NORTHWEST REGIONAL PLAN

2023 - 2031

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Photo: David Juaire

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3 GOAL

Ensure the transportation network enhances residents' overall quality of life, supports regional land-use goals, and expands economic opportunities.

a. Ensure that construction and maintenance of the transportation network minimizes negative impactson natural, cultural, and scenic resources.
b. Use appropriate Complete Streets techniques depending on the land-use context, including as described in Table 4.
c. Develop and maintain rail, truck freight, and air facilities in a manner that supports efficient operation of the system, ensures compatibility with the host community, and increases economic opportunities for the region.
d. Implement the land-use and transportation recommendations from regionally endorsed (i.e., TAC or NRPC board) corridor plans.
e. Implement the goals of the Vermont Comprehensive Energy Plan when developing new transportation projects and programs.
f. Ensure that new land development does not negatively impact the safety of any mode within the transportation network.
g. New public and private transportation infrastructure shall be designed and built to interconnect with adjacent land development(s).

NATURAL AND CULTURAL RESOURCES

GOALS

1. **Protect significant natural resources, including air, wetlands, wildlife, lakes, ponds, woodlands, earth resources, open spaces, groundwater resources and wildlife habitat.**
2. **Protect and conserve historically significant buildings and locations, archaeological resources, and important scenic and aesthetic resources, starting with those identified in local and regional plans.**
3. **Maintain and wherever possible improve the quality of lakes, ponds, rivers, streams and groundwater.**

ASSETS AND VALUES

The region is a reflection of its people and its land. With a traditionally agrarian, working landscape framed by the Green Mountains and Lake Champlain, Franklin and Grand Isle Counties are still heavily dependent on the natural resource base. With a built environment largely defined by compact villages surrounded by open countryside, the region retains much of its rural character.

The region is home to an abundance of archaeological, historic, and cultural resources. The archaeological resources provide clear evidence of the region's extensive and longstanding indigenous habitation, while many of the historic resources are tangible reminders of the communities built following the arrival of Europeans in North America. Cultural value is attached to events and physical items from prehistory through to the present day.

Archaeological resources include the villages, hunting camps, trade networks and burial grounds associated with indigenous people. Significant indigenous archaeological resources are known to be located in the vicinity of Route 78 in Swanton and Monument Road in Highgate. The location of many other such sites in the region remain private to protect their integrity. The Vermont Division for Historic Preservation maintains a listing of the 522 known archaeological sites within the region, of which 410 have detailed data. This figure likely represents a small fraction of significant sites in the region given that indigenous peoples lived in many places and intensive investigation of pre-historic site locations has not been undertaken. The Abenaki of Missisquoi continue to maintain a deep connection to the area in many ways, including via their tribal headquarters in Swanton.

Similarly, several historic settlements, sites and structures in the region (most reflecting post-colonial settlement) have been identified and entered into the State Register of Historic Places. In addition, over 75 properties within the region are included in the National Register of Historic Places. These include historic

districts, as well as bridges, border stations, places of worship, and farmsteads. They also include two historic sites: the Hyde Log Cabin in Grand Isle (managed by the Grand Isle Historical Society) and the Chester A. Arthur Birthplace in Fairfield (managed by the Vermont Division for Historic Preservation). The region also hosts 10 museums, including St. Albans's Museum in St. Albans and the Hyde Log Cabin in Grand Isle, and a growing roster of art-focused venues, such as the Cold Hollow Sculpture Park. The region's 18 community-based historical societies work ever more diligently to document the diverse history of the region and its communities.

Long-standing cultural events such as the Vermont Dairy Festival in Enosburg Falls and Franklin County Field Days reflect the important role that agriculture continues to play in the region. For example, in St. Albans City, the Vermont Maple Festival typically draws more than 50,000 participants each year in honor of maple syrup, Vermont's "liquid gold." Newer and smaller cultural events, including those increasing awareness of the culture of the Region's indigenous people, are also noteworthy. These and other cultural events, from farmers' markets to concerts and parades too numerous to name, provide invaluable contributions to the local sense of place. Another event long considered symbolic of Vermont culture is Town Meeting Day. Indeed, residents in municipalities across the Region gather annually on or near the first the Tuesday in March to vote and make decisions that affect their local communities. Some municipalities have changed to Australian ballot voting combined with a public information session. Many municipalities temporarily halted in-person Town Meetings to respond to the COVID-19 pandemic, though by 2023 all communities in the region have returned to in-person Town Meetings or information sessions.

Beyond the historical richness of the region, Northwest Vermont boasts a robust mosaic of diverse landscapes, from the Adirondacks-backed agricultural viewsheds of the Lake Champlain islands to the heavily wooded western slopes of the Green Mountains. With sensitive siting and design, it's possible for scenic landscapes to be developed and still retain much of their intrinsic character. Aesthetic considerations are recognized as a legitimate public concern under Criterion 8 of Act 250. Conserving the region's aesthetic resources is crucial to maintaining its sense of place.

Our downtowns and historic village centers provide a gathering place for the community, a sense of identity and a unique heritage that is an important cultural and historic resource. State programs that "designate" downtowns and village centers provide a mechanism to access grants and tax credits to assist redevelopment projects and promote growth in these places. The Certified Local Government (CLG) program establishes a preservation partnership between a local historic preservation commission, the State Historic Preservation Office, and the National Park Service. St. Albans City achieved CLG designation in 2020. As such, the city can access CLG grant funding for locally-based preservation projects.

Natural Resources

Bedrock and the Physical Landscape: The Foothills of the Green Mountains are separated from the Champlain Lowlands by a series of thrust faults running north–south through Franklin County. The Hinesburg Thrust Fault and related erosional remnants—including Aldis Hill, Prospect Hill and Georgia Mountain—are among the most prominent landscape features in this part of the region. The Foothills are characterized by rolling hills and valleys ranging in elevation from 500 to around 1,000 feet above mean sea level. This area is differentiated from the Green Mountain chain more by elevation and topography than geology. Many of the region's more picturesque villages and hamlets are located there.

The Green Mountains—which are part of the Appalachian chain and once stood higher than the Rockies—now reach heights within the region of less than 4,000 feet. Nevertheless, these old mountains still present a formidable barrier along Franklin County's eastern border. Exposed bedrock, boulder surfaces, steep slopes and shallow soils are common. Because of its remoteness, elevation, steep slopes, shallow soils and poor

drainage, this area of the region has not been heavily developed. Farming historically has been confined to stream and river valleys. Forestry remains the predominant use of the land in this part of the region.

Climate: The climate of Northwestern Vermont is dominated by prevailing Westerlies—cold, dry air from Canada in winter; warmer, moist air from the Gulf of Mexico in summer; and occasionally damp, cold air moving in from the North Atlantic. The area enjoys the strong seasonal variations that are characteristic of northern New England. The diversity of elevation and proximity to Lake Champlain that define the region contribute to substantial differences in micro-climate between the Champlain Valley and the hill country of eastern Franklin County. Grand Isle County, which benefits from the moderating effects of Lake Champlain, tends to have milder weather, longer growing seasons and less snowfall than the more mountainous parts of the region.

Global climate change may have significant implications for our region. According to the U.S. Environmental Protection Agency (EPA), over the past century, Burlington, Vermont, has seen an average temperature increase of 0.4°F. By 2100, it predicts an additional increase of up to 4 or 5°F. This could significantly alter weather patterns and have implications for agriculture, forestry, maple production and tourist-related industries. Vermont's Global Warming Solutions Act required the adoption of a Climate Action Plan that will reduce greenhouse gas emissions and address climate resilience and adaptation. "As climate change continues to be observed in Vermont, the characteristics of these hazards are also changing and this sets up cultural, socioeconomic and policy implications for Vermonters as individuals, municipalities, communities, and indigenous peoples, as well as for the built and natural environments." (Vermont Climate Action Plan, 2021)

Soils: Soils are an important environmental factor influencing the use of land in rural areas. Within the context of land use planning, the characteristics that are of primary concern are bearing capacity, erodibility, drainage, septic suitability and resource value. Resource values may include productivity for growing crops or for sustaining specific species or communities.

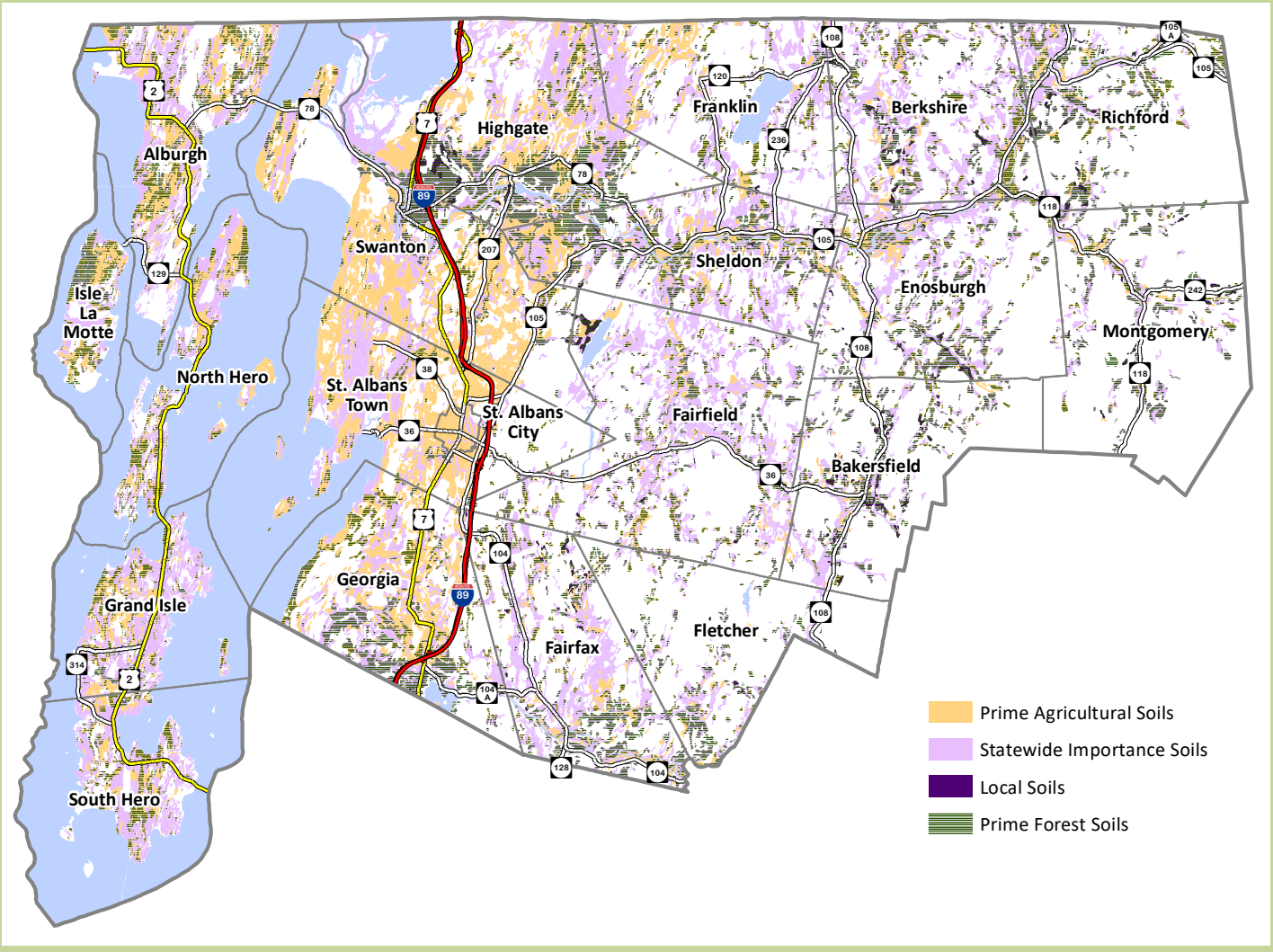
"Primary agricultural soils," as defined for use in Act 250 proceedings, are soils mapped as important farmland soils according to the Natural Resources Conservation Service (NRCS). NRCS classifies many soils as having prime, statewide or local importance for agriculture. Soils designated as having prime or statewide importance cover 41% of the region, the majority of which are in Franklin County (Map 6). Franklin County contains one category of local importance soils, defined as Missisquoi loamy sand, with 8% to 15% slopes.

Many of the region's agricultural enterprises depend upon the availability of high-quality soils in sufficiently large, contiguous parcels to allow for economical hay and field crop production. Because of their physical qualities, however, these soils are often also considered the best suited for land development and corresponding subdivision. Farmland conversion and fragmentation are a concern both regionally and statewide. The parcelization and development of good farmland effectively takes it out of production over the long term and reduces an already limited resource base.

The NRCS has also identified "prime forest soils," which are important to sustaining commercial forestry operations in the region. Prime forest soils can be classified according to their relative productivity (Map 6). These soils cover 12% of the region and in some cases overlap with important agricultural soils signifying areas of high soil quality. Similar concerns exist regarding the development and fragmentation of forest soils.

Other Earth Resources: A prominent geological site, the Chazy Reef—the oldest reef in the world—is visible and accessible in Isle la Motte. Other earth resources—including sand and gravel deposits and quarry stone—are of critical importance to road maintenance and construction and their use in products or industrial processes. An example of the latter is Isle La Motte's high quality black marble. Resource value asides,

MAP 6: Agricultural and Forestry Soils



SOURCE: *Natural Resources Conservation Service (NRCS)*

improper or excessive resource extraction is extremely damaging to the natural and scenic resources of the area, with far-reaching implications for surface and ground water quality as well as the archaeological and aesthetic resources of the region. Sand and gravel deposits often serve as important areas for aquifer recharge and filtration, so they are vital for high-quality sources of drinking water.

Rivers and Watersheds: Rivers and streams offer sustenance, scenic beauty and recreational opportunities, and they heavily influence the cultural, social and economic environment in Northwest Vermont. Within Franklin and Grand Isle Counties they form three major drainage basins, all of which empty into Lake Champlain (Map 7). Watersheds are a critical geographic unit when planning for natural resources. The Department of Environmental Conservation (DEC) has worked with NRPC and communities to complete Tactical Basin Plans for these watersheds. These basin plans are prepared to protect each basin's surface waters and ensure that they meet or exceed the Vermont Water Quality Standards.

Development in and around the region's rivers can significantly affect the health of the river by reducing water quality, impacting the lives of stream biota, and increasing flood hazards. Of particular concern is development within a river's floodplain. During flood events, the floodplain provides an area for flood waters to spread out, slowing down their flow and depositing sediment. Development in the floodplain restricts the flood waters and

Deer wintering areas, or "deer yards," provide critical habitat for white tail deer and other species of vertebrates. These areas of hemlock, spruce, fir, cedar and pine species provide shelter from deep snows and permit easier winter travel for deer, compared to deciduous forests. Deer yards also benefit 169 of Vermont's 386 vertebrate species (excluding fish). Of these, five species are threatened or endangered, and four are of special concern due to their limited population size. Numerous deer wintering areas have been identified throughout Franklin and Grand Isle Counties, the most extensive of which are located in the heavily forested areas of eastern Franklin County.

For habitat serving large mammal populations, the area along the Green Mountains on the eastern boundary of the region is critical. The Cold Hollow to Canada initiative is a partnership of community members in Franklin and Lamoille Counties. Its mission is to work together toward the common goal of land stewardship and wildlife habitat conservation across property and municipal boundaries through education, outreach and conservation of land and water resources. On a larger scale, several state and federal organizations have mapped large contiguous habitat blocks in the Green Mountains and vital corridors that connect them; these connectors are important for enabling the movement of large mammals (Map 11).

Scenic Resources: The region's scenic resources are plentiful and include both natural and human-influenced elements. Undeveloped ridgelines are among the region's highly valued natural scenic resources, serving both as vantage points (the areas we enjoy views from) and as terminal views (and create the scene we are enjoying through our observation). Because impacts on scenic resources are assessed as part of the Act 250 development review process, communities in the Region may wish to incorporate a scenic resource assessment as part of their planning processes.

Moose in a Highgate Wetland
PHOTO CREDIT: *Bill Ashton*

GOALS AND POLICIES

1 GOAL

Protect significant natural resources, including air, wetlands, wildlife, lakes, ponds, woodlands, earth resources, open spaces, groundwater resources and wildlife habitat.

a. Support efforts to reduce air pollutants generated in the region from the residential, commercial, industrial and transportation sectors.
b. Ensure that development will not present an undue risk of degrading the region's air quality.
c. Plan, construct and manage mineral and earth resource extraction and processing facilities to ensure that negative impacts are limited and rehabilitation is certain. Minimize noise and adverse impacts on existing or planned uses within the vicinity of the project, fish and wildlife habitat, water quality, prime agricultural soils and scenic resources. Ensure projects do not interfere with the function and safety of all modes within the transportation system.
d. Ensure that development in floodplain or river corridor areas does not impede the flow of flood waters or endanger public health, safety and welfare.
e. Locate and configure land development to avoid the fragmentation of and adverse impacts to natural areas, forest blocks, critical wildlife habitat and connectivity areas identified in the regional plan or local plans by the Vermont Agency of Natural Resources, or through site investigation.
f. Ensure that outdoor lighting is designed to minimize the amount of light leaving development sites, overly bright areas or hot spots, and the amount of light pollution illuminating the night sky.
g. Assist in efforts to combat the spread of invasive species.

2 GOAL

Protect and conserve historically significant buildings and locations, archaeological resources, and important scenic and aesthetic resources identified in local and regional plans.

a. Ensure that new land development minimizes impact on archaeological sites.
b. Ensure that land development along prominent ridgelines and hilltops is designed to fit within the landscape and avoid undue adverse visual impacts.
c. Encourage communication facilities to limit their impact on scenic resources by reducing their size or location so that exterior lighting is not required, by seeking opportunities for co-location, and by choosing sites, shapes and colors of structures that reduce visual impact.
d. Encourage energy generation and distribution facilities to minimize their visual impact on ridgelines, slopes and open areas.
e. Ensure that historically significant buildings and locations are conserved and/or made available for adaptive reuse whenever feasible considering their cost and condition.

3 GOAL

Maintain and wherever possible improve the quality of lakes, ponds, rivers, streams and groundwater.

a. Forbid the use of persistent harmful and toxic pollutants in groundwater recharge areas or in areas where they could enter surface or sub-surface waters.
b. Ensure that development mitigates the anticipated effects on water quality through Low Impact Development techniques, such as limiting the amount of impervious surface on a site and incorporating adequate amounts of vegetation, trees and shrubs to aid in stormwater treatment.
c. Improve surface water quality and protect it from point and non-point nutrient loading.
d. Maintain and expand vegetative buffers along surface waters of sufficient width as a tool for improving water quality and protecting habitat.
e. Support efforts to remove as much of the Missisquoi and Carry Bay causeways as possible given permitting and funding constraints.

CURRENT LAND USE PATTERNS

The region is composed of two counties with distinctly different land features that have influenced unique human settlement and use patterns over time (Map 12).

The topography of Grand Isle County consists of generally flat areas to rolling hills characterized by large farm fields, orchards and wetlands, and the county is surrounded on three sides by the small beaches and rocky shoreline of Lake Champlain. Predominantly clay soils and lack of public wastewater facilities limit development possibilities. As a popular summer destination, families have built camps and second-homes along the shoreline. With a population that more than doubles in the summer months and a continuing trend of converting seasonal homes to year-round use, the island's villages and amenities are growing, particularly in South Hero and Alburgh. US Route 2 (the region's first and only Scenic Byway) bisects the county from north to south and serves as the only access on and off the islands.

Franklin County's topography changes markedly from the Lake Champlain Valley in the west to the rising spine of the Green Mountains in the east. Farmland is highly concentrated in the Champlain Valley and extends east along the Missisquoi River Valley. East of the Champlain Valley, the topography gets hillier and more forested, particularly along the eastern border in Richford, Montgomery and Bakersfield. Franklin County has generally maintained the traditional pattern of densely settled villages surrounded by sparsely populated farm and forest land, although over the last several decades farmland conversion and a demand for affordable housing and has led to scattered homes throughout some of the rural areas of the county. In a few areas, commercial sprawl has become a concern. In the west of the county is St. Albans City, the region's only urban center, and the Interstate 89 Corridor, which provides quick access to Chittenden County and Montreal. These features orient the settlement pattern toward the west and the south for access to jobs, shopping and services in St. Albans City and via I-89.

ASSETS, OPPORTUNITIES AND CHALLENGES

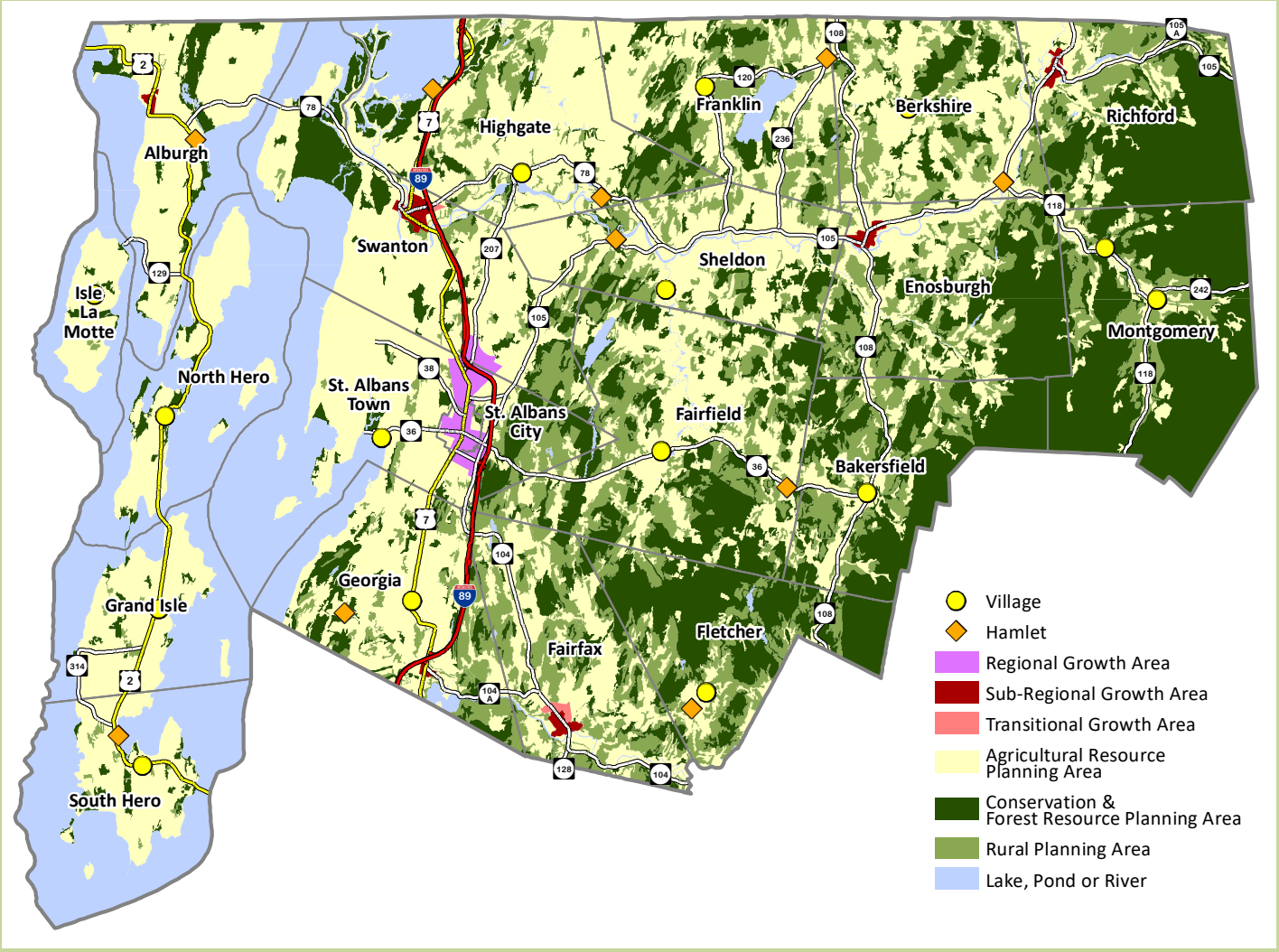
Designated Centers

Vermont has established a framework of "designations" to offer incentives that encourage communities to maintain vibrant concentrated settlements separated by rural countryside. These programs provide a variety of incentives for development in the designated areas, but each program has a set of unique goals for making

TABLE 5: State Designations

DESIGNATION	INTENT/INCENTIVES
Village Center	Village Center Designation supports small town revitalization with a variety of tax credits and priority consideration for several state grants. Village Center planning also helps to build community connections and economic resilience.
Downtown	Downtown Designation provides communities with the help and resources they need to make downtown revitalization a community effort through a variety of incentives ranging from tax credits to tax increment financing to priority consideration for many state grants.
Growth Center	The Growth Center program designates areas that are planned for new development in keeping with historic development patterns and offers a variety of incentives ranging from tax increment financing to Act 250 master permit application to priority consideration for many state grants.
New Town Center	The New Town Center program provides the option for town that lack a historic downtown to designate a New Town Center. Benefits include being able to set up a special tax district to fund capital and operating costs of a project in the center, in addition to affording certain benefits during Act 250 Review and priority consideration for many state grants.
Neighborhood Development Area	The Neighborhood Development Area program designates areas that are within or adjacent to village centers, new town centers or growth centers for mixed income housing, providing special permit and tax incentives for communities and developers.

