

Chapter	Section	Person	1st Draft Complete	Internal Review Done	External Review Done
1	Greensboro Community				
	Background	Christine			
	History	Christine			
	Community Profile	Christine			
	Vision	Christine			
2	Greensboro's Environment				
	Population	Ellen			
	Land Use	Dan			
	Transportation	Dan	X		
	Recreation	David			
	Natural Resources	Christine			
	Cultural Resources	David			
	Flood Resiliency	Dan	X		
	Regional Compatibility	Dan	X		
3	Community Resources				
	Facilities and Utilities	Ellen			
	Energy & Renewables	David/Dan			
	Education	Christine			
	Housing	Ellen			
	Economic Development	Dan			
4	Goals, Policies, Actions				
	Economic Development	Dan	X		
	Land Use	Dan	X		
	Transportation	Dan	X	Peter Romans	
	Recreation	David	X		
	Natural Resources	Christine	X		
	Energy	David/Dan	X	Alisson	
	Education	Christine	X	School Board	
	Housing	Ellen	X	Alisson	
	Cultural Resources	David	X		
	Flood Resiliency	Dan	X	Alisson	



Greensboro Town Plan (Revision 3)

Prologue

- | | |
|--------------------------------|-----------|
| 1. Greensboro Community | Christine |
| a. Background | |
| b. History | |
| c. Community Profile | |
| d. Vision | |
| 2. Greensboro's Environment | |
| a. Population | Ellen |
| b. Land Use | Dan |
| c. Transportation | Dan |
| d. Recreation | David |
| e. Natural Resources | Christine |
| f. Cultural Resources | David |
| g. Flood Resiliency | Dan |
| h. Regional Compatibility | Dan |
| 3. Community Resources | |
| a. Facilities and Utilities | Ellen |
| b. Energy and Renewables | David/Dan |
| c. Education | Christine |
| d. Housing | Ellen |
| e. Economic Development | Dan |
| 4. Goals, Policies and Actions | |
| a. Economic Development | Dan |
| b. Land Use | Dan |
| c. Transportation | Dan |
| d. Recreation | David |
| e. Natural Resources | Christine |
| f. Energy: Act 174 | David/Dan |
| g. Education | Christine |
| h. Housing | Ellen |
| i. Cultural Resources | David |
| j. Flood Resiliency | Dan |
| 5. Appendices | |

Regional Compatibility

The purpose of this section is to examine the plans of our adjacent communities, and the regional plan, to ensure that our plan is consistent or compatible with, these plans. The adjacent towns to Greensboro are Glover and Craftsbury to the north, Hardwick to the south, Stannard to the east, and Wolcott to the west. Each of these towns has published town plans. Also, the Northern Vermont Development Association (NVDA) Regional Plan was reviewed.

The review took into consideration issues such as potential land use conflicts that could occur at town boundaries, development trends, and major regional initiatives.

The Northern Vermont Development Association (NVDA) Regional Plan was reviewed to evaluate the compatibility of the Greensboro Town Plan with the Regional Plan.

The following is an excerpt from the goals and strategies of the NVDA Regional Plan:

- Forest Land - sustainable forests
- Agriculture - preserve productive farmland
- Recreation - support year-round recreational opportunities
- Land Development
 - support established village centers
 - support a variety of housing at different price points
 - protect against fragmentation of rural lands
- Energy
 - support the use of renewable energy
 - encourage energy efficiency
- Education
 - pursue opportunities for shared facilities between municipalities
 - support education for all ages
- Telecommunications - support efforts to address gaps in broadband and cell coverage
- Emergency Services
 - support local efforts for disaster planning
 - discourage development in flood prone areas
- Stormwater - support Green Stormwater Infrastructure
- Wastewater - support the development of community wastewater systems
- Culture
 - promote local and regional tourism
 - Preserve historic downtowns
- Housing
 - Seek a balance of workforce, affordable and market rate housing
 - Help communicate with housing studies
- Economic Dev - Assist town's in their economic development efforts
- Natural Resources - protect the quality of the region's water
- Flood Resiliency
 - Encourage towns to restrict development with river corridor
 - Encourage towns to limit clearing and impervious coverage on steep slopes (>20%)

While these strategies do not represent the entire list of strategies in the NVDA Regional Plan, they do show that when compared to Greensboro's Town Plan, there is consistency. Many of Greensboro's policies and actions are similar to NVDA's strategies.

The village of Hardwick serves as one of the main hubs for the area and provides the surrounding towns with essential services, such as healthcare. The close proximity of Hardwick thus allows the surrounding towns to retain their rural character. Craftsbury, with its historic Craftsbury Common, is rural in character, similar to Greensboro, Stannard and Glover. Wolcott's town center sits along Route 15, and also is rural. A review of the Town Plans for these communities showed that the problems confronted by these towns are similar to those in Greensboro, such as:

- The need for broadband expansion
- Dealing with an aging population
- The need for a balance housing solution
- Preservation of water quality and natural resources
- Attracting tourism
- Developing recreational and cultural opportunities

No conflicts with these plans were observed. Greensboro will continue to monitor progress in adjacent communities, and seek opportunities for multi-town initiatives.

Transportation

The infrastructure that allows people to travel from point to point plays a very important role in Greensboro's economy and recreation opportunities. Greensboro's transportation network is a combination of different modes, from the two village centers, where vehicle speed is a concern, to dirt roads, where maintenance is an issue, to Route 16, which transports people at higher speeds. Transportation also encompasses other means of movement, such as snowmobile and Nordic trails, cycling, and walking paths.

Roads

Greensboro employs a staff of three, plus one part-time summer person, to maintain its fifty-seven miles of dirt roads, eleven miles of pavement, 14 bridges, and 582 culverts. The town road crew works out of the Town Shed located on Cemetery Ridge. The town owns a gravel pit in Glover.

Two state roads pass through Greensboro: State Route 16 runs through Greensboro Bend as it connects Hardwick to points in northern Orleans County, and a short portion of State Route 14 runs beside Lake Eligo. In 2016, the town spent approximately \$ ____, ____, keeping the roads maintained. Road maintenance equipment owned by the town includes a pick-up, two ten-wheeler 14-yard dump trucks, one 7-yard six-wheel dump truck, an excavator, a grader, and a bucket loader. Driveway plowing and roadside mowing services are contracted to private contractors on an annual basis.

Public Transit

Rural Community Transportation, Inc (RCT) is the only public transit provider in the Northeast Kingdom. They provide transport for a fee on its fixed routes. It not only provides regular routes, but will schedule an individual volunteer driver to driver a person from their home to an appointment. Unfortunately, their regular routes do not cover the Greensboro/Hardwick area.

Airports

The state-owned airports in the Northeast Kingdom are Northeast Kingdom (Newport) and Caledonia (St. Johnsbury). These airports serve private aircraft and limited charters and cargo services. For national and international destinations, the closest airports are Burlington and Montreal.

Rail Service

The closest rail service to Greensboro is Amtrak out of Essex Junction. Amtrak runs the Vermonter service to Springfield, MA, New York City, Philadelphia, Baltimore, and Washington, D.C.

Cycling

The roads in Greensboro offer a variety of on-road and backroad cycling opportunities. Some roads have fog lanes that enable safer bike riding, such as Route 16 in Greensboro.

The NVDA published a document called “Cycling in the Kingdom” that describes a number of cycling routes and loops in the Northeast Kingdom. One of the loops is called “Around the Block”, which begins in Hardwick and follows Route 14 north to Irasburg, then takes Route 58 and Route 5 south to Barton, then Route 16 south to the Hardwick area. This route passes through Greensboro Bend.

The Lamoille Valley Rail Trail is currently under construction on the railbed of the former Lamoille Valley railroad, which ceased operation in 1994. The rail line extended from Swanton to St. Johnsbury. Sections from St. Johnsbury to Danville, and Morrisville to Jeffersonville are complete. A future section will connect Danville with Morrisville, which will pass through Greensboro Bend, providing easy access to what will be the longest trail in New England. This trail will provide many recreational advantages to Greensboro during all four seasons.

Snowmobile Trails

Vermont Association of Snow Travelers (VAST) sponsors the maintenance of snowmobile trails through the volunteer efforts of local club members. The only VAST trail in Greensboro follows Richardson Road (Town Road 23) from Craftsbury to Campbell’s Corner and to Edsell Road south to Cook Hill Road.

In addition, there are many private snowmobile trails in Greensboro.

Cross-country Ski Trails

The Craftsbury Outdoor Center operates a system of Nordic trails that cover much of Craftsbury and Greensboro. Trails also extend from Highland Lodge to Craftsbury.

Sidewalks, Walking Paths and Traffic Calming

One of our initiatives is to work towards creating safer village centers in Greensboro, while at the same time improving opportunities for walking and biking. This also is a goal of Act 174, Energy Planning, as discussed in the Energy Chapter, to reduce energy consumption.

In early 2017, we began discussions with Local Motion, a state-wide advocate for safer cities and walkable and bikeable communities. Local Motion performed a study of the Greensboro Village, from Tolman Corner to the town center, and north to Cheney Road. The purpose of the study was to suggest a number of actions that would calm traffic and provide for safer walking.

Local Motion discussed many possible ways to reduce vehicle speeds in the town and provide for better and safer walking conditions. The following is a summary of the types of actions that could be implemented:

- Install speed feedback signs on major entrances to the village.
- Extend Breezy Avenue sidewalk to Tolman Corner.
- Repair sidewalks where needed.
- Shorten the crosswalk at the confluence of Laundon and Craftsbury roads.
- Add four crosswalks at Tolman Corner.
- Paint speed changes on the road (to 25 mph) on Breezy Avenue.
- Installing signs at crosswalks.
- Add a four-way stop at Tolman Corner.
- Create a traffic circle at Tolman Corner.
- Install raised crossings, three inches above grade.
- Add fog lanes to reduce vehicle speeds and provide a space for pedestrians.
- Add a walking path between Town Center and Cheney Road (Stage 1) and then to Highland Lodge (Stage 2).

