

**TOWN OF FLETCHER  
NOTICE OF PUBLIC HEARING**

**Tuesday, February 12, 2019  
7:00 PM  
FLETCHER MUNICIPAL BUILDING  
33 Shaw Road  
Cambridge, VT 05444**

Notice is hereby given to the residents of the municipality of Fletcher, Vermont that the Fletcher Planning Commission will hold a hearing on Tuesday, February 12, 2019 at 7:00 PM at Fletcher Municipal Building to consider adoption of the Fletcher Municipal Plan pursuant to Chapter 117 of Title 24, §4387 and §4384 Vermont Statutes Annotated.

This Plan adoption takes into consideration the following changes to the Town Plan: consolidation of duplicate goals and policies, an update of demographic information, an update of all maps, the addition of language pertaining to the forest integrity and the flood resiliency goals and elements required by state statute, and the incorporation of an enhanced energy plan in conformance with the requirements of 24 V.S.A. §4352. The purpose of the hearing is to receive public comments on the adoption of the updated plan and to discuss any comments provided by the public.

The Fletcher Municipal Plan includes 9 chapters and 3 appendices: Chapter 1. The Planning Process, Chapter 2. Community Profile, Chapter 3. Natural and Cultural Resources, Chapter 4. Housing, Chapter 5 Economic Development, Chapter 6. Transportation, Chapter 7. Energy, Chapter 8. Facilities and Services, Chapter 9. Land Use, Appendix A. Historic and Cultural Resources, Appendix B. Geology and Earth Resources, and Appendix C. Work Program. Full text of the plan is on file in the Fletcher Town Clerk's Office. This plan is intended to be consistent with the goals established in Title 24, §4302 and §4382.

## REPORT ON TOWN OF FLETCHER TOWN PLAN UPDATE

Over the past six months, the Fletcher Planning Commission has been working to complete an update of the “Fletcher Town Plan 2019-2027.” This effort is part of a continuing planning process that guides the Town’s decisions for future growth. The planning process conforms to the State’s four planning goals of Chapter 117, Section 4302, which strive for a comprehensive planning process that includes *citizen participation*, the *consideration for the consequences of growth*, and *compatibility with surrounding municipalities and encouragement of municipalities to work creatively together to develop and implement plans*.

The current Fletcher Town Plan expired on December 16, 2018. The plan update focuses on the following: consolidation of duplicate goals and policies, an update of demographic information, an update of all maps, the addition of language pertaining to the forest integrity and the flood resiliency goals and elements required by state statute, and the incorporation of an enhanced energy plan in conformance with the requirements of 24 V.S.A. §4352. The Fletcher Town Plan 2019-2027 will replace the expired 2013 Fletcher Town Plan.

The plan update does alter the designation of land area in Fletcher by including maps that are required to be included in the enhanced energy plan. In accordance with 24 V.S.A. §4 384, the following is a summary of the alternation of the designation of land and its impacts on Fletcher.

The enhanced energy planning maps, and language associated with the maps, will help the Town, developers, and the Vermont Public Utility Commission understand where future renewable energy facilities may or may not be sited in the community. The solar and wind maps in the Energy Chapter, in particular, alter the designation of land. These maps designate three areas: “Prime” areas where there is potential for solar or wind electricity generation, and which do not contain any known “constraints” that may restrict the development of a future renewable energy facility. “Base” areas have also been identified. “Base” areas may have potential for future renewable energy generation, but also may contain a “secondary constraint,” a natural resource designated for protection that could limit future development of renewable energy facilities. Lastly, the remaining areas on the map either do not contain any resource potential and/or include a “known” constraint, an area that likely contains a natural resource that shall be protected from all future development of renewable energy facilities.

Since the energy maps affect the entire Town, it is not possible to definitively determine the effect of the proposed change in the designation of land on a specific “surrounding area.” The proposed change in the designation of land will not increase traffic. The proposed change in the designation of land will have positive long-term benefits to the municipality based on the possible creation of additional municipal tax base when renewable energy facilities are created and little to no need for additional public facilities. The amount of land which is subject to the change in the designation of land includes the entire municipality since the maps created are based on a data and methodology that includes the whole municipality. This is regardless of whether or not the land is currently considered vacant (or occupied). The suitability of the areas that have been

designated is based on the methodology explained in the preceding paragraph which takes into consideration appropriate alternative locations, alternative uses for the area under consideration, and the probable impact of the proposed change on other areas similarly designated. The proposed size and boundaries of the areas designated as “prime” or “base” are appropriate with respect to the proposed use of such areas, the land capability of these areas, which is based on the best available data regarding solar and wind electricity generation potential and location of natural resource “constraints,” and the existing development in the area.

The Fletcher Municipal Plan includes 9 chapters and 3 appendices: Chapter 1. The Planning Process, Chapter 2. Community Profile, Chapter 3. Natural and Cultural Resources, Chapter 4. Housing, Chapter 5 Economic Development, Chapter 6. Transportation, Chapter 7. Energy, Chapter 8. Facilities and Services, Chapter 9. Land Use, Appendix A. Historic and Cultural Resources, Appendix B. Geology and Earth Resources, and Appendix C. Work Program. These chapters are consistent with the 14 goals established in Chapter 117, Section 4302. These goals aim to: maintain the historic settlement pattern of compact village centers separated by rural countryside; provide a strong and diverse economy with rewarding job opportunities; broaden access to educational and vocational training opportunities for people of all ages; provide for safe, convenient, economic, and energy efficient transportation systems; to identify, protect, and preserve important natural and historic resources; to maintain and improve the quality of air, water, wildlife, and land resources; to encourage the efficient use of energy and development of renewable energy resources; to maintain and enhance recreational opportunities; to encourage and strengthen agricultural and forest industries; to provide for the wise and efficient use of natural resources; to ensure the availability of safe and affordable housing; to plan for, finance, and provide an efficient system of public facilities and services; and to ensure the availability of safe and affordable childcare. The chapters also contain all 12 required elements for a municipal plan established in Title 24, Chapter 11, Section 4382.

Fletcher’s Development Regulations are based on the information compiled and the goals expressed within the Town Plan. Fletcher Planning Commission members have spent many hours discussing and compiling this document and would sincerely like to receive your feedback.

# Fletcher Town Plan 2019 - 2027



(Photo Credit: Timothy Carpenter)

*Adopted by the Fletcher Select Board  
March XX, 2019*

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**Fletcher Select Board**

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Matt Gillilan  
Rich Bidwell  
Jesse Wiens  
Christine Nilsen

**Fletcher Planning Commission**

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Prepared with assistance by the Northwest Regional Planning Commission

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## SECTION 1 – THE PLANNING PROCESS

### Why Plan?

The intent of the planning process is to encourage the appropriate development of land, facilities and services located within the Town of Fletcher, in a manner which will promote the health, safety and general welfare of its residents. A comprehensive plan for the Town provides a framework for the achievement of recognized community goals and policies. The planning process serves to coordinate public and private actions with these goals and policies, and the Town plan provides the guide upon which decisions may be based logically and intelligently.

Vermont municipalities like Fletcher plan to protect community interests, to retain a measure of local control, to promote desired forms of growth and development, to target public investment, to protect scarce public resources, and to help build and sustain a sense of community, and a sense of place.

### The Plan: Purpose and Design

The Fletcher Town Plan, prepared under the Vermont Municipal and Regional Planning and Development Act or "the Act" (24 VSA, Chapter 117), presents a description of the town and a vision for its future, including a comprehensive look at how the town may grow and prosper in the coming years.

Fletcher planning, zoning and subdivision regulations started with the town charter in 1781. The original subdivision divided Fletcher into three divisions, with as many as 70 draughts (104 acres) each; some oddly shaped, many triangles (gores) were also laid out. Each original proprietor received a right (three draughts). Failure to clear five acres meant loss of the property right. 1800 acres were designated for support of the schools, universities, churches and ministers. This glebe land was leased, 100 acres for 8 to 12 cents per acre annually. If unpaid, the land was immediately reassigned to whoever could pay the lease. Homes had to be 18 feet on the floor. Four acres were reserved out of each 104 for roads. The original survey was in what Ed Ellsworth calls big Ira Allen acres. The town was laid out as if it were level. Deeds read to the original rights or to stake and stones.

By 1850, many deeds were by reference to prior deeds only; the 1870's saw acres "more or less" on many deeds; the acres were smaller (land was simply measured over ground); a 104 acre right became 115, 125 or even 140 acres. Deeds referred to stone walls, 3 inch apple trees or spotted maples. Today some land is recorded by deed and map. Descriptions include drifting fence, stone walls, 40 inch beech tree, present or former neighbors, and acres, "more or less."

**H. Carlton Ferguson, excerpted from "Fletcher a Planned Community,"  
A History of Fletcher Vermont, 1976.**

Planning is not new to Fletcher. This plan is the most recent product of an ongoing process, which, as noted in the accompanying narrative, had its start when Fletcher was first laid out and chartered as a town in 1781. Fletcher was one of the first towns in Franklin County to formally adopt a local plan and related regulations. Zoning was initially instituted by the Select Board in August of 1967 prior to a statutory requirement that planning precede zoning. The first town plan, and a new zoning bylaw based on the plan, were adopted in 1972. Subdivision regulations were then adopted in 1974. Since that time local plans and bylaws have been updated and revised periodically to reflect changing conditions and needs. This plan supersedes the plan that was last updated and adopted in 2013.

The plan is laid out topically by section. Each section is followed by goals and policies. A summary of proposed implementation actions is included in this section. Supporting information is provided in the appendices.

### **The Planning Process**

Because change is inevitable and ongoing, the plan by law must be updated and readopted every eight years to remain in effect. It also may be amended at any time to deal with unanticipated or dramatic changes that may be affecting the community.

The plan is adopted by the town Select Board following public hearings as outlined in “the Act”. With plan adoption, the town has a general blueprint for growth and development over the next five years and beyond.

The Select Board has the option of submitting the plan to the regional planning commission for regional review and approval. Regional approval would ensure that Fletcher retains all the benefits under the law that are afforded municipalities with approved plans - including the ability to receive state funds for local planning, to assess impact fees, and the requirement that other local, regional and state plans conform with the approved municipal plan.

The plan is most useful when viewed as a living document that offers a path to follow, a vision to be achieved over many years. It's a work in progress that serves as a reference and guide for use by local officials, area residents, and others with an interest in the community. It is the responsibility of the town's planning commission to maintain the plan, and to work with the Select Board, other town boards, and local citizens to ensure that key goals and policies are translated into action.

The plan frames a vision for the town: a vision of its future built on the past, a vision that sets forth goals to be achieved and ways to achieve them. The underlying intent is to bring some order to change, to coordinate independent decisions and actions into a cohesive whole, and to look to the long term to the benefit of the entire community. Turning vision into reality is challenging at best; it requires strong leadership and the efforts of many dedicated individuals. The plan simply offers a beginning - its success lies in the journey ahead.

### **Participation in Regional and State Efforts**

The plan also provides a basis for local participation in regional and state planning efforts and state regulatory proceedings. As noted, if the plan receives regional approval, it must be in conformance with regional and state plans. This is a powerful tool that may assist in targeting state funding for locally needed infrastructure and improvements.

The plan also offers a powerful tool for local involvement in Act 250—criterion 10 specifically requires that development subject to Act 250 be in conformance with the local plan. The town planning commission and the town Select Board have separate party status under all ten criteria of Act 250. The town and the town plan also have status under Vermont Public Utility Commission (Section 248 and Section 248a) proceedings.

Participation in other regional and state planning efforts is recommended as time and available resources permit to ensure that Fletcher's interests, as defined in the plan, are adequately represented. This is typically achieved through membership on the boards of the Northwest Regional Planning



Commission, Regional Transportation Advisory Committee, the Northwest Solid Waste Management District, and other planning related advisory groups and organizations.

### **Consistency with State Planning Laws**

The Fletcher Town Plan has been prepared with careful attention to the requirements of Vermont enabling legislation at the time of adoption. This plan for the town is consistent with state planning requirements and goals as outlined in the Act. State planning goals (under Section 4302) and plan elements (under Section 4382) have been incorporated into the goals and elements of the town's comprehensive plan. Public participation has been actively sought throughout the planning process through public meetings and hearings.

### **Plan Compatibility**

It has been recognized throughout this process that Fletcher does not exist apart from its neighbors. The plans of adjoining communities were reviewed as part of the planning process; this plan is harmonious with neighboring municipal plans.

In Franklin County, Fletcher adjoins the Towns of Fairfax, Fairfield, and Bakersfield. All three municipalities have regionally-approved municipal plans. Each municipality has a future land use map that has land use districts located along the border with Fletcher that are rural and conservation-oriented. These districts are compatible with Fletcher's land use districts. Each municipality also has development regulations.

To the south and east in Lamoille County, Fletcher adjoins the Towns of Cambridge and Waterville. Waterville does not have development regulations, however it does have a town plan adopted on May 27, 2014. The Town Plan Land Use maps shows land adjacent to Fletcher as "Conservation" and "Resource" areas slated for only low-density development. On Cambridge's Future Land Use Map, land in the "Rural Residential" area is adjacent to Fletcher and is compatible with Fletcher's land use goals.

As a growing bedroom community, Fletcher residents need to be aware of development trends in Northwest Vermont (e.g., Chittenden, Franklin and Lamoille Counties), which create secondary demands for housing and related public services in outlying rural communities.

### **Plan Implementation (Work Program)**

The planning commission's role does not end with plan development, update and adoption, but continues through all stages of implementation. The planning commission will need and actively seek the ongoing support of the Select Board, local officials, and town residents to ensure effective plan implementation.

A variety of tools and techniques are available to implement the plan. The plan forms the legal basis for the adoption and amendment of local development regulations. The Town of Fletcher intends to additionally implement this plan through the following Work Program Appendix C.

### **GOALS:**

1. To provide a coordinated, comprehensive planning process and policy framework that guide decisions made by public officials and private interests, and will promote that which is in the best interests of the residents of the Town of Fletcher and encourage citizen involvement at all levels of the planning process to ensure that decisions having local impact are made with as much local input

as possible.

**POLICIES:**

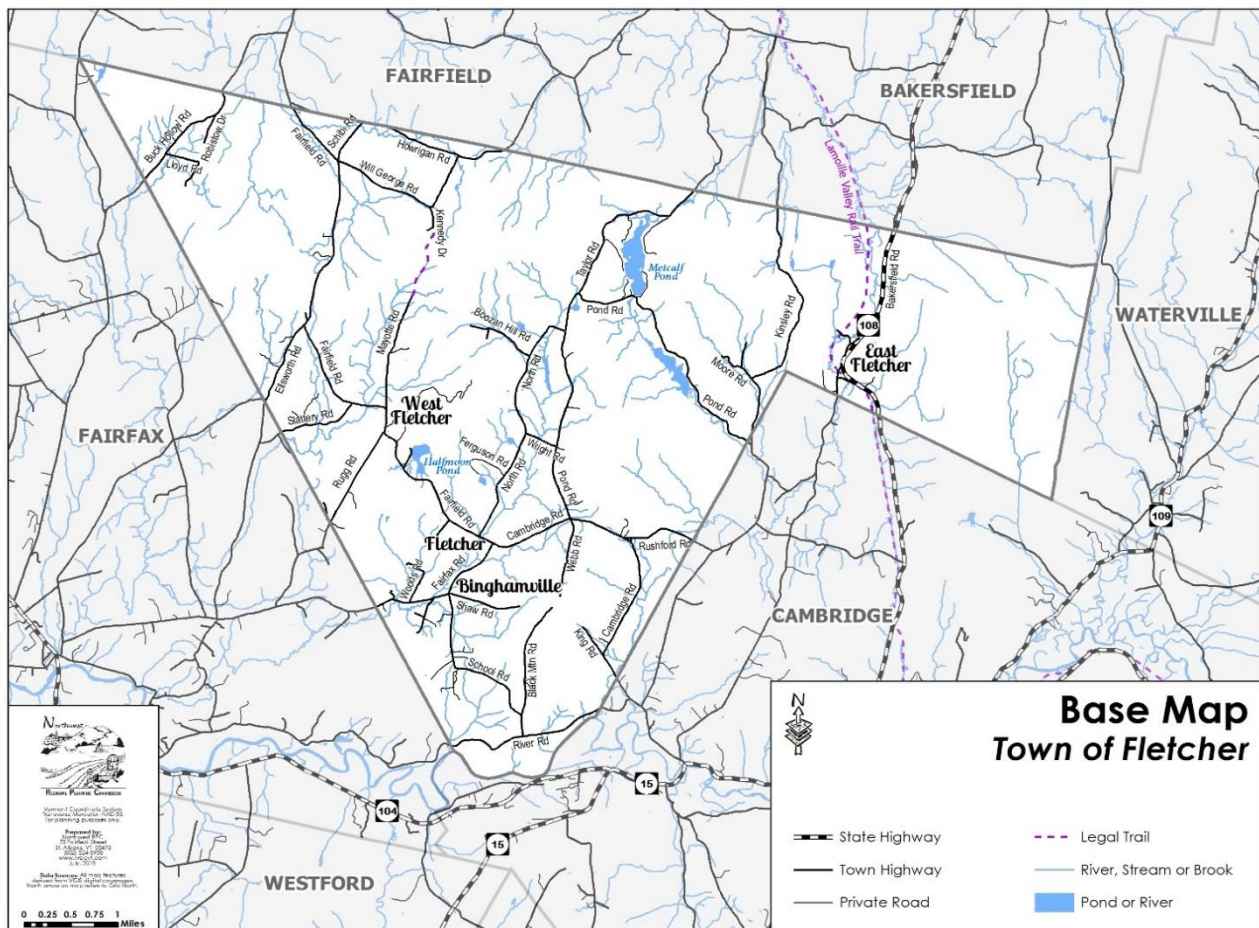
1. The Selectboard shall provide the planning commission, development review board and zoning administrator with the administrative, program, and technical support necessary to sustain an effective, comprehensive local planning process, and to carry out their duties as assigned or otherwise mandated by statute.
2. The planning commission, development review board and zoning administrator will adhere to the highest standards of openness, fairness and honesty in their planning and review efforts, particularly when acting in a quasi-judicial capacity on behalf of the public and the town.
3. The planning commission will coordinate its efforts with those of town officials, town boards, and other local, regional and state interests as appropriate.
4. All decisions or actions by public officials or private interests which may affect the Town of Fletcher will be made with due consideration of the goals and policies of the Fletcher Town Plan.
5. The planning commission recognizes the rights of all citizens to participate in the planning process, and has a responsibility to actively seek input from those most affected by programs or policies under consideration by the planning commission. The planning commission will make an effort, through the town's newsletter and other available resources, to regularly inform town residents of its activities, and to provide opportunities for public input in its planning process.

## SECTION 2 - COMMUNITY PROFILE

### Overview

The town of Fletcher, located in the southeast corner of Franklin County among the western foothills of the Green Mountains, is true Vermont hill country. The Lamoille River, which once separated the southern tip of Fletcher from the rest of town, now forms its southern boundary. Fletcher shares its western border with the town of Fairfax; the towns of Fairfield and Bakersfield lie to the north. The Franklin County line separates the town from Cambridge and Waterville, its Lamoille County neighbors to the south and east.

Fletcher is one of Franklin County's uniquely configured towns, incorporating 38 square miles of rolling hills and valleys, bottomlands, and areas of steep and rugged terrain. The town's topography lends much to its natural beauty, rural character and the quality of life enjoyed by its residents. Historically, however, Fletcher's hills and hollows also served to isolate local residents from their neighbors. Topography limited available transportation routes and defined early settlement patterns. Even today, because of the lay of the land, few roads lead directly to or through town.



**Table 2.1 – Fletcher Base Map**

## Historic Development

For more information about the historic development of Fletcher, please see Appendix A – History of Fletcher.

## Population

As illustrated in the Table 2.1, by 2000, Fletcher's population surpassed the historic peak population of 1,084 reached in the mid-1800s. As of the 2016 2012-2016 American Community Survey (ACS), the town's total population totaled 1,345. The population density is approximately 35 persons per square mile.

Table 2.1: Population Comparison									
	1980	1990	% Change 1980-2000	2000	% Change 1990-2000	2010	% Change 2000-2010	2016	% Change 2010-2016
Vermont	511,456	562,758	10.00%	608,827	8.20%	625,741	2.80%	626,249	0.08%
Franklin County	34,788	39,980	14.90%	45,417	13.60%	47,746	5.10%	48,625	1.84%
Waterville	470	532	13.20%	697	31.00%	673	-3.40%	705	4.75%
Cambridge	2,019	2,667	32.10%	3,186	19.50%	3,659	14.80%	3,776	3.20%
Fairfield	1,493	1,680	12.50%	1,800	7.14%	1,891	5.10%	1,877	-0.74%
Fairfax	1,805	2,486	37.70%	3,765	51.50%	4,285	13.80%	4,513	5.32%
Bakersfield	852	977	14.70%	1,215	24.40%	1,322	8.80%	1,298	-1.82%
Fletcher	626	941	50.32%	1,179	25.30%	1,277	8.30%	1,345	5.32%
Source: U.S. Census Data, American Community Survey 2012-2016									

Table 2.2: Components of Population Increase, 1970-2010				
Year	Total Population	10-year Change	% Change	% Natural Increase
1970	456	57	14.30%	89.10%
1980	626	170	37.30%	17.10%
1990	941	315	50.30%	33.30%
2000	1,179	238	25.30%	56.50%
2010	1,277	98	8.30%	42.90%
Source: US Census, VT Dept. Of Health Vital Statistics				

The rate of local populations growth between 2010 and 2016 (5.3%) exceeded that of the county (1.84%), and the state (0.8%). This is due in part to Fletcher's relatively smaller base population, but it is also indicative of the effect of prevailing outside growth pressures on Fletcher and other adjoining communities such as Fairfax due to their location within the greater Burlington commutershed.

Historically, much of Fletcher's growth could be accounted for through a natural increase in the population, wherein the number of births

exceeded the number of deaths. As indicated in Table 2.2, between 1970 and 1990, however, a net influx of people into the community was largely responsible for the more substantial population increases experienced during these decades. This trend has reversed since 2000.

Population projections can be invaluable to the planning process. Table 2.3 displays population projections for Fletcher and Franklin County available from the Vermont Agency of Commerce and Community Development. Scenario A project future population based on higher growth rates seen in the 1990s. Scenario B projects future population based on more moderate growth rates seen in the

Table 2.3 – Population Projections						
	Fletcher			Franklin County		
	2010 (Census)	2020	2030	2010 (Census)	2020	2030
<b>Scenario A</b>	1,277	1,561	1,695	47,746	51,810	55,647
<b>Scenario B</b>	1,277	1,354	1,412	47,746	49,253	50,739
<b>Source:</b> Vermont Agency of Commerce and Community Development Population Projections 2010-2030						

2000s. Both scenarios show Fletcher gaining several hundred new residents by 2030.

## Population Characteristics

### Age Distribution

Fletcher, like much of Vermont, has an aging population. The median age in Fletcher has risen from 34.7 in 2000 to 40.8 in 2016. The percentage of individuals 65 years of age and over in Fletcher has increased slightly from 6% in 2000 to 7.3% in 2010. The percentage of individuals less than 25 years of age has also decreased from 29% in 2000 to 25% in 2010. The majority of Fletcher's population is between 25 and 64 years of age.

Table 2.4 - Median Age			
	2000	2010	2016
Fletcher	34.7	40	40.8
Franklin County	35.7	39.6	39.7
Vermont	37.7	41.5	42.6
<b>Source:</b> US Census, 2012-2016 American Community Survey			

### Educational Levels

According to 2012-2016 ACS data, over 96% of Fletcher residents over the age of 25 are high school graduates and over 29% hold college degrees (bachelor's or higher). Table 2.5 shows that Fletcher's population is comparably educated relative to Franklin County and Vermont residents.

Table 2.5: Educational Levels, Population 25+ Years		
	% HS graduates	% College Graduates
<b>Fletcher</b>	96.30%	29.40%
<b>Franklin County</b>	89.70%	23.50%
<b>Vermont</b>	91.90%	36.20%
<b>Source:</b> US Census Data		

### Income

Comparative income information for the years 1990, 2000, 2010 and 2016 is provided in Table 2.6 below. In 2016, Fletcher residents had higher per capita and median household than those reported for the county, and a smaller percentage of Fletcher's population lived below the poverty line. The Town per capita and median household income values were also higher than those of the state. Fletcher reported a lower percentage of its population below the poverty level than did the state of Vermont overall.

Table 2.6: Income Level Comparisons								
	Per Capita Income				Median Household Income			
	1990	2000	2010	2016	1990	2000	2010	2016
<b>Fletcher</b>	\$11,314	\$20,498	\$33,350	\$33,582	\$30,074	\$46,146	\$64,276	\$85,313
<b>Franklin County</b>	\$11,678	\$17,816	\$24,700	\$28,892	\$28,401	\$41,659	\$52,398	\$58,884
<b>Vermont</b>	\$13,527	\$20,625	\$26,876	\$30,663	\$34,780	\$40,856	\$49,406	\$56,104
<b>Source:</b> US Census Data, 2012-2016 American Community Survey								

The 2012-2016 American Community Survey indicates that 6% of Fletcher residents live below established poverty levels including 5.6% of children under the age of 18, and 17.5% of persons aged 65 and over.