MAP 14: Proposed Land Use



SOURCE: *Vermont Agency of Natural Resources and NRPC Collected Data*

Land Use Planning Areas

Agricultural Resource Planning Areas: Agricultural Resource Planning Areas represent the best farmland in the region and shall be given the highest level of support for their continued use as active agricultural lands. Nearly 39% of the region is included in this category, reflecting the significant acreage of prime agricultural soils, the large number of farms in the Northwest and the importance of agriculture in the region's economy. Strategies that support the long-term protection of these lands from conversion to non- agricultural use are supported by NRPC. Where development does occur, it shall be located to minimize impact to primary agricultural soils. Recognizing the importance of farming to the region's character and economy, and also recognizing that existing farms may occupy some good farming lands that would otherwise be categorized as Forest and Conservation Planning Area, Agricultural Resource Planning Areas were given precedence over the Forest and Conservation designation. For example, if a particular area has characteristics of both an Agricultural Resource Planning Area and a Forest and Conservation Planning Area, the area would be characterized as the former.

Forest and Conservation Planning Areas: Forest and Conservation Planning Areas, which constitute 25% of the region, include a variety of land types that are well suited for tree growth and habitat and generally not suitable for development. Land in this category usually should not be developed in order to protect the forest resource value of the lands. Development that does occur shall be limited due to natural resource constraints,

such as wetlands and floodplains, wildlife and scenic values in the case of uplands, or an overall low suitability for development based on soils, distance from roads and other factors.

Ridgelines and hilltops contribute significantly to the beauty of the region. Development in these areas can damage characteristic and picturesque viewsheds that contribute to the region's beauty. The use of these lands shall be limited to a mix of forest and conservation purposes including maple syrup production, logging, appropriate agricultural operations, wildlife habitat and recreation. These lands shall be protected from fragmentation and conversion.

Rural Land Planning Areas: A relatively small amount of the region's growth is anticipated in Rural Land Planning Areas, which occupy 16% of the region. Cluster development—such as planned unit developments and other methods that conserve open space, common land and/or farmland useful for its intended purpose—is encouraged in these areas, particularly in situations where developers plan to build numerous units. Methods of creating useful open space, common land or farmland include but are not limited to ensuring the land is appropriate and of value for the intended use, locating it adjacent to other open spaces in similar use, and requiring a management plan. Based upon historical development trends NRPC expects that much of the growth in rural areas will involve single-family homes. Areas included in this category require particularly careful planning to ensure that strip development and sprawl are minimized and the goals for the other land use areas are promoted.

Smart Growth Principles

The term "smart growth principles" (as enacted into law under 24 V.S.A. § 2791) means growth that:

- Maintains the historic development pattern of compact village and urban centers separated by rural countryside
- Develops compact mixed-use centers at a scale appropriate for the community and the region
- Enables choices in modes of transportation
- Protects the state's important environmental, natural and historic features, including natural areas, water quality, scenic resources and historic sites and districts
- Serves to strengthen agricultural and forest industries and minimizes conflicts of development with these industries
- Balances growth with the availability of economic and efficient public utilities and services
- Supports a diversity of viable businesses in downtowns and villages
- Provides for housing that meets the needs of diverse social and income groups in each community
- Reflects a settlement pattern that, at full buildout, is not characterized by:
  - ◊ Scattered development located outside of compact urban and village centers that is excessively land consumptive
  - ◊ Development that limits transportation options, especially for pedestrians
  - ◊ The fragmentation of farmland and forestland
  - ◊ Development that is not serviced by municipal infrastructure or that requires the extension of municipal infrastructure across undeveloped lands in a manner that would extend service to lands located outside compact village and urban centers
  - ◊ Linear development along well-traveled roads and highways that lacks depth, as measured from the highway

Regional Growth Areas and Sub-Regional Growth Areas: This Regional Plan recognizes one regional growth area and six sub-regional growth areas in the Northwest region (Map 15). The six growth areas are located within municipalities that have expressed the desire and planned for managed, high-density, mixed-use development and the infrastructure to support it. St. Albans City and areas in St. Albans Town by exits 19 and 20 of Interstate 89 constitute the regional growth center. The five sub-regional growth centers include areas within the three incorporated villages (i.e., Swanton, Enosburg Falls and Alburgh), the village areas of Richford and Fairfax and a planned growth area in Georgia. Growth areas were chosen for their capacity to accommodate greater levels of economic and social activity than other areas in the region. Only the St. Albans growth area was found to have the scale and capacity to serve the entire region. The sub-regional growth areas are expected to serve as economic and cultural hubs for surrounding towns.

NORTHWEST REGIONAL PLANNING COMMISSION

REGIONAL ENERGY PLAN

Adopted June 28, 2017

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IMPLEMENTATION

1. Implement the existing language in the Northwest Regional Plan that calls for limiting the loss of primary agricultural soils and active farmland. In addition, implement the existing language in the Northwest Regional Plan that calls for mitigating the impacts to primary agricultural soils and active farmland when these areas are to be developed, including the construction of renewable energy generation facilities.
2. Work with regional municipalities to institute local zoning changes that provide additional protections to productive agricultural land and primary agricultural soils.

B. GENERATION

As seen in the results of the LEAP model, achieving the state's energy goals will take more than improvements to energy efficiency and reductions in energy use. It will also require additional energy generation, particularly of electricity.

ELECTRICITY GENERATION

Electricity generation strategies focus on continued support of existing state programs that encourage renewable generation development such as net-metering programs and the Standard Offer Program. Strategies also focus on the creation of more accessible, internet-based information for electricity generation developers and for the general public regarding grid limitations and the Certificate of Public Good process. Implementation will primarily focus on the NRPC aiding municipal energy planning efforts, which includes working with municipalities to identify preferred locations for future generation development in municipal plans. It also includes working with municipalities to identify and develop effective policies to protect significant cultural, historical, scenic, or natural resources. The development of these policies can address many of the concerns that communities and citizens in the region have expressed with regard to solar and wind generation facilities. The NRPC will work with municipalities to ensure that municipal plans receive an affirmative "determination" from the Northwest Regional Planning Commission.

The NRPC would like to further investigate the public benefits provided to municipalities either directly from renewable energy generation developers or as a condition of a Certificate of Public Good. The NRPC is interested in determining whether the current system creates equitable outcomes or if it can be improved to provide greater equity to all municipalities impacted by a renewable energy generation facility, even if the facility is only located in one municipality. This is particularly relevant when discussing "industrial" or "commercial" wind generation facilities.

Lastly, the NRPC finds it to be essential that all decisions regarding new renewable energy generation facilities take into consideration concerns about health and safety. The noise, vibration, glare, or other impacts from generation facilities shall be mitigated by developers to ensure that such impacts do not have an undue adverse impact upon neighboring properties. This includes any impacts that pertain from electric or magnetic fields, or from construction activities associated with the facility.

FIGURE 5.5
RECAP: LEAP ELECTRIC GENERATION ENERGY TARGETS

To meet the 90 x 50 goal, LEAP establishes the following targets:

- Total regional electricity consumption expected to double between 2010 and 2050.
- Regional generation needs project to be met by development of 208.5 MW of new solar generation, 19 MW of new wind generation, and 10 MW of a new hydro generation.

8 GOAL

Increase the renewable energy generation capacity in the Northwest region to include an additional 208.5 MW of new solar generation capacity, 19 MW of new wind generation capacity, and 10 MW of new hydro generation capacity by 2050.

STRATEGIES

1. Support the development of individual home and community-based renewable energy projects in the region through the following programs: Vermont Small Scale Renewable Energy Incentive Program, Clean Energy Development Fund, and tax and regulatory incentives including net-metering.
2. Support changes to net-metering rules and other regulatory tools to provide financial incentives in order to encourage siting of renewable generation facilities on the built environment (such as parking structures and rooftops) and other disturbed lands (such as former landfills, brownfields, or gravel pits). Support changes to net-metering rules that disincentivize development on land identified in this plan as a location with known and possible constraints. Encourage multiple uses in conjunction with the development of renewable generation facilities, such as grazing of livestock, recreation, or parking.
3. Continue to support the Standard Offer Program (Figure 5.6) to foster deployment of diverse and cost-effective renewable energy resources, and support the evaluation of this program after 2022 to determine if the program should be extended or changed.
4. Support the creation of "solar maps," like the maps developed by Green Mountain Power, to make interconnection information available to the general public and accessible online. Local electric utilities could partner with the NRPC to create these maps.
5. Support efforts by local utilities and private individuals to maintain and upgrade existing renewable electric generation facilities in the Northwest region and the state.
6. Support the development of additional methane digesters on farms in the Northwest region, especially those that utilize manure from multiple farms and/or food waste.
7. Support the creation of incentives for locating new renewable energy generation facilities within a half-mile of three-phase distribution line or electric transmission line infrastructure. Ensure new transmission lines and three-phase power lines associated with renewable energy projects do not create forest fragmentation or have an undue adverse impact on necessary wildlife habitats, ecological systems, and water and/or air quality.

FIGURE 5.6 STANDARD OFFER PROGRAM

In 2009, the Vermont legislature created the Standard Offer Program, which is designed to encourage the development of renewable energy generation facilities by establishing prices for new renewable energy generation facilities based on the cost of developing a project plus a reasonable rate of return. Through the program, renewable energy developers can receive a long-term, fixed-price contract for renewables facilities up to 2.2 MW in size. The original program cap was 50 MW, which was amended to 127.5 MW in Act 170 of the 2011–2012 legislative session. Facilities to meet the program cap will be built over time through 2022. All facilities to be built through the program are required to receive a Certificate of Public Good from the Public Service Board.

IMPLEMENTATION

1. Apply to the Public Service Department to have the Northwest Regional Energy Plan receive an affirmative determination of energy compliance in order to ensure that the plan is given greater weight in the Certificate of Public Good process.
2. Provide assistance to municipalities to identify potential areas for development and siting of renewable energy generation facilities. Work with municipalities to identify areas, if any, that are unsuitable for siting renewable energy generation facilities or particular categories of renewable energy generation

facilities. Ensure that municipalities include this information in their municipal plans and work to ensure that municipal plans are given an affirmative regional determination of energy compliance by the NRPC so that municipalities may receive "substantial deference" in the Certificate of Public Good process.

3. Work with municipalities to specifically identify significant cultural, historical, or scenic resources in their communities. Work with municipalities to protect these resources through the development of a statement of policies on the preservation of rare and irreplaceable natural areas and resources as well as scenic and historic features and resources, as required by 24 V.S.A. 4382, and include such policies in municipal plans.
4. Identify, catalog, and map potential brownfield sites and other previously disturbed sites in the region that may be appropriate for future solar generation facilities.
5. Investigate public benefits provided to municipalities either directly from renewable energy generation developers or as a condition of a Certificate of Public Good. Assess if the current system is equitable to all municipalities impacted by a renewable generation facility, or if the current system can be improved to provide greater equity to all municipalities impacted by a renewable energy generation facility.

ENERGY RESOURCE MAPS AND THE PUBLIC SERVICE BOARD

The Vermont Public Service Board has jurisdiction over all energy generation facilities that are a part of the public electrical grid. The board provides its approval to an energy generation facility by issuing a Certificate of Public Good to that facility. A proposed energy generation facility must meet the criteria found in 30 V.S.A. §248 in order to receive a Certificate of Public Good. The role of regional planning commissions in the Certificate of Public Good process is outlined in 30 V.S.A. §248(b)(1), commonly referred to as Section 248:

> *With respect to an in-state facility, will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.*

In addition, regions and municipalities may receive "substantial deference" instead of "due consideration" during a Certificate of Public Good proceeding if the region or municipality has received an affirmative determination of energy compliance. This potentially provides regional and municipal plans with greater weight before the Public Service Board.

In recent Certificate of Public Good proceedings, the Public Service Board has frequently found that municipalities and regional planning commissions have not had language, or maps, that have provided for "land conservation measures" that are specific and/or well-reasoned enough to have a real impact on the siting of renewable generation facilities through the Certificate of Public Good process. Through the creation of the following regional energy generation maps, the NRPC is planning for the development of additional renewable generation facilities in the region (using the LEAP model targets as a basis of conversation) and providing for clarity regarding regional land conservation measures and specific policies.

The NRPC has developed renewable energy generation maps for four renewable energy resources: solar, wind, hydro, and biomass. The following subsection provides a basic explanation of how the maps were created and how they are intended to be used and/or integrated into the Northwest Regional Plan. This is followed by subsections explaining the intent behind the maps of each renewable energy resource. Maps created while developing this project are provided in Appendix C.

ENERGY GENERATION MAPS METHODOLOGY

NRPC staff worked with other regional planning commissions, the Department of Public Servie and other project partners in the state to develop criteria that would inform and guide the siting of renewable energy

There has been an ongoing call from concerned citizens and advocacy groups for site-specific standards for large-scale wind generation facilities in Vermont, especially regarding sound. Concerns have also been raised regarding aesthetics, surface water degradation, and the "flicker effect" (caused by moving turbine arms in front of the sun). The Public Service Board has been tasked with creating sound standards for wind generation facilities per Act 174. These standards shall be adopted by the board by July 1, 2017. The NRPC finds that the other potential concerns raised regarding wind generation facilities should continue to be studied by the Department of Public Service and the Public Service Board but are not addressed by this plan.

Hydro Generation Facilities - LEAP Generation Target 10 MW

The LEAP model results follow the guidance from a study commissioned by the Department of Public Service. The study found that 10 MW of new hydro generation is possible in the region. This generation would come from 16 existing dams in the region that are not currently producing electricity (see Figure 5.9) and from retrofits to existing dams to generate additional electricity at those sites. Existing dams that are not currently producing electricity could only account for approximately 1,019 kW (or about 1 MW) of generation capacity. According to the Department of Public Service, most dams need to provide at least 500 kW of generation capacity to be cost effective. Therefore, it seems unlikely that many of the smaller existing dams in the region would be refitted in the future to provide generation capacity. It also means that the majority of untapped hydro potential in the region is located at existing dam sites that are already producing electricity.

The growth of hydro generating capacity in the region is desirable because of the positive effect it may have on baseload electrical production (according to the Department of Public Service, most new in-state hydro

FIGURE 5.9 EXISTING HYDRO FACILITIES WITH GENERATION POTENTIAL

Name	Stream	Owner	Year Built	Hazard Classification	Potential kW
Georgia-3	Lamoille River-TR				5
Sheldon-2	Goodsell Brook				0
Webster (Lower)	Black Creek				46
Mud Creek	Mud Creek	State of VT - DFW	1957	Low	8
Johnsons Mill	Bogue Branch	Perry Cooper	1928	Low	5
Trout Brook Reservoir	Trout Brook	Town of Enosburg		Low	4
Bullis Pond	Rock River	Town of Franklin	1843	Low	9
Lynch	Abenaki Bay-TR	Karen Lynch	1969	Low	1
Browns Pond	The Branch	Jamie Rozzi	1920	Low	29
Fairfield Pond	Dead Creek-TR	Swanton Light & Power Department		Low	15
Lake Carmi	Pike River-TR	State of VT - DEC	1970	Low	14
Fairfield Swamp Pond	Dead Creek	State of VT- DFW	1967	Low	18
Swanton	Missisquoi River	Swanton Light & Power Department	1920	Low	850
St. Albans North Reservoir	Mill River	City of St. Albans	1895	High	6
St. Albans South Reservoir	Mill River	City of St. Albans	1910	Significant	6
Silver Lake	Beaver Meadow Brook-TR	City of St. Albans	1912	Significant	3
				Total Potential kW	**1,019**

VI. FEASIBILITY, CHALLENGES AND CONCLUSIONS

A. FEASIBILITY

Combined with the LEAP model results, the analysis of existing energy demand and supply provides a framework for discussing the region's energy present and future. From that framework, the NRPC has developed goals, strategies, and implementation actions for both conservation and generation that will help the region achieve the 90 x 50 goal. Generally, the generation goals and strategies, guided by the LEAP generation targets, are feasible for the region to achieve in terms of both the amount of electricity needed to reach projected demand and the amount of land required to generate the electricity.

In the Northwest region, solar generation is the preferred method of renewable generation. Solar will have to meet generation levels higher than the targets set by the LEAP model to make up for the difficulty of developing hydro and wind generation facilities in the region. However, the generation targets remain feasible despite challenges posed by grid limitations and by site-specific siting issues that the NRPC is confident can be addressed at least partially and overcome through the implementation of this plan. The development of other types of renewable generation (e.g., wind, hydro, biomass) is also possible in the region, and the regional generation maps in Appendix C provide guidance on how those types of renewable energy generation facilities should be deployed in the region.

The identified conservation goals and strategies may be more difficult for the NRPC to implement. Electricity conservation goals will require changes by individual consumers in the region. The NRPC can facilitate and help organize the efforts of other organizations in the region (e.g., public utilities, Efficiency Vermont) but has little expertise or influence in this area. Thermal efficiency is similar. The NRPC can aid the efforts of other organizations to increase thermal efficiency in the region, but it cannot accomplish the plan's goals and strategies alone.

The third area of conservation—transportation—is different. One of the NRPC's core functions is to coordinate transportation planning for the region. Combined with the NRPC's experience in land use planning—a discipline inextricably linked to transportation planning—the commission is well suited to implement transportation goals and strategies. Progress on transportation implementation actions will be prioritized.

B. IMPLEMENTATION CHALLENGES

The NRPC faces several challenges in achieving the 90 x 50 goal. Many cannot be resolved by the NRPC alone and will require the cooperation and coordination of the federal government, state government, and private sector. Other challenges, such as those posed by Chittenden County's future electricity demand, will require the NRPC to make policy decisions that will have an impact on the achievement of state energy goals. Key implementation challenges include the following:

- **Baseload vs. intermittent electricity** – Solar and wind generation technologies create electricity intermittently: when the sun is shining and when the wind is blowing, respectively. Unfortunately, the times when these generation sources are operating do not always correspond to the times when electric demand is at its peak. "Baseload" electricity, or electricity that is available on demand, is needed to ensure that peak demand can be met at any time. At present, baseload electricity is typically generated by fossil fuel, nuclear, or hydro generation sources; this may change in the future. Research indicates that solar and wind generation often complement each other, and increased solar generation in the region has helped the region address peak loads. Still, reaching the 90 x 50 goal will require the development of alternative technologies—most likely, more efficient and large-scale batteries, which will enable renewable technologies to supply baseload electricity (and fossil fuel generation facilities transitioning to "peaking" plants).

gas. The economic viability of renewable natural gas, its impacts on climate change, and its classification as a "renewable" resource should be analyzed in future updates to this plan.

The LEAP analysis only factors in the energy use of heat pumps for heating. It does not factor in the use of heat pumps for cooling. Use of heat pumps for cooling may have a substantial effect on electricity demand in the summer, especially given the potential effects of climate change on the region. This issue should be addressed in future revisions to the LEAP analysis.

- **Proximity to Chittenden County** – Although the LEAP generation targets appear to be achievable in the Northwest region and for most of the state, it may be much more difficult for neighboring Chittenden County to attain its LEAP generation targets. Chittenden County's existing electricity demand is larger than that of the Northwest region, and the electric demand in Chittenden County is growing at a faster rate than in the rest of the state. There will likely be pressure on the regions surrounding Chittenden County to "help" it meet its generation targets. The NRPC specifically expects there to be pressure to develop additional solar in southern and western parts of the region due to these areas being adjacent to Chittenden County. This is especially true given grid limitations that exist in Addison County and Washington County. The NRPC will need to decide whether or not it is appropriate for the region to be an energy "exporter" to Chittenden County. The effects of additional generation in the region will need to be weighed against the potential monetary benefits that additional generation may have for some of the region's landowners, as well as the positive impacts that it may have both in helping the state achieve the 90 x 50 goal and on the overall state economy. Many regional residents rely on Chittenden County for employment.
- **Reliance on cord wood and biomass** – The LEAP model depends very heavily on cord wood use as a single-family home heating source (and for commercial and industrial heating, too). The NRPC has some questions about how this increased demand will be met regionally and about the potential environmental impacts of increased reliance on wood—particularly with regard to climate change. Although wood is a renewable resource that is currently available in the region, its use in the region should be monitored as this plan evolves to ensure that it continues to be harvested in a sustainable manner. The continued reliance on cord wood for heating and its impacts on greenhouse gas emissions in the region should be monitored. As the impacts of climate change on the Northwest region become clearer, the widespread use of cord wood should be reassessed to ensure that its use continues to be in the best interest of the region and the state. In addition, information from BERC indicates that the region has less low-grade wood that can be used for biomass heating than other regions of Vermont. This may limit efforts in the region to greatly expand the use of biomass for heat and electricity generation.
- **Lack of site-specific guidelines for solar and wind generation facilities** – The energy generation maps in the plan address which conservation resources should be protected from development of renewables and which conservation resources should be subject to mitigation if impacted by development of renewables. This plan does not provide site-specific guidelines for how solar or wind should be placed on a site if it is deemed appropriate for development. The issues of screening, stormwater management, fall distance, sound levels, and aesthetics have not been addressed in this plan. The NRPC did not address these issues directly in this plan primarily due to the unique challenges that each particular site poses to renewable development.

  The legislature has developed setback requirements for solar facilities and has enabled municipalities to develop solar facility screening ordinances, but concerns persist about whether enough has been done to protect the state's working landscape. Sentiment is even stronger in the state regarding the need for siting standards for wind generation facilities. Of particular concern to the NRPC are the possible economic inequities that can result through the siting of a wind generation facility in the region. The NRPC advocates for changes to the Section 248 process ensuring that the economic benefits provided by a developer are distributed equally to all municipalities that are impacted by a proposed facility.

APPENDIX A

APPENDIX A - SUMMARY RESULTS AND METHODOLOGY

dedicated to conserving land or resources, and private parcels with conservation easements held by non profit organizations. (*Source: VCGI*)

- **Deer Wintering Areas:** Deer wintering habitat as identified by the Vermont Agency of Natural Resources. (*Source: VCGI*)
- **Hydric Soils:** Hydric soils as identified by the US Department of Agriculture. (*Source: VCGI*)
- **Agricultural Soils:** Local, statewide, and prime agricultural soils are considered. (*Source: VCGI*)
- **Act 250 Agricultural Soil Mitigation Areas:** Sites conserved as a condition of an Act 250 permit. (*Source: VCGI*)

REGIONALLY IDENTIFIED RESOURCES (REGIONAL POSSIBLE CONSTRAINTS)

- **Class 3 Wetlands:** Class 3 wetlands in the region have been identified have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan (*Source: ANR*)
- **Municipal Conservation Land Use Areas:** Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D.