These type of traffic calming and walking improvements also would apply to Greensboro Bend.

Flood Resiliency First Draft 12-5-17

Vermont Statutes Act No. 16 states that as of July 1, 2014, municipal and regional planning must contain a Flood Resilience Element. This chapter must identify flood and fluvial erosion hazard areas and designate those areas to be protected, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests to reduce the risk of flood damage to infrastructure and property. It must also recommend policies and strategies to protect the town from flooding.

Background

Flooding risk is a function of a number of issues, including the nature of the watershed, the topography of the land surface and its rate of change, and man-made structures that may affect the flow of storm-related water.

Greensboro lies within two watersheds: the Upper Lamoille River watershed, and the St Francis watershed (a sub-basin of the Lake Memphremagog watershed). The Upper Lamoille River watershed is fed by an area of about 720 square miles, beginning at the headwaters in Greensboro. Most of the streams in Greensboro ultimately drain into the Lamoille River (the only exception is Eligo Lake, which drains to the St Francis watershed). Figure 1 shows the boundaries of the two watersheds in Greensboro.

Greensboro is characterized by topography that varies considerably across the town. For example, the highest location in the town is an un-named hill about a mile northwest of Paddock Hill (2200 ft), followed by Paddock Hill and Barr Hill (2100 ft). The lowest parts of town are the shore of Eligo Lake (1000 ft) and Greensboro Bend (1200 ft).

Rapid changes in topography over short distances (i.e. slope steepness) can create conditions during heavy rain events where damaging soil erosion can occur. Figure 2 shows the slope as a percent, for Greensboro. The figure shows that there is a significant amount of land area in the town where slopes are well above 10%. The steep areas are cause for concern about soil erosion.

Flooding Risks

Flooding risk arises from a number of physical attributes in Greensboro, such as floodplains, river, or river corridors, streams, uplands, wetlands, and roads (including culverts and bridges).

Floodplains

Floodplains are important features that provide for temporary storage of water during major rain storms as well as reducing the water flow velocity and commensurate erosion. A floodplain encompasses the area where a river typically meanders during high flow periods. However, floodplains also are areas with relatively high probability of flooding. Greensboro's floodplains have not been digitally mapped. The only source data is from the Federal Emergency

Management Agency (FEMA) maps called FIRMS, or Flood Insurance Rate Maps. The most recent FIRM prepared for Greensboro was created in 1985.

The Vermont Department of Conservation created a map of Special Flood Hazard Areas (SFHAs) within Greensboro. The SFHAs are land areas that are within Zone A on the FIRMS, which denote areas in the 100-year floodplain. This map is shown in Figure 3. There are 88 buildings in the SFHAs in Greensboro, which comprises about 11% of the buildings in the town. Most of these are located along the shores of Caspian Lake, in addition to a few buildings in Greensboro Bend.

River Corridors

The mainstem of the Lamoille River originates in the northwest corner of the Town of Wheelock, at the outlet of Horse Pond (which is located in Greensboro). 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. From its headwaters to the mouth, the river descends approximately 1,200 feet and drains a 706 square mile watershed.

A river corridor includes both the channel and the adjacent land. The purpose of the zone is to identify the space a river needs to re-establish and maintain stable "equilibrium" conditions. In other words, if the river has access to floodplain and meander area within this corridor, the dangers of flood erosion can be reduced over time. River corridors are equivalent to fluvial erosion hazard areas. Note that special flood hazard areas (SFHA) represent the floodplain denoted as Zone A on the FIRM maps. The SFHAs are smaller than the river corridors.

About two-thirds of Vermont's flood-related losses occur outside of mapped floodplains, and this reveals the fundamental limitations of the FIRMS. A mapped floodplain makes the dangerous assumption that the river channel is static, that the river bends will never shift up or down valley, that the river channel will never move laterally, or that river beds will never scour down or build up.

Fluvial Erosion Hazard Areas (FEH) have been delineated for some communities based on studies of particular stream and river reaches. An FEH is essentially equivalent to a River Corridor Protection Area (RCPA). Both delineate the extent of the meander belt. A River Corridor includes the meander belt and the riparian buffer area required for a naturally-stable channel.

The Vermont Agency of Natural Resources mapped the major river corridors for the state, including the Lamoille River and Greensboro Brook, Mud Pond Brook and Sawmill Brook. The river corridor protection area varies in width for the three streams, and is about 450 ft for the Lamoille River along Greensboro Bend. Figure 4 shows an enlarged view of the River Corridor Protection Area (RCPA) for Greensboro Bend.

Land within the RCPA will experience heightened risk from erosion and flooding. Therefore, the state encourages towns to restrict development in river corridors. Doing so can help streams lose flood energy in undeveloped areas and help prevent flood damage to existing riverside development from getting worse.

There are benefits to Greensboro if the town adopts bylaws that restrict encroachment into designated river corridors. See the section on Regulatory Issues below.

Uplands

While upland areas, which consist primarily of forests, do not present a great flooding risk, they do impact flooding and soil erosion downstream.

Forests limit erosion and the ability of water to transport sediment that can cause water quality problems when forest vegetation and organic debris on the forest floor slow and infiltrate surface water during storms. Forested lands contribute the lowest amounts of nutrients, sediment and other pollutants into Vermont streams per acre compared to other land uses.

Forest blocks are areas of contiguous forest and other natural habitats, frequently spanning multiple ownerships. Greensboro's forest blocks are primarily forests, but also include wetlands, streams, lakes, ponds, and rock outcrops. Forest blocks protect water quality, provide flood storage, and protect habitat for fish and wildlife. Forests also provide shading to moderate water temperatures, and act as a carbon sink.

Best management practices must be applied in upland areas. Development, which involves clearing and increased runoff, should be discouraged in areas of steep slopes (>20%).

On parcels over 25-acres, landowners may be eligible to enroll forestland in Vermont's Use Value Appraisal Program (also known as Current Use). For forestland to be eligible it must be managed according to a 10-year forest management plan that provides for continued management for forest products which meets minimum plan and management standards and is approved by the Department of Forests Parks and Recreation (VFPR). Landowners with riparian areas and forested wetlands are encouraged to manage for protection of these sites during any forest management.

Streams

Headwater streams make up a large proportion of the total length and watershed area of fluvial networks in Greensboro, and are partially characterized by the large volume of organic matter and invertebrate inputs from the riparian forest. Organic matter entering these streams consists of leaves, woody debris, detritus, and sediment. For example, while each headwater stream in the Caspian Lake watershed is short and narrow, they collectively can impact lake water quality during and after large storm events.

Identifying and implementing priority conservation practices for forest landowners at the headwater stream level is important in watershed management for several reasons:

- Controlling soil erosion on logging trails
- Restoring forest riparian buffers along streams
- Stabilizing erosion-prone soils.

Wetlands

Wetlands provide many benefits, including water quality protection, wildlife habitat, recreation, and flood protection. All Class I and II wetlands are protected by the Vermont Wetlands Program. These rules require buffer zones within 100 feet of Class 1 wetlands, and 50 feet of Class II wetlands. Any activity in a Class I or II wetland requires a state permit. We can further protect wetlands by adopting setbacks and zoning that would allow review of development plans for wetland impacts.

Those wetlands that provide water quality protection at the highest level are a priority for protection in the Lamoille River Basin. These wetland types include those that attenuate sediment, filter overland runoff from flooding and stormwater, support fisheries, and provide refuge for wetland dependent species.

All of the wetlands in Greensboro are Class II or Class III wetlands.

Dams

Dam failures can be a source of flooding risk. There are three dams in Greensboro. Two of them are privately owned and are rated low hazard potential by the state. The earthen dam at Caspian Lake was built in 1929 and reconstructed in 1948. The dam is seven feet high and 205 feet in length. Approximately 2300 ac-ft of water is stored in Caspian Lake under normal conditions.

The Caspian dam, because of the storage volume, is called a “jurisdictional dam” by the Dam Safety section of the Vermont Department of Conservation. This dam is classified as “significant hazard potential” by the Dam Safety section because a dam failure could result in “a few fatalities and/or appreciable economic loss”. Dams with this classification must be inspected every 3-5 years; however, the inspections are voluntary on the part of dam owners.

The owner of the Caspian Lake dam is Hardwick Electric. The most recent inspection of the Caspian Lake Dam occurred on June 27, 2017. The visual inspection was conducted by the Facilities Engineering Division of the Vermont Department of Environmental Conservation.

The findings of the inspection are summarized here:

- Based on the visual inspection of the dam, the condition is considered poor.

- The downstream slope of the dam on one side of the spillway is covered with trees in excess of 30 inches in diameter.
- The spillway condition appears poor. Some concrete is deteriorating, with exposed rebar. The concrete footing appears to be separating from the remainder of the structure.
- The concrete wall adjacent to the left abutment is in a state of failure, and not considered stable, having rotated outwards toward the lake.
- The dam does not meet the current standard of providing 1.5 feet of freeboard during the spillway design flood.

The inspection report recommends that a professional dam safety engineer be retained to specify the repairs needed to bring the dam into compliance with the State requirements, including concrete repairs and tree removal.

Roads and Culverts

Roads, culverts and bridges are important facilities that can be sources of flooding problems and can conduct nutrients and sediment to streams, and then to lakes. Therefore, it is essential that Greensboro maintains its roads and associated facilities in good condition. Greensboro has 69 miles of town roads, in addition to 582 culverts.

Vermont has a number of initiatives to help towns with maintaining roads and culverts:

- The Better Roads Program, which publishes a Better Back Roads Manual, and operates a Better Roads grant Program
- The Vermont Department of Fish & Wildlife published guidance for the design and replacement of road crossings and culverts, called “Guidelines for the Design of Stream/Road Crossings for Passage of Aquatic Organisms in Vermont”.
- The Vermont Department of Conservation, Watershed Management Division prepared the Stormwater Infrastructure Mapping Project Report, dated February, 2017 to supplement the existing drainage data collected by the town and with the intention of providing a tool for planning, maintenance, and inspection of the stormwater infrastructure. This report and associated mapping, will assist Greensboro and its residents with emergency preparedness for large rainfall events or spring snowmelt runoff events by helping to keep drains and culverts open, thereby minimizing localized flooding.