### Tax Base

As all communities in Vermont, Fletcher relies heavily on its property tax base to fund needed community facilities and services. The local grand list thus provides information not only about properties in town, but also about tax burdens and trends that may change over time as the community grows and develops.

The total number of parcels listed increased by 17% between 2000 and 2017, suggesting that a significant amount of land subdivision and development occurred during this period. By far, the greatest increase in parcel numbers was due to residential development. The number of year-round residential homes on 6 acres or less increased by 33%, while residential properties of more than 6 acres increased by 44% between 2000 and 2017. The number of vacation properties has remained steady in recent years. Overall, the number of farm parcels experienced a decline, while woodland parcels have recuperated from previous reductions, and the town has not gained industrial tax base. Eight commercial properties account for less than 1% of the local tax base. This confirms that the town is largely and increasingly dependent on its residential tax base to fund needed community services and facilities.

<b>Table 2.7a, Grand List Comparison, 1980-2017</b>									
<b>Parcel Type</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2017</b>	<b>Pct Change (1980-90)</b>	<b>Pct Change (1990-00)</b>	<b>Pct Change (2000-10)</b>	<b>Pct Change (2010- 2017)</b>
<b>Residence, ≤ 6 Acres</b>	70	111	175	210	233	58.60%	57.70%	20.00%	10.95%
<b>Residence, 6+ Acres</b>	75	133	162	219	234	77.30%	21.80%	35.19%	6.86%
<b>Mobile Home, w/o land</b>	6	6	11	5	5	0.00%	83.30%	-54.54%	0.00%
<b>Mobile Home w/ land</b>	24	36	43	37	34	50.00%	19.40%	-13.95%	-8.11%
<b>Vacation, ≤ 6 Acres</b>	56	54	48	46	46	-3.60%	-12.50%	-4.17%	0.00%
<b>Vacation, 6+ Acres</b>	20	20	17	18	16	0.00%	-17.60%	5.88%	-11.11%
<b>Commercial</b>	0	0	1	2	8	0.00%	100%	100%	300%
<b>Industrial</b>	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%
<b>Utilities</b>	0	2	3	2	2	200%	50.00%	-33.33%	0.00%
<b>Farm</b>	22	25	24	22	17	13.60%	-4.20%	-8.33%	-22.73%
<b>Woodland</b>	34	26	31	36	36	-23.50%	19.20%	16.13%	0.00%
<b>Miscellaneous</b>	105	107	104	101	95	1.70%	2.90%	3.85%	-5.94%
<b>Total Parcels</b>	412	520	619	692	726	26.00%	19.00%	11.79%	4.91%
<b>Source: 2017 Fletcher Grand List</b>									

A comparison of Fletcher's tax rate with those of surrounding communities is given in Table 2.8. Fletcher's common level of appraisal is lower than most surrounding communities, meaning that the appraised value of homes tends to be lower than the state average. This may provide some of the reasoning why the homestead rate and nonresidential rates for education property tax rates are slightly higher than those surrounding communities with a higher common level of appraisal.

### Recent Development Trends

The number and type of zoning permits issued each year, listed in the accompanying table, give an indication of the amount and type of development occurring in Fletcher. Not all permitted development is constructed, however, permit information is useful in looking at local development trends.

Fletcher has developed parcel maps, which makes it easier to identify and locate specific subdivision and development trends. Permitting activity further validates the fact that land use is largely residential.

Table 2.8 – Education Property Tax Rates			
Town	Common Level of Appraisal	Homestead Rate	Nonresidential Rate
Bakersfield	99.29	1.4252	1.546
Fairfax	95.94	1.3681	1.6
Fairfield	93.65	1.5823	1.6391
Fletcher	93.78	1.5212	1.6368
Cambridge	102.56	1.4355	1.4967
Source: Vermont Department of Taxes			

The pattern of development in Fletcher to date has been largely low density, single or multiple lot subdivisions of land along existing rights-of-way (including some Class 4 roads) for year-round residential use. If this pattern is maintained through the next decade, Fletcher's open land will continue to be subdivided for residential use.

Table 2.9 Permit Applications															
Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Single Homes	15	10	15	8	8	7	4	8	1	7	4	4	2	10	7
Mobile Homes	2	0	3	3	2	1	3	0	0	0	0	0	0	0	0
Camps	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Additions /Sheds/ Garages	18	42	24	25	18	30	23	23	20	23	17	18	14	23	15
Other	38	42	43	52	27	7	15	12	16	6	6	9	3	0	2
TOTAL	73	94	86	88	56	45	45	43	37	36	27	31	19	33	24
Source: Fletcher Town Report 2003-2017															

**GOAL:**

1. To pursue a course to best understand the community, resident population and existing conditions.

**POLICIES:**

1. The most current data available will be pursued and applied to planning activities.

**Table 2.10 Subdivision in Fletcher**

	2012	2013	2014	2015	2016	2017
Two Lot Subdivision	2	4	0	1	3	1
Three Lot Subdivision	0	1	2	0	0	1
Other Subdivision	0	0	0	0	0	0
<b>Source:</b> Town of Fletcher						



## SECTION 3 – NATURAL AND CULTURAL RESOURCES



(Photo Credit: Timothy Carpenter)

### Overview

Fletcher is a rural community, with a particular “sense of place” that has developed over time through the integration of the town’s natural, cultural or built environment. This blending, unique to each community, gives rise to special qualities and a distinct character, which is recognized and valued by local residents, but not always easily defined or preserved. Increasingly, many towns are losing their sense of place, their uniqueness, their character and their identity through nondescript patterns of development, including lower density residential sprawl in rural areas. In doing so, these communities lose many of the very qualities that make them attractive places in which to live and work. Further, what resource-based economy exists is continually being challenged as the town continues to shift into a bedroom community.

Giving due consideration to Fletcher’s natural and cultural features, and the qualities of life these afford, is of major consequence for the continued growth and development of the town. Protecting that which is unique or special about the town promotes quality development, increases property values, has direct economic benefits, and may form the basis for a shared, positive local image and greater sense of community. Fortunately, Fletcher retains much of what makes it an attractive place to live and work.

In this section, important natural and cultural features found in Fletcher which contribute to its rural character and sense of place are noted, along with related goals and policies concerning their

protection, preservation and/or enhancement.

<b>Table 3.1 – Land Use/Land Cover in Fletcher</b>	
<b>Land Use</b>	<b>Sum of Acres</b>
Barren Land (Rock/Sand/Clay)	1.16
Cultivated Crops	630.83
Deciduous Forest	14,674.50
Developed, High Intensity	5.82
Developed, Low Intensity	129.59
Developed, Medium Intensity	20.03
Developed, Open Space	543.84
Emergency Herbaceous Wetlands	224.70
Evergreen Forest	2,186.54
Grassland/Herbaceous	36.28
Mixed Forest	2,770.71
Open Water	143.91
Pasture/Hay	2,254.83
Shrub/Scrub	114.40
Woody Wetlands	875.86
<b>Grand Total</b>	<b>24,612.99</b>
<b>Source:</b> Vermont Land Use/Land Cover Datum 2011	

### Natural Features

Fletcher's most prominent natural features and attributes are locally recognized. Others are less apparent, but nevertheless important to the health of the environment and the community. According to the Vermont Land Use/Land Cover (LULC) Datum, 2011, the land use/land covers outlined in Table 3.1 exist in Fletcher.

### Climate and Air Quality

Climate represents the normal or average weather conditions that are characteristic of an area over a long period of time. Typical weather conditions are an important part of the planning and design process because they affect such things as soil erosion, plant growth, air quality, storm water runoff and flooding, groundwater levels, road maintenance, and access to solar or wind energy.

Vermont's northern climate is dominated in winter months by cold dry air from Canada, and in the summer by warm moist air from the Gulf of Mexico. Occasionally the state also feels the effects of damp, cold air moving inland from the north Atlantic. Vermont experiences violent thunder and windstorms with shifting weather patterns; tornadoes and hurricanes are rare but episodes of heavy rainfall and flooding may occur during these periods.

Fletcher's climate is especially pleasant in the summer months when the average daily temperature fluctuates around 80° F. Winter months, when temperatures may fall well below 0° F, present a different set of circumstances. Buildings must be constructed with sufficient insulation and heating to fend off the cold, and with the structural integrity and roofing to withstand heavy snowfalls. Winter snows also contribute to expensive winter road maintenance costs. Fletcher tends to receive more precipitation in the form of rain and snow than towns in the Champlain Valley. The freeze-thaw cycles that bring spring sap runs also buckle poorly drained foundations, pavements, and roads; and "mud season" may result in nearly impassible dirt roads and driveways.

Given the lack of industrial development in town, local air quality concerns are limited mainly to pollutants generated by vehicles, heating systems (e.g., wood stoves), and some agricultural practices. These types of low-level emission sources are coming under increased scrutiny statewide.

### Geology and Earth Resources

For information about Fletcher's geology and earth resources, please see Appendix B – Geology and

Earth Resources.

### **Topography**

Fletcher's topography and drainage patterns reflect the differential erosion of underlying bedrock, and the effects of more recent glaciation. The result is a geologically mature, hilly, sometimes mountainous landscape cut by small stream valleys. Because topography provides natural barriers to movement and often influences the accessibility and use of land, topographic information is important in planning for different types of land use, transportation routes, and the location of public facilities and infrastructure.

Elevations in Fletcher range from lows of 430 to 440 feet above mean sea level (msl) along Black Creek and the Lamoille River, to 2,140+ feet atop Fletcher Mountain, east of Route 108. Most development in Fletcher, including Binghamville and Fletcher Center, is located between 500 and 700 feet, along the valleys and hollows that cut through surrounding uplands.

One of the most important factors controlling the potential use of land is slope or steepness. Slope is an important consideration not only because of associated constraints including drainage, erosion, and bearing capacity, but also because of the damage that may result from slope destabilization. Major causes of slope destabilization include vegetation removal and undercutting of slope faces. Slope destabilization may result in accelerated runoff and soil loss, septic system failure, foundation shifts, and in the extreme, landslides and building collapse. According to state soils data, 32% (7,761 acres) of the town consist of topography greater than or equal to 25% slope. This means that a significant amount of land area is unsuitable for structural development.

### **Upland Areas**

Areas of higher elevation (here defined as 1,000' or more) include most of the town's mountains, ridgelines and hilltops, such as Gilson Mountain. Many are highly visible from public vantage points and contribute significantly to the scenic beauty of the town. Drainage divides, steep slopes, shallow soils and exposed, fractured bedrock are common in upland areas, which allow for upland drainage groundwater recharge, wildlife habitat, forestry and outdoor recreational activities, but make these areas highly sensitive to most forms of development. As such, upland areas deserve adequate protection from improperly sited and potentially harmful development.

Fletcher's drainage includes a complex network of streams, rivers, overland, and subsurface flow. Locally, Fletcher lies within two drainage basins: the Missisquoi River basin, including Black Creek and the headwaters of the Fairfield River which drain northward; and the Lamoille River basin, including Wilkins Brook, Stones Brook and local tributaries which flow south into the Lamoille River. The major drainage divide runs roughly northwest to southeast through the middle of town. Both basins lie within the Lake Champlain watershed. Fletcher is unusual in that most of the town's drainage originates locally; apart from the Lamoille River, many local headwaters are located in upland areas above 1,000 feet.



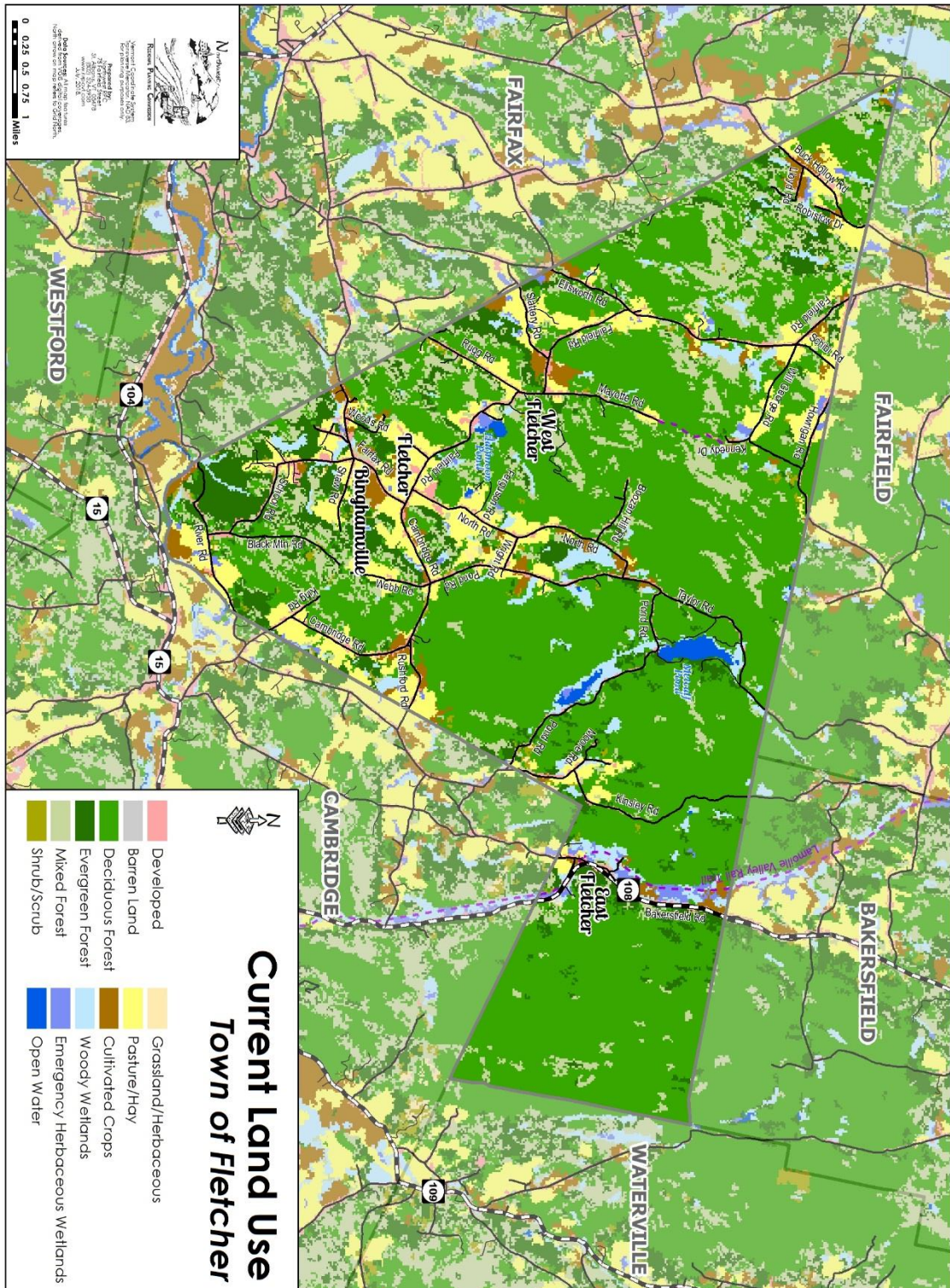


Figure 3.1 - Current Land Use Map

## Soils

Soil is perhaps the most important physical factor governing the use of land in rural areas. Soils are classified on the basis of their structure, form, composition, and suitability for various types of development. The most widely used classification system is that of the US Natural Resource Conservation Service (NRCS formerly the Soil Conservation Service). The NRCS has produced detailed soil survey maps for Fletcher, which is included in their publication *Soil Survey of Franklin County, Vermont*, issued in 1979. Components of the survey including suitability ratings for agricultural, forestry and on-site sewage disposal systems have since been updated. A map depicting soils particularly suited for agriculture and on-site septic systems is included for planning purposes (see appendices).

### ***Primary Agricultural Soils***

“Primary agricultural soils” as defined under state law includes soils which, based on their chemical and physical properties, are considered especially suited for agricultural use. These are subdivided into “prime” soils having very high potential for and few limitations for agricultural use, and “secondary” soils of statewide significance that have good potential but may have one or more limitations that restrict crop selection or require more management.

In the rolling hills and mountains of Fletcher, primary agricultural soils, and “prime” soils in particular, are a very limited and valuable resource. Agriculture depends on the availability of high quality soils, in large enough acreage (a critical mass), to make crop production economical. However, many of the best agricultural soils are also well suited for other types of development, including the subdivision of land for the construction of houses and related infrastructure. Fletcher is no exception; new homes in town have been built on some of Fletcher’s best farmland.

The conversion of good farmland effectively takes it out of production over the long term and reduces an already limited resource base. In Fletcher, much of the best farmland, located in valleys along local roads and drainage, remains in production. Historically, more agricultural land has been abandoned to shrub and forest than has been lost to development; however, given the importance of agriculture to the community, now and in the future, farmland conversion and fragmentation remains a local as well as regional and statewide concern. It is necessary to retain sufficient acreage of all types of agriculture for sustainable production for the continuation of agricultural practices in Fletcher.

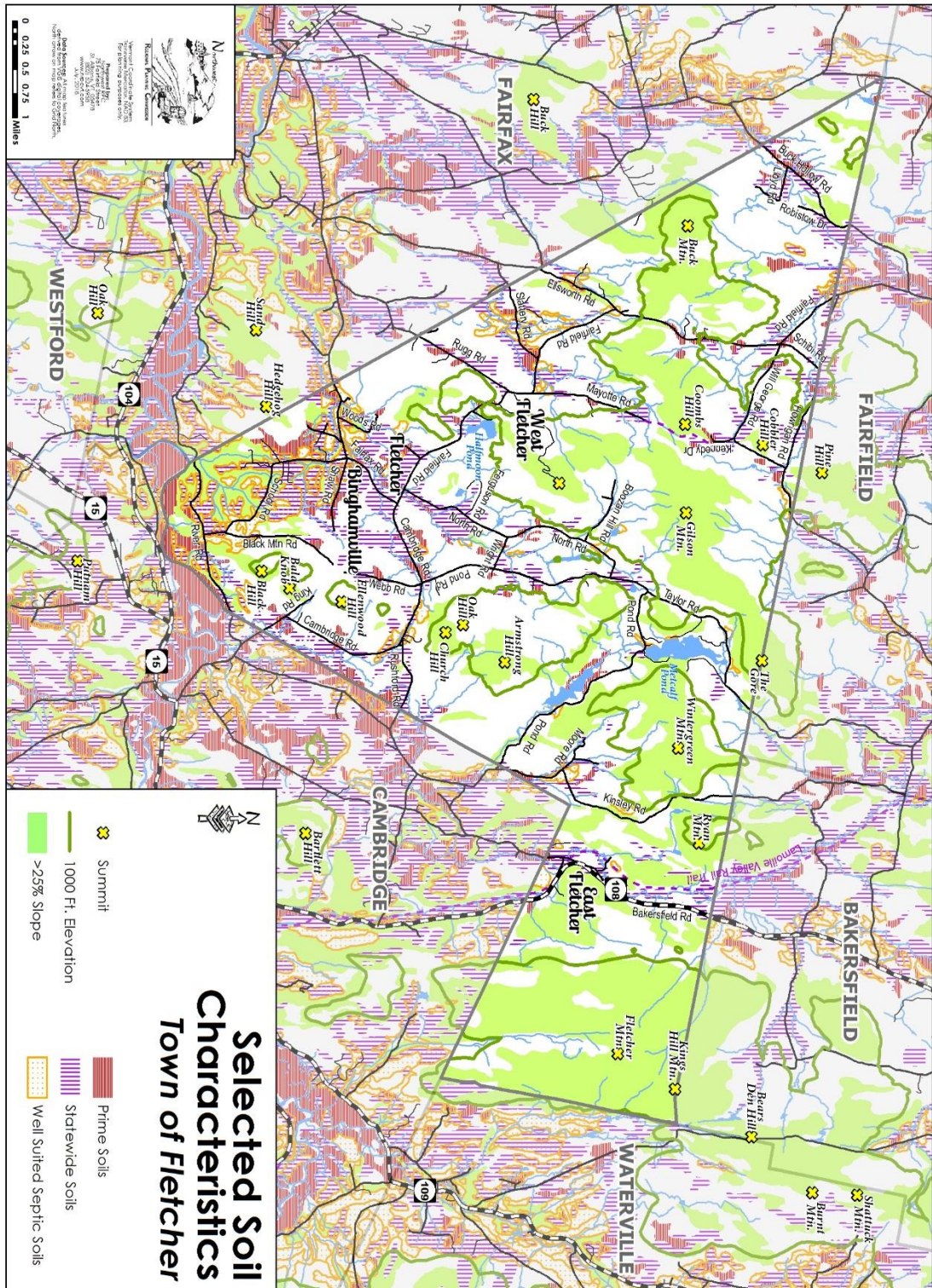
### ***Primary Forestry Soils***

“Primary forestry soils” also have been identified by NRCS and the state according to their productivity for commercial forestry. Similar concerns exist regarding the development and fragmentation of commercial forestry soils; though these soils are more widespread and are often found in the more remote upland locations in town. Primary forestry soils include many soils, which, because of slope and drainage, are not suitable for intensive development. This reduces development pressures on this resource base, but even low-density development, including seasonal camps, may result in fragmentation and limited access to good forestland.

In all, few soils in Fletcher are suitable for high density development. Limited areas of good development soil (e.g. Windsor-Missisquoi soils) are located on sandy terrace deposits in the vicinity of and to the south of Binghamville. Given these soils’ suitability for different, often competing uses, and the amount of development pressure in this area of town, careful planning is needed to resolve existing and potential land use conflicts.



Figure 3.2 – Selected Soil Characteristics



### ***Surface Waters***

Fletcher's principal surface waters include Metcalf and Halfmoon Ponds, the Lamoille River, Black Creek, Wilkins Brook, Stones Brook, and the upper reaches of the Fairfield River. These waters, as well as other local streams and brooks, provide drainage for surrounding lands, important wildlife habitat, recreational opportunities, scenic views and individual water supplies. Any of these functions may be impaired by land uses within local watersheds, particularly in the vicinity of stream banks and shorelines.

Given that most drainage in Fletcher originates locally from upland areas of town, Fletcher is in an especially unique position to protect and enhance the quality of its surface and ground water resources. Pristine headwaters, located in the upper reaches of watersheds, are extremely sensitive to sedimentation and pollution. Inappropriate development within riparian zones and shore land areas may also significantly impair water quality.

Metcalf Pond is the town's most notable surface water feature. Located between steep, forested slopes in the north central part of town, Metcalf Pond is a naturally occurring pond roughly 71 acres in size, and has a maximum depth of 25 feet. The pond drains through a southern outlet, which serves as the source for Black Creek.

The pond's watershed has been mapped at 801 acres, 96% of which is undeveloped. Forested land extends over 84% of the basin. There is a significant amount of shore land development. Seasonal camps and year-round homes served by private, dirt roads and individual septic systems line the southern and parts of the western shores. Steep slopes and wetlands have limited development along much of the remaining shoreline, associated wetlands are found along the north shore and at the southern outlet.

Metcalf Pond is public water regulated by the state. Public access is limited to a small, undeveloped parcel of town land located along the road at the south end of the pond. The pond has been identified by the state as a warm water fish habitat. Fishing, boating, and swimming are popular activities locally.

Water quality is generally good and supports existing uses. There are problems with Eurasian Milfoil, an introduced aquatic weed first documented locally in 1984. Infestations are currently being controlled by manual harvesting. Local residents also have complained of reduced water clarity due to algae and siltation, resulting primarily from localized non-point sources of pollution. Increased development around the pond, including new or expanded seasonal structures or the conversion of seasonal homes to year-round uses, could impair water quality further if shore lands are not properly managed and protected. Given steep slopes and poor soil conditions around the pond, on-site sewage disposal and runoff have been of particular concern. For these reasons, the town has included the shoreland-residential district in its local zoning bylaw.

Halfmoon Pond is a smaller (21 acre), naturally occurring water body located south of West Fletcher. The pond's outlet feeds into Stones Brook. Halfmoon Pond is also public water regulated by the state, and a designated warm water fish habitat, but at present there is no access that permits public use. The pond's watershed area is 194 acres, of which 80% remains undeveloped. Most of the watershed (70%) is forested; roughly 20% is in agricultural use. One farmstead and a small number of homes are located in the vicinity. The shore land remains largely undeveloped and wetlands are located around the southwest end.

Halfmoon Pond played an important role in Fletcher's history, supporting a local ice harvesting industry,

and it remains an important aesthetic resource to the town today. It would serve the public interest for the town to negotiate limited public access to these waters.

Fletcher is one of three Franklin County towns that border the Lamoille River; as noted, much of the southern half of the town drains into this river through Stones and Wilkins Brooks, and other local drainages. The Lamoille River is a river of statewide significance for municipal and individual water supplies, power generation, fisheries and wildlife habitat. It is also a culturally significant historic, recreational and scenic corridor. Currently, the river in Fletcher is bordered by farmland; there is no direct public access.

