

Wheelock Town Plan

March 2014



Table of Contents

Introduction	4
History and Historic Resources	5
Goal	7
Strategies	7
Land Use.....	7
Present Land Use.....	9
Goals.....	10
Strategies	11
Transportation.....	12
Other Transportation Infrastructure	14
Railroads.....	14
Airports.....	14
Cycling	14
ATV and Snowmobile Use.....	14
Present conditions.....	15
Goals.....	15
Strategies	15
Utilities and Facilities	16
Electricity	16
Water and Sewer.....	16
Goals.....	17
Strategies	18
Solid Waste.....	18
Present conditions.....	18
Goals.....	19
Strategies	19
Town Hall, Town Clerk's Office, and Town Garage	19
Present conditions.....	20
Goal	20
Strategies	20
Post Office.....	21
Cemeteries	21
Communications.....	21
Present condition	22
Goals.....	22
Strategy.....	22
Emergency Services	22
Fire.....	22
Emergency Medical Services	23
Police.....	23
Emergency Management	24
Medical Facilities	24
Present conditions.....	25
Goals.....	25
Strategies	25
Energy Plan	25
Present conditions.....	26
Goal	26
Strategies	27
Housing	27
Goals.....	31
Strategies	32

Education.....	32
Goals.....	35
Strategy.....	35
Adjacent Communities	35
Present conditions.....	36
Sheffield	36
Greensboro.....	37
Stannard.....	37
Danville	38
Lyndon.....	38
Sutton.....	39
Goals.....	39
Strategies	39
Economic Development	40
Goals.....	43
Strategies	43
Recreation.....	44
Goals.....	45
Strategies	45
Flood Resiliency.....	46
Goals.....	53
Strategies	54
Appendix	54

WHEELOCK TOWN PLAN

December, 2013

Introduction

A town plan is a guide for growth. The Wheelock town plan describes current conditions, identifies needs, shares goals for the future and suggests strategies to guide actions. Vermont Statute, Title 24, Section 4382 defines what must be included in a town plan and the process for adoption. The law requires the plan to address the following areas: land use, housing, utilities and facilities, transportation, energy, adjacent communities, educational facilities, economic development, flood resiliency, preservation of rare and irreplaceable natural areas, scenic and historic features and resources, a statement of objectives for the above, and a program for implementation.

In and of itself, the town plan is not a regulatory document. However, in combination with Act 250, Section 248 (the public service board), and/or local regulations such as zoning and/or subdivision regulations, the town plan could be seen as having some regulatory impact.

The Wheelock Planning Commission is made up of six citizens appointed by the selectboard. Roger DeKett serves as Chair of the Planning Commission. Other Planning Commission members are Fred Bishop, Marc Brown, Carol Rossi, Marina Cole and Lorraine Poulin.

The Planning Commission began updating this plan in July, 2013. Meeting the last Wednesday of each month, the committee reviewed the prior plan, reviewed the plans of other communities, consulted with NVDA, and wrote the current town plan.

The policies, objectives, and programs used to guide the town planning process are discussed in each section of the plan along with strategies to guide future actions.

History and Historic Resources

Wheelock has the distinction of being the only town in Vermont ever chartered to an out-of-state organization. Eleazar Wheelock contracted with Abraham Morrill of Danville, Vermont, to recruit tenants for the lands in Wheelock and to supervise the development of the community. After his first survey of the land in Wheelock, Morrill wrote the Reverend Wheelock, "I would inform you that on viewing the Town, I find it not so good as was expected that there is some mountains in the middle and towards the westerly part of said Town and that a considerable of the other part is Dark and swampy land and unfit for settlements" (*Town of Wheelock: Vermont's Gift to Dartmouth College*).

Despite this discouraging report, Wheelock grew from a population of 33 in 1790 to more than 60 in 1794. The tenants of the town continued to pay rentals and provide significant funds to Dartmouth College through the mid-1800s; however, this relationship was not all positive. Morrill's letter suggests that as early as 1794 the residents felt some discontent about putting work into land to which they had no title. In 1799, four residents of Wheelock petitioned the Assembly of the State of Vermont to void the original grant and charter, "as one half of which was granted for the use and benefit of Moor's Charity School, which did not at the time of said grant, or any other time, exist..." (*Town of Wheelock: Vermont's Gift to Dartmouth College*). The suit ended when the Vermont legislature confirmed the original grant and charter. One undisputed benefit to the town's status was that the tenants did not have to pay state taxes.

The first major commercial and public buildings were constructed along the County Road, which had been designed to become the "boulevard of the town." (*Vermont Place Names: Footprints of History*). The County Road entered Wheelock from North Danville, passed through what was later called South Wheelock and through Pipvillage and Ramsey Corner into the neighboring town of Sheffield. Each year for the town's Fourth of July celebration, the men of the town cut down a tamarack tree from Ramsey Corner to serve as the Liberty Pole. (*Town of Wheelock: Vermont's Gift to Dartmouth College*).

Selectmen approved a petition to establish a village in Wheelock Hollow in 1830. Erastus Fairbanks began an independent business venture in Wheelock, running the first store in Wheelock Hollow. Later, he founded the original Fairbanks Scale Works in St. Johnsbury. Wheelock was on the stage and mail route between Boston and Montreal.

Small businesses and homes were built along Miller's Run River to take advantage of the water as a source of power. "The story of these millsites and water privileges in the village is a complicated and changing one. The fact that this part of the town had first been a part of Sheffield and was apportioned to Wheelock, so that the later could have better water-power, gave rise to the saying that 'Wheelock got Sheffield's boot and it was a good piece of town cobbling'" (*Town of Wheelock: Vermont's Gift to Dartmouth College*).

Four dams were built on Miller's Run in Wheelock Hollow. The first was the site of a cabinet shop, the second the site of the original grist mill. On the north side of the stream at the third dam stood a tannery and a woolen factory. The fourth dam was the site of a carding and cloth dressing mill.

By 1842, Wheelock had 12 school districts, three saw mills, one gristmill, one fulling mill, one store, 264 horses, 1,272 cattle, 4,787 sheep and 881 habitants. The 1860 census shows a slight drop in population but also the addition of a tavern, meeting house, law office, starch factory, two blacksmith shops, and two shoe stores.

Today, Wheelock has a general store, two Community Supported Agriculture (CSA) farms, and a handful of home-based small businesses. Students in kindergarten through eighth grade attend the Miller's Run school in the adjacent town of Sheffield while students in grades nine through twelve attend high school in adjacent communities. Wheelock is a residential community made up almost entirely of single-family homes. Most residents commute to other towns for employment.

Wheelock celebrated the U.S. Bicentennial in 1976. Festivities included a parade, hayrides to historic sites, good food, and community activities. Since then, traditional annual community events such as Field Day, the Chicken Pie Supper, and the Christmas party have ceased. There is a concern about the lack of volunteerism in the town.

Wheelock has lost several significant historic buildings and seen others moved to new locations. The town hall now stands on the site of a former church. The South Wheelock Church has been moved miles from its original site. There are no buildings remaining at Piperville or Ramsey Corners. Wheelock was at one time well known for its Caledonia Mineral Spring. Visitors came to Wheelock to drink from the sulfur spring for the water's purported medicinal value. Many stayed at the Caledonia Spring House, a brick hotel on the main street of the village, which was dismantled and removed in 1994.

The town desires to identify and preserve Wheelock's historic assets.

Goals

- The town wants to preserve historic buildings and assets that provide a reference and insights into the town's history for the education of townspeople, schoolchildren, and visitors.
- Rebuild a sense of community in the town.

Strategies

- Encourage the selectmen and private land owners to maintain buildings and assets of historic significance, such as the town hall.
- Create an inventory of properties and assets of historic significance.
- Encourage formation of a town historical society to help identify and preserve the photographs, stories, and history of the town.
- If a new town hall is built, maintain the present town hall as a place to house Wheelock historical artifacts.
- Build a cadre of volunteers through personal contacts.

Land Use

The Town of Wheelock consists of 25,478 acres and is divided by a north-south chain of intermittent mountains that are part of a larger chain extending from Sutton to

Walden in Caledonia County. Most of the primary agricultural lands and the better road network are east of the mountains. This area is the most densely populated and comprises the most open land in the town. To the west of the mountains much of the land is managed for forestry, wildlife, and recreation.

Three major water courses run through the town. The larger two are Miller's Run, adjacent to Route 122, which is about 1.6 miles long, and the Lamoille River along Route 16, which is about 1.4 miles long. The smallest of the three is the South Wheelock Branch, which runs for approximately 5 miles adjacent to the South Wheelock and Stannard Mountain roads. There are small flood zones along the South Wheelock Branch, although none of these appear on the FEMA flood zone maps. The FEMA flood zone maps show that the courses of the Miller's Run and the Lamoille Rivers fall into zone A, special flood hazard area.

Ridgelines constitute an aesthetic benefit to the town, but they also may offer advantageous sites for wind energy and communication towers. The use of ridgeline sites for communications and wind energy towers has become a controversial issue. Although for now there are no wind tower projects planned within the town limits and only one existing communication tower, proper management of the ridgelines will require the town to consider the needs of the entire town and of the surrounding communities.

Since its founding, Wheelock has contained many small farms. Today, a small number of specialized farms grow hay or vegetables and Wheelock hosts two CSA farms. The town's sense of connection to the land and desire for open fields and pasture are strong. Retaining the rural character of the town is important.