OTHER MAP FEATURES

- **Three-Phase Distribution Lines:** All available utilities with service in any of the three regions (*Source: Green Mountain Power, Swanton Village Electric Department, Vermont Electric Coop, and Village of Enosburg Falls*) were mapped.
- **Transportation Infrastructure:** These were removed in the initial analysis performed by VCGI. Does not include parking lots. (*Source: VCGI*)
- **VELCO Transmission Lines and Substations:** (*Source: VCGI*)
- **Water Bodies:** Major water bodies (i.e., >1 square kilometer in surface area) are shown on maps as "Lakes/Ponds." (*Source: VCGI*)

E. HYDRO GENERATION MAPS

KNOWN CONSTRAINTS

- None

REGIONALLY IDENTIFIED RESOURCES (REGIONAL POSSIBLE CONSTRAINTS)

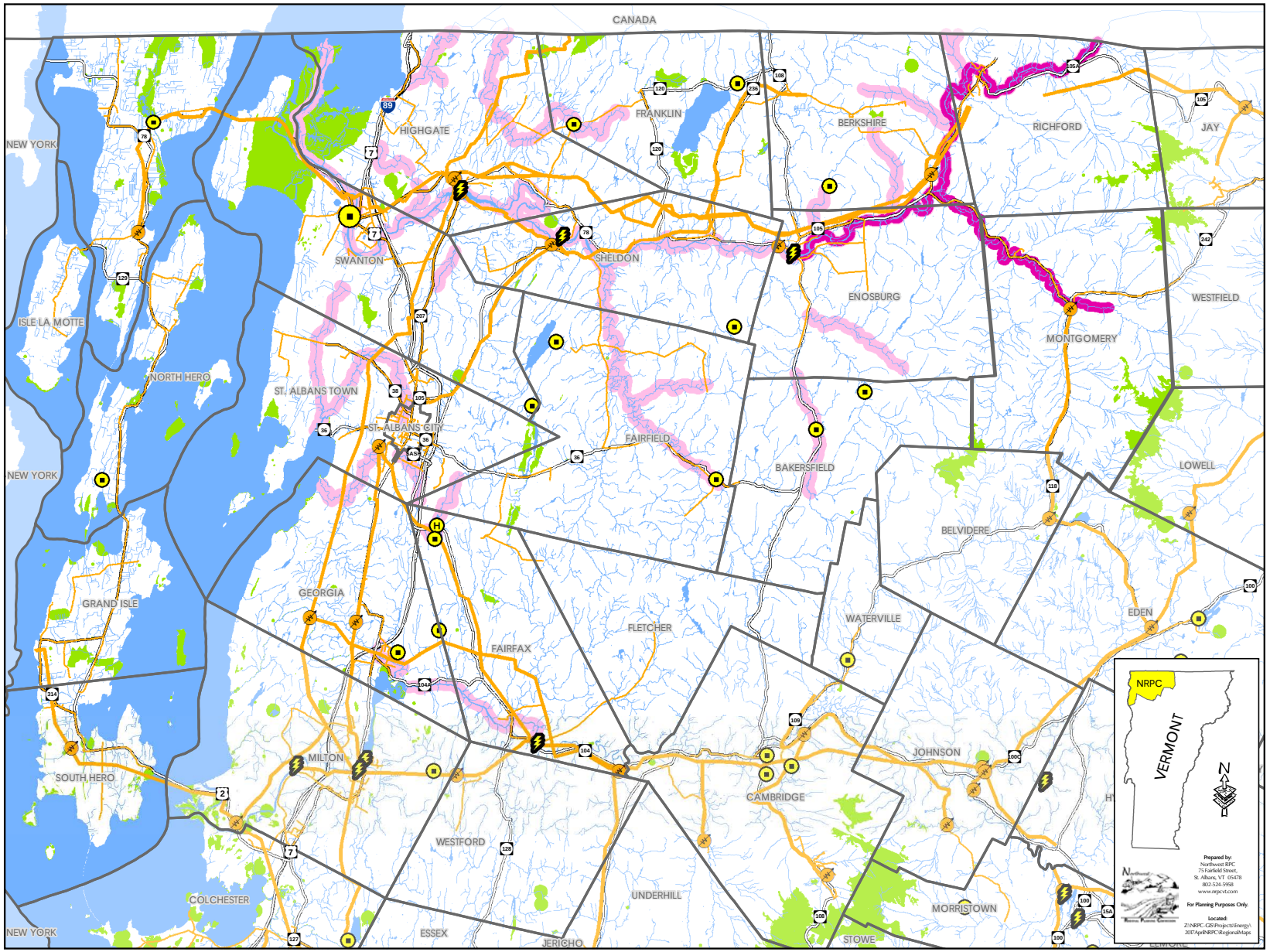
- **National Scenic and Recreational Rivers:** Known constraint; Missisquoi and Trout Rivers. This constraint will only be incorporated into the Hydroelectric Resource Map. Dams occurring within an impacted area will be displayed as such on maps. (*Source: Digitized by the BCRC from Upper Missisquoi and Trout Rivers, Wild and Scenic Study Management Plan*)

POSSIBLE CONSTRAINTS

- **"303d" List of Stressed Waters:** Possible constraint. This constraint will only be incorporated into the Hydroelectric Resource Map. Dams occurring within an impacted area will be displayed as such on maps. (*Source: ANR*)
- **Impaired Water:** Possible constraint. This constraint will only be incorporated into the Hydroelectric Resource Map. Dams occurring within an impacted area will be displayed as such on maps. (*Source: ANR*)

APPENDIX C

APPENDIX C - REGIONAL GENERATION MAPS



Hydro

Northwest Region, VT Act 174 Energy Development Improvement Act of 2016

This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. The maps do NOT take the place of site-specific investigation for a proposed facility and cannot be used of as "siting maps."

Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- Designated Outstanding Resource Water
- Known Constraint - Designated National Wild & Scenic River
- Possible Constraint - Stressed or Impaired Water
- Possible Constraint - RINAs

Potential Hydroelectric Facility

- < 50 kW Capacity
- > 50 kW Capacity
- High Hazard with < 50 kW Capacity
- High Hazard with > 50 kW Capacity

Operating Hydroelectric Facility

- Dam not on National Wild and Scenic River
- Dam on National Wild and Scenic River

Sources: VCGI

Disclaimer: The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

0 1 2 3 4 Miles

APPENDIX G

APPENDIX G - MUNICIPAL ANALYSIS & TARGETS

Transmission & 3 Phase Power Infrastructure

Georgia, Vermont
Act 174
The Energy Development Improvement Act of 2016

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Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

Sources: VCGI
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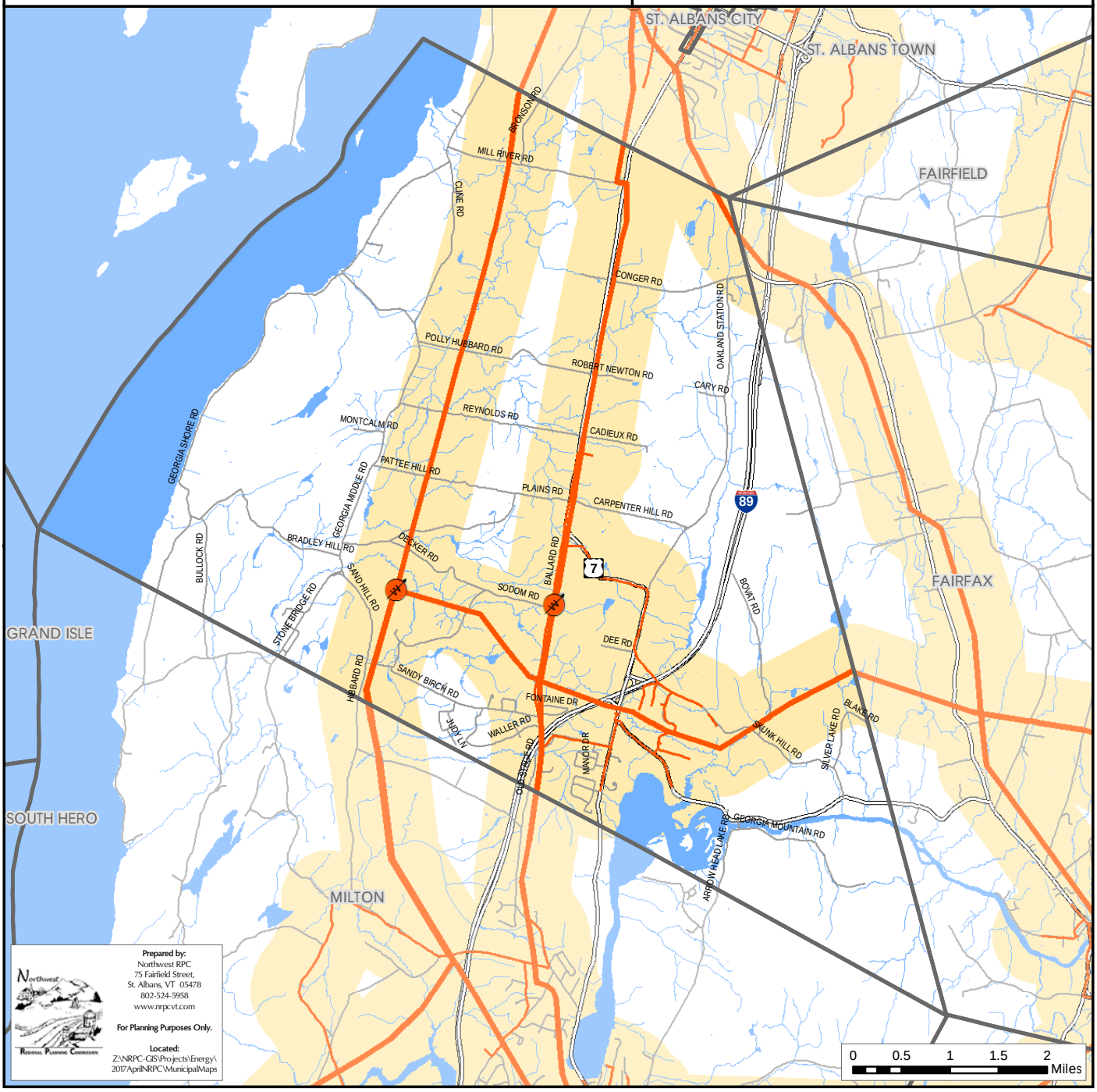

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Z:\NRPC-GIS\Projects\Energy\2017April\NRPC\MunicipalMaps

Hydro

Highgate, Vermont
Act 174
The Energy Development Improvement Act of 2016

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Legend

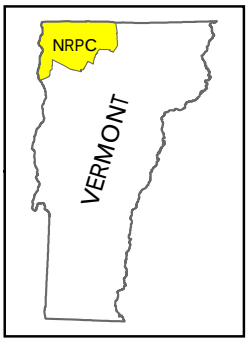
- Substation
- 3 Phase Power Line
- Transmission Line
- Designated Outstanding Resource Water
- Known Constraint - Designated National Wild & Scenic River
- Possible Constraint - Stressed or Impaired Water
- Possible Constraint - RINAs

Potential Hydroelectric Facility

- < 50 kW Capacity
- > 50 kW Capacity
- High Hazard with < 50 kW Capacity
- High Hazard with > 50 kW Capacity

Operating Hydroelectric Facility

- Dam not on National Wild and Scenic River
- Dam on National Wild and Scenic River



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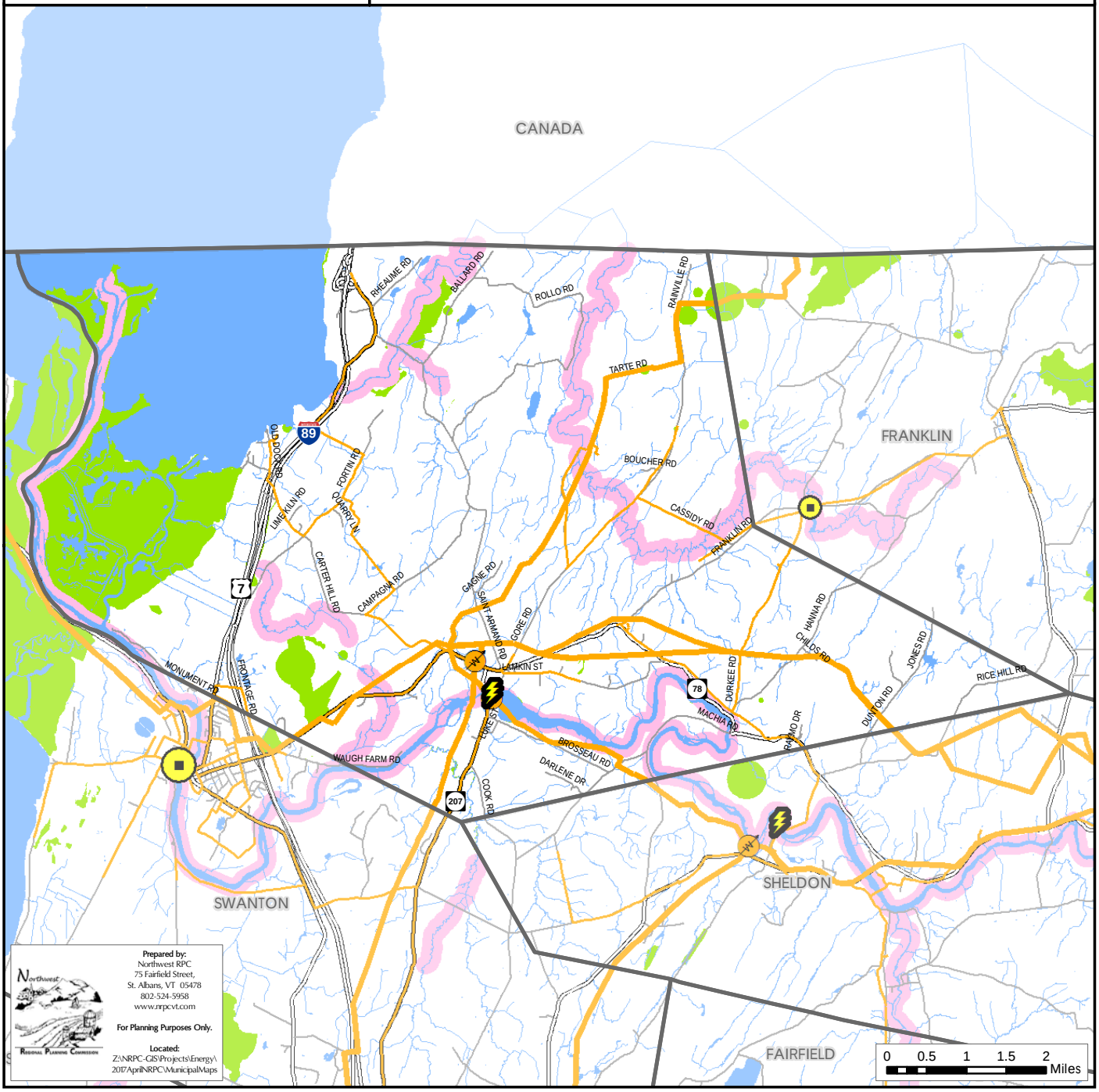

Transmission & 3 Phase Power Infrastructure

Highgate, Vermont
Act 174
The Energy Development Improvement Act of 2016

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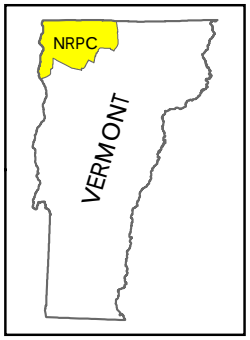

Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

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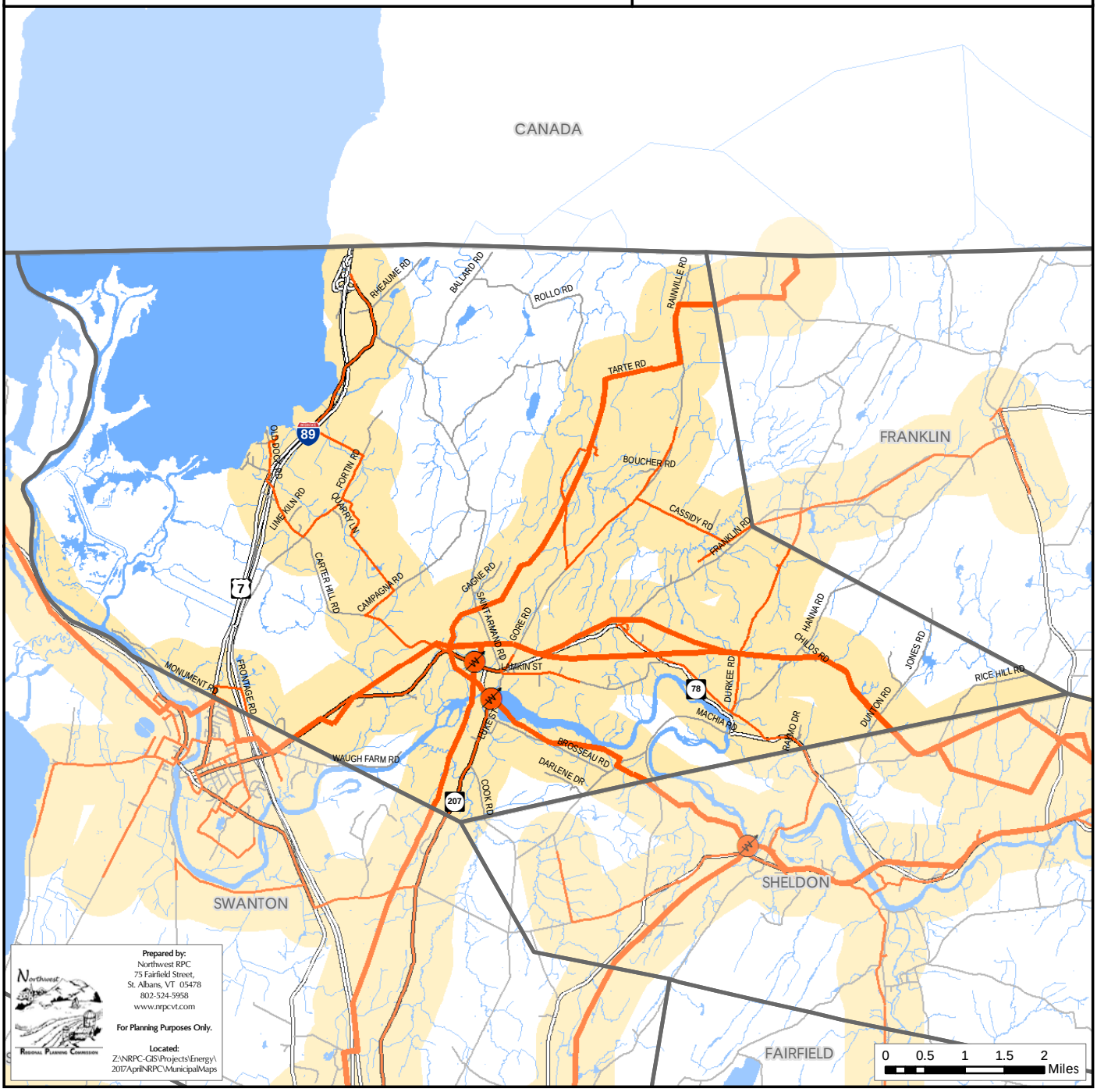

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Transmission & 3 Phase Power Infrastructure

St. Albans Town, Vermont
Act 174
The Energy Development Improvement Act of 2016

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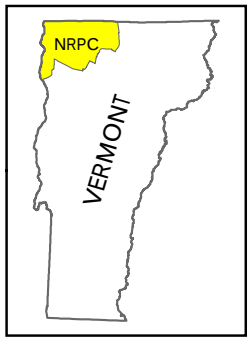

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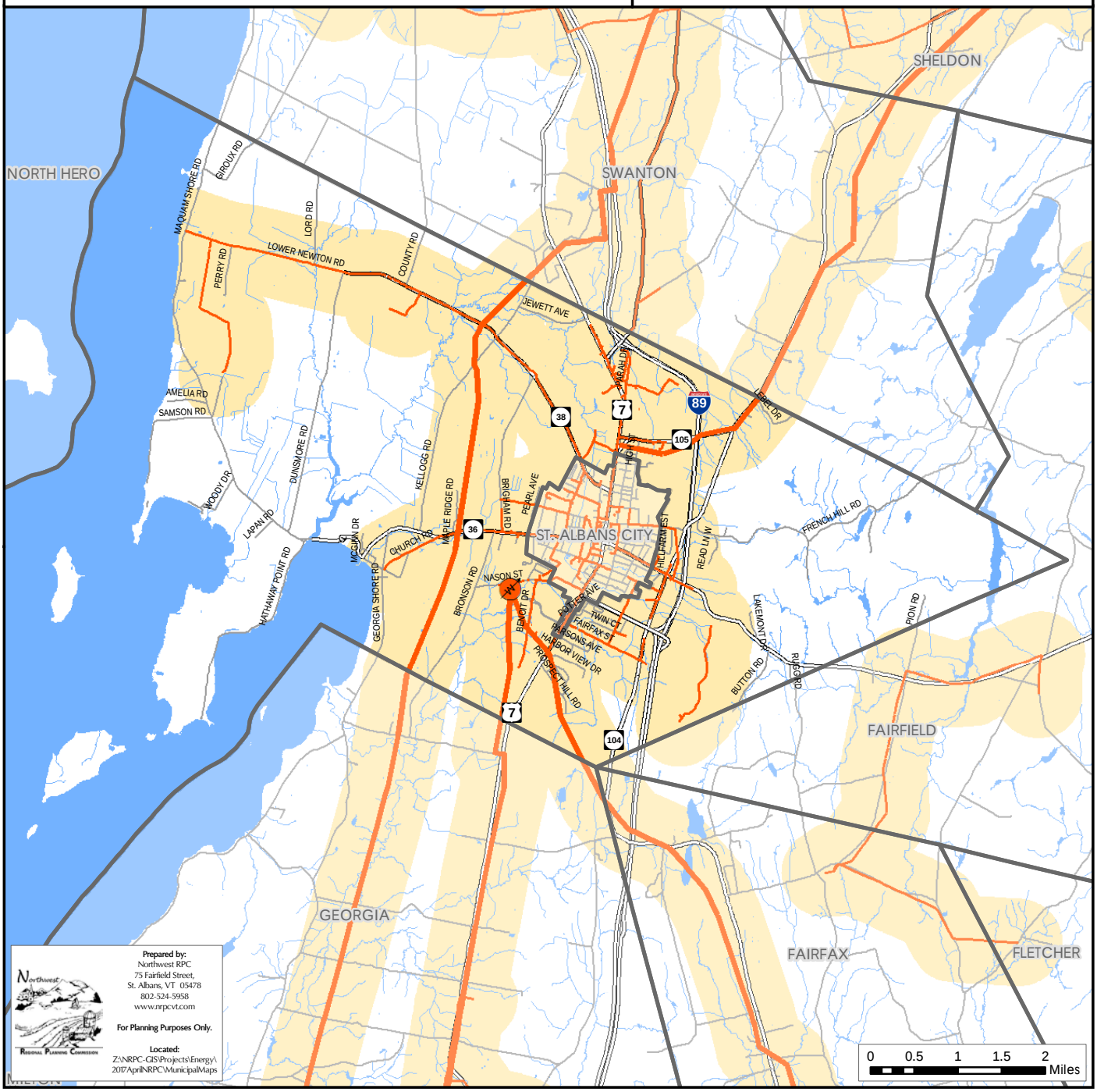

Transmission & 3 Phase Power Infrastructure

Swanton, Vermont
Act 174
The Energy Development Improvement Act of 2016

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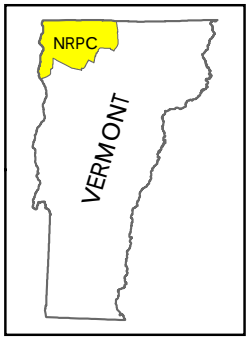

Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

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TOWN OF GEORGIA, VERMONT
2017 COMPREHENSIVE MUNICIPAL PLAN

Photo Credit: Suzanna Brown

Adopted by the Georgia Selectboard
January 9, 2017

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Tara King

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SECTION 1: INTRODUCTION

A. PURPOSE OF PLAN

This plan was developed to assist Town Officials, residents, and persons contemplating actions involving land use and development in the Town of Georgia. It provides a comprehensive framework and statement of policies, goals and implementation strategies from which to make decisions regarding land use, economic development, energy, provision of services and facilities, resource use and conservation (including historic, scenic, cultural, and natural resources), and public health, safety and welfare.