The Vermont Agency of Natural Resources has a Tactical Basin Plan for the Lamoille River and its tributaries. The Tactical Basin Plan have been developed in each large watershed in Vermont “to protect, maintain, enhance, and restore the biological, chemical, and physical integrity, and public use and enjoyment of Vermont’s water resources, and to protect public health and safety.” The plans also identify specific projects in the basin that could be constructed to improve water quality. The Missisquoi River watershed, which covers part of Fletcher, also has a Tactical Basin Plan.

Black Creek, Wilkins and Stones Brook also are important locally. The headwaters of all three are within the town. Black Creek flows south from Metcalf Pond, feeding a significant wetland area that supports a variety of wildlife. In Cambridge, the creek turns northward and reenters East Fletcher along Route 108, then flows northward through wetlands, deeryards and farmland into Bakersfield and Fairfield.

The headwaters of Stones Brook, located along the drainage divide south of Metcalf Pond, also feed wetland areas to the east of North Road. Historically, Stones Brook provided power for local mill operations in Fletcher Center and Binghamville before winding its way south to the Lamoille River. Old dam sites and millponds are still evident.

Other local streams and brooks serve important functions beyond local drainage. Pristine headwaters flowing into larger streams and rivers contribute significantly to their improved water quality. Many local waters are ephemeral and very sensitive to disturbances resulting from housing, forestry, agriculture and other forms of development.

As previously observed, most of the town’s drainage originates locally, therefore Fletcher is in a position to protect and enhance the quality of its surface waters. The headwaters that contribute to East Fairfield’s public water supply are already included in a Source Protection Area (SPA) designated by the state and shown on the accompanying maps (see appendices).

## **Groundwater**

A large majority of Fletcher residents depend on groundwater for their individual water supplies. At present, there are no public water supply systems in town. Fletcher’s aquifer recharge areas include many upland areas where bedrock is exposed (as evidenced by the number of springs that flow seasonally), and sand and gravel deposits, which allow for a significant amount of infiltration. Groundwater is generally abundant, though depth and quality vary from place to place depending on local geology and sources of contamination. Contaminants of particular concern include road salt, agricultural chemicals, leaking fuel tanks and failing septic systems. Because of the low density of settlement in Fletcher, groundwater contamination, when it occurs, is limited and isolated.

There is concern regarding groundwater contamination in the Binghamville area, including the potential



contamination of the school's water supply, which is tested regularly. Given the higher density of settlement in this area, continued reliance on on-site septic systems, sandy soils, and increased development activity, any future community water supply to serve this growing area will require an abundant source of potable groundwater. It therefore makes sense for the town to identify, designate, and protect such a source before it is developed for other purposes.

### **Wetlands**

Wetlands are not typically suited for development, but serve a variety of other important functions, including flood regulation, water purification and wildlife habitat. They also add to the scenic quality of the rural landscape. The National Wetlands Inventory (NWI), conducted by the U.S. Fish and Wildlife Service in the 1970's, identified 782 acres of palustrine (upland) wetlands in the Town of Fletcher. This information is dated and by no means definitive, since wetland boundaries fluctuate from season to season. It does, however, give some indication that wetlands are an important part of Fletcher's landscape.

Major wetland complexes are located along Black Creek, Stones Brook, and along the shorelines of Metcalf and Halfmoon Ponds (see appendices). Wetlands are also scattered through upland areas where drainage is poor, or beavers have been at work. For development and permitting purposes, wetland boundaries are delineated through survey plats. Many wetlands in Fletcher (those designated as Class II wetlands) are now protected by the state and local regulation.

### **Flood Resiliency**

Flood plains include areas along streams and rivers that experience frequent flooding and for obvious reasons are poorly suited for most types of development. "Open space" uses, including agriculture, forestry, and outdoor recreation are most suited to these areas.

Flooding is a natural occurrence and can occur in two ways: inundation and fluvial erosion. Inundation flooding is when water rises and covers the adjacent low-lying land. The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to lakes and streams that is subject to recurring inundation or high water. There are several areas of floodplain in Fletcher. This includes areas along the banks of the Lamoille River and Black Creek. The Town of Fletcher has adopted floodplain regulations as part of its zoning bylaw, which conforms to federal requirements for participation in the National Flood Insurance Program (NFIP). Restrictions are intended to protect life and property, and to allow property owners to obtain flood insurance, and mortgages, at affordable rates. These regulations restrict development in 100-year flood zones, as mapped on federal Flood Insurance Rate Maps (FIRMs) available for review at the town clerk's office. While this information is the best available, the hydrology that these maps are based on has not been updated since the 1980s and therefore does not account for shifts in shoreline or effects of development. The FIRMs were digitized by the Northwest Regional Planning Commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings.

Flooding can also occur through fluvial erosion, a condition that occurs when fast moving flood waters, typically in steep areas, cause erosion of areas surrounding streams and rivers. To identify areas prone to fluvial erosion hazards, the Vermont Agency of Natural Resource has identified River Corridors in all Vermont municipalities. River Corridors are based on the individual conditions of streams and rivers including topography and the existence of public infrastructure. River Corridors are not mapped for streams that have a watershed of less than 2 square miles. Instead, the Agency advises using a buffer of

50-feet on each side of a stream with the intention of protecting stream stability and natural flow.

The Critical Areas map shows all mapped River Corridors in Fletcher. River Corridors 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. Fletcher has adopted a stream buffer regulation that is similar to state administered River Corridor regulation to ensure that land development does not occur in areas prone to erosion.

Planning for future flooding events is important to ensure that a community is flood resilient. Development and adoption of a local hazard mitigation plan can help a community identify potential hazard risks to the community. Local hazard mitigation plans can also identify projects in the community that can decrease the effects of potential hazards, such as the replacement of culverts or buyouts of properties with repetitive flood risk. Approval of local hazard mitigation plans by FEMA may also lead to increased grant opportunities for communities to implement identified projects. Fletcher may want to develop a local hazard mitigation plan in the future.

### **Wildlife Habitat and Forest Blocks**

Fletcher's environment supports many types of wildlife habitat, including upland areas, wetlands, forests, streams and ponds, which in turn support a variety of wildlife. Protecting habitat resources, often accomplished through the protection of other features and values, is critical to sustain local wildlife populations and to maintain and enhance local biodiversity. The protection of wildlife habitat in support of traditional hunting and fishing activities, other forms of outdoor recreation, and to maintain biodiversity, has been identified as a local concern. The primary threats identified include habitat encroachment, fragmentation, water pollution and over hunting. Certain critical habitat areas have been identified for protection by the state. These include winter deeryards, critical bear habitat, and habitats of rare or endangered species or natural communities.

To date, five deeryards (5,955 acres +/-) have been identified in Fletcher (see map "Critical Areas" in appendices). The largest is located in the southwest corner of town in a forested area between Fairfax and River Roads, which extends westward into Fairfax. Development south of Binghamville, and in parts of Fairfax, has begun to encroach on this area. The second largest deeryard is located on the western slopes of Fletcher Mountain along the valley of Black Creek, east of Route 108. Other smaller deeryards are found in eastern sections of town, mainly along Black Creek. These areas provide winter shelter and are critical to the long-term survival of the local deer population.

The state has established the Gilson Mountain Wildlife Management Area on the north slopes of Gilson Mountain through the transfer of rights on 380 acres of private land. Limited public access is permitted, but to date no wildlife management plan has been developed for this area.

The upland areas of Fletcher east of Route 108 are considered important bear production habitat. This region, which consists mainly of contiguous and remote forestland, is part of a larger area that supports relatively high densities of cub producing females. Other upland areas in the eastern half 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.

To date, no rare, threatened or endangered plant or animal communities have been identified in

Fletcher. This is in part due to the fact that no extensive field inventories have ever been conducted in town. If such communities are located in the future, appropriate measures should be taken for their protections.

Maintaining adequate habitat for the protection of local wildlife requires not only the protection of core habitat areas from fragmentation and encroachment, but also the protection of travel corridors, which connect these core areas and allow for seasonal and local movement of wildlife populations.

As of January 1, 2018, all municipal plans must address how “Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.” Habitat blocks are areas of contiguous forest unfragmented by public or private road infrastructure.

Fletcher contains two large, significant forest blocks. These two forest blocks are over 5,000 acres in size and extend into the surrounding towns. They are the two largest forest blocks in Franklin County and provide habitat connection between Lake Champlain and the Green Mountains. There are additional forest blocks located in other areas of town, but these forest blocks tend to be much smaller and fragmented by agriculture.

### **The Working Landscape**

As a rural community, Fletcher’s rural character is most visually defined, and its history most evident, in its working landscape represented by small, compact settlements such as Fletcher Center and Binghamville surrounded by open countryside. It was noted in the 1981 Department of Historic Preservation Survey that the incremental changes, which are affecting Fletcher’s historic buildings, are overshadowed because as individual structures they are dominated by their agricultural setting. Greater concern expressed by local residents in prior surveys, including the 1981 Historic Preservation Survey and in the municipal survey, was not the condition of existing buildings. It was, rather, the development of open space, in particular a concern that the rapid rate of new construction, rising tax rates, and the lack of adequate zoning regulations would encourage the further subdivision of farm and forest land. It is evident that Fletcher’s working landscape, as identified by its residents, has economic, fiscal and cultural significance, and contributes significantly to the rural and scenic character of the town. Since 2000, there has been a significant increase in both multiple and single lot subdivisions in Fletcher. More specifically, single lot subdivision is the most widely applied form of subdivision in Fletcher. New construction has been located mainly on large lots, carved from larger farm holdings.

Until recently most new homes were located away from roads, mainly in wooded areas. This altered traditional set back patterns, but also served to conceal new development from the casual observer. Recently, however, subdivision along main routes in Fletcher has had noticeable visual impact. This suggests that certain landscape elements are more adversely affected by new development than others, and that the impacts of new development can be minimized through appropriate siting and design.

Efforts to counteract the challenges that face the working landscape can only be achieved through multiple approaches, whether provided on a state, federal or local level. Currently there exist only a few mechanisms, which may enable property owners to work their land for viable economic returns. Land trusts and the Current Use Program are the two most widely applied programs.

For more information about Fletcher's historic and cultural resources, see Appendix A.

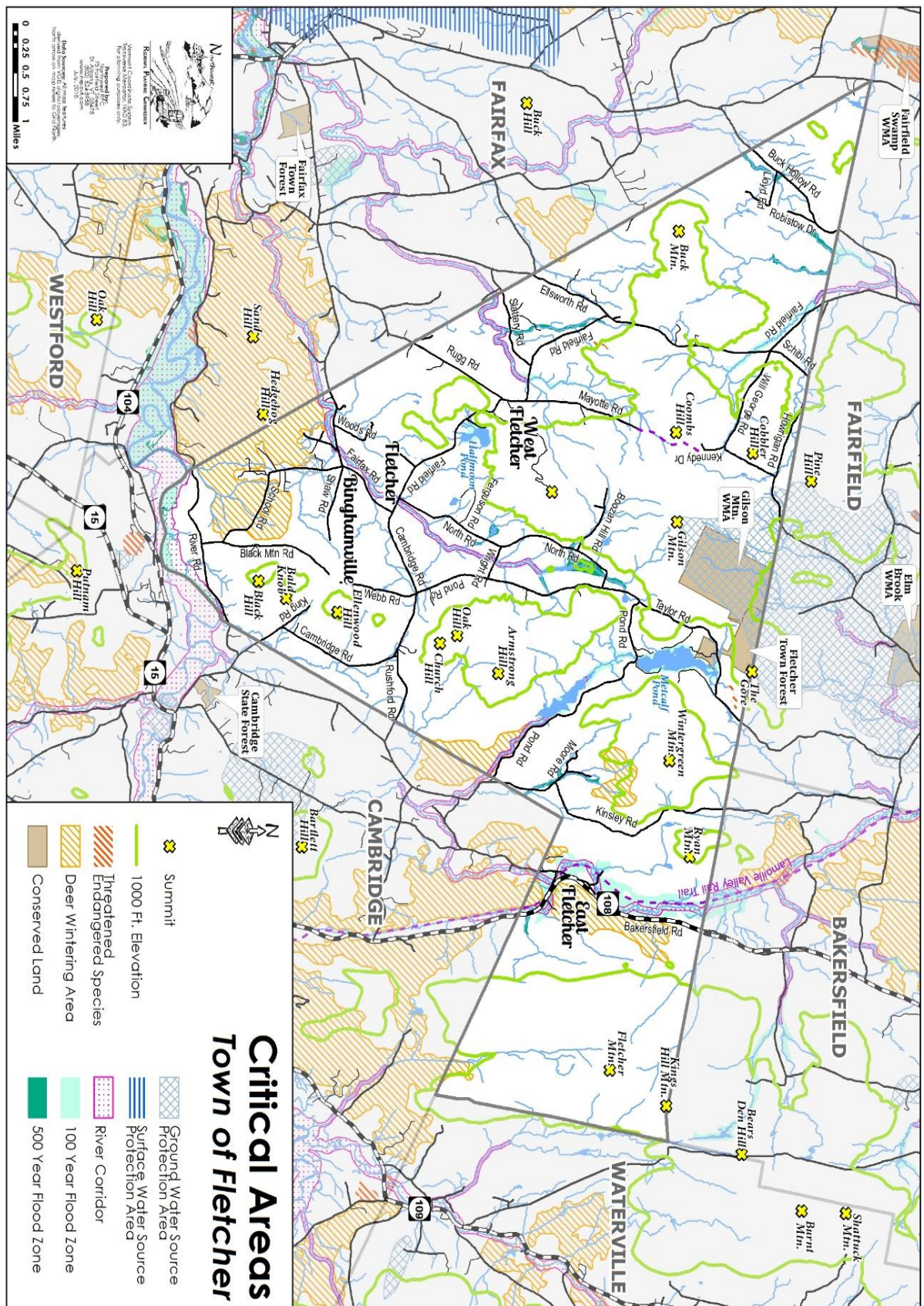


Figure 3.3 – Critical Areas



### Scenic Features

A Design Issue Committee put together by the Vermont Agency on Natural Resources identified six types of “sensitive” landscapes that deserve special consideration in planning, design and project review, along with associated guidelines (Vermont’s Scenic Landscapes: A Guide for Growth and Protection, VANR, 1991). These landscape types, as viewed from public vantage points, include the following:

- Foregrounds of distant views
- Steep slopes
- Shorelines
- Ridgelines and hilltops
- Open fields and meadows
- Historic settlements and gateways

Examples of each type are readily apparent in Fletcher. Specific scenic features identified by Fletcher residents included views of Mount Mansfield from a variety of vantage points; views of other mountains, hilltops and ridge-lines throughout town; views of wooded hillsides, farmland and open space (including the Tinker and Mayotte Farms); Half Mood Pond; Metcalf Pond and the surrounding hillsides, including “the Gore” to the north, and scenic views from the major roads in town, including the Fairfield and the Fairfax/Cambridge roads (TH 1 and 2).

With appropriate sighting and design, even the most sensitive landscape types may be developed and still retain much of their intrinsic character. Landowners and developers should be encouraged to use creative development techniques, including open space and community design that respect traditional development patterns and enhance the rural character of the community. Even small subdivisions of four or five lots (the size of many local hamlets) may incorporate traditional patterns.

### GOALS:

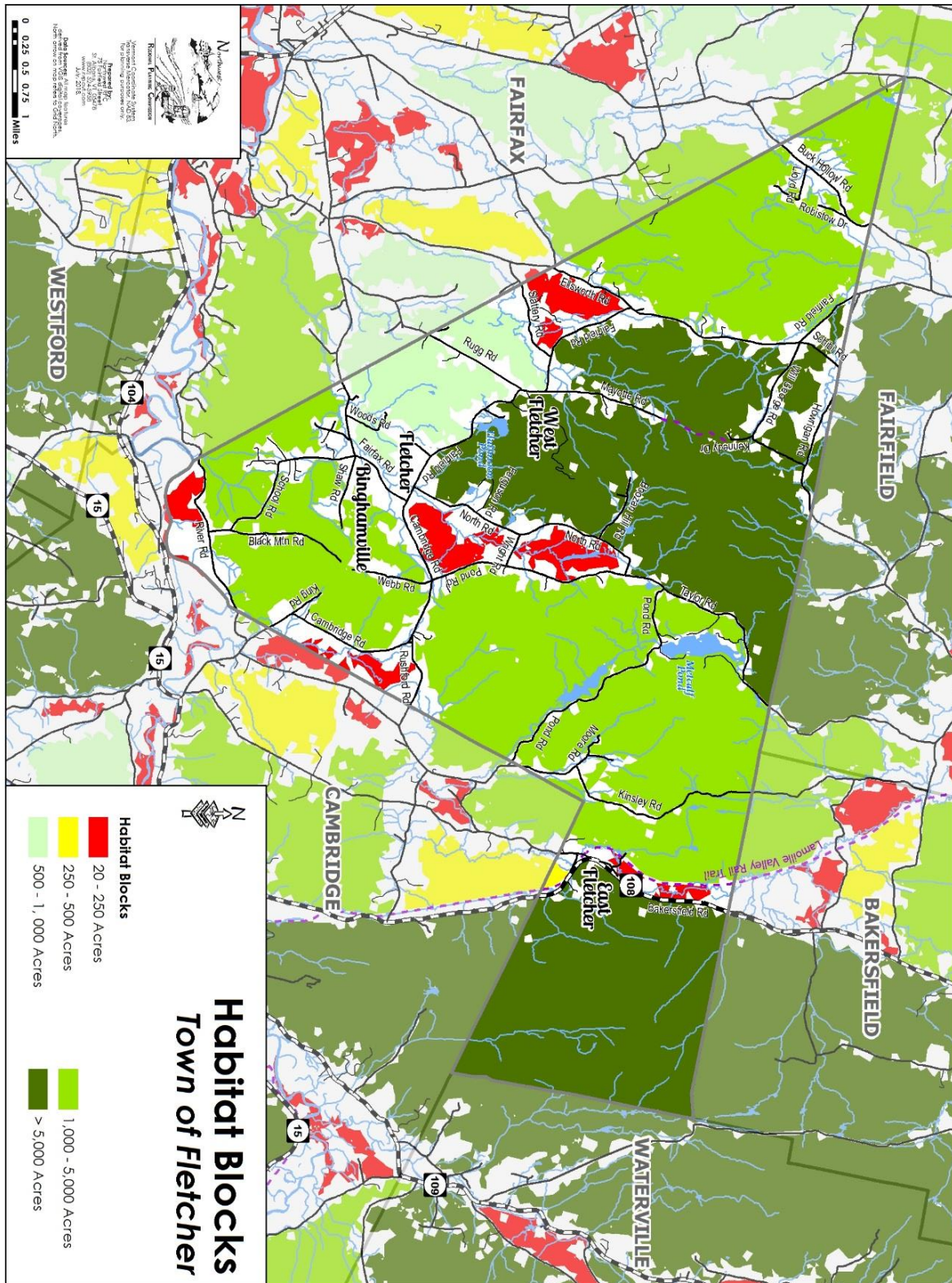
1. To discourage development in areas which are hazardous to human health and safety, or which are otherwise unsuited for this purpose;
2. To protect and enhance resource lands in the Town of Fletcher, including productive farm and forest lands and available earth resources, in order to maintain an adequate land base to sustain agriculture, farming and forestry operations and to secure needed supplies of sand and gravel for the benefit of existing and future generations;
3. To protect, conserve and maintain access to Fletcher's significant natural areas and unique or irreplaceable natural features for environmental, ecological, educational and/or recreational purposes; and
4. To ensure that Fletcher is a flood resilient community.

### POLICIES:

1. Site disturbance for the construction of buildings, roads, basins and other improvements shall be kept at a minimum. Development shall be sited so as to avoid undue adverse impacts to important natural or manmade features, including but not limited to shallow or highly permeable soils, steep slopes, ground and surface waters, wetlands, river corridors and/or floodplains.

2. Development on slopes greater than 15% will be carefully performed in order to minimize site disturbance and the potential for erosion and runoff. Slopes in excess of 25% will be protected from development.
3. The use of Required Agricultural Practices (RAPs) for farms and Accepted Management Practices (AMPs) for silviculture, and associated management plans, as defined, administered and enforced by the Vermont Commissioners of Agriculture and Forests, Parks and Recreation, are encouraged locally to ensure sustainable use of the town's resource lands. Fletcher supports the "current use" program and fiscally sound tax stabilization programs to maintain resource lands in active production will be supported.
4. Extraction and related processing operations will be permitted only when it has been demonstrated that there will be no undue adverse impacts on the town or its residents. Potential conflicts between current land use and proposed extraction operations shall be minimized.
5. The introduction of pollutants, permanent encroachments and exotic and/or nuisance species to the public waters of the town shall be prevented.
6. Adaptive reuse of historic structures, including barns and other agricultural outbuildings, is encouraged and will be supported as feasible through provisions in local bylaws and available incentive programs.
7. Support the efforts of Fletcher Historic Society to preserve and maintain the Fletcher Union Meeting House for public use. Support the efforts of Fletcher Historic Society to preserve and promote the town's history.
8. Structures, including telecommunication towers, shall not be placed on ridgelines or hilltops. With the exception of telecommunication towers, structures shall not extend above the elevation of the crown line of mature trees. Telecommunication towers may be permitted to extend above the crown line only to the minimum extent required for functional operation.
9. Utility lines and associated rights-of-way are to be developed and/or extended in a manner which minimizes adverse impacts on to the town's scenic and land-based resources.
10. Town Highways and public rights-of-way are to be maintained in a manner which, to the extent feasible, preserves and enhances their scenic and historic features. The impact of development on scenic roads will be minimized through appropriate sighting, landscaping and screening.
11. Outdoor lighting shall be designed and installed to not project glare upward or onto adjoining properties.
12. New development in identified flood hazard, fluvial erosion, and river corridor protection areas shall be avoided. If new development is to be built in such areas, it shall not exacerbate flooding and fluvial erosion. Fletcher will encourage protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion. Fletcher will also encourage flood emergency preparedness and response planning.

Figure 3.4 – Habitat Blocks



## SECTION 4 - HOUSING

### Overview

Shelter is a basic need of everyone in the community. For this reason, one of the main goals of planning is to ensure sound, healthy and affordable housing for all residents, now and in the future. In rural communities such as Fletcher, housing contributes significantly to the town's appearance, its ability to attract other forms of growth, and the local property tax base. Insufficient housing stock often results in increased housing demand and cost, which in turn limits the availability of affordable housing and shifts the burden of providing shelter to adjoining towns.

On the other hand, housing that is poorly planned, sited, designed and constructed can overburden public services, destroy natural resources and cultural amenities, and require significant maintenance over time. Planning to meet community housing needs requires a look at the characteristics of local households and housing needs, the condition and availability of housing stock, housing affordability and anticipated need.

### Household Characteristics

The way the local population is organized into households affects the demand for housing, community services and employment opportunities. Locally and nationwide, the size of households has declined dramatically since the 1970s. For instance, in 1980 there was an average of 3 persons per household in Fletcher. By 2016, the average persons per household had decreased to 2.6 people. A decrease in the average household size generally corresponds with an increase in the number of households. The number of households in Fletcher, and statewide, is increasing more rapidly than the population, which contributes to the demand for additional housing. In Fletcher there has specifically been a rise in the number of households composed of married couples without children.

<b>Table 4.1 Household Types</b>					
	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2016</b>
<b>Family</b>	78.70%	76.70%	75.90%	74%	78%
<b>Non-family</b>	21.30%	23.30%	24.10%	26%	22%
<b>Married, with children</b>	42.50%	39.70%	35.30%	25.20%	31.70%
<b>Married, without children</b>	33.30%	26.40%	31.10%	36.20%	53.60%
<b>Single householder, with children</b>	1.00%	7.30%	4.20%	9.30%	12.80%
<b>One person</b>	11.1%	14.50%	18.50%	17.90%	16.40%
<b>One person, 65+ years</b>	N/A	5.40%	4.70%	5%	5%
<b>Total Households</b>	207	330	428	497	517
<b>Source: US Census and 2012-2016 American Community Survey</b>					

### Housing Stock

In 2016, Fletcher had 608 housing units, the second smallest housing stock of any municipality in Franklin County after Bakersfield. The relatively few number of units, however, belies the dramatic growth in housing that the town has been undergoing since the 1970s. Between 1970 and 1980, Fletcher's housing stock increased by 46.1%; it grew another 41.3% between 1980 and 1990; it grew another 20.2% between 1990 and 2000. However, growth has slowed and housing stock only grew by



7% between 2010 and 2016. Local zoning permits for new residential development for 2013 -2017 average 5 permits per year (Table 2.9) . This is down from previous trends including 11 per year average between 1995 and 2000, 7 per year from 2000-2005, and 8 per year from 2005-2010.

As noted in preceding sections, because Fletcher is located within expanding Burlington and St. Albans “commuter sheds,” the town has become an attractive bedroom community for those who work elsewhere. As noted elsewhere, many towns’ people are concerned that a high rate of housing growth may negatively impact municipal and educational facilities and services. However, with the cost of fuel rising in the last five (5) years to record levels, the commuter sheds may become less attractive.