Soil types play a significant role in determining the viability of any type of land use. Soils that are the most desirable for farming exist on land that is typically the most desirable for both commercial and residential development. Soil maps for the entire town are available. These maps can help identify areas that may be prone to flooding. Good planning will require the town to balance the desire to preserve farmland while serving the need for continued residential development.

Earth extraction (such as gravel pits and rock quarries) is a highly intensive use that requires special care and consideration. Such uses shall be sited so that they do

not impair water resources and wetlands, degrade Wheelock's roads, create unsafe driving conditions, or disrupt reasonable enjoyment of adjoining residential and commercial uses.

Forest land plays a critical part in promoting regional tourism, recreation, and hunting, activities that stimulate state and local economies. Forests now cover about 70 percent of Wheelock. These lands offer many benefits, from wildlife habitat to commercial uses that provide valuable local jobs. The vigor of forest growth makes this resource less threatened than open agricultural land. The working forests provide local jobs for loggers, truckers, and sawmill workers. The town is increasingly concerned about the long-term negative effects of unmanaged use of forest lands, such as increased run-off, the degradation of forest health, and certain negative aesthetic impacts. The imminent threat of disease and insect infestation such as the emerald ash borer is also a concern.

Most of the town consists of residential land use. About 2500 acres is public land. This includes the Steam Mill Brook Wildlife Management area on Wheelock and Ide Mountains, and Mathewson State Forest in the northeast part of the town. There are a few landowners with large tracks of land managed for forestry. These areas are located on or in close proximity to the mountains in the town. The remoteness of these areas along with the lack of a road network makes these lands prime for conservation efforts.

The little commercial development in town is located mainly along Vermont Route 122 in the northern part of the town. This is the best road network in the town and is therefore the most logical place for commercial development. Please refer to the Existing and Proposed Landuse Map and also the Residential and Commercial Landuse Map for a more detailed look at these areas.

Present Land Use

- The total acreage in the Town of Wheelock is 25,478 acres.
- Approximately 2500 acres of the town consists of public lands. These areas include Mathewson State Forest in the northern tip of the town and the Steam Mill Brook Wildlife Management Area on Wheelock and Ide mountains.

- Nearly 600 acres are above 2500 feet. Special state land use restrictions apply to these areas. Deer wintering areas cover the extreme western end of the town and comprise about 3800 acres.
- Less than 500 acres in the town are actively farmed.
- Approximately 70 percent of the town is forested.
- There is little or no commercial development in the town.
- Most of the town's dwellings are single-family houses with acreage holdings of less than 50 acres.
- About 45 percent of the total acreage is in the state's Current Use Program totaling about 11,500 acres enrolled.
- The town has no zoning.

Goals

The town wants to:

- Preserve the rural nature of the town while promoting agricultural activity, professional home-based businesses, and a communications network.
- Assure that land use and development do not strain municipal facilities and services.
- Assure that moderate-to-large developments provide and maintain their own access to water and sewer and their own roads.
- View agricultural activity and the natural resources as major benefits. Prime farmland and significant natural resources should not be significantly diminished by development.
- Maintain the diversity and vitality of the cultural, residential, and economic center.
- Protect natural and historical assets throughout the town, such as the sulphur springs, cemeteries, town hall, Wheelock village falls viewing area (where the town garage presently sits), and the lands around them.
- Explore the possibility of creating a park and viewing area of the falls on Miller's Run in the village. This enhancement would require relocating the town garage.

- Recommend that industrial and commercial development be limited and restricted to areas where road access and sewage disposal are safe and feasible.
- Protect Chandler Pond, Flagg Pond, and Bean Pond, as well as the Miller's Run and other streams, from the adverse effects of commercial development. Further residential development adjacent to these natural attributes should be minimal. Adequate setbacks and minimum lot sizes should be regulated to protect these natural features from any harm or deterioration.
- Recommend that flood zones along the Miller's Run, the Lamoille River, and the South Wheelock branch be identified and protected.
- The town recommends that the state owned lands of Mathewson State Forest and the Steam Mill Brook Wildlife Management Area be managed to protect these resources for public, recreational, and educational uses. Adequate access to these areas should be maintained.
- Maintain vigorous and healthy woodlands, water courses, and water bodies.
- Encourage best farm practices and best logging practices.

Strategies

- Develop a plan to investigate the viability of moving the town garage and creating a park for viewing of the falls.
- Identify and inventory all historical markers and monuments, cemeteries, and natural assets. Municipality planning grant funds may be available to help fund the inventory. Develop local regulations to protect these assets and the areas that surround them.
- Develop local regulations to limit the size, kind, and scope of commercial development. Where possible, such developments should be excluded from areas of primary agricultural soils and encouraged where existing road access is good.
- Wheelock includes a variety of unique and fragile natural areas such as wetlands, cliffs, well-head protection zones, and areas where rare plants grow.

The town should identify, inventory, and protect these unique, rare, and/or endangered species and habitats.

- Wheelock's ponds and streams, vital to the wildlife and rural character of the town, are for the benefit and enjoyment of the entire community. To protect these areas, develop local regulations to require adequate setbacks, and proper sewage treatment following the State of Vermont regulatory practices.
- To encourage farming and other land practices that maintain or enhance the agricultural potential of the land, the town recommends:
 - the discouragement of development on primary agricultural soils.
 - cluster development.
 - use of the Current Use Program.
 - encouraging the Vermont Land Trust to purchase development rights.
- In order to maintain a healthy forest and forest industry in Wheelock, the town will need to implement policies that:
 - encourage the use of sound scientific harvesting and conservation methods, including acceptable management practices for protecting water quality.
 - encourage loggers and forest owners to meet with county and local foresters to determine sound management practices.
 - encourage landowners to think about the long-term health of the forest in addition to the short-term economic gain from logging.
 - promote educational workshops on proper long-term forest management.
 - promote land conservation through the Forest Legacy Program.
 - inform of imminent threats to our woodlands from insect, disease, and invasive species.
 - inform of imminent threats to our water bodies from invasive species.

Transportation

The Town of Wheelock maintains approximately 28 miles of class 2 and class 3 roads.

Interstate 91, which runs through the north end of Wheelock, is a major connecting highway for cities in the northeastern United States and Quebec, Canada. Exit 24 provides access to Wheelock and to State Highway 122. Exit 23 provides access to South Wheelock and to the South Wheelock Road.

State Highway 16, running north-south, passes through northwest Wheelock for about one mile. State Highway 122, running east-west for a mile and a half, passes through the Village of Wheelock, connecting State Highway 5 north of Lyndonville with State Highway 16 in Glover.

The only Class II highway in Wheelock is the South Wheelock Road. It is an east-west road connecting State Highway 5 in Lyndon and State Highway 16 in Greensboro Bend. South Wheelock Road traverses Wheelock for 6.15 miles. Only a small portion is paved. The portion of the road that lies in Lyndon is entirely paved. Class II highways are designated by the selectboard and approved by the Vermont State Highway Board.

Class III highways are certified after consultation with the district highway engineer. The minimum requirement for a Class III highway is that it be negotiable during all seasons under normal conditions by standard pleasure cars; thus, such highways must have sufficient surface and base, adequate drainage, and enough width to allow winter maintenance. Wheelock has 22.01 miles of Class III highways.

There are 19.35 miles of Class IV highways in Wheelock. The town has no legal obligation to maintain these roads but must maintain all bridges and culverts. Winter maintenance is marginal; most Class IV roads are used as trails for hiking, skiing, hunting, biking, ATV's and snowmobiles. The Northeastern Vermont Development Association (NVDA) performs town bridge and culvert inventories. The most recent inventory for Wheelock was completed in 2010. It is available on line at vtculverts.org. There are many bridges under 20 feet in length throughout the town. The town alone is responsible for maintaining these structures. A warning to supply funds to replace or repair these bridges is voted on at each town meeting.

The speed limit on any town street or highway cannot be higher than 35 mph. Within the limits of the Village of Wheelock, the speed limit on State Highway 122 is 35 mph.

Other Transportation Infrastructure

Railroads

The only operational rail service is the state-owned Connecticut River Line. It involves only freight service and its main yard is in St. Johnsbury, with a small siding in Lyndonville.

Airports

The Caledonia Airport in Lyndonville serves the region's general aviation and charter needs. For national and international flights, most residents travel to Burlington, Manchester, NH, and Boston, MA.

Cycling

Numerous gravel roads and trails offer a range of cycling adventures. State Highway 122 is a major bike-tour roadway in the Northeast Kingdom.

ATV and Snowmobile Use

The Vermont Association of Snow Travelers (VAST) maintains many miles of trails in Wheelock that connect to a major trail system. Town highways are open to the operation of snowmobiles during the winter months. During the summer months, all-terrain vehicles (ATVs) use portions of the VAST trails and some Class IV highways. All town roads are open to ATVs excluding Routes 122 and 16 as governed by town ordinance.

Present conditions

- The selectboard is responsible for the road crew and the maintenance of the roads.
- Access permit approval is required from the selectboard for any roadway or driveway entering or exiting a town road.
- The traffic flow on roads designed and built long ago has increased considerably in recent years.
- Most residents commute to work. Therefore, many vehicles are using the town roads.
- Requests to upgrade or downgrade roads are considered by the selectboard. A private road must be brought up to a class III standard by the owners before the town will consider taking over the road.
- The use of ATVs and snowmobiles has increased.
- Roads in Wheelock are generally well maintained.
- Approximately 1.5 miles of Interstate 91, a major highway, runs through Wheelock and continues through the state of Vermont and into Canada.

