

West Fairlee 2023 Town Plan

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**The West Fairlee Town Plan was prepared by the
West Fairlee Planning Commission
with assistance from
The Two Rivers - Ottauquechee Regional Commission
Woodstock, Vermont**

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I. Introduction

Just about all of us in West Fairlee live here because we appreciate its rural character, the proximity of farms, woodlands, and streams, and its small-town feel. All of us want to secure these same characteristics for our future and our heirs.

One of our goals for this Plan is to help our town foster connections where current and future residents can meet and be part of the greater West Fairlee community. We believe the only way to bridge some of the differences is through communicating and working together recognizing our shared values and our common interest in our town's future. It is the responsibility of the governing boards and commissions in town and the citizens who comprise West Fairlee to seek a consensus on our town's future.

The West Fairlee Town Plan is the product of this consensus - a blueprint for West Fairlee for the next eight years. What kinds of development do we want or not want? What services do we need? What buildings or infrastructure should the Town have and how should we get them? Are our roads sufficient? Should we generate some of our own electricity through solar power? How do we feel about the waters that flow through town and the wildlife that live here? What can and should we do to still have farms and large tracts of forest? What is the need for safe and affordable housing and how can we get it?

This Plan answers those questions and more as best as we can. Where we agree and feel strongly, it is specific and direct. Where we have broad agreement but differing approaches, it is more general. It provides background to frame policies which will guide the town from where we are today to where we want to be in the future. Many of the policies are meant to guide the actions of the town government and inform town budgets. Some are aimed at federal or state agencies, and other policies will affect individuals and businesses in certain instances, such as if they propose a project subject to Vermont's Act 250 permitting.

The Town Plan is used by a variety of entities:

- The Selectboard uses the Town Plan as its public document that states the policies of the town
- The Planning Commission uses the Town Plan as a document for providing policy background
- The Conservation Commission uses the Plan to identify important natural resources to its residents
- The State of Vermont uses the Town Plan to determine whether West Fairlee is eligible for certain state grants and project funding
- The Public Service Board uses the Town Plan during review of electric generation projects under Section 248 proceedings
- The District Environmental Commission reviews development projects for conformance with the Plan during Act 250 proceedings

Most importantly the Town Plan acts as a resource for current and potential residents to use as a vision for describing to ourselves and to others what we want West Fairlee to be.

A. Planning In West Fairlee

This Plan was largely written by the West Fairlee Planning Commission; that is one of their duties. But this is not the Planning Commission's plan, it is the Town Plan. It was written with input from other commissions, town services, and West Fairlee residents. It was approved by the West Fairlee Selectboard. This town plan replaces the town plan dated March 7, 2017. Under Title 24 Chapter 117 in Vermont Statute, town plans must have certain elements to be a legal plan.

This Plan has also been modified to anticipate development proposals that may apply under Act 250 (10 V.S.A., Chapter 151). Under Act 250, before a Land Use Permit can be granted by the District Environmental Commission, it must be found that the proposed development or subdivision is in conformance with the West Fairlee Town Plan. Therefore, it is essential that the goals, policies and recommendations of this Plan are written clearly and specifically, making the vision of West Fairlee's residents very apparent to the reader.

The Plan states goals, policies, and recommendations for action that will guide future growth and the development of land, public facilities, and services, and to protect the environment.

Goals, policies, and recommendations of a plan must be viewed as an integrated, interdependent system of statements that have clear relationships to each other and to the body of the plan. The Town Plan addresses critical areas that relate to growth and development. Goal statements, policies and recommendations describing specific action steps are included in each chapter.

The definitions of these terms must be made clear for the understanding of each plan section as well as the coordination of the plan sections with each other.

Goals are long-range aspirations which serve to establish the Town's future direction. The "goal" describes the end condition that is sought;

Policies are courses of action to be followed by a government, institution, body, or individual for the attainment of desired objectives;

Recommendations are actions suggested to achieve objectives and may be used to solve existing problems or avoid their recurrence. These may include performance criteria, specific strategies, changes in administrative procedures, or suggestions for further study.

B. Community Input

The development of this Plan was aided significantly by the results of a town survey of residents and other property owners completed in 2017. Of 508 surveys mailed, 105 usable surveys were returned, a 21% response rate. The survey covered a broad range of topics from the local economy, roads, housing, municipal services, and future land use. The survey not only provided a vision for the Plan but also helps guide committees and the Selectboard on decisions regarding the community. Public input and participation were also aided through a Community

Forum that was held in September of 2017 where discussion centered around the question of “What should be on West Fairlee’s Bucket List?”. The group was split into various breakout sessions where attendees contributed their ideas and were later summed together to identify the priorities. The planning commission has also invited other committees to provide input to the Town Plan’s goals, policies, and recommendations.

C. West Fairlee in Brief

1. Location

West Fairlee is one of seventeen communities in Orange County, located in the Upper Valley of the Connecticut River. It is bordered by Bradford on the north, Fairlee on the east, Thetford on the south, Strafford on the southwest, Vershire on the West and Corinth on the northwest. West Fairlee has a total land area of 22.6 square miles or 14,464 acres. According to the 2020 Census the population of West Fairlee is 621, including 374 households and 210 families.

2. History of West Fairlee

The history of West Fairlee can be found on the Town website or by contacting the Historical Society.

3. Population Patterns and Projections

Existing population characteristics, past trends and future projections are all major considerations in the town planning process.

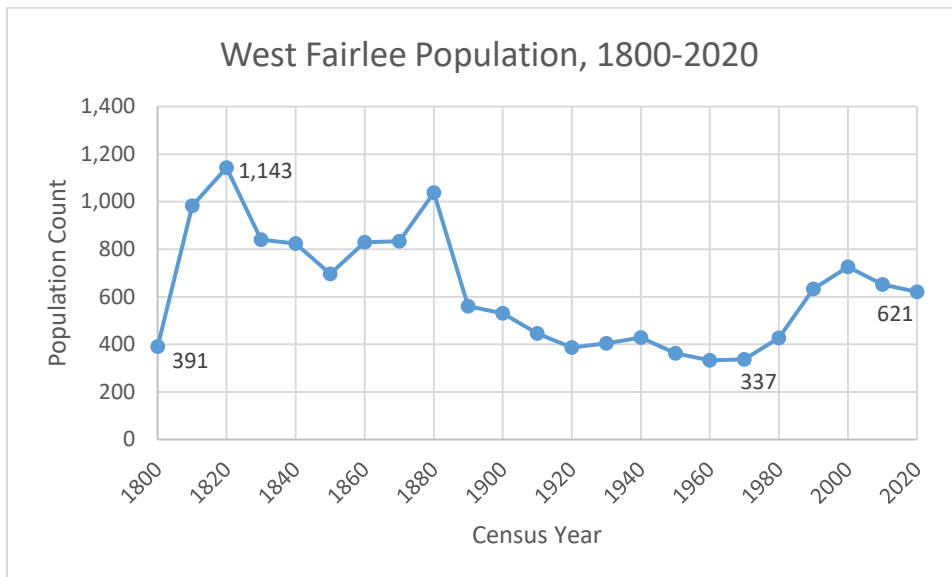


Figure 1 – West Fairlee Historical Population

Like much of Vermont, West Fairlee’s population declined and then was essentially static for decades until around 1970 when significant population increases took place, primarily from in migration. Now, like much of rural Vermont, West Fairlee’s population is not growing.

Percentage Population Change 1980-2020									
	1980	% change	1990	% change	2000	% change	2010	% change	2020
Bradford	2,191	15.1%	2,522	3.8%	2,619	6.8%	2,797	-0.3%	2,790
Corinth	904	37.6%	1,244	17.4%	1,461	-6.4%	1,367	6.4%	1,455
Fairlee	770	14.7%	883	9.5%	967	1.0%	977	1.1%	988
Strafford	731	23.4%	902	15.9%	1,045	5.1%	1,098	-0.4%	1,094
Thetford	2,188	11.4%	2,438	7.3%	2,617	-1.1%	2,588	7.2%	2,775
Vershire	442	26.7%	560	12.3%	629	16.1%	730	-1.2%	721
West Fairlee	427	48.2%	633	14.7%	726	-10.2%	652	-4.8%	621

Figure 2 - Population Change in West Fairlee Area

D. Age of Population

The following table shows how the population of West Fairlee has changed with respect to age using data collected from the American Community Survey (ACS) for 2010, 2015, and 2020. ACS is the only detailed data available now due to changes in how the Census collects information. It can have large margins of error on the local level, but overall trends are still valid. Three facts stand out most clearly in this data. 1) There has been a slight decline in children under five years old since 2010, with a more marked decline of youth and young adults. 2) The working age population has declined somewhat as the baby boomers age out of this cohort. 3) The retirement age population has increased significantly, with residents over age 65 comprising an estimated 25% of the total population; up sharply over the last ten years.

West Fairlee Age of Population, 2010 – 2020

	2010	2015	2020
Under 5 years	5.9%	6.7%	2.0%
5 to 24 years	30.5%	22.1%	23.9%
25 to 64 years	54.4%	57.8%	49.1%
65 + years	9%	13.3%	24.9%

Figure 3 – Age of Population, American Community Survey, Table S0101

These patterns are roughly consistent with changes in the state’s population. While we might spend less for education in the future because we will be sending fewer students to school, we will need increased funds to support services and facilities necessary for the well-being of the

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Town's much larger population of aging and aged citizens. At the same time, the number of West Fairlee's citizens in the prime of their working lives will have decreased.

This combination of factors highlights the need for economic development, affordable homes, and new jobs in the West Fairlee area. It is also important that there be access to jobs in neighboring towns so that people of working age, and most especially young people just beginning their working lives, will not find it necessary to move away to support themselves and their families.

II. Economic Development

Economic growth and change affect community development, future land use, and the resources and activities of the town. West Fairlee's proximity to the Upper Valley employment centers of Hanover, Lebanon and White River Junction provides a wide array of easily available jobs and goods and services for residents, resulting in most economic activity occurring outside of town. Although located close to this larger economic center, West Fairlee remains a relatively rural and undeveloped area. Seventy-two percent of survey respondents agreed that West Fairlee needs more businesses in town. Planning for economic development that can take place in our town is important to ensure a healthy and mixed economy that adjusts to the changing needs of our residents.

A. Employment

Within town there are few formal opportunities for employment beyond self-employment. According to the Vermont Department of Economic and Labor Market Information, there are only 5 business establishments within town, which includes both the elementary school and the town office.¹ This no doubt misses many small businesses. Though there are few places to work in town, we have plenty of jobs available in the greater area, as can be seen by the 2020 unemployment rate in West Fairlee, which was at 2.1%, well below the Orange County rate of 3.8%.² This rate continues to be lower than many other communities and counties around the state, serving as a draw when combined with our livability and affordability for new residents to seek out West Fairlee.