Fletcher’s housing stock consists mostly of detached, single family dwellings; housing units in 2000 through 2010 had an average of 6 rooms. Mobile homes make up 7% of the local housing stock, and provide an affordable alternative to other types of new construction. At present, there are no mobile home parks, condominiums, group quarters (e.g., retirement homes), town houses, apartment buildings, or subsidized housing units in town. There is, however, a growing trend to add an accessory dwelling (apartment) to current single-family dwellings. Given that the housing stock consists predominantly of owner-occupied single-family homes, rental opportunities for smaller units are limited. In 2016, rental units comprised only 5% of housing.

<b>Table 4.2: Changes in Local Housing Stock, 1980-2016</b>					
	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2016</b>
<b>Total Units</b>	288	407	510	569	608
<b>Total Occupied</b>	208	330	428	497	517
<b>Owner Occupied</b>	174	287	378	440	485
<b>Renter Occupied</b>	34	43	50	57	32
<b>Total Vacant</b>	80	77	82	72	91
<b>Source: U.S. Census Data, 2012-2016 American Community Survey</b>					

<b>Table 4.3 – Types of Housing Structures</b>					
	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2016</b>
<b>Seasonal</b>	61	62	77	62	62
<b>Single, detached</b>	182	338	443	519	560
<b>2 Units</b>	4	6	2	4	0
<b>3,4 Units</b>	4	3	4	0	3
<b>5+ Units</b>	2	0	0	0	0
<b>Mobile Home / Trailer</b>	34	55	53	51	43
<b>Avg.# Rooms/Unit</b>	5.9	5.8	6	6	6
<b>Source: U.S. Census Data, 2012-2016 American Community Survey</b>					

Seasonal homes account for the majority of vacant housing in town; at any given time, very few units are available on the market for sale or rent. A vacancy rate of 5% is considered sufficient to take care of short term housing demands. According to local realtors, generally fewer than 5 to 10 units are listed for sale in Fletcher at any given time.

Fletcher does not have a local housing or building code, and no

detailed inventory of housing conditions has been made to date. Given that the majority (69%) of Fletcher’s housing stock has been built since 1970, and is therefore 40 years old or less, it is assumed that the majority of housing is generally in good repair.

Like most Vermont communities, however, Fletcher also has a significant number of dwellings that were constructed prior to 1940. This is indicative of both the historic value of the housing stock, as previously noted, and also the potential need for repair and rehabilitation. Apart from structural concerns, older homes often have problems with heating insulation, efficiency and ventilation, wiring,

lead paint, asbestos and inadequate water supplies and septic systems.

### **Housing Affordability**

Affordability, however, is a relative measure. Under state and federal guidelines, housing is considered affordable when households at or below the median income level pay no more than 30% of their gross income on housing costs.

Data from the 2010 Census indicates that the median housing costs for home owners was \$1,327 per month, while the median for renters was \$663.00 per month. Typically, homeowners spend less of their income on direct housing costs than do renters; but they spend more on indirect costs, including repair, maintenance and taxes. In 2010, 35.6% of Fletcher homeowners and 26.5% of renters were spending 30% or more of their household income on mortgages and rent, excluding other housing costs. This suggests that for a segment of Fletcher's population, housing is becoming less affordable as the value and costs of housing increase in relation to household income.

The property tax burden to residents also makes local housing less affordable, especially for those on fixed incomes; however, the State of Vermont currently offers an adjustment of the school taxes based on household income on primary homes and two acres. Given that Fletcher is a small community, without a viable commercial or industrial tax base, land based and/or residential properties bear most of the burden of paying for municipal facilities and services.

As noted, no subsidized units for low income or elderly residents currently exist in Fletcher. Over half of Fletcher's residential properties are on six or more acres. Large lots, however, often needlessly fragment land, taking it out of use for farming and forestry, and serve to increase the overall cost of housing. Given Fletcher's current fiscal situation, the lack of centralized facilities and services, and the distance from major employment centers, the town can be expected only to provide for affordable housing to meet local, rather than regional, needs.

Any long-term growth management program considered by the town to remedy the fiscal impacts of recent residential development should also make provisions for the development of new types of housing which may require fewer services, including accessory apartments, additional rental units, and possibly elderly housing in order to help meet local needs.

Any local strategy to provide affordable housing, particular for special needs populations (elderly, handicapped, low/moderate income, etc.), should include the elements outlined below.

Programs and organizations are available locally, such as the Champlain Housing Trust (CHT), which can assist municipalities and/or landowners in developing, funding or managing affordable housing units.

### **GOALS:**

1. To ensure the availability of safe, attractive and affordable housing for all Fletcher residents.
2. To promote the development of new housing which avoids environmentally sensitive areas and resource lands, maintains traditional land use patterns, reinforces existing or creates new, integrated residential neighborhoods, and provides a diversity of housing types (e.g. single household homes, duplexes, apartments, etc.).

**POLICIES:**

1. The rate of housing development shall not exceed the ability of the town to provide and maintain associated infrastructure and services.
2. Housing should be safe and sanitary, energy efficient, and satisfy the day-to-day living requirements of its inhabitants.
3. Fletcher shall accommodate a diversity of housing types, including its fair share of affordable housing, based on identified local need and the town's ability to support it; and strive to maintain existing affordable housing stock where feasible. Housing developed as "elderly housing," should be designed specifically to accommodate the needs of elderly residents. The development of affordable and/or elderly housing should be provided with an opportunity to access appropriate density bonuses and/or waivers under development regulations to ensure that affordable and/or elderly housing can be developed in Fletcher.
4. New housing development shall minimize impacts to resource and conservation lands, and designated natural, cultural, scenic features and productive agricultural land. Clustered forms of residential development are encouraged and may be required to maintain the town's agricultural and forest resource base, to protect rural and scenic character, to avoid impacts to natural resources, and to allow for traditional "hamlet" forms of residential development, and related infrastructure and services.
5. High density, multifamily residential development should be located within existing and/or expanded village areas and reinforce traditional patterns of residential development.
6. Regulate the sighting and conversion of seasonal homes to ensure adequate access.
7. Continue to allow for the development of small mobile home parks in appropriate locations in Fletcher.

## SECTION 5 - ECONOMIC DEVELOPMENT

### Overview

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. Economic planning can assist in providing jobs commensurate with the skills and aims of local residents, a more balanced tax base to meet community needs, the protection of important economic resources, and the provision of services and products to support the local community. Poorly planned economic development can adversely affect the local environment, strain municipal services, cause dislocations of businesses and labor, and adversely impact community character.

Fletcher’s local economy remains predominantly rural, agrarian, and resource based. Planning for other forms of economic development in small, relatively isolated communities such as Fletcher, which have limited infrastructure to support business, retail and industrial growth, is a challenge; but such planning can help highlight local needs, strengths and opportunities.



(Photo Credit: Timothy Carpenter)

### Economic Base

#### *Labor Force*

Fletcher’s labor force in 2016 (including persons 16 years and over in the work force) numbered 1,082. Approximately 848 persons were actively participating in the labor market and 811 persons (95%) were actively employed were employed. According to the Census Longitudinal Employer-Household Dynamics

(LED) data, the vast majority of Fletcher's employed residents (99% in 2016) worked outside of the community. This qualifies Fletcher as a bedroom community. Fletcher residents are highly dependent on the regional economy for employment opportunities.

The industries in which the most local residents worked in 2016 included educational services, health care and social services; manufacturing; and construction (Table 5.2).

### **Local Employment**

Fletcher's labor force is relatively well educated and well trained. As noted in the accompanying tables, the top three occupational categories in 2016, representing 75% of the local labor force are: management, business, science, arts and professional; natural resources, construction and maintenance; sales, office occupations. According to Vermont Department of Labor, in 2017 there were approximately 49 non-agriculture or forestry-related jobs in Fletcher at 9 different work establishments. Fletcher's economy has traditionally been agrarian, which contributes significantly to its rural character. However, Table 5.2 notes that only a small percentage of Fletcher local labor force is involved in Fletcher's resource-based industries, including farming and, to a lesser extent, commercial forestry. Despite shrinking numbers, farming and related activities remain the mainstay of the local economy. Dairy, beef, horse and other livestock farming, the production of lumber, firewood, maple syrup, honey and eggs, and related farm service and equipment sales contribute significantly to local wages, incomes and to the larger cash economy of the town.

Home-based and other small businesses also make up a substantial portion of the local economic base. Nearly 30 Fletcher-based businesses are listed in the local directory, including farm and wood related enterprises, construction, welding, pottery, furniture and automotive repair, computer and bookkeeping services, day care, and other professional and personal services. A general store, bed and breakfast and antique store, sawmill, garage, salvage yard and other types of small wholesale or retail businesses also contribute to the local economy.

### **Economic Outlook**

The national and state economies are now recovering from the recession of 2007-2008 that has affected local residents both directly and indirectly. Of particular concern for Fletcher's resource-based economy are national and regional trends affecting the agriculture and forestry industry. Economic forces, largely beyond local control, will continue to affect the long term economic viability of local farming and timber operations.

Fletcher does not have the population base or infrastructure (municipal water and sewer, three phase

**Table 5.1: Occupational Comparison, Pct. Of Labor Force**

<b>Occupational Category</b>	<b>Fletcher</b>	<b>Franklin County</b>	<b>Vermont</b>
<b>Management, business, science &amp; art</b>	43.00%	35.40%	40.30%
<b>Service occupations</b>	10.70%	16.50%	17.40%
<b>Sales and office occupations</b>	18.00%	21.50%	21.60%
<b>Natural resources, construction, maintenance</b>	14.30%	12.20%	10.70%
<b>Production, transportation, &amp; material moving</b>	14.00%	14.30%	10.80%
<b>Source: US Census Data, 2012-2016 American Community Survey</b>			

power, transportation infrastructure) to support large scale commercial and industrial development. Increasingly, however, the focus statewide is on the promotion, development and expansion of small businesses (20 employees or less) to generate jobs.

<b>Table 5.2: Industry Comparison, Pct of Labor Force</b>			
<b>Industry Category</b>	<b>Fletcher</b>	<b>Franklin County</b>	<b>Vermont</b>
<b>Agriculture, forestry, fisheries and hunting and mining</b>	3.40%	3.60%	10.80%
<b>Construction</b>	15.10%	8.50%	7.40%
<b>Manufacturing</b>	13.70%	14.80%	10.90%
<b>Wholesale trade</b>	2.70%	2.70%	2.20%
<b>Retail Trade</b>	8.70%	11.00%	11.50%
<b>Transportation and warehousing and utilities</b>	3.60%	3.80%	3.20%
<b>Information</b>	0.50%	1.20%	2.00%
<b>Finance, insurance, real estate and rental and leasing</b>	3.00%	2.80%	4.80%
<b>Professional, scientific, management, administrative and waste management services</b>	11.10%	7.90%	8.80%
<b>Educational, health and social services</b>	21.40%	24.50%	28.10%
<b>Arts, entertainment, recreation, accommodation and food service</b>	4.80%	6.90%	9.30%
<b>Other services (except public administration)</b>	5.90%	3.50%	4.30%
<b>Public administration</b>	6.00%	8.70%	4.80%
<b>Source:</b> U.S. Census Data, 2012-2016 American Community Survey			

telecommuting.

As a small, rural bedroom community, the town will remain tied to the regional economy for high quality, high paying jobs, and for many needed goods and services. Fletcher nevertheless can support its existing economic base and promote increased diversification through the protection of the towns natural resources in support of sustainable, resource-based industries, and also related tourism and outdoor recreational opportunities. Fletcher can also support future development of home occupations, home-based businesses, or even cottage or light industries in appropriate locations which require minimal services and facilities.

These forms of economic development can be supported locally through provisions for their appropriate development in local bylaws (farming activities are currently exempt from local regulation); through tax incentives, particularly in support of the resource-based economy; and through the promotion of local businesses, products and services, for example through business guides, directories, community fairs, bulletin boards, farmer's markets and on-line services. It should be noted that additional broadband and cell phone towers may be needed in order for Fletcher residents to take advantage of

In decades to come (beyond the scope of this planning period), if the town's population base has grown sufficiently to support a viable local market area and labor force, the town may consider investing in additional, more costly improvements to local infrastructure (e.g., community water and sewer systems, high speed internet and utility line upgrades, road improvements) that are necessary to attract and support higher density and higher impact forms of development. At present, however, this is fiscally unrealistic.

**GOALS:**

1. To promote and sustain the local agricultural and forestry economies;
2. To encourage a diverse and stable local economy through promotion of business activities, including home-based businesses of a type and scale which are compatible with the town's rural character and quality of life, promote value added production, and provide employment opportunities and needed goods and services to the benefit of all Fletcher residents.

**POLICIES:**

1. Support incentives and other available means to keep farm and forest lands in sustainable production. This may include tax stabilization and other programs that provide incentives to landowners to maintain large tracts of agricultural land in sustainable use.
2. The development of support businesses, cooperatives and value-added manufacturing will be encouraged as a means to stimulate the agricultural and forestry economy.
3. Right to farm provisions will be respected; the town will not act upon nuisance complaints having to do with normal farming operations using accepted or best management practices unless a specific health risk is demonstrated.
4. The development and expansion of home occupations, home-based businesses and cottage industries will be encouraged and accommodated in the development regulations.
5. The development of rural recreation, tourist and communication/information-based businesses that will take advantage of and have minimal impact on Fletcher's rural character and environment will be encouraged.
6. The development of compatible commercial businesses will be encouraged in suitable locations, in particular to provide for locally needed goods and services and to protect the vitality and importance of the village of Binghamville as the community's commercial center. The clustering of related and compatible commercial uses is encouraged; strip development along public highways shall be prohibited.
7. Compatible light industry, which requires no centralized services or facilities, will be accommodated as appropriate under local zoning bylaws.

## SECTION 6 - TRANSPORTATION



### Overview

Transportation planning is vital to any community. The local transportation network provides for the movement of people and goods within the town to places beyond its borders. Patterns of growth, development and land use are strongly tied to the network, which is maintained at considerable public expense.

Traditionally, in our automobile-oriented culture, transportation planning has been concerned mainly with roads, specifically their design, construction, maintenance, and sufficiency. In recent years, planning in this area also includes consideration of other aspects of the road network, including its scenic, recreational, environmental and cultural components, relationship to adjoining land uses, and other types of transportation and infrastructure, including recreation paths and ridesharing opportunities.

It is unlikely that in the foreseeable future Fletcher residents will be any less dependent on the automobile to get around. There is, however, growing interest among residents of rural communities in road and bridge design, maintenance and access issues, programs to reduce commuting expenses, and in the development of recreational opportunities located close to home. Recent federal and state initiatives have decentralized the transportation planning process, giving more responsibility to local government working in close association with regional planning commissions, to determine transportation priorities for available state and federal funding. Good local planning and the active participation of town officials are essential to this effort.

### Travel Patterns

A majority of Fletcher residents work, shop and obtain needed services outside of the community. US Census data from 2010 indicate that for workers 16 years and older (numbering 784), only 11.1%



worked at home or walked to work. Sample commuter flow data indicate that of 639 total work trips to places of employment, only 1.3% were within Fletcher's borders, and only 23% were within Franklin county (mostly to St. Albans, Fairfax and Georgia). According to 2016 Local Employment Dynamics (LED) Census data, the largest share of work trips (60%) had Chittenden County destinations; another 5.6% ended in Lamoille County.

Although census data does not track travel patterns related to retail commerce, Burlington, St. Albans, Essex and Morrisville have been identified by citizens as primary shopping destinations. Public transit is not available in Fletcher for commuters. It is notable, however, that despite the large number of commuters traveling from Fletcher each day, especially to points south, few share rides. According to 2010 Census data, 72.8% of Fletcher commuters drove to work alone and only 16.1% carpooled.

Fletcher residents will continue to be highly dependent on their vehicles and the local and regional road network to meet their needs for employment, goods and services. For this reason, attention needs to be given to both the local and regional road network in planning for the needs of the community.

## Road Network

### *Existing Conditions*

Given local topography, the phrase "you can't get there from here" generally sums up the road network in Fletcher, though the addition of road signs as part of the E-911 program has made navigating around town somewhat easier. For residents of East Fletcher or the Buck Hollow Road to get to Binghamville or Fletcher Center, they have to go around mountains and through neighboring towns. East Fletcher residents have easy access to other parts of the county via Route 108, the only state highway in town. This route, however, is located away from more populated areas of town, and is not used much by most Fletcher residents. Regional roads of more importance locally include Routes 104, 104A, and 128, reached through Fairfax, which provide the easiest access to I-89 and points north and south.

Table 6.1: Fletcher Road Classification			
Roads	Surface	Mileage	Aid
Route 108	Paved	2.332	Federal, Primary
Class 2	Paved	12.5	Federal, secondary
Class 3	Gravel	29.91	State
Class 4	Gravel	7.91	State
Source: VT Agency of Transportation			

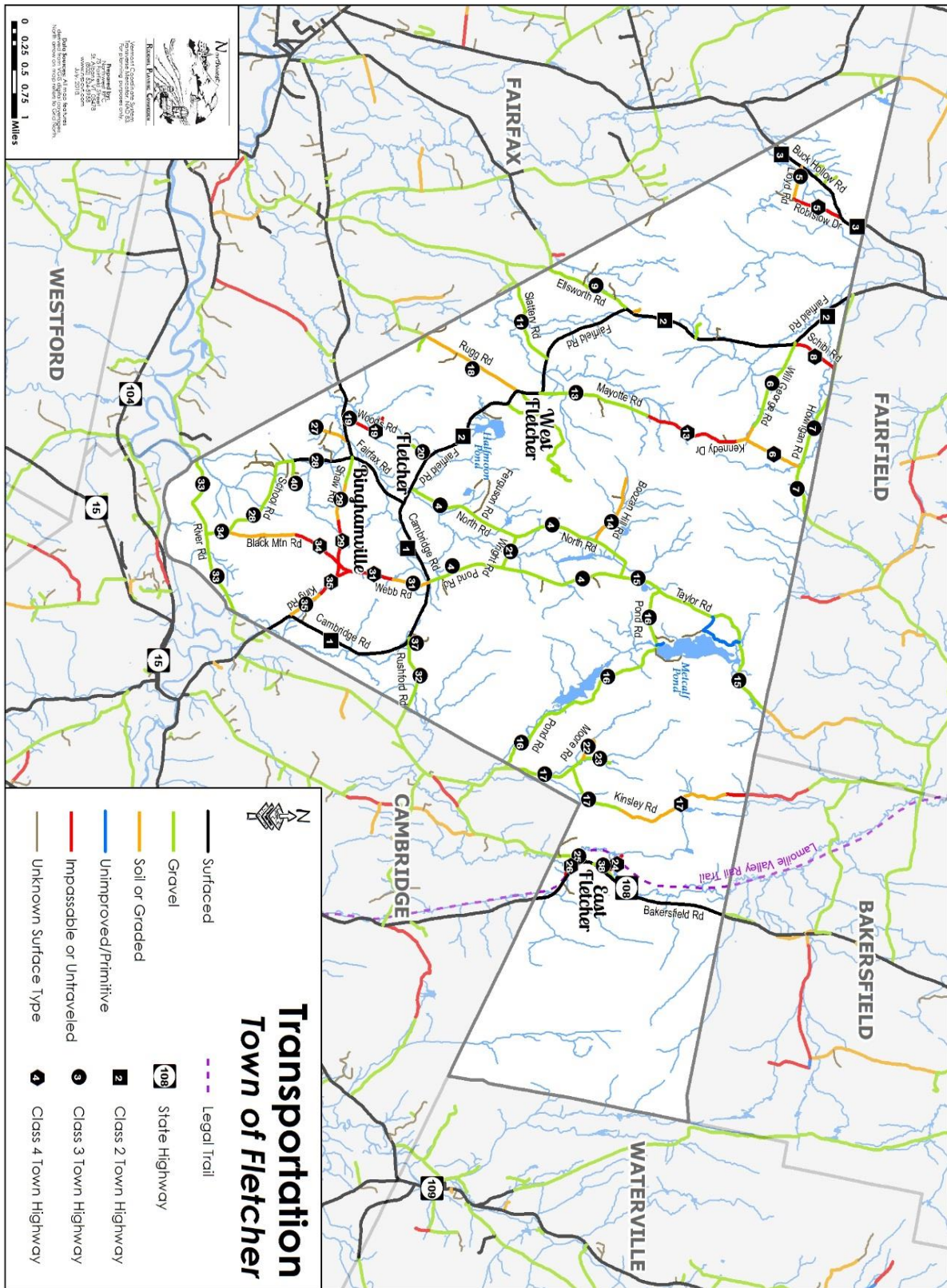
There are approximately 44.7 miles of traveled, public roads in Fletcher which are maintained year-round, and approximately another 7.91 miles of road that are maintained seasonally or not at all. For planning and funding purposes, the road network is described using statutory and functional classifications. The road network also incorporates intersections, access points (curb cuts) and related infrastructure, including but not limited to bridges and culverts, swales and guardrails.

A road erosion and culvert inventory for local roads was completed in 2017 and 2018 through cooperation with Northwest Regional Planning Commission.

### *State Routes*

Fletcher's road network includes approximately 2.3 miles of state highway - Route 108. As part of the state's road network, this road is designed to state specifications, and is eligible for state and federal funding. Route 108 is considered a major artery, intended mainly to move traffic through the region. Average annual daily traffic along Route 108 through Fletcher is estimated around 1,200 trips per day.

Figure 6.1 - Transportation



Though this road is the responsibility of the state, local officials have input with regard to needed improvements through the regional transportation planning process. Other needed improvements needed along this route include general preservation of the character of the road, access management along the corridor, limited lane widening and shoulders on sections having poor visibility or alignment, and “share the road” signs which designate Route 108 as a regional bicycle route.

### ***Town Roads***

Fletcher’s town road network includes three major collectors, TH 1, TH 2, and TH 3, which carry the largest volume of internal traffic and also provide links to state roads in neighboring communities. These Class 2 town roads are included in the regional road network; TH 1 and TH 2 also are included in the state’s secondary system. Town Class 3 roads, TH 15 (and a portion of TH 4), and TH 32 serve as minor collectors, which also provide connections to neighboring communities.

The majority of roads in town are gravel roads, which are maintained by the town for year-round use and serve mainly to provide access to adjacent collector roads. Class 3 roads make up the bulk of the local road network, for which the municipality has primary responsibility. Some state assistance for repair and maintenance is available, based upon an annual road plan; however, the maintenance and upkeep of Class 3 roads accounts for the largest share of the town’s road budget. Class 3 roads require significant local public investment.

Fletcher also has jurisdiction over a number of Class 4 roads. The primary responsibility for the upkeep of Class 4 roads under Fletcher’s current road policy lies with adjoining landowners. Some Class 4 roads are untraveled, impassable, and/or unmaintained. To date, no legal trails, in which the town retains rights-of-way but has no legal maintenance requirements, have been designated within the community.

### **Needed Improvements**

Specific policies regarding private road acceptance by the Town should be developed; any road acceptance or reclassification must also be done in accordance with the legal process for the laying out of public highways.

A more comprehensive list of needed improvements should be identified through an update of road inventory. These may then be prioritized in an overall road management plan, and associated costs included in a capital budget and program. In this way scarce resources may be used most effectively. Assistance with the development of a Road Surface Management System (RSMS) that is adapted for local needs is available through the Vermont Better Roads Program and the Northwest Regional Planning Commission.

### **Other Considerations**

Road improvements, and the laying out and development of new public and private roads, should be done so that they are in keeping with Fletcher’s rural and scenic character. Fletcher’s back roads contribute much to its rural character and scenic beauty, as evidenced by the increasing number of motorists and bicyclists touring through town.

To date there have been no scenic inventories or designations of local roads in town. Given the importance to the community of maintaining Fletcher’s rural character, a scenic road survey may be in order, particularly along major routes (TH 1, TH 2). Additional standards relating to the design and layout of new roads, and the repair and maintenance of existing roads for better incorporation in

the landscape, also should be developed. All new roads and driveways shall:

- Follow existing topography and linear features (e.g., tree lines, rights-of-way, stone walls,) wherever feasible;
- Avoid cutting through open areas or scenic vistas;
- Be designed to minimize access points (e.g., through shared driveways and/or development roads) particularly on collector roads; and
- Not be overly designed for their intended use and volume of traffic.

The repair and maintenance of existing roads and related infrastructure should also accommodate natural and cultural features within and /or adjacent to the right-of-way (e.g., historic structures, tree lines and stonewalls).

### **Access and Parking**

Access onto Fletcher roads from adjoining properties is typically a single driveway and curb cut per parcel for residential lots and poorly defined access areas/curb cuts for public and commercial uses. Private, minimally maintained dirt roads provide access to camps along Metcalf Pond and may be contributing to runoff and sedimentation.

A growing number of subdivision roads are being developed in town in accordance with common standards (e.g., 50 foot rights-of-way), which may be excessive for the volume of traffic generated from these developments. The over-design of access roads in rural areas is common, and often required in anticipation of possible acceptance by the town, but the over-design of roads may also adversely affect both rural and village character, increase speeding, and result in unnecessary expense.