The Vermont Agency of Transportation created VTCULVERTS, an inventory of culverts and bridges in Vermont. The VTCULVERTS database shows that Greensboro has 582 culverts, of which 355 are in Good condition and 152 are in Fair condition. Only 65 culverts are in “Poor” condition and none are in Critical or Urgent condition. This data was compiled by the NVDA in 2015.

Act 64, the Vermont Clean Water Act, requires VDEC to develop a new Municipal Roads General Permit (MRGP). The MRGP will require Greensboro to conduct Road Erosion Inventories (REIs) for hydrologically connected municipal road segments. The ANR Natural Resources Atlas shows hundreds of road segments in the town that will be included in this regulation.

Greensboro will also be required to develop Road Stormwater Management Plans for all hydrologically connected road segments not meeting MRGP standards. Greensboro would then be required to implement the Road Stormwater Management Plans over a period of time defined by the MRGP.

Regulatory Issues

The Vermont Rivers Program has created a Flood Resilience Scorecard for the Lamoille River Basin. The scorecard reflects the actions communities have taken to implement the state's flooding guidelines. Greensboro is rated medium flood resiliency. Medium is achieved when a community has adopted the four mitigation measures needed to qualify for the 12.5% public assistance match (listed below). Greensboro can reach the high level of flood resiliency by satisfying the requirements of the River Corridor Protection Program (protecting river corridors from further encroachments).

There are a number of regulatory programs that deal with flooding.

National Flood Insurance Program (NFIP)

Greensboro participates in the NFIP and regulates development in the flood hazard areas according to the minimum standards established by FEMA. These regulations control the use and construction of structures in the flood hazard areas. An important benefit to adopting the rules is that it allows all property owners in Greensboro to purchase flood insurance – whether or not the property is located in a Special Flood Hazard Area (SFHA). Homeowner's insurance policies do not cover flood damage.

Greensboro currently regulates development in the SFHA in accordance with FEMA's minimum standards. If new development is to occur in the SFHA, it must meet certain standards, such as elevation and floodproofing.

The NFIP prepares the Flood Insurance Rate Maps or FIRMs, as discussed earlier.

Emergency Relief Assistance Fund (ERAF)

The ERAF provides a state-funded match for Federal Public Assistance through FEMA if Greensboro meets FEMA requirements. When a community requires public assistance, FEMA funds generally cover 75% of the loss. For federally declared disasters that occur after October 23, 2014, ERAF will contribute half of the required match (12.5%) only if the town has taken all the following steps to reduce flood damage:

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

Greensboro has satisfied these requirements; therefore, the Town is eligible for a 12.5% match.

Local Emergency Operations Plan (LEOP)

An LEOP is a guide for activities immediately following a disaster, when it is critical that procedures be in place to respond to situations where health and safety are concerned. The LEOP establishes an incident command system, designates an operations center, and identifies local resources needed in a disaster. Maintaining an up-to-date LEOP is required for a 12.5% match in funding from the state Public Assistance Fund.

Local Hazard Mitigation Plan (LHMP)

The LHMP takes the LEOP to another level. The purpose of the LHMP is to provide education about the possible hazards and vulnerabilities in the town, identify methods to mitigate the risks, and enlist governmental agencies, organizations, businesses, and the public.

The latest LHMP revision was dated 2016. Mitigation strategies were proposed based upon the hazards and vulnerabilities identified. These strategies included the following:

- Integrate LHMP into the Town Plan and bylaws.
- Update flood hazard bylaws to prohibit new structures in floodplains.
- Require new critical facilities to be located one foot above the 500-yr flood elevation.
- Support education and public outreach regarding hazards.
- Develop and implement a Fire Prevention Plan for the villages.

River Corridor Easement Program

The intent of this program is to provide a financial incentive to landowners to allow for passive restoration of channel stability by allowing the natural erosive forces of the river to establish its least erosive form over time. Under a river corridor easement, the landowner sells their river channel management rights within the meander belt width corridor of sensitive and erosive streams. Agriculture and silviculture are permitted within the river corridor easement area. The three primary components of a river corridor easement are:

- Transfer of channel management rights to a land trust.

- No new structures/development within the river corridor.
- A minimum 50 ft. riparian buffer of native woody vegetation whose location floats with the river.

Critical Facilities

Critical facilities are essential to a community's resilience and sustainability. In general, there are two kinds of facilities that a community would consider "critical" during and after a flood:

- Those that are vital to the health and safety of the public before, during, and after a flood, such as emergency responders, schools, and shelters; and
- Those that, if flooded, would exacerbate the problem, such as a hazardous materials facility, power generation facility, water utilities, or wastewater treatment plant.

Because they are defined by their ability to quickly and efficiently respond to and recover from floods, critical facilities should never be flooded, and their critical actions should never be conducted in floodplains if at all avoidable.

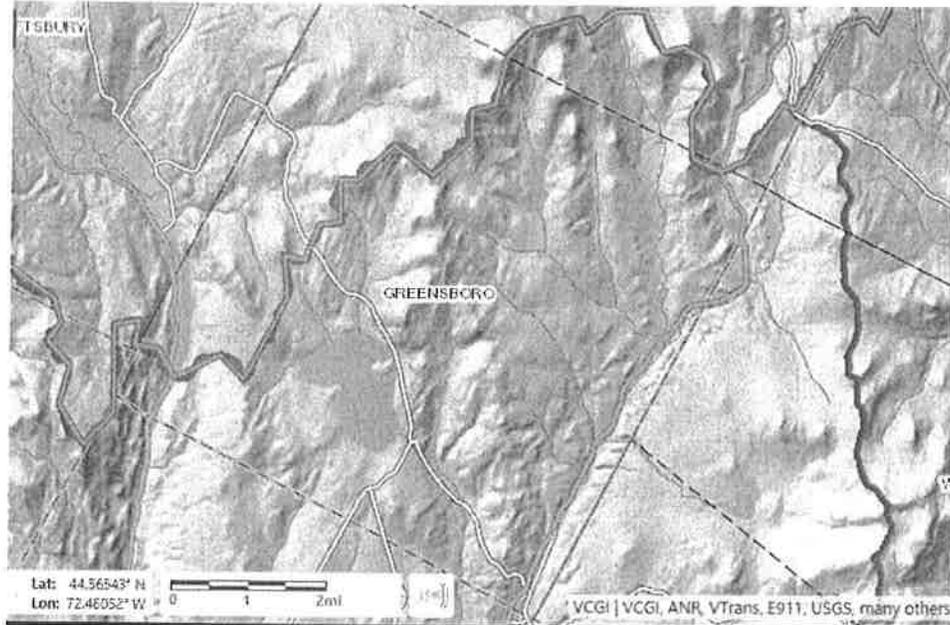
Greensboro does not have any critical facilities in the Special Flood Hazard Area or in the recently delineated river corridors.

Areas Requiring Attention

1. Caspian Dam inspection date? Talk to Mike Sullivan or Dam Safety

Figure 1-1

Watersheds in Greensboro



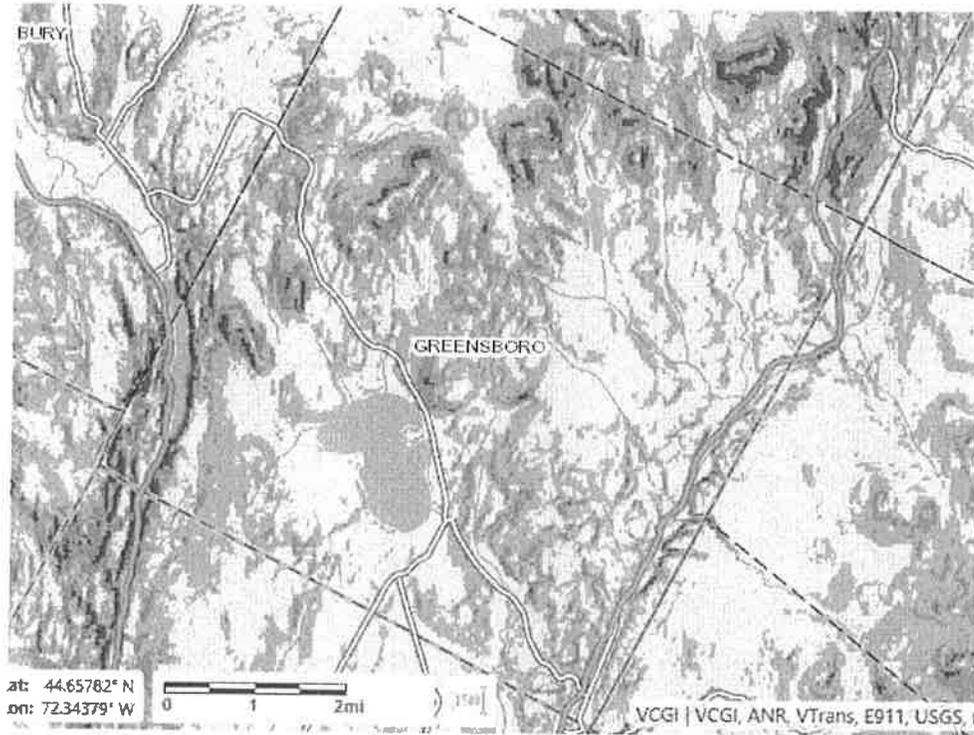
Legend:

Unshaded Area: Lamoille River Watershed

Shaded Area: St Francois River Watershed

Source: VCGI

Figure 2
Slope as Percent



Legend:

☐ Slope Angle (percent slope)

- ☐ 2 - 10
- ▒ 10 - 20
- ▓ 20 - 36
- 36 - 100

Source: VCGI

Figure 4

Greensboro Bend Flood Hazard Area + River Corridor



Legend:

Pink shading is the Flood Hazard Area (Floodplain)

Clear shading is the River Corridor

Chapter 4 Goal, Policies and Actions Statements as of 12-5-17

1. Economic Development
2. Land Use
3. Transportation
4. Recreation
5. Natural resources
6. Energy Conservation
7. Education
8. Housing
9. Cultural Resources
10. Flood Resiliency

Chapter 4: Economic Development FIRST DRAFT 12-5-17

Economic Development Goal

A sustainable Greensboro, where prosperity contributes to and drives quality of life must support existing local businesses and attract new small to mid-sized businesses that are compatible with and preserves our rural character.