Residents largely work outside of town, with the average commute time being just over 27 minutes.³ Town residents work in a wide variety of occupations with the largest sector being (32%) in management, business, science, and arts occupations.⁴ Some of these residents no doubt work at Dartmouth Hitchcock Medical Center, Dartmouth College, or the Veterans Affairs Hospital, and so it is important to see that those statistics drive opportunities for carpooling, van pooling or other public transit use. The next largest group for employment is in sales and office occupations (21.6%), followed by construction and farming-related occupations (18.2%).

B. Economic Opportunities

Prior lack of high-speed internet has been alleviated by broadband development supported in part by federal and state funding to telecommunications companies that have deployed fiber and other infrastructure. This is a positive development to help support economic development opportunities in West Fairlee. Fiber optic cable throughout town would make opening a

¹ Vermont Department of Labor, *Economic & Labor Market Information*, Business Finder, 2020

² American Community Survey, Table S2301: Employment Status, US Census Bureau, 2020

³ American Community Survey, Table S0801: Commuting Characteristics By Sex, US Census Bureau, 2020

⁴ American Community Survey, Table S2401: Occupation by Sex for the Civilian Employed Population 16 Years and Over, US Census Bureau, 2020

business in town more viable, as well as provide the opportunity for home businesses to start or grow, helping to reduce the energy use of commuting to the regional employment centers.

West Fairlee's Village Center Designation lapsed during the creation of the new Town Plan, but a renewal is being prepared. Village Center Designation was created by the Vermont legislature to recognize and encourage local efforts to revitalize Vermont's traditional village centers. The focus of the program is to support commercial activity in the center of Vermont's villages. Benefits of Village designation to property owners, business owners, lessees and the village include:

- tax credits for building rehabilitation and code improvements, such as handicapped access;
- priority consideration for all grants administered through the State's Municipal Planning Grant Program, VTrans, VT Agency of Natural Resources, and the Community Development Block Grant Program (CDBG);
- technology tax credits to assist in the funding of data and network installations or improvements.
- A special assessment district in a village may use funds for operating costs and capital expenses.

In addition to assisting communities with maintaining their Village designation, the Two Rivers-Ottawaquechee Regional Commission has funding to assist the Town with environmental assessment of properties that may be contaminated with hazardous or petroleum wastes. One focus of these funds is on redevelopment of village center properties, particularly for workforce housing or other economic development projects.

Respondents to the 2017 town survey favor more of the following businesses in priority order:

1. Restaurants/ coffee shops
2. Professional services (doctor, lawyer, accountant)
3. Home-based business
4. Agriculture
5. Retail

To provide current residents the resources they seek and promote younger families moving into town, the town will need to look further into ways to diversify economic activity and opportunities (such as for telecommuting) in town while maintaining the same character that residents value.

C. Economic Development Goals, Policies and Recommendations

Goals

1. More local jobs available in small businesses.
2. The region's employment options are available to residents.
3. Place-based businesses build on our outdoor recreation, agriculture, or forestry opportunities.

Policies

1. To allow for small businesses throughout town consistent with the community's ability to provide services.
2. The expansion of high-speed internet and cell service is encouraged.
3. Economic Growth that supports and enhances our working landscapes is encouraged.
4. Increased Transportation options are encouraged to better enable residents to affordably access Upper Valley jobs.
5. To renew and maintain Village Center Designation.

Recommendations

1. The Selectboard should support efforts to install and encourage high speed internet.
2. The town should work with cell carriers to increase cell phone coverage.
3. The Town should work with the USDA, the county forester, area non-profits and others to increase opportunities to make a living off our natural setting, including production of value-added agricultural and forestry products.
4. The town's surface and ground waters are an important economic asset that should be protected by working with the Agency of Natural Resources (ANR).
5. The town should form a committee of community members to assist in establishing new businesses.
6. The Planning Commission should work with village business owners to take advantage of the benefits of Village Designation.

III. Land Use

A. Current Land Use

The citizens of West Fairlee enjoy much about the way their town is right now - our small, densely built village, our open fields and the undeveloped rolling hills covered by dense forest that define West Fairlee. West Fairlee is a quiet, mostly residential community that includes a state-designated village. Most residents work out of town and, in general, appear comfortable with being a residential community.

Many of the town's residents are spread throughout the town, living along the network of "back roads," many of which are unpaved. This development of housing mostly along West Fairlee's roads helps create the open feel that generates the sense of rural character we choose to maintain. Most townspeople are satisfied with the present balance of paved and unpaved roads.

Because of the natural resources that exist in West Fairlee, there are abundant formal and informal opportunities for outdoor recreation such as hunting, fishing, hiking, cycling, cross-country skiing, snowmobiling, horseback riding, swimming, and others. The availability of these opportunities shapes the rural character of the Town.

Maintaining the balance between a denser concentration of development in West Fairlee's village, and the diffuse residential development of the surrounding areas is essential to maintaining the Town's rural character.

Home businesses, light industry and other development that can strengthen and contribute to the rural character within the village are not only welcome but encouraged. There is active support for adding more small businesses to the village and throughout the town.

B. Tax Rates and Land Use

Property tax is the main source of revenue Vermont towns use to cover their expenses.

The largest annual expenses for West Fairlee's citizens are the cost of educating our children, followed by maintenance of town roads. Much, but nowhere near all, of the school budgets come from state education funds that all property owners in the state contribute to. The town's tax rate is a combination of the state education property tax, additional town property taxes to pay for education above the state per pupil grant, and property taxes to maintain and improve town roads. A smaller part of the town budget is for office staff and town buildings.

More development in town does not always lead to lower taxes. As a town's tax base (Grand List) increases, demands for services also will increase, and as these demands are met, budgets will also have to grow. It is important to understand that tax *rates* are not taxes. A low tax *rate* in a town with high property values might equal the same tax as a high tax *rate* on a similar property in a town with low property values.

From a land use perspective, it is useful to consider what kind of community we want, and how we can make this vision a reality. As mentioned above, much of the current landscape has what

we want. But we want additional things as well – more housing for our young families and elderly, better internet access and cellular service, and more businesses in the village. How can we help these to happen *and* keep the land use we like *and* do so in a way that does not create undue tax burdens?

C. Overall Land Use Goals

When considering development proposals, the well-being and interests of Town residents should be the Town’s primary concern.

Responding to continuing business growth in Lebanon and Hanover, residential development has been extended in the Upper Valley through Norwich, into Thetford, then into Fairlee, and so on. Perhaps not in our immediate future, but West Fairlee will likely have to address this challenge eventually. Some would prepare for it now, by putting language in our town plan that would have the effect, through Act 250, of requiring land developers to conform to our wishes.

Most of West Fairlee’s history has taken place in the absence of any formal regulation of land use. Some residents are skeptical about the alleged benefits of Act 250 and distrust those who would limit the rights of property owners to do whatever they may want with their land. They would prefer this plan not to include language that would restrict future land use decisions. All discussions of land use are centered around the natural tension between how much development should be regulated by local government so that what one person does with his or her land does not adversely affect adjoining property owners, and so that the common good of West Fairlee residents is protected.

This is the challenge for West Fairlee in the future: How to reconcile these two perspectives? More than half of the people who answered the 2017 survey (65%) say West Fairlee should have zoning regulations and 71% indicated that the Town should adopt regulations to control how land is subdivided.

In the short term, the absence of mandatory language in this land use section probably would have little effect. In the future as development occurs, we hope that the Town will be ready for the “speculator” or “outside developer” scenario described above. It is much easier to manage and guide development trends by being proactive. We urge all townspeople with differing perspectives to continue to talk about the future we want, and how to get there. To encourage this discussion, this plan will recommend a series of continuing and frequent community meetings devoted to finding a path to achieving the goals of this plan.

In summary, the following goals are important to our town:

- Remain a rural town by supporting current land uses.
- Plan for the controlled and orderly growth of the town, utilizing a pattern that maintains West Fairlee’s rural character.
- Promote a healthful environment for our citizens and ensure adequate and clean waters and air.

- Encourage the development of enterprises in West Fairlee that provide basic services for citizens, which will enhance and improve the rural way of life that benefits us.
- Ensure necessary public facilities and services within a written plan at a reasonable cost through annual and capital budget planning.
- Provide recreational opportunities for townspeople.
- Help provide employment and housing opportunities that allow for affordable living in West Fairlee.
- Strike a balance between the property rights of individuals, and the rights of all residents and the needs of our community.

D. Land Use Regulations and Act 250

As suggested previously, the residents of West Fairlee historically have generally taken a “no regulation” stance when zoning has been considered. Towns without land use regulations are always at risk when a commercial development or subdivision is proposed. Because of this, State legislators have designated all towns such as West Fairlee without both zoning and subdivision regulations as “1 Acre Towns” for the purposes of review under Act 250. This designation means the following:

- Any commercial or industrial developments of over one acre of property shall trigger a review under Act 250.
- Subdivision of land into six or more lots within five years shall trigger review under Act 250.

Under Criterion 10 of Act 250, any proposed project must conform to clearly specified mandatory policies in all duly adopted local and regional plans to ensure that new development respects the wishes of Vermont citizens about the future of their town and region.

The Environmental Court has often found it difficult to interpret town plans in a regulatory proceeding because of their often vague and non-specific language. Town Plans are considered visionary documents, and though not intended to be the word of law, will be used by the Environmental Board for direction if zoning laws do not exist. Considering that West Fairlee does not have land use regulations at this time, the town must specify the standards it expects a developer to meet if it wants the Town Plan to have controlling weight under Act 250. Where we have chosen strong language in some instances it is to ensure that the Town Plan gives clear direction to an environmental board if the need arises.

For those projects not requiring Act 250, this plan creates guidelines that should be considered as strong recommendations if the town ever does create land use regulations.

E. Future Land Use

One of the primary considerations of this Plan continues to be how land is used and will be used in the future. Many decisions about land use, once made, cannot practically be reversed. Farm

fields turned into housing units, development of scenic areas, and construction practices which result in long term soil erosion or other ecological damage are examples of practices that shall be carefully considered and evaluated by the Town prior to any change in land use or construction. Any development plan shall consider the impact of proposed changes in land use on the preservation of land for this generation and for future generations. Development proposals must promote the public benefit. Development proposals must not have a harmful negative economic impact on the Town or any of its citizens. Proposals must not limit citizens' right to the use and enjoyment of their property. At the same time, the Town must use discretion and not prejudice any individual.

The Town presently, and in the future, needs land for public buildings, parking areas, recreational areas, schools, access routes, town forest land protecting water resources, and for various other facilities. The Town must regularly assess public land needs and, when necessary, recommend purchases or acquisition to the voters. Town investments in infrastructure should not be made to the detriment of viable agricultural, conservation or recreation lands.