Goals

The town wants to:

- Improve Class III roads with an adequate base and surface to safely accommodate increased traffic flow.
- Maintain the small-town atmosphere of Wheelock and keep taxes as low as possible.
- Balance the desires of those who use ATVs and snowmobiles for recreation with the concerns of residents who may be disturbed by their use.

Strategies

- Seek grants for ditch stabilization, road resurfacing, and erosion control.
- Plan regular bridge and culvert inspections.

- Develop an inventory of all bridges and culverts identifying the condition and create a priority list of those needing replacement.
- Encourage a study of traffic flow and parking for the Village of Wheelock, particularly the Wheelock Village Store area.
- Continue widening roads and ditching where most necessary.
- Apply for grants and low-cost loans to repair or replace bridges as needed.
- Consider resurfacing paved areas.
- Conduct a study to assess the impact of ATV and snowmobile use.
- Participate in the District 7 Road Foreman meetings facilitated by NVDA and VTrans District 7.

Utilities and Facilities

Electricity

Wheelock is served by four utility companies, Central Vermont Public Service Corporation (CVPS), Lyndonville Electric Department (LED), Vermont Electric Co-op (VEC), and Washington Electric Co-op (WEC). In general, WEC covers about 47 percent of the town. LED covers about 40 percent of the town. VEC covers about 7 percent of the town. CVPS covers about 6 percent of the town.

Water and Sewer

Fire District #1 supplies the water for much of the village. The original system was installed over 100 years ago and was maintained by the users on the distribution line. The pipes were made of lead, coated with tar in and out, and wrapped in burlap bags. Records show that in 1940 Steve Cree owned the water system. After his death, two men named Little and Burrington took over the system, creating L&B Water Company. In 1989 it became the Wheelock Water System.

The Wheelock Water System is currently owned, and maintained by the 18 members of Wheelock Fire District 1. Fire districts are eligible for state and federal grants to improve and maintain the systems. This system underwent a major rebuilding project in 1992 and again in 2010. This system provides an important service to village households.

The land around a public water supply is called a “well-head protection area” and should be protected from land uses that might threaten the quality or amount of the water. One well-head protection area is northeast of the village on Mathewson Hill. Another well-head area exists around Chandler Pond in South Wheelock. A third is Walden Springs on Bean Pond road.

Most of the drinking water for residents in the town is supplied by either a drilled well or a dug spring. Well depths and water supply vary greatly. For example, in one area of the town a well drilled to a depth of 350 feet only produces two gallons per minute, while a well only a few hundred yards away, drilled 220 feet deep, produces 20 gallons per minute. A similar situation may occur with the dug springs.

All of Wheelock’s wastewater is handled by private on-site septic systems, which depend on the type of soil present and require sufficient area for satisfactory operation of the system. These systems typically consist of a 1,000 gallon septic tank and a leach field. They are generally satisfactory when properly maintained. New house construction sites and some reconstruction of existing housing must meet Vermont state standards for septic system construction. These standards are more rigorous than in the past and require engineering approval as well as alternate sites for leach fields.

Goals

The town would like to:

- Maintain a sustainable supply of good quality drinking water.
- Delineate the well-head protection areas and protect them from incompatible land uses.
- Eliminate pollution from poorly performing septic systems.

- Ensure that rivers, streams, and ponds are not contaminated by nearby septic systems.

Strategies

- An emergency plan has been developed to supply water to the users of the village and is on file at the town clerk's office.
- A second spring in the well-head protection area comprising the Village of Wheelock has been located and could be developed, if needed.
- The frequent testing of spring water is advisable.

Solid Waste

Present conditions

- Wheelock is a member of the Northeast Kingdom Waste Management District (NEKWMD) and works with the district to manage the solid and hazardous wastes in accordance with the district's solid waste implementation plan.
- There is a transfer station that serves both Wheelock and Sheffield residents located in the Village of Wheelock. The station accepts recyclables as well as household waste and metal. At present, there is no per-bag or bulky-items charge for Wheelock and Sheffield residents using the transfer station.
- According to the NEKWMD 2012 annual report, the Wheelock and Sheffield residents generated 602 tons of waste, of which 87 tons, or 14 percent, were recycled. The majority of Wheelock and Sheffield residents are satisfied with the solid waste disposal services.
- The Vermont Legislature passed Act 148, Universal Recycling Law, in 2013. This law will be enacted in stages. Every collection facility and waste hauler will be affected starting 2014, with full implementation by 2020.
- The State of Vermont legislative goal is to reach 60% recycling by 2020.

Goals

The town would like to:

- Increase recycling to 60 percent by 2020.
- Reduce the amount of recyclable materials that enter the compactor.
- Eliminate the outdoor burning of trash.

Strategies

- Encourage and support the expansion of recycling programs in all public facilities within the town.
- Monitor and participate in the Northeast Kingdom Waste Management District's planning and implementation of services.
- Work with the waste district to educate residents about the harmful effects of illegal trash burning.

Town Hall, Town Clerk's Office, and Town Garage

The Town Hall has served as the Town Office, public meeting space, and center of community activity since it was built in 1871. For 80 years it stood side by side with the Wheelock Hollow Church. The church was demolished in 1961. The site of the church was excavated to allow for a basement and foundation. The Town Hall was moved onto the new foundation.

The Town Hall meeting area or upper level of the hall is handicap accessible. A ramp was built several years ago to meet that requirement.

The Town Clerk's office; the vault containing town records; and the Lister's office are all in the basement of the Town Hall. All bathroom facilities are also in the Basement area. None of that area is Handicap accessible.

The Town Garage is located in the Village of Wheelock on the bank of the Miller's Run River. It houses 2 town trucks, a grader, a bucket loader, and a fire truck. The building was built around 40 years ago. It does not meet current regulations for municipal buildings.

In March of 2010, the town voted to authorize the Board of Selectmen to borrow up to \$150,000 dollars to purchase land for a new Municipal building. In 2011, a firm was hired to design plans for a new municipal building and town garage. A property adjacent to the current Town Hall was purchased in 2012, as a site for a new municipal building and town garage.

Present conditions

- The current municipal space for the town clerk and listers is limited and is not handicap accessible. The structure has a history of water damage and mold issues.
- The records kept in the town clerk's office are at risk due to space limitation and inadequate vault facilities.
- The current town garage is aging and has limited space for vehicles and equipment. It does not meet current regulations for municipal buildings.

Goal

The town would like to:

- Provide facilities with adequate space for the town clerk's office while providing an environment that properly protects the town records and meets the requirements of the American with Disabilities Act.
- Re-locate the town garage which also houses a fire truck, out of the flood hazard area.
- Provide an adequate facility and location to house the fire and town equipment.
- Improve the energy efficiency of the town hall while preserving its historic integrity. An energy audit was conducted on the town hall by NVDA in 2011.
- Provide an adequate space for town or general meetings and ensure the facility meets not only the short term but also the long term needs of the town.

Strategies

- Establish committees to explore options for the stated goals.
- Seek opportunities for grant funding.

Post Office

The Wheelock post office was located in the home of Ervine Brown, across the street from the current village store. It closed on August 31, 1955. Currently, the post offices in the villages of Sheffield and Lyndonville serve the residents of the town.

Cemeteries

There are six town cemeteries: the Old Village Cemetery, the Samuel Drown Cemetery, the Shattuck Cemetery, the South Wheelock Cemetery, the Sulfur Springs Cemetery, and the West Wheelock Cemetery. Only the Sulfur Springs Cemetery is still selling burial plots. The majority are in disrepair and in need of maintenance, improved accessibility, and demarcation.

Communications

Fairpoint Communications is the sole operator of land-line telephone communications. Comcast carries the only cable television service in Wheelock, along Route 122. Television and broadband are also available through satellite dish networks. Wireless Internet service broadband coverage is available in some parts of Wheelock through the tower on Burke Mountain operated by the Kingdom Connection. The expansion of cable service in the near future is unlikely.

Wheelock has one cell tower owned by Verizon. The placement of cell towers and related infrastructure require careful consideration. These structures tend to be highly visible, often located on mountaintops and ridgelines. The need for additional communications facilities is projected to increase. Expansion of communication services are planned to be expanded throughout Wheelock. Town Government utilizes internet and other technology services to help plan and organize the day to day duties.

Present condition

- Wheelock has few communication options other than existing phone lines and satellite dish networks.

Goals

The town strongly encourages efforts to:

- Provide low-cost, high-speed Internet access.
- Provide consistent and reliable cell phone network coverage.

Strategy

- The town should develop a plan to govern communication tower construction, considering siting, projected need, aesthetics, the location of other towers, and so on. The town should work with neighboring towns and the State of Vermont to provide high-speed Internet access.

Emergency Services

Fire

The towns of Sheffield and Wheelock are served by the Sheffield-Wheelock volunteer fire department. The 2012 fire department budget was about \$33,000. The Town of Wheelock is responsible for one half of this budget amount. Operational cost increases will cause this figure to rise. The fire department has received many grants in past years totaling around \$320,000. These funds have been used for equipment, training, apparatus, and to pay for an addition to the South Wheelock station. The fire department will continue to seek grant funding.

Plans for improvement of these services call for ongoing training, installing more dry hydrants, equipment purchasing, and fire fighter recruitment and retention. At present, the fire department now has a certified technical rescue team for water, ice, low

and high angle. This team is the primary rescue team for the Sheffield Wind Farm. A junior firefighter program has been adopted and includes outreach to Lyndon Institute. The department has adopted the National Incident Command System and has updated all radios and equipment to the FCC's new narrow band requirements.

