposits in Jaffrey range from low to medium. Aquifers are described by a unit of measure “transmissivity”, reported as “feet-squared-per-day”, which accounts for both the amount of water stored in an aquifer available for withdrawal and the ease with which the removed water will be replaced. The transmissivity of Jaffrey’s stratified drift deposits is estimated to range from less than 1,000 to 4,000. Transmissivity less than 1,000 is considered marginal for public or commercial wells. Jaffrey’s existing municipal wells are located in the medium yield deposits.

The situation of the stratified drift extending throughout parts of Jaffrey, Rindge and Sharon creates a water management issue for Jaffrey in that, while water in Jaffrey’s aquifer may be contributed from land area in the other towns, Jaffrey does not have land use authority in the neighboring towns.

Protecting groundwater in aquifers for individual private wells or public wells requires protection of environmental quality throughout the contributing watershed(s). This includes pollution prevention (including septic system maintenance) and minimizing impervious surfaces (rooftops, pavement and compacted earth) or otherwise ensuring a natural regimen of stormwater run-off versus infiltration to groundwater. For this reason, many states and towns have created regulation to control development in watersheds that supply the water to the aquifer area that is used as a public water supply.

Fractured bedrock can be highly-productive aquifers, especially when overlaid by a layer of sand gravel, which allows the recharge to occur directly from above. Most domestic water wells in Jaffrey are drilled into bedrock; and while many have low yields, bedrock fractures can yield vast amounts of water and sometimes transmit great volumes of water over many miles. Bedrock aquifers are more difficult to characterize, requiring labor-intensive, site- or area-specific technological study. At present there is little detailed information about the qualities of bedrock as an aquifer in New Hampshire. However, the USGS is currently conducting a geologic study of bedrock aquifers in the State, which will provide information similar to the 1993 stratified drift study.

Glacial till will typically provide very low yields of water to a well. The high content of very fine particles of clay and silt in till creates a situation where till can absorb a tremendous volume of water, like a sponge. However, electro-chemical interaction between water molecules, silt and clay essentially trap water in till. While the water in till is available to the flora and fauna of soil and plant growth above ground, till is a very poor aquifer.

### ***Surface Water***

Of Jaffrey’s total land area of 25,565 acres, 1,142 acres (4%) are bodies of water. The U.S. Geological Survey (USGS) identifies 103 separate water bodies in Jaffrey, with a total of 42 miles of shoreline.

Jaffrey’s 12 Great Ponds – water bodies 10 acres or greater in size – are prominent natural features (Table 29; see also Water Resources Map). These ponds and shorelands are cherished as home sites and for their recreational and habitat values.



**Table 29: Great Ponds in Jaffrey**

Pond	Acres (in Jaffrey)	Maximum Depth (in meters)	Mean Depth (in meters)
Ainsworth Pond	15	NA	NA
Black Reservoir	10	1.5	0.6
Cheshire Pond	27	3.0	1.0
Contoocook Lake	215	6.4	2.2
Cummings Meadow	42	1.8	0.6
Frost Pond	56	3.7	2.1
Gilmore Pond	115	13.1	3.7
Gilson Pond	12	1.0	0.4
Hodge Pond	14	NA	NA
Mt. Brook Reservoir	194	3.4	1.0
Parker Pond	20	2.3	1.4
Thorndike Pond	224	7.0	3.4

Source: NH Department of Environmental Services

<http://www.des.nh.gov/wmb/lakes/lakewater/trophicreports.html>

Surface water is not commonly regarded as a constraint on development. However, there are three reasons why Jaffrey should treat the protection of its surface water as a priority concern having potential significance for further development along and near the shorelines of its Great Ponds, in particular.

- 1) Along with bedrock wells, Jaffrey's surface water is the most likely source of water to meet the Town's future needs for an expanded water supply.
- 2) Jaffrey's Great Ponds are uniformly shallow, making them especially vulnerable to pollution caused by over-development of their shorelines (Contoocook Lake being a prime example).
- 3) Measures to protect long-term water availability and quality are necessary in the short term lest more of these bodies be compromised and their future use as water sources be impaired or rendered more costly.

All of this is underlined by the fact that much of Jaffrey's shoreland development consists of seasonal residences on small-sized lots with on-site septic systems. This type of development poses a potential threat to the water quality of the water bodies affected. As more of these seasonal residences are converted to year-round homes, there will be increasing incidents of septic system failure, thus increasing the threat of contamination. One solution to this problem would be greater setback requirements for septic systems and structures.