Economic Development Policies

1. Work with the Heart of Vermont Chamber of Commerce and the Northern Vermont Development Association (NVDA) to attract business to Greensboro and support our existing businesses.
2. Work with Fairpoint Communications and its successor to improve internet connectivity in Greensboro.
3. Identify barriers that stifle economic growth and incentives that would promote growth in Greensboro.
4. Encourage local residents to buy from local businesses.
5. Maintain and improve the Town's infrastructure, including road, town buildings, sidewalks, and recreation facilities to attract visitors and new businesses.

Economic Development Actions

1. Create a small business support team with materials in the Greensboro Library that offers help to job seekers and individuals interested in starting new home-based or small businesses in Greensboro.
2. Explore interest in and feasibility of installing a community-based wastewater system (e.g. package treatment plant) in Greensboro Village that would support the local businesses, possibly including Willey's, Miller's Thumb, Greensboro Garage, and the Greensboro Nursing Home.
3. Create and distribute promotional and informational materials that will help attract visitors and new businesses to Greensboro, including the municipal website and social media.
4. Support events that help local businesses succeed, such as the Farmer's Market.

Greensboro Land Use First Draft 12-5-17

Land Use Goal

Maintain and enhance the town's rural and agricultural character, while encouraging future residential and commercial growth in and adjacent to the Village Districts.

Land Use Policies

1. Preserve undeveloped land through conservation tools such as the Greensboro Land Trust, the Vermont Land Trust, the Vermont Housing and Conservation Board and other similar tools and programs.
2. Establish new town land districts to help protect and preserve highly sensitive and important resources.
3. Once the new land use districts have been defined, consider changes to the Bylaws to protect these districts and avoid fragmentation.
4. Establish zoning or development standards that allow lot sizes that can attract workforce housing in or immediately adjacent to our Village Centers.
5. Support agri-tourism as an effective light industrial activity that promotes business success and preserves agricultural land.
6. Encourage farmers to work with the Northeast Organic Farming Association.

Land Use Actions

1. Establish a Special Resource District composed of town lands that are environmentally sensitive and should be preserved, including large forest blocks, higher elevation land, ridgelines, wetlands, and streams.
2. Establish a Shoreline District to protect surface water resources on Caspian and Eligo Lakes.
3. Establish an Agriculture District composed of commercially farmed areas of the town, with the purpose of sustaining these commercial land uses.
4. Establish a zoning ordinance that requires landscaping of ground-mount solar projects that are installed adjacent to town roads.

Chapter 4: Transportation SECOND DRAFT 12-5-17

Transportation Goal

Maintain Town roads in good condition while minimizing erosion impacts and improving opportunities for walking and bicycling.

Transportation Policies

1. Strive to reduce speeds of motor vehicles in the vicinity of the Village Center and the Bend by employing traffic calming technology as well as recommendations by Local Motion.
2. When major maintenance or paving is conducted on road segments, efforts will be made, where feasible, to include a four foot wide walking path adjacent to the road.
3. Support/encourage energy efficient transportation.
4. Maintain the roads and culverts in Greensboro to minimize erosion and sediment input to Caspian Lake.

Transportation Tasks

1. Investigate the feasibility of upgrading the ballfield parking lot with gravel/staymat and advocating its use as a park and ride location.
2. Request grant writing help from NVDA to compete for a VTrans/ACCD Better Connections Grant to improve the Greensboro Village's walking path system, in stages, from the ballfield, down Breezy Avenue, onto Craftsbury Road to Highland Lodge.
3. The Town will continue to apply for road repair and maintenance grants to defray costs to the town.
4. The Town will utilize the VTCULVERTS database to continue to improve road infrastructure with the goal of reducing fluvial erosion impacts on Caspian Lake.
5. Continue to improve sidewalks in the Village and the Bend.
6. Purchase Radar Speed Signs to calm traffic in or adjacent to the Greensboro Village and/or Greensboro Bend.
7. Investigate additional traffic calming option suggested by Local Motion.

Chapter 4: Recreation Goal, Policies, Actions 12-5-17

Recreation Goal

The availability of a wide range of recreational opportunities in Greensboro instills a strong sense of community, provides economic benefits, and attracts tourism.

Recreation Policies

1. Support the use and expansion of four season recreation opportunities and facilities in Greensboro
2. Encourage the maintenance and expansion of the winter recreation trails.
3. Encourage the Mountain View Country Club to provide access to the tennis and golf facilities at a reasonable rate.
4. Continue to support the summer swimming program at the Caspian Lake public beach and encourage and support the Town of Hardwick to protect and improve the public beach area.
5. Encourage and support increasing the recreation opportunities for senior citizens including cultural, intellectual and physical activities.

Recreation Tasks

1. Compile and publish a pamphlet(s) to describe and map the recreation facilities and opportunities in Greensboro.
2. Build a bicycle route around Caspian Lake, including a bicycle lane on Craftsbury Road so that bicyclists can bike around all of Caspian Lake in safety
3. Encourage and support the extension of the Lamoille Valley Rail Trail through Greensboro Bend. Support an attractive Trailhead facility in Greenboro Bend, with appropriate signage and parking.
4. Hire a part or full time recreation/cultural director to coordinate, develop and expand the recreation/cultural activities in Greensboro to both serve the residents of Greensboro and encourage the expansion of tourism.

Chapter 4: Natural Resources 12-5-17

Natural Resources Goal

Stewardship with integrity over all of Greensboro's natural resources, including open fields, forests, animal and plant habitats, streams, lakes, and scenic landscape in a manner that protects and enhances the town's ecological health and biological diversity for the benefit of current and future residents.

Natural Resources Policies

1. Establish conservation priorities that will preserve agricultural land, evergreen and deciduous forests, important wildlife habitat, water resources, river corridors, wetlands, stream and lake shorelines and scenic view sheds.
2. Ensure that runoff and erosion are adequately controlled to protect the water quality of the Town's lakes and streams.
3. Ensure that wastewater systems surrounding Caspian Lake are maintained in good working order to preserve lake water quality.
4. Support the continuation and expansion of the State of Vermont Current Use Program, administered by the Division of Property Valuation and Review, Department of Taxes, to tax farm and forest properties at their productive value rather than their development potential. Encourage the participation of Greensboro property owners in that program.

Natural Resources Tasks

1. Request that the Greensboro Land Trust/Conservation Commission update the Caspian Lake Feeder Stream Study conducted in 2013 and suggest specific actions or Bylaws changes to improve lake water quality. Apply for a grant from VDEC.
2. Amend the Town Bylaws to preserve Caspian Lake shoreline and ridgeline viewsheds.
3. Amend the Town Bylaws to minimize stormwater runoff impacts from development on steep slopes. Require extraordinary stormwater controls for development on slopes of 15-25% and prohibit development on slopes greater than 25%.
4. Work with the Greensboro Road Department and others, including farmers, landowners and Greensboro Association members, to identify actions that will control stormwater runoff (utilize 2017 Greensboro Stormwater Study) into Caspian Lake.
5. Amend the Town Bylaws to create a 100 foot buffer along streams.
6. Amend the Town Bylaws to prohibit the construction of new or expanded commercial or industrial activities that extract and sell groundwater.

7. The Conservation Commission will evaluate the actions needed and Bylaws amendments required to protect lake water quality from all potentially harmful actions, including failed septic systems and unnecessary agricultural runoff, on Caspian Lake.
8. Evaluate the natural resources in Greensboro, and create a map of “Areas of High Public Value” that will provide a guide for future land conservation efforts.
9. Conduct public outreach to educate shoreland property owners in order to reverse the negative trend in shoreland vegetation and aquatic habitat; to implement best management practices consistent with the Vermont LakeWise program; to work with the State of VT to evaluate the the best water level to be maintained in order to have the least amount of impact on aquatic habitat and to protect lakeshore habitat; to control milfoil and other aquatic nuisances.

Resource Maps

1. Lakes, streams and wetlands
2. Contiguous Habitat Blocks with Habitat Value
3. Conserved lands
4. Slope

Energy Conservation: First Draft 12-5-17

Goal

Encourage energy conservation and the use of renewable energy while minimizing the visual and environmental impacts from these technologies.

Policies

1. Promote the use of weatherization and energy efficiency for both homes and businesses in Greensboro.
2. Encourage the use of renewable energy systems in residential, commercial, and municipal applications.
3. Promote the reduction of transportation energy demand and the use of renewable energy sources for transport.
4. Encourage energy conservation through preservation of the rural character of the town and its two village centers.
5. Maximize the potential locations for the development of renewable energy sources that will enable the town to meet its renewable energy targets.
6. Support the formation of a Greensboro Energy Committee to address energy conservation and renewable energy development goals.

Actions

1. Provide information on the latest energy codes and energy efficiency techniques to those who require permits from the Zoning Administrator.
2. Adopt bylaws that require all Act 250 projects (residential and commercial) to follow the latest energy codes along with a plan of how energy conservation measures will be implemented.
3. Encourage the Town to implement appropriate energy efficiency projects in municipal buildings.
4. Create a renewable energy ordinance that states specific restrictions for development, including setbacks, landscaping, and protection of ridgelines.
5. Facilitate carpooling by creating and maintaining a park and ride location in the town.
6. Promote the continued expansion of walking and biking paths in the town.
7. Establish a collection of energy conservation and renewable energy information in the Greensboro Library.
8. Embark on an outreach program to educate homeowners and business owners regarding the benefits of energy conservation, energy efficiency, and renewable energy use.