Mutual aid agreements have been signed by all fire departments in the area including the Sheffield-Wheelock department that states each department will respond upon request at no charge.

The Town of Wheelock owns the South Wheelock station on land with a life-long lease. The station houses one engine, and one rescue/4x4 Pumper. The Wheelock town garage also houses one tanker, a utility vehicle (UTV) and a trailer for the UTV. The Sheffield fire station houses one engine and one tanker. All fire department meetings take place at the Sheffield station. At present, the department has 26 members, 14 of which are certified firefighters. The average age of all members is 31.

The fire department responded to 82 calls in 2013.

Emergency Medical Services

The Town of Wheelock receives primary emergency medical services from Lyndon Rescue, Inc., an organization funded by tax revenue and private contributions. The town's costs are based on call volume. These will probably rise each year in response to population increases and growth in recreation.

The fire department may increase their medical training so they may be first responders ahead of the ambulance. Lyndon Rescue has three ambulances. If all three are busy when Wheelock has a call, Calnex ambulance will respond from Northeast Vermont Regional Hospital in St. Johnsbury.

Police

Police coverage is provided by the Vermont State Police and on a contractual basis with the Caledonia Sheriff's Department. The Vermont Fish and Wildlife Department also monitors Wheelock for violations involving fish, animals, and birds.

Emergency Management

The Town of Wheelock has an emergency coordinator who is appointed by the selectboard and emergency shelters at the Wheelock town hall, the Sheffield fire station, the Sheffield town hall, the Miller's Run School, and the Lyndon public safety building. All emergency shelters have generators except the Sheffield town hall and the Millers Run School. Wheelock's emergency action plan has been recently revised and will be updated again in 2014.

Most town officials and all fire department personnel have taken the national incident management course. Adoption of the flood insurance program in 2014 is currently being discussed by the community. The town clerk's office will also serve as the town's emergency operations center or as an additional emergency shelter. Any disaster would be handled locally by fire department personnel, the emergency coordinator, and selectboard. Larger incidents would require regional resources, such as mutual aid and local emergency planning commission. Large disasters could also involve Vermont Emergency Management, National Guard, or Federal Emergency Management.

The town will continue to evaluate emergency plans and attempt to mitigate problem areas. Wheelock's emergency response plan has included the role of Homeland Security (HS) and will continue to work with HS in the areas of national preparedness, response, and mitigation. Wheelock's Emergency Management Personnel will continue to work with all emergency management agencies to keep Wheelock and surrounding town's people and property safe.

Medical Facilities

Northeastern Vermont Regional Hospital (NVRH), in St. Johnsbury, is the regional medical facility serving Wheelock. Most residents travel to Lyndonville or St. Johnsbury for their health care.

Present conditions

- The towns of Wheelock and Sheffield share and staff a volunteer fire department.
- South Wheelock houses one engine and one rescue pumper, Sheffield houses one engine and one tanker, and Wheelock houses a tanker and a UTV.
- Lyndon Rescue, Inc. handles all emergency calls for the town with Calex as a backup.
- The Vermont State Police provide service to the town.
- The emergency shelters for the town are the Miller's Run School, The Sheffield fire station, the Sheffield town hall, The Wheelock town hall and the Lyndon public safety building.

Goals

The town wants to:

- Increase the staff of the fire department.
- Increase awareness of emergency services.

Strategies

- Start an information campaign to increase volunteerism.
- Hold an open house at each fire station to increase awareness.
- The selectboard and fire department should work together to explore options for adequate housing of fire equipment and vehicles.

Energy Plan

The energy needs of the Town of Wheelock are currently being met; however, increasing energy use in existing homes, farms, and businesses, in addition to new construction, will continue to increase the town's requirements.

Residents are concerned about the rising costs—monetary, social, and environmental—of energy. Solar, hydropower, and small scale wind remain the top choices for alternative sources of energy.

Present conditions

- Many residents commute long distances to work and for pleasure. Many residents use wood to heat their homes. Propane, gasoline, diesel, fuel oil, and wood pellets are supplied by several private companies.
- Lyndonville Electric Department and Washington Electric Co-op are the two main electric power suppliers. Vermont Electric Cooperative (formerly Citizen's Energy Services) and Central Vermont Public Service also provide electricity to some residents.
- The Town of Wheelock heats three public buildings (not including Miller's Run School, which is located in Sheffield).
- A few residents live off the grid entirely and a few others use some alternative energy sources.
- Outside wood furnaces and indoor pellet stoves/furnaces are gaining popularity for heating sources.
- A Massachusetts-based company, UPC Wind, has built sixteen 420-foot wind towers in the neighboring town of Sheffield.

Goal

- The town would like to reduce the use and cost of energy.

Strategies

- Promote energy efficiency in new building construction through new and emerging technologies.
- Promote energy conservation through money-saving processes and incentives.
- Use the Public Service Board, Vermont Housing Authority, Northeast Kingdom Community Action, and other state or federal agencies and programs to help defray the costs of energy-efficient features in new buildings or for renovations to existing buildings.
- Encourage the use of small-scale alternative energy production.
- Promote patterns of land use that are likely to result in energy conservation, such as building homes closer to local facilities to reduce travel and road maintenance.

Housing

There are really two housing worlds in Vermont. In one world, the population can afford the rapidly escalating costs of housing--these are the Vermonters who benefit from prosperity generating high-quality jobs and an expanding real estate market. A very different part of Vermont's population has persistently low incomes and struggles to find affordable, high-quality housing.

-- "Between a Rock and A Hard Place", Vermont Housing Finance Agency, 2006

Population Characteristics and Distribution including Income and Employment

The Town of Wheelock experienced a decline in population over the past century from a high of 964 residents in 1810 to a low of 238 residents in 1970. Since then, the trend has been upward. In this section of the Town Plan, information will be shared for the purpose of analyzing present and future trends related to housing and to identify current or potential needs.

POPULATION

TOTAL		811
BY AGE GROUP		
	under age 18	208
	20-24	33
	25-34	69
	35-49	172
	50-64	191
	65 or older	125
BY GENDER		
	male	412
	female	399

From the U.S. Census Bureau, Census 2010

HOUSEHOLDS AND RELATIONSHIPS

Number of households	322
Number of families	213
Husband and wife families	173
with own children under 18	58
Average household size	2.43
Average family size	2.90

From the U.S. Census Bureau, Census 2010

DEMOGRAPHICS

EDUCATIONAL ATTAINMENT	
Population 25 years and over	513
Less than 9 th grade	20
9 th -12 th grade, no diploma	17
High school graduate (equivalency)	215
Some college, no degree	109
Associate's degree	28
Bachelor's degree	54
Graduate or professional degree	70
VETERAN STATUS	
Civilian veterans	90
PLACE OF BIRTH	
Born in United States	708
Born in Vermont	360
Born in different state	348

DP02-Selected Social Characteristics, 2007-2011 American Community Survey

Estimates

EMPLOYMENT STATUS

Population 16 years and older	564
In labor force	399
Employed	392
Unemployed	7
Management, business, science and arts occupations	163
Service occupations	38
Sales and office occupations	79
Natural resources, construction and maintenance occupations	58
Production, transportation, and material moving occupations	54

DP03 – Selected Economic Characteristics, 2007-2011 American Community Survey Estimates

INCOME (in 2011 inflation adjusted dollars)

	FAMILIES only	ALL HOUSEHOLDS
Less than \$10,000	16	20
\$10,000 - \$14,999	3	9
\$15,000 - \$24,999	23	33
\$25,000 - \$34,999	6	37
\$35,000 - \$49,999	47	57
\$50,000 - \$74,999	56	71
\$75,000 - \$99,999	14	19
\$100,000 - \$149,999	24	24
\$150,000 - \$199,999	11	11
\$200,000 or more	0	0

DP03 – Selected Economic Characteristics, 2007-2011 American Community Survey Estimates

The percentage of citizens in Wheelock whose income in the past twelve months was below the poverty level was 15.8%. The rate is higher for families with children (17.0% for families with children under 18 and 60% for families with children under 5 years old).

HOUSING STOCK

Total housing units, 2010	448
Owner occupied	289
Renter occupied	33

Vacant, seasonal	98
Vacant, for rent	4
Vacant, for sale	5
One unit per building housing	92.10%
Mobile Homes	7.9%

2010 Census: Profile of General Population and Housing Characteristics

Note: The rate of single unit housing structures is significantly higher than the county average which is 71.8%

HOMEOWNERSHIP COSTS / AFFORDABILITY

The Vermont Housing Data shows 3 primary residences were sold in Wheelock in 2012. The average price in Wheelock was lower than the county average.

	Wheelock	County
Average price of a single family home, 2012	\$117,333	\$147,607

The Vermont Housing Data shows 3 vacation homes were sold in Wheelock in 2012. The average price in Wheelock was significantly lower than the county average.

	Wheelock	County
Average price of vacation homes sold in 2012	\$93,667	\$167,042

Federal and State housing authorities state that housing is deemed affordable when the total cost of housing accounts for no more than 30% of the household income. The housing expenses of one-third of Wheelock homeowners with a mortgage are in excess of that 30% affordability limit. 19.9% of Wheelock homeowners with a mortgage are paying in excess of 50% of their income for their housing expenses.