The Georgia Town Plan also serves as the legal basis for the adoption of local land use regulations, capital budget programs, and impact fee ordinances. By statute, plans must be readopted every five years or they expire.

It is important to note the legal link between the plan and other regulations the Town may adopt. The policies, goals and implementation strategies found herein should serve as a guide for decision making by the appropriate branches of government as well as the private sector. The plan policies give definition and meaning to the regulations and should be used in concert with one another in order to be effective in directing growth and development in desirable ways. A good plan is one that is used by both the public and private sector to make reasonable decisions concerning development and land use for the overall benefit of the citizens residing in the Town.

This plan updates a plan adopted on September 12, 2011. The 2016 plan has been developed by the Georgia Planning Commission with assistance from the Northwest Regional Planning Commission and with input from other Town boards, municipal offices, private citizens and the Town Administrator. The plan has been developed to conform to current state statutes, including 24 VSA Chapter 117.

As part of the 2011 Town Plan revision, the Planning Commission sought to further engage the public on two specific issues currently facing the community: energy and issues related to public and private roads.

This Town Plan required considerable involvement and effort. Projections are based, to a large degree, on the 2009-2013 American Community Survey and the 2010 Census, as well as a review of past Town reports. A list of past Town reports can be found in Appendix A.

The Town Plan is given consideration in state agency planning decisions, state and federal regulatory schemes, such as Act 250 Hearings, Agency of Transportation Hearings, and Public Service Board Hearings. The Planning Commission and Selectboard are statutory parties in any Act 250 Hearing involving Georgia and conformance with Plan Policies is one method of participating in those hearings.

SECTION 2. PLAN GOALS AND POLICIES

The following section includes goals and policies related to each section of the Town Plan. Many of the policies were developed as part of past town plans and have been carried forward in the 2016 update because they continue to be relevant. Other goals and policies are new, reflecting current town planning goals.

Implementation actions related to these goals and policies are located in Section 8, Plan Implementation

A) Housing

Goals:

To ensure that safe, sanitary and adequate housing is available and affordable for Georgia residents.

To achieve a diverse mix of housing types that meets the needs of Georgia's population at every stage of life.

Policies:

A-1) Where possible, rehabilitate existing housing through the use of existing programs or volunteer efforts, such as Habitat for Humanity.

A-2) To encourage the provision of affordable housing through planning for appropriately sized lots, accessory apartments, and clustered developments.

A-3) Ensure that residential development does not exceed the ability of the community to provide services and facilities for such development.

A-4) Design and phase development so as to minimize impacts on municipal services, local tax burden and important resources.

A-5) Encourage Planned Unit Developments (PUDs) that allow for clustered housing and less infrastructure to reduce the cost and other impacts of housing development.

A-6) Provide a diversity of housing types and ownership that meets the needs of Georgia residents.

D-5) Public and private roads shall not be constructed or extended into fragile, unique, and sensitive area, as designated by this plan, when it would lead to the destruction or degradation of those resources.

D-6) The Town will work cooperatively with the state to develop a transportation network that meets both state and local needs. The Town will play an active role in the planning of new improvements proposed by the state which might affect Georgia. Such plans shall conform to the overall goals and policies of the Town.

E) Historic and Scenic Resources

Goals:

To encourage that Georgia's noteworthy historic and scenic resources remain intact.

Policies:

E-1) Places of outstanding historical, educational or scenic value shall be protected from development that would unreasonably impair their character or quality.

E-2) Encourage the rehabilitation and adaptive reuse of historic structures.

E-3) To encourage innovation in design and layout of development so that the visual impact can be minimized.

E-4) To encourage the use of vegetative buffers and other screening methods to reduce the visual impact of development.

SECTION 4. THE PHYSICAL SETTING

F) Geology and Topography

Goal:

To protect private and public investment and maintain the natural environment by considering topography and geology when determining land use.

Policies:

F-1) Geologic factors should be considered in planning to insure the proper use of land.

F-2) Development on ridges and hilltops shall be discouraged and their adverse aesthetic and environmental impacts should be prevented.

F-3) Site modifications necessary for a particular project should be allowed but there should be no substantial change to natural drainage ways.

F-4) Land development on slopes in excess of 25% shall be prohibited and every effort shall be made to maintain a suitable cover of natural vegetation to reduce erosion.

F-5) Development shall be performed so as to prevent runoff and soil erosion. Vegetative cover should be maintained or established and erosion control measures shall be undertaken at the time of construction.

G) Soils

Goal:

To maintain and improve the quality of important soils, such as agriculture and forestry soils, when considering the future development of the town.

Policies:

G-1) The Town shall require proof of a State wastewater permit as a condition of local Zoning Permits, where applicable.

G-2) Slopes in excess of 8% may be highly subject to erosion, depending on soil type, and consideration should be given to the use of acceptable soil erosion control measures. Vegetative cover shall be established and maintained after construction.

G-3) Development on poorly drained soils shall be avoided.

G-4) Following the use of required agricultural practices and best management practice is essential to protect valuable soil and other resource. Accepted forestry practices and/or best management practices are encouraged as a way to protect valuable soil and other resources.

G-5) Impacts to prime agricultural soils due to land development shall be mitigated to ensure the future viability of agricultural uses in Georgia.

SECTION 5. UTILITIES, FACILITIES AND TOWN SERVICES

M) Utilities, Facilities and Town Services

Goals:

Development and growth in Georgia should occur at a rate which can be accommodated by reasonable expansion and/or improvement of facilities and services.

Public utilities and services should be enhanced in ways that improve economic development opportunities and quality of life, but that do not jeopardize public health, the environment or scenic resources.

Regulation of land development in Georgia should not negatively impact the availability of safe and affordable childcare.

To broaden access to educational and vocational training opportunities for all ages, sufficient to ensure the full realization of the abilities of current and future residents.

Policies:M-1) Review projects based on their individual impact, as well as their conformance with the overall rate of growth and facility/service capability planned for the town.

M-2) Locate facility and service improvements in existing development areas and areas that are designated for future growth.

M-3) All commercial telecommunication facilities shall be located in appropriate areas, respecting the integrity of residential areas, aesthetic concerns, and natural resource issues. As noted elsewhere in the Plan, the protection of scenic and natural areas is very important to the Town of Georgia.

M-4) New telecommunications facilities shall be co-located on or near existing structures, unless the Planning Commission determines that separate facilities will create less visual and aesthetic impact.

SECTION 6. LAND USE

N) Land Use

Goals:

To concentrate residential, commercial and industrial growth in the Village Center and the South Village area to protect the Town's rural character and resources.

Policies:

N-1) To avoid strip development the town may require developers to use techniques such as clustering to discourage strip development along highway corridors. Strip development along highway corridors shall be strongly discouraged.

N-2) Use the site plan review process to encourage innovation in design and layout for improved traffic flow, pedestrian access, parking, landscaping and screening, lighting and aesthetics.

N-3) Support Vermont's "right-to-farm" statute.

N-4) Support the preservation and protection of open land agricultural fields and forests through programs that encourage farming and forestry such as the current use tax program and land conservation easements.

N-5) Encourage the preservation of land in an agricultural, wooded or open state, particularly in areas of the town which are important scenic viewsheds and not well connected to service systems.

N-6) Georgia's rural landscape shall continue to be characterized by open land agricultural fields and forests. Agriculture shall be the predominant use in the Agricultural/Rural Residential District ("AR 1").

N-7) Recognize that important resource lands such as prime and statewide agricultural and forest soils are a unique and limited resource, which are essential for food and fiber production.

N-8) Consider the impacts of livestock in medium and high density residential areas.

SECTION 7. ENERGY

O) Energy

Goals:

To reduce the use of and dependence on expensive and polluting energy sources.

SECTION 4. THE PHYSICAL SETTING

A. INTRODUCTION

The Town of Georgia is rich with natural resources. The diverse landscape stretches from the shores of Lake Champlain across the sandy flats of Georgia Plains and the open farmland of Georgia Center, to the western foothills of the Green Mountains. These resources enrich the lives of all those who live, work and play in our community. Our natural resources provide recreational opportunities, a scenic landscape, and support the local economy. Through good planning and sustainable management of these resources, we seek to enhance the quality of life for current and future Georgia residents.

The Georgia Conservation Commission was formed in 1992 by the voters of the town in accordance with state statute. The commission has seven members who are appointed by the select board for a term of four years. Normally, meetings are held once a month and work days are scheduled throughout the year. The members work to preserve, protect, and enhance the native plants, animals, and their habitats in the town for current and future residents. The Conservation Commission has an educational presentation board which is displayed each year at town meeting, Fall Fest and other events around town. Topics studied have included Stream Bank Buffers, and Invasive Plants and Insects in Vermont. On the recommendation of the Commission, the Town purchased a 70 acre parcel in 2004 at the North end of Lost Pond; this area has a management plan which is overseen by commission members. Other duties currently include town maintained properties including Russell Greene Natural Area at Deer Brook, the Henley Webster Town Forest and the Mill River Falls natural area.

The Town also established a Conservation Reserve Fund, guidelines for the use of these funds can be found on the town website. Conservation Commission members also work on controlling invasive plants, increasing wildlife habitat, controlling erosion, building trails, improving water quality along Georgia's extensive Lake Champlain shoreline, tree plantings, and Green Up Day held in May.

B. GEOLOGY AND TOPOGRAPHY

Geology

Perhaps the most notable geologic feature in Georgia is the 5-mile north/south length of Champlain thrust fault ledges, a limestone and dolomite precipice that overlooks the lake. The shoreline slopes west of the Champlain thrust fault are generally less than 12%. The Champlain thrust fault is typically made up of rock outcrop and west facing slopes greater than 12%. These rock outcrops and steep slopes of the Champlain thrust lie in a sparsely populated area several thousand feet east of the shoreline and west of Middle, Cline, and Bronson Roads.

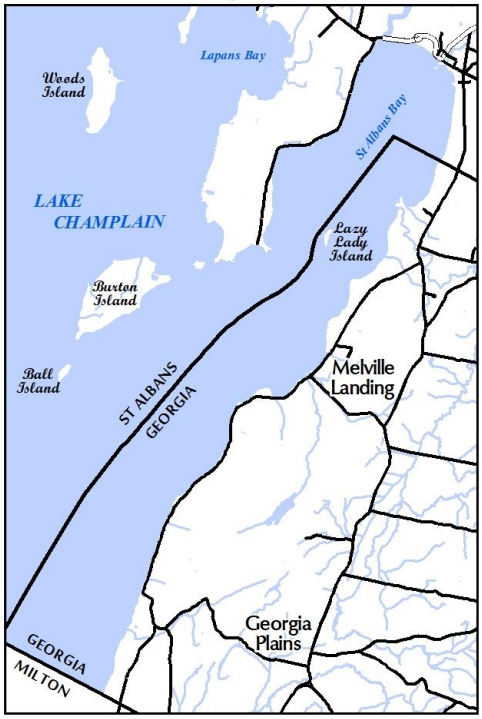
The Town of Georgia spans across two Physiograph Regions: The Champlain

Lake Champlain

The Town of Georgia has approximately 7 miles of lakeshore frontage on Lake Champlain. The lake, which is more than 400 sq. miles in size is the largest freshwater body in the United States besides the Great Lakes.

Georgia forms the easternmost shore of St. Albans Bay and holds, within its waters, several small islands, the largest of which is Lazy Lady Island. To the west, St. Albans Point and Burton Island form a peninsula which separates the northerly half of Georgia's waters from the broad lake (See **Map 4.7**).

GEORGIA ISLANDS
Map 4.7



The water quality of St. Albans Bay is impaired primarily by excessive levels of phosphorus which lead to algal blooms and growth of aquatic weeds. This problem impacts recreation in the lake, making boating, swimming and fishing less enjoyable for residents and visitors of our community. The State of Vermont's recently adopted a Total Maximum Daily Load (TMDL) for Lake Champlain. The TMDL aims to reduce phosphorus pollution in Lake Champlain. The State also recently adopted Act 64, which aims to address increased phosphorus loads in Lake Champlain through increased regulation of agriculture and stormwater discharge.

Lake Champlain is a sensitive resource. It is sensitive environmentally, aesthetically and in terms of its ability to absorb development. The area's "carrying capacity" and development requires extensive oversight and planning initiatives to ensure its long term health and viability.

Sewage disposal along the lakeshore also has the potential to degrade water quality. Regional solutions are currently cost-prohibitive. However, alternative individual system options, now permitted by the State of Vermont, are working to improve the waste disposal issue for several shore owners. As they become more generally applied, these will substantially reduce this as a problem.

Lake Champlain continues to be a valuable asset to our community for community recreation and enjoyment, but access to the lake remains an issue. The Town Beach is the primary means of access for the public to the lake. The bulk of shoreland is in private ownership which limits the use and enjoyment of the lake for the citizenry as a whole. The town will continue to investigate ways to increase public access to the lake.

Shoreline

The Lake Champlain shoreline is a unique ecosystem that provides an important habitat for both aquatic and terrestrial animals. The shoreline in Georgia is relatively open with

H. SCENIC RESOURCES

The views and scenic beauty of the Georgia landscape are greatly valued and appreciated by residents and visitors alike. Georgia's gradual transition from the foothills to the lake provides beautiful scenery: The juxtaposition of rolling farmland, historic settlements, and forest within the Champlain lowlands creates a landscape that enhances our community and our quality of life. Scenic resources must be a consideration in planning and development, including ridgelines, foregrounds of distant views, open lands, vistas, and historic village settlements.

Lake Champlain is particularly important as visual and aesthetic resource for the Town of Georgia. To the west, we enjoy beautiful views of the Adirondacks and to the east we see the Green Mountains. The shoreline itself is a scenic resource and is particularly sensitive to human and natural change.

Changes in our working landscape will also affect the aesthetics of our community. Just as Vermont's forest cover has risen from 20-30% in 1850 to over 75% today, we can expect to see our landscape change as the economics of forestry and agriculture change. We can also expect that demand for new renewable energy sources will create interest in wind power development in our town and towns within our viewshed. Balancing economic, environmental and aesthetic interests will require careful review of projects and consideration of all potential costs and benefits.

Poorly planned development can threaten the scenic beauty of our community. These scenic resources contribute to the local quality of life and sense of place, help to preserve and enhance property values, and are instrumental in defining the character of the Town. Future development must be sensitive to these areas of the landscape. Development should be properly sited to protect scenic vistas, and to avoid steep slopes and hilltops. Through the use of flexible zoning tools, such as PUDs, the town can allow creative site design that accommodates and respects scenic and natural resources.

I. FRAGILE, UNIQUE AND SENSITIVE AREAS

All three physiographic regions contain sites for natural, unique, and fragile areas/species. **Map 4.9** indicates the location of critical habitat areas including deer yards and habitats used by threatened and endangered species.

The 1992 Non-game and Natural Heritage Program Report identified five sites in Georgia as Biological Areas of State-Significance. The Program, part of the Vermont Department of Fish and Wildlife, determined the sites on the basis of uncommonness of the natural community type, ecosystem integrity and lack of major disturbance, and the presence of rare species. State significance implies that a site is one of the best examples of its natural community type in the state, or that it is the site for at least one rare species.

Summary

These areas serve unique functions which are very sensitive to human interference and deserve a level of protection. They are usually unsuited for human habitation but ideally suited for wildlife habitat and have significant ecological, recreational, scientific, and scenic value. They represent a dwindling resource which, with careful planning, this generation may be able to offer as a gift to the next generation.

SEE SECTION 2 FOR GOALS AND POLICIES RELATED TO THE PHYSICAL SETTING

SEE SECTION 8 FOR IMPLEMENTATION ACTIONS RELATED TO THE PHYSICAL SETTING

SECTION 5. UTILITIES, FACILITIES AND TOWN SERVICES

Overview

In a growing town, community facilities and services are often in transition. Existing facilities and services become inadequate as growth occurs. In Georgia, it is apparent that both population growth and the increasing expectations of Georgia residents regarding community services are continuing to result in facility and service expansions and improvements. While town budgets have not increased substantially, the prospect of future service and facility improvements, as well as need for new services, will undoubtedly have fiscal effects. **Map 5.1**, Utilities, Facilities, and Town Services shows the location of such existing facilities. This plan section contains an overview of town facilities and services from two perspectives: 1) What is the current state of the facility or service? Are there current deficiencies? and; 2) What changes are expected over the next five to ten years? Further, it is the goal of this plan section to aid the town in anticipating changes over the next few years, and to establish priorities for facility and service improvements during that period.

A. PUBLIC SAFETY

Police Services

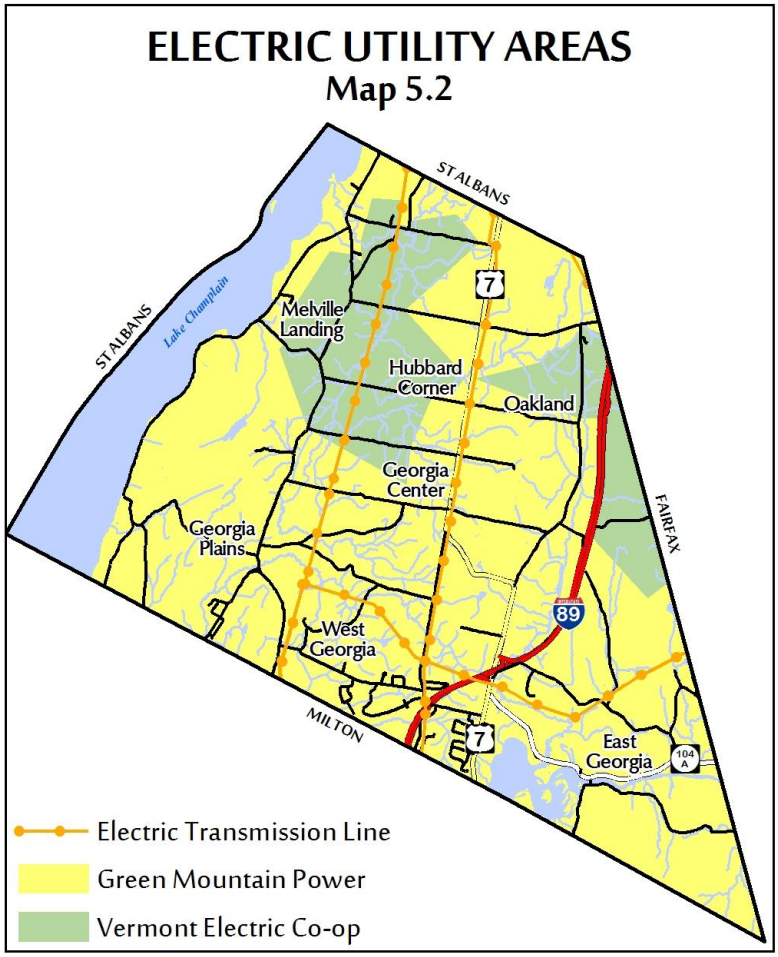
Georgia's police protection system currently is handled by both the Vermont State Police, who respond from St. Albans, and by contract services with the Franklin County Sheriff's Office. Georgia residents or businesses typically call 911 in the event of a need for police services.

Given the amount of growth which has occurred in town, several arrangements for increased police services have been considered by the Selectboard, including a contract with the Vermont State Police, a contract with the Franklin County Sheriff's Department, and the creation of a local police department. Based on investigation by the Selectboard and Town Administrator, the most cost effective option is to contract services with the Sheriff's Department and the State Police. The cost and liability exposure to the Town from having its own Police Department is seen as prohibitive at this time.

As of 2015, there is a 16-hour-per-week contract with the Sheriff's Department and a four hour per week contract with the State Police. While this approach appears to be adequate, concerns about issues like speeding and potential for property break-ins will likely increase residents' expectations for higher levels of service in the future and may result in increased town expenditures in this area. These contracts will be carefully monitored for effectiveness.

F. PRIVATE UTILITIES

Georgia is served by several utilities which provide needed energy, power and communication services. Vermont Electric Power Company owns and maintains a major 115 KV transmission line, which bisects the Town in a north/south direction, as well as numerous substations and fiber optics cables. These lines serve as a major transmission link for the power grid from Canada to the Northeast.



As shown on **Map 5.2**, Electric Utility Areas, Green Mountain Power (GMP) serves much of the residential and commercial electrical needs of the town, with Vermont Electric CO-OP (VEC) serving the rest. VEC owns approximately 13.2 miles of overhead and underground lines, while GMP owns app. 77 miles. GMP serves approximately 1700 residential, commercial and industrial customers and Vt. Electric CO-OP serves approximately 100 customers.

GMP estimates they will have ample supplies of electrical energy in the near term for both residential and commercial/industrial usage. Three phase power is available for commercial and industrial purposes along Route 7 from the Georgia Elementary school south to the Milton line; along Ballard Rd from Route 7 south to the Manor Rd.; along Manor Rd.; and along Route 104A from Route 7 approximately 1/2 mile. Old Stage Rd, Morse Dr, Industrial Park Rd, and Skunk Hill Rd (East to the town line) have also gained access to three phase power recently. Three phase power enhances growth potential of the commercial/industrial base.

Vermont Gas Systems has a major north south transmission line and provides gas service to approximately 440 residential, business and industrial customers in Town. The system presently consists of 6.9 miles of transmission lines and 5.9 miles of distribution lines. Natural Gas is a clean fuel source of energy used for heating, hot water, cooking, clothes drying and industrial/commercial processing. The presence of this energy source near the B-1, I-1 and I-2 zoning districts enhances commercial

industrial development potential.

Fiber optic cables are available for telephone service and the cable companies are providing greater coverage for Georgia each year. It is expected that technological advances will continue to fuel the fast growing field of information and communication, which may present a range of increased opportunities for Georgia.

G. TELECOMMUNICATIONS

The field of commercial telecommunications has many implications for land-use in the Town of Georgia. Telecommunications have become increasingly important as a tool for economic activity. Moreover, the technology enables people to "telecommute," and thereby live a long distance from where they work, which may have the effect of populating more rural areas. The Telecommunications Act of 1996 (federal statute) placed certain limitations over municipal control of telecommunication structures. With these confines, however, Georgia can use land-use regulations to protect the town's rural nature, historic character, and scenic beauty.

Telecommunication Towers

Telecommunications infrastructure is a critical component to economic development in rural areas. However, commercial towers and related infrastructure require careful consideration. Since wireless communication facilities emit electro-magnetic radiation which may affect human and animal health, and towers (and supporting facilities, e.g. roads, transmission lines and fences) create aesthetic and wildlife impacts, telecommunications has emerged as a form of land-use which has significant impacts on a wide area around its location, and therefore is a planning concern.

Telecommunication towers tend to be located in highly visible locations, for example on mountaintops and ridgelines. Furthermore, the technology is evolving quickly. While the use of such technology has increased dramatically within the past ten years, it could be replaced by another technology within the next ten years.

Toward that end, when siting new facilities or upgrading existing facilities, there must be clear evidence that the proposed facility and location are necessary. The Zoning Regulations incorporate appropriate guidelines and regulations governing at least the following areas: integrity of residential zones, protection of scenic areas, protection of wildlife areas, preferred locations, and co-location or clustering of tower facilities.

H. HEALTH SERVICES

The closest hospital to Georgia is the Northwestern Medical Center in St. Albans. NMC is a 70-bed community hospital with an active medical staff of more than 75 physicians spanning 22 medical specialties. NMC's service area covers the greater Franklin and Grand Isle County region, which includes the Town of Georgia. NMC cares for approximately 2,000 inpatients each year, performs over 3,000 surgeries, delivers over 450 babies, and treats over 27,000 patients in the Emergency Department. NMC offers

SECTION 6. LAND USE

Overview

The use of land, both historically and currently, defines the physical make-up of the Georgia, providing not only a sense of place, but an insight to how the town functions economically, physically and socially. Current land use trends in Vermont are often inconsistent with local historic patterns of development and State planning goals. To some extent that has happened in Georgia. An example is the Interstate highway, which represents a national land use/transportation initiative which has altered traditional or normal development patterns that did occur or may have occurred in Georgia.