F. Commercial Development

There is broad consensus in West Fairlee about what we want the town to be like in the future - pretty much the same as it is now. We enjoy living in a rural community, close to the fields, woods, and streams. Most accept that change will come someday, but do not want to hurry it along. When there is new development, we agree that it shall proceed so as to have as minor impact as possible on our traditional views, trails, and rural atmosphere. There is less agreement, as was indicated earlier, about how best to ensure that our desires and expectations are met.

Commercial development could potentially take place in many parts of town, provided that it takes place in certain areas and is of a nature that does not create undue impacts.

Policies

1. Where it is the best alternative, development shall be located in clusters set back from State or Town roads.
2. If feasible and practical, existing buildings or parts thereof shall be reused for commercial development.
3. Large parking or delivery areas shall not be located in front of commercial buildings but at the sides or rear of such buildings. Where feasible, parking areas shall be shared among adjacent uses.
4. Illuminated commercial signs shall be illuminated from above.
5. A landscaped buffer, preferably of native plants and trees, shall be part of any new construction adjacent to State or Town roads to maintain the rural character and appearance of the location.

6. To minimize paved or impermeable areas, all curb cuts to State or Town roads shall be shared, when possible, and conform with the Town's "Highway and Driveway Access Ordinance" and required Access Permit.
7. Outside the village, West Fairlee shall be open to light manufacturing or other commercial development, compatible with the area's agricultural/residential character. Commercial development, except primary retail, shall not be limited to the designated village area.
8. Industrial development shall be appropriate in West Fairlee only if it preserves and is consistent with our agricultural/residential character.

Included in this Plan are maps of current and future land use areas. The data on these maps, particularly road names and designations, are based on available data at the time this Plan was written.

Future Land Use is categorized in this Plan into one of the areas described below and depicted in Map #1.

G. Village Area

West Fairlee Village is an area of concentrated development that provides a sense of place or identity, a center for community interaction, and a contrast to the surrounding rural countryside. As the town grows, its residents want West Fairlee Village to continue to fulfill these important functions. It should be noted that our Village Area and the requested state Village Center Designation might not match. This is common, as the state tends to tightly draw its boundaries for designation.

The Village Area serves as the town center, allowing the highest density development of all Future Land Use Areas in this Plan, providing residential, commercial, and other uses compatible with a community center. Intensive land use in the Village Area will protect other lands in West Fairlee from scattered development and will help prevent strip development along Route 113, as well as the attendant costs and negative consequences of these types of development.

H. Village Area Goals, Policies, Recommendations

Goals

1. To maintain a viable village center through good planning and reasonable subsequent development.
2. To strengthen the existing 'sense of place' in West Fairlee Village by encouraging development in this Town center.

Policies

1. West Fairlee Village should continue to accommodate a mix of housing types.

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2. Higher-density housing is encouraged in the Village Area, both traditional single-family dwellings and multi-family units. This area is especially appropriate for multi-family and senior housing. However, density in the village is naturally limited by the ability of the soils to accept wastewater without impacting drinking water wells.
3. Business development should be encouraged in the Village Area but must be carefully reviewed to ensure that the activity will be conducted in a manner which will not be likely to result in undue or unreasonable adverse impacts on nearby residences or other businesses or on town services, facilities, and natural resources.
4. The scale of business development in the Village should be in keeping with its rural character.
5. Rehabilitation and renovation of structures and older buildings of historic merit is encouraged, when economically feasible and practical, to enable new uses of property and to avoid obsolescence.
6. Major public investments, such as improvements to Route 113 or Route 244, shall not unreasonably or unnecessarily jeopardize or endanger the character of the Village Center. Prior to the commencement of plans, state planners must consult with the Town and affected property owners regarding these types of activities.
7. The Town supports bicycle/pedestrian enhancements that will promote walking, bicycling, and safety.
8. Commercial development in the village shall be retail, small-scale cottage industry or service oriented.
9. Newly constructed buildings must be of a size and scale compatible with already existing buildings in the Village Area.
10. Traditional building massing, forms and materials must be used within this settled area.
11. Within the Village Area, home businesses and small-scale cottage industries are deemed to be uses compatible with existing uses.
12. Since any development within the Village Area may have an impact on the existing water supply due to the limited space, developers must prove that their project will not have unmitigated and undue negative effects on public or private water supplies within this area.

Recommendations

1. Through a series of community meetings, the Planning Commission and other Town officials should begin to define and actively seek out opportunities for commercial development in the village.
2. The Town should consider a very basic form of zoning to register new buildings, ensure they are set back from lot lines and protect water quality.
3. The town should seek and maintain Village Center Designation for West Fairlee village.

I. Agricultural/Residential Area

The Agricultural/Residential Area is comprised of all lands not designated as Village or Low-Density Forest. The purposes of the Agricultural/Residential Area are to preserve the working rural landscape, to protect lands with an economic capability for agriculture or forestry, and to allow for a lower density development of residences and businesses that are compatible with this type of area.

As a general guideline, a small business enterprise is any private business that employs or will employ 50 or fewer employees on site year-round. The term “rural industrial” includes any use of land or structure for the provision of a commercial activity that primarily processes material extracted on site or material that is a raw agricultural or forest product.

J. Agriculture/Residential Area Goals, Policies, Recommendations

Goals

1. To maintain the Town’s working landscape and high-quality rural character, preserving its scenic beauty and the natural resources of the Town while allowing for moderate growth.
2. To encourage agriculture of all varieties throughout West Fairlee.
3. To support new agricultural businesses provided that they continue to maintain the rural character of the Town.
4. To protect productive forest and farmland.
5. To protect the right of residents to the quiet enjoyment of their properties.

Policies

1. Projects that have undue adverse effects on the rural setting and conflict with the existing working landscape must not be located in this Area.
2. Residential development and commercial or industrial projects in this Area shall be designed and carried through so as not to have undue adverse effect on the maintenance of good to high quality agricultural soils and the viability of agricultural enterprise.
3. Commercial strip-type development shall not be allowed within this Area.
4. To prevent fragmentation of forest, agricultural lands, or wildlife habitat, no new private road constructed in this Area shall connect to other town roads or highways or create through traffic.
5. Preservation of working forests and farms on large parcels should be encouraged.
6. New development should occur at a pace that Town institutions and our road system can sustain.

7. The density and placement of new buildings in subdivisions shall be compatible with agricultural use and the desired land use patterns set out in this plan.
8. The Town supports low density residential development and small commercial enterprises whose impacts are limited so that they do not detract from the rural nature of the Area and are in keeping with its agricultural and residential uses.
9. The Town of West Fairlee encourages the private conservation of land.
10. Where land will be subdivided and new houses are encouraged to be built, the lots where possible will be laid out to take advantage of, and preserve, existing traditional and natural features such as stone walls, hedgerows, fields, natural clearings, and land contours.
11. Lot sizes and shapes should be varied to avoid suburban repetition. Development and building plans shall avoid monotonous, equally sized and shaped lots, and “spaghetti” lots, which are long lots with narrow frontage.
12. Where development of more than five houses is proposed, clustered housing should be considered to leave a natural area common to all which shall be preserved as open space.
13. To the extent reasonable, buildings should be sited to preserve historic sightlines. Choices shall be made to minimize excavation for roads and buildings where excessive erosion is likely.
14. Land uses allowed in the Agricultural/Residential Area include low density residential, agriculture, forestry, recreation, home occupations, small business enterprises, commercial such as light manufacturing, and rural industrial enterprises scaled to be compatible with this Area. Uses that are primarily retail in nature (stores) shall not be located in this area.
15. Any proposed development must not unreasonably harm any significant natural and fragile areas as defined in Chapter 6 of this Plan.
16. The extension of municipal water supply and sewage disposal systems to serve this area is not appropriate.
17. Development in this Area shall not contribute to strip-type development that, by its nature, attracts similar businesses, including, but not limited to, convenience stores, chain retail stores, and fast-food establishments.
18. Subdivisions and other development on large lots shall demonstrate they have taken reasonable steps to minimize impacts on forestry and agricultural potential and habitat values of undeveloped areas by concentrating development at the forest/field edge near other development and roads; and shall use small lot sizes and shapes so that most of the remaining land is in a large undeveloped tract.

Recommendations

West Fairlee Town Plan

1. Following the recommendations of the community survey of 2017, the Planning Commission should propose subdivision regulations for the division of large parcels of land into smaller ones consistent with the goals and policies of this Plan.
2. Through a series of community meetings, the Planning Commission should begin to define and actively seek out opportunities for commercial development and increasing agriculture within its agricultural/residential area.
3. The Planning Commission should explore opportunities to promote recreational activities in West Fairlee and the development of the Town as a recreational destination.
4. To achieve fair treatment of all property owners on the grand list, all those who undertake major renovations or construction of a new building or addition should be required to inform the Town.

K. Shoreland Area

The Shoreland Area extends along Route 244 in West Fairlee bordering Lake Fairlee and represents about 22% of the Lake's waterfront. The Area extends inland 200 feet along the northwest side of the road and to the water's edge on the opposite side. Existing land uses are two summer youth camps (owned by the Aloha Foundation and on the National Register of Historic Places), a very small section of another summer youth camp, vacation camps, and a few year-round residences. The lake's only state boat launch area is located in the Area.

The purposes of the Shoreland Area are to preserve the current quiet residential character of the area, to maintain use of the area for housing and camps, and to protect the shoreland to ensure continued water quality in Lake Fairlee.

L. Shoreland Area Goals, Policies, Recommendations

Goals

1. To maintain the existing development and recreational pattern of Lake Fairlee and protect it from any unreasonable adverse impacts of new development.
2. To preserve the scenic beauty of the Shoreland Area and Lake Fairlee as a key natural resource and recreational resource for the Town.
3. To protect the water quality of Lake Fairlee.

Policies

1. Projects that would adversely affect the rural setting and conflict with the existing lakeside landscape must not be located in this Area.
2. Commercial development is prohibited except for home occupations and businesses that are consistent with the present and desired pattern of land use.
3. Consistent with the guidance of the Vermont Agency of Natural Resources and except for preexisting residential lots, a 100-foot undisturbed natural buffer is required along the lakefront.

Recommendation

1. The Town should encourage preexisting residential lots to maintain the 100-foot undisturbed natural buffer consistent with Vermont Agency of Natural Resources guidance.
2. The Town should explore the possibility of increasing public recreational access to Lake Fairlee.

M. Low Density Forest Area

West Fairlee has extensive woodlands that are primarily in large lots. These lands provide scenic backdrops, outdoor recreation opportunities, water storage and filtration, critical habitat for species that need large intact forests, carbon storage, and a supply of timber and firewood. Some of these lands are publicly owned, but most are privately owned. Of these private lands, some are conserved with easements restricting development, others are partially protected from development by being enrolled in the Current Use Program and would pay a tax penalty if developed, and some have no protections at all. Some of the private forests are held by older people who have owned them for some time, as is the case with most such lands in Vermont. There is cause to be concerned about development in these areas impacting their unique functions. It also must be kept in mind that many people rely on these lands for income. Thus, the balance here is to allow development while preserving forests.