	Wheelock	County
Median monthly owner cost with mortgage	\$1186	\$1226
Median monthly owner cost without mortgage	\$511	\$493

Above 3 tables from Vermont Housing Data, maintained by Vermont Housing Finance Authority and Vermont Center for Rural Studies

HISTORY OF PROPERTY TRANSFERS IN WHEELLOCK 2002-2013

YEAR	Residential below 6 acres	Residential 6 acres or more	Seasonal below 6 acres	Seasonal 6 acres or more	Mobile Homes Landed	Woodland	Open	Total*
2012	7	9	3	5	3	9	2	40
2011	6	7	3	4	0	12	4	37
2010	5	3	1	5		2	3	19
2009	7	11	2	8	1	6	4	39
2008	5	8	5	4	2	3	6	34
2007	2	7	3	3	3	6	3	29
2006	7	13	0	11	1	4	7	47
2005	7	18	0	7	3	10	9	54
2004	4	9	4	8	5	10	17	61
2003	6	12	2	6	4	10	24	71

* Total includes some transfers in categories not listed
Vermont Department of Taxes

Wheelock remains a community made up almost entirely of single-family dwellings with some seasonal homes and hunting camps in the more remote areas. There are mobile homes in a variety of conditions scattered throughout the town. Home ownership costs are a concern. Although the average price of a single-family home has dropped slightly since 2005 from \$137,845 to \$117,333 in 2012, the data shows that at least one-third of homeowners with a mortgage are paying in excess of 30% of their income for housing costs.

There is no industry or other source of employment in the Town of Wheelock that drives a need for housing. The issue for Wheelock will be the cost of providing services for any additional growth in population or change in service needs. Current Vermont Population Projections for the years 2010 to 2030 show an expected increase in the population from 811 in 2010 to 1107 in 2030.

As home prices and rents escalate at a rate much higher than Vermonter's wages, housing becomes less and less affordable for more and more people.

-Vermont Housing Finance Agency

Goals

The town anticipates that:

- Wheelock will continue to be viewed as desirable for people of all income levels.

- Any future development will not negatively affect the tax rate and will support any resulting increase in the need for services.
- Wheelock will maintain its rural character.
- Wheelock will ensure a variety of housing units for all income levels within the town, emphasizing when possible the rehabilitation of existing structures.
- Explore the use of both regulatory and non-regulatory methods of managing growth and discouraging types of development that would alter the character of the town or strain the capabilities of local transportation, safety, and health systems.

Strategies

- Monitor the need for housing for low-income and elderly residents.
- Preserve historic buildings as an important part of the town's heritage.
- Encourage housing that conserves energy, provides for efficient delivery of public services, and minimizes negative impacts on agriculture, forestry, wildlife, and the rural character of the land.
- Establish practical regulations to encourage the development of safe, high-quality housing that will improve the character of the community.
- Require planned developments to provide their own services such as sewer, water, and roads.
- Inform residents about federal and state programs for weatherizing, rehabilitation, and home financing by making the information available through the town clerk's office.
- Evaluate the town's future needs for affordable housing.
- Promote federal and state programs for construction and improvement of Wheelock's stock of affordable housing.

Education

The Town of Wheelock has a unique history related to education. The town's land was originally given in trust for the use and benefit of Dartmouth College and Moor Charity School and was consequently exempt from state taxes. Residents paid rent to the trustees for the support of the two schools. Although this relationship no longer exists, in recognition of the town's early support, eligible sons and daughters of Wheelock have the opportunity to attend Dartmouth College on a Wheelock Scholarship, which covers the cost of tuition.

In 1802, the voters decided to raise \$200 in the form of grain, butter, corn, cheese, beef, and pork to hire a school teacher for that year. By 1890, the Town of Wheelock had nine school districts, each with a schoolhouse. Today, three of these old schoolhouses remain. The Chandler Schoolhouse and Red Schoolhouse have been converted into dwellings, and the McGovern (Mountain) Schoolhouse serves as a camp.

In 1971, the towns of Wheelock and Sheffield established Unified School District 37 (UD#37). This cooperative relationship continues. Each town has three members on the school board.

Students from Wheelock and Sheffield attend preschool through 8th grade at the Miller's Run School in the Town of Sheffield. There is no public high school or specific designation for such in the town. High school students typically attend Lyndon Institute or St. Johnsbury Academy, both private schools. Some students have also attended the East Burke School, the Caledonia School, and Hazen Union in Hardwick or Lake Region Union in Orleans.

Vocational education programs are available at Lyndon Institute and St. Johnsbury Academy, which are the regional technical centers. Some families assume responsibility for educating their children through state-approved home-schooling programs or through private education. Cornerstone (The Fold) is a small, faith-based, residential school for youth in South Wheelock.

The UD#37 School Board contracts with a private bus company to transport elementary school students to Miller's Run School. There is no provision for transportation for high school students.

Originally built in 1975, Miller's Run School saw major reconstruction in 2000-2001, which increased the size of the school from 8000 square feet to 27,000 square feet. The

facility allows for one classroom per grade level. The school can meet the needs of current and increased enrollment as long as any increases are spread out across the grade levels. The \$3 million bond for the 2000-2001 construction costs will not be paid off until the year 2019.

The population of the Town of Wheelock and student enrollment both increased from 1970 to 1995. Since 1995, however, there has been a gradual decline in student enrollment. The State of Vermont projects a significant decline in the population of persons under age 18.

Enrollment for the year 2013-2014

Pre-Kindergarten and EEE	9
Kindergarten -8 th Grade	112
High School	24

	Miller's Run	Supervisory Union	State of Vermont
Students receiving no support services*	73%	75%	75%
Student Teacher Ratio	12:7	8.86	10.62
Receiving Free or Reduced Lunch	69%	56%	39%

The approved budget for UD#37 for 2013-2014 was \$3,433,192. The budget proposed by the School Board was defeated twice. The budget with revisions passed on the third vote. The anticipated spending per pupil for Miller's Run School for 2014 was \$12,905. This was below the state average spending per pupil, \$13,560. While student population is declining, the school budget and the school tax rate are increasing. According to statistics from the Vermont Department of Taxation, 64% of Wheelock homeowners are eligible for and receive the homeowner rebate.

The Keniston and Dane Educational Fund, managed by the Sheffield and Wheelock selectboards, was established by Marion Dane and Harry Keniston to benefit qualified college students and qualified endeavors of Miller's Run School. Twenty-one college students from Wheelock were recipients of Keniston-Dane awards in 2012.

Adult educational opportunities can be found in neighboring towns.

Goals

The town supports efforts to:

- Strive for educational excellence while giving consideration to the financial ability of the community to support the program.
- Plan and regulate growth so as not to stress the educational facility and its programs and resources.
- Promote community literacy.
- Support school choice at the high school level.
- Provide programming in athletics, music, and art.
- Expand efforts to inform citizens of adult education opportunities at the Miller's Run School, Lyndon State College, Hardwick Community Learning Center, the Community College of Vermont in St. Johnsbury, and the Northeast Kingdom Learning Services.

Strategy

- The Planning Commission should maintain communication with the School Directors concerning long-range facility needs.
- Encourage the School Board to continue efforts to maintain a cost effective school budget, maintain a high quality of our children's education, and ensure that the school facility meets not only the short term, but also the long term needs of Wheelock's children.
- Space will be provided in the town hall for informational materials related to adult education opportunities.

Adjacent Communities

Wheelock is bordered by six towns: Sheffield, Greensboro, Stannard, Danville, Lyndonville, and Sutton. Lyndonville is the largest, with a somewhat more urban environment. The other five towns, like Wheelock, are smaller and more rural.

The Town of Wheelock has reciprocal relationships with adjacent communities. Wheelock provides some jobs, housing, solid waste transfer facilities, and recreational opportunities, while adjacent communities provide jobs, medical services, places to shop, and educational facilities. Because the Town of Wheelock does not have police or ambulance services, it relies on surrounding towns to fill these needs. The seven communities have agreed to work together to provide mutual aid in case of fires and emergencies. The issues of job availability, housing costs, and affordable education extend beyond Wheelock's borders and are concerns in all of the surrounding communities.

Present conditions

Sheffield Town Plan: March 2, 2010 Zoning Bylaw: No

Because Sheffield and Wheelock share many municipal functions, maintaining open communication will promote awareness of any issues that may affect the residents of Wheelock.

Wheelock shares educational responsibilities with Sheffield through Miller's Run School, a pre-K through grade 8 elementary school in Sheffield. School directors from each town make up the UD#37 School Board that oversees Miller's Run School. Sheffield and Wheelock have a combined volunteer fire department. Each town provides equipment and a building, and volunteer members from each town meet regularly. The Sheffield/Wheelock Volunteer Fire Department provides mutual aid to surrounding towns in case of fire and emergencies.

Wheelock and Sheffield work together to handle solid waste. The transfer station that serves both towns is located in Wheelock, and the towns' select boards meet during the year to discuss its operation.

The towns' selectboards also meet to discuss the Keniston and Dane Fund, which serves resident students pursuing post-secondary education.

Where maintenance concerns involve shared facilities, like the transfer station and Miller's Run School, and in areas where roads connect the towns, Sheffield and Wheelock have an informal agreement to share the road maintenance.

The boundary between Wheelock and Sheffield is dominated by low density housing and State Land. Development pressures on both towns in these areas are limited by the remoteness of the area and the lack of a road network.

In 2011 a 16 tower wind farm was built on the Hardscrabble Mountain ridgeline.