The town should review its access policies in local bylaws and ordinances to ensure that the number of curb cuts, particularly along major collector roads (TH 1, TH 2, and TH 3) is minimized, and clearly defined. Access points, roads, and driveways should be shared by neighboring parcels; inter-parcel access should be required where feasible, off-road connections linking adjoining parcels for pedestrian and vehicular traffic should be required where feasible (e.g., through designated easements and rights-of-way), in order to maintain the functional integrity of the local road network.

Farm and logging roads, maintained by private landowners, provide access to interior, landlocked holdings. Temporary access across adjoining private land for logging operations, which may be granted by the Select Board under state law, has been an issue in upland areas of Fletcher. Because of the environmentally sensitive and often highly visible nature of these areas, landowners should be encouraged to use or share existing access routes and rights-of-way wherever feasible. Provisions also should be made for the reclamation of temporary roads into these areas once operations are completed.

Public parking areas in town, like their associated curb cuts, are generally poorly defined and maintained. These areas have been identified as needing improvements: the Fletcher Union Meeting House, and the parking area at Metcalf Pond. It is strongly recommended that all parking areas intended to serve the public be shared where feasible, be located to the rear of or adjacent to buildings, and be adequately screened and buffered from adjoining land uses.

### **Rail, Air and Bus Service**

The Lamoille Valley Railroad Line (LVRL) no longer runs through East Fletcher, though it was rail banked

by the state in 2004. The federal rail banking program reserves the right-of-way for future rail use, if it again becomes feasible, while providing for interim uses such as recreation paths. When this takes place Fletcher will be linked to a network of regional, state and international trails currently under development.

Fletcher residents now have access to passenger and freight rail service through the New England Central Railroad, located in St. Albans. At present, the “Vermont,” the state subsidized Amtrak line from St. Albans to Washington D.C., runs once a day, leaving St. Albans in the morning.

Most air services required by Fletcher residents are available at the Burlington International Airport which is conveniently reached via I-89. Fletcher residents also may schedule international flights through Trudeau airport in Montreal. Non-scheduled passenger and freight service are also available at the Franklin County Airport in Highgate and at the Morrisville-Stowe State Airport in Morrisville.

Limited long-distance commercial bus service is available through Vermont Transit in St. Albans, and the greater Burlington area.

### **Public Transportation**

At this time there is no bus or van service that serves the needs of the general public. Past regional transit studies have indicated that there is not enough demand or ridership within Franklin County to support a fixed-route system; however, since 2005 the CCTA provides transportation from St. Albans, Georgia, and Milton to Burlington. Currently, people with special needs may qualify for transportation assistance through social service providers and volunteer organizations. The town also contracts school bus services for the transport of local students.

### **Rideshareing**

Ridesharing, including car and vanpooling, helps to significantly reduce the expense and negative aspects of automobile-oriented transportation for both the rider and society as a whole. Given the number of Fletcher residents that commute to work, local participation in existing ridesharing programs should be encouraged through local advertising and the designation or development of a small, centrally located park-and-ride lot. State maintained park-and-ride lots are available for use by Fletcher residents in Cambridge, Georgia and St. Albans.

### **Recreation and Pedestrian Paths**

At present there is no municipally developed and maintained recreation, bike or pedestrian paths in town. As noted, a number of local roads are used for recreational use, including Class 4 roads, which provide access to Fletcher’s countryside for hunting, mountain biking, hiking and cross-country skiing. These, however, are not linked together in any formal trail network. Paved roads in town increasingly are being used by bicyclists, including organized touring groups. A network of snowmobile trails in town is privately maintained by local clubs and the Vermont Association of Snowmobile Travelers (VAST) through agreements with local landowners. This may serve as a useful model for other forms of recreation path development in the community.

Given the costs of maintaining the local road network, sidewalks and trail development have received little consideration. Paved roads, popular with tour groups, also could be designated as bike routes under share-the-road policies. This may require minor improvements, such as the widening of shoulders along segments having poor visibility in order to ensure road safety.



There are no sidewalks in Fletcher at present; however, given the increasing amount of development in and around Binghamville, sidewalks may be warranted in this area at some time in the future. A study of existing and projected need could aid local officials in identifying feasibility and determining approximate costs and available sources of funding.

**GOALS:**

1. To ensure reasonable, functional and orderly development of local transportation systems for multi-modal use as feasible and appropriate;
2. To maintain and improve the town highway system for safe use in an efficient and cost-effective manner, while preserving, as feasible, associated cultural and scenic character of the road system; and
3. To improve and expand alternative, non-automobile transportation and transit modes as feasible, including the promotion of ridesharing programs.

**POLICIES:**

1. The primary objective of the town highway program will be the provision of a safe, efficient, and convenient road network for use by local residents and the traveling public. The function and safety of the town highway system will be maintained through appropriate access management techniques, including limitations on the number of access or curb cuts permitted. Shared access is encouraged and may be required as appropriate.
2. New road construction and major improvements to existing roads is to balance capacity and safety needs with the need to minimize cultural, scenic, resource and environmental impacts and to ensure that rural roads and infrastructure are not overbuilt to urban or otherwise inappropriate standards. All private roads and rights-of-way shall be constructed to standards set forth in the road policy. All expenses, legal and otherwise, shall be borne by the applicant in the process of laying out and constructing proposed development roads and related infrastructure. The town will not accept any private rights-of-way into the town highway system unless it is demonstrated that there is clear public benefit, and the costs to upgrade the road to standard are not borne by the town.
3. Carpooling or vanpooling by local commuters to reduce transportation costs and impacts is encouraged.
4. Land use and development activities should not adversely impact traffic safety and the condition of town roads and rights-of-way.
5. Parking areas for commercial and public buildings where feasible will be sited adjacent or to the rear of structures, and be buffered and screened as appropriate. Shared off-street parking is encouraged and may be required as appropriate.
6. State proposed and initiated transportation improvements in Fletcher should be considered in accordance with the goals and policies of the town plan.
7. The Town of Fletcher will provide no services on Class 4 town roads beyond those required by statute.

Class 4 roads may be maintained by landowners, with Select Board approval, only to the degree necessary to provide simple access to property. If future conditions warrant, Class 4 roads may be considered for upgrade to Class 3 roads in accordance with state law. Costs associated with upgrade are to be borne by adjoining landowners as appropriate.

8. No permanent access roads shall be permitted in the forest district except as needed to access essential public services, including utility rights-of-way.
9. The town will support the development of the LVR right-of-way for recreational use.

DRAFT



## SECTION 7 - ENERGY

### Enhanced Energy Plan

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 local, regional, and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (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; and*

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fletcher to achieve “substantial deference” instead of “due consideration” in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Fletcher will have a greater “say” in CPG proceedings before the Vermont Public Utility Commission 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 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 section will include the required analysis, targets, and mapping. The “pathways,” or actions, have been included in Section 1 under the Work Program.

### Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and electricity generation in Fletcher. Several different units of measurement are used in this section. Please refer to Table 7.13 for more information about unit conversions.

#### ***Thermal Energy***

Table 7.1 shows an estimate of current residential thermal energy demand in Fletcher, based on data from the American Community Survey (ACS 2011-2015). The data shows that 43.5% of households in Fletcher depend on wood as their primary source for home heating. Wood includes both cord wood and wood pellets. Fuel oil and wood sources combined are estimated to be the primary heating source for 81% of homes in Fletcher. The remainder of homes heat primarily with propane and electricity. The

nearest natural gas pipeline is located in Georgia and is not likely to be extended to Fletcher in the future.

Table 7.1 - Current Fletcher Residential Thermal Energy Use				
Fuel Source	Fletcher Households (ACS 2011-2015)	Fletcher % of Households	Fletcher - Households Square Footage Heated	Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)
Natural Gas	0	0.0%	0	0
Propane	85	16.3%	155,504	9
Electricity	8	1.5%	15,232	1
Fuel Oil	195	37.5%	367,056	22
Coal	0	0.0%	0	0
Wood	226	43.5%	422,560	25
Solar	0	0.0%	0	0
Other	6	1.2%	11,424	1
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>520</b>	<b>100.0%</b>	<b>971,776</b>	<b>58</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table 7.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is 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, 4 billion BTUs per year, is used as thermal energy for commercial uses.

Table 7.2 - Current Fletcher Commercial Energy Use			
	Commercial Establishments in Fletcher (VT DOL)	Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)	Estimated Thermal Energy BTUs by Commercial Establishments in Fletcher/year (in Billions)
Municipal Commercial Energy Use	5	0.725	4

### ***Electricity Use***

Table 7.3 shows 2017 electricity use in Fletcher per date available from Efficiency Vermont. Fletcher's total electricity use has increased since 2015 from 5.3 million kWh in 2015 to about 5.5 million kWh per year in 2017. According to Efficiency Vermont, the average residential usage per household has decreased from 7,703 kWh per year to 7,434 kWh per year between 2015 and 2017. During the same period, overall commercial and industrial electricity usage increased. Fletcher's average residential usage in 2017 was about 500 kWh higher than the average residential kWh use in the region.

Fletcher is served by two electric utilities. Green Mountain Power provides service to the central part of town along Fairfax Rd. and North Rd. including the villages of Fletcher and Bighamville. Vermont Electric Cooperative provides service to the most rural parts of eastern and western Fletcher.

Table 7.3 - Current Fletcher Electricity Use		
Use Sector	Current Electricity Use in Fletcher - 2017 (Efficiency Vermont) (kWh)	Current Electricity Use (in Billion BTUs)
Residential	4,422,998	15.09
Commercial and Industrial	1,156,499	3.95
<b>Total</b>	<b>5,579,496</b>	<b>19.03</b>

Table 7.4 – Current Fletcher Transportation Energy Use	
Transportation Data	Municipal Data
Total # of Passenger Vehicles (ACS 2011-2015)	1,216
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	13,808,896
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	<b>742,414</b>
<b>Transportation BTUs (Billion)</b>	<b>89</b>
Average Cost per Gallon of Gasoline in 2016 (NRPC)	\$2.97
<b>Gasoline Cost per Year</b>	<b>\$2,204,969</b>

### Transportation

Table 7.4 contains an estimate of transportation energy use in Fletcher. NRPC estimates that Fletcher residents drive personal vehicles approximately 13.8 million miles per year and spend about \$2.2 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

It is difficult to track electric and hybrid vehicle registrations in Fletcher. This is because vehicle registrations with the Vermont Department of Motor Vehicles are based on zip codes and there are three zip codes that cover the Town of Fletcher. It is unknown how many electric vehicles are currently registered in Fletcher.

### Electricity Generation

There is currently 110 kW of electricity generation capacity from renewable generation facilities located in Fletcher. This capacity results in approximately 134,904 kWh of electricity generation per year. All of this generation is from net-metering solar facilities located in Fletcher. The amount of electricity generation in Fletcher is roughly equal to the annual electricity use of about 20 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table 7.5 organizes information about existing generation in Fletcher by type of facility. Map 7.4 shows the location of all electricity generators in Fletcher with a capacity greater than 15 kW. A full list of

Table 7.5 – Existing Renewable Electricity Generation		
Generation Type	kW	kWh
Solar	110	134,904
Wind	0	0
Hydro	0	0
Biomass	0	0
Other	0	0
<b>Total Existing Generation</b>	<b>110</b>	<b>134,904</b>

electricity generators in Fletcher can be found at the end of this section (Table 7.12).

Fletcher has extremely limited access to electric transmission 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. The lack of access to this type of infrastructure in Fletcher may make development of renewable energy facilities harder and less cost-effective than in other surrounding communities with more existing grid infrastructure.

Map 7.2 shows the electricity transmission and three-phase distribution infrastructure in Fletcher. The map shows a three-phase distribution line in the town along Fairfax Rd. and North Rd. There is also a three-phase distribution line that serves northwest Fletcher along Buck Hollow Road. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

### Targets for Use and Generation

The second required element of an enhanced energy plan is creation of targets for future 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 renewable electricity 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](http://www.nrpcvt.com)).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service's Municipal Determination Standards. Tables 7.6, 7.7 and 7.8 show the targets for future energy use for Fletcher by sector (totals are cumulative).

One thermal target for Fletcher in 2050 is to have 89.2% of structures be heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally, the target also relies on wood heating being a continued source of residential heating. However, Fletcher does not have a target for new efficient wood heat systems. This is due primarily to the high proportion of existing households in Fletcher that already use wood heating systems. Although there is no target, Fletcher strongly encourages residents' conversion of existing wood heating systems to more advanced wood heating systems. Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. Table 7.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

Table 7.6 - Thermal Targets			
Thermal Targets	2025	2035	2050
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	47.3%	61.2%	89.2%
New Efficient Wood Heat Systems (in units)	0	0	0
New Heat Pumps (in units)	62	142	265
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	25%	73%

The transportation energy targets for Fletcher are similarly ambitious. By 2050, almost 85.9% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion light-duty passenger vehicles from fossil fuels energy sources to electric energy. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

Table 7.7 - Transportation Targets			
Transportation Targets	2025	2035	2050
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	4.5%	21.9%	85.9%
Electric Vehicles	106	797	1895
Biodiesel Vehicles	58	113	211

Targets for electricity use are complex to interpret. Electricity use in Fletcher is targeted to double by 2050 (Table 7.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels.<sup>1</sup>

Table 7.8 - Electricity Targets			
Electricity Targets	2025	2035	2050
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

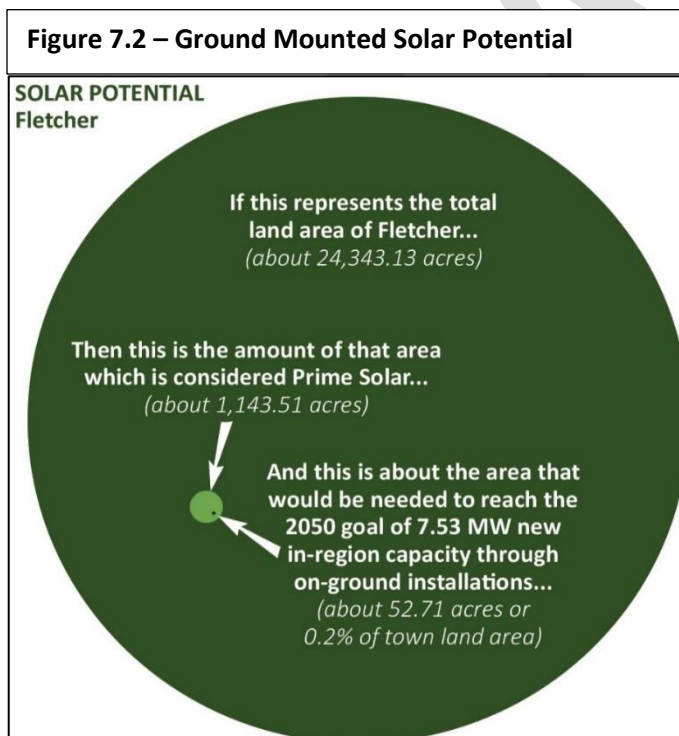
Table 7.9 shows the electricity generation targets for new electricity generation in Fletcher in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional 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

<sup>1</sup> Vermont Comprehensive Energy Plan - 2016, page 44.

considerable effort over the next 30 to 35 years. The 2050 generation target (12,147.17 MWh) is about 90 times more than the current generation capacity (134 MWh) within the Town of Fletcher.

Table 7.9 – Renewable Electricity Generation Targets			
Renewable Generation Targets	2025	2035	2050
Total Renewable Generation Target (in MWh)	4,008.57	8,017.13	12,147.17

Table 7.10 - Renewable Electricity Generation Potential		
Resource	MW	MWh
Rooftop Solar	1	668
Ground-mounted Solar	320	392,168
Wind	69	211,937
Hydro	0	0
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>389</b>	<b>604,773</b>



Based on mapping and calculations completed by NRPC, Fletcher has sufficient land to meet the above electricity generation targets. Fletcher has access to the renewable electricity generation capacity outlined in Table 7.10. This estimate shows that Fletcher has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table 7.9. 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.

Fletcher 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. Fletcher encourages the use of these sources for electricity and thermal energy generation, especially on farms.

### **Mapping Energy Resources and Constraints**

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. Fletcher has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity 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 an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified 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” in Fletcher based on information provided by the Vermont Sustainable Jobs Fund. “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 electricity 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 7.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC. The Forest District in Fletcher was included as a regional known constraint and the Conservation District in Fletcher was included as regional possible constraint.

#### ***Solar and Wind***

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity 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 in a few areas: in central Fletcher along Fairfax and North Roads, along Cambridge Road, along River Road, between Ellsworth and Slattery Roads, and northwest of Buck Hollow Road. The following preferred locations for solar generation facilities by the Town of Fletcher: rooftops, parking lots, and landfills. Brownfield sites located outside of the village areas of Binghamville and Fletcher are also considered preferred locations.

Fletcher has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community's dedication to preserving the aesthetic and rural qualities of Fletcher by restricting the geographic size of solar facilities. In addition, Fletcher prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to "break up" the visual impact of two or more solar facilities located next to each other and to preserve Fletcher's rural character. It is expected the most solar facilities proposed in Fletcher in the future will be small net-metered projects due to the fact that the Town lacks three-phase electric distribution and electric transmission infrastructure.

All solar facilities to be sited in Fletcher shall include proper screening. The Town of Fletcher hopes to adopt a municipal solar screening ordinance in the near future.

There generally isn't much land available in Fletcher that has base and prime wind resources. The small areas that do exist are generally concentrated in the northwest Fletcher along Rugg Road, Fairfield Road, Will George Road and in the extreme northwest along the border with Fairfax and Fairfield.

### ***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 electricity generation potential. 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 electricity 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. Fletcher has no existing dam sites and the development of new dam sites is extremely unlikely due to Fletcher's upland location and the extensive regulatory process involved in developing new dams.

### **Conclusion**

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

### **GOALS:**

1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
2. 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.
3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
4. Focus growth within and adjacent to the villages.

**POLICIES**

1. Fletcher supports energy conservation efforts and the efficient use of energy across all sectors.
2. Fletcher 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.
3. Fletcher supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Fletcher to other parts of the region.
4. Fletcher supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
5. Fletcher supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
6. Support local farms and the local food system.

**Table 7.11 – Mapping Constraints**

<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	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
<b>River corridors</b>	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	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

<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	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
<b>Ground and surface waters drinking protection areas</b>	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
<b>Vermont Conservation Design Highest Priority Forest Blocks</b>	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
<b>Public water sources</b>	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
<b>Municipal Conservation Land Use Areas</b>	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 of the Regional Energy Plan. The Forest District as identified in the Fletcher Town Plan was included in this category.	NRPC
<b><u>Solar, Wind and Biomass Maps - Possible Constraints</u></b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>

<b>Protected lands</b>	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
<b>Deer wintering areas</b>	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
<b>Hydric soils</b>	Hydric soils as identified by the US Department of Agriculture.	VCGI
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region 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
<b>Municipal Conservation Land Use Areas</b>	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 of the Regional Energy Plan. The Conservation District as identified in the Fletcher Town Plan was included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>None</b>		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>"303d" list of stressed waters</b>		ANR
<b>Impaired waters</b>		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more	VCGI

	information on the specific rankings, explore the methodology for the shapefile.	
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The date in Table 7.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fletcher recognizes that some of the data in the table may be out of date or incorrect. The Town of Fletcher also recognizes that some identified facilities may no longer generate electricity.

Table 7.12 - Fletcher Electricity Generators (8.17.18)							
Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	Ground-mounted PV	Floyd Fay	567 Rugg Rd	5502	Net Metered	Vermont Electric Coop	10.8
Solar	Ground-mounted PV	Gary Comette	706 School Rd	3461	Net Metered	Green Mountain Power	6.8
Solar	Ground-mounted PV	Ian Flint	246 Drinkwine Road	7005	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	Shana Kane & Andy Bushey	1199 Taylor Road	7275	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	Rebecca Rivard Darby	86 Taylor Rd	17-2114	Net Metered	Green Mountain Power	3.8
Solar	Ground-mounted PV	Maria Short	1228 Cambridge Rd	16-2936	Net Metered	Green Mountain Power	7.6
Solar	Ground-mounted PV	Tyler Riggs	960 Pond Road	17-3258	Net Metered	Green Mountain Power	10
Solar	Ground-mounted PV: Tracker	John & Mary Larrabee	658 Ellsworth Rd	3828	Net Metered	Vermont Electric Coop	6.4
Solar	Ground-mounted PV: Tracker	Steve & Cheryl Grundon	221 Black Mountain Rd	3884	Net Metered	Green Mountain Power	9
Solar	Roof-Mounted PV	Buck Hollow Farm, Inc.	2150 Buck Hollow Road	549	Net Metered	Vermont Electric Coop	11.9