N. Low Density Forest Area Goals, Policies, Recommendations

Goals

1. To maintain large forest blocks when possible.
2. To keep critical habitat connectors between large forest blocks in town and in adjacent towns when possible.
3. To protect interior woodland habitat.
4. To provide income for landowners.

Policies

1. The Town of West Fairlee encourages the private conservation of land.
2. Where land will be subdivided, it is desirable that the lots should be laid out to preserve large blocks of forest and locate small lots for development along edges, close to road access.
3. To limit overall development, subdivisions should not result in a density of greater than one unit per ten acres, with units clustered on small lots and contiguous undeveloped lands left in a large lot suitable for forestry. Density may be traded across parcels to best achieve protection of interior and remote areas.
4. Outdoor recreation and home occupations are appropriate in this Area, and light manufacturing or other commercial development, compatible with the area's forested character is allowed, but not primary retail.

5. Development of house sites and private roads and utilities must demonstrate that reasonable efforts have been taken in site design to use cleared areas and to keep development to forest fringes and avoid mature trees if new houses are to be built.

Recommendation

1. The Town should consider subdivision regulations to protect forest values in a way that also allows some small-scale development.

O. Flood Hazard Area

The purposes of the Flood Hazard Area are to prevent increases in flooding caused by excessive poor quality development of land in the Flood Hazard Area, to minimize losses due to floods in West Fairlee or in downstream towns, to preserve and enhance high quality waters, to provide for the beneficial use of public waters by the general public, to protect shore lands from erosion, to maintain a low density of development, and to promote high standards of quality for permitted development. The Town has floodplain regulations that cover all development in the FEMA-mapped flood hazard areas. The Town of West Fairlee adopted a Flood Hazard Bylaw that was updated in March 1990. West Fairlee is a participating community in the National Flood Insurance Program (NFIP). Flood insurance coverage is only available to landowners in towns that elect to participate in the program.

Though we do not have townwide zoning, we do have flood regulations as noted above, and it is not obvious what lands are covered by the bylaw. If in doubt when developing, contact the West Fairlee Planning Commission or the Town Office. Under the Town's bylaw, the West Fairlee Administrative Officer serves as the NFIP Administrator.

Flood maps made by the Federal Emergency Management Agency (FEMA) determine the expected limits of flooding along streams, rivers, lakes, and ponds from inundation during the 1% annual chance flood. The calculations do not consider the impact of ice dams or debris and may underestimate the areas subject to flooding damage. They also rely on outmoded topography and past rainfall data which we know now underestimates our extreme storms.

The Town's Flood Insurance Rate Map (FIRM) was last updated thirty years ago, and the current effective map date is 12/2/92. This map is on file at the Town Office (on the official flood hazard maps and the Future Land Use Map of this plan) and at the Regional Commission. The town's flood maps can only be found online right now at the FEMA Map Service Center. We expect to get new flood maps in the next few years that will be more accurate and cover smaller streams. These maps will still not show areas at risk from lateral erosion of stream banks. Those areas are best viewed using the 'river corridor' maps produced by the VT Agency of Natural Resources.

P. Flood Hazard Area Goals, Policies, Recommendations

Goals

West Fairlee Town Plan

1. To encourage agricultural and outdoor recreational use on the high-quality soils of the floodplain.
2. To recognize and maintain the flood plain functions of the valley, particularly sediment storage and nutrient retention.
3. To enhance and maintain use of flood hazard areas as open space, greenways, agricultural and/or non-commercial recreation land.
4. To ensure no net loss of flood storage capacity to minimize potential negative impacts. These impacts include the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures that result from flood damage.
5. To maintain maps that reflect as accurately as possible the flood hazard areas to assist in appropriate land use decisions.
6. To educate landowners regarding upland areas adjacent to unstable rivers and to steep streams which may be at risk of erosion during floods.

Policies

1. New principal residential and commercial structures shall not be allowed within the limits of the 100-year floodplain (area of special flood hazard).
2. Improvements to existing structures in the floodplain are acceptable, provided that careful planning is done to ensure against unnecessary loss of property or public endangerment, such as by using the No Adverse Impact standards.
3. Building on land that has been elevated above the flood hazard level in the flood hazard area shall be discouraged.
4. Agricultural and outdoor recreation uses are encouraged in the flood hazard area.
5. Expansion of new commercial development shall not be permitted in the flood hazard area.
6. Any land use activity (filling, or removal of earth or rock) within flood hazard areas which would result in net loss of flood storage or increased or diverted flood levels or increased risk to adjacent areas shall be prohibited.
7. Utilities or facilities serving existing development (e.g. water lines, electrical service, waste disposal systems, roads, and bridges) may be located within these areas only when off-site options are not feasible and provided that these utilities or facilities are relatively protected from flooding damage.
8. Flood hazard regulations should be extended to areas identified as at risk of flood erosion.

Recommendations

1. The Planning Commission should review and update the town's current Flood Hazard Bylaw when new maps are available.

West Fairlee Town Plan

2. To address flood risks from lateral erosion in state mapped river corridors, The Planning Commission should draft an updated flood ordinance concerning our stream and river corridors to regulate any new development in identified erosion and flood hazard areas to ensure that development does not increase the risk of flooding and fluvial erosion.
3. In consultation with regional and State experts, the Town should consider prohibiting all new construction in the flood hazard areas and flood plains.
4. The Planning Commission should work with FEMA, Vermont ANR Rivers Program and TRORC to identify and map known and likely flood hazard areas based on actual events, unstable upland areas, and river corridor protection areas based on stream geomorphic assessment studies.

IV. Flood Resilience

A. Background

Except for the far northeastern-most portion of our town, which drains to Rowell Brook and is part of the Waits River drainage basin, West Fairlee is entirely within the Ompompanoosuc River catchment area – also designated as part of Vermont’s Drainage Basin 14. West Fairlee comprises three local watersheds including, from east to west, the Blood Brook watershed, the Middle Brook watershed, and the watershed for the upper part of the main stem of the Ompompanoosuc River. Blood Brook and Middle Brook each convey and discharge surface water runoff directly to Lake Fairlee. Lake Fairlee drains into the Ompompanoosuc River via the dam at its western end in Thetford. The main stem of the Ompompanoosuc River flows east from Vershire through the western portion of West Fairlee and into Thetford to the south. Notably, all our essential services, including municipal and emergency response facilities, and our public school are within this corridor, along the mapped Ompompanoosuc River floodplain and floodplain fringe.

In general, most of the upland areas in each of West Fairlee’s three local watersheds are forested and steeply sloping. Blood Brook, Middle Brook, and the Ompompanoosuc River occupy valleys characterized by relatively low, gentler gradients and correspondingly wider floodplains southward and downstream.

Most Vermont stream floodplains and, to a lesser degree, upland watersheds have been altered by human activities including deforestation and farming, channelization, stream bank retaining walls, filling, and construction of roads, bridges, dams, and buildings, such as homes, schools, and critical facilities. When development encroaches or stream channels are altered, conditions in the flood erosion hazard zones become more unstable. Dangers to downstream occupants and structures are worsened. Removal of vegetation, soil disturbance, and stream channelization increase floodwater depths, flow velocities, erosion, and sediment deposits downstream.

Along the larger streams and rivers, damage from flooding often occurs outside the FEMA mapped regulatory floodplain boundaries. This is especially the case in Vermont (based on research by the Vermont Land Use Institute) as up to two-thirds of flood damage occurs outside of FEMA’s mapped Special Flood Hazard Areas (SFHAs). Much of this is due to lateral erosion of riverbanks as they meander across floodplains. The Agency of Natural Resources has mapped “river corridors” that encompass the area at risk from such erosion.

To better understand the town’s flood risk, Phase I and Phase II stream assessments of Blood Brook, Middle Brook, and the Ompompanoosuc River from Vershire downstream through West Fairlee and Thetford were completed between 2009 and 2011. The assessment data was used to develop a corridor management plan for the Ompompanoosuc River in West Fairlee and Thetford. The stream assessments and river corridor management plan are documented in:

- **“Ompompanoosuc Watershed Phase I Geomorphic Assessment Orange and Windsor Counties, Vermont” (April 16, 2009) prepared by Bear Creek Environmental, LLC for the Thetford Conservation Commission (with support from the VANR River**

Management Program); and “Ompompanoosuc River Corridor Plan West Fairlee to Thetford, Vermont” (April 28, 2011) prepared by Bear Creek Environmental, LLC in partnership with the West Fairlee Conservation Commission, Thetford Conservation Commission, Vermont ANR, Ompompanoosuc River Watershed Council, and the White River Natural Resources Conservation District (with support from the Upper Connecticut Mitigation and Enhancement Fund).

These stream studies added to prior work by TRORC to assess infrastructure installations affecting drainage along the major streams and tributaries in the Ompompanoosuc River watershed. TRORC’s work on this aspect of watershed assessment is documented in:

- **“Bridge and Culvert Survey Ompompanoosuc River and Major Tributaries Fairlee, Norwich, Thetford, Vershire, and West Fairlee, Vermont” (April 2007)**

These studies provide quality baseline data of local stream and river corridor conditions and help to identify and direct ongoing stream corridor stabilization and hazard mitigation projects.

The Rivers Program at the Vermont Agency of Natural Resources has mapped major streams and rivers in West Fairlee and created ‘river corridor’ maps that show areas that are at risk from stream channel erosion. Mapped streams and rivers in West Fairlee include Blood Brook, Middle Brook, the Ompompanoosuc River, and Schoolhouse Brook. These river corridor areas typically extend beyond the mapped SFHAs and to smaller streams.

The FEMA-mapped Special Flood Hazard Areas only occur on the main stems of the Ompompanoosuc River, Blood Brook, and Middle Brook. Altogether, there are 16 structures located in the SFHA, including 2 public gatherings, 6 single family residences, and 8 mobile homes. If all these structures were destroyed in a flood, the resulting damage would be approximately \$2,416,000.

There are mapped river corridor areas for those streams mentioned above that have mapped Special Flood Hazard Areas, as well as Bear Notch Brook and the northern portions of Middle Brook. Altogether there are 36 structures that are located outside of the Special Flood Hazard Area but are located within the mapped river corridor areas, including 24 single family residences, 2 camps, 8 mobile homes, 1 commercial structure, and 1 other residential structure. If all these buildings were destroyed in a flood, the resulting damage would be approximately \$5,436,000. This does not include all the river corridors along the small streams that may have additional properties within the state mapped fifty-foot river corridor buffer.