Greensboro Town Plan: November 28, 2012 Zoning Bylaw: January 15, 2009

Greensboro's Town Plan supports Wheelock's vision of open communication. Greensboro's plan supports regional economic development to benefit concerned communities. Greensboro plans to establish a relationship with neighboring communities that addresses areas of mutual interest while developing goals with mutual benefits. Greensboro plans to encourage various boards and planning bodies in the town to cooperate and exchange information with their counterparts in neighboring communities. Greensboro and Wheelock have an informal agreement to share the road maintenance in areas where roads connect the towns.

Vermont Route 16 runs along the Sheffield boundary and at one point into the town of Wheelock. Most of this area is forested, farmed, or in low density residential housing. No imminent development pressures are noted in either town along the boundary, but the presence of the agricultural land and access allowed by Vermont Route 16 could promote development opportunities. The town of Wheelock should work in close association with Greensboro to monitor development and plan appropriately for its impact.

Stannard Town Plan: February 14, 2011 Zoning Bylaw: May 11, 2009

One of the objectives of Stannard's Town Plan is to foster regional cooperation. As a small town, Stannard is sensitive to the activities of its larger neighbors. Stannard's

plan emphasizes Stannard's long-term policy of cooperating with regional and statewide groups in areas of mutual concern. Stannard and Wheelock have an informal agreement to share the road maintenance in areas where roads connect the towns.

The boundary between Wheelock and Stannard is dominated by low density housing and State Land. Development pressures on both towns in these areas are limited by the remoteness of the area and the lack of a road network. There are no indications that development pressures will increase within the next five years.

Danville Town Plan: June 2, 2011 Zoning Bylaw: December 3, 2009

Danville's Town Plan contains elements that describe the town's approach to relationships with adjacent towns. The plan supports retaining Danville's small town character. The plan supports the preservation of farm and forest resources, natural features, historic landmarks, and wildlife habitats so that they may be available to all residents of the region.

The boundary between Wheelock and Danville is dominated by low to medium density housing. Development pressures on both towns in these areas are limited by the remoteness of the area and the lack of a road network. There are no indications that development pressures will increase within the next five years.

Lyndon Town Plan: December 22, 2008 Zoning Bylaw: June 10, 2013

Lyndonville's town government structure is more urban. The town holds regular zoning board meetings that are open to the public. Wheelock residents may attend these meetings to monitor issues of concern. Decisions reached during these meetings are announced in the local newspaper.

The Lyndon town line remains the busiest border for the residents of Wheelock. Vermont Route 122 and the South Wheelock road are the main transportation corridors to access shopping and work related transportation needs. This area in the Town of Wheelock also contains the highest density of housing. Even with these facts, this area

is still quite rural and forested. No significant development pressures are anticipated. However, close contact with the Lyndon Planning and Zoning Commissions should be maintained in order to best address any development issues that may develop over time.

Sutton Town Plan: October 24, 2013 Zoning Bylaw: August 23, 2005

Sutton has recently approved a town plan. The Town of Wheelock supports an open and positive relationship with the Town of Sutton to ensure a cooperative recognition of their plan's intentions and features.

The boundary between Wheelock and Sutton is very remote. Mathewson State Forest makes up over 90 percent of the boundary on the Wheelock side. No significant development is anticipated in this area.

Goals

The town intends to:

- Maintain a positive relationship with adjacent towns.
- Communicate openly with neighboring communities to help maintain the quality of life that is important to all of the residents of the area.
- Encourage the use of village centers as the focal point of each community for commerce as well as social gatherings.
- Ensure that new development is compatible with the existing land use and with the local plan.

Strategies

- Wheelock, like its neighboring towns, is a rural community. The town hopes to maintain its beneficial rural attributes as Wheelock continues to grow.

- Formal and informal agreements with adjacent communities (concerning municipal functions, schools, churches, clubs, departments, boards) should be continued. These agreements must be continually monitored by the selectboard and other town boards to ensure that the relationship between the communities remains positive.
- Open communication with neighboring communities must be maintained so that the residents of Wheelock will be aware of any changes that may affect Wheelock's goals.

Economic Development

Because Wheelock is largely viewed as a bedroom community, economic development strategies are best viewed within a regional context. The Northeastern Vermont Development Association has commissioned an analysis of “Strategic Industries in the Northeast Kingdom.” Prepared by Economic & Policy Resources, Inc. This report provides an appropriate context for evaluating employment opportunities in Wheelock.

The first part of the analysis provides an economic overview of the Northeast Kingdom. The Northeast Kingdom’s labor market is undergoing fundamental changes. While employment in the Northeast Kingdom increased by one-sixth between 1990 and 2010, employment growth has been virtually flat during the latter half of the first decade of the 2000s. Significant structural changes occurred within the Northeast Kingdom economy during the 2000s. Employment shares in the goods-producing sectors of agriculture, forestry, mining; construction and manufacturing continued to fall. Services, trade, transportation, and finance and insurance, combined now employ about three in every four workers in the region. Unemployment is a significant indicator of the vitality of a region’s economy. The unemployment rate in the Northeast Kingdom during the Great Recession (December 2007 – June 2009) spiked, reaching its 20-year high in 2009 with an annual unemployment rate of 7.2 percent which is about 2 percentage points higher

than the statewide rate. In 2012, the annual unemployment rate in Caledonia County was 6.4%.

While employers in the Northeast Kingdom have not added much employment in recent years, there has been a marked increase in self-employment. Compared with the state and other counties, self-employed workers in the Northeast Kingdom compose a significant share (a third) of total employment.

According to the 2012 NVDA Regional Transportation Plan the transportation infrastructure in the NEK is a mix of poorly maintained paved roads, railways, and small regional airports. Only about a quarter of our paved road mileage is in good condition. The traveled surfaces of unpaved town roads vary greatly depending on the diligence/expertise of town road crews. The region is bisected by Interstate 91 (I-91) and US Route 5 and they are the only major north-south highways connecting the NEK with the rest of New England. Interstate 91 which runs through Wheelock connects many of the major population centers within the Northeast Kingdom and terminates at the US-Canada border in Derby Line. While Wheelock has no airport, the Caledonia County Airport in neighboring Lyndon is open year-round and has planned improvements and expansions through the Vermont Department of Transportation and Federal Aviation Administration.

In 2010 NVDA commissioned a study of the key industry clusters for the Northeast Kingdom. Using an iterative analysis of sector data, including employment concentration, wage performance and stability, growth and change, and supply chain interrelationships, clusters were ranked as mature, challenge, opportunity, or star. More information on the clusters can be found at <http://www.nvda.net/>

Seven primary industry clusters were selected based on the analysis of various screening criteria of growth and expansion, competitiveness, linkage strength, and overall position (and subsequent label).

- Agribusiness, food processing & technology cluster
- Biomedical/biotechnical (life sciences) cluster
- Education and knowledge creation cluster
- Fabricated metals and machinery manufacturing cluster

- Machinery Manufacturing
- Forest and wood products cluster
- Visitor and tourism cluster

Congress created the fifth employment-based preference (EB-5) immigrant visa category in 1990 for qualified foreigners seeking to invest in a business that will benefit the U.S. economy and create or save at least 10 full-time jobs. In the fall of 2012, an infusion of EB-5 funds into the region could bring fundamental change to the regional and local economies, along with potential changes to the uniquely rural lifestyle. Several projects have been proposed that will likely lead to the creation of thousands of jobs for the region. The net-migration to the region and subsequent demand for housing is yet to be determined but is being studied by the regional planning commission. A recent analysis of the workforce development needs for the hospitality and tourism sector based on the potential EB-5 project slated for Burke Mountain Ski Area could create upwards of 600 jobs, though not all of these will be full time positions. This expansion will certainly have implications for Wheelock's future.

Wheelock's Economy

As noted throughout this document, Wheelock serves as a bedroom community for employees working in jobs that are outside the community. Many of these jobs have disappeared during the recent recession but, with the recently announced EB-5 funded projects on the horizon there is reason to hope for an improved employment outlook. The town has a few working CSA (Community Supported Agriculture) farms and logging firms that produce goods which contribute to value-added enterprises throughout the region. Many Wheelock residents are also self-employed entrepreneurs and directly provide services to clients (house cleaning, landscaping, auto repair, etc.). The Wheelock General Store is currently the only retail business in the town. The town recognizes the value of the service local businesses provide and their worth cannot be overstated.

According to the most American Community Survey Five-Year Estimates (2007-2011), the mean travel to work time for Wheelock residents was about 22 minutes,

which is similar to the mean travel-to-work time for the county (about 22 minutes) and for the state (about 21 minutes). However, about 85% of Wheelock residents work within their county of residence, which is higher than the statewide rate (77.9%).

The feasibility study for the Burke Mill Site in the neighboring town of Sutton concluded that the only barrier to siting a wood pellet manufacturing plant there was the absence of three phase electrical service. Lyndonville Electric Department estimated it would cost \$3-5 million to upgrade and extend the existing line to the site and didn't express any interest in doing so. The \$0.18/kilowatt electricity cost which was factored into the business model for the study would have more than covered the cost of onsite generation and the project still was projected to yield a \$279% return on investment over a year projection. While one investor was very interested in siting a plant there, he was able to find other sites (in Maine and Virginia) that had everything, including three phase power, available. With increasing energy prices the West Burke Mill Site may well be developed in the future as a pellet plant or for some other use.

Goals

The town intends to:

- Maintain a positive working relationship with adjacent towns in attracting new business.
- Ensure that new business development is compatible with the existing land use and with the local plan.
- Encourage carpooling and public transportation when feasible.