In sum, Jaffrey would be wise to take immediate and permanent action to safeguard its future water supply, as recommended in the *Final Report* of the Town's Ad Hoc Water Study Committee (September 17, 2004). Implementing water protection overlay zoning and other protective measures are especially recommended for Mountain Brook Reservoir.

Moreover, the Town would be well advised to revisit the existing Shoreland Overlay District to ensure its adequacy in the face of increasing pressures for perimeter development of all Great Ponds in the years ahead.

This committee asks additionally that Bullet Pond be closely monitored. Although Bullet Pond is located in Rindge, Jaffrey owns it and the land around it. Bullet Pond is a well-protected surface water source and served for many decades as a source of very high quality drinking water for Jaffrey. Some NHDES officials now agree that their decision to stop using Bullet Pond, circa 1990, was unfortunate. As such, its potential future value to Jaffrey is very high. It is in Jaffrey's interest to actively monitor all development activity in the watershed of Bullet Pond and to communicate our interest in protection of this resource to the current generation of planning officials in the Town of Rindge.

### *Summary*

The natural resources of Jaffrey need to be protected from the impacts of development. The environment, and our continued use of it, depends upon active stewardship by the community. Regulations related to development on steep slopes, surrounding wetlands, within floodplains, and within aquifer recharge areas need to be stringent enough to ensure the ecological health of these areas as well as the public health benefits that they provide.

## **CHAPTER SUMMARY AND CONCLUSION**

The fragility of our Town's natural resources, the threat to ecosystems from land fragmentation, and the implications for both the environment and Jaffrey's rural character posed by increasing housing and human density in the Rural District must be recognized. Through the creation of an Open space/Natural Resource Subcommittee, perhaps jointly with the Jaffrey Conservation Commission, the Planning Board could study how best to provide stewardship of our natural resources. This committee would review and strengthen relevant ordinances. Our rural ambiance will be sustained only through an on-going process of reconciling conservation with development.

Jaffrey must consider carefully the reality that approximately 68% of our Town's land area is subject to one or more of five natural constraints to development (steep slopes, wetland and other vulnerable soils, floodplains, aquifers, and surface water). This committee suggests that a natural resources section be created in the new Land Use Plan. A review of all ordinances pertaining to these natural constraints must be done. Recognizing inevitable tradeoffs with legitimate development, expert opinion should be sought on how best to protect these constraining, natural, physical features.

It would be helpful if a 3-tiered map, 1<sup>st</sup> tier Unfragmented Rural Land, 2<sup>nd</sup> tier Other Rural Lands, and 3<sup>rd</sup> tier Targeted Development Areas is developed. This could be done in conjunction with the Jaffrey Conservation Commission and would be a helpful guide for decisions concerning conservation and development.

The centrality of Mt. Monadnock's topography, scenic splendor of Jaffrey is known and respected. It is necessary, too, to recognize the significant and vulnerable natural resources, scenic attractions, important plant and wildlife habitats, and agricultural lands of high soil quality of the Rural District outside the Mountain Zone. Both the Mountain Zone and Rural District deserve to be well protected. This committee suggests that high-density, multiple-use development be directed to the downtown hub area. By enlarging this hub area, commercial and industrial expansion as well as the need for affordable housing could be met. Jaffrey's northern, northeastern, and southern peripheries' natural resources, open space, and rural character can be protected by allowing only low-density housing in these areas.

We wish to make a final comment concerning Jaffrey's farmlands. Within the current state of both the local and national economy, agriculture no longer provides a sufficient primary income for most families or individuals and therefore there is a significant threat to existing farmland as large tracts are being sold

primarily for residential development. However, there has been a rise in the use of small scale farming for personal use, farming as a secondary income source, and an increase in the production of value-added farm products being produced by small farms. However, there is still a significant threat to farmlands within Jaffrey. Maintaining agricultural lands in Jaffrey in their current state through the use of conservation easements, Open Space Residential Developments, Transfer of Development Rights and other regulatory policy should be a goal of Jaffrey in order to mitigate the impacts of development on an important town resource.