B. Flood Resilience Viewpoint

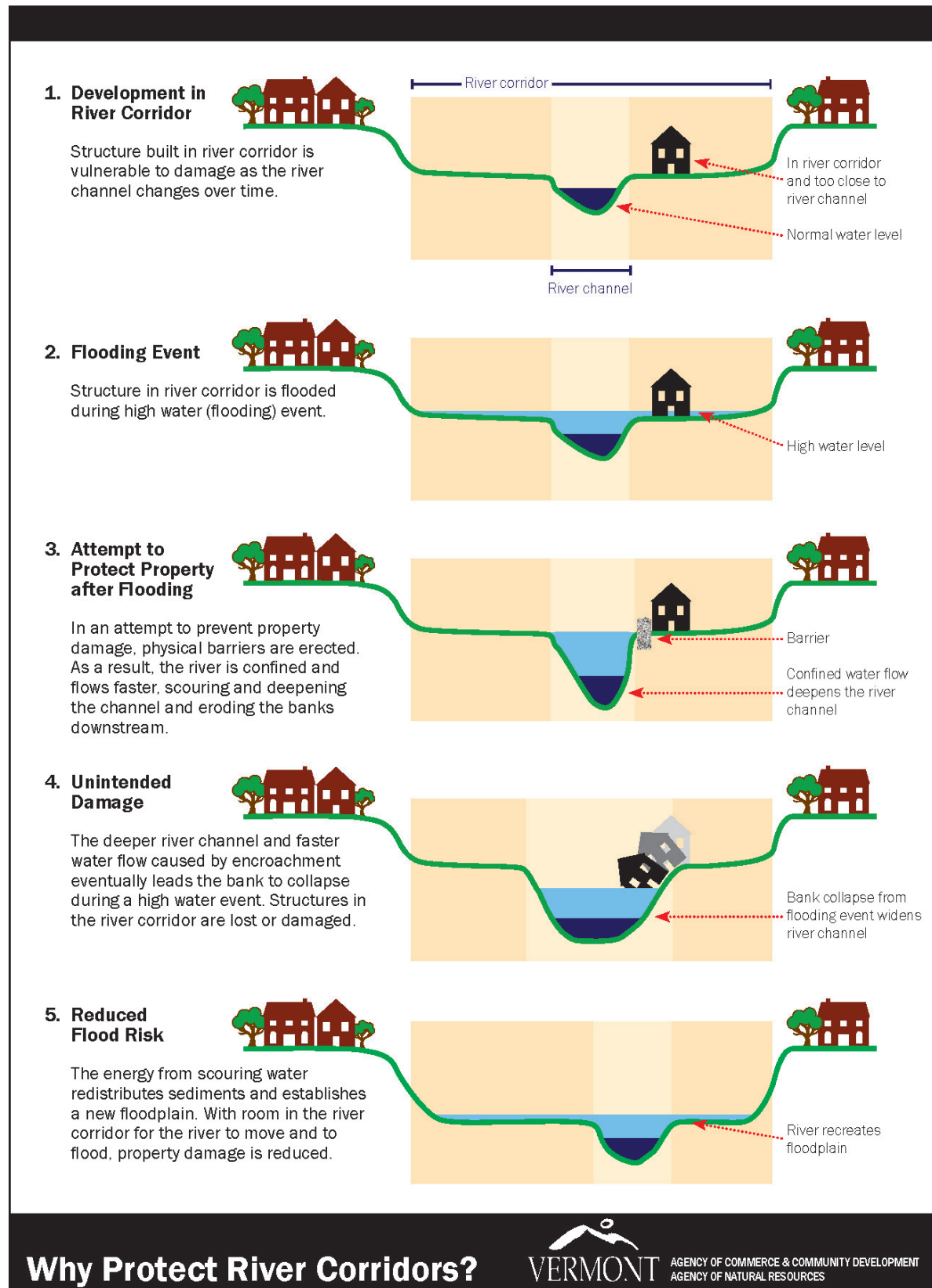
From hard experience, science, and economic data, there has emerged a consensus that our wisest, least painful and least costly course over the long term lies in an approach that reduces flood and erosion hazards; minimizes the recurring costs of trying to control our streams and repairing and replacing community infrastructure, public and private buildings, and homes; and allows us to keep our valuable and irreplaceable soil resources while improving stream water quality and aquatic habitat. The term widely adopted to describe this new understanding of

socially and ecologically responsible, safe, cost-effective, and sustainable management is “flood resilience.”

At its core, flood resilience directs that we as a community manage our interactions with our streams and coordinate our efforts with our neighbors because, ultimately, everyone lives, works, and plays downstream.

Flood resilience recognizes that we cannot undo our historical settlement and land development patterns, nor is it practical to expect relocation of all community buildings and homes, nor can we afford the expense and disruption of large-scale changes to infrastructure over the short term.

A central tenet of flood resilience is, within the bounds of where we live, to allow the streams and rivers to regenerate a more natural floodplain with the unique landforms, rich soils, and diverse plant and wildlife communities that combine to limit and dissipate flood energy and damage and enhance the beauty and appeal of our community. Resilience is created by preparing for foreseeable flood-related hazards, planning and adapting in ways that avoid or minimize damage, and by optimizing social and economic recovery from catastrophic events. The objective of flood resilience is to enhance our community’s ability to anticipate, avoid, withstand, respond to, and recover from the adverse effects of routine and seasonal and exceptional flooding events. Resilience also works to discourage new development in known flood hazard areas, including both SFHAs and river corridors. The impacts of protecting of river corridors are shown in the diagram below:



Why Protect River Corridors?

Figure 4: Why Protect River Corridors-

Because flood resilience management relies on working with, rather than against, natural stream processes, it decreases the money our community will spend to maintain infrastructure such as bridges, roads, and power lines. It decreases flood damage and the economic impact of recovering from floods, while encouraging land uses that keep people, property, and community assets out of harm's way.

Over the long term, West Fairlee's best approach to flood resilience is to implement appropriate, practical, and sustainable strategies to achieve the greatest benefits at the lowest cost over time, while minimizing impact to existing landowners.

A widely recommended way to facilitate this evolution in management of floodplains is to adopt a "No Adverse Impact" land use policy for our stream and river corridors. Following are excerpts summarizing the central tenets of No Adverse Impact policy as described in a paper published in 2008 by the Association of State Floodplain Managers (ASFPM):

No Adverse Impact floodplain management takes place when the actions of one property owner are not allowed to adversely affect the rights of other property owners. The adverse effects or impacts can be measured in terms of increased flood peaks, increased flood stages, higher flood velocities, increased erosion and sedimentation, or other impacts the community considers important. . .

The No Adverse Impact approach will result in reduced flood damage. However, its true strength is seen when proposed development actions that would affect local flooding or the property rights of others are permitted only when they are in accord with a locally adopted plan that identifies the negative impacts the community wishes to avoid and/or mitigate.

West Fairlee's current floodplain bylaw addresses only the minimum necessary to qualify for participation in the NFIP and allow property owners to obtain flood insurance. It does not consider errors in mapping, the risk of lateral erosion or plan for mitigation of any flood-related risks except as addressed by NFIP minimum standards, which only apply to effects on insurability related to modification of existing buildings or construction of new buildings in SFHAs. It does not address areas outside of FEMA's flood maps.

Compliance with the NFIP qualifying minimums does not address causes of flooding nor does it consider risks from erosion, the effects of land use practices on flooding and erosion, risk on unmapped streams, changes to stream channels since the maps were made over 30 years ago, the projected increase in severe storms, nor the long-term costs to a community to respond and repair flood damage. Continued reliance on floodplain ordinances that only meet the minimum NFIP standards poses risks to communities within and along stream and river corridors. Adherence only to the minimum NFIP standards would allow new construction in and alteration of our known floodways and erosion hazard areas and upstream portions of our floodplains, would allow land uses that induce greater flood damage downstream.

West Fairlee has for the past several years been actively collaborating with neighboring communities, TRORC, the Vermont ANR Rivers Program, and other stakeholders in watershed-

scale management efforts toward flood hazard mitigation and flood resilience. Some examples of our recent resilience planning and enhancement work are listed below:

- Guided by observations from the TRORC bridge and culvert survey (2007) and the stream geomorphic assessment and river corridor planning documents (2009-2013), West Fairlee's Conservation Commission has promoted and actively engaged in stream bank stabilization and riparian corridor re-establishment projects that, among other efforts, include plantings in cooperation with volunteer landowners along the Ompompanoosuc River.
- West Fairlee's Conservation Commission is collaborating with Vermont's Division of Water Quality to identify ways to mitigate ongoing sources of pollution within the Ompompanoosuc River corridor.
- West Fairlee's conservation commissioners and planning commissioners are discussing conservation strategies to enhance floodplain naturalization and, thereby, flood resilience
- West Fairlee's Planning Commission is actively engaged in conversations with Vermont's River Program team to facilitate understanding of State initiatives to promote flood resilience and obtain and update maps of flood hazard areas based on FEMA flood maps and on field assessments by Rivers Program scientists.
- West Fairlee's Planning Commission has initiated the process of local floodplain and watershed assessment, with emphasis on identifying existing landowners, residences, buildings, and facilities within or along the fringes of flood and erosion hazard zones.
- West Fairlee's Selectboard has obtained grants for projects to improve the resilience of Town infrastructure in accordance with VTrans recommendations and standards
- West Fairlee is working to promote a more robust recreational economy, including floodplain naturalization through collaboration between our Conservation Commission and our Planning Commission. To date, West Fairlee has preserved over **2,000 acres** of forest and wetlands in the upland portions of our Blood Brook and Middle Brook watersheds. We are considering ways to work with community residents to promote re-establishment of more continuous and ecologically diverse, natural stream corridors along Blood Brook, Middle Brook, and the Ompompanoosuc River.

Actively encouraging, diligently implementing, and committing to sustaining flood resilient land management practices protects human safety and health, private property, community resources, the natural environment, and our community's economic future.

C. Flood Resilience Goals, Policies and Recommendations (see also these for the Flood Hazard Area)

Goals

West Fairlee Town Plan

1. Facilitate sustainable land use and development policies and rules that reduce risks to human safety, property, and infrastructure, and decrease recurring costs to the community related to damage from inundation and erosion.
2. Integrate the core elements of the best available regulation, conservation, and emergency preparedness to enhance flood resilience.
3. Continue to promote improved water quality in Vermont's lakes and streams.