Strategies

- Wheelock, like its neighboring towns, is a rural community. The town hopes to maintain its beneficial rural attributes as Wheelock continues to grow and attract new business development that is compatible with the existing land use and local plan.

- Open communication with neighboring communities must be maintained so that the residents of Wheelock will be aware of any changes that may affect Wheelock's economic goals.

Recreation

Wheelock abounds with outdoor recreational opportunities: hiking, biking, canoeing, cross country and back country skiing, snowmobiling, horseback riding, hunting, and fishing.

Areas that provide public access for outdoor activities include:

- Steam Mill Brook Wildlife Management Area—This is a 10,826 acre area located in the towns of Wheelock, Stannard, Walden, and Danville. It is owned by the State of Vermont and managed by the Fish and Wildlife Department. The WMA can be accessed from a number of places including Stannard Mountain Road in Wheelock, Coles Pond Road in Danville and Walden, and also Rock Road in Walden. The area is open to regulated hiking, skiing, hunting, fishing, trapping, and wildlife viewing.
- Mathewson State Forest—This is a 795 acre area located in Wheelock, Sutton, and Sheffield. It is owned by the State of Vermont and managed by the Department of Forests, Parks and Recreation Department. The area is open to hiking, camping, skiing, hunting, fishing, and trapping (subject to state regulations).
- Flagg Pond Access Area—This is a 20 acre area located in Wheelock. It is owned by the State of Vermont and managed by the Fish and Wildlife Department. This area provides access to Flagg Pond.

The Northeastern Vermont Development Association provides two guides for bicycling in the Northeast Kingdom. Cycling in the Kingdom contains two loops easily

accessible from Route 122 in Wheelock. One is the “Around the Block Loop”, accessed by riding west along 122 to the intersection of route 16 and the other is the “Glacial Lakes Loop” accessed by riding east along 122 to the intersection of route 114. Cycling the Kingdom’s Back Roads includes a route that runs along Route 122 to the village of Wheelock, then south along Peak road exiting the town on Burroughs road.

The Vermont Association of Snow Travelers (VAST) maintains many miles of trails in Wheelock that connect to a major trail system. Town highways are open to the operation of snowmobiles during the winter months. Since most snowmobile trails are located on private land, VAST relies on the generosity of landowners for the privilege of riding on their land. During the summer months, all-terrain vehicles (ATVs) use portions of the VAST trails and some Class IV highways. All town roads are open to ATVs excluding Routes 122 and 16 as governed by town ordinance.

Goals

- Maximize opportunities for outdoor recreation including but not limited to, hunting, fishing, hiking, biking, skiing, horseback riding and wildlife viewing.
- Engage the town’s children in the widest possible variety of outdoor educational and recreational activities.
- Provide opportunities for motorized sports that do not degrade the environment, violate the rights of property owners, or interfere with other recreational activities

Strategies

- Encourage owners of large tracts of undeveloped land to keep their land open to recreational uses.
- Discourage the behaviors (littering and dumping, unauthorized camping and campfires, use of motorized vehicles without permission, hunting too close to roads and residences) that cause landowners to post their land.
- Encourage people to seek landowner permission to access posted land.

- Encourage people to use safe, environmentally sound, and courteous practices while enjoying Wheelock's outdoor activities.
- Work with sporting groups such as VAST and VASA to assure that members follow regulations and thereby maintain good relations with landowners and townspeople.
- Promote school activities such as cross country skiing and hiking as well as activities that relate to forestry, wildlife management, fisheries management, and natural resources management.
- Explore opportunities for land acquisition by the town to protect valuable natural resources and increase recreational opportunities.
- Promote the abundance of back country skiing along VAST trails, logging trails, and class 4 roads.
- Explore the options for creating a roadside park if the existing town garage is relocated.

Flood Resiliency

A. Existing Conditions

The Town of Wheelock lies within four watershed areas; The Lamoille River Watershed, the Miller's Run Watershed, the Sleepers River Watershed, and the South Wheelock Branch Watershed. All, with the exception of the Lamoille River, lie within the larger Passumpsic River Watershed which is part of the larger Connecticut River Watershed. The Lamoille River Watershed lies within the larger Lake Champlain Watershed. A very small portion in the extreme northern part of the town lies within the Calendar Brook Watershed which is part of the larger Passumpsic River Watershed.

The Lamoille River main stem originates in the northwest corner of the Town of Wheelock, along the east side of Vermont Route 16 at the outlet of Horse Pond. It flows 84.9 miles in a generally westerly direction until it empties into outer Mallett's Bay of Lake Champlain ten miles north of Burlington. It is a pool-riffle gravel bottom river for the majority of its length although there are smaller reaches of dune-ripple sand bottom and plane-bed cobble-boulder bottom. From its headwaters to the mouth, the river descends

approximately 1,200 feet and drains a 706 square mile watershed, which is 7.5 percent of Vermont's land area. The basin occupies the major part of Lamoille and lesser parts of Franklin, Chittenden, Orleans, Washington, and Caledonia Counties.

There are a total of 24 lakes and ponds that are 20 acres or larger in the Lamoille River Basin. Caspian Lake, Arrowhead Mountain Lake, and Green River Reservoir are by far the largest with areas of 789 acres, 760 acres, and 554 acres respectively. Major tributaries to the Lamoille River include the Wild Branch (39 square miles), Green River (22 square miles), Gihon River (66 square miles), North Branch (37 square miles), Brewster River (21 square miles), Seymour River (21 square miles), and Browns River (92 square miles).

Forested land is the dominant land cover/land use in the Lamoille River watershed (71 percent). Agriculture is the second largest land use with relatively high percentage coverage of 13 percent. Surface waters cover about 7 percent of the

The South Wheelock Branch main stem begins on Wheelock Mountain and flows east for 11 miles traveling through the towns of Wheelock and Lyndon. It drains a watershed of 17 square miles before it reaches the Passumpsic River. Chandler Pond Brook, Bean Pond Brook, and Cold Hill Brook are all tributaries to South Wheelock Branch.

The Miller's Run is approximately 12 miles long and drains about 48.5 square miles. The main stem's origin is in dispute with official documents showing it originates in two different locations. One, from Bruce Pond in the southwestern part of the Town of Sheffield and the other in the eastern part of Sheffield cradled between Grout and Hardscrabble Mountains. The river flows in a southeasterly direction across the Towns of Sutton, Wheelock, and Lyndon where it joins the Passumpsic River. The two fastest flowing sections of the river are in the villages of Sheffield and Wheelock. Route 122 follows the course of the river along its steep eastern flank. Interstate 91 also follows the river's corridor and crosses the river with two 75 foot bridge abutments. About 11 percent of the watershed is in agriculture located mostly in the river's wider, flat valleys. The rest of the watershed is mountainous and forested.

The Sleepers River origin, located in the north central part of the Town of Danville, is created by the flow from Morrill and North Brooks, which join in North

Danville village. Badger Brook and Pope Brook are significant tributaries to Morrill and North Brooks respectively. It drains an area of approximately 43 square miles is about 7 miles long. The Sleepers River flows southeasterly from North Danville in a fairly narrow channel, and then makes a sharp turn to the northeast at the Danville and Saint Johnsbury Town line. It then turns sharply again to the southeast at the junction with Burroughs Brook and continues southeasterly and finally southerly where it passes over Emerson Falls just west of the village of Saint Johnsbury. The river continues in a southerly direction where it is channelized under the Interstate 91 on and off ramps and taken through the center of the clover leaves, follows the southwestern edge of St. Johnsbury passing under the High Street bridge. From there, the river goes under Route 5, past the Saint Johnsbury wastewater treatment facility and enters the Passumpsic River.

The Sleepers River Research Watershed in northeastern Vermont was established by the Agricultural Research Service (ARS) of the U.S. Department of Agriculture in 1959 and is now operated jointly by the U.S. Geological Survey (USGS) and the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL), with collaboration from several other Federal Agencies and Universities. The USGS has contributed to the understanding of hydrological processes and added a major biogeochemical cycling research component in the last 10 years of Sleepers River's 40-year history as a field laboratory. The USGS uses hydrologic measurements and chemical and isotopic tracing techniques to determine how water moves from the hillslope to the stream, and what processes cause chemical changes, such as the neutralization of acid rain. Research results provide insights on how pollutants move through ecosystems, and how ecosystems may respond to climatic change.

Approximately 67 percent of the watershed is forested with the remaining area in agriculture.

When planning for flood resiliency, there are two types of flood-related risks to consider:

1. Inundation: Where the water rises from a lake or stream into low-lying land (such as a floodplain); and
2. Erosion: Where an unstable river channel undergoing a physical adjustment process. This may cause a stream bank to either erode

gradually over time – or suddenly collapse in a major storm event (such as May 2011). This type of flood-related damage occurs frequently in Vermont, due in part to the state’s mountainous terrain.

It is important to understand the two different types of flood risk because different regulatory programs apply to each one. The National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), addresses inundation hazards. These hazard areas are identified on Flood Insurance Rate Maps (FIRMs), which are sometimes referred to as “FEMA maps.” Wheelock’s FIRM identifies Special Flood Hazard Areas (called SFHAs) along the Miller’s Run and the Lamoille River. The FIRM was created in 1974 and is not accompanied by any flood insurance study.

The following table is an estimate of the structures that may fall within the SFHA in the town. It is likely that some are not in danger of floodwaters while others not listed below could be in danger.