Chapter 4 Education 12-7-17

Goal

Education, or learning, is a key to a sustainable community that supports a high quality of living. It is a goal of Greensboro to provide educational service and facilities that meet the needs of all of its residents.

Policies

1. Maintain a quality school system for both present and future residents.
2. The Town should keep the Lakeview School open to continue to realize the significant community benefits generated by the school.
3. Develop Lakeview School budgets that balance the need for a quality educational experience, suitable facilities for teachers and students, and affordable cost to Greensboro residents.

Actions

1. Investigate the feasibility of strengthening the role that the Lakeview School building plays in the community, including providing access to school facilities for community events and activities, including learning opportunities for all ages.
2. Encourage local businesses to team with Lakeview, Hazen, and GMTCC so as to: enrich the K-12 educational experience; demonstrate relevance of the curriculum; and promote an interest in jobs available locally.
3. Offer opportunities for community engagement in the planning for possible changes in the Greensboro School District as a result of pressures imposed by the State of Vermont.
4. Explore long-distance learning opportunities through improved digital platforms in order to support a wide array of enrichment and learning opportunities for all ages.

Greensboro Housing Goal, Policies Actions 12-5-17

Goal

The long-term sustainability of Greensboro depends upon the availability of adequate housing for all residents, including seniors and the workforce, that are energy efficient and compatible with the character of the community.

Policies

1. Support the town's small-scale lodging facilities to provide short-term accommodations for tourists.
2. Support initiatives that will require new homes to meet the recommendations of Efficiency Vermont.
3. Support policies that will encourage development of homes for our workforce, including young families, which will promote local economic development.

Actions

1. Adopt bylaws that require installation of erosion controls where steep slopes (>30%) are graded to reduce erosion and protect our streams and lakes.
2. Adopt bylaw changes that restrict new residential construction within 10 ft of mapped ridgelines.
3. Estimate the housing demand in Greensboro at various levels of income.
4. Investigate the feasibility of Planned Residential Developments (PRD's) as a means to provide workforce housing.
5. Update the bylaws to support workforce housing in Greensboro's designated Town Centers.
6. Encourage the use of renewable energy technologies for both residential and commercial development.
7. Change the bylaws to allow a density bonus in and immediately adjacent to the Greensboro Village and Greensboro Bend village district if the proposed development addresses workforce, or affordable housing.

Cultural Resources Draft 12-5-17

Goals

Support the visual and performing arts facilities and artists, which benefit Greensboro residents and visitors, and strongly contributes to and celebrates community character.

Policies

1. Support the groups and facilities which provide cultural and artistic experiences and opportunities in Greensboro.
2. Support the expansion of artistic and cultural opportunities for all ages in Greensboro.
3. Ensure the availability of suitable venues for holding cultural events.
4. Preserve Greensboro's cultural resources, including its historic sites and the Historical Society.
5. Ensure there is sufficient town support to continue cultural events such as the Funky Fourth and other public events that encourage community involvement.

Actions

1. Create a map that shows all cultural and historic sites in Greensboro.
2. Hire a recreation/cultural director to coordinate, develop and expand the recreational/cultural activities in Greensboro to both serve the residents of Greensboro and encourage the expansion of tourism.

Chapter 4: Flood Resiliency SECOND DRAFT 12-9-17

Flood Resilience Goals

Ensure that the Town and its facilities are prepared to meet the demands of a major flood event, and limit adverse impacts to Greensboro residents, properties, and Town infrastructure.

Flood Resilience Policies

1. Ensure that the Town's transportation infrastructure information is reasonably up to date.
2. Protect Greensboro's natural flood protection assets, including floodplains, river corridors, land adjacent to streams, wetlands, upland forested areas, and the Caspian dam.
3. Limit use in Flood Hazard Areas and River Corridor Protection Areas to recreation and agriculture.
4. Ensure that the Town can receive the maximum level of assistance in the event of a federally declared disaster.

Actions

1. Work with NVDA to import updated data on condition of roads and culverts into the VTCULVERTS.
2. Conduct public outreach to educate residents about flood impacts and actions that residents can take to minimize these impacts.
3. Review and revise Greensboro flood hazard bylaws as needed to ensure continued enrollment in the National Flood Insurance Program.
4. Participate in regional road foreman trainings and Transportation Advisory Committee meetings to stay abreast of flood resilience measures for the Town's roads and bridges;
5. Develop and adopt changes to the Bylaws that will protect erosion-prone and floodwater storage areas (i.e. River Corridor Protection Areas) from additional development and encroachment.
6. Require a 50 ft structure setback from all perennial streams (Tate Brook, Wright Brook, Porter Creek, Cemetery Brook, Stanley Creek) and ensure that development from 50 ft to 100 ft comply with the most stringent erosion protection standards.
7. Educate landowners about the benefits of enrolling in the Current Use Program.
8. Work with Hardwick Electric to engage a professional dam safety engineer to provide a cost estimate for the indicated repairs and tree removal at the Caspian lake dam.

Cultural Goal

Support the visual and performing arts facilities and artists in Greensboro.

Cultural Policies

1. Support the groups and facilities which provide cultural and artistic experiences and opportunities in Greensboro.
2. Support the expansion of artistic and cultural opportunities for all age groups in Greensboro

Cultural Tasks

1. Hire a recreation/cultural director to coordinate, develop and expand the recreation/cultural activities in Greensboro to both serve the residents of Greensboro and encourage the expansion of tourism.

Natural Resources

Greensboro is home to a community of people who care about the natural landscape and whose vision for the future is a profound and strengthened human commitment to the natural world, striving to protect and conserve Greensboro's natural heritage. Nearly 40 sq miles in size, Greensboro is rich with outstanding natural features. The local community recognizes the value in stewardship of wildlife, plants, ecological systems, fish, and the immeasurable benefits therein.

Given the community commitment to conservation, [insert data from survey] it is natural to take the steps to actualize that commitment. If we foster the stewardship of undeveloped lands in large landscapes, we will protect the quality biological requirements of wildlife and native plants. Furthermore, we will nurture the natural environment so prized by our community members who actively participate in restorative outdoor activities of skiing, hiking, fishing, boating and wildlife watching. It is more the natural environment and less the activity that restores.

Forests

A continuous forest habitat, uncontaminated and unfragmented, offers lands that represent what makes life in Greensboro sought after and appreciated; serves up what connects wildlife to wildlife, and current residents to dreams of what the future holds for future generations of the community; must be recognized as significant contributions to Greensboro's natural and cultural heritage and must be respected and supported as such.

Contiguous forest habitat is defined as an area of forested land with either no roads or low densities of class III or class IV roads and virtually no human development. While this habitat may be actual forests of differing ages, it could also be wetlands, streams, ponds or old meadows--private environments for the wildlife that make their homes there and the plants and natural communities that thrive there without human contamination. Key to the sustainability of wildlife is the concept that animals can migrate widely to share genes and to access varying feeding habitats. Thus, the habitat in undeveloped lands and waters must connect with other undeveloped lands and waters so animals and fish can roam, procreate and thrive, again, absent the human contamination. Contiguous forest habitat--undeveloped land habitat--buffers species against consequences of land fragmentation. Greensboro must consider and prioritize this fact, the concept of contiguous forest habitat, when viewing any proposed development and/or conservation efforts.

Current contiguous forest habitat is mapped here ____ [insert web page] ____.

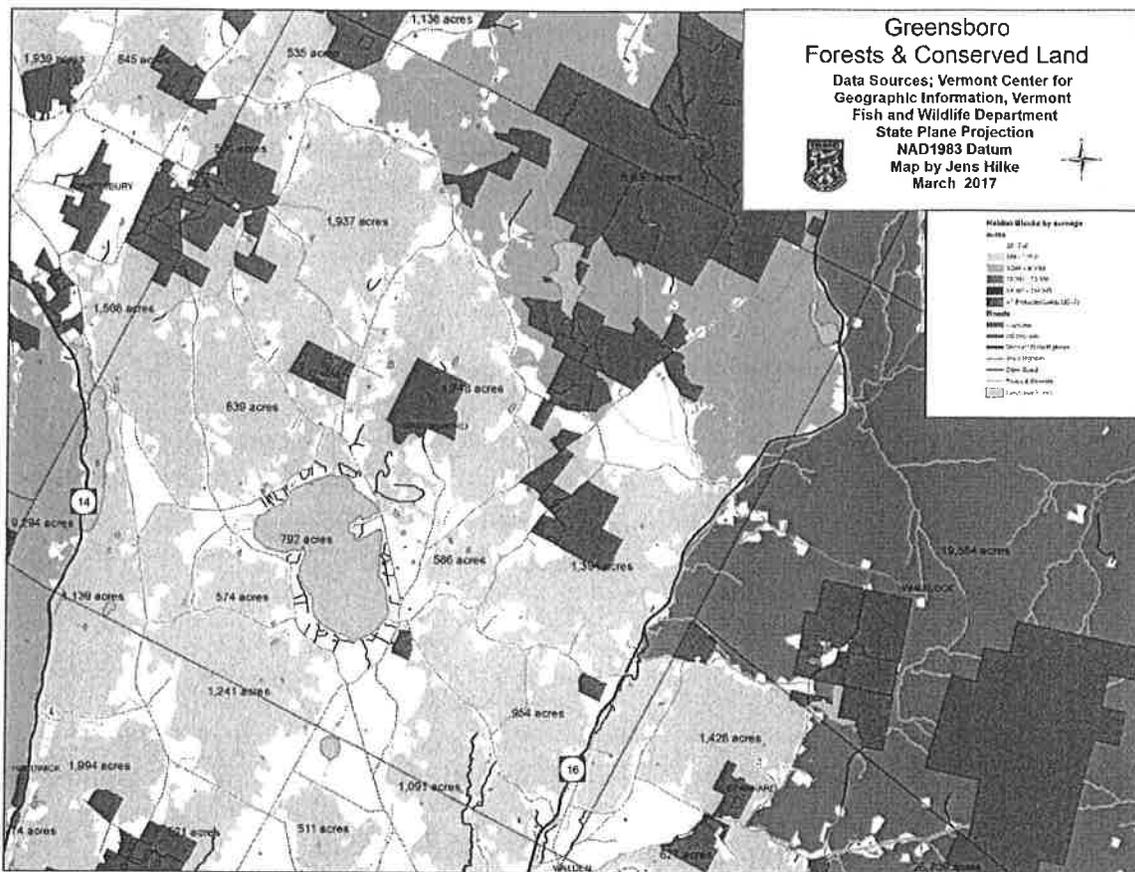
Greensboro has _____ acres of contiguous forest habitat.