Policies

1. Encourage the protection and restoration of our river corridors, floodplains, wetlands, and upland forested areas that minimize flooding and fluvial erosion.
2. West Fairlee's planning and regulatory efforts should be done in coordination with efforts by adjoining towns, and with local and regional stake holders in the larger Ompompanoosuc River watershed (Vermont Drainage Basin 14).
3. Promote land use planning that facilitates sustained hazard mitigation efforts, including naturalizing river corridor and floodplain establishment and conservation, using easements and acquisition, when possible, to prevent inappropriate land uses.
4. Actively encourage flood emergency preparedness and work with other Town officials to develop contingency plans for emergency responses to natural disasters, and appropriately integrate the town's emergency response, infrastructure, and flood resilience planning.

Recommendations

1. The Planning Commission and Emergency Management Coordinator should engage in focused efforts to inform town residents of policies, strategies, and resources to protect the identified and designated hazard areas and to minimize risks to public safety, critical infrastructure, and municipal investments, including:
 - a. Contact with property owners and residents within and near stream corridors;
 - b. Lists of published planning and land use guidelines, relying on State publications;
 - c. Summaries of emergency response notification procedures, contacts, and resources;
 - d. Inform property owners of flood insurance and insurance rate reduction incentives; and
 - e. Provide information on flood damage and disaster recovery funding and financial incentives.

V. Natural, Scenic and Cultural Resources

A. Significant Natural and Fragile Areas

No matter how important all these things are, every town is more than its buildings and roads, and includes its people, their history, and their present relationships with one another. In a very real sense, every town is also its land: its topography, soils, waters, vegetation, forests, wildlife and even the insects the land supports. West Fairlee, like all towns, has been shaped by the land and natural resources it supports.

In the 2017 survey of West Fairlee's citizens, 77% of respondents strongly stressed their interest in preserving the rural character of the Town by conserving the open land that has value for agriculture and for the aesthetic appeal of its vistas as well as the undeveloped land that has value for forestry, recreation, and wildlife populations.

One permanent and secure method of preserving land for wildlife and undisturbed beauty, recreation and the overall health and strength of our ecosystems and economy is for it to be owned by the Town itself. This is how the Town's Brushwood Community Forest has been preserved.

It is worth stressing here that good agricultural use of open lands, well-managed forestry and reasonable recreational use of open space are themselves sound conservation practices, adding not only to the rural character of the Town but also to the effort to preserve open space.

An inventory of the natural features that comprise West Fairlee is an important part of this Town Plan and considers their value to the Town. These are Areas that, because of their fragile nature, irreplaceable value, and vital function of maintaining the environmental and ecological health and quality of the Town, require special conservation and protective measures. A comprehensive Natural Resources Inventory requisitioned by the Conservation Commission from Arrowwood Environmental and completed in 2021 provides critical details about the unique features of these Areas <https://arrowwoodvt.com/westfairlee> . The nature and importance of these significant natural and fragile areas are described below, and in combination with the goals, policies, and recommendations that follow, constitute an environmental conservation policy for the Town.

B. Water Resources

Lake Fairlee, the Ompompanoosuc River and the brooks, streams and ponds that comprise West Fairlee's surface water resources are perhaps the most important of the Town's natural resources. Numerous small wetlands provide additional critical water resources for West Fairlee. These water bodies are not only important recreational assets and of great scenic and wildlife resource value, but are also connected with groundwater, which is the current source of private water supplies and the potential source of future municipal water supplies. The continued use of surface water is directly related to water quality throughout the Town.

Vermont has a Water Pollution Control Act regulating the quality of waters in the State. This Act forbids, except by special permit, the discharge into the waters of the State any waste that

reduces the quality of the receiving waters. Agriculture and forestry practiced according to state standards are assumed, by law, not to be degrading water quality; however, many areas of the state are still being impacted by agricultural runoff.

In West Fairlee, the threats to water quality include non-point pollution such as sediment from land development and road runoff; stream bank de-stabilization and thermal modification from riparian vegetation removal; invasive species; and pathogens in effluent from failed septic systems.

The simplest, most straightforward, and most effective means of preventing nutrient and sedimentation impacts to rivers and streams is to have buffer strips of native vegetation between any land disturbing activity and the top of the stream or riverbank. The roots of trees, shrubs and herbaceous species hold soil in place and help keep banks stable. Woody vegetation also helps shade rivers and streams. All the vegetation as well as the uncompacted soil and uneven topography of an undisturbed vegetation community will slow runoff, reducing its erosive force and allowing it to percolate into the soil and water table.

C. Water Resources Goals, Policies, and Recommendations

Goals

1. To maintain and enhance the quality and quantity of drinking-quality resources.
2. To allow use of groundwater resources by new development only in such a manner to protect the public right to adequate quality and quantity of the resource.
3. To consider surface water and groundwater impacts and effects related to proposed or existing uses of land.
4. To maintain or improve surface and ground water for habitat, recreation, and drinking.

Policies

1. Land use activities which potentially threaten groundwater quality shall be carefully reviewed and monitored to prevent undue loss of groundwater quality.
2. Maintenance or enhancement of water resources for recreation, fisheries, necessary wildlife habitats and quality aesthetics are high priorities. Water resource policy and practices should protect these uses.
3. Preservation of the natural state of streams and, to the extent possible, Lake Fairlee should be encouraged by:
 - Protection of adjacent wetlands and natural areas;
 - Protection of natural scenic qualities;
 - Protection of all streams and Lake Fairlee from invasive plants and elimination of invasives where they have already taken hold; and
 - Maintenance of existing stream bank and buffer vegetation including trees, together with wildlife habitat.

4. Gravel roads should not be paved as part of a commercial or residential development unless it can be shown that paving will not have undue adverse impact on any watercourse, wetland, pond, or lake as the result of runoff of oil, salt, or other road pollutants. Rain gardens, grass strips or other vegetation must be planted, when necessary, to prevent danger to the Town's water resources because of road runoff.
5. Consistent with the guidance of the Vermont Agency of Natural Resources a buffer zone of 50 feet must be maintained contiguous to all rivers and streams.

Recommendations

1. The Town should support citizen water quality monitoring efforts for the Ompompanoosuc River.
2. The Town should investigate maintaining and improving public access to the river for recreational use.
3. The Conservation Commission should advise the town regarding non-harmful means of eliminating Eurasian watermilfoil from Lake Fairlee.
4. The Town should encourage the State of Vermont to require the washing of all boats using the Lake Fairlee boat access.
5. The Town, through the Selectboard and the Conservation Commission, should continue the efforts begun in 2010 to reduce sedimentation, erosion, and the conveyance of pollutants along the Ompompanoosuc River, Middle Brook and Blood Brook and to enhance, improve and restore the ecosystem integrity and vitality of these waterways and their corridors. To these ends, the Town should continue to work with local and regional environmental and planning organizations to locate and secure funding for projects including streamside plantings, corridor clean-up and protection, culvert replacement, bridge replacement and, possibly, dam removal.

D. Wetlands

The wetland areas in West Fairlee are particularly important resources. They provide needed wildlife habitat by serving as feeding or breeding grounds for wildlife.

Wetland areas also provide a direct benefit as flood protection areas. Because of their high organic composition, these areas can absorb and retain a large amount of water occurring as runoff, thus reducing flood peaks, and providing a more constant supply of water. Since wetlands are naturally associated with the ground water table, they require protection from pollution of all kinds. Whatever is allowed to flow into wetlands may flow into the ground water. Wetlands also serve to purify ground water and thus are natural cleansers of this resource.

Vernal pools are ephemeral wetlands that fill with water in the spring and usually have dried out by late summer. These pools allow for the hatching of amphibians in a non-predatory environment. Vernal pools are breeding grounds for many species of amphibians, including three species of salamander currently listed as rare and imperiled by the State of Vermont.

E. Wetland Goals, Policies, Recommendations

Goal

1. To identify and encourage land use development practices that will avoid or mitigate adverse impacts on significant wetlands.

Policies

1. Structural development or intensive land uses shall not be located in wetlands or within the buffer zones of wetlands established by the rules of the Vermont Water Resources Board. According to these rules, the buffer zone contiguous to a Class One wetland is 100 feet, and the buffer zone contiguous to a Class Two wetland is 50 feet.
2. Developments adjacent to wetlands shall be planned so as not to result in undue disturbances to wetland areas or their function. Mitigating measures to protect the function of a wetland are an acceptable measure.

Recommendations

1. The Conservation Commission should continue their inventory of wetlands to determine the location of any wetlands not mapped by the State of Vermont.
2. The Conservation Commission should continue to review state regulations establishing buffers protecting wetlands from construction, agricultural uses and septic systems and advise the Selectboard as appropriate regarding adequate protection of the Town's wetlands.

F. Shallow Soils, Steep Slopes and High-Water Table

West Fairlee's soils in the higher elevations tend to be shallow and gravelly above bedrock with stones and boulders. In the valleys, West Fairlee's soils tend to be fertile and highly suitable for agriculture.

A significant portion of West Fairlee's steep slopes of more than 25%, shallow soils or high-water table impose severe building and development limitations. All these conditions present risks of soil erosion and loss leading to contamination of water bodies and waterways and to loss or negative alteration of wildlife habitat. Therefore, these conditions also create operational restrictions for timbering, farming, and recreation in areas where slopes or trails used by skidders, farm equipment or other motorized vehicles may cause soil erosion or loss. Careful design of driveways, logging roads, access trails and bridges are important to prevent unnecessary loss of topsoils and sub-soils.

G. Shallow Soils, Steep Slopes and High-Water Table Goals, Policies, and Recommendations

Goals

1. To maintain and ensure the integrity of the town's soils and to prevent soil erosion.

2. To prevent undue adverse impacts on the town's water bodies, waterways, soils and wildlife habitats by monitoring land use and developing sound building practices and careful use of vehicles and machinery in areas of shallow soils, steep slopes, and high-water table.

Policies

1. Construction and careless or destructive use of vehicles and machinery in areas of shallow soils, steep slopes or high-water table is strongly discouraged.
2. Use of vehicles and machinery in areas of shallow soils, steep slopes or high-water table must follow the State of Vermont's recommended best practices.
3. All commercial or housing development projects or proposals in areas of shallow soils, steep slopes or high-water table must include detailed plans for avoiding or preventing soil erosion. It shall be the responsibility of owners who develop in these areas to restore all soils lost to erosion, all water bodies or waterways contaminated, and wildlife habitats negatively impacted as a consequence of their development.

Recommendations

1. The Selectboard, the Planning Commission and the Conservation Commission should work together to do all they can to safeguard the integrity of West Fairlee's soils by monitoring land use and ensuring sound building practices and careful use of machinery on the land, especially in areas of shallow soils, steep slopes, or high-water table.
2. While considering subdivision regulations, the Selectboard and the Planning Commission shall pursue the question of whether these regulations should include measures to protect the integrity of soils generally and especially in areas of shallow soils, steep slopes, or high-water table.

H. Forestry and Wildlife

1. Forestry in West Fairlee

Healthy forests provide a substantial number of benefits to our communities, including environmental benefits (such as clean water supply, clean air, mitigation against climate change, wildlife habitat, and biological diversity), and economic benefits (such as tourism, recreation, and the wood products industry).