Table 1. Existing structures in the Mapped Flood Hazard Areas

PRIMARYADD	SITETYPE	TOWNNAME	GPSX	GPSY
39 PEAK RD	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08805084000	44.58789062000
3838 FALL BROOK RD	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08268737000	44.58493042000
1353 VT ROUTE 122	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08674726000	44.58813618000
699 VT ROUTE 122	MOBILE HOME	WHEELLOCK	-72.07667239000	44.58284212000
698 VT ROUTE 122	COMMERCIAL	WHEELLOCK	-72.07503208000	44.58349303000
1287 VT ROUTE 122	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08547210000	44.58798599000
881 VT ROUTE 122	MOBILE HOME	WHEELLOCK	-72.07889188000	44.58479350000
1385 VT ROUTE 122	GOVERNMENT	WHEELLOCK	-72.08742011000	44.58824619000
796 VT ROUTE 122	SINGLE FAMILY DWELLING	WHEELLOCK	-72.07694872000	44.58431700000
694 VT ROUTE 122	MOBILE HOME	WHEELLOCK	-72.07445761000	44.58262162000
1241 VT ROUTE 122	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08455660000	44.58769161000
1464 VT ROUTE 122	COMMERCIAL	WHEELLOCK	-72.08893764000	44.58886311000
1311 VT ROUTE 122	COMMERCIAL	WHEELLOCK	-72.08601824000	44.58804582000
4048 FALL BROOK RD	SINGLE FAMILY DWELLING	WHEELLOCK	-72.08493838000	44.58719981000

If Wheelock were to participate in the National Flood Insurance Program, all property owners (including those outside of the SFHA) would be able to obtain flood insurance. The rates would be based on the information in FIRM, and development standards for elevating and flood proofing certain structures in the SFHA would be required.

There are some limitations to the National Flood Insurance Program. First, the FIRM has limited flood data and does not identify any areas subject to fluvial erosion. Second, the standards for development required by the NFIP – such as floodproofing and elevation – are clearly inappropriate measures to reduce erosion hazards

Vermont’s Agency of Natural Resources (VTANR) addresses the erosion hazards and has been conducting geomorphic assessments throughout the state to identify areas that are subject to fluvial erosion. These areas are called “River Corridors.” The VTANR has developed model regulations regarding development within the corridors. If adopted, these regulations would meet FEMA standards for joining the NFIP. The Town is currently reviewing this information in order to develop a more effective approach to minimizing flood risks in Wheelock. The Miller’s Run is the only river corridor in the town that has a geomorphic assessment. It is a phase 2 assessment (meaning the assessment was performed on site) and was completed in October 2009 by the Caledonia County Conservation District ([Millers Run Corridor Plan](#)). The South Branch in the southern part of the town and the Lamoille River in the northwest part of the town have a phase 1 assessment (meaning the assessment was performed remotely) but each should also have a phase 2 assessment.

Identified Hazards (based on Wheelock’s All Hazard Mitigation Plan (AHMP)):

- 2.2.3 Flooding -- Flooding is rare but does pose a threat to some buildings and roads. Prioritized roads have been built up in low areas prone to flooding. Possible flood locations are watched during flood warnings. A few rivers have been banked with large rocks to reduce the chance of erosion. Rivers and streams are watched for ice jams when weather is warm. If needed, a contractor will be brought in to break the ice. These operations will continue along with new strategies as needed. There is no history of individual repetitive damage in the community. Flood areas designated on the FIRM maps are along Route 16 on the western edge of town and along Route 122 in the northern section of town. Both roads are state highways.

- 2.2.4 Washouts -- Dirt road washouts are common in the entire area. Washouts have been reduced since the installation of new culverts. The road crew will continue to keep the culverts cleaned out. Because of the many remote areas, road washouts have caused citizens to become stranded. Deeper ditching and better gravel has helped but because of the steep roads and many streams, it continues to be a problem. Road access permits will continue to be reviewed to assure proper size culverts are being installed.
- 2.2.5 Severe Weather -- High winds, large snowstorms, heavy rains, and thick ice storms are common in Wheelock. With high elevations and residents living in remote areas, this could be a very serious problem. With very cold winters and frequent power outages, the weather is watched closely. Wheelock officials have started talks with local utility companies and are currently discussing some ideas. One is to cut wider utility lines in the larger tree areas; another is to replace some of the older lines and poles. The process is expected to be slow because of cost and landowner education/permission. Funding is sought to offset some of the cost. Impassable roads are rare but do happen on occasion. Widening of some roads will make road maintenance quicker and more efficient. Lightning strikes are common because of the high terrain and large amounts of ledge. Fires are the biggest threat from lightning.

B. Planning Considerations

The Vermont Department of Environmental Conservation (VT DEC) has setback recommendations available for smaller and higher gradient streams.

The Town of Wheelock should investigate the Vermont Flood Resilient Communities Program as established in 2012. The Flood Resilient Communities Program will provide favorable grant matching funds from the state for damage mitigation efforts and other grants to municipalities. The Town should also investigate the FEMA Community Rating System (CRS) to see if the community could qualify for discounted flood insurance, once flood hazard regulations have been adopted.

FEMA funds require a local match of 25%. Until now the State of Vermont has provided half of this match (12.5% of the total cost). In 2014, however, new legislation

will tie the level of State funding to specific local initiatives to reduce flood-related risks and prepare for emergencies.

For disasters that occur after October 23, 2014, the State of Vermont will contribute 12.5% if the town has taken all the following steps to reduce flood damage. If Wheelock has not done all of the following, the level of State funding will be reduced to 7.5%:

- Enroll in the National Flood Insurance Program.
- Adopt the most current Town Road and Bridge Standards (which can be found in the *VTrans Orange Book: Handbook for Local Officials*).
- Maintain a Local Emergency Operations Plan (adopt annually after town meeting and submit before May 1).
- Adopt a FEMA-approved Local Hazard Mitigation Plan.

Wheelock’s current Hazard Mitigation Plan has expired. The Town has recently applied for assistance to develop a new one. Once approved by FEMA, this plan will allow the town to apply for FEMA disaster mitigation funds to remove or reduce certain risks (such as relocating the town garage out of the floodplain).

The new legislation has an incentive to increase the State match to 17.5% of the total cost, if the town adopts an approach to managing flood risks that is more aggressive than the minimum standards of the National Flood Insurance Program. These measures include protecting our river corridors from new encroachment, protecting our inundation areas from new encroachment, and participating in the FEMA Community Rating System. All of these measures are relevant to flood and flood-related risks in Wheelock, and all should be explored as way to minimize taxpayer expense in the event of future flood-related losses.

After a declared disaster, the cost of damage to public infrastructure including roads and culverts can be very large. Here is an example of how the cost of damage could be carried by federal, state, and municipal taxpayers:

	With 7.5% State share	With 12.5% State share	With 17.5% State Share
Federal Share	\$750,000	\$750,000	\$750,000
State Share	\$75,000	\$125,000	\$175,000
Municipal Share	\$175,000	\$125,000	\$75,000

100% of \$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
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The Better Backroads Program is a partnership with the Vermont Local Roads Program, Vermont Agency of Transportation (VTrans), Vermont Agency of Natural Resources (VTANR), and the Northern Vermont Resource Conservation and Development Council (RC&D). The program is administered by the Northern Vermont RC&D. The Vermont Better Backroads Program provides grants and technical assistance to towns to correct erosion problems and adopt road maintenance practices that protect water quality while reducing long-term road maintenance costs.

Present Conditions

- Infrastructure placed in close proximity to streams and rivers is particularly exposed to damage from flash flooding, bank failure, and stream channel dynamics.
- Any mortgages, grants, or loans (including disaster aid) to a structure in the Special Flood Hazard Area must secure flood insurance.
- Federal capital funds may not be invested in facilities located within the 0.2% and 1% annual chance flood hazard areas.

Goals

- Identify areas subject to normal channel erosion processes and avoid the loss of floodplain functions.
- Stream bank setbacks and buffer standards should be based on default geomorphic standards from VT DEC.
- Establish and sustain a flood hazard area education and outreach effort to support flood damage mitigation and better insure community residents and property against future flood damage.
- Establish clear guidelines to promote appropriate flood mitigation for historic structures in the Special Flood Hazard Area.

- Update the Emergency Operations Plan and All Hazards Mitigation Plan.
- Establish clear guidelines for forestry and agricultural practices that reduce runoff.

Strategies

- Wheelock should secure a geomorphic assessment of the South Branch to secure River Corridor Fluvial Erosion Hazard (FEH) delineations. The assessments should also collect data on the geomorphic compatibility of stream crossing structures (culverts, bridges).
- Adopt flood hazard area and river corridor regulations to meet standards in the current Vermont flood hazard area regulation model, and to qualify for Vermont Flood Resilient Communities matching funds.
- Explore participation in the FEMA Community Rating System (CRS) so as to secure a discount on flood insurance.
- Promote best management practices in forestry applications.
- Promote best management practices in agricultural and other land management applications.

Appendix

The following is a list of web address

- Northeast Vermont Development Association
<http://www.nvda.net/>
- Wheelock Community Data
<http://www.nvda.net/towns.php?town=17>
- The Natural Resources Conservation Service
<http://www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home/>
- The Vermont Agency of Natural Resources
<http://www.anr.state.vt.us/>
- The Vermont Planning Information Center
<http://www.vpic.info/PlanningManual.html>
- Flood Resilience from VTANR
<https://outside.vermont.gov/agency/ANR/FloodResilience/Pages/Default.aspx>