All of the factors discussed in this plan have to be reconciled with the community's short and long term goals for itself...does Georgia want to remain rural?...does Georgia want more industrial development? What will be the future of the Town Center? These are questions which a Land Use Plan attempts to answer.

The land use plan must be responsive and directive, yet flexible. On the one hand, it must respond to conditions as they now exist. Ideally, the location and form of natural landscape features should dictate patterns and location of future growth. The land use plan must respond to existing patterns of development, enhancing their value and utility, and not alienating them, or rendering them obsolete. On the other hand, the land use plan must direct future development to take place in ways that will serve goals, policies and implementation strategies as we now understand them. Land use patterns in the future should enhance Georgia's scenic, cultural and natural resources. Land use patterns in the future should ensure that Georgia continue to function as a viable community.

A. LAND USE TRENDS

Historically, land use in Georgia has been dominated by residential and agricultural uses. Much of this development has taken place in three village centers, Georgia Center and Georgia Plains, and more recently in South Village around the Interstate access. More than half of the town's population lives in these villages, along the southern edge of town, and in the clustered development near Arrowhead Lake. While St. Albans has long influenced development in Georgia, the construction of I-89 places Georgia within the reach of Chittenden County commuters. Approximately 61% of the town's working population commuted to Chittenden County in 2011 according to the US Census "On the Map" tool. . Access to transportation and services, as well as natural conditions conducive to development, have resulted in significant development in the town's southern tier.

In recent years, Georgia has also experienced more industrial development. Located next to the interstate and the railroad, the Georgia Industrial Park brought jobs to the town and diversified its tax base. There is also a private Industrial Park located off

Land development along the shoreline should occur within parameters developed to preserve environmental and visual quality, as well as the accessibility of the resource for the community. Clustering, screening, sensitive siting and site development are all standards which should be applied by the Planning Commission, when reviewing development. The Planned Residential Development and Site Plan Review processes should be used to protect this fragile resource.

Agriculture and forestry efforts must be carefully considered and managed within the context of supporting these activities, facilitating their operation and ongoing viability, while at the same time ensuring that the land and water resource is not further undermined.

Finally, lake access, visually and physically, should be maintained and enhanced. The town might explore the purchase of additional lands or obtaining easements which maintain the open spaces. These steps could be an integral component, for example, of a PRD process.

Rural Character and Agriculture

Much of Georgia outside of the South Village Core and Traditional Village Centers continue to have a rural/agricultural character that is valued by Georgia residents and should continue to be promoted.

Agriculture and forestry continue to be important components of the local culture and economy. It is important to remember that owners of farms and forests provide a public benefit by not developing their property, and cost the town little in terms of municipal services. From popular scenic vistas, to important wildlife habitat, these contributions to the well-being of the town cannot be overlooked.

The development of farms and forests for residential use is becoming more profitable for the individual land owners. This creates pressure for development. It is important that this development be guided by good land use planning in order to maintain the unique character of our community and ensure that local services are not overwhelmed.

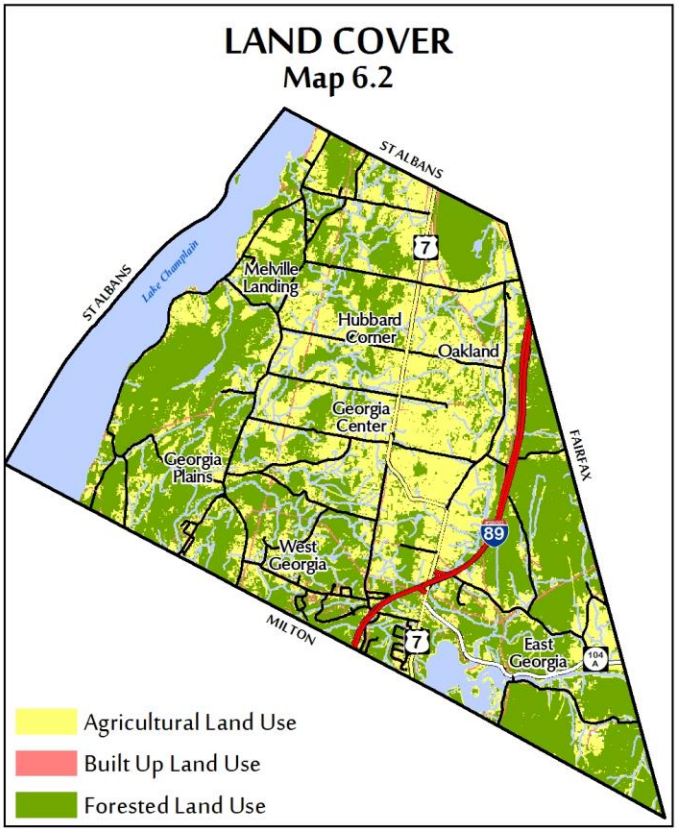
Industrial Development

Industrial Development is generally concentrated in the two industrial parks located to the east of Exit 18, which measure approximately 600 acres. Industrial activities should continue to be focused in these areas as they are largely buffered from residential neighborhoods and provide the appropriate infrastructure to support these uses.

B. EXISTING LAND USE

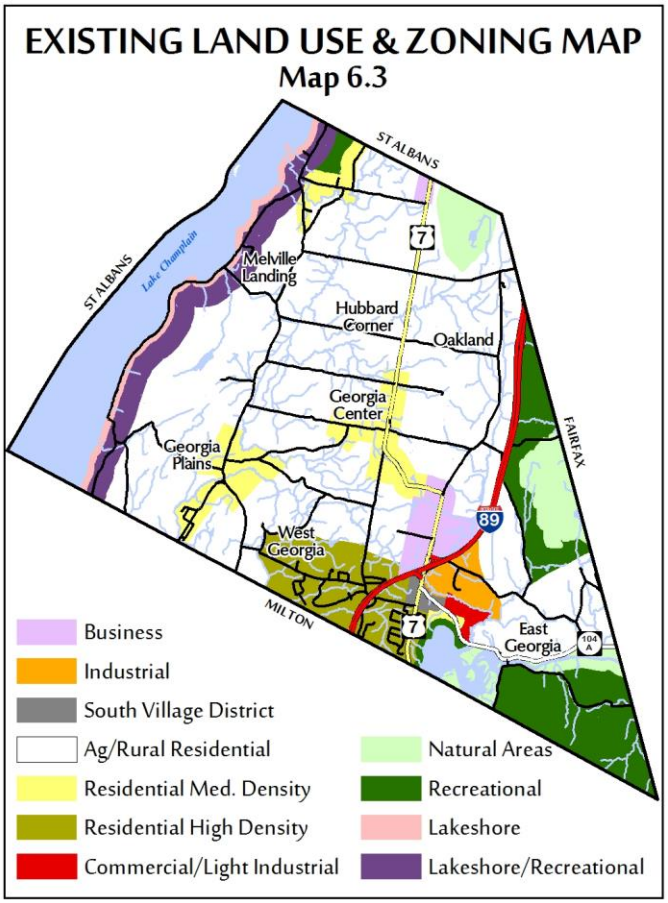
The Town of Georgia is currently composed of approximately 29% forested, 42% agricultural/open, 23% water and 6% developed (Landsat 2002, **Map 6.2**).

Today, the Town of Georgia is divided into 11 zoning districts. These districts have been developed to implement the Town's goal of maintaining rural character and allowing for appropriate residential, commercial and industrial development in the areas that are most suited to these uses (**Map 6.3**).



C. PROPOSED LAND USE

The proposed land use map is intended to respect the traditional land use patterns and activities that have defined the Town, while being attentive to the physical capabilities of the landscape and the desires of its residents. The Town is proposing 13 land use districts listed and described below, and as shown in **Map 6.4**, Proposed Land Use. There is also one overlays



It is the intent that the Planning Commission use the Proposed Land Use Map, the district purposes outlined below, and the goals, policies, and implementation strategies in this Plan when preparing updates to the Georgia Development Regulations. Any future zoning map is not required to match the proposed land use map exactly, but it should be used as a guide when delineating zoning district boundaries.

Agricultural/Rural Residential District (AR-1)

The primary purpose of the Agricultural/Rural Residential District ("AR-1") is to provide a place in Georgia for *agriculture* and silviculture *uses*. The Town Plan encourages development in other areas of the Town and not in the AR-1 District. Residential and other *uses* permitted in the district should be very low *density* and should not interfere with the agricultural and rural nature of the District, and should not place an unreasonable burden on the Town's ability to provide and maintain Town *service*s to all residents. It is a policy of the Town to strongly discourage *strip development* in this district. Land should be developed so that large contiguous expanses of agricultural, *forestry*, significant geological areas, wildlife habitat, *scenic area*s, and other important *open space* land will be protected. Development may be phased in order to meet the purposes of this district.

Medium Residential District (AR-2)
The purpose of the AR-2 Residential District is to provide a location for residential development at a higher *density* than surrounding rural areas where historic centers of the town are located. In addition, small *scale commercial uses* will be allowed. Development in the district should reflect historic village patterns, protect important resources, enable the economic provision of *service*s, plan for pedestrian and vehicular access, avoid *strip development*, and be planned so as not to burden the ability of the Town to provide adequate facilities and *service*s.

High Density Residential District (AR-3)
The purpose of the AR-3 District is to enable higher *density* residential development where existing development at a higher *density* has already occurred. Development in the district should enable the economic provision of *service*s, reasonable pedestrian and vehicular access within the district and to nearby business and recreation districts, protect important resources, avoid *strip development*, and be planned so as not to burden the ability of the Town to provide adequate facilities and *service*s.

South Village District (SV)
The purpose of the South Village Core District is to provide a concentrated core settlement of small-scale commercial, governmental, and residential *uses* in a traditional Vermont village setting. The standards in this section intend to achieve a livable *streetscape* where people can walk, gather, and meet comfortably. A mix of *uses* is allowed at a higher *density* than elsewhere in the Town to create a community where people live, work, and shop. Developers are encouraged to work with the Planning Commission on developing their site according to the Design Criteria and Guidelines which are intended to implement the South Village Core Strategic Plan.

Business High Density District (B-1)
The Business-High Density District is a high traffic area with good access to major highways. The purpose of the Business-High Density District is to enable high *density commercial uses* in an interconnected, unified pattern that does not result in *strip development*. Development in the district will have controlled access on highways, screening and landscaping, creative design and layout, good pedestrian circulation, and connections to adjoining residential and industrial districts. This district is not intended

Municipal Ordinances		
Adopt Vermont Road and Bridge Standards each year.	Selectboard	Every Spring
Review and update the Town Road Ordinance including standards for Class IV roads.	Planning Commission and Selectboard	2 years
Reevaluate and revise all town ordinances to assure conformance with the town plan.	Planning Commission and Selectboard	2 years
Develop and adopt a solar facility screening ordinance enabled by 24 V.S.A. 4414.	Planning Commission and Selectboard	1 year
B. Non-regulatory Implementation		
Capital Planning and Impact Fees		
Review the Capital Budget and Program and revise consistent with the adopted Capital Facilities and Equipment Impact Fee Ordinance.	Selectboard	Each Fall
Special Studies, Projects, and Plans		
Adopt a Local Emergency Operations Plan.	Selectboard	Every Spring
Update the Georgia Hazard Mitigation Plan (HMP).	Planning Commission and Selectboard	Every 5 years
Work with NRPC to update Georgia buildout analysis.	Planning Commission	2 years
Conduct a study of the South Village Zoning District to assess previous changes made to the zoning district in the Development Regulations. This study shall also investigate the possible future use of form-based code and/or design standards in the South Village Zoning District	Planning Commission	2 years
Consider applying for a state designation (village center or neighborhood development area) for the South Village and Georgia Center.	Planning Commission and Selectboard	2 years
Conduct a study of scenic resources in Georgia and include specifically identified scenic resources in the Municipal Plan.	Planning Commission and Selectboard	2 years
Investigate the creation of a Municipal Energy Committee.	Selectboard	1 year
Conduct periodic energy audits of Town buildings and vehicles.	Municipal Staff and Selectboard	Ongoing
Pursue State and Federal Grant Programs to secure funding for projects that improve water quality such as shoreline stabilization and buffers.	Municipal Staff and Selectboard	Ongoing

acres), which therefore could result in fairly intensive development along the Georgia border.

Transportation

The following roads "connect" Georgia and Fairfax: I-89, Route 104A, Goodrich Hill Road, Blake Road, and Georgia Mountain Road. Route 104 runs along the border of the two towns for 0.13 miles.

I-89 functions as a "major arterial" in both towns. Route 104A serves as a "minor arterial," and is notable for its scenic quality due to its proximity to the Lamoille River and Georgia Mountain. Route 104 serves as a "collector" where it joins the two towns. Goodrich Hill Road, Blake Road, and Georgia Mountain Road are "local streets." Goodrich Hill Road and Georgia Mountain Road are Class 4 roads on the Georgia side, but turn into Class 3 roads on the Fairfax side.

Although most of these roads currently function similarly in both towns, and so are not a cause for concern at this time, as discussed above, intensive development along Route 104 or Route 104A in Fairfax could create traffic impacts in Georgia on Oakland Station Road, Route 7, and Route 104A.

B. THE REGION

Georgia is part of the Northwest Regional Planning Commission (NRPC). The Commission is comprised of two appointed commissioners from each of the 23 member municipalities and a support staff. The Commission provides technical assistance in matters of land use and development and develops a Regional Plan similar to our Town Plan. The Northwest Regional Planning Commission adopted a Regional Plan effective September 2, 2015. There are many topics in the Regional Plan which are pertinent to Georgia, however three main areas related to the compatibility of the Regional Plan and this Town Plan are: growth center designation, transportation, and shoreline protection.

Growth Center Designation

The Regional Plan identifies one "regional growth center" and six "sub-regional growth centers." Georgia's South Village is included as a "sub-regional growth center." The Regional Plan describes the attributes of sub-regional growth areas as serving as "economic and cultural hubs for surrounding towns." The plan continues by noted that the sub-regional growth centers are located in municipalities that have "expressed the desire and planned for managed, high-density mixed-use development."

It is uncertain whether Georgia will invest in sewer or water infrastructure in the near future. It would take a tremendous capital investment to develop this type of infrastructure and the town does not have a large enough population or tax base to support the investment at this time. The town has investigated the possibilities and implications of this infrastructure, and has identified potential practical solutions if this is the direction townspeople wish to go.

TOWN OF ST. ALBANS
Franklin County, Vermont

Town Plan

Selectboard Approved on Monday June 15, 2020

Prepared By:
Town of St. Albans
579 Lake Road
St. Albans, VT 05478

The Town of St. Albans Selectboard has reviewed and approved the Town Plan for the Town of St. Albans by majority vote. The Town of St. Albans Selectboard recognizes responsibilities and duties to enforce the policies of the Town of St. Albans Town Plan in full accord to Vermont Statue and for the citizens of the Town of St. Albans.

The Town of St. Albans Selectboard members were all present at their June 15th, 2020 Public Hearing on the Town Plan and the following vote:

Approve

Selectboard Member & Chair, Brendan Deso

Selectboard Member & **Vice Chair**, Jessica Frost

Selectboard Member, Erin Creley

Selectboard Member, Stan Dukas

Selectboard Member, Jonathan Giroux

The Town of St. Albans Town Plan is hereby adopted on the 15th of June in this year 2020.

Witnessed in form and signature by:
Executive Assistant, Jennifer Gray

Table of Contents

INTRODUCTION

1.1. Vision Statement

The following are a broad vision for our future community and describes the prospective civic aspirations of our citizens.

The Town of St. Albans is and will continue to be a community where there is:

- **a balance between residential, commercial, and industrial development;**
- **a robust, sustainable, and equitable economy;**
- **a common value in local agricultural businesses; and,**
- **an appreciation of our natural, cultural, scenic, and historical resources.**

This Town Plan includes goals, policies, and actions that result in the future described by the vision statement.

1.2. Town Planning

In 1968, the Vermont General Assembly enacted the Vermont Municipal and Regional Planning and Development Act (24 V.S.A. Chapter 117). The Vermont Municipal and Regional Planning and Development Act give all State of Vermont municipalities the authority to prepare, implement and maintain a town plan.

The Town Plan includes policies that can be used as a strategic plan of action. The Town Plan also includes policies for Land Use Regulations and further planning efforts. Projects that come under Vermont's Land Use and Development Act (Act 250) must conform to the Town of St. Albans Town Plan.

1.3. Foundational Goals for the Town Plan

Goal - Provide a means for St. Albans to reach its desired future: The overriding intention of this Town Plan is to provide a means for shaping policies and land use decisions in a manner that enables the community to reach the future described by the citizens in the Vision Statement.

Goal - Manage growth in a logical and sustainable manner: This Town Plan provides for the growth of the community in a manner that allows the maintenance of economic well-being, healthy, functioning environmental systems, and a sustainable high quality of life. The intent of the Town Plan is to meet and exceed the goals for planning established by the Northwest Regional Planning Commission (NRPC) and all related legislation.

Goal - Provide for constant citizen involvement: Continuous public involvement in the planning process is critical within the formal process for reviews and updates of the Town Plan. The development of St. Albans is continuously monitored to ensure that growth is occurring in an orderly fashion that is not and will not adversely affect the Town's ability to provide adequate services, facilities, and infrastructure.

5. SCENIC AND NATURAL RESOURCES

The purpose of this chapter is to describe the community's commitment to stewardship of the natural environment and to provide a basis for policies that guide the Town's decisions that will affect the natural environment. The environment is a complex system of interrelated components upon which the Town depends including air, water, soils, plants, and animals. Finding a balance between the preservation, protection, and transformation of natural resources with other community needs is vitally important to ensuring the continued viability of natural systems and the continued high quality of life for St. Albans.

5.1. Goal - Identify, protect, preserve, and transform important natural and scenic features of St. Albans' landscape.

Policy: Protect and preserve natural resources including surface waters, groundwater, floodplains, river corridors, agricultural soils, wetlands, steep slopes, forest blocks, habitat connectors, and endangered wildlife habitats.

Surface Water, Groundwater, and Floodplain. Water quality and the condition of surface waters in St. Albans has been an important issue for many years, particularly in regards to Lake Champlain and St. Albans Bay. Water quality and issued related to surface water quality are discussed in more depth in Chapter 10 – Stormwater and Flood Resilience. Issues surrounding the regulation of floodplain and state-designated river corridors are also discussed in Chapter 10.

Public water service is currently supplied by the City of St. Albans Water and Sewer Department to some Town residents and businesses. This water comes from Lake Champlain through a pumping station on Maquam Shore and from the St. Albans Reservoirs North and South in the Town of Fairfax. A Surface Water Source Protection Area surrounds the Maquam Shore location; Ground Water and Surface Water Source Protection Areas for the St. Albans Reservoirs are located in the Town of Fairfax, the Town of Fairfield and in a small southeastern portion of the Town. These recharge areas are to be protected from any activities and or

Natural Resources – Statutory Goals

Planning Goals – 24 V.S.A. 4302

(5) To identify, protect, and preserve important natural and historic features of the Vermont landscape, including:

(A) significant natural and fragile areas;

(B) outstanding water resources, including lakes, rivers, aquifers, shorelands, and wetlands;

(C) significant scenic roads, waterways, and views;

(6) To maintain and improve the quality of air, water, wildlife, forests, and other land resources.

(A) Vermont's air, water, wildlife, mineral, and land resources should be planned for use and development according to the principles set forth in 10 V.S.A. § 6086(a).

(B) Vermont's water quality should be maintained and improved according to the policies and actions developed in the basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253.

(C) Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.

(10) To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.

businesses that would harm the potability of existing water supplies.

Protecting groundwater is also of interest to St. Albans, because groundwater is the primary source of drinking water for the majority of St. Albans households. A majority of St. Albans is underlain by deposits of unstratified glacial drift and bedrock. Drilled wells in these materials generally yield enough water for domestic or light commercial use.

Agricultural Soils. The latest soil survey in Franklin County was completed by the Natural Resource Conservation Service in 1998. The survey classifies soils on the basis of their structure, form, composition, and suitability for various types of development. The majority of soils in Town are members of Covington, Farmington, Kinsbury, Georgia, and Massena classes, which are all either clays or stony loams which generally do not drain well. The hillside slopes in the eastern section of Town is typically Woodstock class which tend to be excessively drained and predominantly exist on hillside slopes.

Agricultural soils are specifically classified by the Natural Resources Conservation Service as being "prime," of "statewide importance," or of "local importance." Prime soils have very high agricultural potential and few limitations for farming. Soils of statewide importance have good agricultural potential but one or more limitations requiring more careful management.

St. Albans encourages the responsible management of all agricultural soils in an effort to protect and preserve these soils for continued agricultural use, particularly in land use districts that are intended to retain a rural and agriculture-based character.

Natural Resources – Statutory Elements

Plan Elements – 24 V.S.A. 4382

(2) A land use plan, which shall consist of a map and statement of present and prospective land uses, that:

(A) Indicates those areas proposed for forests, recreation, agriculture (using the agricultural lands identification process established in 6 V.S.A. § 8), residence, commerce, industry, public, and semi-public uses, and open spaces, areas reserved for flood plain, and areas identified by the State, the regional planning commission, or the municipality that require special consideration for aquifer protection; for wetland protection; for the maintenance of forest blocks, wildlife habitat, and habitat connectors; or for other conservation purposes.

(D) Indicates those areas that are important as forest blocks and habitat connectors and plans for land development in those areas to minimize forest fragmentation and promote the health, viability, and ecological function of forests. A plan may include specific policies to encourage the active management of those areas for wildlife habitat, water quality, timber production, recreation, or other values or functions identified by the municipality (5) A statement of policies on the preservation of rare and irreplaceable natural areas, scenic and historic features and resources.

(5) A statement of policies on the preservation of rare and irreplaceable natural areas, scenic and historic features and resources.

Refuge in Swanton and provide habitat connection between habitat blocks located in the Green Mountains and the northern portions of the Champlain Valley. There are additional forest blocks located in other areas of town, but these forest blocks tend to be much smaller and fragmented by roads, development, and agriculture.

According to the Agency of Natural Resources Atlas, St. Albans contains several areas likely to contain rare, threatened, or endangered species. These areas include surface water and shorelines around St. Albans Bay, Lapans Bay, Woods Island, and Burton Island. It also includes an area near the VT Route 104 / VT Route 105 intersection near the border with Swanton and portions of Fairfield Swamp.

St. Albans also contains two "Significant Natural Communities." These are areas with rare and high quality "interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them." These areas include a rare Buttonbush Swamp north of Lapans Bay and a Red Maple-Northern White Cedar Swamp community located in Fairfield Swamp.

The Town Forest is located on French Hill and is 162 acres. It is a recreational area and wildlife habitat area. St. Albans adopted a Town Forest Management Plan and is actively managing the forest. In the past, St. Albans logged the forest using low impact sustainable harvesting techniques. Marketable timber was sold by the Town and remaining unsold wood was given to residents for fuel assistance.

Policy: Proactively work to understand the impacts of increasingly severe weather on St. Albans and support efforts to combat and or adapt to the new climate realities.

Meteorological data shows that Vermont is experiencing warmer and short winters combined with experiencing warmer summer days and more severe or significant weather events. These are current realities in Vermont and many scientists believe that these trends may become more noticeable in the near future.