## MAPS & APPENDICES

Footnote 5 on Page 108:

**Table 30: Soil Types**

Symbol	Soil Type	Characteristics
24B	Agawam	Very fine sandy loam, 3-8% slope
72B	Berkshire	Fine sandy loam, 3-8% slope
76B	Marlow	Fine sandy loam, 3-8% slope
108	Hadley	Silt loam, very level
142B	Monadnock	Fine sandy loam, 3-8% slope
168B	Sunapee	Fine sandy loam, 3-8% slope
513B	Ningret	Fine sandy loam, 3-8% slope

Footnote 9 on Page 114:

The soils listed below are the fourteen soil types occurring in Jaffrey that are associated with excessively steep slopes:

**Table 31: Steep Slope Soils**

Symbol	Soil Type	Characteristics	Slope
22E	Colton	loamy fine sand,	15-50%
60D	Tunbridge-Berkshire	stony fine sandy loam	15-25%
61C	Tunbridge-Lyman	rock outcrop	8-15%
61D	Tunbridge-Lyman	rock outcrop	15-25%
72D	Berkshire	fine sandy loam	15-25%
73D	Berkshire	stony fine sandy loam	15-25%
76D	Marlow	fine sandy loam	15-25%
77D	Marlow	stony fine sandy loam	15-25%
77E	Marlow	stony fine sandy loam	25-50%
143D	Monadnock	stony fine sandy loam	15-25%
161E	Lyman-Tunbridge	rock outcrop	25-50%
365E	Berkshire & Monadnock	very stony fine sandy loam	25-50%
399	Rock outcrop	rock outcrop	8-50%
526E	Caesar	loamy sand	15-50%

These soils are found on the sides of hills, along ridges and as rocky outcrops void of soils. Ranging in slope from 8% to 50%, these soils are classified as having low and/or very low development potential because of steep slope, exposed or shallow bedrock and the lack of adequate corrective measures capable of increasing the development potential of such sites.

Footnote 10 on page 114:

**Table 32: Wetland Soils**

Symbol	Soil Type	Characteristics
5	Rippowam	Fine sandy loam, frequent flooding: biennial
6	Saco	Mucky silty loam, frequent flooding: biennial
107	Rippowam-Saco	Fine sandy loam and mucky silt, biennial flooding

Footnote 11 on page 115:

**Table 33: Floodplain Soils**

Symbol	Soil Type	Characteristics	Suited For	Not Suited For
15	<b>Searsport Muck</b>	Nearly level and very poorly drained	Habitat for wetland wildlife. Probable source of sand for construction	Building site development, septic systems, recreation development, and farming
197	Borochemists, ponded	Nearly level and very poorly drained	Habitat for wetland wildlife	Most uses
214	Naumberg Fine Sandy Loam	Nearly level and somewhat poorly drained and poorly drained	Habitat for open land, woodland, and wetland wildlife. Probable source of sand for construction	Building site development, septic systems, recreation development, and farming
295	Greenwood Mucky Peat	Nearly level and very poorly drained	Habitat for wetland wildlife	Most uses
347B	Lyme Moosilauke	Very stony		
395	Chocorua Mucky Peat	Nearly level and very poorly drained	Habitat for wetland wildlife. Probable source of sand for construction	Most uses
414	Moosilauke	Fine sandy loam		
495	Ossipee	Mucky peat		
533	Raynham	Silt loam		
547B	Lyme	Stony fine sandy loam		
646B	PillsburyFine Sandy Loam			
647B	Pillsbury Stony Loam	Nearly level to gently sloping, somewhat poorly drained and poorly drained	Habitat for woodland wildlife	Building site development, septic systems, and recreation development

## LAND USE

### INTRODUCTION

The results of the Community Survey, February 2006 showed that the residents of Jaffrey want:

- 1) To maintain the rural character of Jaffrey.
- 2) To protect the natural resources of the area.
- 3) Future growth to be well planned and regulated.

Once raw land is converted to a particular use, it is usually committed to that use for a very long time, if not indefinitely. Therefore, decisions about future land use should be made carefully, with a studied eye to the potential ramifications of those uses. A well-conceived land use plan encourages and allows for new growth and development while it protects and preserves the integrity of neighborhoods, businesses, transportation routes, and the environment.

This chapter describes the pattern of existing land uses in Jaffrey and analyzes the changes which have transpired in the land use pattern since 1997, the date of the last land use analysis for Jaffrey. This information provides the baseline necessary to evaluate the appropriateness of future development and the availability of suitable land for such development. Virtually every development-related decision a community makes will have some impact upon the way the land is used. Other chapters of this Master Plan, which discuss housing, community facilities, transportation, utilities, and economic development, are all in some way related to land use.