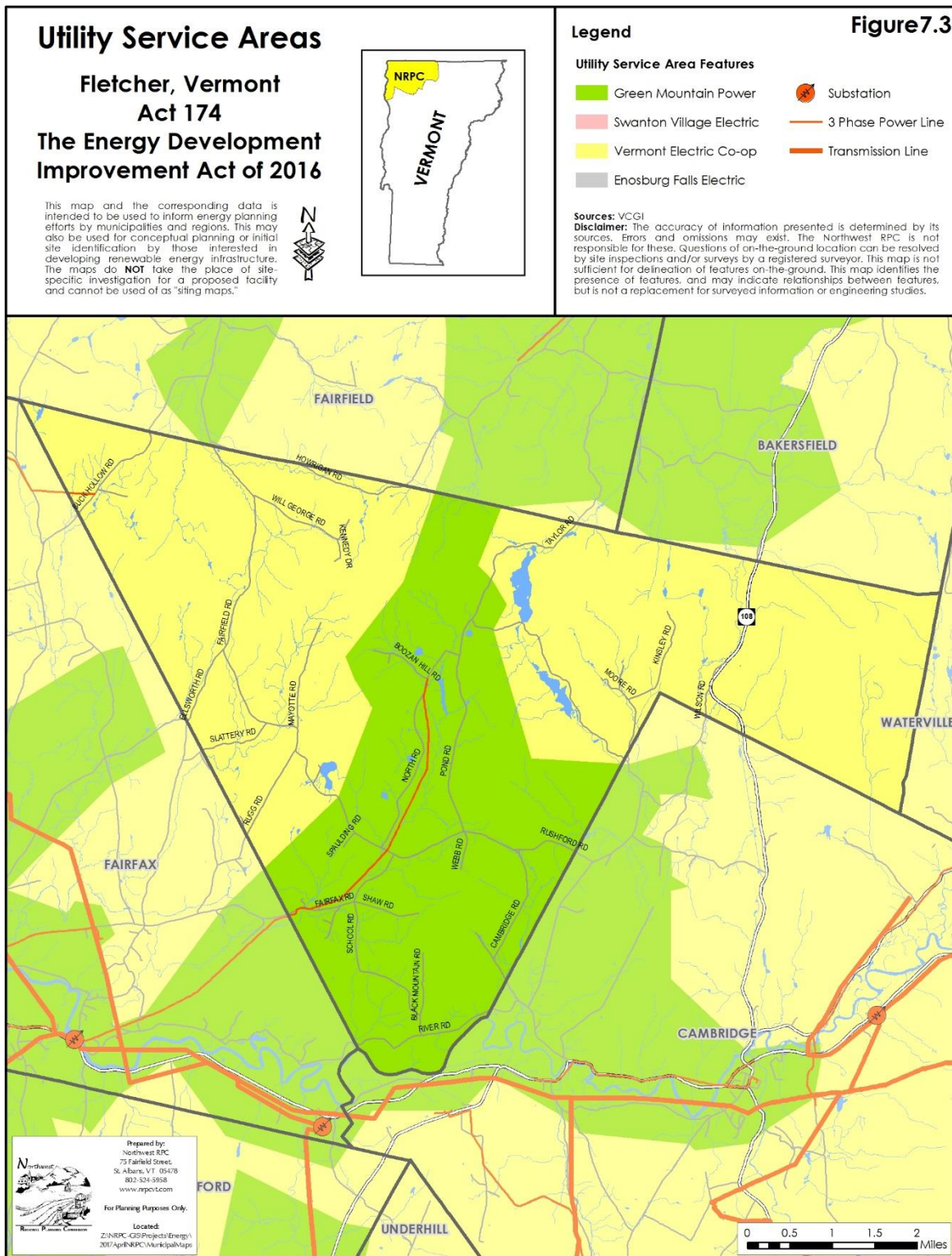


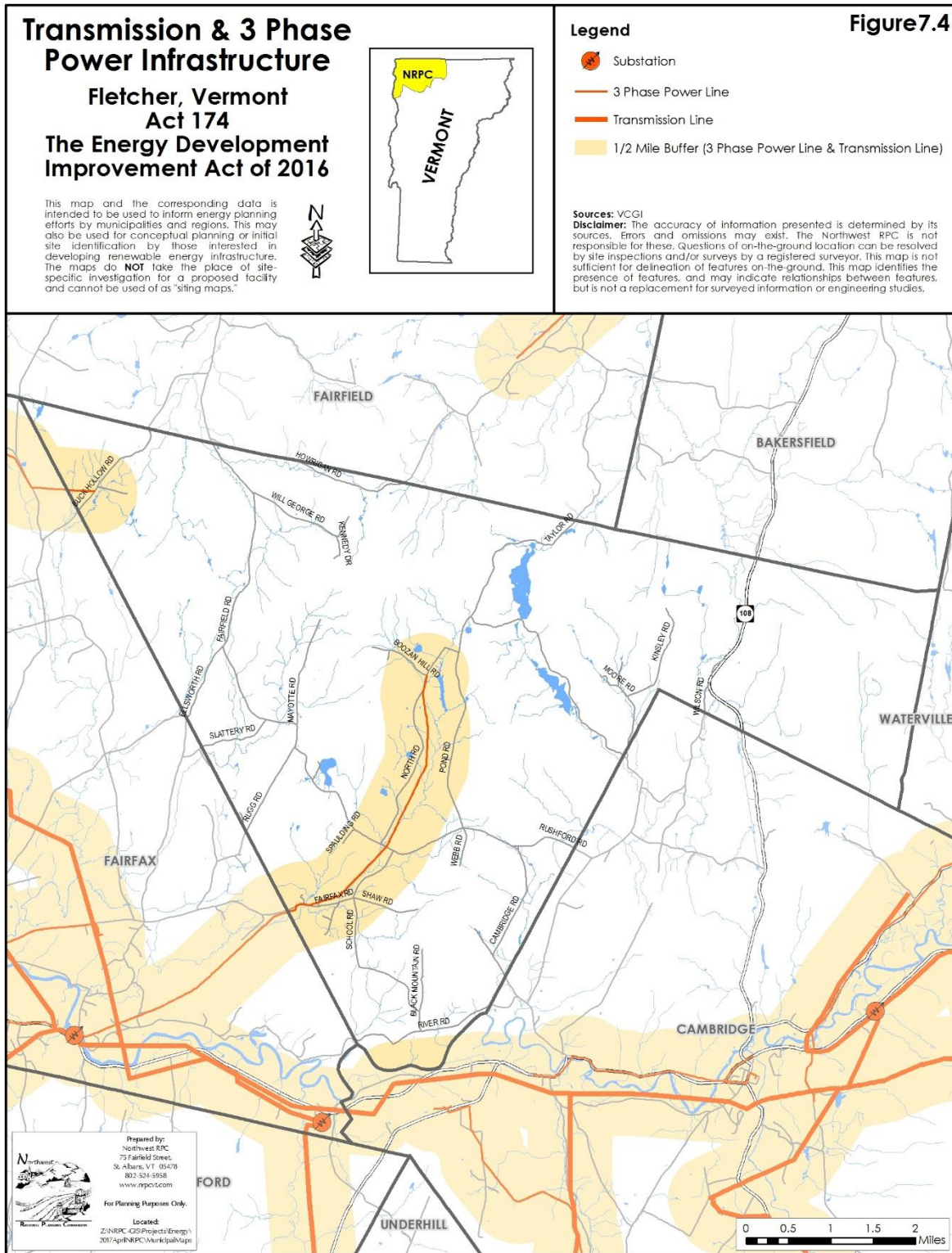
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Solar	Roof-Mounted PV	Corey Decker	17 Rushford Rd	4018	Net Metered	Green Mountain Power	5
Solar	Roof-Mounted PV	Don & Wendy Lawrence	495 Lloyd Road	3310	Net Metered	Vermont Electric Coop	2.9
Solar	Roof-Mounted PV	Paul Dunn	1078 River Rd	1881	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	Richard McCormick	271 Wright Rd	3161	Net Metered	Green Mountain Power	3.1
Solar	Roof-Mounted PV	Brett Walker	819 Fairfax Road	16-0231	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	Christopher Lennox	168 Stone Lane	7353	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	Duncan Macaulay	172 Oustinoff Road	7199	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	Jennifer Sheldon-Purinton	523 Shaw Road	16-0974	Net Metered	Green Mountain Power	6
Solar	Roof-Mounted PV	Joe Roberts	160 Whitetail Way	7270	Net Metered		7.6
Solar	Roof-Mounted PV	Rhonda Little	78 Oustinoff Road	16-0818	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	Tom Mitchell	2895 Pond Road	7269	Net Metered		4
Solar	Roof-Mounted PV	Jonathan King	50 Mountain View Dr	17-4260	Net Metered	Green Mountain Power	5
Solar	Roof-Mounted PV	Kevin McGovern	1541 Fairfax Road	16-1487	Net Metered	Green Mountain Power	3
Solar	Roof-Mounted PV	Deborah Lynch	1175 School Road	17-3999	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	Monica Sullivan	282 Wright Rd	16-2864	Net Metered	Green Mountain Power	3

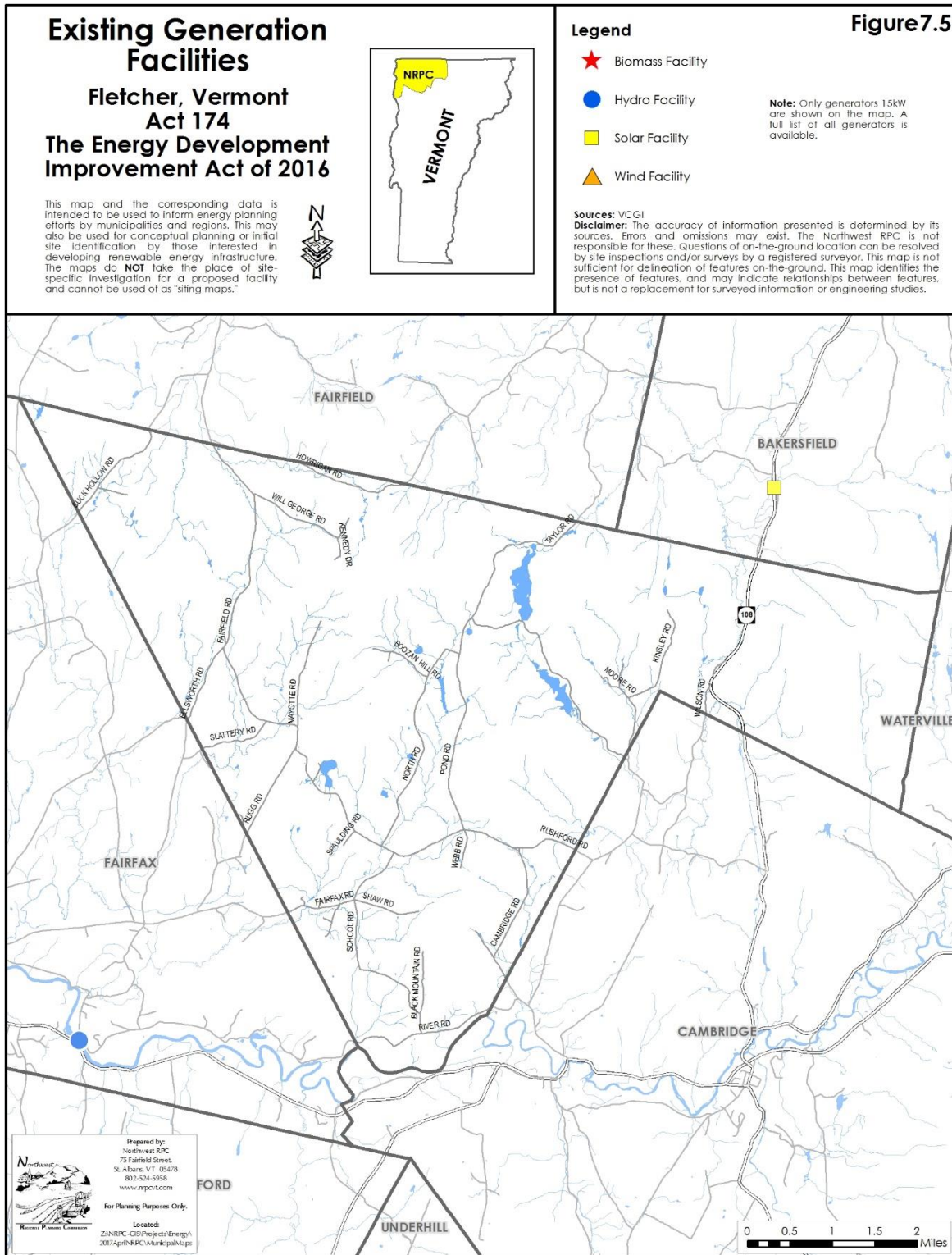
Solar	Roof-Mounted PV	Don Lawrence	1126 School Road	18-0149	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	Jeffrey & Linda Corey	5555 Fairfield Road	3798	Net Metered	Vermont Electric Coop	12.77
Solar	Roof-Mounted PV	Matt Bildeau	81 Oak Hill Road	3422	Net Metered	Green Mountain Power	5.13
Solar	Roof-Mounted PV	Rhonda Little	78 Oustinoff Road	17-4722	Group Net Metered	Green Mountain Power	6

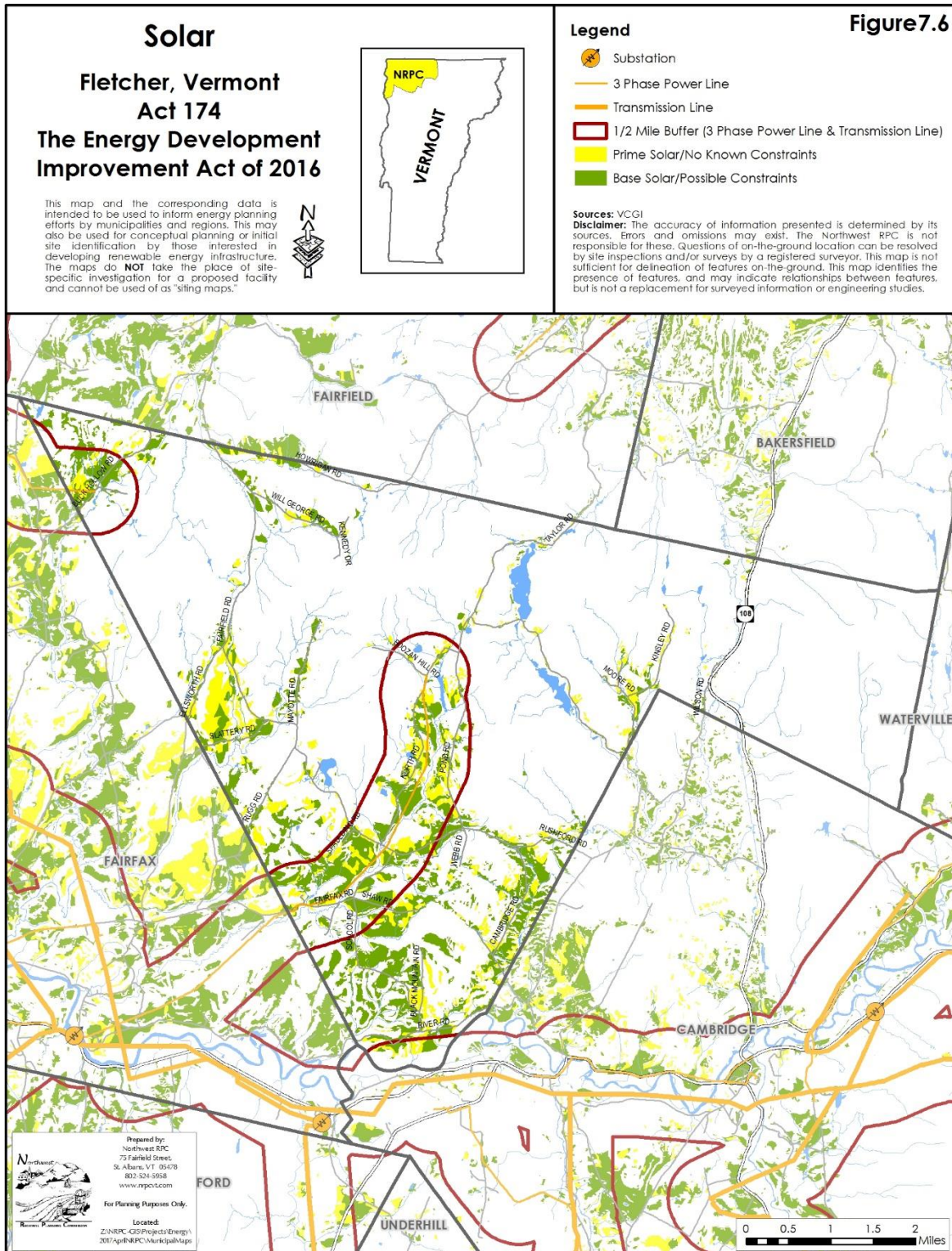
Table 7.13 Standard Conversions - BTU to Unit		
Unit	Unit Type	British Thermal Units
Kilowatt	Kilowatt	3,412
Gasoline	Gallon	120,404
Ethanol	Gallon	84,714
Diesel Fuel	Gallon	137,571
Heating Oil	Gallon	137,571
Residual Fuel Oil	Gallon	149,690
LPG	Gallon	84,738
Kerosene	Gallon	135,000
Biodiesel	Gallon	127,595
Wood Pellets	Ton	16,500,000
Cord Wood	Cord	20,000,000
Wood	Pounds	8,000
Natural Gas	Cubic Feet	103,200
Compressed Natural Gas	Pounds	20,160
Coal	Short Ton	19,490,000



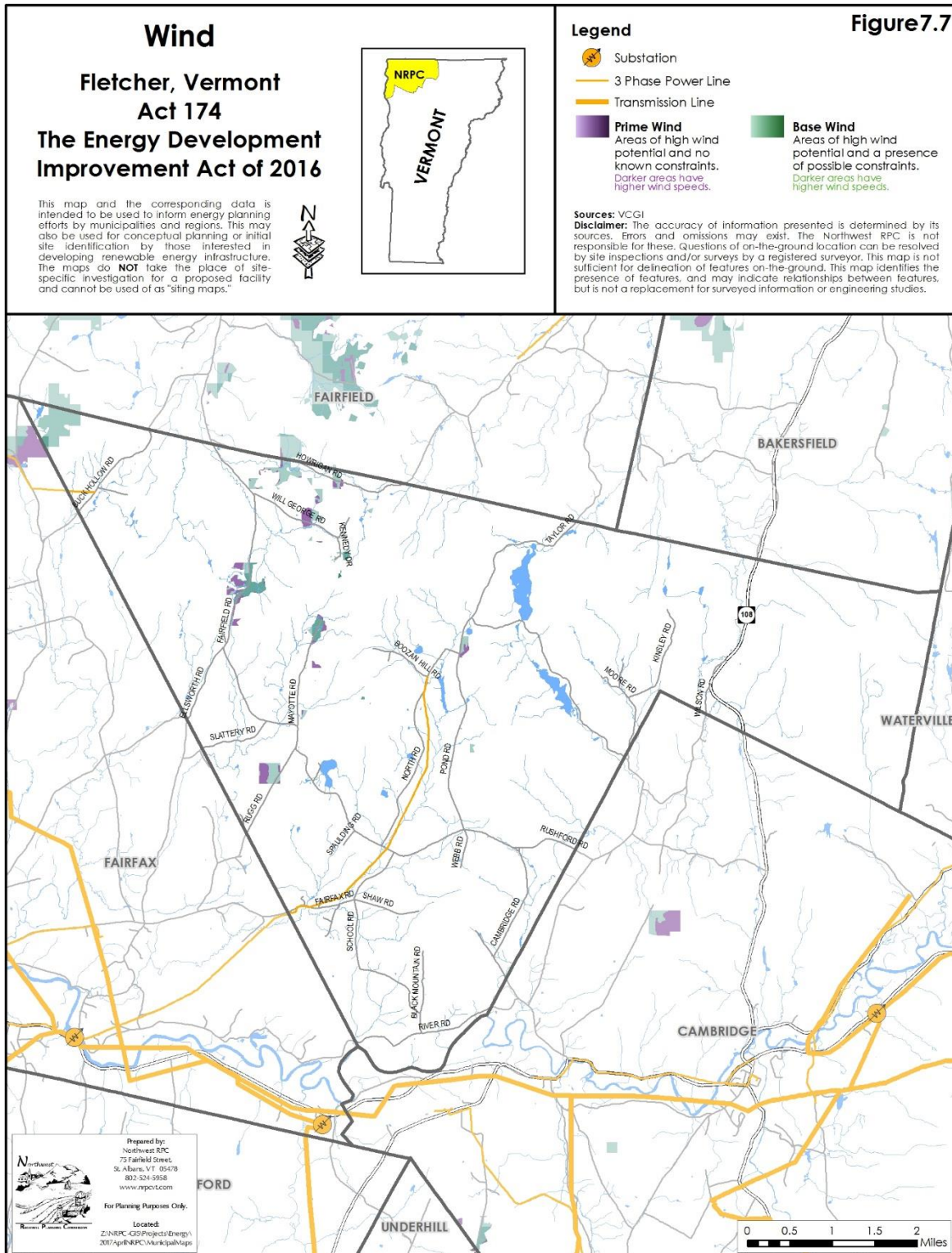


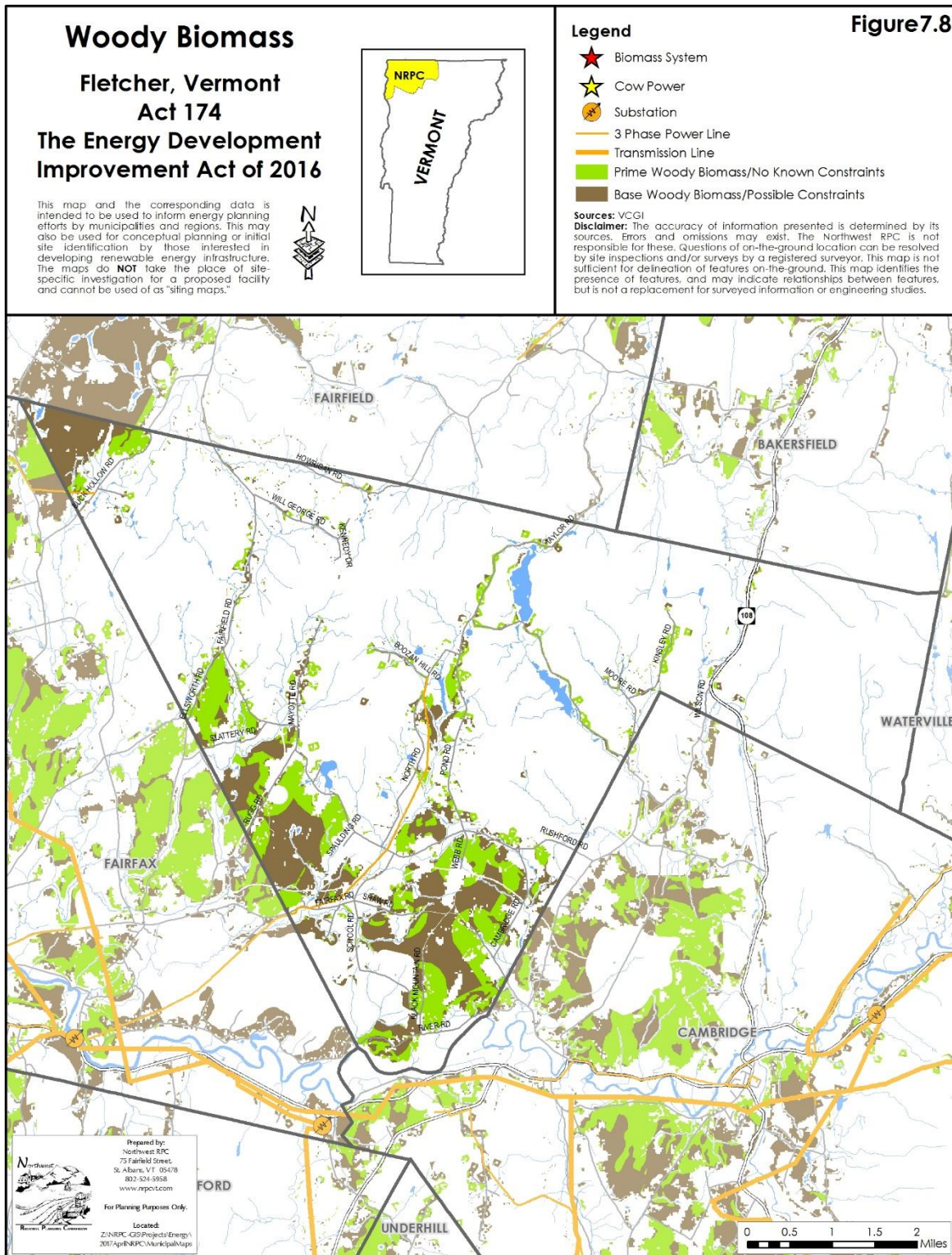




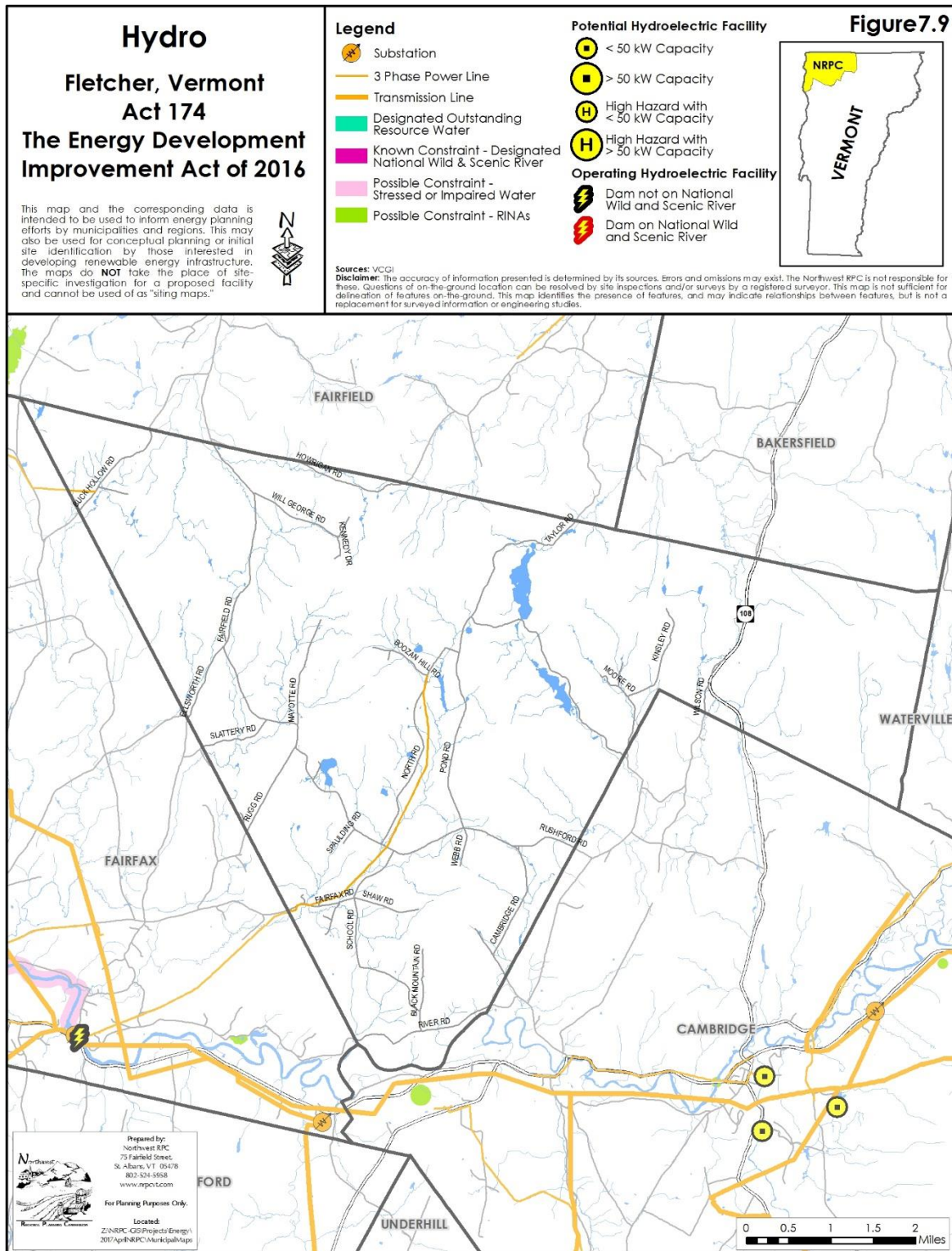












## SECTION 8 – FACILITIES AND SERVICES

### Overview

Facilities and services are provided by a municipality for the benefit of its residents, but at cost to local taxpayers. Those facilities and services supported by the community as a shared responsibility, including local government, education, health, recreation, infrastructure, and public safety, are easily taken for granted. At the same time, the type and quality of services available depend in large part on the community's desire and ability to support them financially and through volunteer efforts.

In small, rural communities such as Fletcher, which are dependent largely on the local property tax to finance the public realm, the ability of the community to support a broad range of municipal services is limited. Because Fletcher is a growing bedroom community with a large commuter population, the ability to provide services through volunteer efforts is also increasingly limited.

For these reasons, the focus in town has been to provide the basics: accessible local government, which relies largely on elected and appointed officials, some of whom volunteer their time; a quality education for local students, which also involves a significant amount of volunteer labor; maintaining the town's road network; and providing for public health and safety to the extent the town can afford. The facilities and services that are available in Fletcher reflect the rural character of the town, the community's fiscal abilities, and the dedicated efforts of its residents.