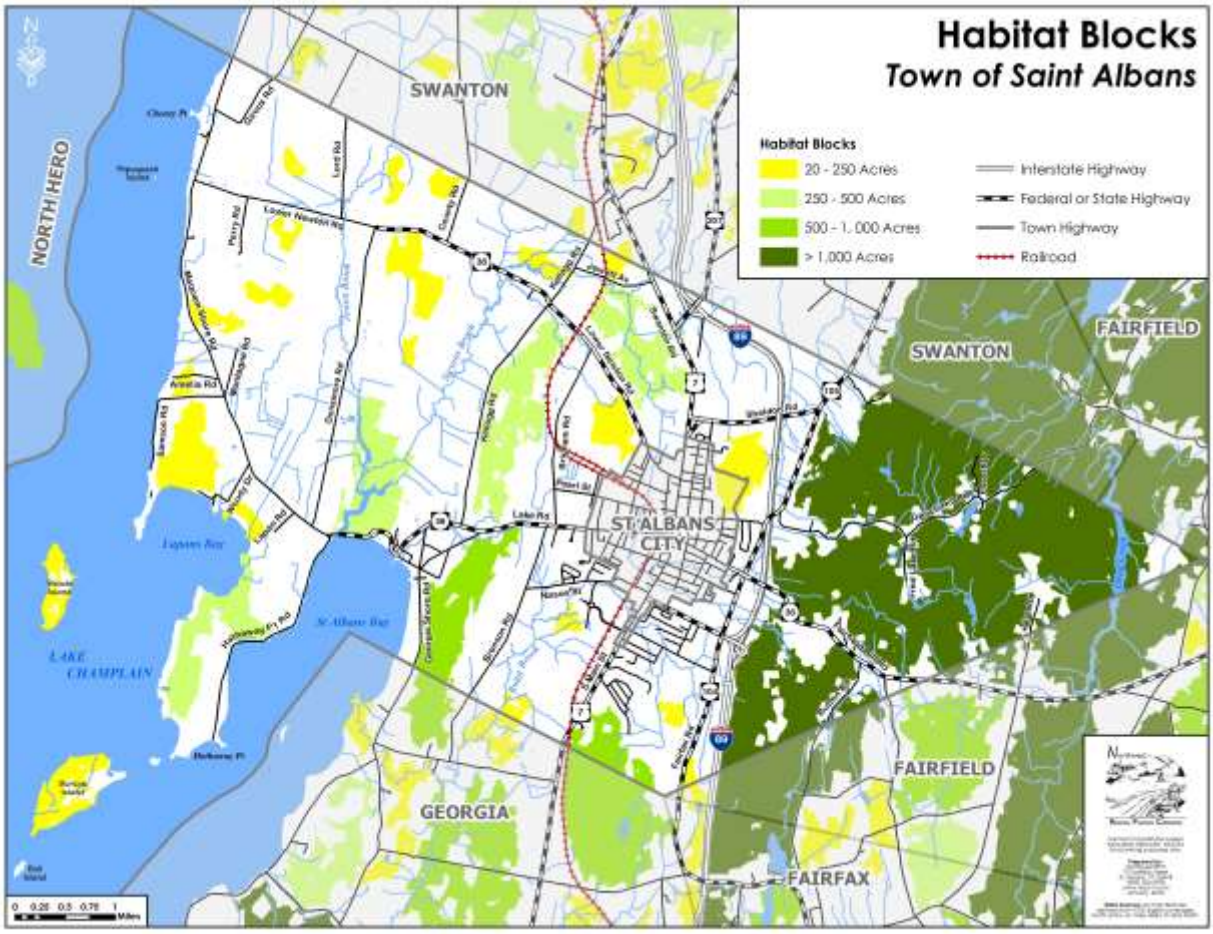
It is important that St. Albans continue to discuss how increasingly severe weather impacts the function of municipal government and the lives of residents regardless of the reasons for these changes. This may include discussing topics as diverse as agriculture, tourism, solar electricity generation, and stormwater infrastructure. The Implementation section contains several actions that the Town can take to combat the impacts from severe weather. These actions pertain to how land and natural resources are used, transportation choices citizens make, and how energy is created and used. All these actions reduce greenhouse gas emissions. St. Albans should continue to monitor climate in Vermont and refine the municipality's role in dealing with severe weather through 2025.

Policy: Protect and preserve scenic locations and scenic roads.

St. Albans is a scenic place. The Town's working landscape and agricultural heritage with rolling fields, tree lines, and farm buildings are a critical component of this beauty. Lake Champlain figures prominently in the sweeping views from the hills on the east of Town, to the views along the lakeshore and the beauty of islands. St. Albans Bay's natural beauty and historic village area also contribute to St. Albans Town's sense of place.

The Town should work to specifically identify scenic locations and scenic roads in St. Albans in the future. The Town should then decide if there should be regulatory protection of the identified scenic locations and scenic roads.

Map 5.3 – Town of St. Albans Habitat Blocks



Policy: Regulate natural resource extraction to ensure extraction does not have an undue adverse effect upon the environment or upon the surrounding homes and neighborhoods.

There are little to no known underground natural resources in St. Albans that have commercial value. Any future natural resource extraction or processing shall be regulated to meet this policy. In addition, any proposal shall include a plan for the rehabilitation of the site at the conclusion of extraction or processing activities.

Emergency Medical Services. Amcare is a private medical emergency response company located in along South Main Street in St. Albans. The Town contracts with Amcare to respond to medical emergencies. Amcare provides service to Fairfield, Georgia and the City. Each town contributes a per capita fee to Amcare in order to receive emergency medical services. The company has 5 ambulances and a staff of 23 employees. Their offices are centrally located making their response to emergencies timely and effective for the Town and the surrounding area.

Health and Human Services. St. Albans has a number of health services provided by organizations in town and surrounding communities. Hospital services are provided by Northwestern Medical Center and Fletcher Allen Healthcare. Additional health and human services can be found at Northwestern Counseling and Support Services. There are numerous doctor offices and health clinics throughout the Town. Emergency help is obtained by dialing 911.

7.2 Goal - Cooperate with other regional and municipal stakeholders to properly plan and finance the expansion of public water, wastewater, stormwater, electricity transmission, electricity distribution, solid waste infrastructure, and telecommunications for the mutual benefit of all participants.

Policy: St. Albans will be an active participant in any effort pertaining to the expansion of public infrastructure and services within the Town and will communicate to appropriate stakeholders regarding any deficiency of public infrastructure and services that exists within the Town.

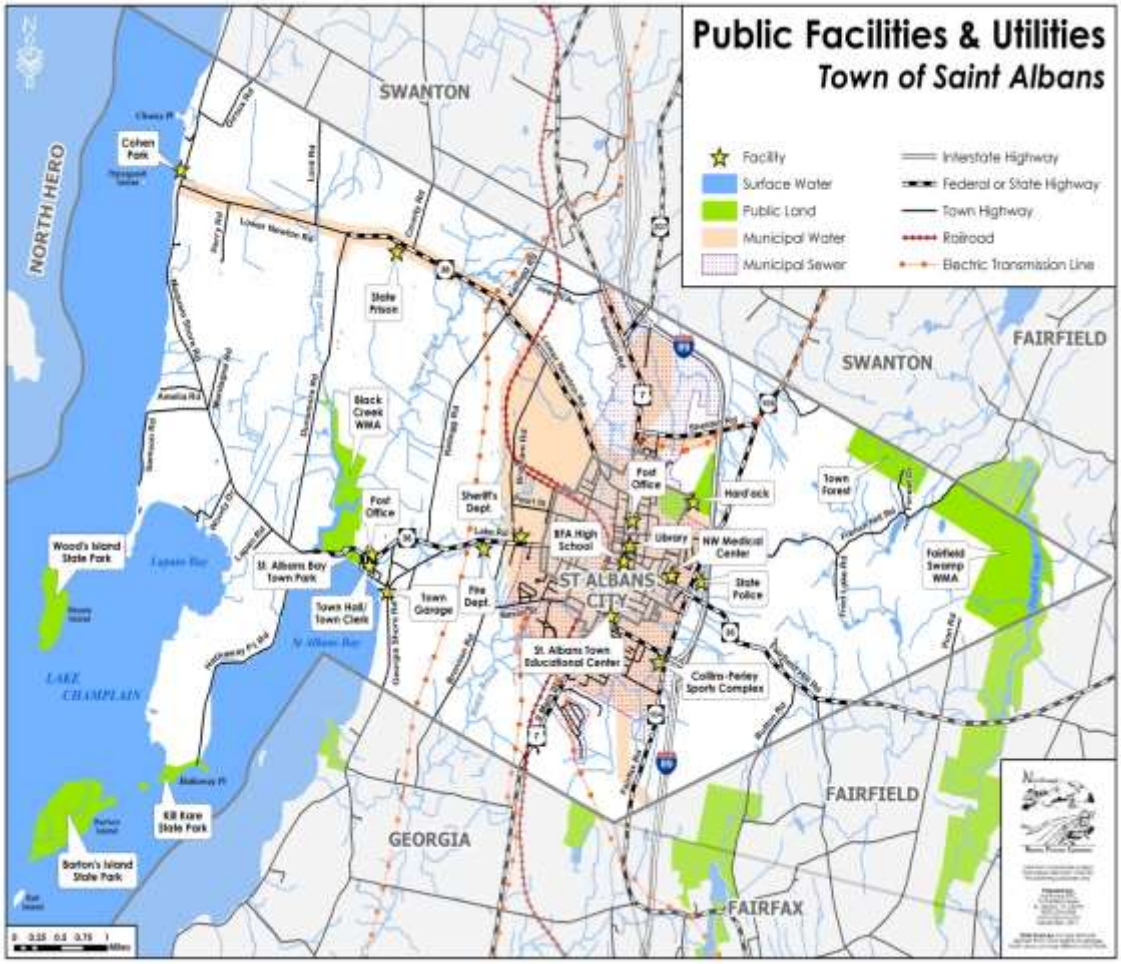
Water and Wastewater Service. The majority of residents in St. Albans rely on privately drilled wells and septic systems for their water and wastewater service. The Town does not have a municipally operated water supply system or wastewater system. The City of St. Albans Water and Sewer Department is to limited areas of Town, which is generally immediately surrounding the City existing service areas.

Water and wastewater systems are under the jurisdiction of the Vermont Department of Environmental Conservation, Division of Drinking Water and Groundwater Protection. Individuals wanting to install a septic system, work on their leach field, or drill a well need to obtain a Wastewater and Potable Water Supply Permit from the State. Any complaint or discovery of a failing septic system may be referred to State by the Town Health Officer.

Stormwater. Stormwater infrastructure and management is discussed in Chapter 10 – Stormwater and Flood Resilience.

Solid Waste. St. Albans is a member of Northwest Vermont Solid Waste Management District (NWSWD) and has a representative on the organization's Board of Supervisors. NWSWD operates a transfer station on Rewes Drive in St. Albans that accepts trash and recycling. Individual households may also contract with a private solid waste hauler for curbside trash pick-up.

Map 7.1 – Town of St. Albans Public Facilities and Utilities



Electricity Transmission and Distribution. Electricity transmission and distribution is discussed in Chapter 8 – Energy.

7.3 Goal - Explore with other regional and municipal stakeholders the expansion of high-speed broadband, gigabit-speed internet, and fiber optic service in Franklin County.

Policy: St. Albans will explore reasonable efforts pertaining to the expansion of high-speed broadband, gigabit-speed internet, and fiber optic service within the Town and will communicate to the appropriate stakeholders regarding any deficiencies that exist within the Town.

Telecommunications. High-speed broadband, gigabit-speed internet, fiber optic service, reliable cellular phone service can have a substantial impact on the economy in rural communities such as St. Albans. Cable, DSL, and wireless internet service are available throughout most of St. Albans. The closest available fiber optic internet service is in the Burlington area. Residents and businesses have a number of options for service providers and can determine what is optimal for their needs.

13. IMPLEMENTATION OF THE PLAN

The St. Albans Town Plan is a living document. St. Albans should be actively using this plan to guide the planning process and enhance decision making. Each chapter has at least one goal and several policy recommendations to fulfill the goal. Some of these will require updating of our ordinances; some are through capital improvements, and some can be accomplished as part of the annual Town budget. All require communication amongst the various constituents and by doing so we will raise public awareness and advance these ideas so they will help St. Albans flourish.

St. Albans is fortunate to have a large number of actively engaged citizens that are eager to make St. Albans an even better place to live. To that end, the Planning Commission will take on the task of evaluating and prioritizing Town Plan goals and policy recommendations. In some cases the Selectboard may create new committees, if one does not already exist, to further reach to goals and policy recommendations in the Town Plan. All meetings will adhere to the open meeting law and minutes will be kept and made public.

13.1 Priority Goals

A goal has been selected from each chapter in the Town Plan, which is listed below to be targeted as a priority. The intent is to draw upon community members that are already in place to help prioritize and implement this plan. The Planning Commission will be charged with overseeing and coordinating this effort. The Chair of the Planning Commission will meet with the Chair of the Selectboard each year in April to determine if the Selectboard would like periodic updates of specific activities of the Planning Commission and to establish a schedule. This is an 8-year plan, so there will be updates several times each year delineating progress and allowing for discussion about the management of planning and implementation process. At those meetings, discussions will be held on this Plan's conformity, address subsequent questions, permit citizens to express concerns about the Plan's implementation, and suggest changes with implementation.

Land Use: Continue to encourage new development in a manner that will promote the public health, safety, prosperity, convenience, efficiency, and the economy of St. Albans.

Transportation: Develop a comprehensive approach to our transportation system that emphasizes the safe and efficient movement of people and goods utilizing a variety of transportation modes that includes public transit, sidewalks, bikeways, multi-use paths, in addition to the movement of cars and trucks along our roads and highways.

Scenic and Natural Resources: Identify, protect, preserve, and transform important natural and scenic features of St. Albans' landscape.

Housing: Facilitate a diverse range of residential dwellings that provide safe and affordable housing for all residents with ownership opportunities for low and moderate income people.

Swanton Town and Village Municipal Plan

Prepared by the
Swanton Planning Commission
Swanton Zoning and Planning Office, PO Box 711, Swanton, VT 05488
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With the assistance of
Leonine Public Affairs
1 Blanchard Ct, Suite 101
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This Municipal Plan update was funded by the State of Vermont Municipal Planning Grant Program.

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Chapter 5. SCENIC AND NATURAL RESOURCES

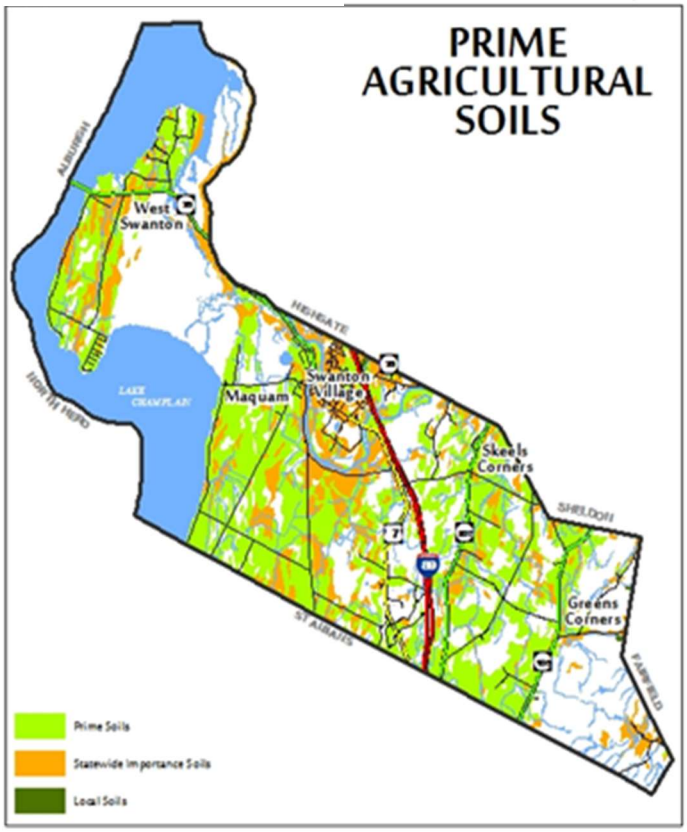
The purpose of this chapter is to describe Swanton's commitment to stewardship of the natural environment and to provide a basis for policies that guide the Town's decisions that will affect the natural environment. The environment is a complex system of interrelated components upon which the Town depends including air, water, soils, plants, and animals. Finding a balance between the preservation, protection, and transformation of natural resources with other community needs is vitally important to ensuring the continued viability of natural systems and the continued high quality of life for Swanton.

Swanton has a number of natural resources. Some of these resources are managed by federal, state, and/or local agencies. Lake Champlain is a resource of international concern. Swanton is committed to the future protection and conservation of these significant resources and is interested in cooperating at all levels. To maintain and encourage a functional, interconnected system of habitats and recreation areas within the Town, region, and state, land uses in Swanton should be directed to appropriate areas.

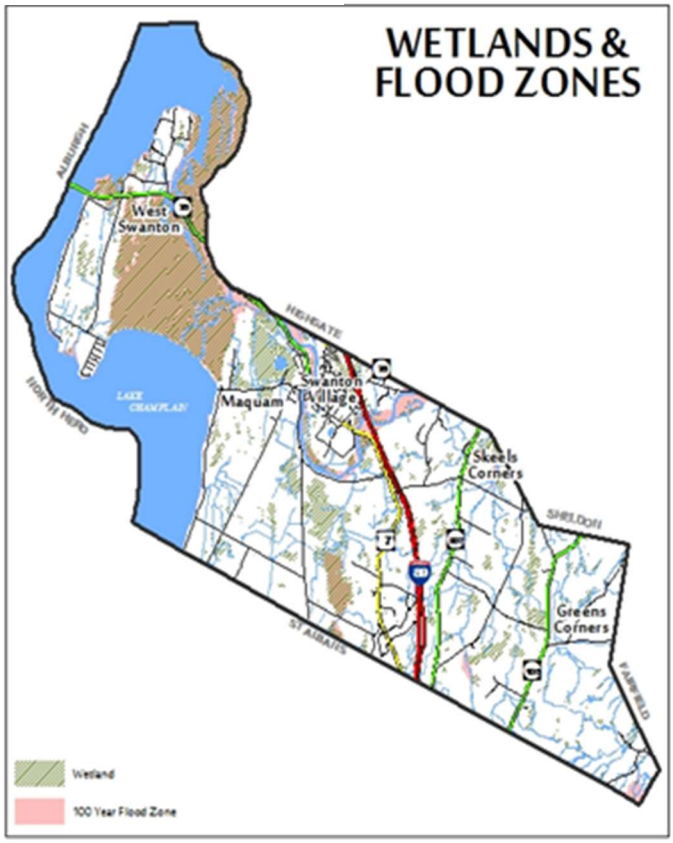
Map 5.1

There are significant natural resources in private ownership including primary agricultural soils, scenic areas, wetlands, and wildlife habitats. Map 5.1 depicts important areas for wildlife habitat including threatened, endangered, and rare species. It is important that these significant resource areas are maintained. Many of these features are part of the working landscape. To protect the landscape, Swanton should ensure that agriculture is adequately protected. Swanton should also investigate the identification and protection of scenic viewsheds within the community.

Map 5.3



Map 5.4



5.1 Goal: ***To protect and maintain the important natural features of Swanton including: Lake Champlain, the Missisquoi River and its tributaries, the Missisquoi National Wildlife Refuge, archeological sites, and scenic areas.***

Policy: Cooperate with and participate in the efforts of state and local groups to ensure that the water quality of Lake Champlain is protected.

Policy: Promote the use of low impact development (LID) through educational programs to minimize the negative impacts of stormwater.

Policy: Protect important vistas and scenic views of Swanton which are worthy of protection.

Policy: Continue to advocate for the removal of the West Swanton Causeway to improve water quality.

5.2 Goal: To identify, maintain, and protect significant wetlands.

Policy: Prohibit all development in Class I and II wetlands and associated buffer areas to protect the value, functions, and biological diversity of wetlands.

Policy: Prohibit development in significant wetlands such as the Missisquoi National Wildlife Refuge and the Fairfield Swamp Management Area.

Policy: Inform and educate the public about the importance of wetlands to wildlife and plant habitat, and the value wetlands have as a local resource.

Policy: Ensure that the Missisquoi National Wildlife Refuge's resource management plan and the Swanton Town and Village Municipal Plan are consistent and compatible with the goals and objectives of each plan.

5.3 Goal: Maintain and protect ground and surface water resources.

Policy: Maintain and protect high quality ground water (particularly wellhead protection areas) and ensure sufficient yields to adequately serve current and future residents.

Policy: Provide safe, healthy conditions for boating and other water-based recreation.

5.4 Goal: To maintain and improve native biological diversity.

Policy: Identify the important habitats of Swanton and work cooperatively with other groups and organizations to ensure their continued protection.

Policy: Regulate new development so as to maintain a functional, interconnected system of habitats within the Town and region.

Policy: Protect and enhance the quality of rivers and streams for fish and wildlife habitats, feeding areas, and travel corridors.

5.5 Goal: To provide for the wise and efficient use of Vermont's natural resources including the extraction of earth resources, and to ensure the proper restoration and preservation of the aesthetic qualities of the surrounding area.

Policy: Ensure existing reclamation requirements are adequate and that the aesthetic qualities of the surrounding area are considered.

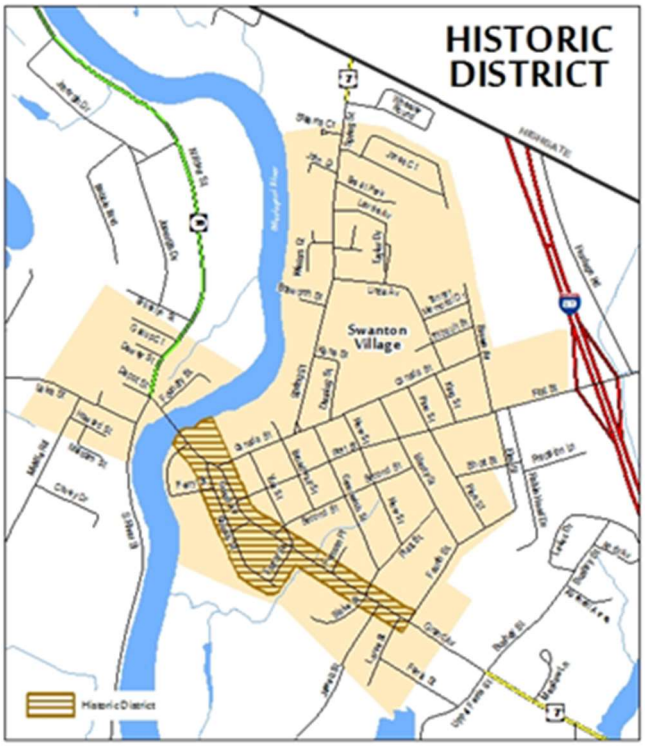
5.6 Goal: To protect the long- term productivity of prime agricultural soils for the production of agricultural products.

Policy: Allow for higher density of development in appropriate areas near the Village Center and in the Southern Growth District.

Policy: Explore various tools including transfer of development rights (TDR) or purchase of development rights (PDR) programs to provide farmers with alternatives from the pressure to develop primary agricultural soils.

Chapter 10: Historic and Cultural Resources

Map 10.1



As Swanton experiences increased growth, historical and cultural resources become more vulnerable and preserving and maintaining this rich inventory can become more challenging. Though Swanton has done a good job at preserving historical structures, several historical and archeological sites have been threatened or lost to development, fire or demolition. It is important that the community dedicate itself to preserve the charm of Swanton Village as a traditional New England settlement.

It is also important to preserve lower Swanton dam and Abenaki cultural sites in the community.

The Swanton Arts Council, a group of local artists and craftspeople, emerged from the 2015 Swanton Community Visit as a unique task force. The Council enhances the exposure and recognition of local artists and promotes artistic collaboration in the community. The Council has been highly successful at recruiting new members, a testament to the untapped artistic potential of the Swanton community. The efforts of the Swanton Arts Council and other groups promoting the arts shall continue to be supported.

The following outlines a series of goals and policies directed to enhance and protect the historical and cultural richness in Swanton.

10.1 Goal: To protect the historic qualities of Swanton Village as a traditional New England settlement and recognize that these resources contribute to the Town's economic well-being.

Policy: Establish a Village Historic District in the Development Regulations. The Development Regulations shall address issues related to exterior architectural and aesthetic guidelines.

Policy: Explore ways in which Swanton's historic and cultural resources can become an element of an economic development strategy. This could include the preservation,

Chapter 11: Recreation

Recreation is a critical component to placemaking. The demand for Recreational opportunities and assets continues to grow with the Town of Swanton's growing population. With the completion of the Lamoille Valley Rail Trail in sight there is momentum to continue to improve and expand on the assets available to the residents and guests of Swanton.