The development of this land use chapter provides the impetus behind the formulation of land use regulations, which encompass zoning ordinances, subdivision and site plan review. The future land use plan should describe the goals and objectives envisioned by the town; while the zoning, subdivision and site plan regulations are the means to implement these goals.

Prior to delving into the quantitative data it is important to identify current land use patterns, trends, and issues. A major focus for communities has been to proactively plan for growth to insure that thoughtful, logical development is identified and encouraged in such a way that there is no significant decline in municipal services in the Town of Jaffrey. Additionally, land use decisions should be weighed in light of their effect on the region to assure that localized decisions do not impose negative externalities on neighboring towns.

Land use planning trends and regulations in New Hampshire have provided new tools and techniques for towns to incorporate. These contemporary planning techniques encompass fundamental land use planning principles intended to encourage more thoughtful, and calculated development. Several New Hampshire communities have endorsed these contemporary land use planning practices due in part to the increased growth and development pressures occurring on the landscape. It is important to identify and discuss some of the growth patterns which are contrary to these planning principles. These growth patterns often produce undesirable impacts such as increased traffic congestion, undesirable visual appearances, and encumbered pedestrian accessibility. These types of development can essentially be classified into three distinct forms: strip, sprawl and scattered. These land use forms are described below.

- Strip – A strip development pattern occurs along high volume roadways that span out from town centers and clusters. This development encompasses an array of residential housing and commercial development of a “stop and go” variety. Proximity to the highway is the major

impetus behind this type of development. Municipalities typically zone this area for commercial uses and include prescriptive regulations to fit this pattern of development. Developers view these commercially zoned areas as economically viable locations to site commercial businesses. This type of development poses challenges for extending and maintaining public utilities due in part from the lack of centralized development and the outward extension of roadway development.

- **Sprawl** – A sprawl development pattern usually begins as strip development followed by horizontal and lateral development extending back from the roadway. Sprawl is also dominated by the roadway, which serves as the major force for this style of development. Sprawl expansion usually consists of residential subdivisions and commercial and industrial land uses. Visually, sprawl encompasses large front parking lots and minimal connectivity or linkages for pedestrian sidewalks and circulation. Additionally, building facades are visually disjointed and larger business signs are located within close proximity to roadway corridors. Some of the common problems that occur with sprawl are inefficient traffic circulation, lack of pedestrian connectivity and lackluster visual aesthetics.
- **Scattered** – Scattered development is development that has no discernable land use pattern. Typically, this development pattern results in a broad array of land uses dispersed across the landscape. Scattered development can lead to incompatibility amongst various land uses.

## LAND USE CATEGORIES

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

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

- ◆ **Single Family Residential:** All land and/or structures used to provide housing for one household. These include site-built single family homes, manufactured homes (previously known as mobile homes), factory-built modular homes, and seasonal residences.
- ◆ **Duplex Residential:** All land and structures used to provide housing for a two (2) household unit. The two units in a duplex development share a common roof.
- ◆ **Multi-family Residential:** All land and or structures use to provide housing for three (3) or more dwelling units.
- ◆ **Institutional:** Establishments and facilities supported by and/or used exclusively by the public or non-profit organizations, such as fraternal, religious, charitable, educational and governmental facilities.
- ◆ **Agricultural:** Lands that are utilized for the cultivation of crops, the raising of

livestock and poultry, and nurseries for horticultural purposes.

- ◆ **Commercial:** All lands and structures that supply goods and/or services to the general public. This includes such facilities as restaurants, motels, hotels, service stations, grocery stores, furniture and appliance sales, as well as establishments which are primarily oriented to providing a professional and/or personal service to the public, such as medical offices, banks and financial institutions, personal care establishments, etc.
- ◆ **Mixed Uses:** A development that combines two (2) or more different land uses on the same lot or contiguous lots in the same zone, such as retail uses and residential uses.
- ◆ **Industrial:** Land and/or facilities used for mining, construction, manufacturing, treatment, packaging, incidental storage, distribution, transportation, communication, electric, gas and sanitary services, and wholesale trade.
- ◆ **Road network:** All public and private rights-of-way that are designated for carrying vehicular traffic. This includes Class VI roads that are no longer maintained by the town and do not carry public traffic.
- ◆ **Protected Lands:** Included in this category are all federally-owned lands, all State parks and forests, land protected under New Hampshire's Land and Community Heritage Investment Program (LCHIP), land protected and/or owned by the Town, sensitive land and wildlife habitats protected by the NH Audubon Society, land held by the Society for the Protection of NH Forests, the Monadnock Conservancy, and similar organizations.
- ◆ **Undeveloped:** All lands that are not developed for any of the above uses, regardless of the reason.