[Describe locations of forest].

Of this area, _____ acres are conserved.

[Describe locations.]

The two maps, conserved lands over contiguous forest habitat can be seen here [\[insert web page.\]](#)



Enduring Features

The biophysical region of Greensboro, as defined by its climate, bedrock geology, superficial geology, topography, hydrology and land use history, is in the Northern Vermont Piedmont region. Calcium rich soils in this cool climate creates mixed forests, Northern White cedar swamps, interesting fens and natural areas. The agricultural soils are good and coupled with the cool climate offer a short growing season.

Evidence of glacial movement and of the associated moving water which shaped the land are abundant in Greensboro and in the land surrounding Greensboro. These features are part of the landscape that resists change despite changes in land cover and wildlife. They will remain the same with climate change. They speak to time, to a much longer and a much larger view.

Polished bedrock is found on the top of Barr Hill. Evidence of north/south glacial action is also seen in the valley of Eligo Gulf, (The most prominent cliffs in town are located on the eastern side of Lake Eligo), the elongated hills of Patmos Peak and Baker Hill. Terraces were formed in the Lamoille River valley when the glacier retreated.

Limestone and phyllite deposits (metamorphic rock) underlie much of Greensboro but are not currently of commercial value. There are three sections of plutonic rock (granite): in a

crescent curving over the north end of Caspian Lake, around the northern section of Long Pond, including Paddock Hill, and in an area northwest of Gebbie Corners.

The town includes other interesting glacial features. Across town small erratic boulders can be seen including Rocking Rock and the large Pulpit Rock in North Greensboro, as well as one on the Swamp Road and several on the north shore of Caspian Lake. [an erratic is material moved by geologic forces from one location to another, usually by the movement of the ice in a glacier]. Paddock Hill, located approximately one mile northeast of Long Pond is a *roches moutonnées*. [A *roches moutonnées* is a rock formation created by the passing of a glacier over underlying bedrock. All the sides and edges of the rock have been smoothed in the direction that the glacier that once passed over it. The other side is much more rough and craggy.] The large vein of granite on there was used in the late 1800's and early 1900's for local building purposes and to supply the granite polishing shed in Greensboro Bend. There are also granite outcroppings in Caspian Lake such as Huckleberry Rocks, Gunther's Rocks, and Bathtub/Elephant rocks, and Blueberry Rocks in Long Pond.

[Insert map of geologic survey and soils, including elevations.]

Various small ponds and swamps scattered throughout the area are largely the result of glaciation. Glaciation left behind several kettle ponds: Long Pond, Horse Pond and the two Mud Ponds. [A kettle pond is created when a section of glacial ice dropped off of the retreating glacier and was buried in sediment. When the ice melted, a shallow hole was left which ultimately filled with water, sediment or vegetation.]

LAKES AND STREAMS:

CASPIAN LAKE

Caspian Lake is regarded as the Town's natural resource jewel and, together with Long Pond and Horse Pond, are considered to be in the overall top 20% of Vermont's Best Lakes. (Vt. Lakes and Ponds Program, 2012). The lake is 789 acres and has a maximum depth of 142 feet, a maximum length of 1.66 miles and a maximum width of 1.3 miles. It is classified as oligotrophic (a deep clear water lake with a very low nutrient level). It is in the Upper Lamoille Basin whose waters ultimately flow into Lake Champlain.

In 2016 the status of the lake was downgraded to Stressed due to the flow alteration with resultant water level fluctuation, causing pollution and jeopardizing fish habitat. Caspian had one of the finest lake trout fisheries in northern Vermont but current water level fluctuation has the potential to impair fishery. Ice damage due to the lack of drawdowns invites evaluation of the the best water level to be maintained in order to have the least amount of impact. Furthermore, sedimentation and road and developed land runoff are negatively affecting water quality. While the Lay Monitoring Program doesn't reveal a negative trend yet, action by the Town to address the sedimentation and the feeder stream contribution to the problem is imperative. Furthermore, the groundwater table is unusually high and each old, outdated and expired septic systems increase the danger of septic overflow, especially in wet years.

The only lakeshore property owned by the town of Greensboro is the "Willey Beach" which is preserved in its natural wooded state, adjacent to the Public Beach. The Public Beach is owned and managed by the Hardwick Electric Department. The beach is maintained by ??????

The Greensboro Association is very active in keeping the Lake free from Eurasian Milfoil and Zebra Mussels. The Association also sponsors swimming lessons, monitors water quality on a weekly basis and studies the effects of runoff on the lake. These activities are testament to the concern and care the residents, both full and part time, have for Caspian Lake.

? Insert map of Caspian watershed?

ELIGO LAKE

This lake of 190 acres, with a maximum depth of 100 feet, is shared with Craftsbury. That Town maintains a public beach at the north end. The area surrounding this glacial pond is so level that it drains both south (into the Lamoille) and north (into the Black River). The steep slopes on the eastern side are environmentally sensitive as are the northern and southern outlet areas. Like Caspian, Eligo is oligotrophic, meaning a deep clear water lake with very low nutrient level. Eligo is currently fighting to combat its Milfoil problem. ~~The Eligo Lake Association, with the support of the Towns of Craftsbury and Greensboro, applied for and received a Vermont Aquatic Nuisance Control Grant late in the summer of 1997. The association has been making progress in eradicating the weed by means of milfoil weevils.~~

LONG POND

One of the four "kettle" ponds in town, this body of water consists of 100 acres and is essentially undeveloped. Its maximum depth is 33 feet and it is classified as mesotrophic (moderate in nutrients). It was evaluated by the State for water quality, biological diversity and unusual or scenic natural features. It is ranked as exemplary in all three categories. Other than the fishing access owned by the State of Vermont and a few lots owned by private landowners, most of the surrounding property is owned and protected by The Nature Conservancy. One of the largest northern white cedar swamps of approximately 115 acres is located at the southern end of Long Pond. It is second growth trees of white cedar, a few emerging white spruce growing out of a mossy groundcover growing over a meter of woody muck. Historically, a state-threatened orchid, (*Calypso bulbosa*), the fairy slipper, has been seen there, along with a rare moss (*Calliergon richardsonni*); and an adult black-backed woodpecker (*Picoides articus*). It is labeled by the state as a warm water fish habitat.

HORSE POND

This pond of 32 acres with a maximum depth of four feet is adjacent to Route 16. Classified as mesotrophic, recreational fishing is poor due to excessive plant growth and is labeled by the state as a warm water fish habitat.

MUD POND(S)

North and South Greensboro. These two ponds are small, shallow, are rapidly eutrophying and becoming swamps. There is no road access to either pond.

RIVERS AND STREAMS

High quality surface water that is clean and cool is important to the spawning and nursery habitat for Caspian and the Lamoille River Watershed. River corridor protections around issues of channel erosion, encroachment, flood resiliency, nutrients are important considerations for the Town Planning and Zoning regulations.

Major streams that drain to Caspian are Cemetary Brook, Porter Brook and Tate Brook.

Both Porter and Tate support very high quality mixed resident trout, allopatric brook trout and spawning/nursery stream populations. They are important to the spawning and nursery habitat for Caspian Lake and for the Lamoille River Watershed and are ranked as a very high water which support recreational fishing. Whetstone and Wright Brooks also drain to Caspian.

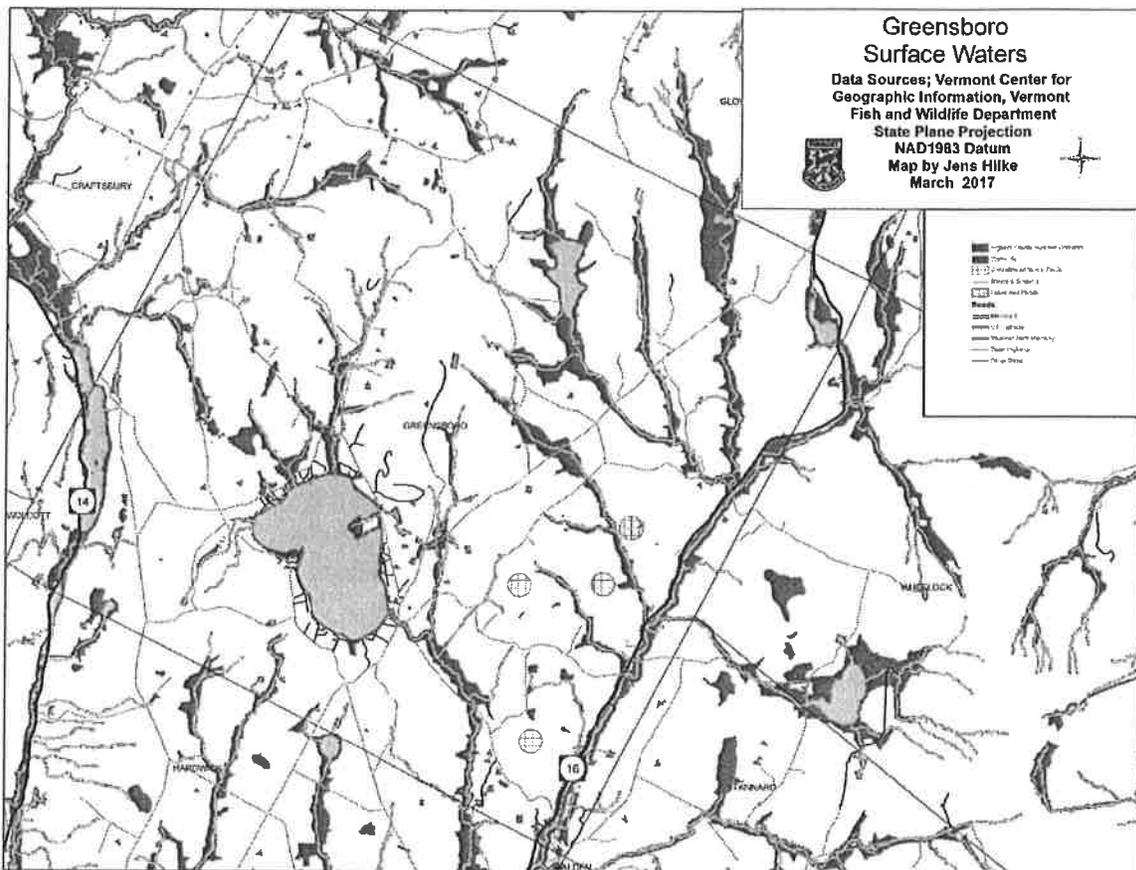
The Lamoille, Barton and Black Rivers originate in Greensboro. The Lamoille River which runs through the valley adjacent to Greensboro Bend has ecological integrity consistent with very good or excellent conditions to support biological health of macroinvertebrates and fish communities. In addition, there are several smaller brooks and streams in good condition all of which drain into the Lamoille River, including: Esdon Brook, Paine Brook, Withers Brook and Stanley Brook. Mud Pond Brook, the outlet of Mud Pond, and Sawmill Brook, the outlet of Long Pond, both drain to the Lamoille and are in very good or excellent condition to support biological health.