Municipal Parks and Recreation Assets

At present, a total of 36.26 acres of parkland is provided by the Village. In the fall of 2008, 9.5 acres of land adjacent to the John Raleigh Memorial Field Complex was donated to the Town by Shelburne Limestone Corporation and will provide an opportunity for expansion of facilities.

Table 11.1: Park and Recreation Areas in Swanton

Recreation Areas	Acreage	Current Condition
John Raleigh III Memorial Field (Recreation Ball Fields - Jewett Street)	14.50	
Marble Mill Park	5.41	
Swanton Beach, Route 36	2.40	
Village Green	1.80	
Flat Iron Park	0.15	
Goose Point Park	12.00	
Total Acres	36.26	

The Swanton Recreation Commission manages a variety of programs and community events to meet the recreation needs of the community. Youth programs for softball, baseball, soccer, basketball, skiing, and are offered, in addition to an annual summer camp program. Adult programs include basketball and volleyball leagues.

Swanton is also host to several trails, which provide walking, running, biking, and horseback riding routes for residents. The Missisquoi Valley Rail Trail, a 26.4-mile recreation trail, begins in St. Albans and passes through Swanton on its way to Richford. The 96-mile Lamoille Valley Rail Trail begins in Swanton and ends in St. Johnsbury. In July of 2009, a scenic 1-mile recreation trail (called the Swanton Fit and Healthy Trail) was opened as a first segment to the Lamoille Valley Rail Trail. It provided a paved link between the restored railway depot museum, ballfields, and the elementary school.

The Town of St. Albans for the first time in a century is the most populous municipality in Franklin County. The Town of St. Albans is also the largest commerce center in the county with its strong industrial and retail base.

Swanton and St. Albans share natural features including: Lake Champlain, Stearns, Jewett and Hungerford Brooks, open lands, prime agricultural soils, scenic vistas and several trails within the more mountainous areas (eastern side) of the two Towns.

St. Albans Town is a suburban and rural Town surrounding St. Albans City. The Town has established a number of land use districts which adjoin Swanton Town. Along the western boundary is a lakeshore land use area. East of the lakeshore district is a large rural area containing sparse development and several active farms. In the vicinity of Route 7 and I-89, is a commercial area on the west side of I-89 and a light industrial area on the east side of I-89, which is part of the Regional Growth Center. Swanton's Southern Growth District, also part of the Regional Growth Center, borders St. Albans Town in this area. Proposed land uses in this area are compatible.

St. Albans has also established a residential/commercial district along the north side of Route 105 which extends to the Swanton Town line. This District abuts a rural area of Swanton which is still actively farmed.

St. Albans City

The City of St. Albans is surrounded by St. Albans Town and not directly adjacent to Swanton. However, The City provides municipal wastewater treatment and water services to outlying areas of St. Albans Town. The City of St. Albans and Town of St. Albans have recently (2023) engaged in a 20-year contract to share municipal policing and end a generation long dispute over access to the City's water and sewer infrastructure. This is critical for Swanton and realizing its potential growth at the Southern Growth District. The area is served by I-89 and Route 7 and Central Vermont Railroad. Amtrak passenger trains stop in the City.

As mentioned above, St. Albans City's long-range plan proposes extending sewer and water service to areas outside the City adjacent to the Swanton border. Swanton has also discussed cooperative efforts to extend sewer and water to the Southern Growth District. The Town and Village of Swanton wish to encourage joint economic ventures.

Alburgh

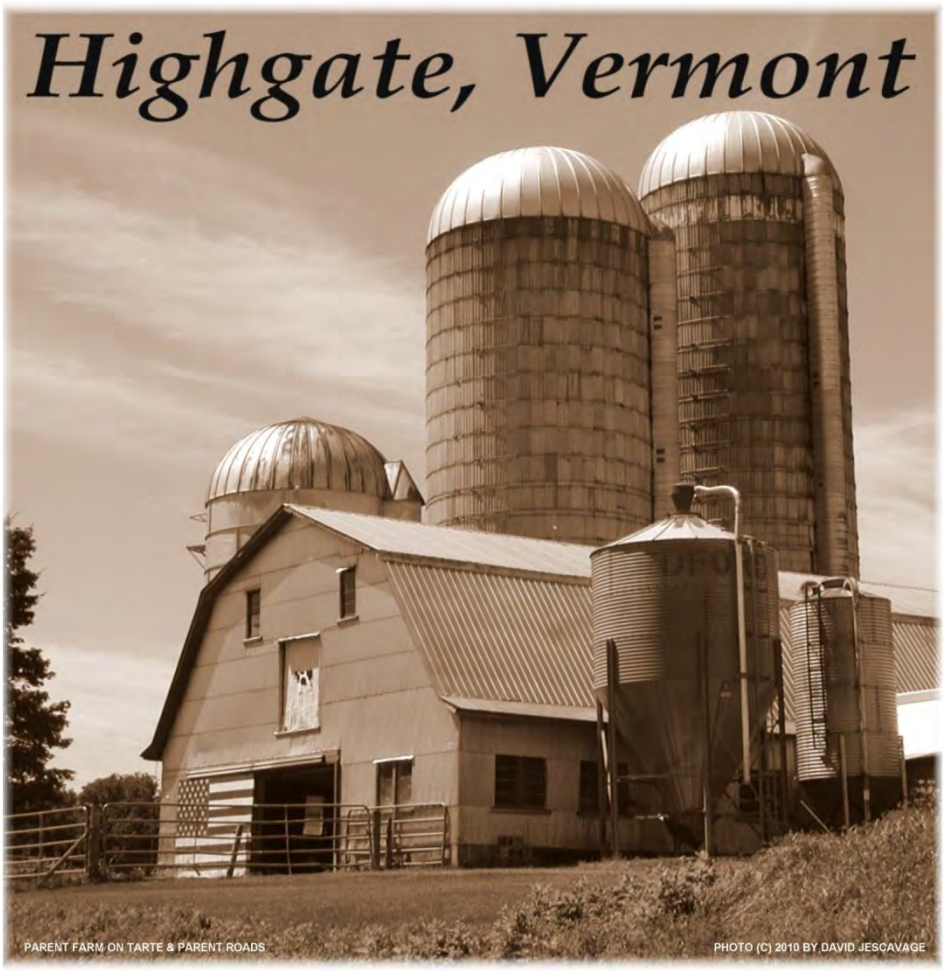
Alburgh Town is located west of Swanton Town, just across the strait of Lake Champlain. The two towns are connected by the Missisquoi Bay Bridge (Route 78) and the Central Vermont Railroad. The Missisquoi Bay Bridge and the Route 78 and Route

Goal Number	Goal	Policy	Lead	Time Horizon	Necessary Resources			
					Staff or Volunteer	Budget	Capital Budget	Grant or Other
5.1	To protect and maintain the important natural features of Swanton including: Lake Champlain, the Missisquoi River and its tributaries, the Missisquoi National Wildlife Refuge, archeological sites, and scenic areas.	Cooperate with and participate in the efforts of state and local groups to ensure that the water quality of Lake Champlain is protected.	Selectboard	Ongoing	Yes	No	No	Potentially
		Promote the use of low impact development (LID) through educational programs to minimize the negative impacts of stormwater.	Development Review Board	Ongoing	Yes	No	No	No
		Protect important vistas and scenic views of Swanton which are worthy of protection.	Development Review Board	Ongoing	Yes	No	No	No
		Continue to advocate for the removal of the West Swanton Causeway to improve water quality.	Selectboard	Ongoing	Yes	No	No	No

Goal Number	Goal	Policy	Lead	Time Horizon	Necessary Resources			
					Staff or Volunteer	Budget	Capital Budget	Grant or Other
		adequately serve current and future residents						
		Provide safe, healthy conditions for boating and other water-based recreation.	Selectboard	Ongoing	No	No	No	No
5.4	To maintain and improve native biological diversity.	Identify the important habitats of Swanton and work cooperatively with other groups and organizations to ensure their continued protection.	Selectboard	Ongoing	Yes	Yes	No	Yes
		Regulate new development so as to maintain a functional, interconnected system of habitats within the Town and region.	Selectboard	Ongoing	Yes	No	No	Yes
		Protect and enhance the quality of rivers and streams for fish and wildlife habitats, feeding areas, and travel corridors.	Selectboard	Ongoing	Yes	No	No	Yes
5.5	To provide for the wise and efficient use of Vermont's natural resources including the extraction of earth resources, and to ensure the proper	Ensure existing reclamation requirements are adequate and that the aesthetic qualities of the surrounding area are considered.	Planning Commission	Ongoing	Yes	No	No	Yes

Goal Number	Goal	Policy	Lead	Time Horizon	Necessary Resources			
					Staff or Volunteer	Budget	Capital Budget	Grant or Other
	restoration and preservation of the aesthetic qualities of the surrounding area.							
5.6	To protect the long- term productivity of prime agricultural soils for the production of agricultural products.	Allow for higher density of development in appropriate areas near the Village Center and in the Southern Growth District.	Planning Commission	1 Year	Yes	No	No	No
		Explore various tools including transfer of development rights (TDR) or purchase of development rights (PDR) programs to provide farmers with alternatives from the pressure to develop primary agricultural soils.	Selectboard	2 to 5 Years	Yes	Yes	No	No
5.7	To ensure that Swanton is a flood resilient community.	Discourage development in identified flood hazard, fluvial erosion, and river corridor protection areas. If new development is to be built in such areas, it shall not exacerbate	Selectboard & Planning Commission	Ongoing	No	No	No	No

HIGHGATE
TOWN PLAN
2023-2031



The Dairy Farming Capital Of Vermont

BK: 204 PG: 393
INST: 00102478

2023 - 2031
Highgate Town Plan

Draft for PC Hearing

formally adopted by the
Highgate Selectboard 07/20/23

Prepared With
the professional assistance and mapping services of the
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- ~~Bruce Ryan~~ Robyn Klein
- Scott Bessette

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Town Administrator
Sharon Bousquet

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Natural and Cultural Resources

SOILS

Soil quality is an important physical factor governing the use of land in rural areas. Soils are classified based on their structure, form, composition, and suitability for various types of development. The most widely used classification system is that of the U.S. Natural Resource Conservation Service (NRCS). The latest soil survey of Franklin County was done by the NRCS in 1998.

Soil characteristics generally depend on particle size (sand, silt, and clay) and water content. Poorly drained, fine-grained (clay) soils have the greatest limitations for most types of development, especially for anything that requires on-site sewage disposal. A good portion of the northern boundary of Highgate, extending south to the Town center is characterized by such poorly drained, silt and clay soils. Upland areas intersperse the dominance of the latter with deep, somewhat excessively drained sandy soils, which are either moderately or marginally suited for on-site sewage disposal. In addition, soils with slopes greater than 20 percent pose severe limitations, with potential seepage problems and slope failure. In total, there are 16,594 acres (43 percent of total land area) of soils not suited for on-site sewage disposal. See the Septic Suitability Map for a complete septic suitability survey of the Town.

In contrast, course grained, well drained sandy soils, though somewhat droughty for agriculture, are best suited for residential, commercial, industrial, and other related types of uses. Moderately well drained, loamy soils are best for onsite septic and often these associations, such as Peru or Cabot have lower slope percentages as well. In total, there are 5,220 acres of soils (14 percent of total land area) well suited for on-site sewage disposal, largely located in the southern portion of the Town.

Some of the best soils for urban development are those characterized as agricultural. There are 6,849 acres (18 percent of total land area) of State designated prime agricultural soils in Highgate.

WATER RESOURCES

Highgate's topography is defined by two watersheds; the Rock River Watershed and the Missisquoi Watershed (See the Water Resources Map). Its dominant surface water resources are the Missisquoi River and Missisquoi Bay. The Missisquoi River serves as an important resource for hydroelectric energy to the region's development. However, such projects have greatly reduced the recreational benefits over the years. The Missisquoi River drains into Missisquoi Bay, a valuable recreational and water resource for the Town and region. While the Bay provides opportunities for swimming, boating, and fishing; problems of pollution continue. Phosphorus loading has been identified as the primary threat to Missisquoi Bay. High phosphorus levels promote the growth of algae and aquatic plants, and reduce the health, aesthetic and recreational values of the Bay. Elevated levels of mercury in walleye are also of concern and a lake-wide health and consumption advisory is in effect.

The Lake Champlain Phosphorus Total Maximum Daily Load (TMDL) establishes maximum allowable phosphorus loads from each sub-watershed of Lake Champlain and the TMDL implementation plan outlines the actions that will be necessary to achieve these phosphorus targets. The Vermont Agency of Natural Resources and the Environmental Protection Agency have reached agreement on a TMDL implementation plan. The plan relies on a combination of regulatory and non-regulatory actions. These actions include best management practices on farms to reduce nutrient runoff, stabilization of stream banks and stream channels, and better stormwater management and erosion control on developable land and roadways. The Town has been working with the Friends of Northern Lake Champlain (FNLC) on identifying areas in the community where water quality issues can be addressed. FNLC is a non-profit organization that works with municipalities and landowners on projects to improve water quality projects as well as providing public education and outreach. The amount of funding available for water quality projects has increased significantly as a result of the Clean Water Service Delivery Act, which was enacted in 2019.

While phosphorus has been identified as a high priority threat to water quality in the Missisquoi Bay, there are also concerns regarding the health of fish and wildlife, the invasion of nuisance aquatic plants, rising mercury levels and other watershed-related issues. The Lake Champlain Basin Program produces a Lake Champlain Management Plan "Opportunities for Action" which identifies actions that should be taken to address the many threats to the health of Lake Champlain.

To further the effort of improving water quality in Missisquoi Bay and Missisquoi River, the Town of Highgate has been working with the Missisquoi River Basin Association (MRBA), a non-profit organization in operation since 1996. MRBA is a volunteer organization that carries out streambank stabilization projects and educational forums about water quality. In 2007, the Town of Highgate, MRBA, the Northwest Regional Planning Commission and the VT River Management Program partnered to complete a geomorphic assessment study of the Rock River. This study documented the condition of the river and identified opportunities to reduce channel erosion, plant stream buffers, replace culverts, and restore adjacent wetlands and floodplains in order to improve water quality and stream stability.

In 2018, the State developed the Municipal Roads General Permit (MGRP) which requires municipalities to complete work on town highways to reduce stormwater-related erosion, promoting good water quality. Highgate has met its target goals for water quality projects and is currently in the process of completing a road erosion inventory.

Subsurface water resources serve as potable supply for residents of the community. Such areas are extensive in Highgate, and include bedrock and gravel aquifer recharge. Areas of greatest sensitivity are northern and far-western portions of the Town, while areas of lesser sensitivity and far greater development potential lie in southern portions of the Town.

The information base defining areas of development limitations is not site-specific. Careful percolation tests and soil borings may well establish sites with few limitations for sub-soil sewage disposal. On the other hand, development must be approached cautiously for areas of noted sensitivity.

East Highgate Bridge over the Missisquoi River, circa 1928
Used with permission from the Highgate Historical Society

FOREST RESOURCES

Highgate has 9,560 acres of forest (18% percent of the total), including 2,666 acres of deciduous forest, 1,527 acres of coniferous forest, 2,707 acres of mixed forest and 2,660 acres of forested wetland. Highgate's forests provide quality forest products while supporting tourism, recreation, wildlife habitat, and the scenic, rural nature of the Town. Protecting the Town's forest resources is very important to the people of Highgate therefore the Town has created two areas of forest reserve making up 3,879 acres. The forest reserve is valuable forested land that lacks access to public roads, is important for wildlife and wildlife habitat, has potential for commercial forestry, or has one or more physical limitations to development.

FRAGILE, NATURAL, AND ECOLOGICALLY SENSITIVE AREAS

Fragile Areas

According to Title 10 VSA, Chapter 158, Section 6551, a fragile area is "an area of land or water which has unusual or significant flora, fauna, geological or similar features of scientific, ecological, or educational interest". Under Chapter 158, the Department of Fish and Wildlife is mandated to create a Fragile Areas Registry, which is designed to identify and educate rather than regulate. The Missisquoi River Delta (within the Missisquoi National Wildlife Refuge) is listed. The river delta, shared by the towns of Highgate and Swanton, consists of approximately 1,500 acres of freshwater marsh and swamp. Aside from its rich ecological wildlife value, the area has hydrological potential as a major source of potable ground water. The Missisquoi National Wildlife Refuge consists of 6,642 acres of quiet waters and wetlands that attract large flocks of migratory birds. Upland areas consist of a mix

north of Campagna Road, and an area of 40 acres is located in Medium Density Residential District around the intersection of Morey Road and Brosseau Road. These areas provide winter shelter and browse for deer, and are critical to the long-term survival of the local deer population.

Steep Slope

Areas characterized by slopes of greater than 20 percent are noted since septic seepage and aesthetic considerations play a part in land use development decisions. Steep slopes characteristically have shallow soils and frangipan areas, which are hard brittle layers below the soil surface, which present considerable constraints to many types of development.

Development on steep slopes can be expensive for the municipality as the costs of road maintenance, including runoff maintenance and sedimentation problems, are much higher on steep slope areas. School bus and fire service may also be difficult, expensive, and even impossible depending on weather conditions. Considerable environmental problems may arise from development of steep slopes presenting hazards to those residing within the areas as well as those outside. Development on steep slopes may upset the natural slope repose angle, which with the removal of vegetation and the injection of effluent by onsite sewage removal, will increase runoff, erosion, and the possibility of mass movement or slumping. Slippage of foundations can also be common in steep sloping areas.

Septic tank disposal fields located on slopes greater than 20 percent may result in partially treated effluent surfacing and seeping into the down slope surface causing health hazards and possible nutrient enrichment of surface water, not to mention aesthetic problems. Much of the effluent that does remain under the shallow soil of steep slopes may flow laterally and result in groundwater contamination or the surfacing of effluent at outcrop or frangipan areas. Development should therefore be limited to slopes of less than 20 percent, especially when it requires on-site sewage disposal.

Habitat Blocks and Connectors

Maintaining large unfragmented habitat areas is critical to supporting large animal species and habitat functions. Over time even low-density rural development and roads can fragment these areas, threatening the health, function and value of these habitats. The highest priority habitat block in Highgate is in the southwest corner of Highgate. Much of the habitat block is protected as part of the Missisquoi National Wildlife Refuge, protecting it from fragmentation. Other priority habitat blocks are shown on Map 4.4

Air Quality and Climate

Climate represents the normal or average type of weather conditions that are characteristic of an area over a long period of time. In general, Vermont's climate is dominated by cold dry air from sub-arctic Canada, particularly in the winter months, and warm, moist air, which moves northward from the Gulf of Mexico, mainly during the summer. Highgate is located along Lake Champlain, which provides some moderating effects to the climate.

Meteorological data shows that Vermont is experiencing warmer and short winters combined with experiencing warmer summer days and more severe or significant weather events. Highgate will need to prepare for the impacts of this severe weather to ensure climate resilience.

Air quality is generally high throughout Vermont, especially in rural communities such as Highgate. Motor vehicles are the largest source of air pollution in Vermont, which can create localized areas of poor air quality where traffic is congested Air quality can also be impacted by weather patterns which carry pollutants from other areas, such as in 2021 when fires in Southern Canada impacted air quality across northern Vermont.

CONSERVATION PROVISIONS

In effort to preserve some of Highgate's most cherished resources, the Town passed a Forest Reserve District of 3,879 acres and a Protected Area District of 1,564 acres, which each have limited development provisions. In 2004, the Planning Commission offered new amendments to the Town's zoning bylaws that would further protect these districts. These amendments did not pass. The land in the Protected District contains vulnerable wetland, wildlife habitat, soils, and/or slope unsuitable for development. The Forest Reserve District, as identified earlier under forest resources, contains valuable forested land that lacks access to public roads, is important for wildlife and wildlife habitat, has potential for commercial forestry, or has one or more physical limitations to development. See Chapter 8 (Land Use) for full descriptions of each district and elaboration on conservation strategies. Each land use district can be identified on the Proposed Land Use Map.

EARTH RESOURCE OPPORTUNITIES

Highgate was endowed with extensive sand and gravel deposits, particularly, along the Missisquoi River basin. Several have been and/or are still being exploited commercially for concrete production and ultimately construction activities in and out of the region. While these mineral resources are of value to the Town, care must be taken of harmful side effects to other resources; extensive aquifer recharge areas are possible in subsurface portions of mining locations. In order to avoid siltation and resultant harm to potable water supplies, preventive engineering measures should be employed. This resource is becoming scarcer due to development in the area over the past several years. These deposits will eventually no longer generate industrial revenue or provide employment in Highgate, other opportunities should be considered. In addition, once the mineral is depleted, appropriate reclamation activities can once again make the area suitable for urban and recreations activities.

NATURAL RESOURCE GOALS

1. Protect ecological and resource sensitive areas such as wetlands, fragile soils, steep slopes, wildlife habitat, and State designated natural and fragile areas from inappropriate development.

2. Maintain the character of the Town through the preservation of the environmental resources that make Highgate unique: including the Town's forests, wildlife habitat, biological diversity, shore land and water resources, scenic vistas and agricultural land.

NATURAL RESOURCE OBJECTIVES

1. Prohibit development in areas that threaten potable water supplies, such as wellhead protection areas.
2. Regulate shore lands to ensure land use development and other activities do not degrade water quality in the Bay.
3. Ensure new development does not have a detrimental effect on air quality.
4. Discourage fragmentation of important habitat blocks and encourage clustered development.

NATURAL RESOURCES ACTIONS

1. Identify important wildlife and plant habitats in the Town of Highgate and work with other groups to maintain their continued protection.
2. Guide new development away from productive agricultural and forest soils and consider slope and soil characteristics when reviewing individual development proposals.
3. Improve access and trail maintenance in the Highgate Cliffs Natural Area.
4. Identity the important vistas and scenic features in Highgate that are worthy of protection.

TABLE 5.5 – EXISTING RENEWABLE GENERATION		
Generation Type	**MW**	**MWh**
Solar	13.5	29,062.85
Wind	0.00	0.00
Hydro	9.40	32,937.60
Biomass	0.00	0.00
Other	0.00	0.00
Total Existing Generation	22.9	62,000.45

Table 5.5 organizes information about existing generation in Highgate by type of facility. Appendix A contains a map that shows the location of all electricity generators in Highgate with a maximum generation capacity greater than 15 kW.

Highgate generally has good access to electricity transmission lines and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. Access to this type of infrastructure may make development of renewable energy facilities easier and more cost-effective than in other surrounding communities with less existing grid infrastructure. Appendix A contains a map that shows the electricity transmission and three-phase distribution infrastructure in Highgate. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

One barrier to the development of new energy generation facilities in Highgate is constraints on the electrical transmission grid. After the addition of the Kingdom Community Wind plant in the Town of Lowell, the Sheffield-Highgate Export Interface (SHEI) was created to monitor the system and flows in relation to system capacity in Northern Vermont. Generation resources in this area are often required to curtail their output due to the lack of capacity to export power. This issue will need to be addressed on a statewide basis for Highgate to meet its energy goals.

While not included in the targets for energy use and generation, another potential source of energy in Highgate are anerobic biodigesters. Biodigesters capture methane from manure or food waste and convert it into a renewable gas which either can be used in natural gas pipelines or transformed into electrical energy on-site through use of a generator. Anerobic biodigesters can have beneficial climate impacts as they reduce methane emissions and can offset use of traditional natural gas. Biodigesters can also provide an important source of income for farmers. A major barrier to the expansion of biodigesters is that many small farms do not generate enough manure to make the biodigester profitable. Highgate supports efforts to expand on-farm anerobic biodigesters with creative solutions including digester hubs and micro digesters.