### Public Buildings

The town of Fletcher owns and maintains three public buildings: the Fletcher Elementary School, the town office, and the town garage, as noted in the accompanying table and map (appendices). These three facilities are funded primarily through property tax revenues. The Fletcher Union Meeting House (the Grange) and the Binghamville Church are the two other facilities in town, which, though privately owned, support public functions.

#### *Fletcher Elementary School*

The elementary school, located on the School Road just south of Binghamville proper, was originally constructed in 1962. In 1988 an addition was added to accommodate a growing elementary student population including the addition of a kindergarten class, and to meet state educational requirements. A modular building was added as a temporary classroom to accommodate growing enrollment. Because of the school's small population, the standard state education projection formula produces unrealistic results. This makes it inadequate for Fletcher Elementary projections.

There were 138 students enrolled at Fletcher Elementary for the 2017/2018 school year. The school now houses grades K-6, and has an overall capacity of approximately 200 students, though varying class sizes may affect classroom capacities (12-20 students) for particular grades. The school is near capacity. The school is sited on 9 acres; 10 or more acres will be required should the school need to expand. Capital improvements are done on an annual basis as needed. No major upgrades are needed at this time. Minimizing facility cost is an ongoing concern.

In an effort to reduce costs, streamline resources and expand educational opportunities, the Fletcher, Georgia, and Fairfax school districts have continuously researched the possibility of merging the three districts. Most recently, in 2016 both Fletcher and Fairfax voted against an Act 46 merger. The districts then had to apply to remain alternative structures and stay under Franklin West Supervisory Union. Although both towns chose not to merge, this, as well as other options, will need to be re-examined in

the future as pressures to reduce costs and improve efficiency increase.

The elementary school includes 6 regular classrooms and one special education classroom, a library, which is also open for small meetings, an AV room and conference room, office space for administrative and health personnel, and storage and maintenance rooms. The school building also includes a multipurpose gymnasium/cafeteria which is used by the community for town meetings and social events, and is available for a fee (to help cover utility costs) in the evenings for nonpublic events. The school grounds include a playground and recreational fields.

### ***Fletcher Town Office***

The town office is currently located on the corner of Cambridge and Shaw Roads. The building is approximately 2,600 square feet. Construction on the town office building began in November 2015 after the former town office outgrew its previous location in Fletcher Center. Town land was sold in October of 2013 to offset the costs for the creation of the new town office. The town offices were moved to the new location in May 2016. The computer systems for both the town clerk and the listers were upgraded during the move.

The town office has space for the town clerk and administrative offices. There is also a title research area, a large vault, and a meeting room that is available for community use. Updated furnishings were donated to the building by Champlain College.

The previous town office has been reverted back to the original land owner, as per an agreement made 46 years ago by the town.

### ***Town Garage***

The Fletcher Town Garage is located at the end of Oustinoff Road approximately one-quarter mile from the Fletcher Elementary School on 6 acres, more or less. The site consists of a 6,000 square foot structure. This building has septic and water. Another building, used for the storage of salt is 20 feet x 30 feet, and closed on three sides. The sand and salt mixture is stored outdoors.

The Old Town Garage collapsed in February 2011 under snow load. This site is 0.25 acres and the parking lot in front of the building is owned by the Fletcher Union Meeting House located across the road.



### ***Fletcher Union Meeting House***

The Fletcher Union Meeting House, also known as the Grange or Community House, is located in Fletcher Center and as discussed previously, is one of the town's most notable and readily recognized historic buildings. Originally constructed as a church, the Meeting House has been used for public gatherings, town meetings, and community events throughout the years. Long maintained by the Fletcher Grange, the building is now owned and managed by the Fletcher Historical Society, a private nonprofit incorporated in 2008 to promote the building's restoration, maintenance and continued use. Fletcher residents recognize the historic value of the Meeting House, and its importance to the community. Each year since 1990, the town has contributed \$1,500 from the general fund in support of restoration and maintenance. Through fundraising and grants in recent years, several major restoration

projects have been completed. These include a new roof, repairs to the foundation and chimneys, siding, painting, and insulation.

### ***Binghamville Methodist Church***

The Binghamville Church, centrally located in Binghamville on 2 acres of land, also has considerable historic significance and value to the community at large. Many church sponsored events, including church suppers and ice cream socials, are open to and attended by Fletcher residents. A fund drive was held to help pay for a new roof, which is now complete, and repairs have been made to the clock. The foundation will need repairs in the near future. At present the building is privately owned, operated, and maintained by the Regional Methodist Church Conference.

## **Public Lands**

The Town owns several parcels of land. A parcel of land bordering Metcalf Pond, including a small undeveloped stretch of shoreline within the road right-of-way, provides access to the pond. An additional 1.5 acres across the road is designated for public parking. Another parcel of land bordering Metcalf Pond is privately owned, but subject to a conservation easement requiring public access.

The state owns rights to 380 acres on Gilson Mountain, accessed through Fairfield, which comprise the Gilson Mountain Wildlife Management Area. This land is under the management of Vermont Department of Fish and Wildlife, but to date no management plan has been prepared. The land is open to area residents for hunting and other recreational uses.

Many Fletcher residents perpetuate the traditional Vermont norm of allowing access to their lands for hunting, fishing, hiking, cross-country skiing and other recreational pursuits, as well as some farming and forestry. Fletcher residents are under tremendous hunting pressure from neighboring towns due to the lack of public lands and many residents have resorted to posting. As also noted elsewhere, a network of snowmobile trails is maintained by local clubs in association with VAST. These forms of access to private land provide significant opportunities for recreation for area residents.

A community land trust continues to be a future goal of the Planning Commission. It could help to protect and preserve important resource lands for the town. There is growing interest in preserving and maintaining forest and agricultural lands on a State and Federal level.

## **Public Services**

### ***Educational Services***

As noted, Fletcher elementary students (K-6) receive their education locally at the Fletcher Elementary School in Binghamville. Contrary to state trends, Fletcher Elementary annual enrollment is increasing. The busing of Fletcher elementary students is provided by the school district under an annually negotiated contract.

The Fletcher School District is currently a member of the Franklin West Supervisory Union, which provides supervisory and administrative services. The school district is overseen locally by the Fletcher School Board, consisting of five elected school directors.

Fletcher does not have a middle or high school in town and offers school choice. Many families choose to send their children in grades 7-12 to Bellows Free Academy Fairfax or other area schools. Secondary enrollments have been on the rise, and are expected to continue to increase.

There are no adult or alternative educational opportunities available within the community; however Fletcher residents may attend classes at the Community College of Vermont (CCV) and the Northwest Technical Center, both located in St. Albans; Northern Vermont University in Johnson, or a number of colleges in the Burlington area, including the University of Vermont.

### ***Road Services***

The second most costly service provided by the municipality is road management and maintenance. As discussed in more detail under the transportation section, Fletcher maintains over 44 miles of roads within its borders. The summer and winter maintenance of roads is the responsibility of one full-time road foreman and two full time crew members.

An equipment replacement schedule has been in place now for several years. A listing of present road equipment and the anticipated replacement dates is included annually in the Town Report. The town's most recently replaced item replaced was their grader, upgrading from a 1998 model to a 2017. Estimated amounts of road material used per year include 3,500 yards of sand, 7,000 yards of gravel, and 80 tons of salt. People have asked that winter roads be as clear as possible, which has increased the amount of salt used in recent years. The amounts listed here may vary significantly in any given year depending upon the weather (e.g. heavy snows, flash flooding). The town currently gets sand and gravel from local sources (Waterville, Fairfield) depending upon availability and price. Although the State has ruled that salted sand does not need to be covered, Fletcher's salt storage shed is watertight due to an upgrade in 2004. The town also purchases asphalt for the maintenance and upgrade of its paved roads.

### ***Administrative Services***

Fletcher is governed by a local Select Board consisting of five elected members. The Select Board meets on a regular basis, and members receive nominal payment for their services. The town employs a full-time, elected Town Clerk (and Treasurer) to manage the town office, records and accounts. The position is assisted by a part-time Clerk. Financial records for the town are checked by three elected town auditors.

The town also employs a part-time Zoning Administrator, selected by the Planning Commission and approved by the Select Board, to administer and enforce its Development Regulations. Septic regulations are governed by the State.

The town has a five member planning commission and a five member development review board, both of which are appointed by the Select Board. These boards meet monthly, or as needed, and receive some administrative support from the Zoning Administrator. Planning, zoning and subdivision records are maintained in the town office. The town's grand list is maintained by an elected board of three Listers. The town last completed an in-house reappraisal of all listed property in 2015. Another reappraisal is anticipated to begin in the next two years.

Town officers include a number of other elected and appointed officials (e.g., justices of the peace, animal control officer, fire warden, constable, emergency coordinator, pound keeper, inspector of lumber, weigher of coal, fence viewers, etc.), whose duties vary with their positions. Although some of these positions are now more in name only than substantive, local officials provide much needed services to the community, often at their own expense.

The town government of Fletcher, as in many rural Vermont communities, depends largely on local



residents who are willing to volunteer their time and talents. Though Fletcher is a growing bedroom community, it continues to be fortunate in having residents who are willing to serve in the town's and the public's interest. The Town of Fletcher's tradition of local volunteerism has in the past and will in the future continue to be a valuable resource in meeting the town's long term needs.

Fees for other organizations, including assessments from the Northwest Solid Waste Management District, the Northwest Regional Planning Commission, fire and rescue services, and a number of other organizations which the town supports also come from the administrative budget. The town collects permit fees, and other nominal fees to help offset the costs of administration.

### ***Public Health and Safety***

Fletcher, as a small, rural, isolated community, has little ability on its own to support public health and safety services. The enhanced 911 program has been active for several years now, and the town is divided fairly evenly geographically for emergency services, which are provided by neighboring towns. An annual retainer is paid to both Cambridge and Fairfax, for both fire and emergency medical services. It also pays for back-up services from AmCare of St. Albans. A number of Fletcher residents actively serve on fire and rescue squads.

Fletcher has one elected constable, but law enforcement in town is generally the responsibility of the state police and the county sheriff. The town also has an elected safety officer and an elected animal control officer. The town owns a large generator for emergencies, which is currently housed at the school that serves as an emergency shelter.

### ***Water and Sewer Services***

At present, there are no municipal or community public water and sewer systems in Fletcher. All Fletcher residents, farms, and businesses are served by individually owned systems, which are the responsibility of the owner to install and maintain.

### ***Solid Waste Management***

Under state regulations passed in recent years (Act 78), municipalities are now responsible for the waste generated within their borders. In response to the passage of these regulations, Fletcher was one of several Franklin County communities to form the Northwest Vermont Solid Waste Management District (NWSWD) in 1987. The town appoints a supervisor to serve as a voting member of the District's governing board, and pays an annual assessment to help offset administrative costs. The District has taken a collective, regional approach to planning for the reuse, recycling and ultimate disposal of the solid waste generated by its member municipalities.

Locally, trash pickup and curbside recycling services are available on an individual basis through private haulers. The District offers a regional solid waste and recycling drop-off located in Bakersfield and Georgia.

### ***Communication Services***

Fletcher is served by Consolidated Communications for its local phone service, and by a number of long-distance providers. The phone services available to local residents have increased markedly in recent years, but at additional expense to the consumer. Fletcher has three local phone exchanges (849 and 827 in Franklin County and 644 from Lamoille County) and a recently expanded local calling area that includes surrounding towns and much of the region, but excludes the Burlington area. Cell phones are

common, but because of Fletcher’s topography, do not work well in certain locations.

The town is also served by a number of post offices, none of which are located in Fletcher. Although Fletcher does not have “last line identity” from the U.S. Postal Service at this time, it would be beneficial to pursue it. Residents would be able to reference their own town in their address (e.g., “Fletcher” instead of East Fairfield or Cambridge) while keeping the same zip code for sorting purposes. The advantages of last line identity include less duplication in street names and addresses, greater ease in locating an address, and perhaps most importantly, community identity.

At present, very few commercial and national internet service providers are available in the local area. Broadband internet is not widely available in town. The town is beginning to work with broadband providers to develop a plan for faster internet services in Fletcher. The plan is to begin providing broadband service in town sometime in 2019. Given the potential importance of online services to local businesses and area residents, affordable local access is necessary.

Due to Fletcher’s topography, relative isolation and low population density, there are limited television and radio services available to residents. Most households in Fletcher have antennas or satellite dishes. The nearest radio stations serving the local community are located in St. Albans, and the reception varies around town.

The development of new or expanded telecommunications facilities, including radio, television and telephone towers are permitted based on Fletcher’s Development Regulations. While the need for telecommunication facilities is obvious, the development must be done in a manner that is aesthetically pleasing as well as functional.

### ***Childcare Facilities***

Although not a service provided by the community, childcare can be a community issue. Childcare can be a growing concern for existing and prospective families, whether in regards to finding quality services or the costs associated with securing these services.

According to State data, Fletcher currently has one registered childcare home and one childcare center (preschool), with a total capacity of 25 children. There are two registered childcare facilities in Fletcher. The Fletcher Elementary School Pre-School program functions as a part of Fletcher Elementary School and offers early education in a classroom setting. The other childcare facility in town operates out of a home. The 2016 American Community Survey indicates that there are 210 children from birth to age 12 in Fletcher. Data on other options such as stay at home parents, family care providers, unregistered homes, or other in-home childcare options is not available. The question remains whether the needs of the remaining children are being met.

### **GOALS:**

1. To plan for, finance, and provide an efficient system of public facilities and services and to meet the needs of the community in a fiscally responsible manner with appropriate public facilities and service that support residents’ livelihood and lifestyles.
2. To maintain and enhance recreational opportunities in the Town of Fletcher.
3. To ensure that Fletcher residents have access to high quality education in cooperation with the

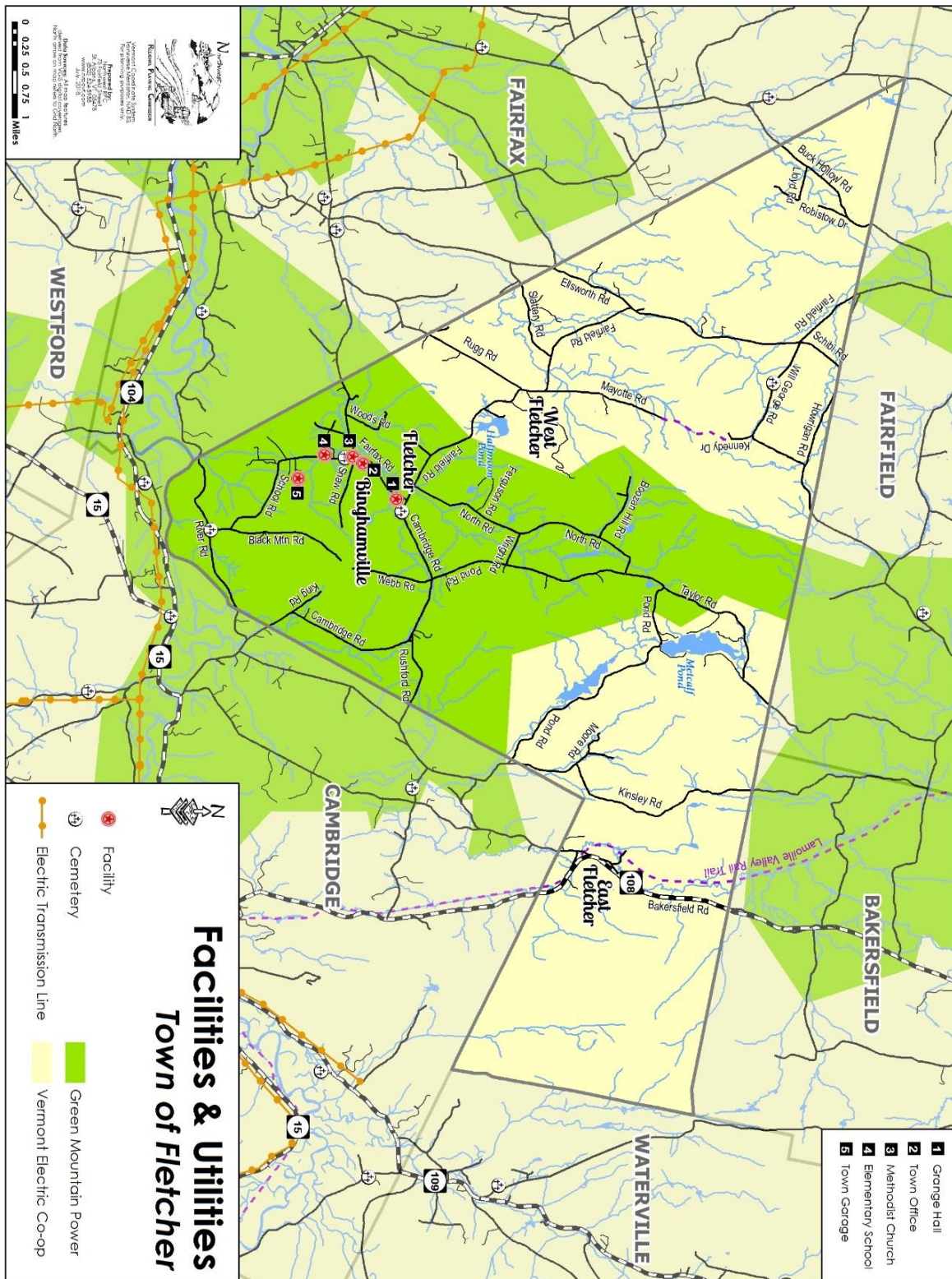
Franklin West Supervisory Union.

4. To ensure the availability of safe and affordable childcare and to integrate child care services into the planning process, including child care financing, business assistance for child care providers, and child care work force development.

#### **POLICIES:**

1. Public and semi-public facilities will be located to reinforce traditional settlement patterns, and to avoid or otherwise minimize impacts on resource and conservation lands and natural, cultural and scenic features. New buildings intended for broad-based public access and use, including new governmental and educational facilities, will be centrally located within or immediately adjacent to existing village areas in order to concentrate public functions, reinforce village character, and strengthen community identity (see attached land use map).
2. The town will ensure the supply of safe drinking water and adequate wastewater disposal through the administration and enforcement of local health regulations.
3. Emergency response and public safety services, including fire, ambulance and policing services will be provided through cooperative agreements with neighboring towns, agencies and/or private organizations as appropriate, based on available funding. Volunteer efforts, including volunteer service and community-based programs, will be supported as appropriate.
4. All new development will be located and sited to be accessible to emergency response vehicles.
5. Public recreational areas and facilities for the use and enjoyment of Fletcher residents will be provided in convenient and suitable locations to the extent available funding and resources permit. The maintenance and improvement of existing facilities will receive priority.
6. Telecommunication facilities shall be located only in areas specifically designated for these uses, and shall be co-located on existing sites unless such sites are demonstrated to be unsuitable or unavailable. The town will encourage affordable local access to telecommunication services, including on-line services, and support upgrades in telephone and electric services to meet telecommunication needs, to the extent feasible.
7. Participate in regional solid waste planning, recycling and disposal efforts as a member of the Northwest Vermont Solid Waste Management District.
8. Support the Fletcher internet presence (<http://www.fletchervt.net>, which also provides links to the public Google group and Facebook page).

Figure 8.1 – Facilities and Utilities





## SECTION 9 - LAND USE

### Overview

Land use is more often than not the most difficult planning issue faced by most communities. Through effective planning, a reasonable balance can be maintained between the public interest and the interests of private landowners.

Land use planning integrates all other aspects of the planning process: defined goals, policies, and policies; physical factors and limitations; historic patterns of development; projected and accepted rates of growth; existing and proposed facilities and infrastructure; and the ongoing need to provide housing, jobs, services and a quality environment for present and future generations.



(Photo Credit: Timothy Carpenter)

The primary goals of Fletcher's land use planning are:

- To maintain a reasonable balance between the limitations imposed on land use in the public interest, and the rights of individual landowner.
- To maintain and preserve the rural character of the town, including its resource-based economy, natural environment, cultural landscape, and the rural lifestyle enjoyed by its residents;
- To provide for orderly development in suitable locations in order to enhance the quality of life of all Fletcher residents, and to ensure that local taxpayers are not overburdened by the costs of unanticipated, inefficient and unmanaged growth and development; and
- To require that all development be pursued with strict regard to the capability of the land to

support it.

The following provides a description of existing land use in Fletcher, a description of the types of land uses appropriate for Fletcher, and recommendations for facilitating the appropriate use of land through planning in order to meet the Town's goals and policies.

### **Current Land Use**

The Town of Fletcher covers approximately 24,608.75 acres. The various land uses/land covers that comprise this total acreage are listed in Section 3 and are illustrated in the Current Land Use Map in the Figure 3.1. The most prevalent land cover by far is forest, comprising approximately 79% of Fletcher's total acreage. In contrast, the acreage devoted to agricultural uses comprises only about 10% of Fletcher's land base, and residential use comprises only about 1% of the land base.

### **Land Use Districts**

This plan establishes six different land use districts for the Town of Fletcher. These are:

- The Village District
- The Rural Residential Agriculture District
- The Conservation District
- The Forest District
- The Shoreland-Recreation District
- The Flood Hazard Overlay District

Below is the purpose statement for each of the land use districts in the Town of Fletcher:

#### ***The Village District***

The Village District includes all lands within and adjacent to the historic settlements of Binghamville and Fletcher Center, as depicted on the zoning map attached in the Appendix. This district is meant to encourage the development of village areas as the focus of social and economic activities in the community and to provide for residential, commercial and other compatible development that serves the needs of the Town. Such development should occur at densities and reflect uses which will maintain the traditional social and physical character of the villages, including their historic and scenic resources, and which will not exceed the capability of the Town's lands, waters, services and facilities to absorb such densities.

#### ***Rural Residential/Agricultural District***

The Rural Residential/Agricultural District includes lands within 1,500 feet of maintained (Class I, II, or III) public roads. These lands are intended to be used primarily for residential, agricultural, and forestry uses. The purpose of this district is to provide for and protect residential, agricultural, forestry and compatible commercial and recreational uses in accordance with the Town Plan. Development densities must be in keeping with the physical capabilities of the land and the availability of planned community facilities and services. Development methods to preserve the rural character and protect the agricultural resources of these areas are encouraged.

#### ***Conservation District***

The Conservation District includes all lands that are further than one thousand five hundred (1,500) feet from a maintained (Class I, II or III) public roadway, and are not in any other zoning district, as depicted on the Official Zoning Map. Most are remote upland areas and other conservation lands. Designation within this district is specifically intended to protect the scenic and natural resource value of these lands for forestry, ground and surface water recharge, wildlife habitat and outdoor recreation. Due to their remote locations, extreme topography and/or severe limitations for buildings, roads, utilities and sewage disposal, these areas of town are poorly suited for future community growth and development. Due to an abundance of natural resources, physical limitations for development and the cost of providing public services to these areas, only limited, low-density land development that is compatible with this district's purpose will be permitted.

***Forest District***

The Forest District includes all lands eleven hundred (1,100) feet or more in elevation on Wintergreen Mountains, and all lands on Gilson Mountain one thousand four hundred (1400) feet elevation and above. This district includes the upland areas without roads on Fletcher Mountain and all lands east of Route 108, but not including the area within one (1000) feet of the road, which is in the Rural Residential / Agriculture District.

As provided by the Act (24 V.S.A. §4413), this district is established to protect remote lands that are essentially undeveloped, lack direct access to public roads, are critical wildlife habitat, are currently used for commercial forestry and/or have high potential for commercial forestry use, and have severe physical limitations for development. Because environmental considerations and potential expenses for community services make such areas unsuitable for most types of development, all but uses exempted by statute shall be subject to conditional use review by the Development Review Board.

***Shoreland-Recreation District***

The Shoreland-Recreation District includes all lands within five hundred (500) feet of the shoreline of Metcalf and Halfmoon Ponds. This district protects areas which have present or potential capability for water-based recreation in accordance with the Act [24 V.S.A. §4414].. Development in this district must be carefully controlled to protect water quality and scenic beauty.

***Flood Hazard Area Overlay District***

The Flood Hazard Area Overlay District includes identified areas subject to a one percent or greater chance of flooding in any given year (i.e., 100-year flood plains) as depicted on the Federal Insurance Administration's current set of Flood Insurance Rate Maps (FIRMs) for the Town of Fletcher. The purpose of this district is to prevent increases in flooding caused by development in flood hazard areas, to minimize future public and private losses due to floods, and to promote the public health, safety and welfare. Designation of this district is also required for continued Town eligibility in the National Flood Insurance Program.

**Development Regulations**

Fletcher's current development regulations incorporates each of the above referenced land use districts in the land use map. The current development regulations have been in effect since March 19, 2018.

**GOALS:**

1. To maintain a reasonable balance between the limitations imposed on land use in the public interest, and the rights of individual landowner.