## FACTORS THAT INFLUENCE LAND USE

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

### **Water**

Jaffrey has 25 waterbodies dispersed throughout Town. Most of them are small, measuring no more than a few acres in size. The largest body of water in Jaffrey is Thorndike Pond, which encompasses two hundred and twenty four (224) acres. Most of these waterbodies are hydraulically connected to streams and brooks which form the drainage pattern. The three watersheds located within Jaffrey are; the Ashuelot River, Millers River, and Contoocook River watersheds.



***Transportation Systems***

One of the most important elements of Jaffrey's transportation/road system is how route 202 will be reconfigured in the downtown area. This is further discussed in the Economic Development and Transportation chapters.

Route 202 is classified by the state as a Class I road within the state highway system. Route 202 is a minor arterial which runs in a northerly/southerly direction through Jaffrey's downtown core

From a local standpoint, Route 202 serves to provide access for many local roads to and from Highway 101. Route 124 provides highway access east and west. Routes 202, 124 and 137 all traverse through Jaffrey's downtown.

***Topography & Soils***

Topography and soils also play a role in any town's development. Soil type and characteristics influence what kind of development will occur - farming, for example, and where that development will take place.

The most distinguishing natural feature in Jaffrey is Mount Monadnock. The Mountain, which is located in the northwest corner of Jaffrey and spans within the confines of Troy, Dublin, and Marlboro. With an elevation of 3,165 feet, the mountain is surrounded by a heavily glaciated terrain consisting of exposed bedrock, large rock outcroppings, and steep slopes. In addition to the topographic constraints on development, land owned by the Monadnock State Park, The Society for the Protection of New Hampshire Forests and the Jaffrey Town Forest will not be developed and is preserved in perpetuity. Rolling hills occupy the central and eastern portions of town, which can contain a slope gradient in excess of 15%. Drainage from these upland areas flows into the Contoocook River.

The soils of Jaffrey are characteristic of the Monadnock Region. Approximately 25% of the land area in Jaffrey has restrictive features such as wetness, steepness of slope, hardpan or floodplain conditions. Soils on steep slopes are usually thin with exposed bedrock or a shallow depth to bedrock. Floodplain soils tend to be fine and sandy with wetland conditions. Floodplain areas often have well-developed topsoil making them desirable for certain agricultural uses.

Wetland soils in Jaffrey are those that the soil survey categorizes as being poorly drained or very poorly drained (including muck and peat). Jaffrey has a scattered pattern of wetland soils, accounting for roughly 5% of the total land area, or 1,210 acres.

***Public Utilities***

The protection of current water supplies and the development of new water sources must be considered in all future land use.

Jaffrey Water Works operates the Town water system, which includes over 36 miles of piping and supplies approximately 1,500 water connections.

The Town of Jaffrey also operates a sewage treatment plant. The plant serves roughly 800 connections with an average daily flow of 490,000 gallons per day. These connections include residential, commercial and industrial and institutional uses.

**CURRENT LAND USE PATTERNS AND TRENDS**

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

recommendations can be developed relative to future land uses. As Jaffrey continues to grow and develop there will be new development challenges for locating suitable and economically feasible areas for development. As development occurs over time, the remaining land for development will be more encumbered by environmentally sensitive areas, or have inadequate road access or infrastructure. Additionally, land owners may see a greater incentive to subdivide their land as the market forces dictate future demand for suitable building lots.

Jaffrey has grown from a collection of farmsteads to become a community with an active and varied town center. The town still maintains the rural character that is Jaffrey's heritage.

This is the image of Jaffrey which persists to this day, and one which the residents of town are so desirous of maintaining in the face of anticipated growth.