Trends in forest health have changed over the past decade. In the 2013 US Forest Service's National Forest Inventory and Analysis Program report, figures indicated that since 2007 there has been a continuing loss of about 75,000 acres of forestland in Vermont. Developed land in Vermont increased significantly between 1980-2010 (67%). The pattern of development growth has led to significant forest fragmentation throughout the state.

Forest Fragmentation

Forest fragmentation is the breaking of large, contiguous forested areas into smaller pieces of forest. For natural communities and wildlife habitat, the continued dividing of land with naturally occurring vegetation and ecological processes into smaller and smaller areas creates barriers that limit species' movement and interrupt ecological processes. Since the 1980s, Vermont has experienced "parcelization," which is the result of larger tracts of land being divided into smaller land holdings. Parcelization is more likely to lead to development of infrastructure such as roads, utilities and buildings. The 2015 Vermont Forest Fragmentation Report identifies the following causes for this trend:

- Escalating land prices;
- Increased property taxes;
- Conveyance of land from aging landowners; and
- Ex-urbanization (the trend of moving out of urban areas into rural areas).

Forest fragmentation affects water quality and quantity, fish and wildlife populations, and the biological health and diversity of the forest itself. When many small habitat losses occur over time, the combined effect may be as dramatic as one large loss. Forest fragmentation can disrupt animal travel corridors, increase flooding, promote the invasion of exotic vegetation, expose forest interiors, and create conflicts between people and wildlife. Habitat loss reduces the number of many wildlife species and totally eliminates others.

To help mitigate the effects of human population growth and land consumption, many scientists and conservationists urge governments to establish protected corridors, which connect patches of important wildlife habitat. These corridors, if planned correctly, allow wildlife to move between habitats and allow individual animals to move between groups, helping to restore or maintain genetic diversity that is essential both to the long-term viability of populations and to the restoration of functional ecosystems. A map of both forest blocks and habitat connectors can be found at the Protected Lands and Forest Blocks links at <https://www.trorc.org/programs/gisgpsmaps/>

The mostly forested area known locally as "Brushwood" is part of a larger contiguous forest block of approximately 26,268 acres. Over many years, several organizations have identified this area as a high priority for conservation. Consolidating the fragmented ownership pattern of the area has long been considered an important first step toward protecting this extensive regional forest.

Starting in 2008, West Fairlee town officials spearheaded a project to establish a Town Forest in part of the "Brushwood" forest block. Working in partnership with the Trust for Public Land (TPL), five privately owned properties were purchased through funding by the Federal Forest Legacy Grant Program and with money TPL and the Town raised from a group of institutional and individual donors. The 470-acre property became known as Brushwood Community Forest (BCF). Working with TPL again in 2011, West Fairlee purchased the Town of Bradford's 580-acre former Municipal Water Department land located in the Town of Fairlee.

Brushwood Community Forest's 1055 acres now links with the existing, but separated, 1,573-acre Fairlee Municipal Forest to create more than 2,600 acres of conserved, unfragmented forestland. This critical forest block provides significant wildlife habitat and watershed protection, serves as a community resource for recreation, and its diverse forest types offer opportunities for sustainable timber harvesting to support the area's traditional land-based economy.

In time, the expanded Brushwood Community Forest can become a focus of outdoor recreation in the Upper Valley, such as hiking, snowshoeing, cross country skiing, mountain biking, bird watching, picnicking and so forth. As such, it can offer modest economic advantages to the Town and similarly modest business opportunities for thoughtful and inventive entrepreneurs: recreational equipment outfitters, bed and breakfasts, grocery merchants, restaurants, cafes, and the like.

Approximately 89% of the land in the Town of West Fairlee is forested. More than 67% of taxable land in West Fairlee (9,005 of West Fairlee's 14,464 acres) is in the state's Use Value Appraisal Program, more commonly known as "Current Use". A portion of this is agriculture and the rest is forestland. Forest management plans required for enrollment of forest land in the Current Use Program must be updated every 10 years, and well-crafted management plans can play a significant role in ensuring vital wildlife habitat and corridor connectivity.

There are several other important forest blocks and habitat connector areas in West Fairlee that are priority locations for protection where development and fragmentation should be avoided to protect ecological function:

- **West Fairlee Wildlife Management Area:** 101-acre upland forest located west of Back Street.
- **Wormwood Hill, Old Buffalo Area, Southworth Park:** The western portion of town between Middlebrook Rd. and the village area constitutes the highest priority interior forest and habitat connectivity. This large forest block extends into Bradford, Corinth, and Vershire totaling about 13,811 acres.
- **Middlebrook, Bloodbrook, and Brushwood Community Forest:** A Highest priority forest interior forest block as well as habitat connectivity that for wildlife connects crucial core habitat. This area abuts the western side of the Brushwood Forest area.
- **Middlebrook East, Bloodbrook, Fairlee.** This area is a priority interior forest block and highest priority connectivity area located between south of Bloodbrook Road, east of Middlebrook Road, and the Fairlee town line.

2. Wildlife Habitat

West Fairlee is host to critical wildlife habitat areas defined as "concentrated habitat" and identifiable by the Vermont Fish and Wildlife Department. These areas have been shown to be decisive to the survival of particular species of wildlife at any period in their life, including breeding and migratory periods. Such areas include deer wintering areas, important wetlands, habitat for rare or endangered species, black bear habitat, vernal pools, and wildlife corridors. Most of these areas, including Natural Heritage Sites –rare and endangered habitats or habitats

of rare and endangered species-- are in the relatively undeveloped sections of Town and are mapped by State of Vermont officials.

One of the most severe impacts of poor development planning is the constriction or outright destruction of critical wildlife habitat and corridors resulting from fragmentation. Construction of new roads, excessive parcelization of land, and development too far from existing roads are the typical practices that result in fragmentation of wildlife habitat and corridors. West Fairlee recognizes that good stewardship of land and resources, including wildlife habitat and corridors, requires avoiding development design and planning that will impose such fragmentation on the Town's resources.

I. Forestry and Wildlife Goals, Policies, Recommendations

Goals

1. To maintain and enhance the Town's forested areas.
2. To encourage management of the Town's forested areas for timber and other forest products, as well as wildlife habitat, recreation, and education.
3. To encourage the conservation and protection of the Town's forested areas by individual owners.
4. To maintain or enhance the natural diversity and population of wildlife.
5. To restore stable populations of endangered or threatened wildlife in appropriate habitat areas.
6. To maintain or improve the natural diversity, population, and migratory routes of fish.

Policies (these apply in the Forest/Low Density land use area)

1. Wildlife populations and natural diversity should be maintained or enhanced.
2. Long-term protection of major habitats through conservation easements, land purchases, leases and other incentives is encouraged.
3. It is the policy of the Town to protect deer wintering areas from developments and other uses that unduly and adversely impact these resources when practical.
4. In lands identified as priority or higher forest blocks or habitat connectors, development other than isolated houses and camps should be designed to preserve continuous areas of wildlife habitat. Fragmentation of wildlife habitat is discouraged. Effort shall be made to maintain connecting links between such areas.
5. Preference shall be given to development that utilizes existing roads and field lines.
6. The Town's Stewardship and Forestry Management Plans shall be kept up to date to responsibly manage West Fairlee's municipal forests.
7. New developments shall take reasonable steps to avoid disruption or loss of identified wildlife corridor crossings.
8. Bridges and culverts should incorporate wildlife passages to reduce animal-vehicle collisions.

Recommendations

1. The Conservation Commission should continue to study and develop strategies to protect the long-term viability of forest lands.
2. The Conservation Commission shall continue to study, update, and implement the Stewardship Plan on a regular schedule in consultation with the County Forester and Vermont Department of Forests, Parks & Recreation.
3. From time to time the Conservation Commission may organize volunteers to undertake specific activities such as trail development and maintenance; conduct hikes and natural history programs in the forest to familiarize citizens with this natural resource and recreational resource; and other activities deemed necessary to management and public enjoyment of the Forest.
4. The Conservation Commission shall encourage owners of necessary habitat for threatened species to contact the State and the Natural Resources Conservation Service for assistance in developing a management plan for these sites.

J. Agriculture in West Fairlee

West Fairlee includes within all three of its valleys an abundance of good to prime agricultural soils. Nonetheless, agriculture has long been in decline in West Fairlee just as it has been throughout the state and throughout northern New England. The Town's farmlands and open fields are underused for agriculture and are far less productive of food, income, and jobs than they could be.

According to the town survey conducted in preparation for this plan, West Fairlee citizens favor protecting farmland and open fields from residential and commercial development. For many people, this may primarily reflect a desire for West Fairlee to continue to look as it does, namely, to look like a rural town. But there can be little doubt that the best way to secure West Fairlee's rural appearance in the future will be to encourage the highest and best possible agricultural use of the Town's agricultural resources. The only way for us to continue to look like a farming community is for us to be --much more than we have been in recent years-- a farming community.

The revival of interest in organic food, locally produced food, and artisan and other value-added food products can provide a basis for West Fairlee to begin pursuing an agricultural revival of its own. It is the policy of Vermont to encourage and assist maintenance of the working landscape by supporting agriculture through initiatives like the Farm to Plate Strategic Plan. Many small farming enterprises in nearby towns have been successful over the years and will be happy to share their experience and sound advice. West Fairlee should look to drawing on all these resources to develop its agricultural base as a foundation for planning and growth over the next five years.

K. Agriculture in West Fairlee Goals, Policies, Recommendations

Goals

1. To identify, protect and preserve the agricultural resources of West Fairlee.

West Fairlee Town Plan

2. To strengthen agricultural businesses and encourage new agricultural opportunities.
3. To continue existing agricultural land use.

Policies (these apply in the Agricultural/Residential land use area)

1. Promote and continue use of agricultural land for sustained farming activities where possible.
2. Maintain agricultural viability by discouraging building in prime agricultural lands and supporting value-added agricultural products.
3. Development within agricultural areas should be clustered to protect crucial resource land.
4. Lands adjacent to riparian buffers shall adhere to the Acceptable Management Practices as established by the Agency of Agriculture, Food and Marketing of the State of Vermont.
5. Maintain or create appropriate buffers between active farmland and adjacent rivers and streams to prevent the runoff of nutrients, pesticides, fertilizers, manure, and soil which adversely affect water quality in rivers and streams. A 50-to-75-foot buffer strip of no-till seeding, non-disturbed soil of grasses or native shrubs or trees should be maintained. The width of the buffer should be determined by slope, intensity of land use, existing vegetation, and related factors.