Greensboro Brook, the outlet of Caspian also drains to the Lamoille. However, this brook is stressed by land erosion, toxics and nutrients. Projects to mitigate stormwater runoff from Laurendon Avenue will be important.

Skunk Hollow Brook is an inlet of Long Pond.

WETLANDS, SWAMPS AND RIPARIAN AREAS:

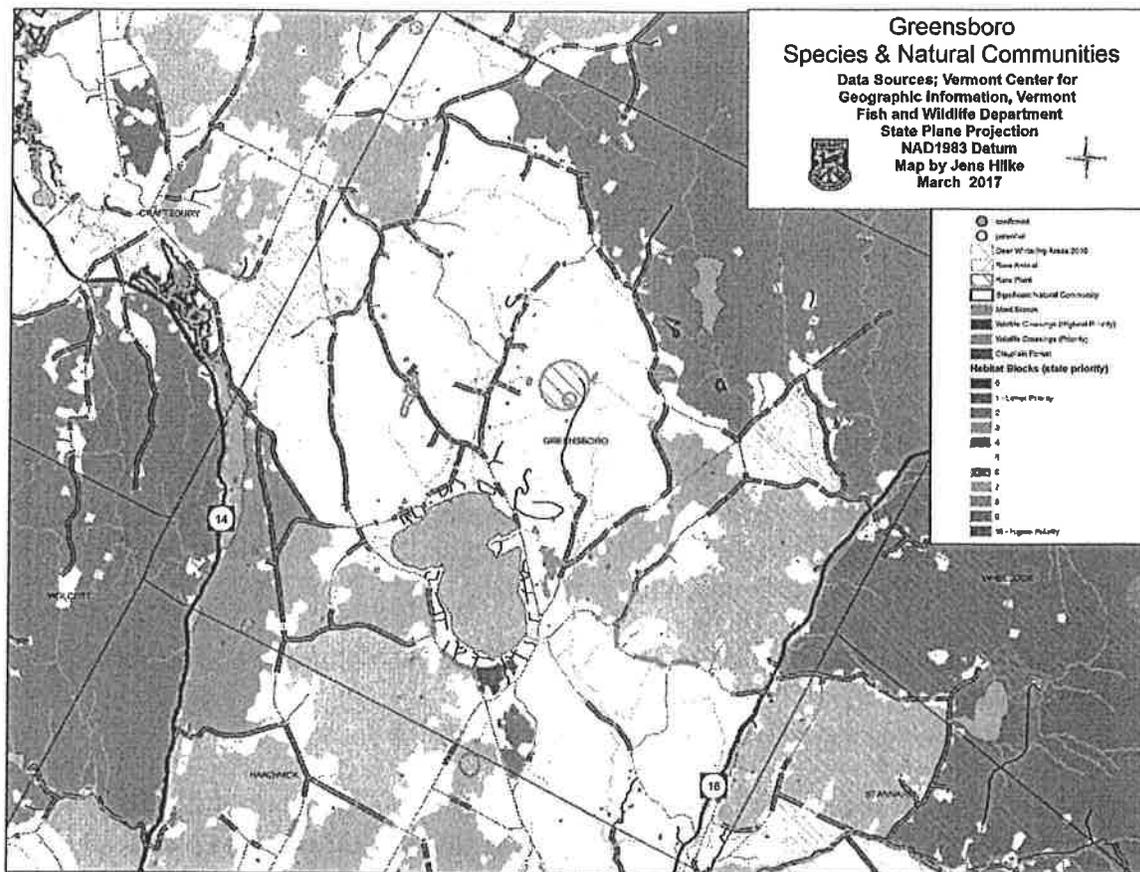
Obtain map of Greensboro wetlands, swamps, riparian areas.



Mount Sarah Southeast Swamp (20 acres)

BIOLOGICAL AND WILDLIFE:

Obtain data and map of significant natural communities/wildlife habitats--deer wintering, mast stands, other:



Rare and endangered plants include a stand of *Lycopodium sabinifolium* (Savinleaf Groundpine) on Baker Hill

The bird life in Greensboro is chronicled by The Annual Bird Count (see the History of Greensboro, Appendix 16 "Birds of the Greensboro Area"). The common loon is frequently seen on Caspian Lake, and nested there successfully in the summer of 2016, due to the construction of a floating nesting habitat and floating signs not to disturb.

B. Geological Features

Gravel Deposits: There is one known deposit of quality gravel in town (near Hardwick) on Route 14. _____

NATURAL RESOURCE GOALS:

The Town of Greensboro adopts the following natural resource goals:

Stewardship with integrity over all of Greensboro's natural resources, including open fields, forests, lakes, streams and animal habitats in a manner that protects and enhances the town's ecological health and biological diversity for the benefit of future generations.

Protection of the views of our rural landscape so as not be significantly altered by man-made structures ~~that are out of character with the community.~~

Protection of the shorelines of Caspian Lake from ~~erosion and~~ any further ~~over~~development.

Protection of the quality of all our ground and surface waters from existing and potential sources of exploitation, pollution and degradation.

B. Natural Resource Policies:

In order to achieve these natural resource goals the Town of Greensboro shall:

1. Identify and protect important natural resources, including prime agricultural soils, forest resources (soils, products, habitat), significant wildlife habitat, floodplains, river corridors, water resources and other features described in this plan.

2. Adopt and enforce Caspian Lake shoreline and ridgeline viewshed protection provisions in the Zoning Bylaw.

Adopt and enforce zoning regulations to create a 100 foot buffer for streams.

3. Support landowners, the Nature Conservancy, and other local, regional and statewide organizations in their efforts to preserve ~~Long Pond~~ lands in their natural state by providing leadership, policy support and financial contributions when reasonable and feasible. Support the continuation and expansion of the state current use program to tax farm and forest properties at their productive value rather than their development potential. Encourage the participation of Greensboro property owners in that program.

4. Continue to work with the Greensboro Association to:

- Evaluate and educate shoreland property owners in order to reverse the negative trend in shoreland vegetation and aquatic habitat.

- Protect riparian vegetative areas.

- Implement lakeshore best management practices as identified in the VT LakeWise Program. -

Work with the State of VT to evaluate the the best water level to be maintained in order to have the least amount of impact on aquatic habitat and to protect lakeshore habitat.

- Support greeter program and AIS signs at Long Pond and Caspian at town beach to ensure that aquatic nuisances are not introduced into Caspian Lake, and that all milfoil mitigation equipment is working properly and staffed when necessary.

5. Create a commission whose sole job is to protect the lake water quality from failing WW systems. The Commission will:

- Inventory and document status of lakefront WW systems;

- Adopt and enforce Zoning Bylaws that require professional evaluation of and improvement of WW systems, including documentation of regular maintenance and certification of good working order, in advance of any permit application process.
- Adopt and enforce Zoning Bylaws that require professional evaluation and improvement of WW systems, including documentation of regular maintenance and certification of good working order, on a regular interval (?) for any lakefront home that offers their home for rental.

~~2. work with the Eligo Lake Association to install and maintain a milfoil washing station;~~

6. ~~regulate~~ Prohibit the construction of new or expanded commercial or industrial activities that seek to extract and sell groundwater for agricultural or commercial purposes;

??? utilize Vermont Geological Survey data on the extent and character of aquifers in town to protect groundwater from pollution and over-extraction, and thereby protect public and private water supplies and surface water resources; ????

7. Inventory and prioritize municipal road erosion features that discharge into surface water. Work with the ANR to educate and provide outreach to road crews, farmers, and landowners to protect high quality surface waters.