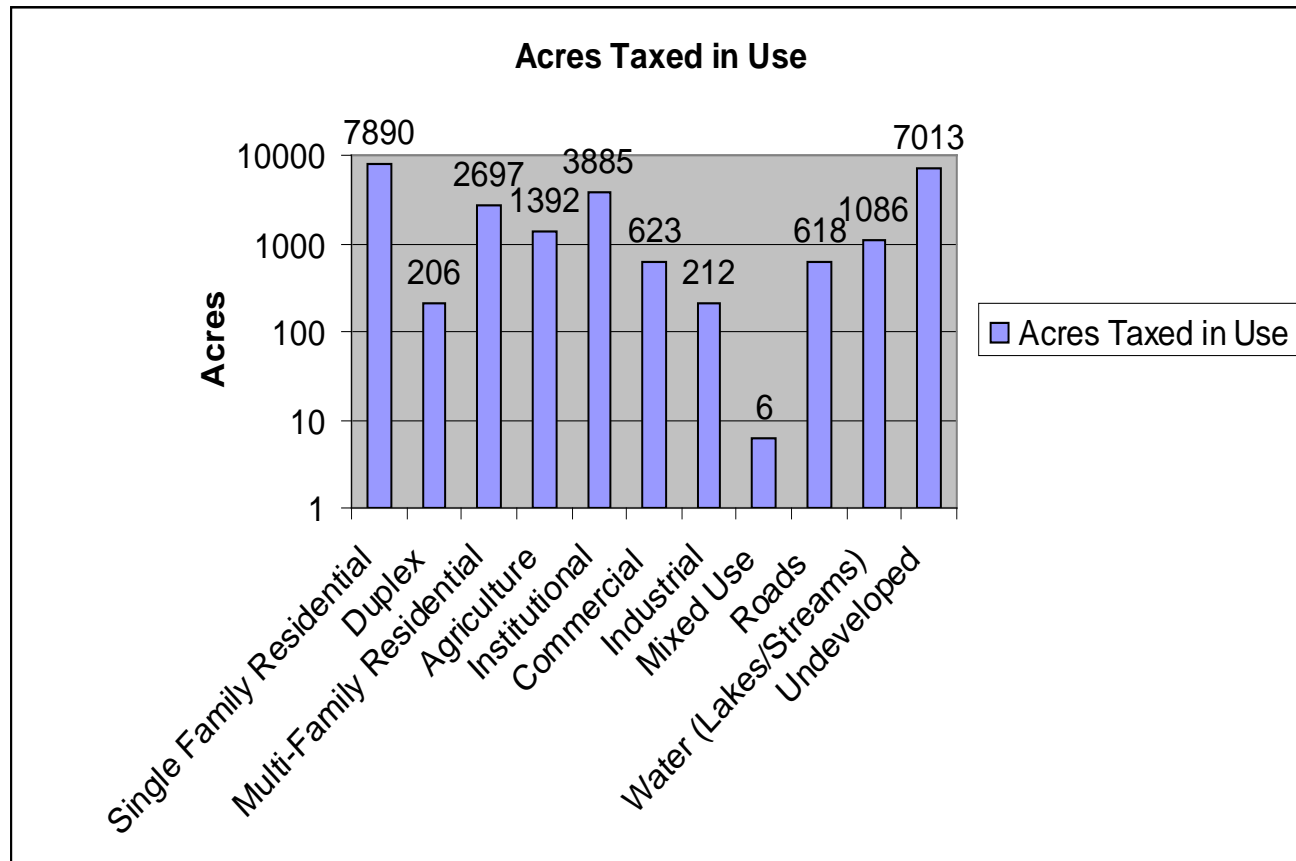
Many New Hampshire towns have developed in a similar manner to Jaffrey. Towns and cities were established when living patterns were less complex than they are today. The center of Jaffrey is typical of this clustering of homes, businesses and services.

Jaffrey is comprised of a land area totaling 38.4 square miles or 24,576 acres. Only 1.8 square miles of this total area consists of surface water. Roughly 69 percent of the land in Jaffrey is presently developed for one of the uses described earlier in this chapter. A developed parcel of land implies that a use has been established on the property and at least a portion of the land is being occupied and taxed accordingly. A developed property does not necessarily imply the land has exhausted its development potential either through subdividing additional lots or intensifying uses on the land. For instance, a residential parcel may be considered "developed" even though the potential to subdivide additional parcels from the parent parcel is probable.