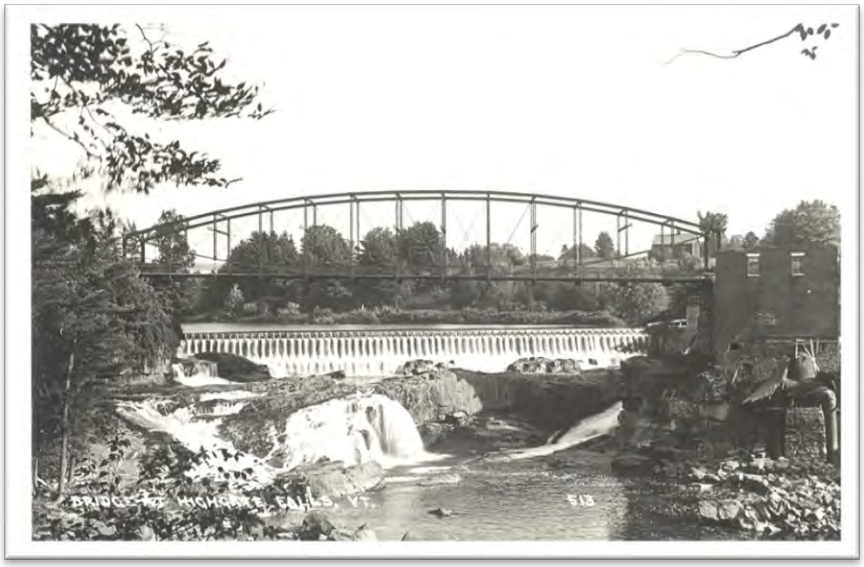
EQUITY AND AFFORDABILITY

Reaching Highgate's energy goals will bring both environmental and economic costs and benefits. The equity issues related to who will bear those costs is of continuing concern to Highgate. A just energy transition requires that all residents have equitable access to the benefits and costs of the energy transition. The efficiency of green technologies offers savings for consumers as seen with electric vehicles, electric heat pumps, newer appliances, residential solar, etc. These technologies often require upfront investment, making them more difficult to access for residents with lower income. Low-income workers in Vermont also tend to work in industries that are more susceptible to the effects of climate change such as tourism and agriculture and are often disproportionality impacted by natural disasters like flooding. Equity for all residents will be considered in every decision about energy.

Highgate has abundant solar resources. Many of the areas with solar potential are considered "base" solar, most commonly because of the existence of agricultural soils. The solar map indicates a general concentration of prime solar areas around the northern portion of Interstate 89 near the border crossing and in the vicinity of East Highgate. Highgate has identified the following preferred locations for solar generation facilities: rooftops, parking lots, and landfills. Brownfield sites located outside of the village are also considered preferred locations.

Highgate has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community's dedication to preserving the aesthetic and rural qualities of Highgate by restricting the geographic size of solar facilities. In addition, Highgate prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to "break up" the visual impact of two or more solar facilities located next to each other. All solar facilities shall include proper screening. Highgate hopes to adopt a municipal solar screening ordinance in the near future.

There generally isn't much land available in Highgate that has base and prime wind resources. These areas are generally concentrated south of Highgate Springs on US Route 7 and north of Highgate Village off Gagne Road.



Highgate Falls Dam, circa 1900
Used with permission from the Highgate Historical Society

HYDRO AND BIOMASS

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays "base" and "prime" areas. However, these categories are not necessarily indicative of generation. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

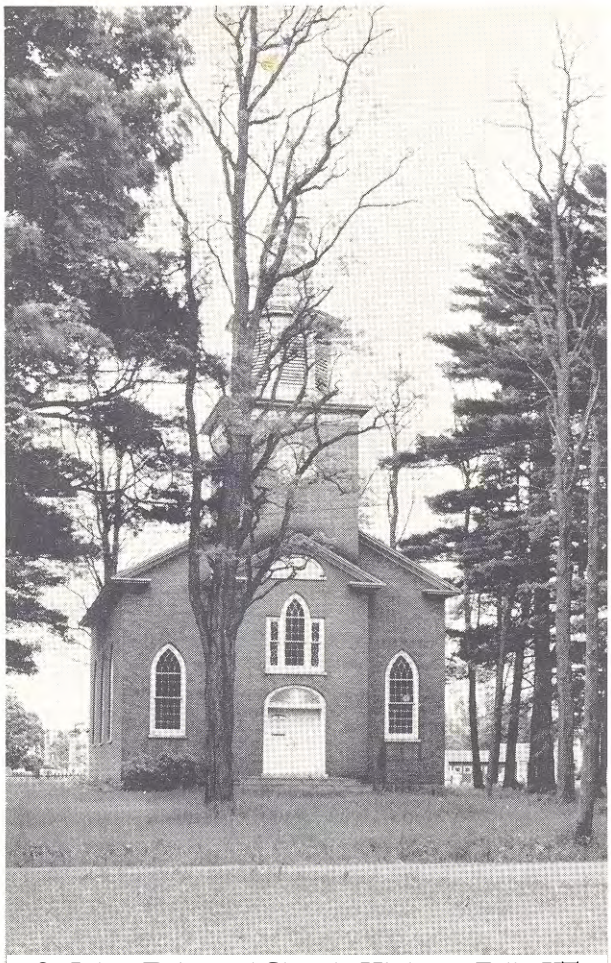
The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide generation capacity. Data about these dams comes from a study

CHAPTER 7
Community Facilities and Services

INTRODUCTION

Community facilities include those institutions that provide a civic and social system function. Facilities providing education, recreation, and safety are of particular interest to Town government, and since most of these facilities and institutions are developed by and paid for by the entire community, they become by their very nature part of public policy.

Every facility or institution costs money, usually paid through local taxes. If these features are desirable then it is money well spent. However, working at cross-purposes or duplication of efforts wastes a very limited tax resource. As the demand for public expenditure increases, it is incumbent upon the developers of public policy to achieve the necessary coordination. Facilities and institutions can be used to shape and implement all phases of community policy. The location of roads, Town offices, and services for instance, governs to a major extent the development of land. Similarly, school placement and expansion can govern the pace of residential development.



St. Johns Episcopal Church, Highgate Falls, VT
Used with permission from the Highgate Historical Society

EDUCATIONAL FACILITIES

It is with great pride that the teachers of Highgate Elementary School serve the children, families, and taxpayers of Highgate. They are dedicated to giving quality educational services and actively pursue professional development opportunities. The School's goal is to provide an exceptional education to all children regardless of their abilities and/or disabilities. The School strives to make all children lifetime learners by providing them with the skills to be productive members of the workforce and citizens who will be leaders in our Town, State, and Nation.

The Highgate Elementary School is governed by an elected school board of three dedicated public servants. They are responsible for developing all school policies, which set the pathway for school operation. The second primary responsibility of the School Board Members is to establish a budget and monitor expenditure of all funds. Each bill is reviewed and authorized before payment. This process guarantees that the taxpayers' hard-earned dollars are expended in an appropriate manner.

Missisquoi Amateur Hockey Association. Both of these groups host games at the arena. Teams come from all over Vermont, New York and Canada to play. The Arena also sponsors ice skating lessons and a full-scale public skating program. Part of the schedule contains hours dedicated to other organizations that rent the arena for non-scholastic hockey games. The Men's Hockey League and Broomball League for example, consume many available hours of ice at the Arena. The Highgate Elementary School conducts a six-week ice skating program at the Arena as part of the physical education program.

Other Facilities

Highgate also has other recreational facilities and sites such as the Highgate Springs Boat Launch Rock River Boat Launch, the Riverwalk Trail, the Missisquoi National Wildlife Refuge, Highgate Cliffs Natural Area, Northern Forest Canoe Trail, and the Tyler Place. The Town owns and maintains the single launch boat facility on Shipyard Bay Road next to the Tyler Place. The launch serves small craft during the summer months and it has an area to get shanties out onto the ice during the ice-fishing season. Capitalizing on the lake's recreational potential by increasing public access areas and developing recreational activities that relate to tourism will benefit everyone both economically and recreationally.

In summer of 2004, volunteer efforts led to the construction of a one-mile walk/run/bike path around the perimeter of the elementary school property and the ice arena. In addition, a canoe access area has been prepared by the Missisquoi River Basin Association and the State of Vermont Fish and Wildlife Department has built a small boat launch off the Waugh Farm Road.

The Tyler Place is a private family resort on Shipyard Bay of Lake Champlain. The family geared resort has drawn families from across the country to Highgate for summer vacations for over 70 years and is a vital part of Highgate's small tourist economy.

Natural Areas for Recreation

The Missisquoi National Wildlife Refuge was established in 1943. It is located on the eastern shore of Lake Champlain near the Canadian border in Franklin County. The 5,839-acre refuge includes most of the Missisquoi River delta where it flows into Missisquoi Bay. The Refuge consists of quiet waters and wetlands that attract large flocks of migratory birds. Protecting and managing wildlife habitat is the primary goal of the Wildlife Refuge; therefore, care must be taken when visiting the area. Many types of recreational and educational activities exist at the refuge. Boating, fishing, wildlife observation, hiking, photography, and hunting, are just some of the activities one can enjoy at the refuge.

Highgate Cliffs Natural Area is located in Highgate State Park above Missisquoi Bay on Lake Champlain. It is approximately thirty-seven acres in size with elevations ranging between 100 and 252 feet. This natural area includes three significant natural communities and supports several uncommon or rare plant species. There is also a hiking trail located in the State Park. Visitors to the trail can observe panoramic views of northern Lake Champlain. The three natural communities include the following: a warm calcareous cliff community, a calcareous talus (rock fall), and a lakeside cobble shore. The Town is currently working with the state to develop long range management plan for the area.

The Lamoille Valley Rail Trail will be completed in 2023. This 96-mile corridor runs from St. Johnsbury to Swanton, and crosses the Missisquoi Valley Rail Trail in Sheldon. As of 2022, a section

CHAPTER 9
Land Use

EXISTING LAND USE

Land in Highgate is used primarily for agriculture or is considered forestland. The Town covers 59.8 square miles (38,279 acres), 11.5 square miles (7,291 acres or 19 percent) of which are covered by water. Of the 38,279 total acres, the number of acres in agricultural use is 16,057 acres, or 42 percent of the total. The number of acres of forested land is approximately 9,559 acres, or 18 percent of the total. Wetlands, shorelines and other non-buildable locations account for 14 percent of the land area in Highgate. The remaining 7 percent of the acreage in the Town is used for residential purposes, as either available for residential development, or for transportation purposes.

TABLE 9.1 LAND USE ACREAGE (2003)

Land Use	Acres	Percent
Residential	1,633.87	4.27%
Transportation/Utilities	965.97	2.52%
Commercial	22.99	0.06%
Industrial	8.21	0.02%
Other Urban	2.15	0.01%
Row Crop	10,790.41	28.19%
Hay/Pasture	4,947.52	12.92%
Other Agricultural	319.56	0.83%
Deciduous Forest	2,665.51	6.96%
Coniferous Forest	1,526.65	3.99%
Mixed Forest	2,706.71	7.07%
Forested Wetland	2,660.60	6.95%
Non-Forested Wetland	2,718.06	7.10%
Barren Lands	20.26	0.05%
Water	7,291.01	19.05%
Total	**38,279.47**	**100%**

The Town of Highgate has four areas of State owned land covering a total of 668 acres. These areas include Highgate State Park (which is within the Highgate Cliffs Natural Area) covering 37 acres, the Rock River Access Area covering 7 acres, the Rock River Wildlife Management Area covering 296 acres and the Franklin County Airport covering 348 acres. The boundaries and locations for all of these can be found through the Survey Section of the Vermont Department of Forests, Parks, and Recreation and are identified on the Facilities and Utilities Map.

Settlement in the Town is typically spread out either along the existing roadways or along the shoreline. The overwhelming majority of development since 1980 has followed this pattern. Commercial and industrial development is primarily located along VT 78 and within the village areas. A small number of individual enterprises are scattered throughout the Town, and many home occupations are operating as well, although the exact number is unknown. Commercial "strip" forms of development have been occurring along State Road 78 west of Highgate Center, particularly near the Franklin County State Airport. The Missisquoi Valley Union High School is also in the area, and combined with adjacent commercial development, has created serious traffic conflicts along this stretch of roadway.

Residential development is by far the greatest growth industry in Highgate, making it somewhat of a "bedroom" community in many respects. The great majority of residential land use occurs within about two miles of Highgate Center, particularly east and west along State Route 78. Increased residential land use is also developing near U.S. Route 7 in the southwest quadrant and north of the State-owned airport. Other lesser areas of existing and growing residential land use are Highgate

AGRICULTURAL DEVELOPMENT

The Town of Highgate lies in a fertile and agriculturally important part of the Champlain Valley. Dairy farming, maple sugaring, commercial orchards, and produce farming are the primary agricultural activities still being practiced in the Town. Prime agricultural soils are an important Town resource. In Highgate, the number of acres in active agricultural use is, approximately 42 percent of the total (based on 2003 Land Use and Land Cover data).

According to the 2020 Grand List, there are approximately 55 parcels with farm buildings in Highgate, representing 51 different landowners. This number has decreased by 10 since 1987 when the State Property Valuation and Review reported that there were 65 farms in Highgate. The number of farms in Franklin County has continued to decrease from 770 farms in 2002 to 729 farms in 2017. While in some areas the number of farms has decreased, the total acreage in production may not have due to the consolidation of agricultural land into fewer owners who work larger parcels of land. However, it is likely that in Highgate the number of farms as well as the acreage have both decreased over the past two decades.

The loss of productive agricultural land may be due to the development of existing farmland for residential use which is currently more profitable for the individual landowners. This creates strong pressure for development, presenting landowners in Highgate with difficult decisions to make. It is important to remember that agricultural and forestry landowners provide a public benefit by not developing their property, and cost the Town little in terms of municipal services. Keeping land in production provides pastoral scenic vistas, important wildlife habitat and other services, which contribute positively to the Town and region. These aspects of farmland that help maintain the rural character and high quality of life in the community cannot be overlooked.

The State of Vermont offers programs that tax agricultural and forestry property according to its use value. The purpose of these programs is to keep agricultural and forested land in production, and to slow development on these lands. In each program, the property must remain in agricultural or forestry use in order to receive benefits. A large proportion of property tax revenue lost to the Town is reimbursed by the State. The programs, administered by the Property Valuation and Review Division of the Vermont Department of Taxes, are Agricultural Land Program, Forest Land Program, Farmland Program, and Working Farm Tax Abatement Program. The State Legislature constantly threatens to eliminate or reduce funding for these programs. As of 2020, 93 parcels are part of one of these current use programs, with a total of 13,731 acres.

On-farm businesses are increasingly important to the viability of the local farms. Expanded retail sales and agritourism opportunities such as farm stays, tours, and tastings can be important sources of revenue for farms. To promote these businesses, the Vermont State Legislature passed Act 143, which requires that municipalities allow for on-farm sales and/or events that meet the definition of an accessory on-farm business.

By state statute, accessory on-farm businesses must be clearly subordinate to the primary use of the property as a farm and meet one of the following two standards:

THE LAND USE PLAN

Future land use in the Town of Highgate has been established by the Planning Commission, and is based on natural resources and other data provided through the Northwest Regional Planning Commission. The following policy criteria were used to approach the land use plan:

1. Locations poorly suited for development
   - Development will avoid areas with steep slopes or be carefully controlled to avoid unnatural erosion.
   - Development will generally avoid areas with shallow soils.
   - No housing units would be permitted in areas where depth to seasonal high-water table is 0 to 1 1/2 feet.

2. Resource Lands and Natural Areas
   - Development within shoreline areas of streams, lakes, or ponds, will be compatible with the natural beauty of the area, protect existing vegetation, and be set back sufficiently to prevent erosion or pollution. Where possible, visual and physical access to the water bodies will be retained.
   - Unique natural areas will be protected or reserved for their aesthetic and recreational value.
   - Wildlife habitats as identified are protected from development.

3. Areas Potentially Hazardous to Human Life and Health
   - No land alteration that interferes with the natural flow of waters to surface waters will be allowed.
   - Development in an aquifer protection area, which will contaminate a public water supply, will not be permitted.
   - All development other than uses and structures essential to the operation of agriculture, forestry, outdoor recreation, and wildlife protection will be restricted in floodways.

PROPOSED LAND USE DISTRICTS

Land use districts were delineated for the Town of Highgate. The Districts are conceptual (not necessarily site specific) and will become the basis for the zoning districts; zoning bylaw updates closely follow the District delineation in the Plan. Referring to the District land use map, the intent of classification is as follows:

Agricultural District (A.D.) - The Agricultural District is designated for land best suited for, and primarily used for, agricultural purposes. This district includes the prime tillage areas, pastureland, and farm woodlots. Due to soil conditions and the district's location with respect to existing and anticipated land use patterns, much of this district remains economically viable for agriculture and should, to the extent possible, be preserved for agricultural use. Agriculture business (agribusiness) and limited residential uses are permitted so as not to interfere with, or materially alter, the primary character and designated uses of the Agricultural District.

Medium Density Residential (M.D.) - This district is intended to accommodate traditional country living characteristics. Due to the soil characteristics, terrain and highway access, the land in this zone must be put to a lower intensity of use than the high density zone. A medium density of development should manage to preserve the environment and character of this zone, even though Planned Unit Developments are permitted as a conditional use. The highest densities in the classification should be

located closest to village centers, where public water and sewer facilities can be provided most efficiently. Residential development should provide for a variety of dwelling types and for the needs of people of all income levels and ages.

Village District (V.D.) - This district of high residential density consists of the locations within the Town where it is desired that development occur which can accommodate the majority of the population growth in Highgate. These districts have been selected because of existing settlements, anticipated patterns, existing and future public facilities and services, suitable soils and other physical characteristics. The development of these districts with urban uses affords the best opportunity for the existing and future provision of economically feasible public facilities and services while providing an orderly separation of these uses from other legitimate land uses within the Town. High density residential, commercial and many public and quasi-public facilities and services are intended to develop in these districts. This provides for the highest level of access to shopping for persons living in a multifamily housing environment, i.e. senior housing complexes. This district also provides the more concentrated forms of commercial use in village centers and restricts the tendency toward roadway "strip" development.

Industrial/Commercial (I/C) - This district is intended to afford the opportunities of increased municipal tax base and employment opportunities in manufacturing, warehousing, and service functions for the citizens of Highgate and the entire region. It enables commercial uses that specifically serve the industries or their employers. The district needs to be serviced by good transportation facilities and public utilities. Single family dwellings and duplexes have been approved as conditional uses in this district. To service the industrial potential, Highgate may consider developing and maintaining adequate water supply, sewage disposal facilities, and roads for this district.

Shoreline (S.L.) - The shoreline district in Highgate is shoreland along Missisquoi Bay. The purpose of the Shoreline District is to provide management policies reasonably consistent with existing development and use, to provide for the beneficial use of public waters by the general public, to provide a balance between the bay resource and bay uses including the protection of habitat and water quality, and to protect areas unsuitable for development. New residential development within this shoreline district should protect public access to the bay, be compatible with the visual quality of the area, protect existing vegetation, and not cause any water pollution problems. Outdoor recreation uses are encouraged. Expanding or new commercial development should not be permitted.

Protected Areas (P.A.) - Protected areas are so designated to control development in unique and irreplaceable areas of natural beauty, where shallow soils, steep slopes, fragile vegetation, wetlands, or wildlife habitat may occur. Areas providing significant recharge to the ground and surface water supplies lie in this district. Because of the fragile resources and limitations to development, no community facilities and services (water and sewer) are provided to these areas. Limited compatible land uses could be permitted in this district, such as outdoor recreational activities that do not involve large structures and forestry that does not create erosion problems or harm unique and fragile areas.

Forest Reserve (F.R.) - The purpose of the Forest Reserve District is to protect the natural resource value of a portion of Highgate that is essentially undeveloped, lacks direct access to article and collector roads, is important for wildlife and wildlife habitat, has potential for commercial forestry use, has one or more physical limitations to development, and includes significant natural, recreational, or scenic

resources. Class III roads in the district are to be maintained but no Class IV roads are to be upgraded for at least the next five years. No further facilities or services should be considered for this district other than what has already been planned or established. This limits the residential development to only what can be accommodated by existing infrastructure. Outdoor recreational uses, conservation uses and forestry practices that are compatible with the district purposes and do not require additional facilities and services are permitted.

Airport Overlay (A.O.) - The purpose of the Airport Overlay District is to limit the height of objects in the vicinity of the Franklin County Airport and to prevent their interference with safe and efficient operations of the airport. In addition, the district is created to encourage and enhance the ability to establish associated industry and commercial uses as appropriate, and in conformance with the Airport Master Plan completed by the State of Vermont.

Flood Plain (F.P.) - The Flood Plain District is the area delineated on the Flood Insurance Rate Map for the Town of Highgate by the Federal Emergency Management Agency (FEMA). The requirements of this district are promulgated to minimize and prevent the loss of life and property, the disruption of commerce, the impairment of the tax base, and all extraordinary public expenditures required following flood disasters. Establishment of this zone is also meant to ensure that the design and construction of development in special flood hazard areas is accomplished in a manner that minimizes or eliminates the potential for flood damage. This district is to be administered according to the National Flood Insurance Program (NFIP), which is required for community eligibility in the NFIP and thereby ensures availability of flood insurance to property owners.

CHAPTER 11
Recommendations for Implementing the Plan

In order to have an effective Town Plan, it is essential that the recommendations contained within it be implemented. Implementation takes many forms, from amending bylaws and Town ordinances to working with community groups and organizations on new projects. It is important to periodically review the Plan to prioritize implementation steps and to ensure that all recommendations are being considered. In addition, the Town should work to develop a timeline for implementing the goals of the Plan. Although the Plan is set in a eight-year time frame, many of the goals are long-term, and require continuous effort. Each action in the implementation plan includes a goal timeframe of short (1-3 years), medium (4-6 year) or long (6+ years).

Social and Economic Resources		
Implementation Action	*Timeline*	*Entity Responsible*
Extend water and sewer infrastructure to the Franklin County Airport Industrial/Commercial area.	Short	Selectboard
Develop a water and sewer infrastructure to the Highgate Village Center Core.	Medium	Selectboard, Village Core Master Plan Committee
Encourage the development of childcare centers and home-based childcare businesses and ensure development regulations support childcare establishments.	Long/Ongoing	Planning Commission
Explore new partnerships and funding options to enhance the supply and diversity of housing options at all affordability levels, with special focus on opportunities to add senior housing to Highgate Village Core.	Long	Planning Commission
Identify the needs of special needs populations including those with disabilities, the elderly and low-income households, and work to ensure the continued provision of appropriate housing.	Ongoing	Planning Commission
Natural and Cultural Resources		
Create a list of Town historic sites including, but not limited to buildings, farm-scapes, archaeological and other historic sites, and features that contribute to the identity of the Town and the broad patterns of its history.	Medium	Planning Commission/Historical Society?
Identity the important vistas and scenic features in Highgate that are worthy of protection.	Medium	Planning Commission
Guide new development away from productive agricultural and forest soils and consider slope and soil characteristics when reviewing individual development proposals.	Ongoing	Development Review Board

Appendix A- Enhanced Energy Maps

As required per 24 V.S.A. 4352, the Highgate Town Plan contains the following maps. For additional information about the methodology used to create the maps, or for more information about how these maps shall be used, see Chapter 5 – Energy.

TABLE A.1 – MAPPING CONSTRAINTS		
Solar, Wind and Biomass Maps - Known Constraints		
Constraint	**Description**	**Source**
Confirmed and unconfirmed vernal pools	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
River corridors	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
National wilderness areas		VCGI
FEMA Floodways		VCGI/ NRPC
Class 1 and Class 2 Wetlands		VCGI
Designated Downtowns, Designated Growth Centers, and Designated Village Centers	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain - 500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
Ground and surface waters drinking protection areas	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

Deer wintering areas	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
Hydric soils	Hydric soils as identified by the US Department of Agriculture.	VCGI
Agricultural soils	Local, statewide, and prime agricultural soils are considered.	VCGI
Act 250 Agricultural Soil Mitigation Areas	Sites conserved as a condition of an Act 250 permit.	VCGI
Class 3 wetlands	Class 3 wetlands in the region have been identified have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D. The Conservation District and the Forest Reserve District from Highgate have been included in this category.	NRPC
Hydro Map - Known Constraints		
Constraint	**Description**	**Source**
National scenic and recreational rivers	Upper Missisquoi and Trout Rivers.	BCRC/ NRPC
Hydro Map - Possible Constraints		
Constraint	**Description**	**Source**
"303d" list of stressed waters		ANR
Impaired waters		ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI