Fairfax Town Plan
2018 – 2026

Adopted by the Fairfax Selectboard on

September 24, 2018

Special Dedication

Mark Hunziker has dedicated over 15 years to planning and volunteering in the Town of Fairfax. The Planning Commission wants to thank Mark for the many volunteer hours he has spent over the years utilizing his editing expertise and knowledge of all things Fairfax. Your positive impact on our community will always be appreciated and we wish you the best in your future endeavors.

Acknowledgements

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Amanda Holland, The Northwest Regional Planning Commission,

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Section 1: Planning with a Purpose

Planning is a means of preparing for the future in order to overcome problems, meet opportunities, and achieve community goals. In response to changes in the community, problems must be addressed by comprehensive forethought to ensure that future decisions will provide long-term solutions rather than stopgap measures. Since communities exist primarily for the health and enjoyment of those who live in them, it follows that the nature, location, and timing of any future development should be determined by the people of Fairfax rather than left solely to chance.

What's In the Plan?

The plan for the Town of Fairfax must consider many inter-related factors. It is helpful to understand Fairfax's history and traditions to give a perspective for considering our present and our future. Present trends and their likely future impact must be analyzed. These components plus knowledge of the natural resource limitations and suitability for various uses provide the basis for determining what is possible and what may be desirable in our Future. To begin, broad public goals should be stated. Consideration of these in light of Fairfax's past and present enables specific policies and land use, transportation, and recreation plans to be developed.

This document is drafted to comply with Section 4382 of Title 24, Chapter 117, Vermont Statutes Annotated, which outlines the 12 required plan components. They are, briefly:

1. A statement of growth related objectives, policies, and programs;
2. A land use plan;
3. A transportation plan;
4. A utility and facility plan;
5. A statement of policies on the preservation of rare and irreplaceable natural areas, scenic, and historic features and resources;
6. An educational facilities plan;
7. A recommended program for the implementation of the plan objectives;
8. A statement indicating plan compatibility with plans and trends in adjacent municipalities, the region, and state;
9. An energy plan;
10. A housing element;
11. An economic development element; and
12. A flood resilience plan.

State law requires that municipal plans be updated and readopted every eight years to remain in effect; prior to July 1, 2015 plans were required to be updated every five years. Once adopted, the comprehensive plan allows the Town to exercise its authority with regard to the course of its future growth and development. It forms the basis for policy implementation at the local level and permits greater participation in regional and state planning efforts and project review (e.g. Act 250). Public and private interests are made aware of the desires of the Town through stated goals and policies.

A Plan can also serve as an important function in the evaluation of major development under Vermont's Land Use and Development Law, Act 250.

Structure of the Town Plan

This plan is split into sections and each major topic area has a series of goals, policies and actions. Goals express broad, long-range community aspirations that intend to show

what the town will strive for over the life of this plan. Policies express statements of the Town's intent with regards to specific issues or topics. Actions are intended to be "SMART"—specific, measurable, actionable, relevant and time-bound—to form a to-do list for the town and its boards and commissions. This list can be found in Section 2, the Implementation Section of this plan. Appendix 1 is the Fairfax Enhanced Energy Plan enabled per 24 V.S.A. §4352.

There are a number of documents incorporated by reference into this plan including:

- **Fairfax Community Data Profile**, which includes the supporting data and information about the past and present town trends in more depth than is covered in the Town Plan. This profile is incorporated by reference so that it can be separately updated and maintained.
- **Town of Fairfax Historical Record**
- **2017 Fairfax Town Survey Results**

These documents will be available by request and posted on the Planning Commission's section of the Town website.

Role of the Planning Commission

It is the charge of the Fairfax Planning Commission to prepare and update a comprehensive Town Plan. The Fairfax Planning Commission has a responsible role in all phases of the planning process. This role does not end with the adoption by the Selectboard of a comprehensive plan, but continues in the following areas:

- Plan implementation, which may include the preparation of appropriate regulations (e.g., zoning and or subdivision regulations) and capital programming to direct the course of future growth and development;
- Preparation of further studies to identify and plan for specific issues that may arise; and
- Regular review and revision of the Plan, Development Regulations, and programs to ensure that they reflect changing conditions and requirements.

The Planning Process

The Town of Fairfax is engaged in a planning process to encourage the appropriate development of land, facilities, and services located within the Town in a manner that will promote the health, safety, and general welfare of its residents. The Fairfax Town Plan provides a framework for the achievement of recognized community goals and policies, while the planning process serves to coordinate public and private actions with these goals and policies.

Citizen Participation

Citizen participation is important in all levels of the planning process. Opportunities for citizen involvement throughout the Town Plan update process as well as during projects that implement goals and policies of the Plan have been assured through diverse initiatives (see inset Citizen Participation). These efforts are intended to foster the broadest level of public participation possible, and to utilize the planning process as a vehicle for exercising an inclusive, community-wide vision for the future of Fairfax.

Citizen Participation: *A History of Involvement*

Citizen input has been utilized in formulating and implementing the Town Plan since the adoption of the first Plan in 1984.

1971 The first meeting of the Fairfax Planning Commission was held March 22, 1971.

1984 The first Town Plan was adopted.

1990 A community survey was mailed to all postal patrons in the Town of Fairfax. The survey received 395 responses. Questions were focused on identifying community needs and concerns, and on defining areas which are most important to protect from future development.

1991-95 Citizen committees were developed to formulate goals, objectives, and policies regarding the future of the Town. Focus areas included recreation; business and commerce; housing; historical and cultural resources; agriculture and natural resources; and roads. Reports from each group were submitted to the Planning Commission for further action.

1997 A follow-up survey similar to that of 1990 was distributed to Fairfax residents. Results were tabulated and compared to results from 1990 to gauge similarities and changes in citizen ideas and concerns.

2002-03 Citizen focus groups were formed according to geography, to stimulate discussion and receive input. The Planning Commission coordinated ten separate meetings through late 2002 into early 2003.

2007-08 A community survey was mailed to all postal patrons in the Town of Fairfax. The survey received a 19% response rate. The survey asked questions about the rate and pattern of growth in the community, important community issues, and the quality of town services.

2012-2013 The Village Vision Steering Committee held four public informational events to inform community members about the on-going project and to provide an opportunity for residents to identify opportunities, express concerns and foster open dialogue.

This Committee also provided input to a long-term vision for a network of bicycle and walking facilities in and around the Village that would maximize non-motorized mobility and conveniently link the Village with the rest of the Town.

2017 A booth during the Fourth of July celebrations displayed a series of posters to kick off public outreach on the Plan update. The posters introduced themes the Town will be addressing such as renewable energy, continued population growth, and pedestrian connectivity.

A community survey was distributed in property tax mailing (1850 recipients) and on social media; 258 surveys were completed.

Overall Community Goals

Although specific goals, policies, and implementation strategies are included within each section, several broad statements may be made regarding the future of Fairfax in the focus areas described. These are included below as overall community goals.

1. To accomplish the goals, policies, and implementation strategies set forth by the Town of Fairfax Plan in compliance with all applicable state and federal regulations, rules and standards.
2. To develop, maintain and implement any plans or studies as necessary to achieve the goals and policies set forth by the Town of Fairfax Plan.
3. To preserve the natural, cultural, and historic features and activities which define the rural character and scenic beauty of Fairfax.
4. To promote safe and healthful housing for all segments of the population.
5. To maintain and enhance recreational opportunities for all residents.
6. To insure the provision of efficient, environmentally sound public utilities.
7. To build and maintain a strong and diverse local economy, encourage the efficient use of public funds, and to maintain a sound fiscal balance.
8. To provide broad access to quality educational and vocational services which respond to the needs of a growing community.
9. To promote the efficient use of energy and encourage the development of renewable energy resources.
10. To focus future development toward areas most suitable for that purpose, and to promote planned development which does not exceed the physical capability of the land to support it.
11. To ensure that future growth, including commercial and industrial development, is in harmony with the traditional pattern and scale of existing development, and to promote complimentary development patterns of open space and concentrated growth in traditional, mixed use areas.
12. To provide for safe, convenient, economic and energy efficient transportation systems that respect the natural environment and utilize a variety of transit modes, including bicycle and pedestrian travel wherever existing or desired future development densities would support it.

Section 2: Achieving the Vision

"Even if you're on the right track, you'll get run over if you just sit there."

-- Will Rogers

Implementing the Plan

The implementation of the goals and policies of this Town Plan falls into two general categories: regulatory and non-regulatory options. Regulatory options consist of Development Regulations and Town Ordinances that further the goals and policies in the Plan. Non-regulatory implementation options include, but are not limited to, capital planning, special studies, and advisory commissions.

Regulatory Implementation Strategies

Development Regulations

The majority of policies outlined in the Fairfax Town Plan will be implemented through the Development Regulations. The purposes of the Development Regulations are to implement the Fairfax Town Plan and to further the purposes of the Act [Title 24, Chapter 117, Section 4302 of V.S.A]; specifically, to promote the public health, safety, comfort, convenience, economy, and general welfare of the community. The Development Regulations require that all land development, including the subdivision of land, obtain all permits and approvals as required in the regulations before it is commenced. The Development Regulations should be reviewed on an ongoing basis to implement the goals, policies, and implementation strategies of this plan.

Regulatory Implementation Actions Since 2013 Plan Adoption:

2017 Adopted a Building Inspection, Code Enforcement, and Fire Safety Ordinance

2016 Adopted a Special Events Ordinance

2016 Adopted a bylaw to establish screening standards for ground-mounted solar

2016 Amended the 2014 Development Regulations with:

- Modified sign standards to increase allowable size of business signs from 20 to 25 square feet per side and other district specific guidelines
- Outlined the use of screening and factors to prioritize type and amount necessary
- Incorporated Sidewalk Construction and Design Standards
- Clarified definitions or terms including: expired permit extension, definition of "family" changed to "household", home occupation categories are considered residential uses and not a commercial use.

2014 Amended the 2011 Development Regulations with:

- Site Plan process and submission requirements
- Definitions and permitting requirements for Replacement Homes; Abandoned, Destroyed or Demolished Structures; and Structural Alterations
- Clarification of permit exemptions and definition of "Dwelling Unit"

Town Ordinances

The Town has adopted many regulatory ordinances that implement the goals and policies of the Town Plan.

Non-Regulatory Implementation Strategies

Capital Planning

A Capital Improvement Budget and Program (CIP) is a tool that will allow the Town to plan for municipal improvements by linking long-term municipal expenditures and development plans with municipal budgeting to avoid sharp increase in the tax rate from one year to the next. It also makes the Town's financial management and decision-making process more visible to the voters. Capital budgeting in Fairfax is essential in planning needed improvements such as expansions to the Village water and sewer systems and road improvements.

Fairfax has been levying an impact fee, which implements the Capital Budget and Program, since 2003. An impact fee is levied on new development to help mitigate its fiscal impacts on the community. Under state law (24 V.S.A. §5200), the purpose of authorizing impact fees is "to enable municipalities to require the beneficiaries of new development to pay their proportionate share of the cost of municipal and school capital projects which benefit them and to require them to pay for or mitigate the negative effects of construction." Fairfax's impact fee is important because it offsets a portion of the burden of additional services incurred by new development from the existing taxpayers.

Non-Regulatory Implementation Actions Since 2013 Plan Adoption:

2016* Funded a Village Gateway Study to explore the arrival gateways into Fairfax Village and evaluate measures to enhance their appearance, improve safety, and promote a more unified community identity.

2015* Explored a recommendation of the 2012 Non-motorized Travel Plan to connect the North and South Villages. A route was identified utilizing 5-foot sidewalks and 8-foot shared use path to improve safety for walking and biking in and between the villages. An Advisory Committee comprised of community members including the Town's Recreation Director and Elementary School Principal provided input on the route.

**Funded by a State Municipal Planning Grant*

Special Studies and Projects

Development Regulations and capital planning work best at implementing the goals and policies of municipal plans when they are coupled with studies and projects initiated or recommended by the Planning Commission (see inset of Non-Regulatory Implementation Actions).

Implementation Plan

Listed below are strategies that the Fairfax Planning Commission recommends to implement the goals and policies of this Town Plan.

Responsible Parties	TM (Town Manager), PC (Planning Commission), RD (Recreation Director), SB (Selectboard), DRB (Development Review Board), Town (to be determined)
Partners	NRPC (Northwest Regional Planning Commission), FCRCC (Franklin County Regional Chamber of Commerce), FCIDC (Franklin County Industrial Development Corporation), FPR (VT Forest, Parks, & Recreation), VANR (VT Agency of Natural Resources), DHCD (VT Department of Housing & Community Development), USFWS (U.S. Fish & Wildlife Service), VTrans (VT Agency of Transportation), PPP (Public Private Partnership)
Timeline	S-Short (1-4 years), M-Medium (5-8 years), L-Long (>8 years), O-Ongoing
Critical Action	Highest priority actions that are critical to meet the Goals and Policies of this Town Plan

Actions	Responsible Party & Partners	Timeline	Critical Action
Local Economy *(see Page 21 for section Goals and Policies)*			
1. Develop strategies to encourage centralization of public services and commercial amenities in the Village to promote a healthy localized economy.	TM, PC	O	
2. Inform eligible applicants of the Village Center Tax Credit program to improve historic structures in the designated Village Center.	Historical Society, Committee, Zoning Dept.	S	
3. Develop strategies and consider implementation incentives that support desired development and encourage businesses to locate or expand in Fairfax.	TM, PC	O	✓
4. Market and publicize community events to attract residents and visitors.	Town, RD	O	
5. Develop a creative, high quality signage and wayfinding program.	Town, FCRCC	S	
Facilities, Utilities, & Services *(see Page 32 for section Goals and Policies)*			
1. Conduct a market study of the regional economy and residential buildout to outline the types of development the service area could support as a driver for water and sewer improvements.	Town, RPC	L	

Actions	Responsible Party & Partners	Timeline	Critical Action
2. Develop a plan to expand Town water and sewer systems, including providing a back-up water source, to enable centralization of public services and commercial amenities at higher densities of development in the Growth Center and Mixed Use Districts.	Town (Utility Dept.)	O	✓
3. Work on increasing Town-wide support for funding community infrastructure in the Village, with specific attention to wastewater treatment and water supply.	Town	S	✓
4. Hold semi-annual meetings of the Planning Commission, Development Review Board, and Selectboard to coordinate the implementation of the goals, policies, and recommendations in this Plan.	SB, DRB, PC	S	✓
5. Review the Community Facilities, Utilities, and Services Plan yearly to assess that progress is being made to meet community needs.	TM, Utility Dept.	O	
6. Request regional approval of the Town Plan to make the Town eligible for Municipal Planning Grants and enable the Town to assess impact fees.	Town	S	
7. Maintain the Capital Improvement Program and Budget that serves as a five-year plan to be revised and adopted on an annual basis.	Town, PC	O	✓
8. Review and evaluate the effectiveness of the impact fee ordinance.	Town, PC	S	
9. Pursue the implementation of projects identified in the 2018 Fairfax Stormwater Master Plan.	TM, Highway Dept., VANR, NRPC, Watershed Groups	S/O	
10. Provide outreach to citizens and businesses emphasizing the importance of the solid waste collection and recycling programs.	Town	O	
11. Increase capacity for composting by promoting household and commercial establishment composting to meet the state target by 2020.	Town, Private Contractor	O	
12. Continue to provide a town-wide household hazardous waste collection program.	Town	O	

Actions	Responsible Party & Partners	Timeline	Critical Action
13. Appoint a town representative to participate in the update and implementation of the Fairfax Community Library 5-year Strategic Plan.	Town	M	
14. Investigate and promote viable options for expanding communications infrastructure (broadband internet access and cellular service) in Fairfax.	Town, PC, NRPC, Committee, Public	S/O	✓
15. Investigate the use of existing municipal property and land for development of cellular and broadband services.	Town	M	
16. Communicate with public and private partners to assess the gaps in broadband and cellular service by town highway and evaluate the level of service customers can access.	Town	L/O	
Recreation *(see Page 33 for section Goals and Policies)*			
1. Pursue State and Federal Grant programs to secure funding for recreational projects that that are consistent with the recreational goals of the Town.	TM, RD	S/O	✓
2. Increase the availability of recreation department programing to the residents of Fairfax.	RD	S/O	✓
3. Improve accessibility to the Town Forest as a recreational resource by improving the access road from VT Route 104 and installing a marked parking area.	Town, RD, Highway Dept.	S	✓
4. Improve the trails in the Town Forest by conducting a trail assessment, design and construct a trailhead, and install trail markings.	Town, RD, FPR	S	✓
5. Complete renovations to the Fairfax Community Center to enable the facility to serve as a venue for services, activities, and events that support community residents of all ages.	RD, Fairfax Community Center Non-profit	S	✓
6. Develop an operational plan that outlines the use of the Community Center.	RD, Town Committee	S	✓
7. Periodically evaluate the current and future recreational needs of the residents and ability of existing infrastructure and facilities to fulfill this target.	RD	O	

Actions	Responsible Party & Partners	Timeline	Critical Action
Education & Childcare *(see Page 36 for section Goals and Policies)*			
1. Offer childcare at Town Meeting and other town-sponsored events.	Town	S	
2. Support the use of the Community Center for child enrichment programs.	RD, School	O	✓
3. Provide opportunities for students to participate in civic life by including student representatives on Town boards, committees, and commissions; work with school administration to ensure it meets curriculum.	Town, School	S	
Community Health *(see Page 38 for section Goal and Policies)*			
1. Annually review Town financial support for public health and human service agencies.	Town	O	✓
2. Provide municipal facilities as a venue for public health education and screening.	Town	O	✓
3. Provide a venue for health-related classes (i.e. yoga, aerobic, etc.).	Town	O	✓
4. Assess zoning (sign standards, setback requirements, etc.) for barriers to on-site farm stands and direct marketing outlets (farmers' markets, community supported agriculture pick-up sites, etc.).	Town	O	
5. The Town will work with the School Board to support the BFA Farm to School Program.	Town, School	S	
6. Encourage healthy food and beverage options are offered in municipal venues (e.g. town office, recreational facilities, etc.) and at municipal events.	Town	O	
Housing *(see Page 42 for section Goal and Policies)*			
1. Review the Development Regulations and look for areas where affordable housing could be further encouraged.	PC	L	
2. Investigate the implementation of appropriate zoning techniques to encourage affordable housing.	PC	M	
3. Analyze the existing residential development pattern, such as location of housing and density, to identify if current regulations are effective at meet the intent of the districts.	PC	S	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
4. Study the feasibility of design standards for the North and South Village that considers the historic character of the community.	PC	L	
5. Conduct a housing needs assessment to gain a better understanding the types and affordability of the current housing stock and guide decisions to accommodate the growing population.	PC	S	✓
6. Promote use of Village Center Tax Credits to improve historic structures in center.	Town	S	
7. Support the development of a network of pedestrian and bicycle infrastructure within a half-mile radius of village services for walking and a three-mile radius for biking.	Town, SB, PC, Public	M/L	✓
Transportation *(see Page 47 for section Goals and Policies)*			
1. Review and evaluate Road and Driveway Standards (Sec 7.6F) of development regulations to ensure they meet public safety standards.	PC	S	✓
2. Review and revise as needed municipal road standards to ensure that they reflect the "complete streets" principles.	Town, PC, Highway Dept.	M	
3. Pursue the short-term solution to connecting the North and South villages with shifting the striping on the Route 104 Bridge to accommodate a wider shoulder on the west side, as identified in the 2015 Pedestrian Connectivity Feasibility Study between the North and South Villages report.	Town, PC, VTrans	S	✓
4. Continue to explore opportunities to form a network of safe, connected non-motorized facilities in both the North and South Villages as identified in the 2015 Pedestrian Connectivity Feasibility Study between the North and South Villages report.	Town, PC	O	
5. Evaluate the feasibility of the Town taking over the Class 1 section of town highway within the Growth Center to implemented identified improvements.	Town, VTrans	S	✓
6. Pursue wayfinding and gateway signage to promote traffic calming.	Town, PC	S	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
7. Participate in the regional Transportation Advisory Committee to facilitate coordination with Regional Planning Commission and VTrans on plans and policies that are in the best interest of the region and the Town such as improvements to the Route 104 corridor.	Town	O	
8. Participate in regional discussions on transit service that can serve the needs of residents.	Town	O	
9. Secure funding for the completion of the Sidewalk Master Plan.	Town	S	✓
10. Prioritize the repair and implementation of pedestrian and bicycle infrastructure within the Growth Center to allow students to safely walk or bike to school.	Town	S	✓
11. Review the results of the 2013 Fairfax Village Non-motorized Travel Plan with the Town Highway Department to identify short- and long-term opportunities.	Town, Highway Dept.	S	
Energy *(see Page 50 for section Goals and Policies)*			
1. Investigate the installation of a municipal net-metering facility to off-set municipal electric use.	Town, PC, NRPC	O	
2. Investigate installation of a community-based renewable energy project.	Town	M	
3. Ensure firefighters receive proper training to handle structures that have roof-mounted solar.	Fire Dept.	S/O	
4. Review and maintain the Building Inspection, Code Enforcement, and Fire Safety Ordinance to incorporate any changes to national rooftop solar installation methods and standards.	SB, Fire Dept.	S/O	
5. Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfax residents.	Town, Energy Committee	O	✓
6. Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.	Zoning Dept.	S/O	
7. Create an Energy Committee and/or appoint an Energy Coordinator to coordinate energy-related planning and projects in Fairfax.	Town, PC	S/O	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
8. Evaluate the remaining improvements identified in the 2012 energy audit of Fairfax Fire Station and incorporate the recommendations into the municipal capital budget.	Town, Fire Dept.	S	
9. Implement recommendations from the 2012 NRPC evaluation of street lighting in Town, including switching to LED lighting.	Town, Green Mountain Power	S	
10. Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.	Town, PC	L	
11. Study potential need for a park and ride in Fairfax with a particular focus south of the village	Town, PC, NRPC, VTrans	L	✓
12. Promote and provide information about the GoVermont website which provides information to citizens about ride share, vanpool, and park-and-ride options.	Town, Energy Committee, NRPC, VTrans	L	✓
13. Plan for and install electric vehicle charging infrastructure on municipal property.	Energy Committee, VTrans, DHCD, PPP	L	
14. Aid in locating an EV charging infrastructure on public or private property.	Energy Committee, VTrans, DHCD, PPP	L	
Natural Resources *(see Page 66 for section Goal and Policies)*			
1. Periodically review the site plan and subdivision review standards for preserving natural, scenic, and cultural resources, and evaluate for conformity to the Town Plan.	PC	O	✓
2. Evaluate the effectiveness of the subdivision review standards to minimize impact to (or protect) prime agricultural soils and existing farmland and forest resources.	PC, NRPC	L	
3. Participate in the Agency of Natural Resources' Tactical Basin Plan process as plans are updated on a 5-year rotation.	Town (TM, Highway Dept., Utility Dept.), NRPC, VANR	O	
4. Promote readily available educational efforts from regional and state partners aimed at assisting the municipality and residents to employ steps they can take to improve water quality.	Town, NRPC, VANR	L/O	

Actions	Responsible Party & Partners	Timeline	Critical Action
5. Strengthen regulations in the flood hazard areas beyond National Flood Insurance Policy minimums and consider adoption of the state river corridors to protect floodplain and stream resources and support public health and safety.	PC, NRPC, VANR, DHCD	L	
6. Conduct a scenic resource inventory to identify important community resources (i.e. views, viewsheds, corridors) to guide regulatory and non-regulatory protection measures.	PC, NRPC, DHCD	L	
7. Utilize available tools (e.g. Biofinder) to identify the high priority habitat blocks and assess their vulnerability for fragmentation by development.	PC, NRPC, USFWS, VANR	L	
Land Resources *(see Page 77 for section Goals and Policies)*			
1. Review the planned unit development standards to evaluate the protection of significant agricultural lands, forest lands, meadows, and wildlife habitat from fragmentation and conversion in the Residential and Rural Districts; and to discourage strip development along existing roads.	PC, DRB, NRPC, DHCD	M	✓
2. Consider strategies to discourage residential development from encroaching on large tracts of forest land.	Town, PC	M	✓
3. Consider implementing regulatory changes that would enable and encourage community services and businesses to locate in the growth center and mixed use district.	Town, PC	S	
4. Consider expansion of the land use mapping capabilities of the Town to assist in development review.	Town, PC	M	
5. Produce and maintain a map that identifies infrastructure and amenities for all roadway, sidewalk, and trail users.	Town	S	
6. Expand water and wastewater capacity in the villages to achieve the desired levels of density that would support the plan vision.	Town, Utility Dept.	S/O	✓
7. Consider implementing design standards in the North and South Villages.	PC	L	
8. Identify sites appropriate for use as park-like gathering areas and increase the amount of plantings and seating.	Town	S	

Actions	Responsible Party & Partners	Timeline	Critical Action
9. Periodically review the regulations to ensure that the regulatory tools support the vision.	PC	O	
10. Consider site improvements and amenities such as bike racks and canoe/kayak storage to encourage use of natural destinations.	Town, RD	O	
11. Develop a street tree planting program in the North Village.	Town, Committee	L	
12. Identify areas for landscape enhancements in the South Village.	Town, Committee	L	
13. Transitional areas of residential development in the Rural Planning area will be monitored and evaluated by the Planning Commission during this Town Plan cycle to inform revisions to the development regulations.	PC	M	

Section 3: Community Profile

The Setting

The Town of Fairfax is located in the western foothills of the Green Mountains and characterized by open farmland and wooded slopes with panoramic views of Mt. Mansfield and the Lamoille River. It is the southernmost municipality in Franklin County. Fairfax is served by several State Routes that link the Town with St. Albans, the Interstate and communities to the east and south.

Understanding Population Projections

Population projections provide a good estimate of future growth; these estimates are based on past trends from two time periods. From 1990-2000 much of the state experienced a surge of population growth; this period was used to calculate a "high growth" estimate. The following decade, 2000-2010, experienced slower growth and thus provides a "low growth" estimate.

The People

The Population is Growing. Fairfax's population has risen to historically high levels; due in large part to a period of sustained, accelerated growth that began in the 1970's and has continued to the present decade. As shown in Figure 3.1, Fairfax has more than tripled its population between 1960 and 2010 and has a significantly higher growth rate than that of the County as a whole. Forecasts for future growth show Fairfax's population continuing to grow at a similar rate.

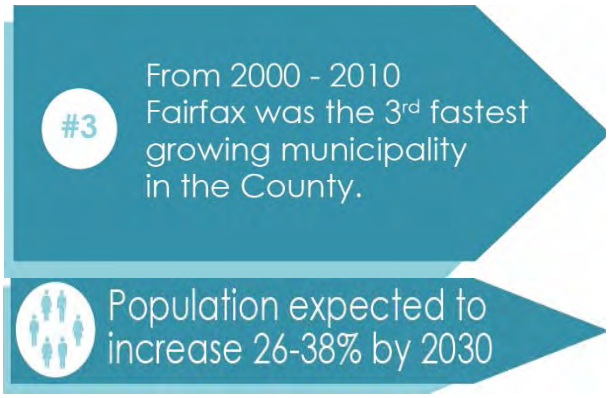
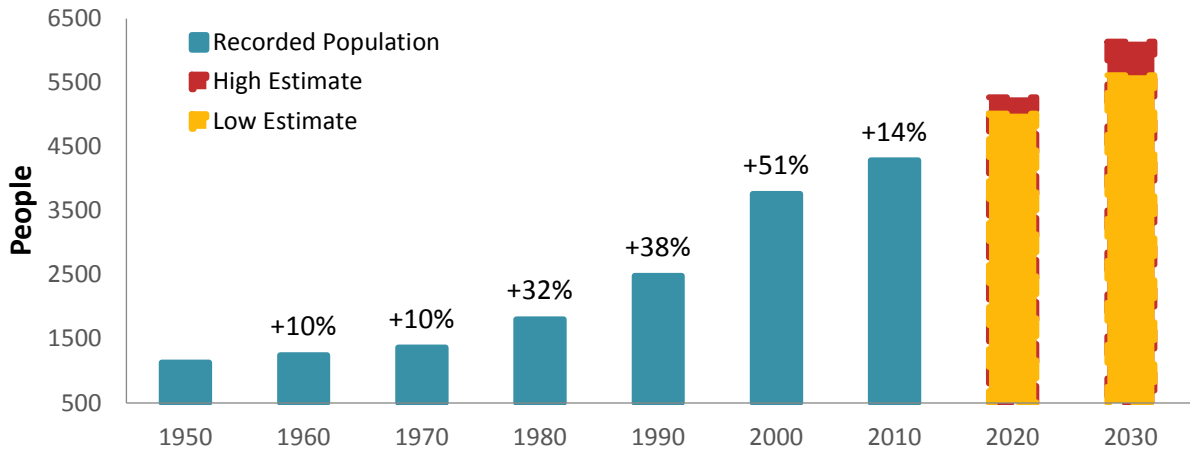
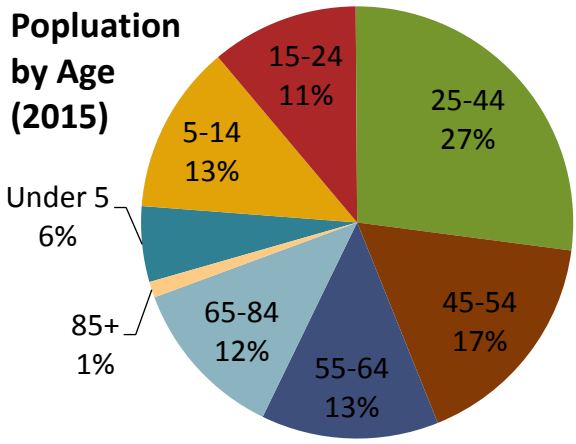


Figure 3.1 Total Population of Fairfax and Future Projections



Fairfax Median Age: 39.5

The Population is Aging. The majority of residents are between the ages of 25 and 54. From the period of 2000 to 2015 the number of residents 55+ has been steadily increasing while the number of children under the age of 15 has decreased.



Defining a Household

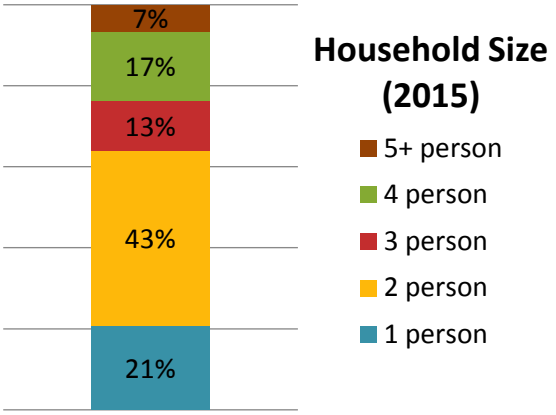
A **household** is all people who occupy a housing unit regardless of relationship, such as a person living alone or multiple unrelated individuals or families living together.

A **family** is two or more people related by birth, marriage, or adoption in the same housing unit.

Households: 1,745
Average Household Size: 2.55

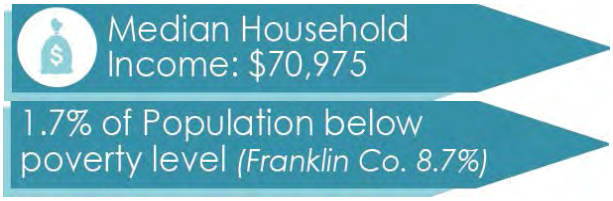
Families: 1,205
Average Family Size: 3.03

Household Composition is Changing. The number of 1- and 2-person households has increased since 2000 by 101% and 89% respectively. These two groups make up the majority of households in Fairfax. The American Community Survey also reports a higher number of households do not have children under the age of 18.



No related children under 18 years.

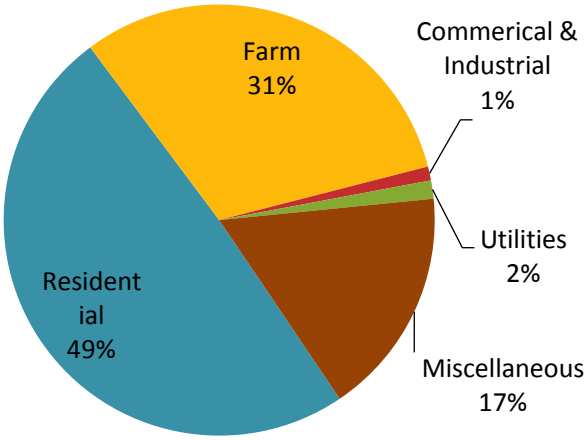
Fairfax has a higher density than many communities in the County. Fairfax has a population density of 102.8 people per square mile, which is double the density of Franklin County as a whole of 49.6. The majority of the land in Town is considered residential.



Higher than average household income. On average, residents of Fairfax bring home a larger income than the median of both Franklin County and the three county areas of Chittenden, Franklin, and Grand Isle Counties.

High rate of homeownership. The majority of residents own their home leaving little inventory for rental properties. Twenty percent of homeowners are cost burdened (paying more than 30% of their income towards housing).

% Total land Area by Category (2015)



Workforce largely commutes to access employment centers. The majority of residents commute to Chittenden County for jobs. A small percentage of residents in Fairfax report to jobs in Town (7%) and an even smaller amount of residents (5%) likely telework as their listed job sites are more than 90 minutes away. The top employment sectors of residents are: educational services, health care, social assistance sector, and public administration.

Section 4: Economy

The term "economy" for purposes of municipal planning refers to resources, production, jobs, income and activities in the town and region that contribute to the economic well-being of local residents, businesses and industries. The economy in Fairfax is supported primarily by the businesses and services in the historic village area and Mixed Use district south of the Lamoille River and the rural economy in the remainder of the Town. The rural economy largely consists of agricultural operations, agriculture-related businesses, and home-based businesses. The intent of this plan is to enable business and industry that will contribute to and maintain both the traditional village character and rural, agricultural setting.

Local Economy

According to the Vermont Department of Labor, there were 92 employers in Fairfax in 2015, an increase by 23% since 2000. The top three industries based on number of people employed in Fairfax are trade/transportation/utilities, education services, and manufacturing. The Village has a number of retail businesses serving the basic needs of villagers and the surrounding countryside. Future commercial development is likely to be primarily in the service sector and retail businesses and should be encouraged to be located in the Growth Center and Mixed Use district as identified in the Fairfax Development Regulations. Sixty-nine percent of the respondents to the 2017 Fairfax Town Survey supported the Town encouraging more commercial development in the Growth Center and Mixed Use zoning districts.

Despite the decline in the total number of dairy farms in Fairfax, there is an overwhelming desire to maintain the agricultural culture of the community. Ninety-three percent of the respondents to the 2017 Fairfax Town Survey stated that local agriculture was important. Agriculture in Fairfax is seen as a part of the regional economy, a way to maintain the town's rural character, and provides a source of local food. The Town should encourage efforts that support its agricultural base, including the protection of primary agricultural soils, support diversified agriculture, and support of tax abatement programs such as the Use Value Appraisal Program or Current Use. Agribusiness and other support and co-operative services should be encouraged to locate in Town. Home occupations and other small industries and businesses should also be encouraged as part of the rural economy to encourage local employment opportunities and a diverse economic base.

Challenges Related to Economic Development

The Town is faced with many challenges to local economic development. By working on these challenges, the Town will encourage the continued development of a healthy economy in the Village area. These challenges are discussed in other areas of the plan, but are briefly introduced here as they relate to economic development:

Sewer and Water Infrastructure - Additional sewer and water capacity would encourage new businesses to locate in the Growth Center, and help to realize the goal of a compact village center surrounded by rural countryside. Until the Town addresses this ongoing problem, the village will not realize significant economic development.

Parking - Adequate parking is important to attract people to stop in Fairfax and patronize businesses. Parking is currently seen as adequate for the commercial activity in town today. Given the vision for the dense village center and commercial areas, it may make sense to encourage common parking lots.

Sidewalks - A safe pedestrian environment in the Village will contribute to its economic vitality. Continued effort to maintain and improve sidewalks in the Village area and along Route 104 in the Mixed Use district will encourage people to walk the village streets and patronize local businesses. Specific attention should be paid to providing safe pedestrian links from the Mixed Use District to the Growth Center. Further discussion on sidewalks is located in the Transportation Section under Pedestrian and Bicycle Facilities.

Traffic - Vehicle speed is an issue along Route 104 through the Growth Center and the Mixed Use District. To improve access and circulation to local businesses, the Town should implement the recommendations of prior studies the Village Gateway study (2016), the Route 104/104A Corridor Study (2005) and the Route 104/128 Intersection Study (2007).

Opportunities Related to Economic Development

All of the challenges for economic development mentioned above can also be positioned as opportunities for bringing in new investment. Improving the broadband and cellular coverage to support small businesses and tele-working professionals is another opportunity the Town has prioritized this plan cycle. Additionally, the north village and Growth Center areas are designated as a sub-regional growth area by the Regional Plan and are intended to serve as an economic and cultural hub for the surrounding area.

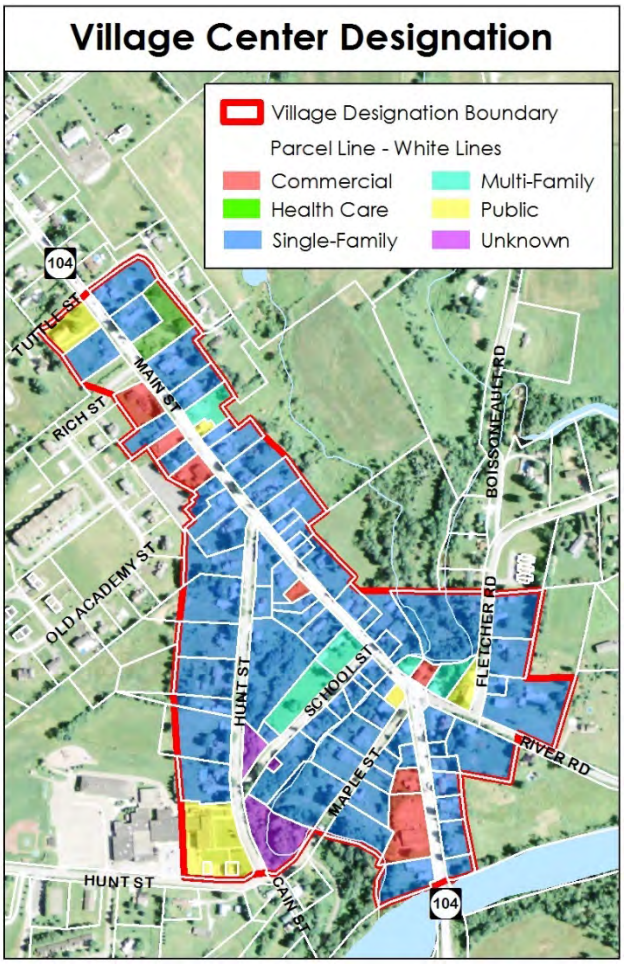
Village center revitalization is an ongoing process to improve a community's vitality and livability. Investment in these areas will expand access to employment, housing, education and schools, services, public facilities, and other basic needs. Supporting our villages also aligns with the statewide planning goals of encouraging compact development and maintaining the historic settlement pattern as stated in 24 V.S.A. § 4302.

Village Center Designation is one tool the state offers communities to focus on supporting commercial activity in the center of Vermont's villages. Benefits available for designated village centers are:

- Access to tax credits;
- Priority consideration for state grants
- Priority consideration for state building and general services when leasing or constructing buildings;
- A special assessment district in a designated village center may use funds for operating costs.

The Fairfax Village Center Designation was obtained in September of 2008 for the North village area and is set to be renewed in 2018. This designation supports the goals of the community by gaining access to the benefits listed above and aligns with the statewide planning goals of compact development and maintaining the historic settlement pattern as

stated in 24 V.S.A. § 4302. Since designation in 2008 Fairfax has received priority consideration for state grants; most recently in 2017 the United Church received a Historic Preservation Grant. The Town has not received any tax credits in the designated village center. In the future, Fairfax hopes to promote the benefits of the designation program to village property owners to enhance participation in state programs.



Local Economy Goals and Policies

Goals:

- Promote a balanced, diverse economic base, with a focus on locally owned businesses.
- Encourage a vibrant local food economy with access to healthy foods.

Policies:

- To encourage a mixture of commercial uses including retail, personal and professional services, and restaurants in the Growth Center and Mixed Use districts.
- To support the maintenance of and/or upgrade to reliable services that attract commercial development, such as broadband internet, cell phone service, and municipal water supply and wastewater treatment.
- To support agriculture and forestry related businesses, and protect productive agricultural and forestry lands from conversion to incompatible land uses.
- To promote opportunities to produce, process and distribute locally grown food products and forest resources.
- To support and encourage low-impact, home-based businesses.
- To consider developing ways to promote the Villages as an attractive and supportive community where business thrives.
- To develop materials encouraging promotion and utilization of local businesses, marketing materials and tourism plan to encourage economic growth.

Section 5. Community Services, Facilities, & Utilities

A core function of local government is to provide services, facilities, and infrastructure to meet community needs. An important function of the Town Plan is to review accessibility, availability, condition, and capacity of municipal facilities, services, and infrastructure to meet the current and projected needs of the Town. The Fairfax **Facilities and Utilities Map** shows the location of these facilities.

Fairfax offers a wide variety of services to residents including roads, public safety, community library, recreational facilities, and trash and recycling pick-up. Water and sewer are provided by the Town in designated districts that serve the village.

Fairfax has experienced consistent growth since the 1980s and its population is projected to continue to rise at a steady rate until 2030. As the Town continues to experience growth pressures due to the proximity to job centers in Chittenden County, a need for additional or improved services and facilities will likely occur. Clear forethought and planning will be necessary to ensure that the rate of future growth in Fairfax does not exceed the ability of the community and the area to provide necessary facilities and services to maintain public safety, environmental integrity, and a high quality of life.

Local Government

The local governance in Fairfax is composed of full-time and part-time employees as well as volunteers (see Table 5.1). The Town Office serves as the administrative offices for much of Town government. The building came into service in 2014. It has two public meeting rooms and is handicap accessible. The office houses working space for the Town Manager, Town Clerk, Town Treasurer, the Assessors, the Zoning Administrator, Recreation Department, and the Water and Sewer Departments. It also serves as a meeting place for the Selectboard, Planning Commission, Development Review Board, and Recreation Committee.

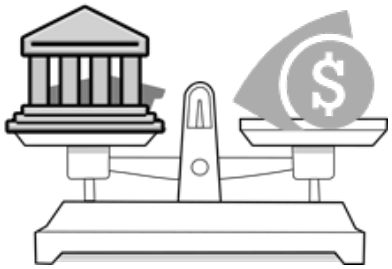
Table 5.1 Fairfax Town Government

Departments, Boards, and Committees	Number of Members
Town Manager	1
Selectboard	5
Town Clerk/Treasures Office	2
Assessor	1
Animal Control Officer	1
Health Officer	1
Planning and Zoning Department	1
Highway Department	4
Water & Sewer	4
Town Constable	0
Fire Department	26
Emergency Management	1
Recreation Department	3
Library	8
Planning Commission	5
Development Review Board	5
Cemetery Commission	5
Fire Warden	1
IT staff	1
Justice of the Peace	12
Legislative Representation	1

Municipal Finance

The majority of services and facilities are funded through local property taxes. The rate of growth in Fairfax should not exceed the ability of the community to provide services. As it stands today some services and facilities

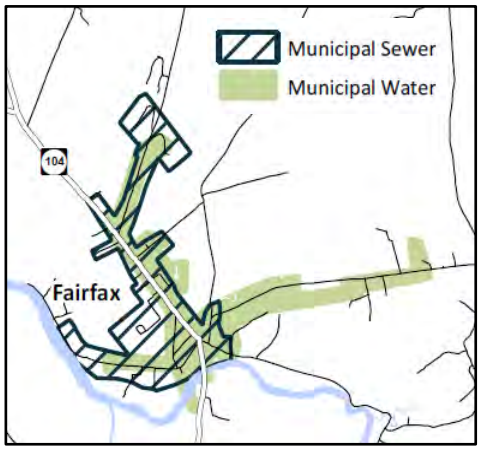
Maintain a moderate tax rate was the top planning objective from the 2017 Community Survey



need improvements in order to meet current and future need. The Town utilizes the CIP as a tool to plan for the future needs and should maintain an annual adoption process as part of the budget development. The capital budget also gives the Town the ability to enact an impact fee to help offset the costs of capital expenditures. Impact fees were first assessed in 2003 and the Impact Fee Ordinance was last updated in 2012.

Municipal Properties

The Town is currently listed as the owner or part-owner of several pieces of property in town totaling 218.5 acres.



Public & Private Services

This section provides an assessment of the primary services available in Fairfax; additional information about each service is located in the Fairfax Community Data Profile report. The intent of this information is to provide an assessment of the available services in Fairfax and the ability of each service to meet the needs of current residents as well as accommodate future growth. The template below details how this information should be interpreted.

Service

General narrative of each service.

Fairfax Today:

"Fairfax Today" provides a report on the existing conditions and status of the system as it stands at the writing of this Town Plan in 2018 to provide service to current customers.

Fairfax Tomorrow:

"Fairfax Tomorrow" provides a report on the ability of the current service to accommodate new users or population growth. This section emphasizes the importance of planning for the future demand and the projected population increase of additional 1160-1685 residents by 2030.

Status Indicator:

= Meets the needs of the current level of users and *may* have available capacity to accommodate additional users

= Needs improvement and/or is at capacity and cannot accommodate more users

Next Steps: Statement outlining actions the Town should take related to each service.

Highway System Infrastructure

The Town Highway Department maintains 61.5 miles of Town roadways and a system of culverts and bridges. The Town has adopted standards for the construction and maintenance of the town highway system that include:

- Standards for driveways;
- Town Road standards; and
- Requirements of the Municipal Roads General Permit (MRGP)

Fairfax Today:	Fairfax Tomorrow:
The Town institutes a regular maintenance program and annually budgets for improvements.	The Highway Department will continue to maintain the town system to meet the needs of the population.

Next Steps: Future development from public and private investment should aim to connect roads to improve motorized and non-motorized accessibility.

Pedestrian & Bicycle Facilities (Sidewalks, Paths, On-road facilities)

There is currently 4,731 feet of sidewalk located along VT Route 104 between Tuttle and School Streets as well as along Hunt and School Streets. Phase 1 of the Sidewalk Master Plan will be constructed in 2018 adding an additional 2,310 feet of sidewalk from Huntville Road to Hunt Street along VT Route 104. Several resources are available to provide guidance on infrastructure improvements as noted in *Section 5 Bicycle and Pedestrian Facilities.*

Fairfax Today:

Once the construction of the Master Plan Phase 1 sidewalk is complete, sidewalks will be present along 28% of the streets in the Growth Center. However:

- Sections of current sidewalk need repair and are not plowed in winter.
- Gaps in the sidewalk system force pedestrians to walk in the streets.

Fairfax Tomorrow:

The current system does not meet the needs of the users for safe use. The following needs should be addressed:

- Continue construction and repair to achieve a safe, complete, and contiguous village sidewalk system.
- Improve connectivity to the southern village.

Next Steps: The Town should finish the remaining phases of the *Sidewalk Master Plan* and continue to pursue recommendations of *Non-Motorized Travel Plan* to meet the needs of current and future residents.

Stormwater Infrastructure

Fairfax has a network of stormwater infrastructure throughout town that ranges by type and level of treatment:

- Catch basins and outfalls are present in the north and south village.
- Development creating 1 acre or more of impervious surface is required to obtain a state stormwater permit and provide treatment, such as a stormwater pond.
- Roads throughout Town utilize best management practices to direct stormwater runoff off of the road and reduce the potential for erosion

In 2018, Fairfax is developing a Stormwater Master Plan that will identify areas where additional treatment should be considered to reduce impacts from erosion and flooding and improve water quality.

Fairfax Today:

Taking strides to ensure that adequate infrastructure is in place.

- The Town provides maintenance to the municipally owned catch basins and outfalls;
- All private developments with existing permits are in compliance with state permits; and

Town is in the process of complying with the Municipal General Roads Permit and identifying needed improvements to roads.

Fairfax Tomorrow:

To ensure the Town does not experience negative impacts from excess stormwater, the Town should continue to maintain existing infrastructure, aim to treat unregulated stormwater, and consider additional local requirements.

Next Steps: The Town should pursue implementation of projects identified in the 2018 Stormwater Master Plan and consider standards to encourage treatment of stormwater on development creating less than 1-acre impervious surface.

Cemeteries

There are 13 cemeteries in Town, of which 9 are private and 4 are public. The Town maintains or contributes funding to 10 cemeteries. The cemetery budget primarily funds mowing; other maintenance includes cleaning up vegetation and stones, and installing fence. Towns are required by statute to ensure town cemeteries have a maintained fence; funded by an annual appropriation.

Fairfax Today:

The Town maintains the vegetation at 8 cemeteries; additional funding is needed to perform restoration of damaged markers and mark boundaries.

Fairfax Tomorrow:

There is capacity for the public at 5 cemeteries for additional burial plots.

Next Steps: The Town will identify the cost to perform restoration and mark the boundaries as applicable.

Community Library

The Fairfax Community library is combined with the school library and located with the BFA-Fairfax building. Accommodates evening, weekend and online access to resources.

Fairfax Today:

The library accommodates a steady stream of public users and has increased programming to accommodate current needs.

- From 2012 to 2017 the Fairfax library saw a 33% increase in the number of public patrons visiting the library with an average of 441 patrons per week in 2017.
- Available programming from 2012 to 2017 increased by 118% and attendance increased by 127%.

Fairfax Tomorrow:

Library has capacity to serve existing and new customers. In 2018 the Library will be updating their 5-year strategic plan that will identify potential improvements to meet the needs of residents.

Next Steps: The Town should coordinate with the library on the update and implementation of the Fairfax Community Library 5-year Strategic Plan.

Parks and Recreation Department

The Parks and Recreation Department offers recreation and fitness programs for the community and sponsors/co-sponsors a series of annual events in the community. The Department also maintains and manages community facilities including: Community Park and Recreation Path, 100-Acre Woods, and Community Center (see additional information under *Recreation Facilities* later in this section).

Fairfax Today:

The program offerings continue to expand and the Town is conducting improvements to all 3 of the main recreational facilities.

Fairfax Tomorrow:

The Town will need to support improvements to facility space, such as the Community Center, for recreational programming in order to grow offerings and accommodate the need.

Next Steps: The Town should provide support and resources to identified improvements at the 100-Acre Woods, the Community Center, and other opportunities to expand recreational programming and field space.

Utility Department – Village Water District

The Town water supply services approximately 299 connections in the Village, including the school. The Wheezy Way Road well has a total possible yield of 60,000 gallons/day and provides for an average daily demand of 36,941 gallons (based on average demand from 2012-2017). An additional 2,025 gallons/day is allocated to future development. The Water Source Protection Area for the Village water supply is shown on the **Water Resources Map**; see Groundwater Section for more information.

Residential allocations based on 150 gallons per day per bedroom

Outside the municipal water service area, the majority of residents obtain their water supply by individual private wells.

Fairfax Today:

User fees maintain current system. An additional water source is needed as a backup source of water in case of contamination or other emergency.

Fairfax Tomorrow:

The well is at capacity based on current use and allocations to future development. The Town continues to search for a new water source to augment the current system of users and accommodate new growth in the Water District. No capital reserve exists to fund system expansion.

Next Steps: The Town will continue to pursue a secondary water source to expand capacity.

Utility Department – Wastewater Treatment Facility (WWTF)

The WWTF serves approximately 403 connections in the Village. The system is able to treat 78,000 gallons of waste per day and treats on average 36,653 gallons/day (based on average discharge from 2012-2017) or 47% of its capacity. The Town reserves 10% capacity for municipal use. As of February 2017, 25,000 gallons/day are available for future development.

Residential allocations based on 210 gallons per day per single-family residence

Outside the municipal sewer service area, residents depend on individual and community septic systems.

Fairfax Today:

User fees maintain current system. Recent improvements have been limited to minimum measures; additional improvements are needed to ensure longevity of system.

Fairfax Tomorrow:

The system is near capacity and only able to serve limited future wastewater needs within the village. No capital reserve exists to fund system expansion.

Next Steps: The Town should continue to explore and identify available options to expand capacity of the system.

Fire Service

Fire Department responds to a variety of calls ranging from auto crashes, carbon monoxide alarms, hazardous materials, hazardous conditions, automatic fire alarms, public event standbys, and fires of all types. The majority of the roster is volunteers. In last 4 years the department has averaged 176 calls.

Year	# of Calls
2014	194
2015	162
2016	164
2017	184

There are 33 fire hydrants connected to the system for use in immediate response to fires. The Fire Department has a map of other water sources available for emergency use, including fire ponds.

Fairfax Today:

Planning for future equipment purchases with regular contributions to a replacement fund in the Town Budget.

Fairfax Tomorrow:

The Fire Department is able to handle the needs of the community as it changes.

Next Steps: The Planning Commission and Fire Department should evaluate the driveway standards to ensure the intent is being met and is not creating an unfair burden to residents.

Rescue Service

Fairfax Rescue is a subscription service that provides ambulance and emergency rescue service in town. The service is funded by billing for ambulance service, use of a subscription plan, fundraising, donations, and from the voters of Fairfax, Fletcher, and Westford. In 2018 the cost of services increased due to the addition of paramedic services.

Fairfax Today:

Fairfax Rescue is able to meet the needs of the community and serve at the Paramedic level 24-hour year-round service.

- Maintaining qualified volunteers is challenging with new requirements and needed training.

Fairfax Tomorrow:

Fairfax Rescue is able to handle the needs of the community as it changes and should aim to keep costs in line with services provided.

Next Steps: The Town should continue to support Fairfax Rescue with an annual appropriation to retain the local provider of emergency services.

Law Enforcement Services

Community needs are met by a combination of providers:

- Franklin County Sheriff's Office contracts with individual towns requesting additional police services; the Sheriff responds to complaints, makes arrests, and issues traffic tickets.
- Vermont State Police provide additional law enforcement
- Town Constable works in conjunction with the Sheriff's Office primarily related to traffic safety issues.

The majority of respondents to the 2017 Community Survey ranked police services as adequate.

Fairfax Today:

Law enforcement services minimally meet the needs of the community today. Town has found filling the post of Constable as challenging due to training requirements.

Fairfax Tomorrow:

Law enforcement services can provide this same level of service in the future. If expansion of services is desired, the ability of these providers to meet the need should be evaluated.

Next Steps: The Town should evaluate the need for increased enforcement.

Solid Waste & Recycling Services

The Town contracts for weekly curbside trash and recycling pickup; the fees for this service are collected with property taxes. As of 2015 it is a statutory requirement for all municipalities to establish unit-based pricing systems for residential municipal solid waste; meaning a user pays a set fee per container or per pound if by weight.

Fairfax Today:

All residents receive service with expectation that it is hauled from end of driveway.

Fairfax Tomorrow:

Contractors able to handle existing and new customers

Next Steps: The Town should monitor whether the contracted service is meeting the needs of residents.

Telephone & Cellular Services

There is only one local telephone provider and multiple providers for long-distance service. Cellular service has improved in recent years but dead areas still exist in areas of town.

Fairfax Today:	Fairfax Tomorrow:
Non-cellular service is acceptable and meets the needs of current customers.	Non-cellular service can meet the needs of new customers.
Cellular service is spotty in Town and additional infrastructure is needed to ensure town-wide coverage	Cellular service providers can meet the needs of new customers however, as noted with existing conditions; additional infrastructure is needed to expand service.

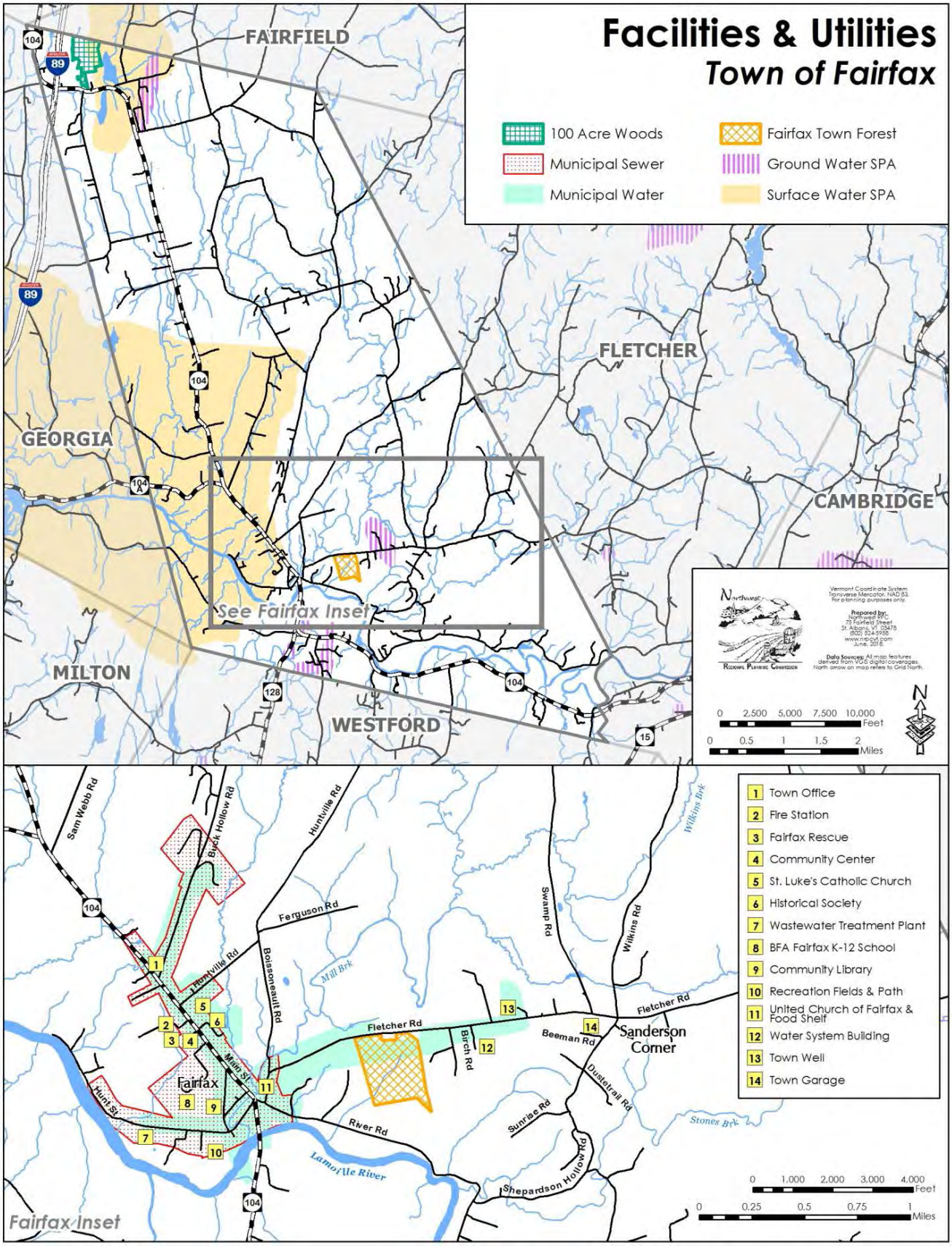
Next Steps: The Town will work with public and/or private partners to assess where there are gaps in cellular service coverage.

Internet & Broadband Services

Internet service is available through various platforms: dial-up, DSL high-speed, satellite high-speed, cable, and wireless broadband.

Fairfax Today:	Fairfax Tomorrow:
Many of these services are provided to most residents but there are service areas that experience unreliable service or are unable to obtain faster internet speeds. This is seen as hindering economic development and ability of residents to telework.	Service providers can meet the needs of new customers but it should be noted that improvements to infrastructure are needed to expand service to ensure town-wide coverage.

Next Steps: The Town will work with public and/or private partners to assess which roads are being served by providers and what level of service people can access.


Facilities & Utilities
Town of Fairfax
100 Acre Woods
Municipal Sewer
Municipal Water
Fairfax Town Forest
Ground Water SPA
Surface Water SPA
FAIRFIELD
FLETCHER
GEORGIA
CAMBRIDGE
MILTON
WESTFORD
See Fairfax Inset
Vermont Coordinate System Transverse Mercator, NAD 83. For planning purposes only.
Prepared by:
Northwest RPC
75 Fairfield Street
St. Albans, VT 05478
(802) 524-5958
www.nrpc.org
June, 2018
Data Sources: All map features derived from VCGI digital coverages. North arrow on map refers to Grid North.
0 2,500 5,000 7,500 10,000 Feet
0 0.5 1 1.5 2 Miles
1 Town Office
2 Fire Station
3 Fairfax Rescue
4 Community Center
5 St. Luke's Catholic Church
6 Historical Society
7 Wastewater Treatment Plant
8 BFA Fairfax K-12 School
9 Community Library
10 Recreation Fields & Path
11 United Church of Fairfax & Food Shelf
12 Water System Building
13 Town Well
14 Town Garage
Sam Webb Rd
Buck Hollow Rd
Huntville Rd
Ferguson Rd
Boissoneault Rd
Mill Brk
Swamp Rd
Wilkins Rd
Wilkins Brk
Fletcher Rd
Birch Rd
Beeman Rd
Sanderson Corner
Main St
Fairfax
Hunt St
River Rd
Sunrise Rd
Dusteltrail Rd
Stones Brk
Lamoille River
Shepardson Hollow Rd
0 1,000 2,000 3,000 4,000 Feet
0 0.25 0.5 0.75 1 Miles
Fairfax Inset

Facilities, Utilities, & Services Goals and Policies

Goal:

- Provide and plan for municipal facilities and services to ensure the public's health and safety, and to improve the quality of life in Fairfax.

Policies:

- To maintain a public water and public wastewater system that meets state and federal standards, and provides for the future development needs of the town.
- To assess when improvements or expansions to the municipal water supply and wastewater treatment plant will be needed and how to finance them.
- To provide for the physical safety of Fairfax residents through quality fire, emergency response, and law enforcement services.
- To locate and maintain public facilities and services to encourage patterns of land use, population density, transportation strategies and street design to promote walking, biking, and public transportation.
- To balance growth with the Town's ability to provide expanded services and facilities.
- To improve stormwater management by the implementation of best management practices to reduce stormwater runoff and control erosion.
- To continue educational efforts to reduce waste generation and provide a variety of efficient, environmentally sound, and cost-effective long-term solid waste disposal options as identified in the Fairfax Solid Waste Implementation Plan.
- To support efforts to maintain and enhance the library.
- To expand communications infrastructure, such as broadband internet access, cellular service, DSL, etc. to serve residential and commercial needs.

Recreation Facilities

The outdoors provides an abundance of recreation opportunities for Fairfax residents. The Lamoille River, which flows through the southern portion of town, is used for fishing and canoeing, and the wooded areas and fields found throughout the town are used for hunting and walking, snowmobiling, and cross-country skiing. There is also a large biking and running community as well as a variety of both team and individual sports program in which to participate.

There are four formal facilities in Fairfax for recreation activities and programing. Full descriptions of the facilities is available in the Fairfax Community Data Profile.

Formal Recreational Facilities in Fairfax

Community Park & Recreation Path

This 23-acre park provides over a mile of mixed surface paths by the Lamoille River, 2 multi-use fields, softball fields, horseshoe pits, restrooms and a pavilion.

BFA-Fairfax Facility

The Recreation Department coordinates with the School to utilize space for fitness programing; space is limited which constrains program offerings

100-Acre Woods

This 100-acre property is heavily wooded with a small network of trails. Planned improvements include demarcating the parking area and trails as well as constructing a trailhead.

Community Center

This facility aims to address the unmet needs for a venue for programming and to expand the services of afterschool programming and enrichment classes.

Recreation Facilities Goals and Policies

Goals:

- Provide a broad range of quality community programs and services to the residents of Fairfax.
- Establish a physical and visual connection between the North and South Village and the Lamoille River and incorporate the river as an active vital corridor.
- Provide diverse community recreation areas, cultural programs, pocket parks and greens.

Policies:

- To maintain, improve and expand Town-owned recreation areas and facilities in order to provide multi-generational recreational opportunities.
- To encourage recreational and cultural programs that support personal growth, enhance family relationships, and encourage civic involvement.
- To support needed improvements and resources to strengthen access to the Lamoille River and other natural features and destinations.
- To seek to establish public access to hunting and fishing, and other outdoor recreational activities.

Educating Our Children

Quality education is essential to the health of a community. The Town is committed to working cooperatively with the local school district to meet facility needs, foster a safe and healthy school environment, and recognizing the critical role that all types of education play in Fairfax's vitality. State statute not only requires that town plans address the present and projected needs of the local public school system, but also requires that municipalities broaden educational and vocational training opportunities for all Vermonters. It is not the municipality's responsibility to make policy or spending decisions for the school—those are made by the school district, with the budget voted on annually by citizens. However, as both the municipal and school budgets are financed by property taxpayers, the impacts of the combined budgets must be considered, and large capital projects should be coordinated. Fairfax's public educational facilities are shown on the Fairfax **Facilities and Utilities Map**.

Existing Facilities & Enrollment

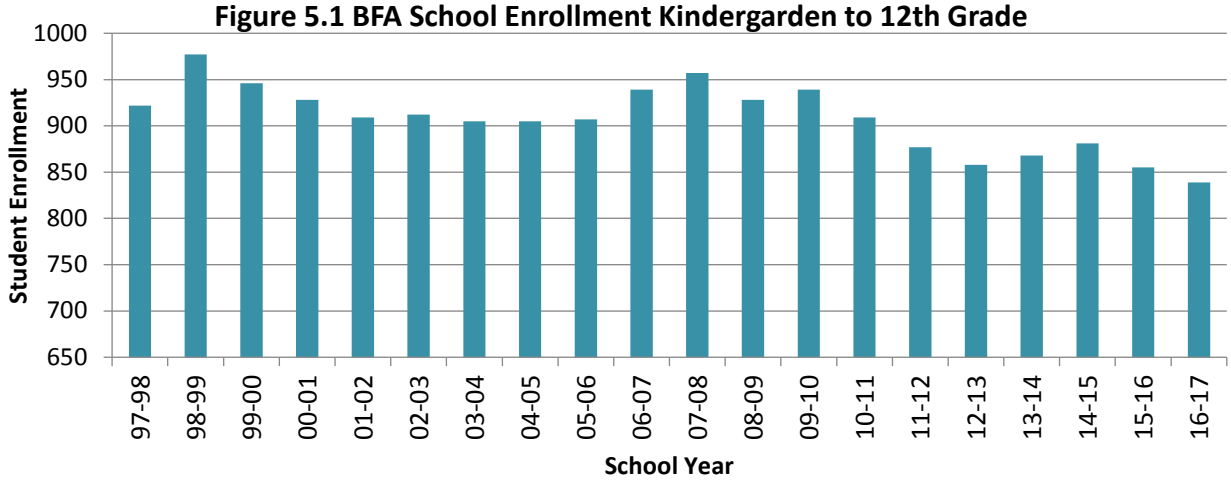
Bellows Free Academy Fairfax (BFA-Fairfax) is a public educational facility serving residents of Fairfax in grades PreK-12. The facility has a capacity of 1,200 students after an addition, constructed in 1998, increased the capacity by 400 students. The addition provided more classroom space, improved the existing kitchen facilities, added parking, provided greater separation of elementary and high school facilities, and installed fiber-optic technology.

Total enrollment at BFA Fairfax has dropped by twenty-three percent in the last ten years; this decline is largely from a reduction of high school students. BFA Fairfax also accepts tuition students from Fletcher in grades 7-12, as well as grade 9-12 students from Georgia, and fewer students from other communities. One factor that influences the high school enrollment is the number of students that tuition to BFA from choice towns; the number of tuition students in grades 7-12 has decreased by 33% since the 2007-2008 school year.

Preparing for the Future

The state projections show the number of school aged residents (ages 5-19) in Franklin County will be lower than 2010 numbers in both 2020 and 2030 (VT Agency of Commerce and Community Development, 2013).

Figure 5.1 BFA School Enrollment Kindergarden to 12th Grade



Source: Vermont Department of Education Town School District Annual reports

However, the population of the Town of Fairfax, based on these same projections, is predicted to increase by 2030. Based on enrollment trends, BFA Fairfax has sufficient capacity for the near future. The School Board has identified potential upgrades to the current facilities in order to meet the demands of today's education system. These improvements, which are not yet approved, would include a 400-seat auditorium, and upgrades to several facilities such as locker rooms, science labs, bathrooms and the joint school and community library.

Community Resource

BFA Fairfax is an important hub for community activities and provides coordinated public access to school facilities and grounds. Community use of the building typically includes meeting spaces used by local government, service organizations, adult recreation, self-help groups, youth activity groups, and cultural groups. Even though the school board has encouraged community use of the facility, the increase in school programs and security has started to restrict community use of the building. Gym space in particular is in high demand between November and March.

Higher Education & Adult Learning

Adults in Fairfax are generally well-educated, with 56.7% of residents that have some college education or graduate degrees. There are several opportunities for continuing education at public and private educational institutions in nearby towns of St. Albans, Johnson, and Chittenden County.

Workforce Training

BFA Fairfax provides High School students access to vocational training at the Northwest Technical Center, Center for Technology at Essex, and Burlington Technical Center as well as access to courses through the Community College of Vermont. These programs provide students with skills sets they can directly apply in the labor force. The Vermont Woodworking School is a local opportunity to gain specialized skills in a trade.

Childcare

Childcare can be a growing concern for existing and prospective families, including finding quality care and paying for its cost. High quality, available childcare is a critical component supporting a stable workforce. As of 2015 there were just over 267 children under the age of 6 in Fairfax; 62% of these children are in 2-parent families with both parents in the labor force and 32% are in a 1-parent family that is working (2011-2015 American Community Survey). Based on this data, the majority of young children has parents in the labor force and will likely need access to childcare services. According to the Vermont Dept. of Children and Families in 2017, Fairfax had 19 childcare providers that are able to serve 262 children with 142 spots for children under 5. Based on these estimates the need exceeds local childcare capacity by a large margin. Given that the majority of residents commute outside Fairfax for employment, residents may utilize services located in the neighboring communities. Data on other options, such as out-of-town childcare providers, stay at home parents, family care providers, un-registered childcare homes, or other in-home childcare options are not available.

Education and Childcare Goals and Policies

Goals:

- Provide educational services, childcare, and enrichment programs to meet the needs of the children and adults in Fairfax.
- Encourage youth to pursue higher education and vocational training opportunities that will make them an asset to Fairfax as adults.
- Foster an environment that stimulates lifelong learning.

Policies:

- To promote healthy and safe school environments.
- To provide students with safe ways to walk or bicycle to school through a network of infrastructure (i.e. sidewalks, crosswalks, trails) and traffic calming measures.
- To provide opportunities for community participation by families with young children.
- To maximize resources for the provision of a rich education for all students.
- To encourage the use of public and private facilities in offering multi-generational educational opportunities.

Community Health

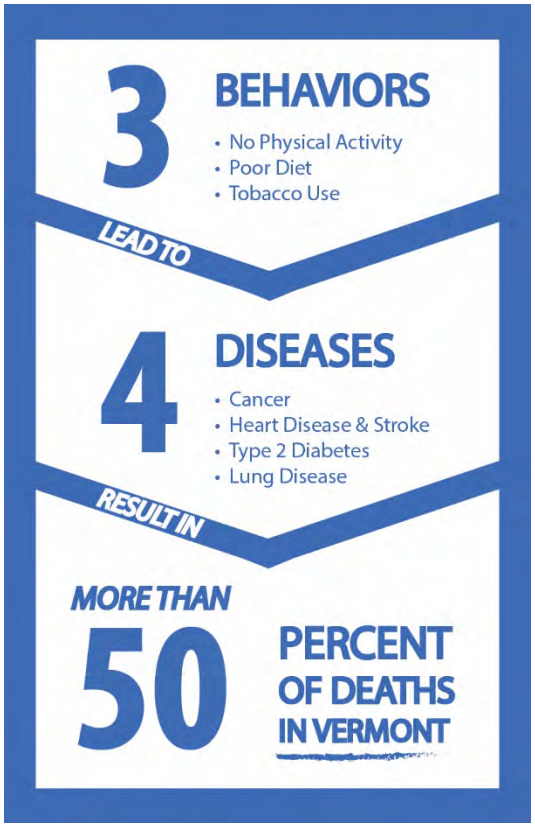
An individual's health and wellbeing can be strongly influenced by where they live; physical inactivity and poor nutrition are among the top causes of preventable death in the United States.

The Vermont Health Department has found a relationship between daily behaviors and an individual's long-term health. In addition, early use of alcohol, tobacco, and other drugs is associated with numerous problems later in life that can impact mental wellbeing as well as lead to higher risk behavior. Teaching our youth to build healthy habits will influence these health outcomes as they become adults.

The 2015 Vermont Youth Risk Behavior Survey provides a glimpse at where the youth of Fairfax stand in making healthy choices. The following statistics are from the responses of BFA-Fairfax students in 9th, 10th, and 11th grade.

- 26% of students participated in at least 60 minutes of physical activity every day during the past 7 days.
- 22% of students ate 5 or more servings of fruits and vegetables in the past 7 days.
- The percent of students who drank alcohol, smoked cigarettes, or used an electronic vapor product in the last 30 days was 31%, 12%, and 20% respectively.
- 58% of students reported that they see advertisements for tobacco products "at least most of the time" when they are in a grocery store, gas station, or convenience store.

Municipalities can support their resident's ability to make healthy choices by influencing the way the community develops, facilitating access to healthy food, and adopting



measures that limit the exposure of youth to tobacco and alcohol products. Measures Fairfax could take to address these include:

- Create a pedestrian oriented environment by encouraging mixed use concentrated development in the Growth Center and Mixed Use zoning districts.
- Provide facilities for safe walking and biking in the community.
- Improve access to parks and recreational opportunities.
- Increase access to healthy food by supporting famers markets and community gardens.
- Prohibit the use and disposal of tobacco, marijuana, and alcohol products and equipment on municipally owned lands.
- Restrict the visibility of advertisement for products containing alcohol or tobacco by incorporating standards into the zoning regulations that limit the area allowed for on-premises signs.

- Provide a venue where health-related education, screening events, and exercise classes can be offered.

Many of these strategies align with other goals and policies in the town plan and will be addressed in the recreation, transportation and land use sections. To address *Health in All Policies*, the Town will consider actions they can take to prevent risky behaviors and support general wellbeing.

A recent program aimed at involving and educating students on their local food system is a successful example of how these strategies can play out in the community. In 2016, Bellows Free Academy began a School Farm program for High School students supported by two grants from the Vermont Farm to School Program. The school program has engaged local farmers, experts, and town residents who have volunteered to support the project financially or through technical assistance. This program engages students and the school with food system curriculum and a Club and results in creating healthy eating habits and larger engagement within the community.

Health Assets

Fairfax is in close proximity to three hospitals and a variety of medical offices from neighboring towns serve residents' needs. At the writing of this plan, there are several services that are located in town which include: two physicians, a pharmacy, and a physical therapy office. For seniors, the Town contributes financially to the Franklin County Home Health Agency and Age Well service agencies; Age Well provides services such as the volunteer program Meals on Wheels. See the *Fairfax Community Data Profile* report for additional information on health services. The quality of health and human services available now will continue to meet the needs of the Town well into the foreseeable future.

Community Health Goal and Policies

Goal:

- Support and encourage activities and community infrastructure, both social and physical, which enable and sustain the health and well-being of all residents.

Policies:

- To encourage opportunities to provide convenient access to health and human services for Fairfax residents.
- To provide diverse, meaningful programming with an emphasis on community health and wellness. Specifically target alcohol free, cross-generational activities for families, teens, and seniors.
- To support the local food system (growing, harvesting, processing, packaging, transporting, marketing, consuming, and disposing of food).
- To collaborate with interested parties to complete a community food audit to identify existing access and future opportunities to increase access to healthy food.
- To improve the access to healthy food and model best practices related to promoting healthy communities.

Section 6. Infrastructure: Housing, Transportation, and Energy

Housing

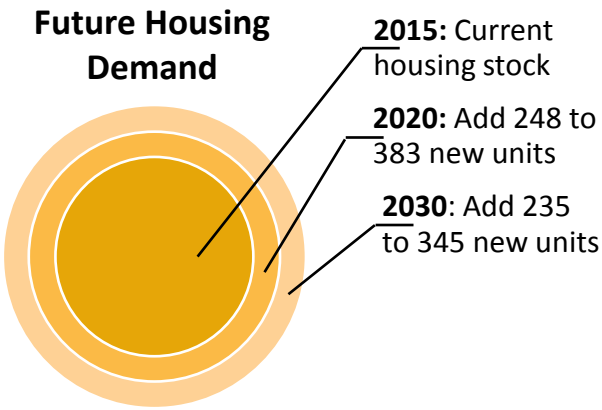
Fairfax is a bedroom community for residents who work in the Burlington and St. Albans areas. This is due to its accessibility from Routes 104 and Interstate 89, as well as the shortage and the cost of housing closer to these employment centers. As a result, Fairfax has experienced continued growth since the 1970s, with a record 51% increase in population from 1990 to 2000. Residential parcels represent 80% of the tax base in the community reflecting the focus of the community in providing a rural to suburban setting for residential development.

Housing Stock

According to the 2015 American Community Survey (ACS) there are 1,745 housing units in Fairfax. The vacancy rate for homeownership has been at or below 2% since 2000. As of 2015 the housing stock in Fairfax is in good condition and can be characterized by:

- Two-thirds of residential structures are less than 40 years old.
- Eighty percent of the homes are single-family homes; multi-family dwellings with more than 3 units make up only 11% of all residential units.
- Residential lots of less than 6 acres account for 71% of the total parcels but only 18% of the total land.
- Three bedrooms are the most common housing unit, accounting for 56%, while 1 and 2 bedrooms are both around 13% of the units.
- Rental units make up just under a quarter (24%) of all housing units.

Based on population projections for 2020 to 2030 (ACCD Population Projections 2020-2030), Fairfax will continue to grow and is expected to account for 10% of the growth county-wide in both 2020 and 2030. Considering the current household size of 2.55 people, Fairfax will need to construct additional housing units to accommodate this growth.



Types of Households

As of 2015, the following are characteristics of the types of households that live in Fairfax:

- The majority of households consist of 2 people (43%).
- The number of 1-person households has doubled since 2000.
- 24% of all households have children under 18 at home.
- The median age is 39.5 and the majority of residents are between the ages of 25 and 54.
- The number of residents aged 55+ has been steadily increasing.
- The median household income of residents is $70,795; 43% of all households earn between $50,000 and $99,999.
- 76% of the residents own versus rent their housing unit.

Affordable Housing as defined by the 30% Rule

Owners: Housing that is owned by its inhabitants whose **gross annual household income** does not exceed **120 percent of the MSA[1] median household income**…and the **total annual cost of the housing**, including principal, interest, taxes, insurance, and condominium association fees **is not more than 30 percent of the household's gross annual income**.

Renters: Housing that is rented by its inhabitants whose **gross annual income** does not exceed **80 percent of the MSA[1] median income**…and the **total annual cost of housing**, including rent, utilities, and condominium association fees, **is not more than 30 percent of the household's gross annual income**.

(VT State Statutes Title 24, Chapter 117, Section 4303)

[1]All municipalities in Franklin County are deemed part of the Burlington-South Burlington

Affordability of Housing

Safe, adequate housing is inarguably one of our most basic needs. It is an important planning consideration to ensure that first-time buyers, senior citizens (often on fixed incomes), and lower income residents are able to afford adequate housing in Fairfax. In order to foster a diverse community, which is not economically exclusive, the Town needs to provide a variety of housing types and price points.

To consider housing as affordable, households should pay no more than 30% of their income on housing related costs based on state and federal definitions. This rule is used as an indicator for the availability of affordable housing in a community.

Using the state definition of affordable housing outlined above, Fairfax does not have an "affordability gap" for homeownership for those earning 120% of the median income.

- The 120% of the median household income for the MSA is $75,906 which is lower than the 120% estimate for the Town of Fairfax residents of $84,954.
- The median sale price for a primary single-family residence in 2015 was $252,750.

Based on these values those households earning the median MSA income ($63,255) or greater can afford to own a home in Fairfax. Homeownership affordability can, however, be a problem for some who earn less than $62,000.

- The median gross rent in 2015 was $1,193 per month.

Rental housing in Fairfax appears to be more affordable than homeownership for median and low-income households. However, the number of available rental units is extremely limited and the low vacancy rate can drive up rental costs, making housing less affordable.

Specialized Housing Options

Communities also need to account for providing housing to individuals and families with varying housing needs such as seniors and individuals in poverty. Different measures will be needed to accommodate these groups ranging from modifications to existing housing stock to meet handicapped accessibility, assisted living arrangements, and smaller or lower cost housing options. If these housing options are not available, it may

force some residents to relocate outside of Fairfax as they age or need additional levels of care.

The following is a list of population groups with special needs and an indication of how well these needs are currently being met in Fairfax.

Seniors – As of 2015, the Town of Fairfax has limited opportunities for group housing for senior citizens that can be classified as independent or assisted living arrangements. There are two senior housing complexes for independent living, Franklin Green and Mountain View Apartments, which provide a combined total of 67 housing units. As of the 2015 US Census, 13.4% of residents or 595 people are age 65 and older. As previously noted the community as a whole is aging, steps need to be taken to ensure that there is adequate housing available for senior citizens.

Franklin Green *provides 47 market rate condos; 30 additional units are planned.*

Mountain View Apartments *provides 20 subsidized rental units; income limits*

Living in Poverty – As of 2015, 1.7% of residents are considered to be below the poverty level. One development in Fairfax that has incorporated subsidized low-income housing is the Eastfield Condominium Development on Route 104 across from Minor's Store. This is a 32 unit 2-bedroom condominium development and 14 of the units are permanently affordable through the Champlain Housing Trust "Shared Equity Program". While the typical buyer of a CHT home averages an income of 60-70% of the MSA median, these units are open to all buyers with an income below 100% of the median. The Town should evaluate the current affordability of the town's housing stock to ensure that there are opportunities for all incomes to find safe and adequate housing.

"Affordable"

Vermont Statute defines "affordable housing development" as a housing development of which at least 20% of the units, or a minimum of five units, whichever is greater, are affordable housing units. The affordability of these units shall be preserved for a minimum of 15 years or longer as provided in municipal bylaws.

Options to Increase Housing Variety and Affordability

The Town recognizes that there is a need for senior housing for the growing senior population and affordable housing for low and moderate-income households. The following are some identified ways the community can address these needs.

Standards provided in zoning regulations should be reviewed to identify if they are promoting opportunities to allow for a variety of housing types, while providing standards to maintain the character of the area and ensure adequacy of services. To accommodate a diversity of housing types and development near existing services, lot size and setbacks minimums should allow for more flexible design for development within village settings. Other forms of housing development that can be economically and structurally viable for affordable units are planned unit developments and other forms

of cluster housing, accessory apartments, and multifamily housing. Mobile homes can also provide an opportunity for those who cannot afford conventional housing. Vermont land use law does not allow municipalities to discriminate against or segregate mobile homes.

Public infrastructure contributes to the availability of low cost housing. In particular, shared sewer and water connections allow for higher densities and lower land costs by minimizing the amount of land that is necessary to accommodate new development. Affordable housing developers often depend on these public facilities to reduce building costs. The expense of drilling wells and designing individual septic systems significantly increases the price the developers require for their efforts. Currently, municipal sewer and water infrastructure that serves the Village Center is near or at capacity. The potential for future growth in this area - at higher densities than in other parts of town – will be dependent on the availability of infrastructure.

Fairfax can also promote housing variety and affordability by promoting programs such as HomeShare Vermont. HomeShare Vermont assists elders and persons with disabilities to live independently in their own home by bringing them together with persons who are seeking affordable housing and/or care giving opportunities. This program represents an opportunity to expand housing opportunities while maintaining open space and other sensitive areas such as floodplains.

Housing Goal and Policies

Goal:

- Guide the Town in achieving well managed residential growth that includes a diversity of housing opportunities.

Policies:

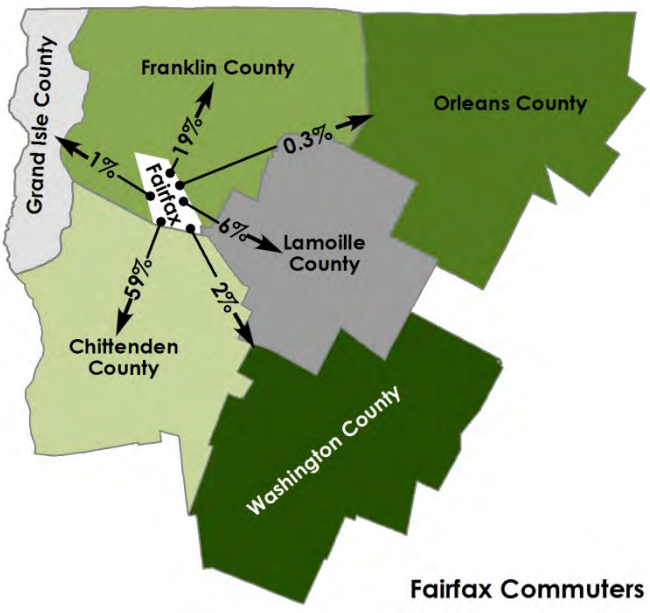
- To ensure adequate housing options for people of all income levels, ages, household types, and housing forms.
- To promote lower-density residential housing in areas without municipal services and higher densities in parts of town with existing services (e.g. Growth Center) or close to existing service boundaries.
- To encourage the preservation and rehabilitation of existing housing stock.
- To encourage infill development of small, existing lots.
- To encourage the development of housing that will minimize long-term living costs through high quality design and energy efficient construction.
- To provide a range of housing types within walking and biking distance of village services and amenities.
- To encourage land use patterns which are inherently more affordable by nature of cost of efficiencies associated with construction (e.g. shorter access roads, smaller lots, proximity to utilities).
- To maintain the affordability and promote new development of rental housing opportunities.
- To enable affordable development in the Growth Center by increasing sewer and water system capacities.

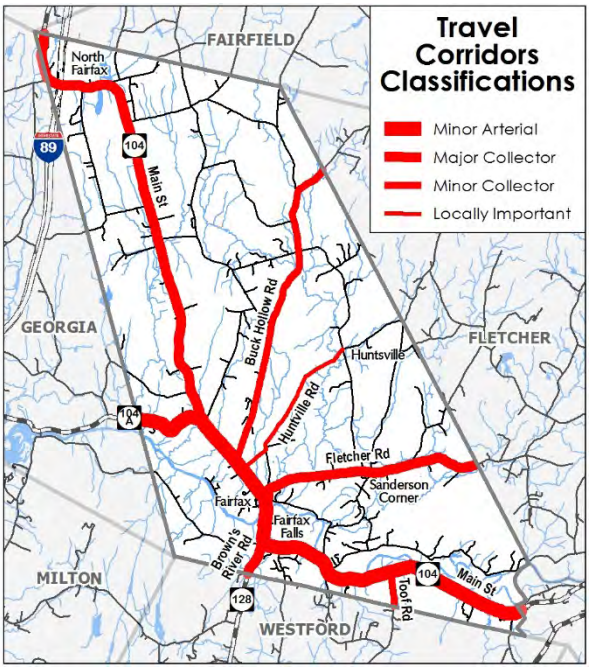
Transportation

Road Network

Fairfax has a total of 79 miles of paved, gravel, and dirt roads and highways (excluding Class 4 and private roads). The **Transportation Map**, shows the roads in Fairfax, the class of road, road surface, and streams which are important for locating culverts. Many of the local roads provide scenic views, but there are no locally or state designated scenic roads in the Town.

Roads are classified according to their use and ability to carry traffic. The Agency of Transportation has identified several roadways in Fairfax which are regionally important for their role as primary corridors for the flow of traffic around Franklin County. These travel corridors are important for the flow of commuter traffic and many also carry a significant volume of truck traffic.





Commuter Flow

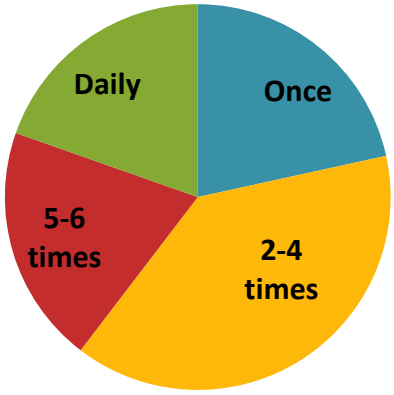
The majority of commuter trips originating in Fairfax are to employment destinations outside of Town, particularly to Chittenden County's major employment centers. According to the Census (Longitudinal Employer-Household Dynamics Program), just under 60% of the workers that live in Fairfax travel to Chittenden County communities for employment. Just under one-fifth of residents (19%) travel from Fairfax to other communities within the County. According to the 2015 American Community Survey, the majority (79%) of employed persons living in Fairfax commuted to work by driving alone.

Only seven percent of workers are reported as being employed within Fairfax. This number is likely closer to 11% if you include employer locations that are more than a 90-minute commute from Fairfax; it could be even higher if you consider the number of home-based (self-employed) businesses that are not captured in this data.

Accessing Essential Needs

According to the 2017 Fairfax Town Plan Survey, residents primarily travel to St. Albans and surrounding towns to access retail shopping (grocery, clothes, toiletries, etc.). A small portion of these services are accessed in Fairfax and via the internet. It should be noted that residents do utilize the services in the Village Center. Forty percent of respondents are patrons 5+ times a week at a business in the Village.

Number of times per week survey respondent was a patron of a Fairfax Village business



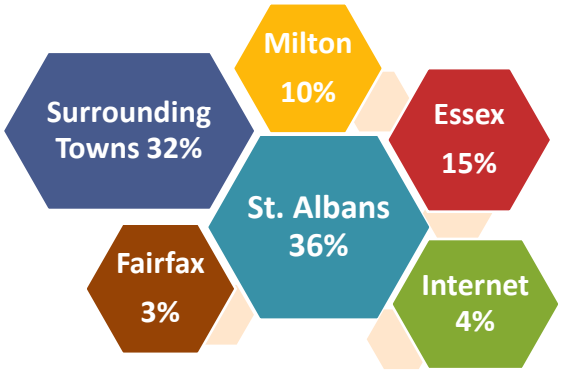
Transportation Services

Local Services

- Commuter Parking –The closest official commuter park and ride lot is located at Exit 18 in Georgia.

- Transport for Elders – Limited transportation services are provided through various service providers. Green Mountain Transit provides trips to medical appointments for Medicaid/Medicare patients.

Communities that provide retail shopping for residents based on 2017 Town Survey



Regional Services

- Public Transportation - There are no regional public transit routes that directly service Fairfax, nor does the Town provide any public transportation for its residents. The closest transit stop is located at the Georgia Industrial Park or St. Albans Town for the St. Albans Link Express, which provides service to Chittenden County.

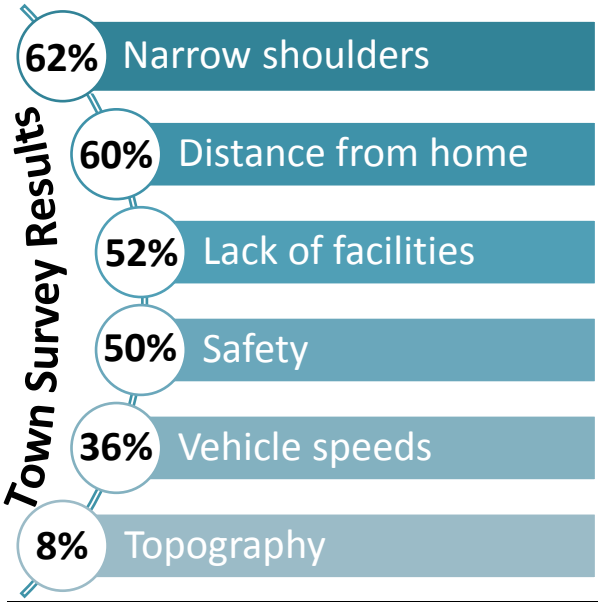
- Train - Amtrak provides passenger rail service out of the St. Albans depot on the Vermonter line which extends down to Washington, D.C.

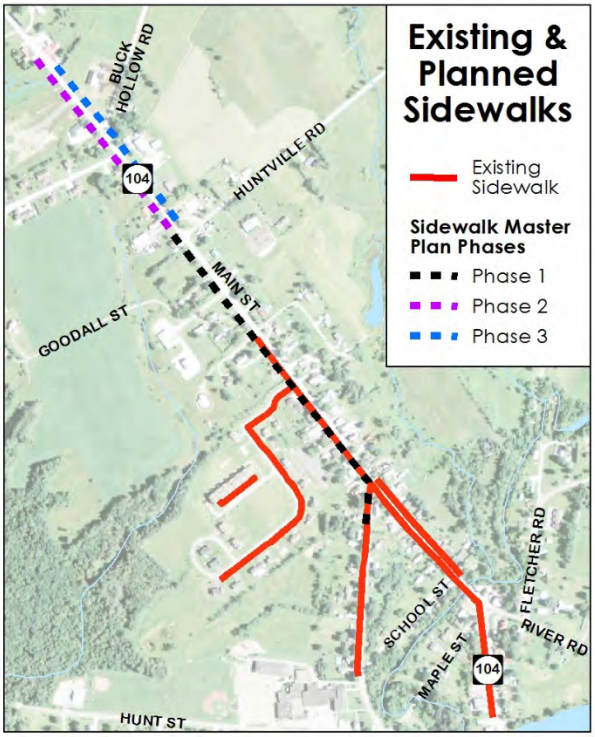
- Airport - The Burlington International Airport in South Burlington, the Plattsburgh International Airport in Plattsburgh, and the Trudeau Airport in Montreal provide air service to the region.

Pedestrian and Bicycle Facilities

Creating a system of infrastructure that provides residents the opportunity to travel on foot or bike throughout Town has numerous benefits. There is a core system of sidewalks in the Village that stem off of Route 104 and mainly service the School. Bicycle and pedestrian travel for recreation is accommodated by the Fairfax Recreation Path and Class 4 roads. No other bicycle and pedestrian related infrastructure (e.g. bike lanes) or signage (e.g. share the road) is available to residents. Bicycle travel in the Village can be accommodated on the existing road network although there are no dedicated lanes. Outside the Village however, this can be hazardous due to varying widths of shoulders. Route 104 and other roads in town would benefit from a dedicated bicycle lane and wider shoulders to provide a safe route as identified by the 2013 Non-motorized Travel Plan. Efforts to maintain and improve a network have been underway for many years.

According to the 2017 Fairfax Town Survey, the top road blocks that prevent people from walking and biking today in Fairfax relate to a lack of facilities to connect the community.





Benefits of a defined system for walking and biking

- *Increase safety for all users*
- *Fewer motor vehicles on the road*
- *Promote better public health and active recreation*
- *Encourage walking and bicycling to the school and other amenities*
- *Contribute to Village revitalization and economic growth*
- *Foster a greater sense of community*

Safe Routes to School

Fairfax is a participant in the Safe Routes to School Program. The program actively encourages walking and bicycling by students and helps to identify infrastructure projects to make walking and bicycling safer. BFA Fairfax completed a School Travel Plan in 2010 that documented problems related to the journey to school and strategies to address these issues; this study is a valuable tool for planning and should be periodically updated.

Assessing needs, designing improvements, & getting it on the ground

- 2006 - Initial investigation of sidewalk expansion in Village along Route 104 identified potential expansion of sidewalk on west side of VT 104 in three phases.
- 2010 – Town receives Transportation Enhancement grant from VTrans to design and construct phase 1 from Huntville Road to Hunt Street. As of January 2018, this project construction is expected in 2018.
- 2013 – Town-wide study to explore opportunities to connect residents outside the village with bicycle and pedestrian infrastructure. *(Fairfax Non-motorized Travel Plan)*
- 2015 – Identified improvements needed to walk or bike from the existing network in the northern village center to amenities across the bridge in the south village. *(Fairfax Pedestrian Connectivity Feasibility Study between the North and South Villages)*
- 2017 – *Village Gateway Study* presents improvements to improve safety along Route 104 and promote community identity.

Building a Sustainable Transportation System

Encouraging a pattern of high density, mixed use development within the Village Center could help create more local job opportunities, lessening the demand on the existing road network to carry commuter traffic to destinations outside of Town for basic services. Promoting home occupations and local agriculture-related businesses would further assist in reversing current commuting trends.

High density development of this kind would best be performed in conjunction with improvements to municipal infrastructure in the area of the existing village. These infrastructure improvements include water and sewer system improvements; continuing the extension of sidewalks within the village for safe, easy pedestrian travel; and the possible addition of new roads within the village which extend the current pattern of interconnected streets in a "neighborhood" street layout. The creation of interconnected "neighborhood" streets is preferred in order to provide efficient flow of automobile travel and opportunities for safe pedestrian travel.

Standards for New Roads

The Fairfax Selectboard has established the Town of Fairfax Statement of Procedures and Standards Regarding Town Highways, dated July 18, 2011. The purpose of this document is to protect the Town from undue financial burdens associated with maintaining existing roads and new construction of development roads. This document provides several additional benefits:

- Standardized road evaluation in regards to widths, surface type, safety and use;
- Ensure that any private roads are constructed reasonably to provide for adequate emergency responder access, and future pedestrian amenities; and
- Avoid creating future issues currently identified as problematic on existing streets (e.g. 'dead end' streets)

Reducing the Transportation Load on the Road

A Park-and-Ride would greatly benefit the community and the transportation infrastructure. As reported, the majority of Fairfax residents travel to other communities for employment, entertainment, medical needs, or supplies. Increasing the number of

residents carpooling will reduce the number of cars on the road and can be beneficial for these residents by reducing their out-of-pocket costs on fuel and maintenance costs on individual vehicles. The Town should investigate suitable locations where carpoolers can leave their vehicles considering informal "park and ride lots" at locations such as churches, where weekday park and ride needs do not usually conflict with the parking needs of the particular location.

In the past, it has been impractical to offer public transportation services in this rural community due to relatively low ridership potential and a diffuse pattern of land use. Due to the steadily increasing population and the fact that more residents are commuting out of town for employment, the potential for some level of public transportation services may too be increasing. The Town should engage Green Mountain Transit to examine possibilities for expansion of existing services.

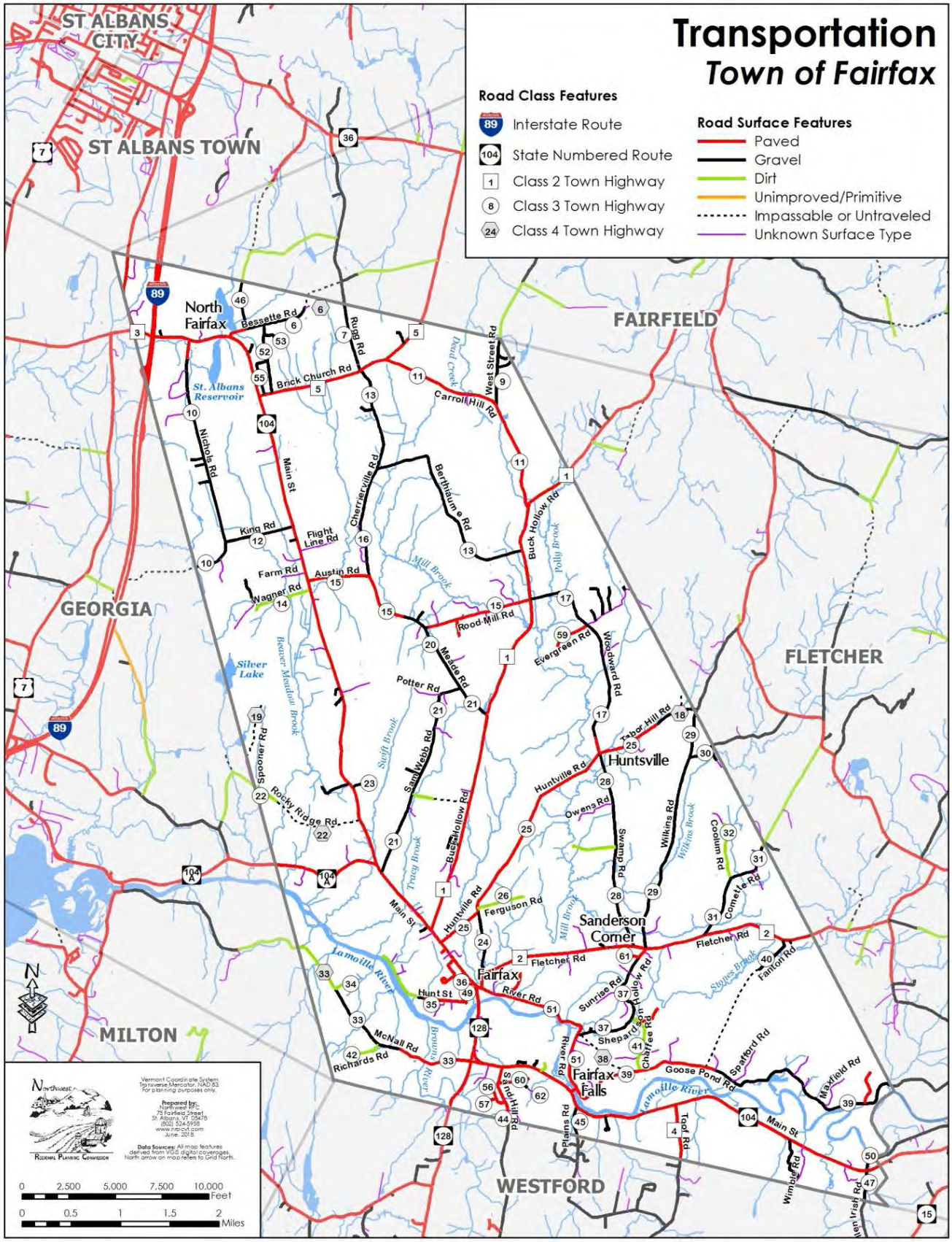
Transportation Goals and Policies

Goals:

- Design a transportation system that provides community-wide non-motorized connectivity to town assets and destinations**.**
- Provide a transportation system that is safe, connected, and sustainable to build, maintain, and access.

Policies:

- To maintain public roads according to the adopted standards and at a level consistent with their use.
- To ensure new roads within the Growth Center shall be reviewed for the ability to contribute to the interconnected village street network and non-motorized infrastructure system.
- To apply the Vermont "Complete Streets" policy to its transportation system to ensure the needs of motor vehicles, public transportation services, bicyclists and pedestrians are being met. This complete street policy shall pertain to both town and private development streets.
- To create pedestrian-friendly village areas that incorporate pedestrian infrastructure (sidewalks, paths, and crosswalks), community amenities (i.e. street trees and wayfinding), and address the safety of motorized and non-motorized travel through traffic calming measures. Traffic calming techniques could include lateral shifts, roundabouts, bulbouts, or neckdowns, in order to reduce traffic speeds, increase safety and encourage pedestrian activity in the villages.
- To coordinate with state and regional partners on transportation improvements.
- To provide pedestrian and bike access to key community places that include the school, town facilities, recreation areas, and river access.
- To encourage appropriate provisions for bicycle and pedestrian use on designated routes, including proper signage and pavement improvements.
- To continue the sidewalk improvement program so that there is a network of continuous, safe, maintained, and accessible sidewalks in the Village.
- To use the comprehensive Fairfax Village Non-motorized Travel Plan in conjunction with existing programs and as a guide for walking and bicycling improvements within the Village.


Transportation
Town of Fairfax
Road Class Features
Interstate Route
State Numbered Route
Class 2 Town Highway
Class 3 Town Highway
Class 4 Town Highway
Road Surface Features
Paved
Gravel
Dirt
Unimproved/Primitive
Impassable or Untraveled
Unknown Surface Type
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
Huntsville
Sanderson Corner
Fairfax
Fairfax Falls
St. Albans Reservoir
Silver Lake
Bessette Rd
Brick Church Rd
Rugg Rd
West Street Rd
Carroll Hill Rd
Nichols Rd
Main St
Cherrierville Rd
Berthiaume Rd
Buck Hollow Rd
King Rd
Flight Line Rd
Farm Rd
Austin Rd
Wagner Rd
Mill Brook
Polly Brook
Rood Mill Rd
Evergreen Rd
Woodward Rd
Meade Rd
Potter Rd
Beaver Meadow Brook
Stiff Brook
Sand Webb Rd
Rocky Ridge Rd
Talbot Hill Rd
Huntville Rd
Owens Rd
Swamp Rd
Wilkins Rd
Wilkins Brook
Coolidge Rd
Comette Rd
Ferguson Rd
Tracy Brook
Buck Hollow Rd
Main St
Lamoille River
Hunt St
River Rd
Fletcher Rd
Sunrise Rd
Stones Brook
Fanton Rd
Shepard Rd
Chaffee Rd
Mower Rd
Goose Pond Rd
Spafford Rd
Maxfield Rd
McNall Rd
Richards Rd
Stanhope Hill Rd
Plains Rd
Taft Rd
Wimbledon Rd
Allen Trail Rd
Northwest Regional Planning Commission
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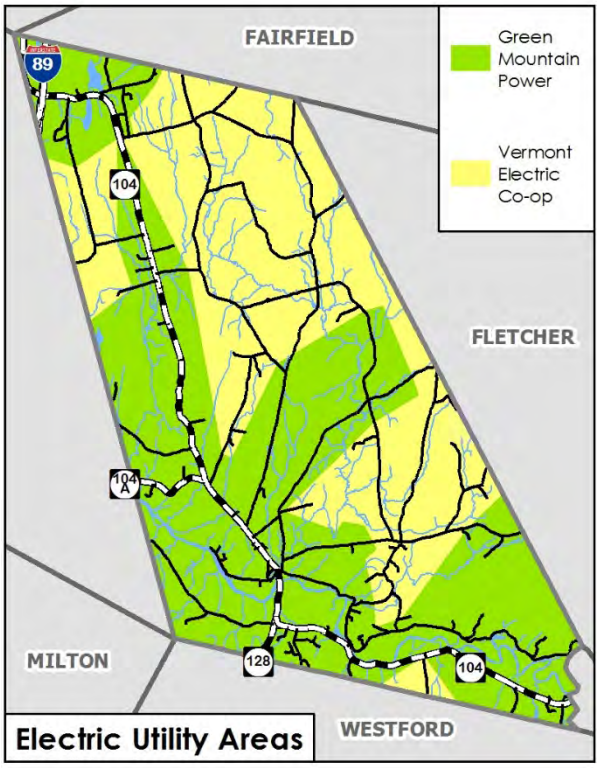
Energy

Vermont planning law states that municipal plans must include an energy strategy for the community. Such a strategy is intended to promote the efficient and economic utilization of energy. With the adoption of the 2018 Town Plan, Fairfax has incorporated an "Enhanced Energy Plan" in conformance with 24 V.S.A. 4352 and provided in Appendix 4. The enhanced energy plan takes the place of other energy-related plan requirements in 24 V.S.A. 4382. The Goals, Policies and Strategies from the Enhanced Energy Plan are provided in this document and in Appendix 4.

Practical energy planning and implementation results in positive environmental and economic returns to the community and energy providers. Conservation of energy lessens the demand for expensive new sources, and allows utilities to defer capital investments necessary to provide for additional capacity. This has benefits for residents, businesses, and ratepayers.

While it is recognized that energy supply and demand are directed largely by economic forces at the state, federal, and international levels, the manner in which the Town plans for future growth can have an impact on energy. For example, a highly dispersed and unplanned pattern of land use can waste both land and energy resources. The need for additional infrastructure and fuel consumption can be reduced with proper planning that includes job locations, public services and housing near the growth centers. The sighting and design of buildings as well as the selection of appropriate energy systems can influence the efficiency and conservation of energy.



Fairfax Energy Snapshot:

- There are two utilities that provide electricity to residents, Green Mountain Power and Vermont Electric Co-op.
- The majority of residential buildings are heated with fuel oil (49%); other major sources are propane (24%) and wood (21%).
- The majority of renewable energy generated in Fairfax today is from the hydroelectric plant, Fairfax Falls.

Achieving the State's goal of having 90% of energy used powered with renewables by 2050, and the other energy goals in state statute, will be difficult. Fairfax is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

Energy Goals and Policies

Goals:

- Plan for increased electric demand with the support of Green Mountain Power, Vermont Electric Coop, and Efficiency Vermont.
- Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.

Policies:

- To support the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in the Fairfax Enhanced Energy Plan. Development of generation in identified preferred locations shall be favored over the development of other sites.
- To support energy conservation efforts and the efficient use of energy across all sectors.
- To support patterns and densities of concentrated development that result in the conservation of energy.
- To support public transit connections from Fairfax to other parts of the region if economically feasible in the future.
- To support the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- To support the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.

Section 7 Land Resources & the Built Environment

Historic Resources

The initial growth of Fairfax was fueled in part by access to waterpower. Throughout the history of this area, the Lamoille River and several of its tributaries in the immediate vicinity were utilized to drive mills. With its 88-foot descent, Fairfax Falls has been the most heavily utilized hydropower location in the Lamoille drainage.

Historical buildings and structures give perspective on the Town's rich past. The Vermont Division for Historic Preservation has placed many homes, farms, buildings, bridges, as well as the Fairfax Falls, and the Fairfax Village Historic District, in the Vermont State Register of Historic Places (see Appendix 1, Table 6.1). The Maple Street Covered Bridge, also known as the Fairfax Covered Bridge, is the only structure in the Town to be placed on the National Register of Historic Places. This structure was listed in 1972 and is an important part of the village landscape.

162 documented historic structures in Village & Town

There are thirteen cemeteries in Fairfax. Preserving the history of the Town and its residents is very important for the community as well as visitors and care should be taken to preserve these places.

Archaeologically Sensitive Areas

Archaeological resources provide evidence of human habitation dating from prehistoric times. This includes evidence of prehistoric habitation and use, including villages, trails, trade networks, and burial grounds, as well as remnants of historic settlement and use, including old foundations and cellar holes, quarry, mill, kiln and foundry sites, and unmarked cemeteries and roads.

Local resources such as the Lamoille River, streams, and wetlands would have supported native populations relying on subsistence activates such as fishing, hunting, & gathering

For planning purposes, the Vermont Division for Historic Preservation has identified "sensitive areas" that include a 200 foot buffer along all major rivers and tributaries in the region, particularly in the vicinity of major confluences, and the Lake Champlain shoreland, which is considered highly sensitive.

The Lamoille River running westward from Fairfax Village is designated as being an archaeologically sensitive area. In addition, the corridor running eastward from Fairfax Village is expected to have moderate to high archaeological sensitivity. Portions of the Olin, Swift, Tracy and Beaver Meadow Brooks may also contain archaeologically sensitive sites. Development in known or anticipated sensitive areas should be cognizant to the possibility of buried sites.

Scenic Resources

Scenic resources should be considerations in planning and development, including ridgelines, foregrounds of distant views, open land, vistas, and historic villages and

settlements. These scenic features contribute to the local quality of life and a sense of place, and are instrumental in defining the rural character of the Town, so prized by its inhabitants.

The scenic views in Fairfax extend from the winding curves of the Lamoille River to the peak of Mt. Mansfield, with a varied pattern of wooded hills and open farm fields in between. Views of the river can be enjoyed from points along Routes 104 and 104A, Goose Pond Road, Hunt Street, and River Road. Mt Mansfield can be seen from several roads throughout the town. Many roads in Fairfax allow for the enjoyment of a drive through countryside with tree covered roads, wide open farm land, and views of the neighboring hillsides and mountains.

Future development should be sensitive to these often unprotected elements of the landscape. Proper siting for development, avoidance of steep slopes and hilltops for construction, and development which fits the existing historic settlement pattern of the town should be encouraged. Implementation of flexible zoning which pays more attention to the character of the landscape than to strict dimensional requirements may enable the Town to preserve its rural character and scenic resources, while not imposing overly restrictive conditions on potential future growth.

Natural Resources

Topography & Geology

Topography, or the shape of the land surface, is a function of the underlying bedrock, soil cover, and the effects of weather over time. Fairfax is located in the rolling hill terrain of the central uplands of Franklin County with a total elevation gain of 500 feet (see **Topographic Limitations Map**).

The bedrock geology in Fairfax relates back to the historical glacial activity, receding waters of the inland sea, and weathering. A fault-line, the Hinesburg Thrust, runs adjacent to the western edge of the town and marks the boundary between two distinct geological areas namely the Champlain Lowlands and the Green Mountains. Glacial erosion and deposition has left many hilltops scoured to bedrock, thin layers of till overlying much of the rest of the landscape, and (glacial) lake-deposited silts and clays filling many of the valleys. Streams from the melting of the glacier deposited thick areas of sand and gravel in various places in the town. Over the next few thousand years, numerous small streams and the Lamoille River further modified the topography, carving valleys and creating perhaps the most dominant geologic feature of the town, Fairfax Falls.

Earth Resources

There is potential for sand and gravel extraction in Fairfax; the areas of deposition relate back to the geology of the area. Currently there is only one active quarry extracting resources in Town. To minimize negative impacts on the natural and cultural environment, a focus on appropriate site development that minimizes visual impact and reduces the risk of resource degradation should be coupled with plans for erosion and sediment control during active operation and post-operative site reclamation. Appropriate guarantees shall be required to ensure the rehabilitation at the operator's expense.


Topographic Limitations
Town of Fairfax
15% Slopes
25% Slopes
100 Foot Contour Line
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
St. Albans Reservoir
Huntsville
Sanderson Corner
Fairfax
Fairfax Falls
Bessette Rd
Brick Church Rd
Rugg Rd
West Street Rd
Carroll Hill Rd
Nichols Rd
Main St
King Rd
Flight Line Rd
Cherrierville Rd
Berthiaume Rd
Buck Hollow Rd
Farm Rd
Austin Rd
Wagner Rd
Rood Mill Rd
Evergreen Rd
Woodward Rd
Meade Rd
Potter Rd
Tabor Hill Rd
Spooner Rd
Rocky Ridge Rd
Sandwebb Rd
Huntville Rd
Owens Rd
Swamp Rd
Winkler Rd
Coolumn Rd
Comette Rd
Buckhollow Rd
Ferguson Rd
Main St
Fletcher Rd
Lamoille River
Hunt St
River Rd
Sunrise Rd
Hollow Rd
Tanton Rd
McNall Rd
Richards Rd
Sandhill Rd
Plante Rd
Cherry Tree Rd
Shepard Rd
Goose Pond Rd
Shattuck Rd
Wakefield Rd
Toof Rd
Wimble Rd
Main St
Mill Brook
Beaver Meadow Brook
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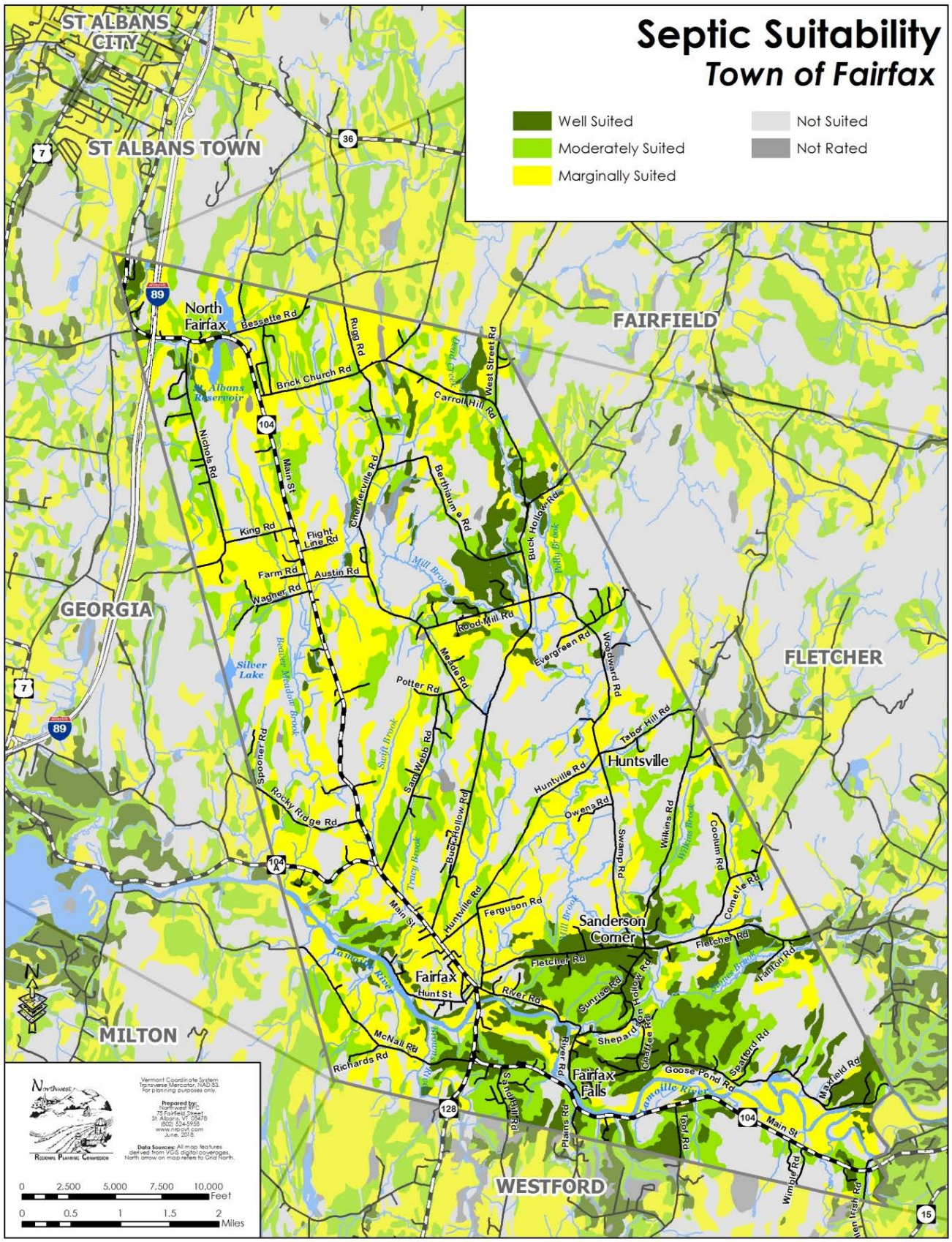
Septic Suitability
Town of Fairfax
Well Suited
Moderately Suited
Marginally Suited
Not Suited
Not Rated
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
Huntsville
Sanderson Corner
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Berthiaume Rd
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Owens Rd
Swamp Rd
Wilkins Rd
Coolum Rd
Cometville Rd
Spooner Rd
Rocky Ridge Rd
Sam Webb Rd
Swift Brook
Bugbee Hollow Rd
Ferguson Rd
Fletcher Rd
Fairfax Rd
Sunrise Rd
Hollow Rd
River Rd
Hunt St
Main St
McNall Rd
Richards Rd
Shepard Rd
Goose Pond Rd
Spafford Rd
Maxfield Rd
Plains Rd
Tyler Rd
Wimble Rd
Silver Lake
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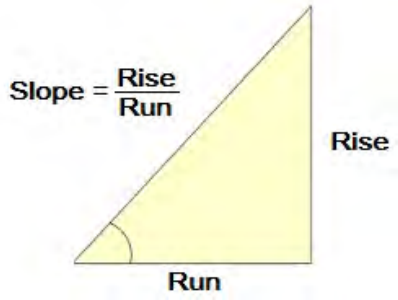
Slope

Slopes pose an important consideration for development as it pertains to factors such as bearing capacity and drainage; development in steep slope areas can result in destabilization and environmental damage. Development on steep slopes, the removal of vegetation, and the injection of effluent by onsite sewage disposal may increase runoff, erosion and the possibility of mass movement or slumping unless properly designed. Development on steep slopes should be regulated as to address these impacts.

Slope is the inclination, or change in elevation, of land over a horizontal distance, and is often expressed as a % (# of feet of vertical rise over 100 feet of horizontal distance or run).



In general, land that is nearly level (less than 8% slope) is better suited for farming and most types of commercial and residential development. Development on steep slopes (more than 15%) may also increase the costs of road maintenance, stormwater and erosion problems, and access for public services (school bus, fire service, etc.). Steeply sloping land is usually best used for timber production, which minimizes the potential for erosion and provides wildlife habitat, recreation, and open space. These types of uses are not incompatible, but steep terrain with multiple uses requires careful land management and appropriate land use controls. Steep slopes over 15% and 25% are shown on the **Topographic Limitations Map**.

Soils

Soils are an important environmental factor in determining the use of land in rural areas. The Natural Resource Conservation Service (NRCS) digital soil survey is an invaluable resource for land use planning and accessing numerous soil attributes, which include:

- *suitability for on-site septic disposal*
- *prime agricultural attributes*
- *frequency of flooding*
- *depth to bedrock*
- *slope classifications*
- *drainage information*
- *potential for woodland productivity*

These factors should be viewed in combination when assessing the ability of the land to support a certain use or activity.

The majority of the land area in Fairfax is marginally suited or not suited for on-site sewage disposal. In total, 37% of the total land area is not suited based on soils for onsite sewage disposal. See the **Septic Suitability Map** for a complete septic suitability survey of the Town.

Prime Agricultural Soils can be characterized as having natural fertility retention qualities, high organic matter content, favorable drainage, level to gently rolling slopes, sufficient depth and textural qualities as well as a high available moisture content. These factors in combination make such soils

intrinsically suitable for crop production. A significant portion of Fairfax contains areas recognized by the NRCS, or by the State of Vermont, as having primary agricultural potential (**Agricultural Soils Map**). These areas of high productivity potential coincide well with areas which are currently in agricultural production.

Prime Agricultural Soil has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods.

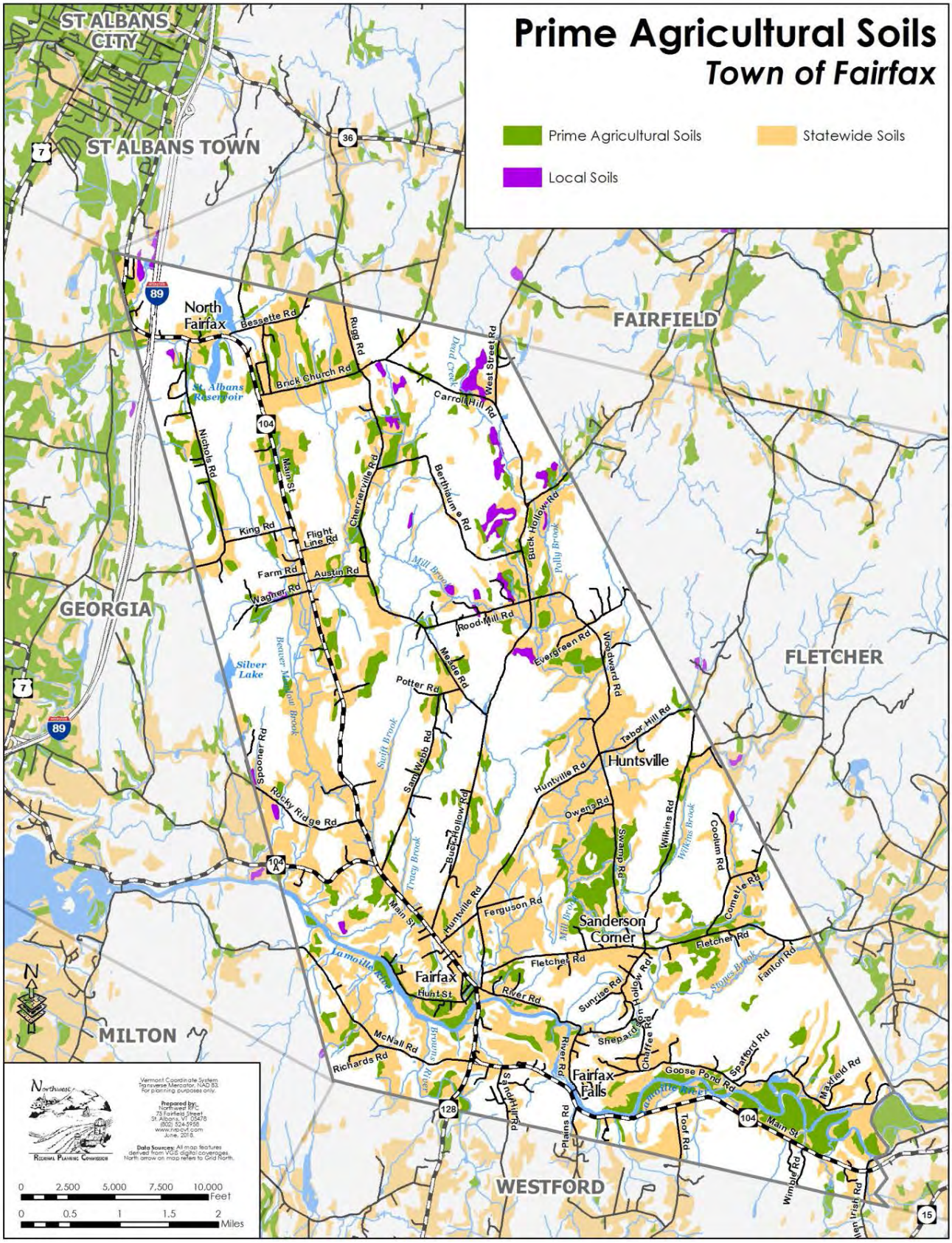
Prime agricultural areas have few local regulatory protections, and from a purely physical perspective, are often extremely suitable for residential and commercial development. Preservation of primary agricultural soils should be considered when reviewing development proposals. Effective conservation of prime agricultural resources may be practically achieved by concentrating conservation efforts on existing productive farmland. Conserving agricultural resources is important to preserving rural character, and sustaining the traditional and economic resources which agriculture and silviculture provides to Vermont's working landscape. Finding innovative ways to balance future growth with maintaining critical resources is central to the planning process for Fairfax. To ensure that these important resources will be available for agricultural use in the future, mechanisms to enhance agricultural opportunities should generally be encouraged and supported. This interactive process between landowners and the Development Review Board will not completely prohibit growth in these areas, but will ensure site planning that is sensitive to these irreplaceable resources, while enabling landowners to realize a fair economic return. To best implement conservation practices, soil resources should be measured against the economic viability and practicality of its use and the Fairfax Town Plan as a whole.

Forest Resources

Much of Fairfax's landscape is heavily wooded with a mixture of hardwood and softwood types. According to 2011 National Land Cover Dataset, 13,130 acres or 50.0% of the land in Fairfax consists of coniferous, deciduous or mixed forests. See the **Working Lands Map** for a depiction of forestland in the Town.

Wood and wood products are becoming increasingly valuable commodities. Productive local woodlands can provide a source for raw materials for various forest products industries and value-added products such as maple syrup. Forestry operations should be conducted in accordance with the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont (AMPs) to comply with the Vermont Water Quality Standards and discourage discharges from logging operations. The conversion of productive forest land to low density development could have impacts on maintaining viable commercial forestry operations.

Forests also provide a range of other benefits and services; forests play a role in water supply protection, flood control, wildlife habitat and biodiversity, and air quality. Careful management of these resources could reap several economic benefits for recreation and tourism.


Prime Agricultural Soils
Town of Fairfax
Prime Agricultural Soils
Statewide Soils
Local Soils
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairax
Huntsville
Sanderson Corner
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Sunrise Rd
Hollow Rd
Shepardson Rd
Chaffee Rd
McNall Rd
Richards Rd
Sandhill Rd
Plains Rd
Goose Pond Rd
Spafford Rd
Mayfield Rd
Toof Rd
Wimble Rd
Allen Irish Rd
Mill Brook
Swift Brook
Tracy Brook
Stones Brook
Polly Brook
Beaver Meadow Brook
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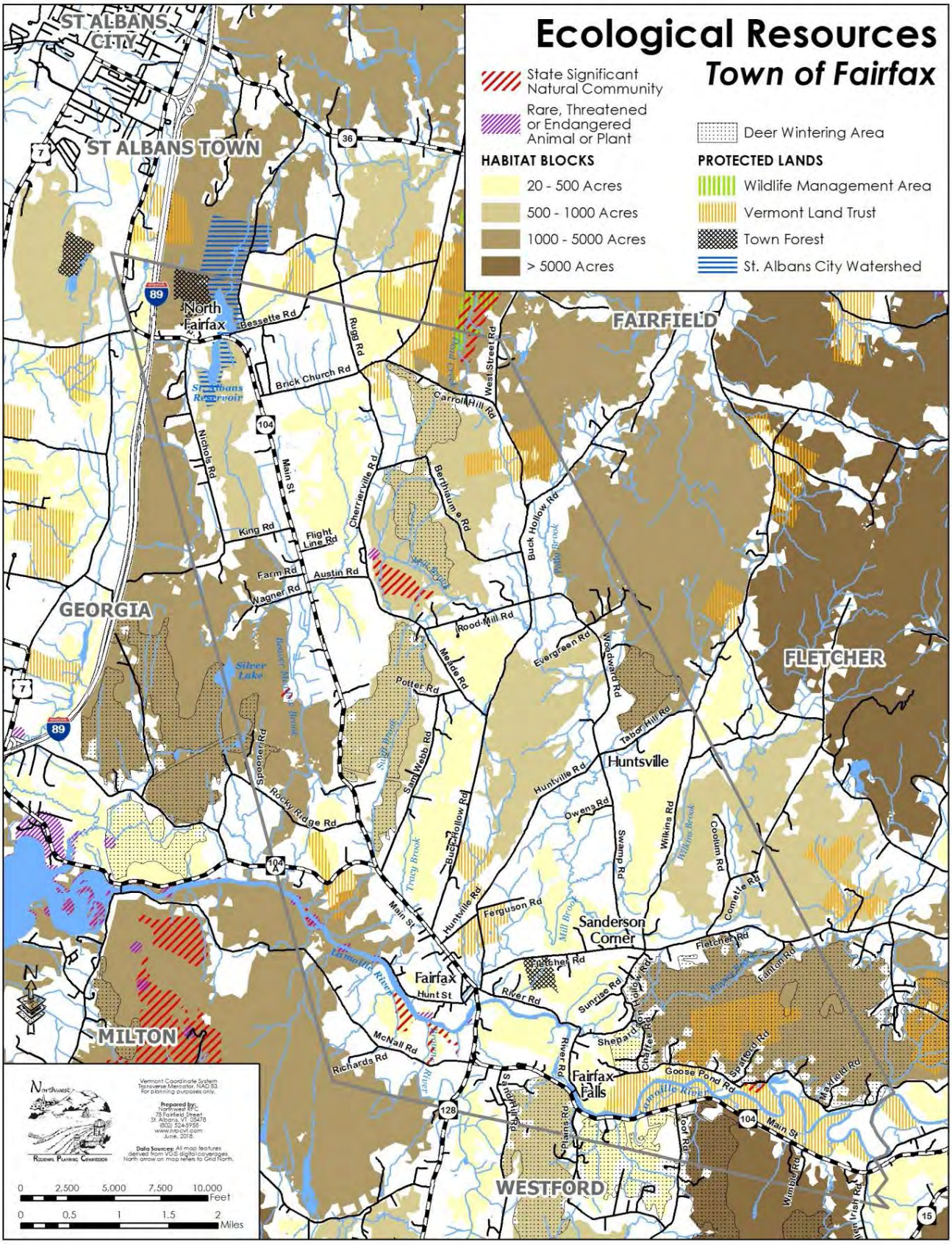
Ecological Resources
Town of Fairfax
State Significant Natural Community
Rare, Threatened or Endangered Animal or Plant
Deer Wintering Area
HABITAT BLOCKS
20 - 500 Acres
500 - 1000 Acres
1000 - 5000 Acres
> 5000 Acres
PROTECTED LANDS
Wildlife Management Area
Vermont Land Trust
Town Forest
St. Albans City Watershed
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
Fairfax
Huntsville
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Northwest Regional Planning Commission
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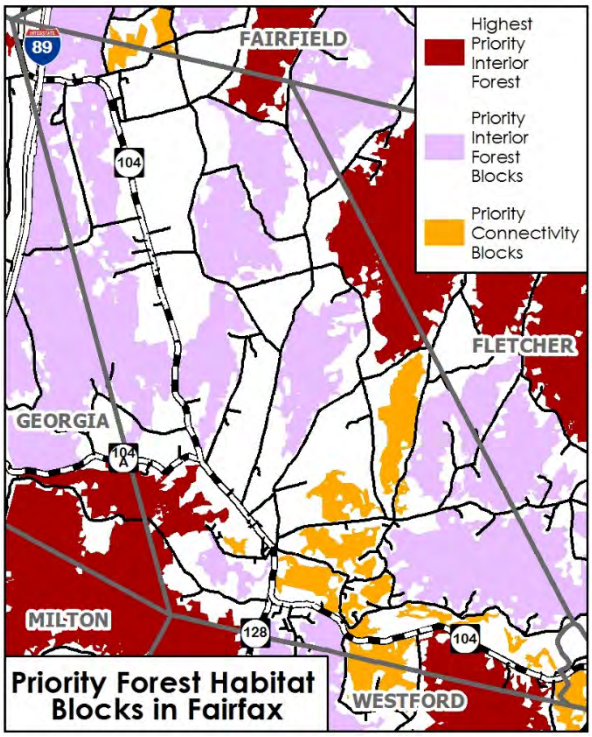
Keeping the Forest Connected

The forestland that covers much of the community is vulnerable to fragmentation as over 95% of the land area is privately owned and managed. The Town of Fairfax owns and maintains less than 1% of the land area in the community; aside from the tip of Fairfield Swamp WMA that dips into the northern corner there are no other state or federal lands in town. Having large areas of land in private ownership poses two risks for forest resources; a forest owned by multiple people results in different land management priorities and as land is subdivided it will result in land clearing and smaller parcels. A trend seen in Fairfax and around Vermont is the incremental impacts of low-density development that physically breaks up continuous forest.

Forest fragmentation is the conversion of a contiguous area of forest by land development. Signs of fragmentation occurring off Route 104 along the Fairfax/Georgia town line are shown above.

Many species of wildlife, especially large mammals, utilize forested habitat to travel from place to place; when forestland is cleared either for development or agriculture it can alter where wildlife live and how they move. To understand which areas may have more value for wildlife the VT Fish and Wildlife Dept (FWD) has mapped and prioritized Forest Habitat Blocks. These areas identify contiguous forest that do not have internal development or roads but may include recreational trails, wetlands and other natural features such as a stream corridor (**Ecological Resources Map**). The large majority of the habitat mapped on the Ecological Resources map serves a role as either core habitat or as a habitat connector to enable travel.

The priority of habitat blocks is identified in the VT Biofinder 2016[1] and shown in the Priority Forest Habitat Blocks inset below. The highest priority habitat blocks in Town correspond to the larger habitat blocks with the least amount of internal development that disrupts internal or core habitat.



[1] Vermont Biofinder 2016, accessed via http://anrmaps.vermont.gov/websites/BioFinder2016

Wildlife Habitat

Vermont state agencies have identified several unique natural habitats in Fairfax, including wetlands, deer habitat, and locations of rare, threatened, and endangered species (**Ecological Resources Map**).

Wetlands - Wetlands provide habitat for a wide floral and faunal diversity, including habitat for threatened and endangered species in numbers which are disproportionately higher than are found in other habitat types. Many species are dependent on wetlands for their habitat requirements including many species of fish, small mammals, large mammals, and many species of waterfowl and migratory birds.

Deer Wintering Areas - Deer wintering areas provide critical habitat for white tail deer and other species of vertebrates. In Fairfax the largest mapped wintering range borders the Town of Fletcher along and south of Stones Brook. Smaller areas in central Fairfax and along the southern border with Chittenden County have also been recorded. These mapped areas support micro-climatic conditions–combinations of elevation, vegetation, and solar aspect–that significantly increase the winter survival rates of deer populations, and therefore critically impact Vermont's landscape ecology. These areas have been targeted for protection by the U.S. Fish and Wildlife Service.

Black Bear Habitat - The forested areas in the far southeastern part of Town are considered important seasonal bear habitat, which include feeding areas and travel corridors. The black bear is a sensitive indicator of the health of Vermont's forest. These areas are considered critical to the black bear's long-term survival in Vermont.

Rare, Threatened, and Endangered Species Habitat - Numerous locations within the Town have been identified which support populations of designated rare, threatened, or endangered plants and animals. Locational data and descriptions for these areas have been entered into the Vermont Nongame and Natural Heritage Program database. The species identified have very particular habitat requirements, or have been identified because they are at the edge of their natural range, are vulnerable to collection or disturbance, or have difficulty reproducing.

State-identified Significant Natural Communities

A natural community is an interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them. A state-identified significant natural community has been determined by the State of Vermont to be significant, either because it is a rare natural community without many occurrences in Vermont, or because it is an extraordinary example of a particular natural community type, due to large size or lack of past disturbance. Fairfax has five identified natural communities classified as "uncommon"; these communities range from forested swamps to floodplain forest to hemlock forests (**Ecological Resources Map**). Many of these natural communities are considered uncommon, since the soils that support the species are uncommon. To learn more about Natural Communities visit BioFinder 2016 - http://anrmaps.vermont.gov/websites/BioFinder2016/.

Water Resources

Groundwater

Groundwater is defined as all water that exists beneath the surface of the earth. Groundwater is replenished from precipitation or surface water that infiltrates deep into the soil.

A Source Protection Area (SPA) identifies the area of land that likely recharges or passes groundwater through it to the public water source as defined by the Agency of Natural Resources. These recharge areas are to be protected from any activities and/or businesses that would harm the potability of water supplies. There are six SPAs within Fairfax, including around the St. Albans Reservoir, around the water supply well for the Fairfax Municipal Water System, and four community water supply wells for residential developments (**Water Resources Map**). The Town may refer any proposed development in a SPA to the water provider for comment to assure that public and private drinking water remains available and clean.

All Fairfax residents rely on groundwater as their source of drinking water. This includes individual or community wells or springs, as well as the Fairfax Municipal Water system.

Surface Water

Surface water accounts for 1,824 acres of land in Fairfax, or 7.1% of the overall acreage. Fairfax is situated among three major drainage basins that all lead to Lake Champlain. The majority of Fairfax is part of the Lamoille River Basin; the Lamoille River flows over 84 miles from its headwaters in Glover to the outer Mallets Bay in Lake Champlain. There is an extensive brook system within Fairfax that includes Beaver Meadow, Mill, Wilkins, Stones, Polly, Swift, and Tracy.

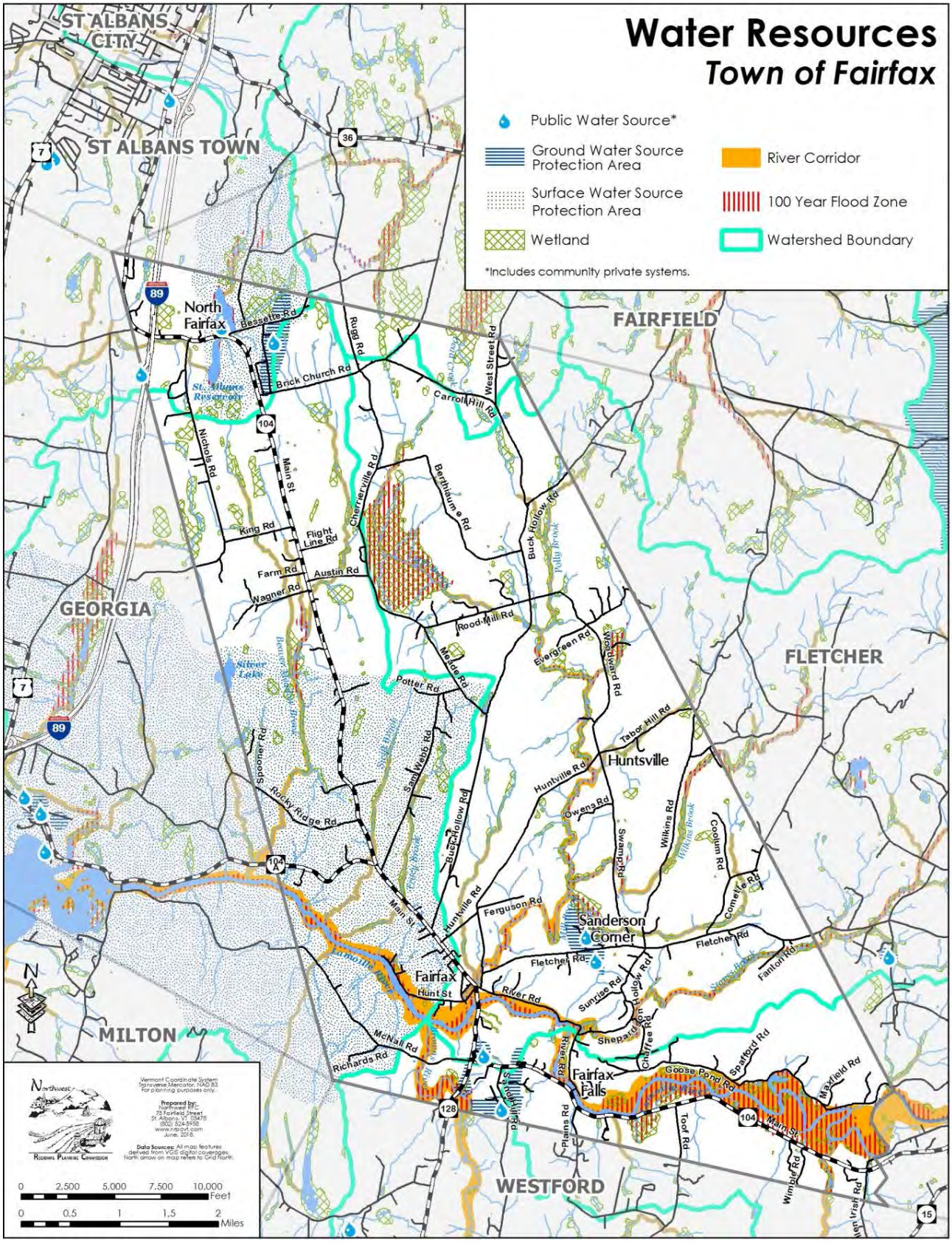
There are two significant surface water bodies in Fairfax, Silver Lake and St. Albans Reservoir. St. Albans Reservoir, located in North Fairfax, is a public water supply source for St. Albans' drinking water. Silver Lake straddles the border between Georgia and Fairfax, in the central-western area of town. Many surface waters in Fairfax exhibit unique wildlife habitat including the known natural areas of Beaver Meadow Brook and Wilkins Brook.

Streambanks and Shorelines

Vegetation along streambanks and shoreline not only shades the water, keeping it cooler and thus more tolerable for certain species of fish, but also provides cover for other wildlife, is aesthetically desirable, and prevents erosion.

Working Together for Water Quality

The VT Agency of Natural Resources maintains Tactical Basin Plans for each drainage basin in Fairfax (Lamoille Basin-7, Missisquoi Basin-6, and Northern Lake Champlain Basin-5). A Tactical Basin Plan (TBP) lays out the current condition of surface waters and aquatic habitat, describes problems occurring with water quality, designates strategies to be taken by State Agencies, and establishes partnerships to improve water quality.


Water Resources
Town of Fairfax
Public Water Source*
Ground Water Source Protection Area
Surface Water Source Protection Area
Wetland
River Corridor
100 Year Flood Zone
Watershed Boundary
*Includes community private systems.
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
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Rocky Ridge Rd
Sand Webb Rd
Bush Hollow Rd
Ferguson Rd
Fletcher Rd
Fanton Rd
Sunrise Rd
Hollow Rd
River Rd
Hunt St
Sheppard Rd
Chaffee Rd
McNall Rd
Richards Rd
Rte 104
Rte 36
Rte 7
Rte 89
Rte 128
Rte 15
Goose Pond Rd
Spafford Rd
Maxfield Rd
Toof Rd
Plains Rd
Wimhie Rd
West Irish Rd
Vermont Coordinate System Transverse Mercator, NAD 83 For planning purposes only.
Prepared by: Northwest RPC 75 Fairfield Street St. Albans, VT 05478 (802) 524-5958 www.nrpc.vt.com June, 2018.
Data Sources: All map features derived from VGIS digital coverages. North arrow on map refers to Grid North.
0 2,500 5,000 7,500 10,000 Feet
0 0.5 1 1.5 2 Miles

Removal of this vegetation for development or conversion to agricultural uses is detrimental to water quality for the Town, and the state as a whole. The effects of erosion on downstream environments is often more severe than at the point of erosion itself, resulting in decreased water quality from additional suspended sediments, increased nutrient loading from overland runoff and increased risk of flooding due to losses in flood storage capacity and increased velocity.

Maintenance or construction of vegetative buffers along waterbodies should be adamantly pursued. The short-term drawbacks of reduced tillable acreage are more than offset by the bank stabilization power of buffers, which results in long term conservation of important agricultural resources. Road construction projects should avoid buffer areas, and filling, dredging or gravel extraction in or near rivers and streams should be avoided. Further, maintenance of roads should utilize the best mechanisms and standards.

Effective July 1, 2014 the State of Vermont implemented a statewide buffer regulation on all lakes and ponds greater than 10 acres (including Lake Champlain); this regulation applies to the St. Albans Reservoir North and South as well as Silver Lake in Fairfax. The Shoreland Protection Act essentially prohibits new clearing and development within 100 feet of the mean water level of these waterbodies and places limits on clearing and development from 100 to 250 feet from the mean water level. The intent of the regulation is to limit bank erosion, to protect shoreland habitat, and to improve water quality.

Wetlands

Wetlands provide critical habitat and play an important role in regulating stream discharge. They store large quantities of water during periods of high runoff and gradually release water during low flow periods. Loss of this storage capacity would not only adversely affect stream behavior but would also increase floods and reduce stream flow during crucial low flow periods. Wetlands also aid in maintaining water quality; the biological activity of a wetland area enables the absorption and assimilation of nutrients and thus purifies to some extent the water that is discharged.

Numerous Class 2 wetland complexes have been identified within Fairfax. Wetlands in the Town range from less than 1 acre to over 350 acres (Fairfax Swamp on Mill Brook between TH 13 and TH 16). In all, over 1,300 acres of wetlands in the Town have been identified by the National Wetlands Inventory. The state issues permits for projects that impact a wetland or its 50 foot buffer only if it is determined that the uses will have no undue adverse impacts on protected functions, unless such impacts are mitigated.

Flood Resilience

Flooding is a natural occurrence and a hazard that may become more prevalent as the climate changes; in the past 50 years Vermont has seen an increase in total annual precipitation by 7 inches. Vermont is anticipated to continue to get wetter with storms that are more frequent and intense. Predicting the occurrence of flooding is nearly impossible so the best protection against loss of life and property is to not build in areas prone to flooding and to restore a

Flooding in Vermont can occur in two ways: inundation and fluvial erosion

	Inundation Flooding	Fluvial Erosion
What is it?	When water rises in a stream after storm events and submerges the floodplain or the adjacent low-lying land	When fast moving waters, typically in steep areas, cause erosion of the land surrounding the streams and rivers
Tools to identify areas in community pronte to this risk.	FEMA Flood Rate Insurance Maps (FIRMs) outline the **Special Flood Hazard Area (SFHA)** also known as the **100-year floodplain**, this area has a 1% or greater chance of flooding in a given year. It is important to note that the existing FIRMs were created in the 1970s and have been "effective" since 1982. While this information is the best available, the hydrology that these maps are based on is out of date and does not account for subsequent shifts in waterbodies or effects of building in the floodplain.	Vermont Agency of Natural Resources **River Corridors** outline the minimum area adjacent to a river that is required to accommodate changes to the river over time. These areas are based on the individual conditions of streams and rivers including topography and the existence of public infrastructure.

waterbodies' access to floodplains where possible.

The floodplain provides important functions including the storage of water after weather events and slowing the velocity of the water in the river channel. This in turn can reduce the amount of localized and downstream flooding. River channels are constantly undergoing a physical adjustment process that results in stream bank erosion or sediment deposition. Land nearby streams is particularly vulnerable to erosion damage by flash flooding, bank collapse, and stream channel changes. Historic land uses in Fairfax resulted in floodplain encroachments and removal of vegetation along river and stream banks. Encroachments of development into floodplain areas have several negative impacts, including restriction of flood flows, decreases in flood storage capacity, increases risk of erosion and landslides. Appropriate uses of floodplains are those that can accommodate this inundation cycle and such as agriculture, open space and recreation. Limiting development in flood and river corridor areas will minimize risk and provide streams the opportunity to reestablish a stable, equilibrium condition. Maintaining vegetated buffers around waterways also helps to minimize risk to property and provides water quality benefits.

Special Flood Hazard Area

There are several areas of 100-year floodplain in Fairfax including along the banks of the Lamoille River, Mill Brook, Beaver Meadow

Brook, Browns River and several small tributaries (see **Water Resources Map**). The Town of Fairfax adopted a stand-alone Flood Hazard Area Regulation Ordinance in September of 2006, which places an additional set of regulations on Special Flood Hazard Areas (100-year floodplain) as identified by Federal Emergency Management Association's (FEMA); flood hazard areas are also subject to the Development Regulations for the Town of Fairfax. These regulations protect the health, safety, and welfare of its residents and to allow the community to participate in the National Flood Hazard Insurance Program (NFIP).

Currently less than 2% of all structures in the community lie within the 100-year and 500-year floodplain. This does not quantify the impacts of repairs to utilities, roads, bridges, and culverts after flooding events. It should also be noted that about two-thirds of Vermont's flood-related losses occur outside the mapped floodplains revealing a fundamental limitation of the FEMA identified floodplain delineation.

River Corridors

River Corridors generally align with the 100-year floodplain and are delineated in two ways. Field data is used map the corridor in rivers and streams with a watershed area of more than 2 square miles. For streams with a watershed area of 0.5 to 2 square miles, the ANR advises using a 50-foot setback on each side of a stream with the intention of protecting stream stability and natural flow. The **Water Resources Map** shows both types of River Corridors in Fairfax.

River Corridor regulations currently apply only to Act 250-related land development and land development not regulated by municipalities (like agriculture). Municipalities may adopt River Corridor maps and regulation as a part of their development regulations. Adoption may provide financial benefits to the Town in the event of a federally declared natural disaster through the Emergency Relief and Assistance Fund (ERAF).

Fairfax has adopted zoning regulations that begin to address fluvial erosion hazards on rivers and streams in the community. Specifically, Fairfax has adopted a 50-foot vegetative buffer on either side of streams to help control soil erosion and protect water quality. These regulations state all structures that require a permit be setback at least 50 feet from all named streams. Given the existing regulations it may be relatively straightforward for the Town to transition to regulating River Corridors Fairfax should investigate adopting River Corridor standards as a part of the Development Regulations.

Hazard Mitigation Planning

Several homeowners along the Lamoille River in the village area are concerned about riverbank erosion along their property. In addition, the Town Highway system has experienced many erosion events along the road shoulder or near culvert inlets during periods of high precipitation and rapid run-off within proximity of the Lamoille River and its tributaries. Fairfax will explore regulatory changes to land in the floodplain and use of river corridors as a way the community can enhance its protection of assets and infrastructure.

Planning for future flooding events is important to ensure that a community is flood resilient. The flooding hazards discussed

above are described in greater detail in the 2017 Fairfax Hazards Mitigation Plan (HMP). The HMP also identifies areas of town that are more at risk, critical infrastructure to protect, and strategies for the town to take to mitigate against hazards and increase resilience. *The Fairfax Hazards Mitigation Plan, as adopted by the Select Board every 5 years, is incorporated by reference into this plan.*

Natural and Cultural Resources Goal and Policies

Goal:

- Preserve, protect and improve the natural, cultural, and scenic resources, which help define the Town's rural character, natural environment, and traditional working landscape.

Policies:

- To maintain the historic, cultural, and scenic sense of place in the Village, including the historic district, sites, cemeteries, landscape features, and archaeological sensitive areas.
- To protect natural, scenic, and recreational areas so that they may be maintained as destinations for hiking, biking, and other physical activities.
- To facilitate appropriate extraction of earth resources that minimizes impacts on the natural and cultural environment.
- To consider topography, geology, and soils in land development review to allow reasonable and wise use of the land while protecting the quality of the environment and the public good.
- To maintain and improve the quality of important agricultural soils and connectivity of forestlands when considering the future development of the Town.
- To prohibit land development on slopes greater than 25% and ensure careful review of land development on slopes of 15% to 25% to prevent runoff, soil erosion, ensure adequate wastewater disposal, and other impacts on resources.
- To protect the surface and ground water resources in the Town and ensure appropriate development and intensity of use in Water Source Protection Areas.
- To discourage development that increases the community's risk from natural and man-made hazards, and to limit new development within the floodplain and state defined river corridor areas.
- To protect fragile and sensitive resources, and endangered species, including but not limited to critical habitat, wetlands, significant natural communities, and floodplains.

Land Use

The residents of Fairfax have had a long history of working the land.

- By the 1880's, the lumber and mill-oriented industry began to shift to dairy farming.
- The population in 1940 was 1,229 residents. At the same time, there were 80 farms with a total of 2,400 milking cows.
- In 1950's Fairfax's employment base began to diminish and the Fairfax branch of the Cooperative Creamery shut down.

Since the Town's population boom in the 1990s, Fairfax has been transitioning from an agrarian-based community to that of a rural suburban community. The increase in residential development is changing the visual landscape and increasing the demand for services. The Town is therefore challenged with maintaining the rural agricultural character and small village setting while accommodating population growth and new residential development.

Existing Land Use

Although the community has gained additional residential development, the forest land and agricultural fields are still the dominant land features today (see **Existing Land Use Map**).

8 *Active dairy operations in 2018*

50% *Total land area is forested*

357 *Residential buildings built since 2006*

Agriculture

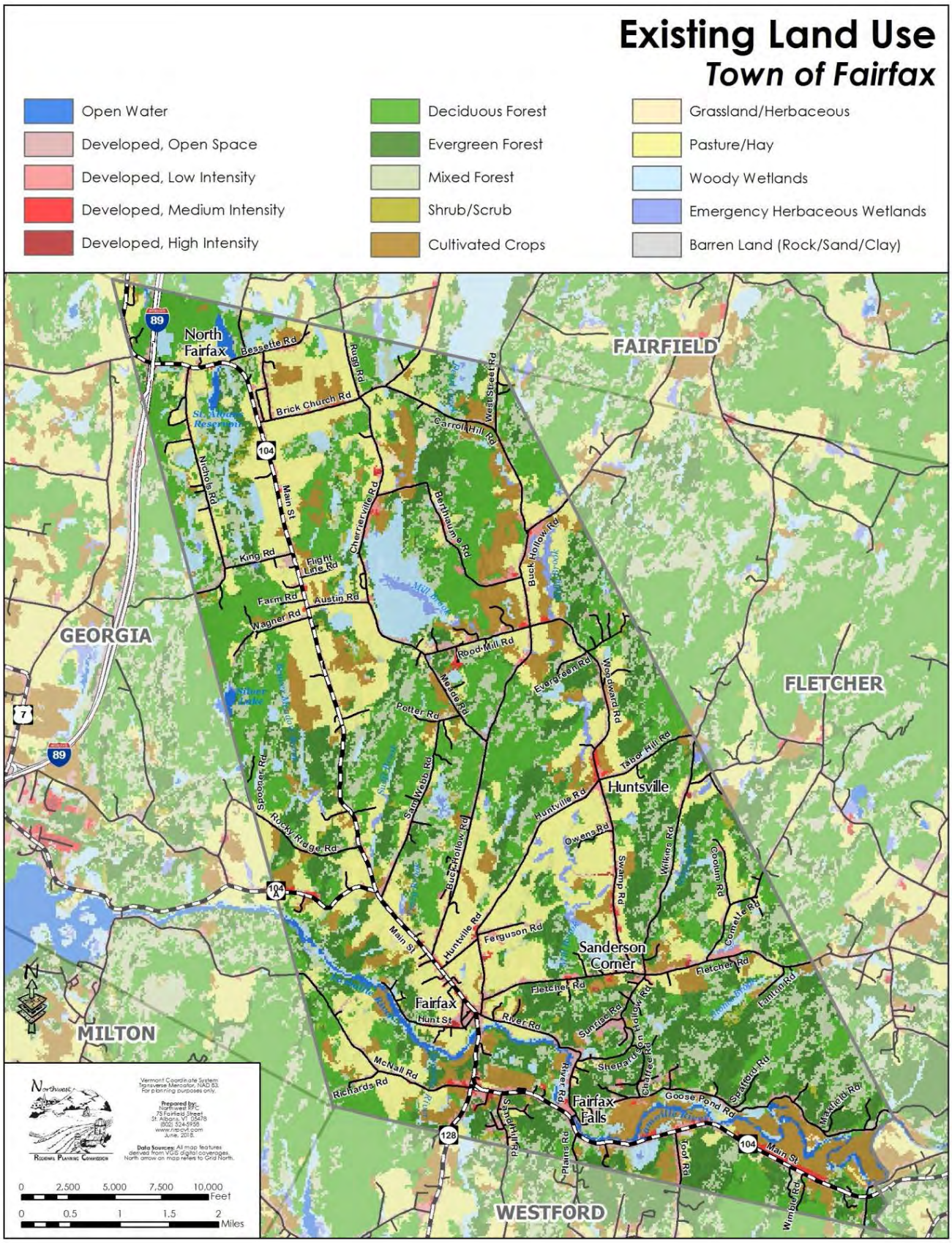
Similar to the trend seen around the state, Fairfax has lost several dairy farms in the last ten years; three dairy farms sold their herds during the writing of this Town Plan. In most cases the land itself is staying in production and being owned and or managed by fewer operations. As of the 2015 grand list there are 29 parcels categorized as "farm" which equates to 7,677 acres or 31% of the land area. This is down from a listing of 46 farms in the 2006 grand list and an associated 8,051 acres or 32.7% of the land area.

Forests

Approximately 50.8% of Fairfax is covered by forest (2011 National Land Cover Database) that is a mix of coniferous and deciduous forest types. The existing forestland may be well-suited for use as small woodlots and low-impact recreation; large scale forest products operations may be limited by the existing land ownership and forest parcel size.

Working Lands

Fairfax has a large amount of undeveloped land that exists as forests and farm land. The most widely used program to enable land to remain undeveloped is the Use Value Appraisal program or "Current Use" that is administered by the state Department of Taxes. Enrolled parcels are taxed according to the use rather than fair market value; as of the 2015 Grand List 99 parcels were enrolled in the Current Use program (see **Working Lands Map**).


Existing Land Use
Town of Fairfax
Open Water
Developed, Open Space
Developed, Low Intensity
Developed, Medium Intensity
Developed, High Intensity
Deciduous Forest
Evergreen Forest
Mixed Forest
Shrub/Scrub
Cultivated Crops
Grassland/Herbaceous
Pasture/Hay
Woody Wetlands
Emergency Herbaceous Wetlands
Barren Land (Rock/Sand/Clay)
North Fairfax
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
Huntsville
Sanderson Corner
Fairfax
Fairfax Falls
Bessette Rd
Brick Church Rd
Rugg Rd
West Street Rd
Carroll Hill Rd
Nichols Rd
Main St
King Rd
Flight Line Rd
Cherrierville Rd
Berthiaume Rd
Buck Hollow Rd
Farm Rd
Austin Rd
Wagner Rd
Mill Brook
Rood Mill Rd
Meade Rd
Evergreen Rd
Woodward Rd
Potter Rd
Tabor Hill Rd
Spooner Rd
Sam Webb Rd
Rocky Ridge Rd
Huntville Rd
Owens Rd
Swamp Rd
Wilkins Rd
Coolum Rd
Comette Rd
Ferguson Rd
Fletcher Rd
Fairfield Rd
Sunrise Rd
Shepardson Hollow Rd
Hunt St
River Rd
McNall Rd
Richards Rd
Chaffee Rd
Goose Pond Rd
Stafford Rd
Maxfield Rd
Stafford Hill Rd
Plaisted Rd
Tool Rd
Wimble Rd
Lake Fairfax
Silver Lake
St. Albans Reservoir
89
104
7
128
Vermont Coordinate System
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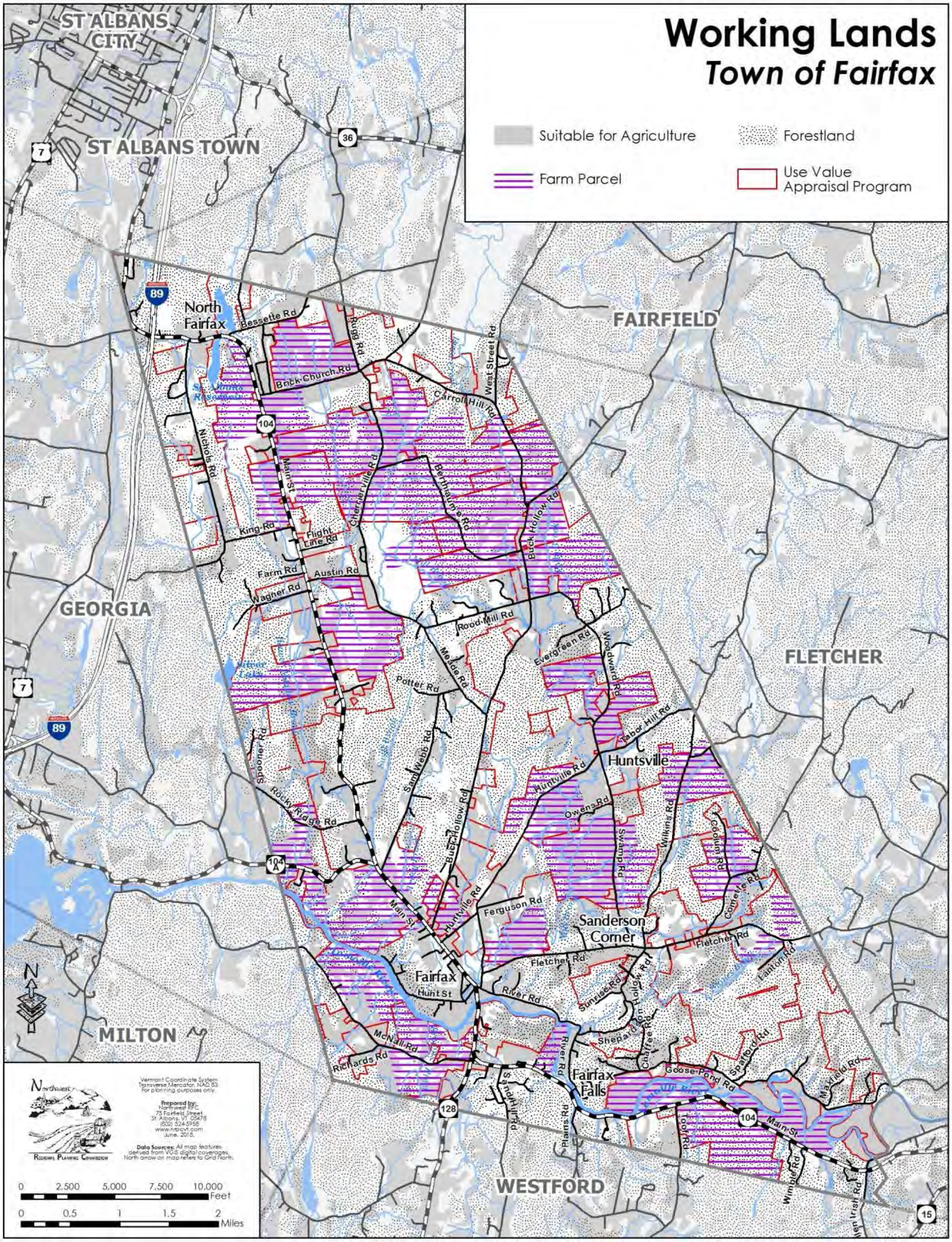
0 0.5 1 1.5 2 Miles


Working Lands
Town of Fairfax
Suitable for Agriculture
Forestland
Farm Parcel
Use Value Appraisal Program
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
Huntsville
Sanderson Corner
Fairfax
Fairfax Falls
Bessette Rd
Rugg Rd
Brick Church Rd
Carroll Hill Rd
West Street Rd
Nichols Rd
Main St
Chesterville Rd
Berthiaume Rd
Buck Hollow Rd
King Rd
Flight Line Rd
Farm Rd
Austin Rd
Wagner Rd
Rood Mill Rd
Meade Rd
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Sunrise Rd
Shepardson Hollow Rd
Chaffee Rd
Lawton Rd
McNall Rd
Richards Rd
Goose Pond Rd
Spafford Rd
Maxfield Rd
Plains Rd
Pond Rd
Wimble Rd
Irish Rd
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Both farm and forest land are being conserved or managed in Fairfax through available programs:

- **45% of the land area** is enrolled in the Current Use Program
- **6% of the land area** is protected by a Conservation Easement

Conserved Land

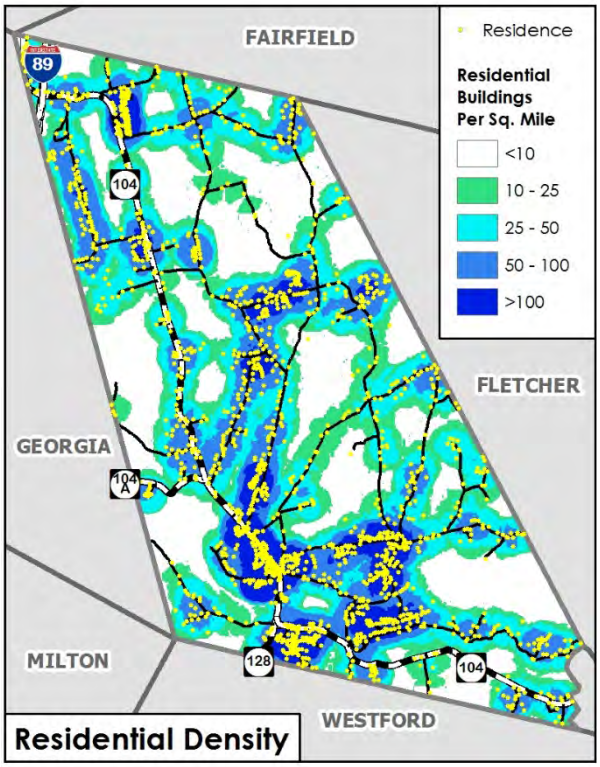
Thirty-three parcels or 1,540 acres in Fairfax have conservation easements with the Vermont Land Trust; all but one of these parcels is also enrolled in the Current Use program. The Vermont Land Trust works with landowners to conserve land by the purchase of development rights; this ensures this land will remain perpetually open and the land is managed for forestry and/or agriculture.

Residential Dwellings

The highest density residential land use in Fairfax is concentrated within the historic settlement areas (the north village where water and sewer infrastructure exists, the south village, and North Fairfax) and the residential zoning district. However, given the population growth in recent years, residential development of all scales is occurring outside these settlement areas. Clusters of concentrated development exist along Nichols Road, Sam Webb Road, Rood Mill Road, Buck Hollow Road, and Woodward Road. Each yellow dot in the *Residential Density* figure represents a residential building.

Commercial Establishments

The majority of commercial uses in the Town are concentrated within the North Village, and the South Village near the intersection of

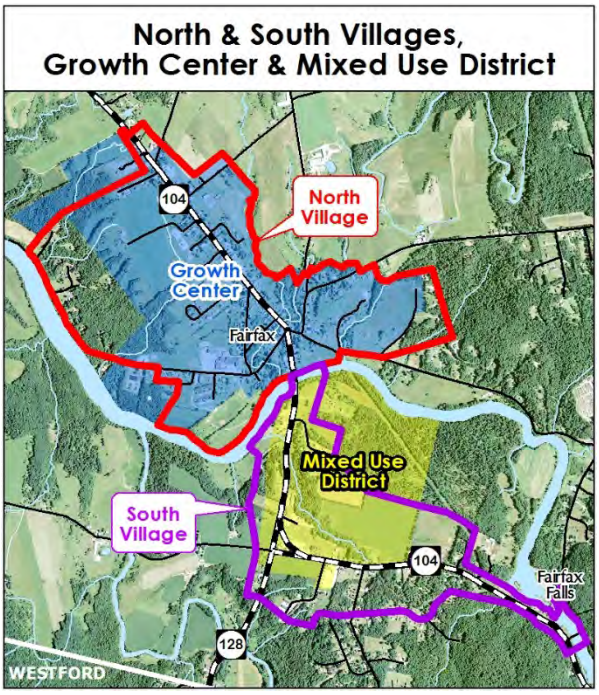


Route 104 and Route 128. The predominant commercial development in Fairfax is service-oriented, including restaurants, shops, gas stations and convenience stores. Commercial development in the Village area is limited by the capacity of the municipal sewer and water service.

18 Commercial businesses in the Village

The Village – North and South

A starting point for the 2012 Village Visioning project was the engagement of residents, local business owners, and students to define the vision for the village areas, meaning how the village should look, feel, and function. From there a series of public outreach events identified assets and challenges in the community, places of importance, opportunities to improve the streetscape, and a visual preference survey on architectural style for design guidelines.



North Village has retained the pattern of traditional historic development with buildings close to the street, sidewalks and a mix of uses. Residents take pride in the remaining historic architecture and it is important that these features of the village be preserved. These elements that reinforce the local character of North Village contribute to a shared sense of place and community vitality.

*The **North Village** could be enhanced with private investments such as the addition of awnings, wayfinding, and engaging storefronts along the length of Main Street to enhance the pedestrian realm and add character.*

South Village is characterized as automobile oriented with a lack of sidewalks and businesses setback from the road with parking lots serving as the main visual appeal upon first glance. This style of development differs from the North Village and the rhythm of development set by buildings adjacent to the street. Landscaping and screening standards were revised in 2016 to more specifically address the use of vegetation in site design and both screen commercial properties as well as define landscaping to offer shade and visual interest.

__Fairfax Falls__ is envisioned as a green entry corridor that establishes an identity and connects the Village and neighborhoods. Improvements to this area could include welcome and wayfinding signage and landscape elements.

Both villages have areas where wide commercial driveways create safety conflicts between cars and pedestrians. The 2016 Village Gateway study took a deeper dive into proposing modifications to the streetscape in each Village to provide pedestrian scale amenities and aid in calming traffic speeds along the corridor.

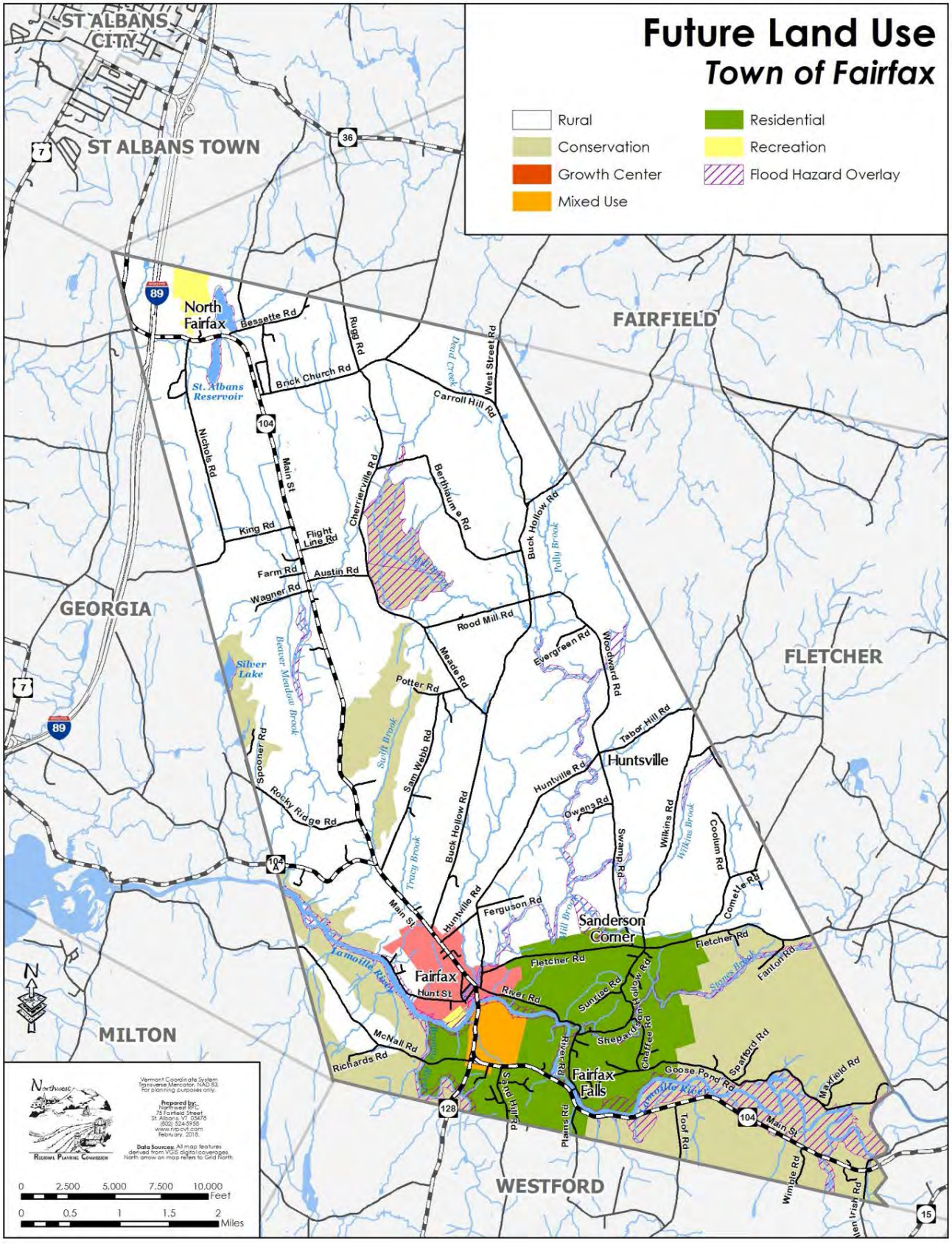
Although adjacent to one another the North and South villages are being shaped by separate identities in zoning. The Growth Center encompasses the North Village with a focus on the desire for higher density growth and the mixed-use portion of the South Village focuses on promoting walkable, village scale development that complements and provides connection to the North Village. However, as noted in Table 4.2, the wastewater system is not adequate to meet the needs of the future growth and development in the village area without improvements to the current system. Absent this investment, the town will not be able to achieve the desired density or level of economic development and services in the Villages.

Assets and Strengths of the Village *(Source: 2012 Village Visioning Project)*

- Small town feel
- Proximity to Burlington/Essex
- Density
- Close to farm land
- Location on river
- Good views
- Covered bridge
- Limited sprawl
- Park & Bike/Recreation Path
- BFA School
- Wonderful people
- Community events/theatre/band
- Excellent library
- Baptist building
- Small businesses
- Tax Rate

Issues and Challenges of the Village *(Source: 2012 Village Visioning Project)*

- Light pollution
- Water and sewer system capacity and back-up
- Stormwater runoff
- Keeping the school competitive
- Lack of pedestrian connections
- Sidewalk maintenance
- Sidewalks not user friendly
- Limited public spaces
- Lack of activity space
- Commuter population
- Town and event promotion and communication
- No major employers/business centers
- Limited road network
- 104 truck route
- Limited public transit options
- Limited traffic calming measures


Future Land Use
Town of Fairfax
Rural
Conservation
Growth Center
Mixed Use
Residential
Recreation
Flood Hazard Overlay
ST ALBANS CITY
ST ALBANS TOWN
FAIRFIELD
GEORGIA
FLETCHER
MILTON
WESTFORD
North Fairfax
Huntsville
Sanderson Corner
Fairfax
Fairfax Falls
St. Albans Reservoir
Silver Lake
Bessette Rd
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Rugg Rd
West Street Rd
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McNall Rd
Richards Rd
Sand Hill Rd
Plains Rd
Toof Rd
Wimble Rd
Allen Irish Rd
Beaver Meadow Brook
Stiff Brook
Tracy Brook
Lamoille River
Stones Brook
Polly Brook
Hill Brook
Wilkins Brook
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Future Land Use

The overall policy concerning future land use shall be to encourage Fairfax to grow and develop in a manner and intensity that reflects its traditional land use patterns and encourages a mix of uses in the defined growth areas, especially where infrastructure exists.

The Town defines the rural character of Fairfax as,

> *Encouraging a diverse, small-scale local economy (including agriculture and forestry enterprises), maintaining and enhancing a mixed use, high density Town Center, minimizing strip development, and preserving natural and cultural features.*

Through proactive planning, this community vision can be translated into actions that best serve the people, the culture, and the land itself.

Since the 2001 Fairfax Growth Center Master Plan, residents have expressed a strong desire for the higher densities of future growth to occur in designated growth areas, with the remaining land being kept in uses such as agriculture, open space, forestry, and some low density rural residential development. To reach this goal, the Town defined a high density, mixed use growth center in the existing village that is intended to accept the majority of future growth in the Town, and will include a mixture of residential, multi-family and commercial land uses on smaller building areas than are allowed in other parts of town. In short, the Growth Center represents "North Village," with the typical amenities which downtowns have traditionally offered: pedestrian friendly streets, "neighborhood" living, an integrated street network, shops, government services, schools, parks and playgrounds.

Characteristics of Growth Centers

- *incorporates a mix of uses*
- *provides public spaces organized around a focal point*
- *promotes denser development than that outside a growth center supported by existing or planned infrastructure*
- *results in concentrated development surrounded by rural countryside*
- *planned in accordance with chapter 117 planning goals and with smart growth principles*
- *supports the purposes of Act 250*

~ ~ ~

(As enacted into Law under Title 24 § 2791)

The Growth Center concept is the engine by which the remainder of Fairfax's future land use policy is driven. The designation (and enabling) of high density growth in certain areas promotes a contrast in land use outside its borders. In addition, the contrast between low and high density land uses helps create an "edge" or visual gateway to the core of the community. The fuel that will drive this policy therefore is the availability and quality of municipal services and infrastructure in these areas. The provision of efficient municipal water distribution and wastewater treatment systems is of paramount importance for higher density development to be adequately absorbed by the land. In this regard, Town policies for expansion and improvement of these systems is the keystone of a successful future. Planning for improvements and acquiring the necessary funding for

improvements has been a working strategy for the past 15 years.

Encouraging the majority of development into the Village area and balancing the rights of individual landowners with aesthetic and cultural considerations in the rural areas is an important challenge for the Town. Creative approaches in subdivision and site design, including encouraging the clustering of residences to prevent strip development and the parcelization of agricultural, forestry, and meadow lands, and flexible zoning that allows for development of building sites that respects natural resources and aesthetic qualities of the land should be incorporated into development review and approval processes.

Future Land Use Planning Areas

This section is intended to guide future land use and development decisions as well as provide a framework for future zoning updates and amendments. Land use in the Town of Fairfax, for future purposes, has been defined in the following planning areas as shown on the **Future Land Use Map** and described below.

Growth Center - This planning area encompasses the traditional village center in Fairfax consisting of a mixture of residential, multi-household, and commercial land uses on smaller building areas than are allowed in other parts of town. The Growth Center is designed to accept the majority of future growth, which shall be designed and sited to further the traditional characteristics of village centers. Such characteristics include pedestrian friendly streets, sidewalks and walkways, neighborhood living, an integrated street network, shops, government services, schools, parks, and playgrounds.

Mixed Use - This planning area is intended for mixed use development near the junction of VT Rte. 128 and VT Rte. 104. The Mixed Use area is intended to maintain the small scale commercial, residential, and recreational uses currently in existence, while complementing and providing connection to the Village. Pedestrian accessibility shall be required in future development applications to promote walkable, village scale development. Community wastewater treatment should be required for any new development to encourage density and clustering of uses. Safe pedestrian connection to the Village should be considered through sidewalks or other pedestrian paths.

Residential - This planning area is intended for low density residential development beyond what is accommodated by the Growth Center and Mixed Use planning areas. Agriculture and significant forestland does not dominate in this district and soils are generally suitable for on-site septic systems. Clustering of building lots and planned unit developments are recommended in these areas in order to preserve open land, forestland, and rural character. Linear strip residential development should be discouraged.

Rural - This planning area is intended to primarily consist of viable agricultural and forest land within the Town; it consists of areas with significant prime agricultural souls, areas in current agricultural use, and significant forestland not included in the Conservation planning areas. Most

Monitoring Growth

The Planning Commission has identified places in the community where development pressures are occurring and intends to perform targeted planning around these areas within this Town Plan cycle. These areas are largely characterized by changes in density and or land use intensity as the community has grown and represent low density or clustered housing development in the rural planning area.

There are several successful examples of clustered residential developments in these areas that have designated a portion of the property as open space. However, the current minimum lot size of 2 acres creates an avenue for development that may not align with the intent of maintaining lot sizes viable for agriculture and forestry operations.

These transitional areas will be monitored and evaluated to determine the best regulatory approach in order to guide future revisions to the development regulations.

importantly, the landscape of rural open countryside and forestland shall be maintained. It is the intent of this designation to encourage viable forest practices and the long-term viability of agricultural uses into the future, and to protect these areas from incompatible forms of development; provisions should be made to encourage the long term viability of agricultural uses. This area can accommodate a small portion of future residential development at low densities if clustered or sited to conserve productive agricultural and forestry soils, meadowland, and to maintain rural character.

Conservation - This planning area defines land generally not physically suited for development, or which should be protected for their inherent value as significant wildlife habitat and forest land. These areas include deer wintering areas; bear habitat; locations of rare, threatened, or endangered species or significant natural communities; or the existence of development constraints such as steep slopes and poor development soils. Development and subdivision should be limited; clustered development shall be required to avoid areas unsuitable for development and to conserve productive agricultural and forest soils, wildlife habitat, and to maintain rural character. Fairfax Development Regulations reflect this intent through appropriate land use restrictions, dimensional standards, and development review standards, including the use of planned unit developments.

Recreation - This planning area consists of those areas owned by the Town, which have been set aside for future development as sites for public recreation. Construction should be limited to necessary public facilities associated with recreation activities. With this exception, recreational lands will essentially remain in their present condition as forested areas and open land for public recreation.

Opportunities for intact preservation of forest and agricultural resources through single or common ownership should be encouraged.

For example, cluster development around the forest perimeter with common or single ownership of the forest interior)

Flood Hazard Overlay - The purpose of this overlay area is to prevent increases in flooding caused by development in flood hazard areas, to minimize future public and private losses due to flood, and to promote the public health, safety, and general welfare. Designation of this area is also required for continued participation in the National Flood Insurance Program (NFIP) and is regulated under the Town's Flood Hazard Area Regulation Ordinance. Included are all areas in Fairfax identified as areas of special flood hazard on the National Flood Insurance maps.

Land Use Goals and Policies

Goals:

- Maintain a compact and vibrant village center surrounded by a landscape of farms, forestry, and rural countryside.
- Promote development and investment within the North and South Villages that reinforces the importance of these Villages as the Town's social and cultural center.
- Maintain and protect open space while accommodating community growth to ensure a network of land is available for use as recreation, working lands, and forest land.
- Create a safe and accessible environment that invites and supports pedestrian use, community events and an active lifestyle.

Policies:

- To provide future services and public facilities within the *North or South Villages* that support pedestrian and other non-vehicular travel, are organized around a central focal area, and include public spaces that promote social interaction.
- To encourage the economic viability of local agriculture, forestry, and related industries.
- To discourage sprawling development patterns/strip development.
- To encourage an interactive permitting process between landowners and local planning officials to facilitate site sensitive planning and awareness of local and state permitting.
- To limit development on lands unsuited for that purpose, including fragile and sensitive resources, such as critical habitat, wetlands, steep slopes, prime agricultural soils, and floodplains.
- To encourage infill development and the rehabilitation of historic structures and features that are a part of Fairfax's character.
- To consider long term plans for the entire parcel and adjacent lands during development review and address their potential cumulative impact.
- To encourage the clustering of development in the rural areas of town to preserve the open rural landscape.
- To coordinate the preservation of forestland, working agricultural land, and open space throughout the Town to create connected corridors of undeveloped land.
- To provide access to parks, shared-use paths and trails, or open spaces within reasonable distance of residential areas.
- To allow select agricultural practices in open spaces set aside in permitting – e.g. community gardens or small agricultural enterprises in open spaces of cluster housing.

- To encourage new residential and mixed-use developments to include sidewalks, outdoor open space, recreational facilities, and community gardens to promote active living.
- Encourage redevelopment of mixed use buildings on lots to provide both residential and commercial activity.
- To define and establish meaningful public spaces within the Village and surrounding network that enhances placemaking and encourages community gathering.

Section 8: Compatibility with Adjacent Communities and the Region

It is important to recognize that municipalities do not exist apart from one another and that land use planning in one community can affect land use in neighboring communities. As defined in 24 VSA §4302, compatibility is judged on whether the plan, if implemented, will significantly reduce the desired effect of the other. This section considers the compatibility of proposed land use in this Town Plan with land use in adjacent communities.

Fairfax is located in southern Franklin County, bordering the Chittenden County towns of Milton and Westford and the Lamoille County Town of Cambridge. The towns of Georgia, St. Albans Town, Fairfield, and Fletcher border Fairfax in Franklin County. Fairfax is well connected to adjacent communities via several state and local highways.

Consideration of Land Use Planning in Adjacent Communities

Town of Georgia

The 2017 Georgia Municipal Plan calls for Recreational and Natural Districts, not intended for future development, along the border Fairfax's Conservation and Rural Districts. Fairfax's Conservation Lands are generally compatible with these areas however Fairfax may allow more residential development in the Rural District that borders these areas; the scale of development is unlikely to present compatibility issues. Georgia's Agricultural/Rural Residential District which borders Fairfax's Rural District is compatible with the intended allowable land use. The Lamoille River crosses the municipal border and the floodplain is currently protected in both towns.

Town of St. Albans

The Town of St. Albans most recent municipal plan calls for the Rural District to border the Fairfax Rural District. The allowable land uses in these districts are compatible; both municipalities identify these areas as intended for agricultural, forest, and rural residential. Route 104 is the transportation link that connects St. Albans Town with Fairfax. Route 104 has experienced high levels of traffic and increasing congestion, these communities continue to work together in implementing recommendations of the Route 104/104A Corridor Study.

Town of Fairfield

The Town of Fairfield's municipal plan calls for an Agricultural and Rural Residential planning areas that abut the Rural District in Fairfax. Fairfield's Agricultural planning area is intended for agricultural and forestry uses and allows for rural residential development, which is compatible with Fairfax's Rural planning area. Fairfield's Rural Residential planning area would allow for more residential development than Fairfax's Rural District but both utilize PUDs to cluster development to preserve open space and maintain the rural character. The State-owned Fairfield Swamp Management District is located in Fairfield and crosses the border into Fairfax between Cadieux Road and West Street. While Fairfax's Rural planning area would allow some residential development, the areas around the Wildlife Management Area are protected by Land Trust, thus the land uses are compatible. Several Town roads connect Fairfield with Fairfax; currently, there

are no issues with proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

Town of Fletcher

The Town of Fletcher's municipal plan calls for three districts that border with Fairfax; the Village, Conservation, and Rural Residential/Agricultural Districts. It is not anticipated that there would be compatibility issues with any of the districts with Fletcher; areas that should be reviewed include:

- The Fletcher Village District is intended to provide for residential and commercial development that serves the needs of the Town and borders the Fairfax Conservation planning areas. While Fairfax's Conservation lands are not generally suitable for future development, the scale of development in the Fletcher Village District will likely not create compatibility issues.
- Fletcher's Conservation District is not intended for future development and borders areas of the Rural District in Fairfax. While the Rural District will allow for some residential development, the scale should not affect compatibility with the Conservation District; this plan recommends appropriate site planning to cluster development and maintain the quality of forestlands.
- The Rural Residential/Agricultural District in Fletcher borders Conservation lands in Fairfax. It is likely that the scale of development in Fletcher's Rural Residential/Agricultural District will not create any compatibility issues with Fairfax's Conservation lands.

Several Town roads connect Fletcher to Fairfax. Currently, there are no issues with proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

Town of Cambridge

The Cambridge municipal plan proposes the Agricultural and the Rural Residential land use areas border Fairfax's Conservation Lands. There is unlikely to be any land use incompatibilities between these two town borders. Route 104 is the transportation link that connects Cambridge with Fairfax. Route 104 has experienced high levels of traffic and increasing congestion, these communities continue to work together in implementing recommendations of the Route 104/104A Corridor Study.

Town of Westford

The Westford municipal plan identifies proposed land use districts that generally are compatible with the planning areas they border in Fairfax. Westford's Agriculture, Forestry, and Residential II District is intended to enable where appropriate certain commercial and industrial uses on good roads while conserving the rural environment of the District and it borders Fairfax's Conservation Lands on either side of Route 128. While commercial development is allowed adjacent to Conservation Lands, if Westford determines it to be appropriate and it conserves the rural environment, these proposed land uses can remain compatible. Westford's Rural Residential District is intended to provide an option for residential development at a higher density than surrounding rural areas and it borders areas of Fairfax's Conservation Lands between Plains Road and just east of Toof Road. If residential development is clustered and appropriately

sited to mitigate impact to wildlife habitat and forest land, there are no incompatibilities with Conservation Lands. Route 128 is the main transportation connection between Westford to Fairfax. Currently, there are no issues with proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

Town of Milton

The Milton municipal plan calls for the Agricultural/Rural Residential District that borders Conservation Lands in Fairfax and there are no roads connecting the two towns. The Agricultural/Rural Residential District is intended to provide for continued agriculture, forestry, and open space uses together with compatible low-density residential development. These land uses are compatible with proposed land use planning in this area of Fairfax.

Consideration of Land Use Planning in the Region

To receive an Act 250 permit, a project must conform to the regional plan. The Northwest Regional Plan, most recently adopted in 2015 and amended in 2017, proposes land use planning areas to encourage the conservation of valued resources and a development pattern that will maintain the character and quality of life important to this region. The planning areas include agricultural resource lands, conservation and forest resource lands, low-density development areas, growth centers, and sub-regional growth centers. Fairfax contains agricultural resource lands, conservation and forest resource lands, and low-density development areas throughout the town. In addition, the Fairfax Growth Center zoning district has been designated a sub-regional growth center. Sub-regional growth centers are expected to serve as economic and cultural hubs for surrounding towns. One factor in designating Fairfax Village as a sub-regional growth center is its desire for managed high density and mixed-use development within the center's boundaries.

Appendix 1: Fairfax Enhanced Energy Plan

Intent

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further regional and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 4the "90 x 50" goal), and the following:

A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
C. Vermont's building efficiency goals under 10 V.S.A. § 581;
D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fairfax to achieve "substantial deference" instead of "due consideration" in Section 248 applications for energy generation facilities (e.g. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. This means that Fairfax will have a greater "say" in Certificate of Public Good proceedings before the Vermont Public Service Board about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and must contain the following information:

A. An analysis of current energy resources, needs, scarcities, costs, and problems.
B. Targets for future energy use and generation.
C. "Pathways," or implementation actions, to help the municipality achieve the established targets.
D. Mapping to help guide the conversation about the siting of renewables.

This chapter will include the required analysis, targets, and mapping. The "pathways," or actions, have been included in the implementation section of the municipal plan.

Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each energy sector of energy use (thermal, transportation, electricity) and generation in Fairfax.

Thermal Energy

An estimate of current residential thermal energy demand in Fairfax, based on data from the American Community Survey (ACS 2011-2015), is shown in Table A1.1. This data represents homes' primary fuel source for home heating and does not account for backup or secondary home heating fuel sources. The data shows that 49.2% of households in Fairfax depend on fuel oil as their primary fuel source for home heating. Fuel oil and wood sources are estimated to heat almost 70.2% of homes in Fairfax. There is no access to natural gas in Fairfax, so the 75 households that are reported to heat their households via natural gas is likely an error from ACS. These households are more likely to be heated through other sources like wood, fuel oil, or propane.

Table A1.1 - Current Fairfax Residential Thermal Energy Use				
Fuel Source	Fairfax Households (ACS 2011-2015)	Fairfax % of Households	Fairfax - Households Square Footage Heated	BTU (in Billions)
Natural Gas	75	4.3%	103,376	6
Propane	414	23.7%	729,824	44
Electricity	19	1.1%	36,176	2
Fuel Oil	859	49.2%	1,451,792	87
Coal	0	0.0%	0	0
Wood	367	21.0%	691,024	41
Solar	0	0.0%	0	0
Other	11	0.6%	20,944	1
No Fuel	0	0.0%	0	0
Total	**1745**	**100.0%**	**3,033,136**	**182**

Estimates for commercial and industrial thermal energy use are more difficult to calculate. An estimate of total commercial energy use (thermal and electricity) is provided in Table A1.2. Based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 48 billion BTU per year, is likely to be for thermal energy needs.

Table A1.2 - Current Fairfax Commercial Energy Use			
	Commercial Establishments in Fairfax (VT DOL)	**Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)**	**Estimated Thermal Energy BTUs by Commercial Establishments in Fairfax/year (in Billions)**
Municipal Commercial Energy Use	66	0.725	48

Fairfax does not have access to natural gas. The nearest natural gas distribution system is located in Georgia. It is not anticipated that this system will be extended to Fairfax.

Electricity Use

An estimate of current electricity use in Fairfax is shown in Table A1.3. This data is from 2016 and is available from Efficiency Vermont. Fairfax electricity use has decreased by about 400,000 kWh since 2014. The decreased use has come from commercial/industrial and residential sectors. Fairfax's average residential electricity usage in 2016 was 7,562 kWh per household which is a higher than the

regional average of 7,038 kWh per household in the region. Green Mountain Power is the electric utility that serves the majority of customers in Fairfax. It's service area is centered around VT Route 104 and VT Route 104a. Vermont Electric Coop is the electricity utility that serves the more rural portions of town, including the northeast part of town.

Table A1.3 - Current Fairfax Electricity Use, 2016

Use Sector	Electricity Use in kWh (Efficiency Vermont)	Electricity Use in Billion (BTUs)
Residential	13,379,211	48
Commercial and Industrial	5,956,929	15
Total	**19,336,140**	**63**

Table A1.4 - Current Fairfax Transportation Energy Use

Transportation Data	Fairfax Data
Total # of Passenger Vehicles (ACS 2011-2015)	3,641
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	41,347,196
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
Total Gallons Use per Year	2,222,968
Transportation BTUs (Billion)	268
Average Cost per Gallon of Gasoline in 2016 (NRPC)	2.31
Gasoline Cost per Year	5,135,055

Transportation

Table A1.4 contains an estimate of transportation energy use in Fairfax. It's estimated that Fairfax residents drive approximately 41.3 million miles per year and spend about $5.1 million on transportation fuel expenses a year. This calculation does not include expense for commercially owned and operated vehicles.

As of January 2016, data from the Vermont Department of Motor Vehicles notes that there are between 5 and 19 electric vehicles within the Fairfax zip code (which includes parts of Cambridge, Fletcher, and Georgia, VT).

Generation

There is currently 4.03 MW of electricity generation capacity from renewable generation facilities in Fairfax. This capacity results in approximately 13,150 MWh of electricity generation per year. This is roughly equal to the annual electricity use of about 1,963 households in Vermont based on information available from the U.S. Energy Information Administration (558 kWh per VT household per month).

Table A1.5 organizes information about existing generation in Fairfax by type of facility. The **Existing Generation Facilities Map** shows the location of all electricity generators in Fairfax with a capacity greater than 15 kW.

The Town 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 in than in other surrounding communities with less existing grid infrastructure. The **Transmission & 3 Phase Power Infrastructure Map** shows the

electricity transmission and three-phase distribution infrastructure in Fairfax. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

Table A1.5 – Existing Renewable Generation		
Generation Type	MW	MWh
Solar	0.43	527.35
Wind	0.003	9.20
Hydro	3.60	12,614.40
Biomass	0.00	0.00
Other	0.00	0.00
Total Existing Generation	**4.03**	**13,150.95**

Targets for Energy Use

Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and generation to meet the State of Vermont's 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan (www.nrpcvt.com).

Tables A1.6, A1.7 and A1.8 show the targets for future energy use for Fairfax by sector (totals are cumulative). These municipal targets are based on regional targets that have been disaggregated.

The thermal targets for Fairfax in 2050 is to have 87.1% of structures be heated by renewable sources. Much of this transition is likely to come in the form of electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. The target also relies on wood heating being a continued source of residential heating. There are also high targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

Table A1.6 - Thermal Targets			
Thermal Targets	**2025**	**2035**	**2050**
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	45.7%	59.2%	87.1%
New Efficient Wood Heat Systems (in units)	0	0	4
New Heat Pumps (in units)	208	477	891
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	49%	73%

The transportation energy targets for Fairfax are similarly ambitious. By 2050, almost 90% of transportation energy will need to come from renewable sources. This will primarily be done through conversion to electric vehicles from fossil fuel vehicles for light-duty, passenger vehicles. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. The biodiesel technology and infrastructure will certainly need to advance and evolve in order to meet this target.

To meet the goals set by the Vermont Comprehensive Energy Plan, other changes will also be required in the transportation sector. This includes maintaining or decreasing the current level of vehicles miles traveled per person per year. This can be done through more compact development in Fairfax, most notably in the village. More compact development allows for greater numbers of people to walk instead of use vehicles. Compact development also more easily supports public transportation routes, another strategy that can result in decreased vehicles miles traveled.

Table A1.7 - Transportation Targets

Transportation Targets	2025	2035	2050
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	8.2%	28.9%	89.4%
Electric Vehicles	319	2386	5675
Biodiesel Vehicles	437	867	1665

Targets for electricity use are more complex to interpret. Electricity use is targeted to double by 2050 (Table A1.8). At the same time, total energy use is expected to become more efficient due to the increased use of electricity as an energy source. The increase in total electricity use will likely be driven by conversions to electric heat pumps and electric vehicles. At the same time, total energy use (energy, not electricity) will become more efficient and therefore decrease. This is because electric cars and electric heating sources are more efficient (i.e. use less BTUs) than using other energy sources, such as fossil fuels. So while the doubling of electricity use is the target, then intent is to continue to work towards electricity conservation while becoming more reliant on electricity for transportation and heating. To truly assess whether or not Fairfax has achieved this target, it will need to assess both parts of the targets, conservation and conversion, in the future.

Table A1.8 - Electricity Targets

Electricity Targets	2025	2035	2050
Increased Electricity Use (Efficiency and Conservation in BTUs)	25.2%	48.3%	100.7%

Targets for Energy Generation

Table A1.9 shows the electricity generation targets for Fairfax in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (24,034.77 MWh) is about 1.5 times the current generation capacity (13,150.94 MWh) within the Town of Fairfax.

Table A1.9 – Generation Targets

Renewable Generation Targets	2025	2035	2050

Total Renewable Generation Target (in MWh)	7,931.47	15,862.95	24,034.77

Fairfax has sufficient land to meet the above generation targets based on mapping completed by NRPC. Based on mapping and calculations completed by NRPC, Fairfax has access to the generation capacity outlined in Table A1.10. This generation capacity was calculated using the "base" layers for solar and wind. For an explanation of what constitutes a "base" layer, please see the mapping subsection below.

Table A1.10 - Renewable Generation Potential

Resource	MW	MWh
Rooftop Solar	2	1,841
Ground-mounted Solar	750	920,187
Wind	254	778,319
Hydro	0.012	42
Other	0	0
Total Renewable Generation Potential	1,006	1,700,389

Table A1.9 provides the generation targets for Fairfax but does not prescribe how the Town meets these targets. As a reference for what it would take to meet these targets, Figure A1.1 shows the total land area that would be needed to provide 17.19 MW of ground-mounted solar, or 88% of the 2050 target, in relation to the total land area of the Town.

Fairfax supports NRPC's position regarding "commercial" and "industrial" wind facilities. The NRPC Regional Plan finds that the construction of new "industrial" or "commercial" wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an "industrial" or "commercial" wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Fairfax encourages the use of these sources for electricity and thermal generation, especially on farms.

Figure A1.1 – Ground Mounted Solar Potential

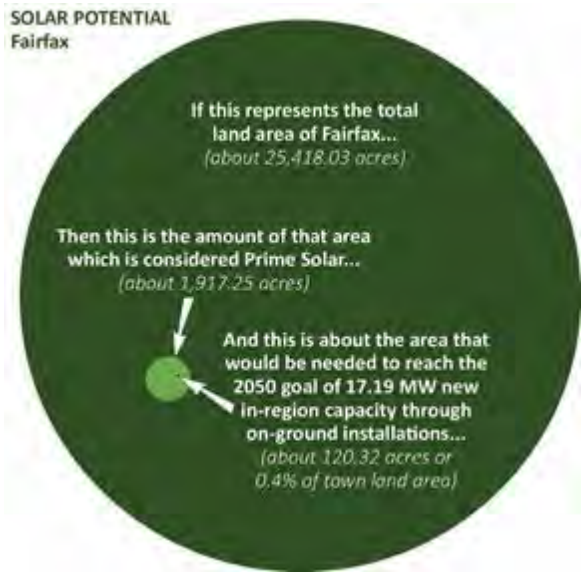

Figure A1.2 – Rooftop Solar Potential

Rooftop solar was estimated by using methods suggested by the Vermont Department of Public Service. The methodology estimates that 25% of residential and commercial structures in Fairfax could be suitable for rooftop solar generation. This results in 436 residential structures and 17 commercial structures in Fairfax. It is then estimated that the average residential rooftop system is 4 kW in size and the average commercial rooftop system is 20 kW in size. The resulting estimated generation capacity is 2.08 MW of solar generation.

Mapping Energy Resources and Constraints

Fairfax has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Determination Standards, including access to energy resources and constraints to renewable development, and are a required element of enhanced energy planning. All maps may be found at the end of Appendix 1.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When a generation facility is proposed, it is the applicant's responsibility to verity the presence of all constraints on site as a part of the application.

Mapping Methodology

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass "potential."

"Known" and "possible" constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table A1.11. The known constraints and possible constraints used to create the maps include constraints that are required per the State Determination Standards from the Department of Public Service and regional constraints that were selected by NRPC.

Solar and Wind

The solar and wind maps show both "base" and "prime" areas. Base areas are areas with generation potential, which may contain possible constraints. Prime areas are areas that have generation potential that do not contain known or possible constraints. Areas that do not contain generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas around the northern portion of VT Route 104, near the southern portion of Buck Hollow Road, and in the vicinity of Commette Road. Fairfax has identified the following preferred locations for solar generation facilities: rooftops, parking lots, landfills and net-metering facilities located on farms (as defined by the Vermont Required Agricultural Practices). Brownfield sites located outside of the village are also considered preferred locations.

It is Fairfax's preference that solar facilities located in town be no larger than 5 MW in size. Facilities this large should not be colocated with facilities of a similar size. The intent is to limit the aesthetic impact of solar facilities on the rural areas of Fairfax. This limit has the same intent of Fairfax Solar Screening Ordinance.

Wind resources are concentrated in the vicinity of Brick Church Road in the northern part of Fairfax.

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 commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites.

Fairfax has three existing dam sites. One dam, owned by Green Mountain Power, is located on the Lamoille River and currently generates electricity. The two other dams are located in the northwest part of Fairfax and create the St. Albans Reservoir. These dams do not generate electricity, but could potentially be retrofitted to produce electricity.

Conclusion

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Fairfax is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

Enhanced Energy Plan Goals, Policies, and Implementation Actions

Goal: Plan for increased electric demand with the support of Green Mountain Power, Vermont Electric Coop, and Efficiency Vermont.

Policy: Fairfax supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in the Fairfax Enhanced Energy Plan. Development of generation in identified preferred locations shall be favored over the development of other sites.

Action: Investigate the installation of a municipal net-metering facility to off-set municipal electric use.

Action: Investigate installation of a community-based renewable energy project.

Action: Ensure firefighters receive proper training to handle structures that have roof-mounted solar.

Action: Review and maintain the Building Inspection, Code Enforcement, and Fire Safety Ordinance to incorporate any changes to national rooftop solar installation methods and standards.

Goal: Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.

Policy: Fairfax supports energy conservation efforts and the efficient use of energy across all sectors.

Action: Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfax residents.

Action: Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.

Action: Create an Energy Committee and/or appoint an Energy Coordinator to coordinate energy-related planning and projects in Fairfax.

Action: Evaluate the remaining improvements identified in the 2012 energy audit of Fairfax Fire Station and incorporate the recommendations into the municipal capital budget.

Action: Implement recommendations from the 2012 NRPC evaluation of street lighting in Town.

Policy: Fairfax supports patterns and densities of concentrated development that result in the conservation of energy.

Policy: To support public transit connections from Fairfax to other parts of the region if economically feasible in the future.

Action: Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.

Policy: Fairfax supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.

Goal: Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.

Policy: Fairfax supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.

Action: Study potential need for a park and ride in Fairfax with a particular focus south of the village.

Action: Promote and provide information about the GoVermont website which provides information to citizens about ride share, vanpool, and park-and-ride options.

Action: Plan for and install electric vehicle charging infrastructure on municipal property.

Action: Aid in locating an EV charging infrastructure on public or private property.

Table A1.11 – 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

Vermont Conservation Design Highest Priority Forest Blocks	The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	ANR
Public water sources	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
National Natural Landmark – e.g. Chazy Fossil Reef	The Chazy Fossil Reef in Isle La Motte has been designated a National Natural Landmark by the US Department of Interior.	NRPC
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D. No land use districts in Fairfax are included in this category.	NRPC
Solar, Wind and Biomass Maps - Possible Constraints		
Constraint	**Description**	**Source**
Protected lands	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
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 Fairfax Conservation District was included in this category.	NRPC
Hydro Map - Known Constraints		
Constraint	**Description**	**Source**
National scenic and recreational rivers	The Upper Missisquoi and Trout Rivers are designated as a National Wide and Scenic River System.	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

The date in Table A1.12 displays the 103 facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fairfax recognizes that some of the data in the table may be out of date or incorrect. The Town of Fairfax also recognizes that some identified facilities may no longer generate electricity.

Table A1.12 - Fairfax Electricity Generators, As of 3/27/18

Sub Category: GM- Ground-mounted, RM – Roof-mounted, PV – Photovoltaic
Utility: GMP – Green Mountain Power, VEC – Vermont Electric Coop
Electricity Type: NM – Net metered
All facilities are residential unless denoted with a (1) for Business or (2) for Municipality

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Hydro	Hydro	Fairfax Falls (1)			Grid	GMP	4200
Solar	GM PV	Harold Vance III	1139 Main St	3406	NM	GMP	3.3
Solar	GM PV	Jeffery & Linda Corey	86 Sam Webb Rd	3798	NM	GMP	6.4
Solar	GM PV	John Quinn	5 Benny Rd	4043	NM	GMP	7
Solar	GM PV	Karen Slowinski & Debra Warner	83 Ledge Rd	2801	NM	VEC	7.5
Solar	GM PV	Madeline Mann	399 Buck Hollow Rd	3111	NM	GMP	9.8
Solar	GM PV	Marti Sterin	73 SAM WEBB RD	1560	NM	GMP	4.4
Solar	GM PV	Paul Gamm	89 Evergreen Road	772	NM	VEC	3.2
Solar	GM PV	Joseph Ducharme	6 Bailey Road	16-0489	NM	GMP	5
Solar	GM PV	Donald Fleming	77 Fletcher Rd		NM	GMP	5
Solar	GM PV	Fairfax Fire Department (2)	15 Goodall St		NM	GMP	15
Solar	GM PV	Tom Snyder	16 Bellows St		NM	GMP	15
Solar	GM PV: Tracker	Keith & Sally Billado	86 W Street Rd	2997	NM	GMP	6
Solar	GM PV: Tracker	Fairfax Family Physical Therapy PC (1)	1282 Main Street	7001	NM	GMP	7
Solar	RM PV	Barbara & William Duval	758 Fletcher Rd	3497	NM	GMP	5.6
Solar	RM PV	Carol Roberts	6 Alexzis Rd	3804	NM	VEC	5
Solar	RM PV	Christen & Thomas Bessette	2371 Main St	2792	NM	GMP	8.9
Solar	RM PV	David Vallett	287 Buck Hollow Rd	5749	NM	GMP	5
Solar	RM PV	Dayon And Heather Brown	68 Upper Meadow Rd	3815	NM	GMP	5
Solar	RM PV	Douglas & Evangeline Lantagne	82 WINDTOP RD	2661	NM	GMP	5.6

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Douglas Reaves	2227 Main St	2653	NM	GMP	3.7
Solar	RM PV	Elaine Barkyoumb	102 Huntville Rd	3512	NM	GMP	7.5
Solar	RM PV	Scott Picucci	15 Cherrierville Rd	3748	NM	VEC	5
Solar	RM PV	Elizabeth Wagner	13 Snowcrest Rd	2622	NM	GMP	2.3
Solar	RM PV	Eric Foreman	1789 Main St	5311	NM	GMP	10
Solar	RM PV	Eric Torraca	1235 Main St	2638	NM	GMP	4.7
Solar	RM PV	Genevieve & Joseph Gallagher	9 Fletcher Rd	6061	NM	GMP	6
Solar	RM PV	Glen Twilley	137 West Street Rd	2716	NM	VEC	3.7
Solar	RM PV	Gregory Martin	41 Maple Hill Rd	3538	NM	GMP	9.9
Solar	RM PV	Hannah Mason Hauser	184 Mead Rd	3698	NM	VEC	4.6
Solar	RM PV	Harald and Rebecca Aksdal	296 Woodward Road		NM	VEC	5
Solar	RM PV	James Naylor	178 Wilkins Rd	4002	NM	VEC	8
Solar	RM PV	Jason Elledge	14 Hawley Rd	3939	NM	GMP	7.7
Solar	RM PV	Jennifer Osgood	17 Michelle Rd	3671	NM	GMP	4.6
Solar	RM PV	John & Kathryn Connell	20 Delorme Road	5954	NM	GMP	3.8
Solar	RM PV	Joseph Jacobson	20 Summit View St	2863	NM	GMP	5.6
Solar	RM PV	Kevin Jarvis	16 King Road	3272	NM	GMP	5.3
Solar	RM PV	Kris Hoyt	2855 Main Street	3496	NM	GMP	4.3
Solar	RM PV	Lisa Atherton	32 Audelin Woods Rd	3605	NM	GMP	4.6
Solar	RM PV	Matthew Roth	281 River Rd	6065	NM	GMP	3
Solar	RM PV	Michael Cain	2757 Main St	4156	NM	GMP	5
Solar	RM PV	Pauline Paquin and Steve Marsh	34 Windtop Rd	5294	NM	GMP	7.6
Solar	RM PV	Peter Lynch	78 Rood Mill Road	4244	NM	VEC	6
Solar	RM PV	Richard Jarmusz	26 Richards Rd	2804	NM	GMP	3.7
Solar	RM PV	Sarah Hodgson	34 Dewey Rd	5614	NM	VEC	3.8
Solar	RM PV	Sarah Jones and Jesse Jones	26 Summit View St	3508	NM	GMP	8
Solar	RM PV	Steve Rainville	272 Wilkins Rd	3771	NM	VEC	5
Solar	RM PV	Steven Dumas	23 Summit View St	3645	NM	GMP	6.8
Solar	RM PV	Wayne Thompson	47 Browns River Rd	4217	NM	GMP	5.7
Solar	RM PV	Winfred & Aleta Decker	67 White Pine Rd	43	NM	VEC	3.8

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Bethany Dukette	36 Craftsfield Rd	16-0261	NM	GMP	5
Solar	RM PV	Bethany Hayden	769 Goose Pond Rd	6446	NM	GMP	6
Solar	RM PV	Bob Bessette	1979 Main Street	6834	NM	GMP	4
Solar	RM PV	Brendan Conray	42 Crystal Dr		NM	GMP	3.6
Solar	RM PV	Bruce Alvarez	147 Nichols Rd	7031	Group NM	GMP	8
Solar	RM PV	Candace Johnson	37 Lochmoor Rd	5253	NM	GMP	6
Solar	RM PV	David Gardell	51 Richards Road	7069	NM	GMP	5
Solar	RM PV	Gennette Carr	416 Carroll Hill Rd	6708	NM	VEC	4
Solar	RM PV	Ian Duckett	45 Lochmoor Rd	16-0333	NM	GMP	5
Solar	RM PV	John Young	351 Buck Hollow Road	16-0129	NM	GMP	7.6
Solar	RM PV	Joshua Silman	161 Bessette Road	6396	NM	GMP	11
Solar	RM PV	Karen Carlin	1209 Main St	16-0389	NM	GMP	5
Solar	RM PV	Kevin Tobey	352 Sam Webb Road	7266	NM		7.6
Solar	RM PV	Lara Scott	28 Old Academy Street	16-0674	NM	GMP	3.8
Solar	RM PV	Mary Lewis	6 School St		NM	GMP	3.6
Solar	RM PV	Matthew Garrett	58 Upper Meadow Road		NM	GMP	3.8
Solar	RM PV	Raquel Urbina	11 Michelle Rd	16-0686	NM	GMP	4.2
Solar	RM PV	Shannon Arnzen	183 Tabor Hill Road	7265			5
Solar	RM PV	Thom & Brenda Smith	464 Nichols Road	7216	NM	VEC	11.4
Solar	RM PV	Timothy Hathaway	10 Nichols Rd		NM	GMP	12
Solar	RM PV	Tom Bochanski	244 Sam Webb Road	7209	NM	VEC	7
Solar	RM PV	Vincent Redding	28 Rowland Rd	16-0321	NM	GMP	5
Solar	RM PV	Zachary Sprague	3 Hillcrest Road		NM	GMP	11.4
Solar	RM PV	Brannon Soter		6800	NM	GMP	4.2
Solar	RM PV	Curtis Lantagne	74 Windtop Rd	16-1104	NM	GMP	4.95
Solar	RM PV	Jennifer Prim	33 Windtop Rd	16-1447	NM	GMP	8.4
Solar	RM PV	Amy Gray	15 Andbron Rd	16-1178	NM	GMP	6
Solar	RM PV	Brenda Turner	110 Buck Hollow Rd	16-1549	NM	GMP	3.6
Solar	RM PV	Elizabeth Brunell	31 Hardwood Hill Rd	16-1506	NM	GMP	5
Solar	RM PV	Jeff Iszak	60 Village View Road	16-1495	NM	GMP	3

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Josh Rollet	48 Leach Rd	16-1273	NM	GMP	6
Solar	RM PV	Kevin Quinlan	12 Meadows Road	16-1409	NM	GMP	4.2
Solar	RM PV	Robert Goboury	402 Buck Hollow Road		NM	GMP	3
Solar	RM PV	San Kong	12 Bentley Rd	16-0852	NM	GMP	3.6
Solar	RM PV	Terri Cote	6 King Road	16-1661	NM	GMP	3.6
Solar	RM PV	Tyler Burns	33 Bovat Road	16-1667	NM	GMP	8.2
Solar	RM PV	Stanley Moody	20 Craftsfield Rd		NM	GMP	3.6
Solar	RM PV	Roger Fisher	57 Allen Irish Road		NM	GMP	5
Solar	RM PV	Donald Tedford	375 Swamp Road		NM	GMP	16
Solar	RM PV	Aaron and Rebecca Wilson	4 Quincy Road		NM	GMP	3.8
Solar	RM PV	Kelly Lyford and Amy Larow	219 Sam Webb Rd		NM	VEC	11.4
Solar	RM PV	Joyce A Hunt	233 Nichols Rd		NM	VEC	6.6
Solar	RM PV	Erin Cain	43 Outback Rd		NM	VEC	3.6
Solar	RM PV	Bertrand Bolduc	27 Wiggins Rd		NM	-	5.2
Solar	RM PV	Deanna Farnham	28 Rock View Rd		NM	GMP	3.8
Solar	RM PV	Beverly Pascavage	4 Meadow Rd		NM	GMP	6.6
Solar	RM PV	Heidi Meunier	183 Brick Church Rd		NM	VEC	10
Solar	RM PV	Brian Duprat	52 Snowcrest Rd		NM	GMP	7.6
Solar	RM PV	John Kjos	20 Rock View Rd		NM	GMP	3
Solar	RM PV	Rob Green	216 Huntville Rd	16-2534	NM	GMP	5.2
Solar	Solar Canopy	Ricky Wood	272 Carroll Hill Rd		NM	VEC	7.6
Wind	Small Wind	Sam Nelson	108 Bessette Road	119	NM	GMP	3

Utility Service Areas

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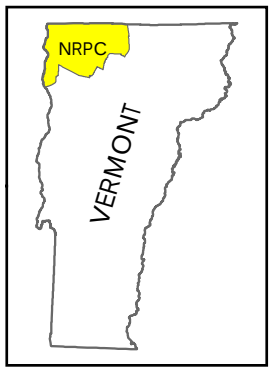

Legend

Utility Service Area Features

- Green Mountain Power
- Swanton Village Electric
- Vermont Electric Co-op
- Enosburg Falls Electric
- Substation
- 3 Phase Power Line
- Transmission Line

Sources: VCGI

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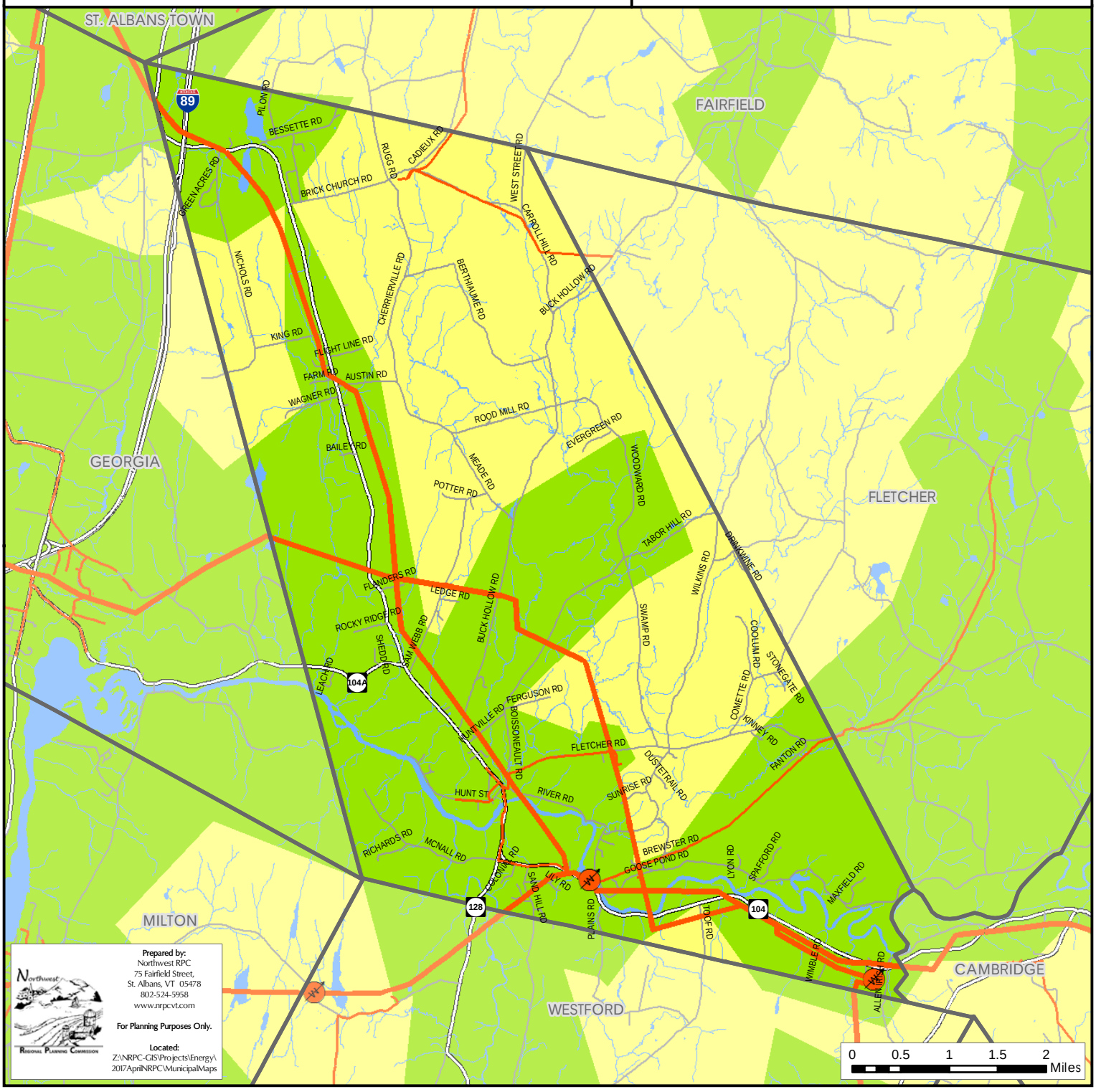

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Existing Generation Facilities

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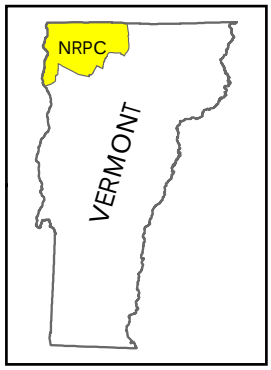

Legend

- Biomass Facility
- Hydro Facility
- Solar Facility
- Wind Facility

Note: Only generators 15kW are shown on the map. A full list of all generators is available.

Sources: VCGI

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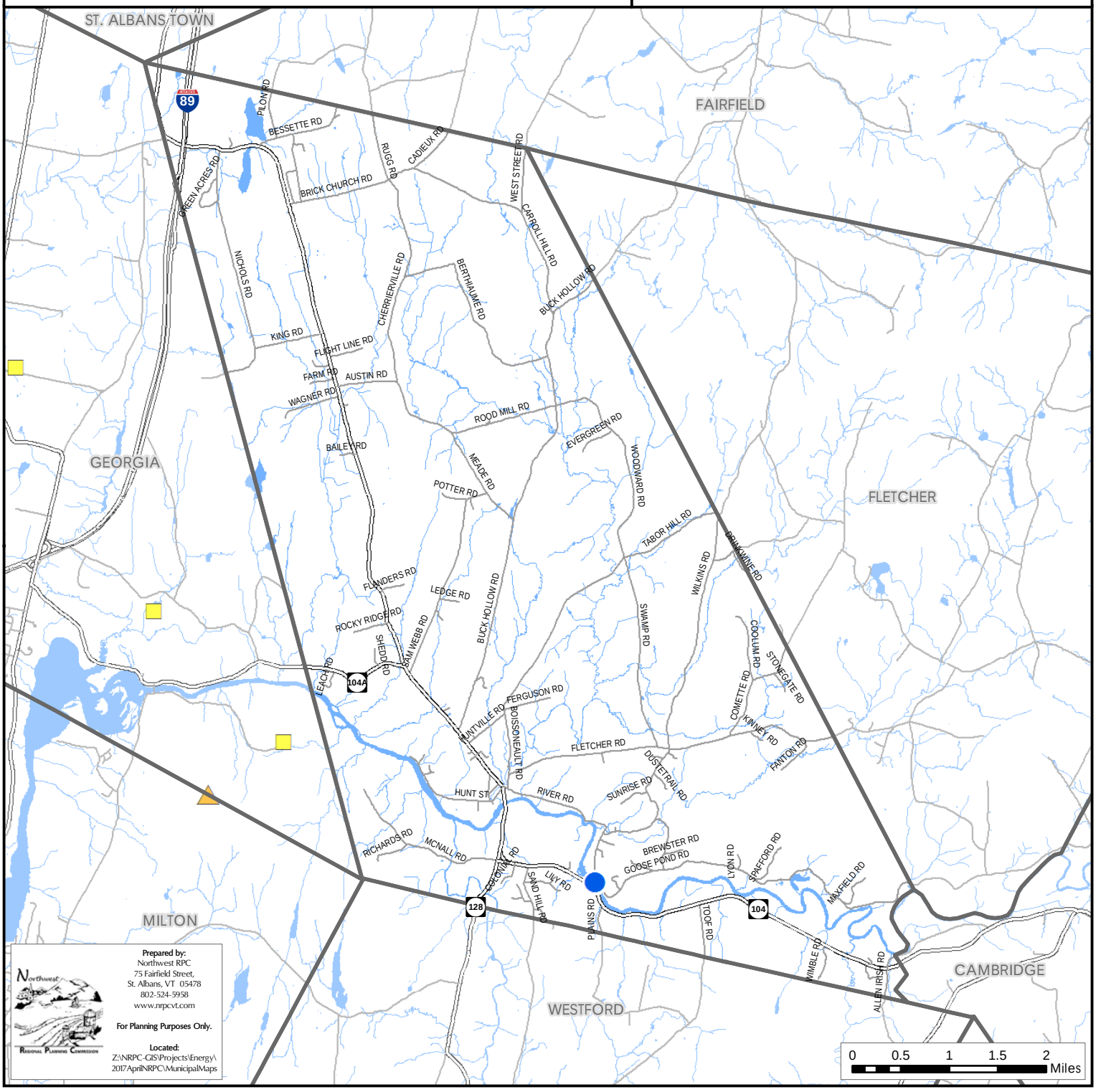

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Transmission & 3 Phase Power Infrastructure

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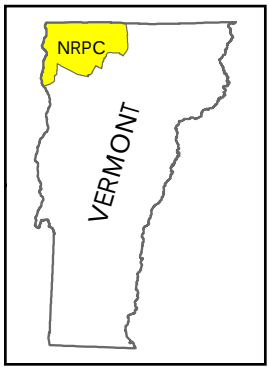

Legend

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

Sources: VCGI
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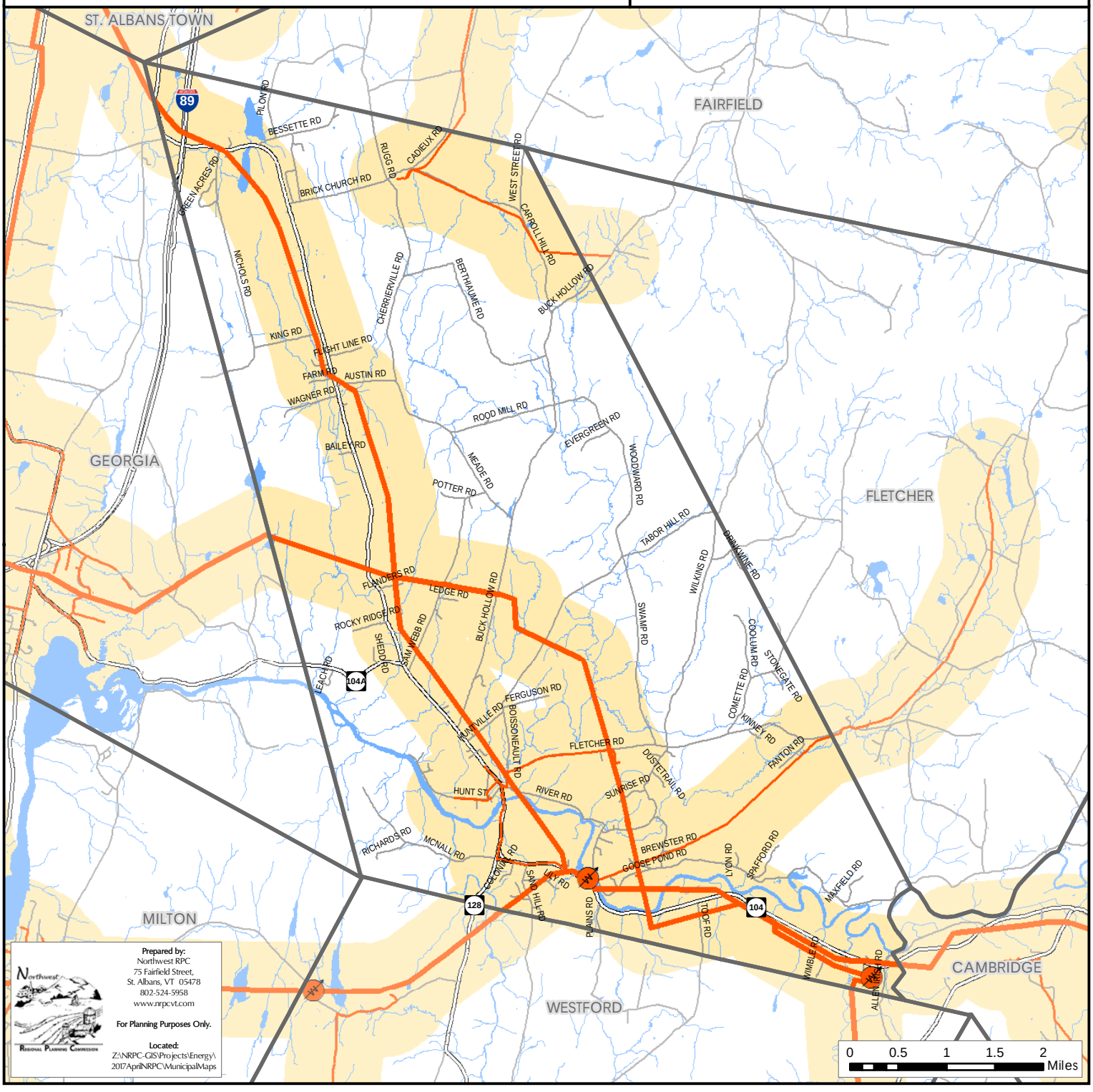

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Solar

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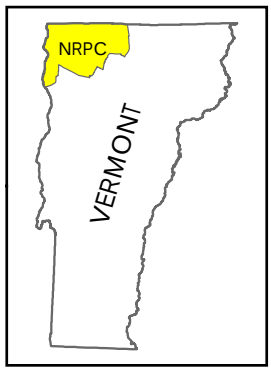

Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)
- Prime Solar/No Known Constraints
- Base Solar/Possible Constraints

Sources: VCGI
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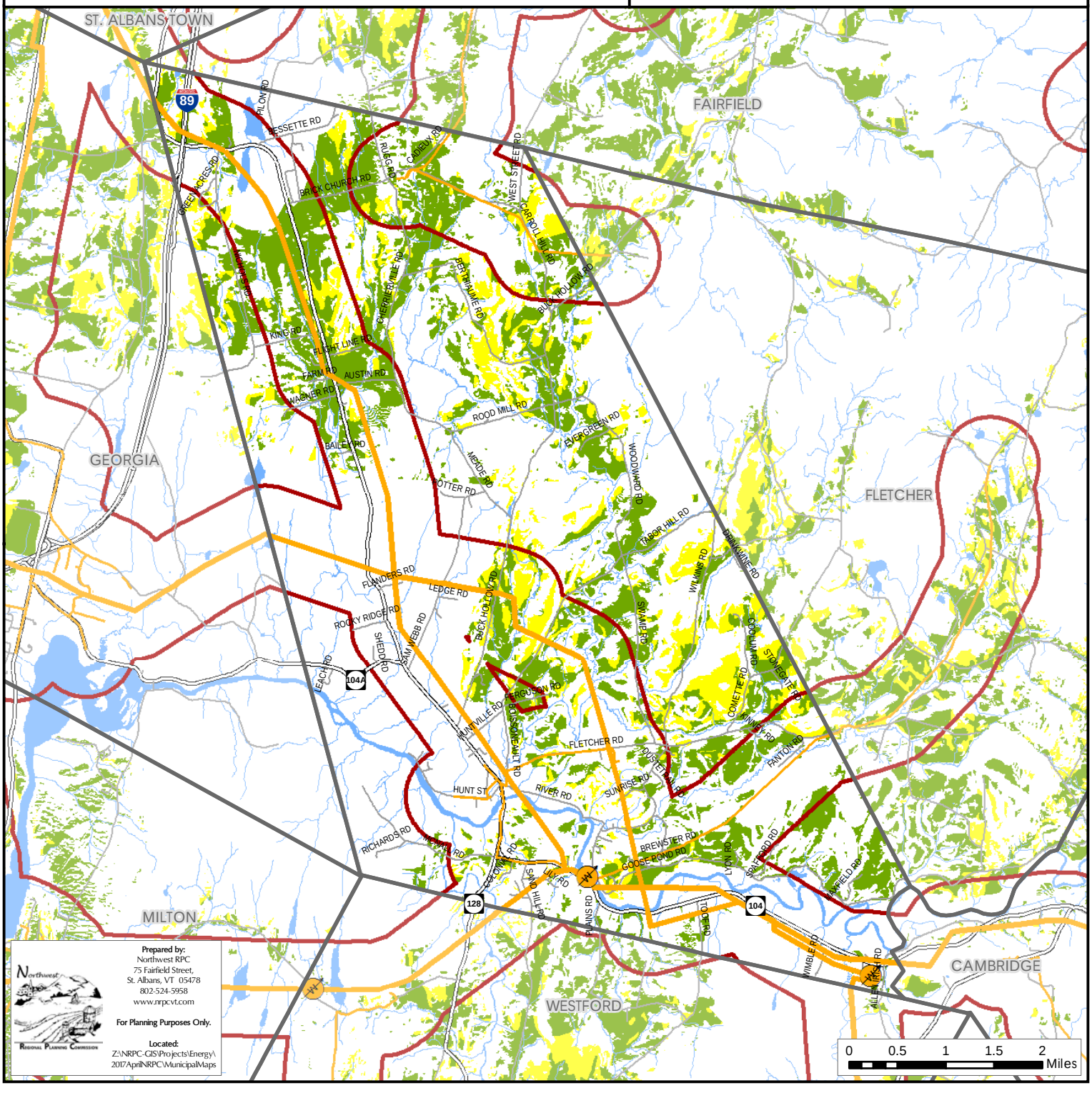

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Wind

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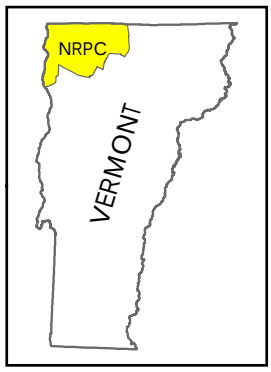

Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- Prime Wind — Areas of high wind potential and no known constraints. Darker areas have higher wind speeds.
- Base Wind — Areas of high wind potential and a presence of possible constraints. Darker areas have higher wind speeds.

Sources: VCGI

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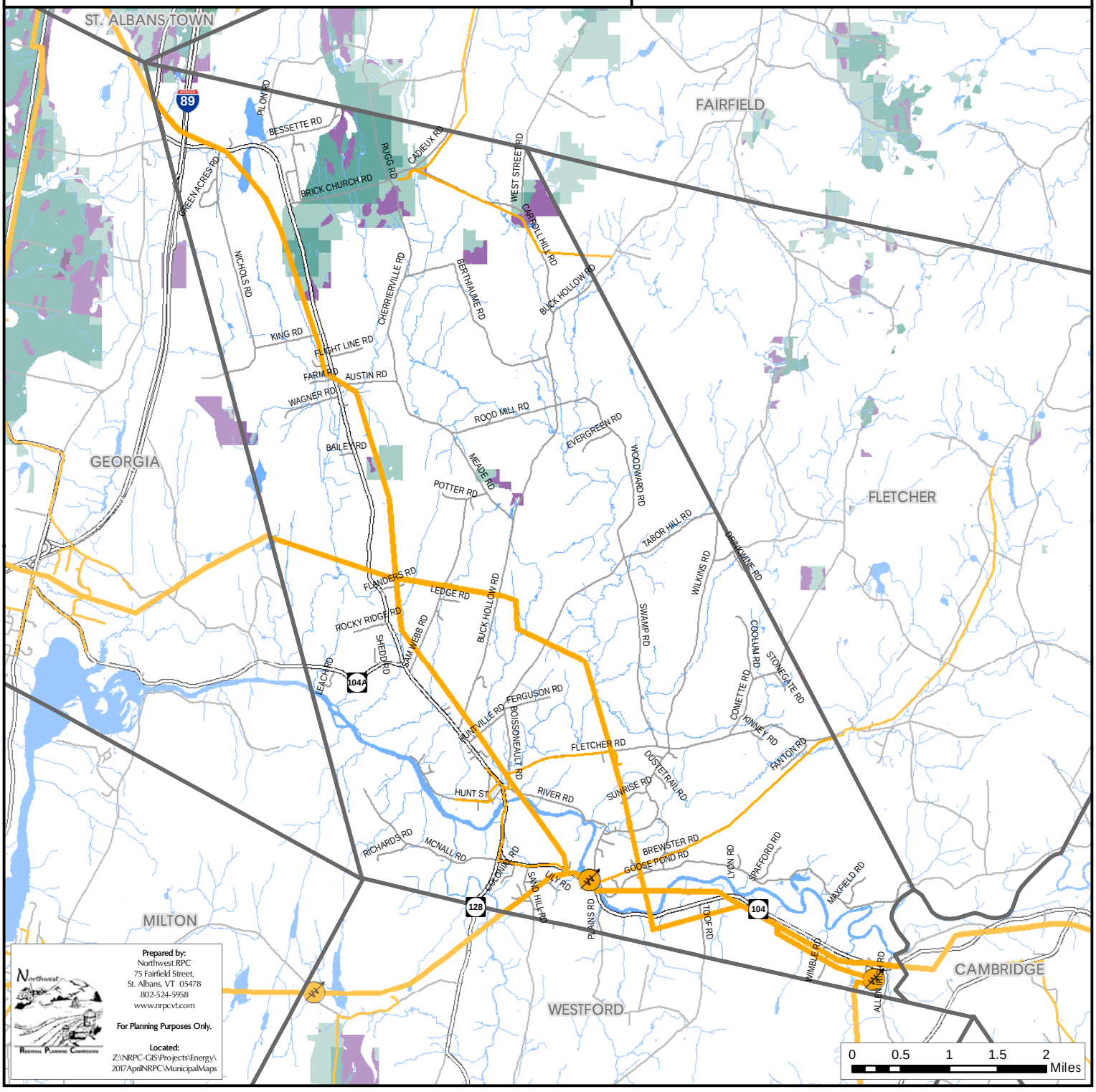

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Hydro

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N

Legend

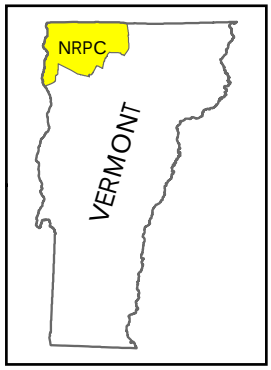
- Substation
- 3 Phase Power Line
- Transmission Line
- Designated Outstanding Resource Water
- Known Constraint - Designated National Wild & Scenic River
- Possible Constraint - Stressed or Impaired Water
- Possible Constraint - RINAs

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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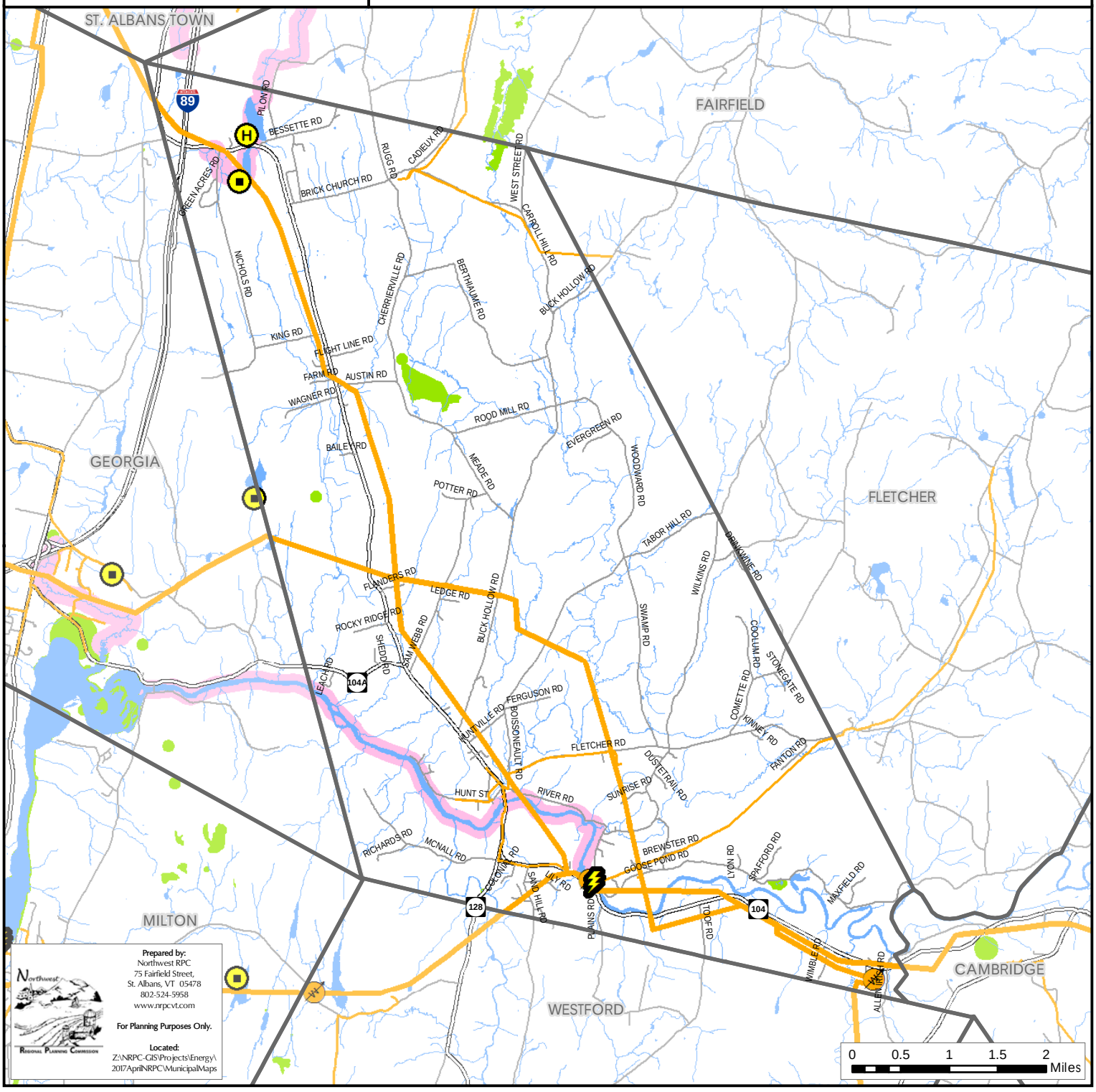

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Woody Biomass

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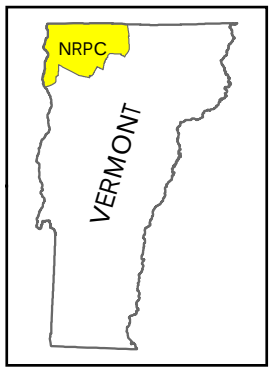

Legend

- Biomass System
- Cow Power
- Substation
- 3 Phase Power Line
- Transmission Line
- Prime Woody Biomass/No Known Constraints
- Base Woody Biomass/Possible Constraints

Sources: VCGI

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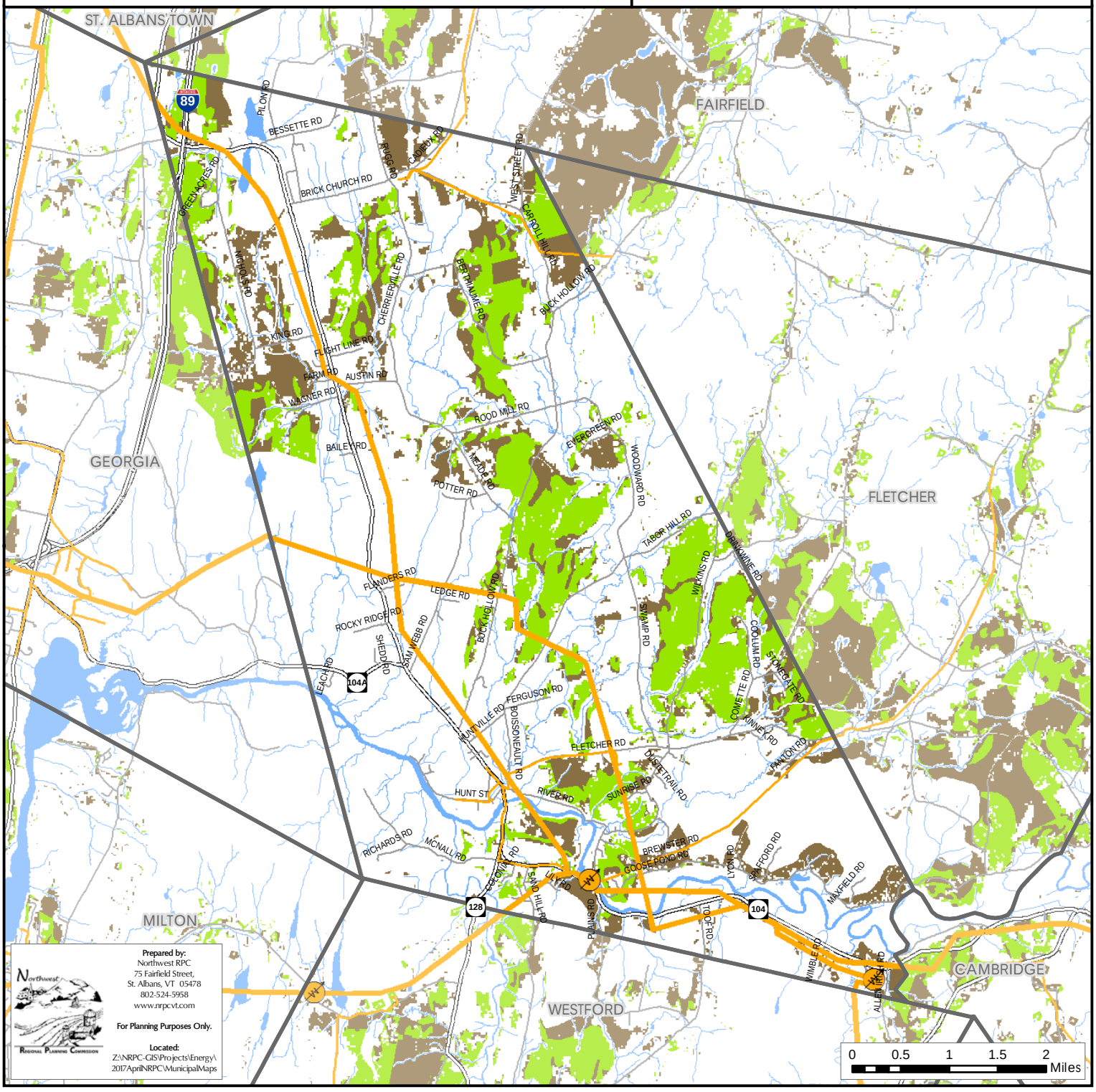

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