Attempting to calculate exact acreages for land uses - particularly residential usage, is difficult and time-consuming. Therefore, a commonly-used methodology is to simply assume two acres per each dwelling unit or use other than public/semi-public and vacant land. For residential uses, this takes into account that multi-family units will typically occupy much less than an acre per living unit and most single family homes much more than an acre per living unit. It is common for more of a lot to be taken up by a non-residential use than is generally observed for residential uses. The analysis of Jaffrey's existing land uses was performed in 2005 using Geographic Information System (GIS) technology with 2005 tax assessing data from the town. The 2005 tax assessing data from the Town of Jaffrey breaks land uses into the following categories:

- ◆ Single Family Residential
- ◆ Duplex Residential
- ◆ Multi Family Residential
- ◆ Agriculture
- ◆ Institutional
- ◆ Commercial
- ◆ Industrial
- ◆ Mixed Use
- ◆ Undeveloped

The land area taken up by roads and highways is calculated by assuming a 40-foot right-of-way, multiplied by the number of miles of road. The following Figure 14 identifies land used and the number of acres being taxed for each identified use.

**FIGURE 14: JAFFREY LAND USES**

2005 Tax Assessing Data from the Town of Jaffrey

Using tax assessment data can provide a rough sketch of how land is physically being occupied, however, it is important to understand that tax data provides only a partial view of how land is being used. Viewing the 2005 tax assessment data in relation to Jaffrey's zoning identifies how the land is being used within each zoning district. Zoning ordinances promulgate uses of the land which are permissible and prohibited within each district. Figure 15 identifies developed and undeveloped acreages within each zoning district based on the tax assessor's database. Discrepancies in data are likely due to differing formats of state GIS data and the tax assessor's database, both used to gather data.

**FIGURE 15: DEVELOPED/UNDEVELOPED LAND BY ZONING DISTRICT**

<b>Zoning District</b>	<b>Developed (Acres)</b>	<b>Undeveloped (Acres)</b>
Rural with Town Water	2,812	470
Rural without Town Water	12,020	6,258
Industrial	571	38
Historic	62	1
General Business District	141	23
Residential District A	283	51
Residential District A with Town Sewer	694	111
Residential District B	121	45
Residential District B with Town Sewer	212	16
<b>TOTAL ACRES</b>	<b>16,916</b>	<b>7,013</b>

2005 Tax Assessing Data from the Town of Jaffrey

Jaffrey's developed land identifies Rural without public water as the predominant zoning district. The Rural Zoning District contains a wide array of permissible land uses including; single family dwellings, duplexes, farms, and manufactured and mobile home parks. The General Business Zoning District allows a myriad of retail sales, professional offices, eating establishments and service related uses. The Industrial Zoning District allows manufacturing, warehousing, distribution and heavy equipment sales and service, in addition to other industrial related uses. Figure 16 identifies the number of industrial and commercially zoned parcels that are currently vacant or occupied.

**FIGURE 16: COMMERCIAL/INDUSTRIAL ZONED PARCELS**

<b>Zoning District</b>	<b>Number of Developed Parcels/Acres</b>	<b>Number of Undeveloped Parcels/Acres</b>	<b>Total Parcels/Acres</b>
Commercial & General Business District	207 Parcels 141 Acres	19 Parcels 23 Acres	226 Parcels 164 Acres
Industrial District	55 Parcels 571 Acres	14 Parcels 38 Acres	69 Parcels 609 Acres

2005 Tax Assessing Data from the Town of Jaffrey

The Commercial/General Business and Industrial Zoning Districts identified twenty three (23) and thirty eight (38) undeveloped acres respectively. It is important to look at the existing inventory of commercial and industrial lands to determine if adequate land is available to accommodate and bolster future commercial and industrial development. Additionally, it is important to consider the location of vacant commercial and industrial lands to garner an understanding of where future development will eventually be erected. Jaffrey's downtown contains a broad spectrum of commercial, multi-family and single family land uses. A majority of parcels in the downtown vicinity are served by public water and sewer, which

allows for higher density development. There is some industrial activity in downtown Jaffrey, although a majority of industrial uses are located on the periphery of the downtown core.

Jaffrey has a variety of public recreational opportunities. Hiking, field sports and boating are just a few of the recreational opportunities available in Jaffrey. Some of the existing opportunities and facilities include: Mount Monadnock, Contoocook Lake, American Legion Ballfield, Alderman Park, Humiston Park, Cheshire Park, Frost Pond, Shattuck Park, and Gilmore Pond.