~~5. encourage all logging to follow the best management practices, as contained in the Department of Forest, Parks, and Recreation guide "Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont;"~~

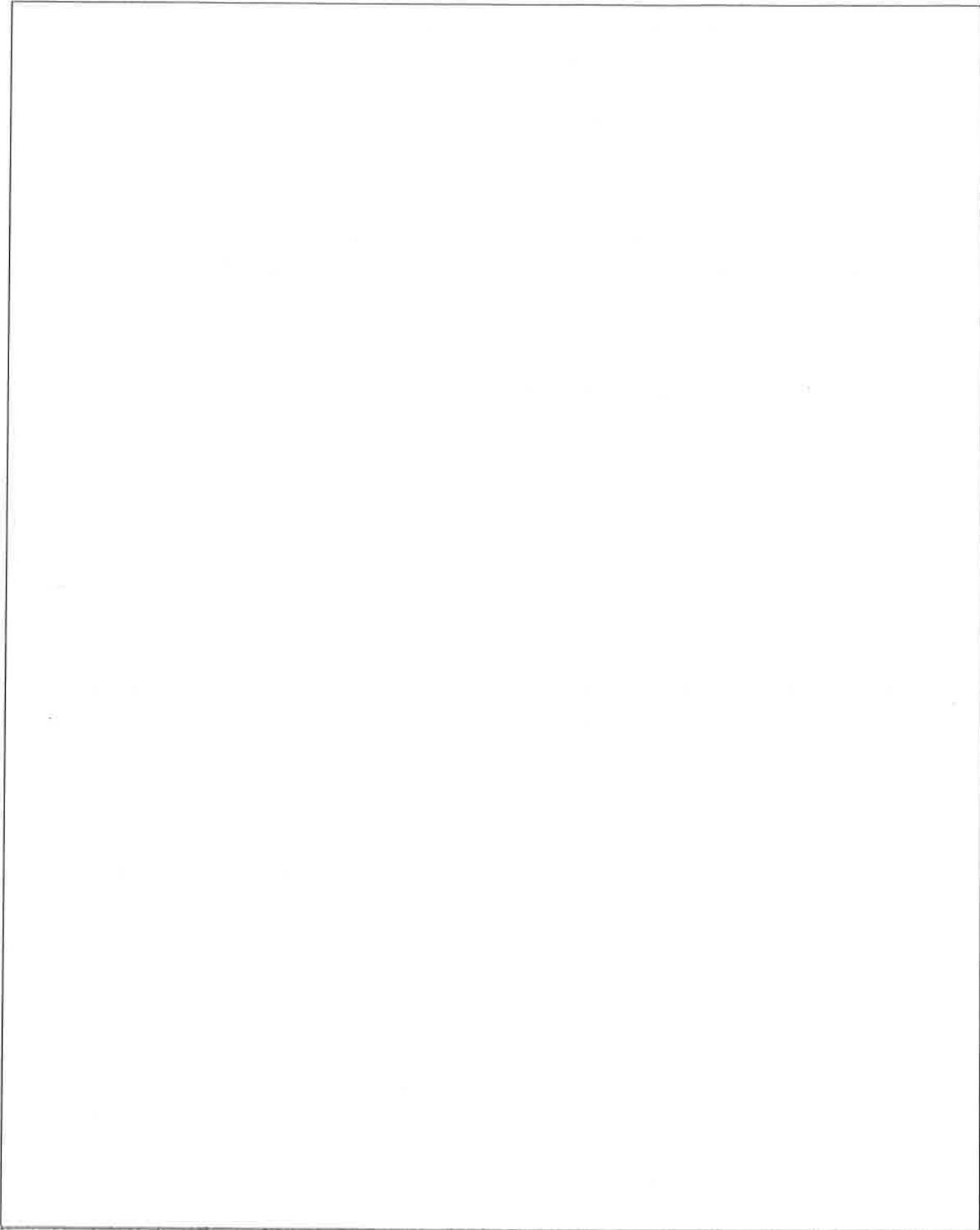
~~6. prohibit housing development that creates erosion, by encouraging compliance with the "Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites;"~~

??? 7. work with private landowners to help them reduce unnecessary agricultural runoff; ????

??? 8. work with the state and other groups to enforce the existing motor boat speed limits on Caspian Lake. ???

???? 9. direct the Natural Resources Board to consider earth extraction development in such a way that minimizes adverse impacts to adjoining residential uses. Act 250 review of earth extraction should require that gravel be stored and sited in a manner that does not impair wetlands and water resources. Also, truck traffic should not degrade our roads and daily truck traffic should not exceed the town's ability to service such roads. Transport of earth materials should be done in a manner that minimizes dust. (Greensboro has no earth extraction section in our Zoning Bylaw and therefore does not enforce any standards for earth extraction or the restoration and reclamation of a site. The Town relies on Act 250 review of such activities).???

10. Inventory contiguous forest habitat in comparison to areas of conserved lands, significant habitats, habitat for rare, threatened and endangered species, wetlands, natural communities.
Map same.



Recreation Goal

Continue to support our existing recreation facilities while encouraging the development of expanded recreation opportunities for the community of Greensboro and expand tourism.

Recreation Policies

1. Support the expansion and use of the recreation opportunities and facilities in Greensboro
2. Encourage the maintenance and expansion of the winter recreation trails.
3. Encourage the Mountain View Country Club to provide access to the tennis and golf facilities at a reasonable rate.
4. Continue to support the summer swimming program at the Caspian Lake public beach and encourage and support the Town of Hardwick to protect and improve the public beach area.
5. Encourage and support increasing the recreation opportunities for senior citizens including cultural, intellectual and physical activities.

Recreation Tasks

1. Compile and publish a pamphlet(s) to describe and map the recreation facilities and opportunities in Greensboro.
2. Build a bicycle route around Caspian Lake, particularly a bicycle lane on Craftsbury Road so that bicyclists can bike around all of Caspian Lake in safety
3. Encourage and support the extension of the Lamoille Valley Rail Trail through Greensboro Bend.
4. Hire a part or full time recreation/cultural director to coordinate, develop and expand the recreation/cultural activities in Greensboro to both serve the residents of Greensboro and encourage the expansion of tourism.

SPARK Collaborators Meeting - November 27, 2017 - Breakout Sessions

Legend

● Suggested by Innovation Breakout Group

● Suggested by Business Breakout Group

● Suggested by Education Breakout Group

What is happening now? (& existing resources)	What do you see as barriers to your work/interests?	What would you be working on if those barriers didn't exist?	What are your needs in an ideal space?	How can we strengthen the economy, creativity, innovation?
Starline College	Internet / High Speed Connectivity	Technical support and technology education	Poweful high speed internet	Mentorship, teaching, classes, professional development
GMTC	Cost of classes, shared services, bookkeeping, software, technical support, legal services	Connecting and networking, knowing about local services and what others are doing	3-D modeling and rendering (3D printer and design software)	Organize and create a directory, exchange, skill share (awareness), reveal what is here
Vermont SBDC	Isolation / work at home	Supporting existing businesses	24/7 access / extended hours	Solving problems that are relevant to the community
WonderArts	Marketing & Publicity	Pop-up installations	Project hub / meeting space / collaboration areas	SPARK functioning as a hub
Highland Center for the Arts	Lack of tech education for older community members	Electric vehicle conversion	Strong, searchable database (app?) of resources, businesses, artists, individuals	Connection / collaboration / cross pollination / cross promotion / inclusiveness
EMMA	Exposure to 21st century experiences and learning	Connecting students to the community	Shared services (bookkeeping, software, tech support, legal, classes)	Publicly / connection to the outside via web presence
Creative Ground	Access to existing and potential resources / no directory	Creating things with shared equipment & education (ex: 3D printers)	Potential for barter / skillshare / cross-generation skilling	Affordability
Greensboro Library/makespace for kids	Exposure to what other people are doing	Knowing how to use tools & equipment	Access to tutors, mentors, SMEs hourly, membership)	Taking advantage of economies of scale (bulk buying)
GRACE in Hardwick	Sharing innovative ideas	Leveraging some of the work they are doing at Hazen	Affordable access (sliding scale, food and coffee on site)	
Local Artisans & Craftspeople	Energy modeling	Improved tourism - making NEK a destination	Camera (photographer), product photography, printer	
Schools - Shift to personalized learning	Transportation	Collaborative activities	Collaboration (videoconference/ screenings) and space	
NEK Investment	Knowledge of partnerships	Collective access to shared resources	Music composition, recording, video and filmmaking	
Center for an Aq Economy	Communication about school and community needs		Celebration / event space / exhibition / maker faire	
NEKA	Division between communities		Anchor tenants	
Center for Women in Business	Support for low and high tech entrepreneurs		Childcare	
Entrepreneurship	Cross Sector Networking opportunities		Tools (plasma cutters, rapid prototyping, CNC, viny cutter)	
Flivernont Technology Solutions	Lack of Mentorships		3-phase power (if needed)	
Vermont Technology Alliance	Knowing how social media works & supports business			
Home Based Businesses (isolated)				





Business:

Business Owner:

Location:

Date:

How is business?	
As a business owner, what is your outlook for the business environment in Greensboro and Vermont?	
Has your business been improving, about the same or declining over the past three years?	
How do you see your business over the next three years...improving, about the same, or declining?	
To what extent do you buy supplies/materials locally?	
How many employees do you have, full-time and part-time?	
Do you anticipate hiring in the next year? In the next three years?	
How difficult is it to attract new employees?	
What reasons are given when an employee candidate says no to your job offer?	
Do job candidates have the training or job experience necessary to be productive employees at your business?	
Do you anticipate building new space for your business in the next 1-3 years?	
Do you anticipate requiring more land in the next three years?	
What discourages your employees or job candidates from wanting to live in Greensboro?	
What about Greensboro do you think attracts employees to live and work in Greensboro (e.g. recreation, culture, library, lake, etc)?	



What percentage of your employees live in Greensboro?	
Would you see a benefit if some workforce or affordable housing is developed in Greensboro?	
Are the schools in Greensboro/Hardwick a plus, a negative, or neutral for your employees?	
What is your opinion about healthcare facilities and availability of healthcare for your employees?	
What are the plusses and minuses regarding services available to your business, (e.g. internet connectivity, electricity, telephone, roads)?	
Would wastewater treatment system access be a benefit to your business?	
What types of new businesses would you welcome to Greensboro that would be complementary?	
Are you interested in using renewable energy for your facility?	
If you had one wish for the Town to do something for you, what would it be?	
What does the Town or County or State do that makes it more difficult to do business in Greensboro?	
Do you have anything to add regarding economic development in Greensboro?	
Have I left anything out?	
If you think of anything else, please don't hesitate to contact me.	