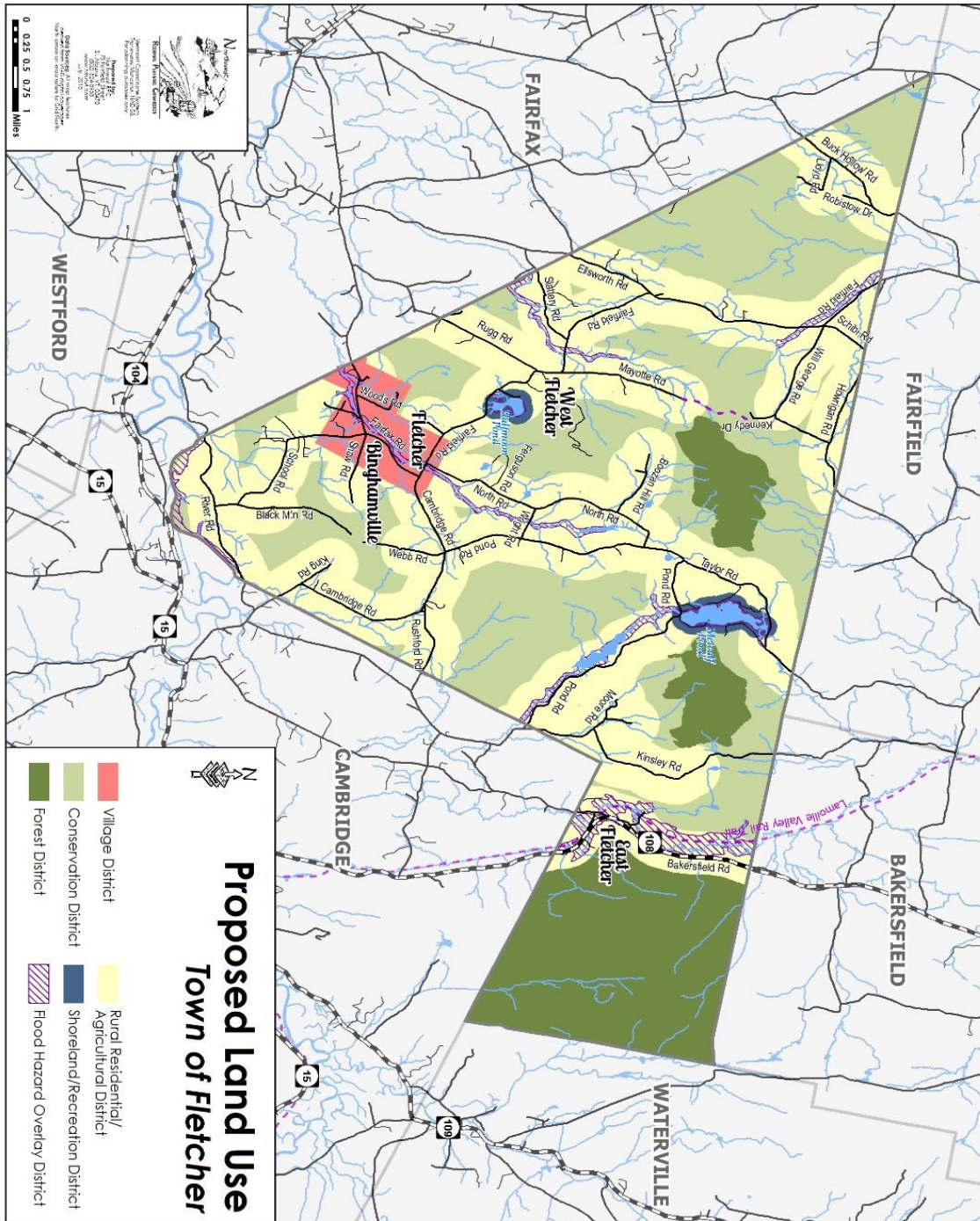


2. To maintain and preserve the rural character of the town, including its resource-based economy, natural environment, cultural landscape, and the rural lifestyle enjoyed by its residents;
3. To provide for orderly development in suitable locations in order to enhance the quality of life of all Fletcher residents, and to ensure that local taxpayers are not overburdened by the costs of unanticipated, inefficient and unmanaged growth and development; and
4. To require that all development be pursued with strict regard to the capability of the land to support it.

## **POLICIES**

1. To ensure that future development complies with the land use districts established in this plan.
2. Development is to be excluded from areas which are particularly unsuited for it, including those areas which have natural development limitations, and limited or no access. Land use and development densities will reflect topography, site conditions, proximity to town roads and commercial centers, and requirements for the economic and efficient provision of public services. Higher densities of development will be accommodated only where they can be properly served.
3. Land subdivision within all districts will be designed to ensure that the pattern of future land use and development does not adversely impact significant natural, cultural or scenic features, or result in the further fragmentation of resource and conservation lands.
4. Strip forms of development along town roads will be prevented. New development will maintain traditional, clustered forms of land use and development (e.g., farmsteads, hamlets, villages) with access to existing town roads.
5. To encourage and support federal and local conservation efforts.

Figure 10-1 - Proposed Land Use Map/Zoning Map



## APPENDIX A – HISTORIC AND CULTURAL RESOURCES

### Archaeological Resources

Archaeological resources include both prehistoric and historic sites, which often are no longer visible on the land. These include prehistoric settlements, hunting and fishing camps, trails, quarries, and burial grounds, as well as remnants of historic use, such as old foundations and cellar holes, dams, kilns and forges, unmarked cemeteries, and roads.

Archaeological sites, when found intact, provide a wealth of information about past ways of life; but because they are not readily apparent, these sites may be easily disturbed or destroyed. It is often not the artifacts themselves (arrowheads, pots, etc.) that are important (though these may attract interest for their historic or commercial value), but rather the context in which they are found.

The Vermont Division for Historic Preservation (VDHP) maintains information of known sites, which is provided on a need to know basis (to avoid scavenging). For planning purposes they have described more broadly defined “sensitive areas” in which archaeological sites are known or expected to occur. In Fletcher, sensitive areas have been delineated along the Lamoille River and its tributaries, and along the upper reaches of the Fairfield River in the northwest part of town. Delineations following two hundred foot setbacks along existing drainage ways are common; however, given the movement of streams and rivers over time, many early sites may be located farther away. Development proposals in these areas should be reviewed with particular attention given to the possibility of buried sites. Assistance with the identification, protection and/or excavation of sites is available from VDHP staff.

### History of Fletcher

Original inhabitants of the area, including the Abenaki and their predecessors, traveled the Lamoille and Missisquoi Rivers, and followed tributaries inland in seasonal subsistence cycles. Known sites of prehistoric settlement and use are generally located in the vicinity of major waterways in the region, including the Lamoille River drainage.

Fletcher's town charter was granted by Thomas Chittenden in 1781 while Vermont was still an independent republic. Sixty-five original proprietors were responsible for bringing new residents to the area. The first recorded settlement was made by the family of John Fullington, a New Hampshire man who built a log home here in 1787. The following year Fullington embarked with his family to settle in town, but died in transit following a meal of bad turnips. Mrs. Fullington continued on to make her home in Fletcher with her four children, and lived to the ripe old age of ninety-five.

Others soon followed. The town was officially organized in 1790, and the first town meeting was held on March 16th of that year. By 1791, when the first census count was taken, 47 people lived in town. Early families in Fletcher depended on the land for their livelihood. Most either worked farms and related enterprises, including logging, cider and syrup operations; farmsteads grew up along a developing network of roads. Large tracts of land were cleared, first for subsistence, then for commercial sheep and dairy farming. By the end of the nineteenth century, only the town's steepest and rockiest slopes remained forested.

Since Fletcher was located a considerable distance from existing markets, small industries and businesses were established to serve the needs of a growing community. These included potash and lye manufacturers, sawmills, tanneries, bucket and blacksmith shops, a wheelwright shop, a brickyard, starch factories, cider presses, skimming stations and creameries, and a number of stores. Ice harvesting for

refrigeration was a lucrative business prior to electrification; up to 27,000 blocks of ice were cut from Halfmoon Pond in one year. Small hamlets, including Fletcher Center, Binghamville, and East Fletcher, grew up in strategic locations. Fletcher Center was the center of local government and commerce for much of the town's history. The first store opened here in 1820. Another store built in the Center in 1839 (which burned in 1979) also served for many years as the post office, town clerk's office, and town library. Binghamville developed from 1830 on as a traditional mill town, with Stone's Brook providing a source of power for sawmills that remained in operation until 1927.

By 1880, Fletcher had been divided into ten school districts to serve the needs of local children. Schools were located in convenient locations around town.

Telephones arrived in Fletcher in 1908 through the Farmers Mutual Telephone Company. New England Telephone expanded into the area in the 1930s.

Electricity first reached Fletcher in 1923 when the Fairfax Falls generating station was constructed. East Fletcher was hooked up in 1939 through the Vermont Electric Cooperative; Binghamville and surrounding areas were not electrified for another year or so.



By the mid-1800s, Fletcher's settlement pattern and road network were well established. Fletcher was served by several stage coach routes until these were replaced by a rail line completed through the east side of town in 1877. East Fletcher grew as a station stop on the Montpelier and St. Johnsbury line (now the Lamoille Valley Rail Trail), and during the height of the railroad years had a weigh station, stockyard, and general store which sold grain and goods carried in by rail.

The same improvements which served to spur and support community growth also exposed Fletcher residents to the wider world, and to inevitable change. Fletcher's population initially peaked around 1850, when it numbered 1,084 (not to be reached again until the modern era). The Civil War years marked the beginning of a steady population decline, which continued well into the twentieth century. Fletcher's hill farmers, finding it increasingly difficult to make a living from rocky slopes, went west for cheaper, more productive land, or to urban areas for more gainful employment.

As the twentieth century progressed, the coming of the automobile and changing farming technologies and balance sheets encouraged more people to move on. Farms, fields and isolated stretches of road were abandoned and many former fields have reverted to forest, and others have given way to houses.

As the number of farms decreased, so did the number of businesses supported by the farming community. Fletcher Center, Binghamville and East Fletcher lost their importance as local commercial, manufacturing and rail centers in relation to growing regional centers in St. Albans and Burlington. One room schools and post offices were closed and consolidated while today Fletcher has one elementary school and one store, both located in Binghamville, and no local post office.

Residents who chose to remain in Fletcher adapted and persevered for many reasons, including strong ties to the land, family, community, and a way of life particular to the area. Beginning in the 1960s, they were joined by newcomers migrating north in search of affordable land and a more rural lifestyle. The town's long-standing population decline finally reversed, and the repopulation of the town has

continued unabated for the last several decades.

Fletcher remains a relatively isolated, rural, resource-based community. The farms still in operation have grown to absorb neighboring lands, and stand out as the principal land-based industry in town. The town's woodlands continue to support maple syrup production and a commercial logging industry. Sand, gravel and rock quarrying operations are scattered throughout. Small, home-based businesses also contribute to the local economy.

Fletcher also increasingly serves as a bedroom community for people who choose to make their home in town, but work elsewhere. Located within easy commuting distance of St. Albans, Milton and the greater Burlington area, much of Fletcher's recent growth may be attributed to its proximity to these employment centers. Many town residents no longer depend directly on the land for their livelihood, but their ties to the community are no less strongly held. Most residents appreciate Fletcher's rural setting, and have learned to adapt to the realities of rural life. The town's natural amenities also attract a seasonal community at Metcalf Pond.

Fletcher continues to grow and develop at a significant pace. The impacts of growth on the town's rural character, community services and facilities have been a concern locally since the 1960s. Due to the keen foresight of town officials and residents, Fletcher was one of the first communities in Franklin County to begin an ongoing process of planning for its future. This process continues today through periodic updates to the municipal plan and zoning and subdivision bylaws (2002).

To better implement the plan and bylaws, in 2002 the town shifted from a Zoning Board of Adjustment (ZBA) to a Development Review Board (DRB). This change affords the town improved efficiency in planning and policy implementation; a more consolidated and comprehensive planning and review process.

## Historic Resources

Historic resources, including historic sites, structures and districts, are more easily identified and surveyed. An initial survey of the town conducted in 1981 by the VDHP identified many structures, which have historic significance, as well as the two historic districts of Binghamville and Fletcher Center. More detailed survey information is available at the town office.

The **Binghamville Historic District** is listed as “an outstanding example of a typical mill town” that has undergone relatively little change in the 20th century. Architecturally, the village contains mid- 19th century to early 20th century 1-story frame houses with clapboard siding and gabled roofs. The Binghamville Church located at the intersection of two roads, stands as a focal point that defines the village center. Older houses are located on small village lots and are oriented in relation to each other and the road, with minimal setbacks. Stone’s Brook, which provided the source of power for the sawmills located along its banks, is identified as the outstanding natural feature in this district. In 1981, the Binghamville Historic District contained no nonconforming buildings. Since that time a store and a few more modern homes have been located here, but the district retains much of its original character.

The **Fletcher Center Historic District**, once Fletcher’s primary commercial center, includes the Fletcher Union Meeting House (Grange or Community House) and a number of historic structures near the intersection of the Fairfax and Cambridge roads. This too reflects a traditional settlement pattern of structures on small lots, oriented to each other and the road.

The **Fletcher Union Meeting House**, originally constructed in 1871, is listed on the National Register of Historic Places, and is now maintained by the Fletcher Historical Society as of November 2010. Their current plans are to continue with the efforts that have been made to keep the building going and incorporate some new ideas. In recent years, the Meeting House has been used for town meetings and community events, but the building's use is limited due to the septic system. Poor septic conditions also have limited amount of new development in Fletcher Center.

Not identified on the state's survey, but nevertheless of historic as well as local importance, are Fletcher's four cemeteries; the **Pioneer Cemetery** (Fletcher Center), the **Fletcher Cemetery** (in Binghamville), the **Bailey Cemetery** (on the Will George Road), and **River Road Cemetery**. The Fletcher Cemetery is the only remaining active cemetery. The Pioneer Cemetery is actively maintained while the other two historic cemeteries are showing signs of long term neglect. Farms and farm buildings were identified by local residents in the municipal survey as having historic significance. Also not inventoried, but increasingly considered of historic importance, are landscape features associated with past or abandoned uses, including old foundations and cellar holes; dams, quarry and mill sites; stone walls and wire fences marking old field and property boundaries; stone posts, "witness trees" and other boundary markers; and old orchards, sugar bushes, woodlots, and logging sites. Unfortunately, these features often are not viewed as having any value and are readily disturbed, removed or demolished.

### Cultural Features

Cultural features are community resources that help us understand our shared past. These include archaeological sites, historic sites, structures and settlements, and larger cultural landscapes that reflect the character of a particular place, time, or lifestyle. Fletcher's cultural resources offer a link to the past, help define the town's present character, and provide a context for future growth and development. As such, the town's cultural features lend much to its identity, character, and sense of place deserve consideration for preservation. The following includes a brief description of the town's cultural resource base; it is not intended to represent a complete inventory.

## APPENDIX B – GEOLOGY AND EARTH RESOURCES

### Bedrock Geology

Geologic events of the distant past have directly affected Fletcher's topography, soils and drainage patterns, which in turn have influenced patterns of local development. Fletcher is underlain by bedrock formed from sediments and volcanic materials deposited some 600 million years ago, which were then altered and hardened from the heat and pressure of mountain building. Over the millennia, the weathering and erosion of less resistant rock resulted in the Fletcher's existing relief. Locally, bedrock consists mainly of highly metamorphosed greywacke, phyllite, gneiss and schist associated with Green Mountain formation.

Geologically speaking, northwestern Vermont has been relatively inactive in recent decades. Over the long term, this region is susceptible to earthquake activity centered mainly to the north and west. Seismic events, such as the April 20, 2002 magnitude 5.1 earthquake centered 15 miles southwest of Plattsburgh, NY show that the region is susceptible to quake activity. On a more local level, occasional shifts in underlying bedrock have resulted in minor tremors that have been felt locally, but have caused no damage.

### Surficial Geology

Periods of glaciations, the most recent ending approximately 11,000 years ago, also dramatically affected the look and lay of the land. Glacial materials deposited during periods of advance and melt including glacial tills, outwash sands and gravels, and lake bottom sediments cover underlying bedrock to varying depths. These are the parent materials from which most of Fletcher's soils have developed. Also found on the surface in isolated locations are organic peat and mucks that have accumulated in upland lowlying areas, along Black Creek south of Metcalf Pond, and more recent flood deposits along local rivers and streams.

Glacial tills consist largely of unsorted, poorly drained materials. Exposed bedrock, boulder surfaces, and shallow soils are common, particularly in the hilly and mountainous upland areas of town. The suitability of tills for forestry, farming, and development varies widely depending on depth to bedrock, slope and drainage. Till soils often have fragipan layers which impedes drainage. Where tills are thin, water is allowed to infiltrate into underlying bedrock and recharge local ground-water supplies.

Level terraces of well sorted, well drained sands and gravels deposited during glacial melt are found mainly along the Lamoille River valley, including an extensive area south of Binghamville. Smaller kame terrace deposits are scattered throughout town. These deposits are often good sources of sand, gravel and groundwater, are fairly good farmland, and are well suited for development. As such, they represent an important resource to the town that may be subject to competing but not always compatible uses.

Lake bottom silts and clays, located in the vicinity of Fletcher Center and at greater depths in the Binghamville area, are poorly drained and generally unsuited for most types of development. Well log data suggest, however, that when left intact, these clays may cap and provide some protection to underlying bedrock aquifers.

### Earth Resources

No commercial mineral deposits have been located in Fletcher; however, outcrops near West Fletcher and Binghamville have been quarried for crushed stone. Sand and gravel deposits scattered throughout



town also have been worked over the years.

There is a growing demand throughout the county for sand and gravel for use in construction and road maintenance. As larger deposits are depleted, smaller deposits may become more economically viable, and more important to the town. These deposits are a valuable resource.

The environmental and social impacts of quarrying and extraction operations also need to be considered prior to development.

Many adverse impacts can be minimized through appropriate site planning, development and reclamation.

### **Geologic Features**

Also of note are two geologic features located in Fletcher that were identified as part of a statewide natural resource inventory conducted in the 1970s. The West Fletcher Esker, a 400 acre glacial feature of statewide significance, extends 1.5 miles along a tributary of Wilkins Brook. Sections of this sand deposit have been subject to extraction, but it retains its integrity as a significant glacial feature.

The second feature is a naturally occurring Rock Cave located in the vicinity of Metcalf Pond. This cave, surrounded by forestland, is historically renowned as a fugitive hideout.

## APPENDIX C – WORK PROGRAM

<b>Task</b>	<b>Responsible Party</b>
<b>Planning and Implementation Process</b>	
Maintain and update the Fletcher Town Plan as the town's official policy document with regard to growth, development and the preservation of Fletcher's rural character. At minimum the plan shall be updated for readopting every eight years in accordance with statute. Seek regional approval of the Fletcher Town Plan in order to retain related benefits under state law, including the requirement that other local, regional and state plans be compatible with regionally approved municipal plans.	Planning Commission and Selectboard
Participate in regional and state planning and permitting. This includes participating as a statutory party in state Act 250 and Public Utility Commission (Section 248) proceedings as appropriate.	Planning Commission and Selectboard
Provide annual reports of planning and permit activities for inclusion in the town report.	Zoning Administrator
Provide updates of planning commission activities in the town newsletter, website, and other social media.	Planning Commission
Submit a yearly planning program budget request to the town Select Board for inclusion in the town budget and consideration by voters.	Planning Commission
Seek, in association with the Selectboard, administrative fees, planning funds, grants, and other sources of funding as appropriate to carry out the planning program, including plan implementation efforts.	Planning Commission and Selectboard
Review and update planning commission bylaws and rules of procedure as necessary to ensure openness, fairness and accountability.	Planning Commission
Conduct a yearly meeting between the Planning Commission and the Development Review Board to ensure communication about planning and zoning issues in the community. Encourage attendance from representatives of the Selectboard and Regional Commissioners.	Planning Commission, Development Review Board and Selectboard
Maintain contact and communication between Fletcher's local officials, boards, and the planning commissions of adjoining municipalities.	Planning Commission and Selectboard
<b>Community Profile</b>	
Current and recent trends will be periodically reviewed and discussed with town residents.	Planning Commission and Selectboard
<b>Natural and Cultural Resources</b>	
Review land trust and similar applications for conformance with the goals and policies of the town plan.	Planning Commission and Selectboard
Form a municipal conservation commission and/or land trust to assist with the identification, inventory, management and protection of important resource lands within the community.	Selectboard

<b>Task</b>	<b>Responsible Party</b>
Develop watershed management plans and monitoring programs for Metcalf and Halfmoon Ponds.	Planning Commission and Selectboard
Request completion of and participate in the development of a state wildlife management plan for the Gilson Mountain Wildlife Management Area.	Planning Commission and Selectboard
Fletcher will work with Cambridge, Northwest Regional Planning Commission, and Lamoille County Planning Commission to extend the Lamoille River model of the Main Stem, and support Cambridge's efforts to reduce flood related closures on Pumpkin Harbor Road/Cambridge Road.	Planning Commission and Selectboard
<b>Housing</b>	
Review Fletcher's Development Regulations to eliminate any provisions and or practices that may exclude affordable housing.	Planning Commission
<b>Economic Development</b>	
Inventory and survey home-based occupations and businesses within the community to identify needs and resources to encourage growth compatible with the rural landscape.	Planning Commission
<b>Transportation</b>	
Study the designation of on-road bike routes in town, including the adoption of "share the road" policies and signing.	Selectboard
Participate on the Regional Transportation Advisory Committee (TAC) to coordinate transportation planning, road maintenance and improvements with adjoining towns, and to ensure that the interests of the town are adequately addressed by the region and state.	Selectboard
<b>Energy</b>	
Coordinate annually with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fletcher residents.	Planning Commission and Selectboard
Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.	Zoning Administrator
Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in Fletcher and to educate residents about the goals of this plan.	Selectboard
Conduct an energy audit of municipal and other public buildings to identify weatherization retrofits.	Selectboard
Promote and provide information about the GoVermont website ( <a href="https://www.connectingcommuters.org/">https://www.connectingcommuters.org/</a> ) which provides information citizens about ride share, vanpool, and park-and-ride options.	Selectboard

<b>Task</b>	<b>Responsible Party</b>
Plan for and install electric vehicle charging infrastructure on municipal property.	Selectboard
Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health ( <a href="http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPD_P_PA&amp;N%20Complete_streets_guide_for_VT_communities.pdf">http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPD_P_PA&amp;N%20Complete_streets_guide_for_VT_communities.pdf</a> ).	Selectboard
Investigate the installation of a municipal solar and/or wind net-metering facilities to off-set municipal electric use.	Selectboard
Investigate installation of a community-based renewable energy project.	Selectboard
Provide firefighters with training in fighting fires on structures that have solar installed.	Selectboard
Develop and adopt a municipal solar screening ordinance.	Planning Commission and Selectboard
Investigate the need for a municipal park and ride facility.	Planning Commission and Selectboard
<b>Facilities and Services</b>	
Develop a capital budget and program, and impact fee ordinance, for the financing of public facilities and infrastructure as part of an overall growth management strategy.	Planning Commission and Selectboard
Invite NRPC staff and Agency of Commerce and Community Development staff on a site walk of Binghamville. Determine if Binghamville would be eligible for state’s Village Center designation program.	Planning Commission and Selectboard
Identify and protect a public water supply source design to serve the Binghamville area.	Selectboard
Find opportunities to better use the Fletcher Elementary School as a community resource; develop and expand existing library holdings at the Fletcher school for community use.	Planning Commission and Selectboard
Provide financial support for educational opportunities for town health officer.	Selectboard
Continue to investigate options for the cost-effective provision of emergency services and police protection as appropriate; support the development of a local community watch program.	Selectboard
Make needed improvements to the Metcalf Pond beach and parking areas; acquire additional public access to Metcalf Pond; provide other amenities (e.g., picnic tables, trash cans) as appropriate.	Selectboard
Petition the US Postal Service for the use of “last line identity” (the use of “Fletcher” as the resident town) in local mailing addresses.	Selectboard

<b>Task</b>	<b>Responsible Party</b>
Maintain the inventory all public lands to assess most appropriate use (firewood, wildlife habitat, recreation, education, sale, etc.); develop management plans as appropriate.	Planning Commission and Selectboard
Fund maintenance of parcel mapping to strengthen community services such as permit review, listing and tax services and general planning efforts.	Selectboard
Develop a maintenance program for town cemeteries.	Selectboard
Plan for the development of a small town green or common and public bulletin board to be centrally located in the Binghamville area.	Selectboard
Develop policies to govern the selection and timing of sale of town owned properties to ensure consistency.	Selectboard
Create a Community Land Trust.	Planning Commission and Selectboard
<b>Land Use</b>	
Conduct a review of Town Plan.	Planning Commission
Conduct a review of Fletcher Development Regulations and update regulations, including district land use designations, for conformance with the updated town plan. Also review for simplicity, clarity, ease of use, and effectiveness.	Planning Commission
Utilize GIS-based parcel maps to track changes in land use and subdivision patterns over time.	Planning Commission
<b>Other</b>	
Adopt a Local Emergency Operations Plan each year.	Selectboard
Adopt a Hazard Mitigation Plan (HMP) .	Planning Commission and Selectboard
Adopt Vermont Road and Bridge Standards.	Selectboard