Mount Monadnock is one of Jaffrey's greatest assets and the Mountain Zone must be considered and protected at all times. The Mountain Zone is an overlay zoning district designed to protect and preserve the rural, scenic beauty of Mount Monadnock and its associated highlands, including Gap Mountain and Little Monadnock. The purpose of this scenic zone is primarily to address the developmental threats to the Monadnock highlands. A regional zone will have positive long-term implications for all towns involved. It will also help to preserve the natural beauty of the Monadnock highlands for future generations.

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

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

The Town of Jaffrey has a total land area of 24,576 acres, of which 263 properties totaling 7,050 acres are in current use, as of 2005.

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

## LIMITATIONS TO DEVELOPMENT

The data concerning the existing land use pattern reveals that roughly 69 percent of Jaffrey's total land area is currently developed, leaving roughly 7,000 acres undeveloped. Undeveloped land is defined as land which is devoid of land development or an established use. It is important to differentiate between undeveloped land, which is currently idle and development land which has potential to yield additional lots, density or build out. Not all of the 7,000 acres of undeveloped land is suitable for future development. Limiting factors to development include steep slopes, certain soil types, wetlands, aquifers, floodplain areas, and other sensitive lands or features. In addition to these physical constraints, development is limited by the public's desire to protect the quality of life and property values of existing residents. The opinions and values of Jaffrey residents will ideally be expressed in the town's land use regulations, and is the central purpose of this planning document.

Four maps have been created using Geographic Information System technology showing limitations to development in Jaffrey: *Stratified Drift Aquifers*, *Steep Slopes*, *Wetlands & Hydric Soils*, and *Development Constraints*. These maps identify the seven constraints to development that are related to

the ability of the soil to accommodate septic systems, road or building construction (maps are located at the end of the chapter).

**FIGURE 17: DEVELOPMENT CONSTRAINTS**

**Limits to Development**

	Acres	% of Town Land Area
Total Land Area	24,576	100%
<b><u>Development Constraints</u></b>		
Slopes greater than 25%	1,529	6%
Poorly and very poorly drained soils (Hydric soils)	1,894	8%
Wetlands*	1,896	8%
Floodplain	4,427	18%
Shallow to bedrock soils (Less than 40 inches)	1,799	7%
Shallow to water table (Less than 1.5 feet)	6,628	27%
Water (Lakes/Streams)	1,152	5%
Conservation Lands	5,829	24%
* National Wetlands Inventory (NWI)		
Source: SWRPC Geographic Information System		

The development constraints listed above provide summary of the acres and percentages of land encumbered by various constraints. This summary is intended to illustrate the types and percentages of constraints found in Jaffrey. Prior to drawing any conclusions it is important to understand that a property may, and often does contain more than one development constraint. For example, it is not uncommon for the same lot to have a stream, floodplain and shallow water table.

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

In addition to topographical constraints, State Law allows municipalities to enact regulations which can limit and curtail growth and development. Under RSA 674:23 municipalities can adopt growth control measures to be used on an interim basis while municipalities devise permanent growth management mechanisms (e.g., phased development). Jaffrey and the surrounding Towns of Fitzwilliam, Rindge, and Dublin have all incorporated interim growth management schemes. Such schemes include a limit on the number of building permits or a prohibition on new subdivision development. A majority of Towns using interim growth measures have placed a moratorium on “major” residential subdivisions which is a division of one parcel of land into four or more lots.

## CONCLUSION

Jaffrey will continue to grow but it is up to those controlling this growth to follow the guidelines in this chapter.

- 1) The Mountain Zone must be protected.
- 2) Development must not be allowed to encroach on wetlands, and possible water sources.
- 3) Development must only be allowed in areas where soil types, grades and depths to the water table are appropriate.
- 4) Any growth should enhance the rural character of Jaffrey not detract from it, by placing a greater priority on conservation and land protection in the Rural District. Growth should be concentrated in the districts where town water and sewer are already available.
- 5) Adopt a policy on development on Class VI roads when dealing with building permit applications.
- 6) Adopt a viewshed ordinance to protect Mt Monadnock and other scenic areas.
- 7) Consider the use of Innovative Land Use tools, as defined by RSA 674:21, such as Open Space Residential Development Plans and Transfer of Development Rights to guide future development. The Planning Board should consider developing an Open Space Plan which is prerequisite to developing effective OSRD and TDR regulations.