Recommendations

1. The Planning Commission should study and develop strategies to protect the long-term viability of agricultural lands.
2. The Town Commissions and Committees should seek out information about how other towns both in and outside of Vermont have set about developing and revitalizing their agricultural resources. This should include both consultation with regional and state planners about how the town might best go about such a project.

L. Mineral Resources

The use and management of West Fairlee's earth and mineral resources are matters of public good. Maintenance of sustainable quantities of gravel, sand, crushed rock, and other materials are essential for business development, as well as state and local highways. Despite this, public and private interests often conflict over use of these resources. It is in the interest of West Fairlee business owners and residents to enable utilization of these resources when such uses do not significantly inhibit or conflict with other existing or planned land uses, or do not conflict with other stated goals in this Plan.

M. Mineral Resources Goals, Policies, Recommendations

Goals

1. To support extraction and processing of mineral resources only where and when such activities are appropriately managed.
2. To enable appropriate utilization of mineral resources.

Policies

1. Existing and proposed mineral extraction and processing facilities shall be planned, constructed, and managed to:
 - a) not adversely impact existing or planned uses within the vicinity of the project site;
 - b) not significantly interfere with the function, useful life and safety of existing road systems serving the project site;
 - c) minimize any adverse effects on water quality, fish and wildlife habitats, view sheds and adjacent land uses;
 - d) reclaim and re-vegetate sites following extraction; and
 - e) minimize noise impacts as well as negative impacts on air and land quality.

N. Recreational Lands and Facilities

Recreation in West Fairlee has traditionally been closely tied to the land. Hills, woods, fields, valleys, streams, and ponds offer opportunities for many kinds of recreation - bicycling, picnicking, snowmobiling, hiking, hunting, and swimming.

The following special places were ranked as being of high importance by those who answered the 2010 town survey:

1. Lake Fairlee
2. Ompompanoosuc River and its brooks and tributaries
3. The Brushwood Community Forest
4. Rivendell Trail
5. Bear Notch
6. Southworth Park

These areas are used for recreation by residents and visitors alike and are priorities for appropriate management. Beyond the natural recreational opportunities afforded the Town by these natural areas, and the hills and forests surrounding West Fairlee, the Town has formal recreational areas at the Westshire Elementary School and fields.

O. Recreational Lands and Facilities Goals Policies, Recommendations

Goal

1. To provide access to recreational opportunities for West Fairlee residents and visitors of all ages.

Policies

1. Maintain recreational land to encourage its optimal use.

Recommendations

1. The Town should develop management plans for each municipal parcel and incorporate these into the Town's Capital Budget and Program.
2. The Town's Boards and Commissions should support the development of a Town recreation plan.
3. The Conservation Commission shall create, map, and promote the use of non-motorized recreational trails that will be open to the public year-round within the town and the forest lands it owns.

P. Scenic and Historic Resources

West Fairlee has many historic resources: buildings, bridges and landscapes which survived earlier periods and serve as a visual record of the Town's history.

The National Register of Historic Places lists four West Fairlee properties, and 16 properties in the Brook valleys and Wild Hill are listed on the Vermont Historic Register. The Village of West Fairlee on its own comprises an historic area. Most of the homes in the Village date from the copper mining period and present a variety of architectural styles of the Nineteenth and early Twentieth centuries. Over 20 village homes are on the Vermont Historic Register. A complete listing of the over 40 town properties on this Register is in Appendix A.

The landscape of the Town and the Ompompanoosuc River valley is an economic as well as an aesthetic asset. Tourists come to the Upper Valley because they are attracted to our scenery and the quality and values of rural life. Tourism is a major industry in Vermont and has particular meaning for towns, like West Fairlee, that are located near the main transportation route. The challenge for West Fairlee is to maintain those parts of the town that have historical value, and which help give the town its character, while accommodating the development that is a by-product of the Town's location.

Q. Scenic and Historic Resources Goals, Policies, Recommendations

Goals

1. To preserve and enhance historic buildings and sites in the Town of West Fairlee, when practical and economically feasible.
2. To promote sensitive economic development in areas of historic value.
3. To support education and outreach to further the preservation of historic and archeological resources.
4. To stimulate economic strength through preservation of historic and archeological resources.

Policies

1. Future development within or adjacent to historic buildings or sites should be permitted

only when the design of the project fits the context but does not detract from the dominant character of the immediate area.

2. Unnecessary destruction or removal of recognized or documented historic buildings, structures, or sites is discouraged.
3. The restoration and adaptive use of historic buildings or sites when this is practical and economically feasible and when such projects do not diminish the distinguishing qualities of those buildings or sites is encouraged.
4. Public improvements such as bridge replacement or rehabilitation, street widening, roadway reconstruction, signage, utility distribution systems, and outdoor lighting should be designed to avoid unnecessary degradation of historic buildings or sites. Such public investments shall be planned in consultation with local and state officials, including the Vermont Division for Historic Preservation, to ensure consistency with their planning objectives and programs.
5. Archeological resources should be recognized and supported as important links to the town's prehistoric and historic record and accepted as key components of our heritage. No land development shall be permitted which results in the unnecessary loss or destruction of a significant archeological resource without appropriate mitigation.
6. To preserve outstanding historic areas and to discourage development which has an adverse impact on locally recognized historic resources, development shall be designed to be compatible with the traditional patterns, scale, size, bulk, density, and form of existing buildings, structures, or sites.

Recommendations

1. Historic resources of the Town of West Fairlee should be further inventoried, analyzed, and mapped by the Historical Society and the resource inventory should include known archeological sites
2. The Historical Society should further identify, document, and evaluate historic buildings, and historic and archeological sites and landscapes which may be included on the National Register of Historic Places.
3. The Historical Society should develop National Register nomination(s) for significant historic properties that might be considered for the Register.
4. Preservation of historic and archeological resources through easements or covenants should be encouraged by the Historical Society.

VI. Housing

The availability, quality, and location of homes in large part determine the nature and quality of our experience of and involvement with the community. The location of homes determines and depends on the facilities and services provided by the town, such as schools and roads. Poor planning of new housing can result in increased water pollution, increased school transportation costs, destruction of wildlife habitat, etc.

West Fairlee lies within a “Goldilocks zone” – close enough for a reasonable commute to employment centers in the Upper Valley and far enough away to maintain its rural character and be slightly more affordable. However, like the rest of the State, West Fairlee has no surplus housing and experienced a tightening real estate market as sales to out-of-state buyers surged during the pandemic. An increasing number of single-family homes have been converted to short-term rentals.

A. Existing Conditions

Housing is spread throughout West Fairlee, with greater density along Route 113 in the Village Area, along West Fairlee Road, and near Lake Fairlee. Most of West Fairlee’s structures (79%) are single- unit detached homes, 20% are mobile homes, and the remaining one percent are duplex configurations.

West Fairlee does not have a wide variety of housing options. According to the 2020 US Census, there were 334 housing units, down from 368 in 2010. Some of the data may have errors given that the 2020 Census and 2021 American Community Survey data no longer has the full sampling that previous Censuses had, so comparisons to previous data is difficult. Of the 334 units, 266 are occupied (80%). Of occupied housing, West Fairlee has a higher than usual percentage of homes that are owner-occupied (85%), while just 15% are renter occupied. The remaining 20 of housing that is unoccupied are for seasonal, occasional, or recreational use. The last few years have put pressure on some of our seasonal/recreational homes to be converted to year-round occupancy.

Although the elderly population is already large (26% as a percentage) and expected to grow in town, there are currently no living facilities of any kind specifically for elderly or disabled citizens. A sizeable portion of the housing in West Fairlee (42%) was built during the rapid increase in population experienced by Vermont in the 1970s and 1980s. These, and other, even older homes, were constructed before accessibility was considered, and before higher energy costs made conservation a high priority. As a result, they are not well-suited for elderly living, and are expensive to heat and cool. Most homes in town use wood, oil, or natural gas for heating.

B. Housing Opportunities

According to American Community Survey data, approximately 15% of West Fairlee's occupied homes are renter occupied, which is comparable to the rest of Orange County (18%).⁵ West Fairlee's location in the Upper Valley and its major centers of employment make it a desirable location for additional rental housing. It would be sensible to locate any additional housing in or near to the current higher density areas.

The number of residents per household has declined over the past decade from 2.72 to 2.1.⁶ This creates the opportunity to increase the number of housing units in West Fairlee without dramatically increasing its population, by encouraging the development of multi-family housing and accessory dwelling units inside of existing larger homes. Some of the costs that are associated with rural housing development are transportation, on-site septic systems, well drilling, and larger lot sizes. Converting a large, older, single-family house into a duplex may reduce some of those costs without creating an undue impact on the town's character.

Due to West Fairlee's proximity to employment centers, but current lack of transportation and municipal park and ride lots, transportation costs are a large part of whether living in town is affordable. Location affordability is a combination of many factors primarily made up of housing and transportation costs. Housing and Urban Development (HUD) defines affordable housing as those households that spend below 30% of their income on housing costs. According to the Keys to the Valley project, roughly 70 households in town are cost burdened (spending 30% or more). According to HUD's location affordability index, a median income household (\$53,353) in West Fairlee/Fairlee (these are combined by HUD) spends 23% of their income on housing but 30.9% on transportation, which is significantly higher than the recommended 15%-20%.⁷

Overall, West Fairlee has two major needs in housing: homes for the aging population (either new construction or through renovations) and affordable housing for younger families. As the aging population continues to increase, creating more opportunities for our residents to age in place either in senior housing or assisted living is important to maintaining a desired quality of life and active engagement with the community. Equally important to attract younger families is that same sense of engagement in the community, as well as lower housing and transportation costs.

Overall, West Fairlee residents would like to see an increase in the number of houses and population increase in town with 45.7 % of survey respondents indicating that preference. To meet the housing needs, respondents were asked what types of housing they would prefer to see developed with residents in favor of the following types: apartments, single family houses, and multi-unit houses. Survey respondents did not want to see condominiums or single-family houses in subdivisions. Ways to address these two major needs could include more rental properties, smaller housing units and lot sizes, cluster housing, accessory dwelling units, and

⁵ American Community Survey, Table DP04: Selected Housing Characteristics, US Census Bureau, 2020

⁶ American Community Survey, Table S1101: Households and Families, US Census Bureau, 2010 and 2020 datasets

⁷ Office of Policy Development and Research, Location Affordability Index, Department of Housing and Urban Development, 2020

multi-family housing. In addition, we need increased transportation, including carpooling and telecommuting options.

C. Housing Goals, Policies, Recommendations

Goals

1. Encourage housing that is affordable and built so that both long-time residents can stay, and new residents are attracted.
2. New and renovated homes that fit well in our existing landscape.

Policies

1. To allow for the growth of housing at a rate consistent with the community's ability to provide services.
2. Encourage the development of affordable housing.
3. Limit the open space fragmentation caused by new housing by encouraging the construction of accessory apartments and clustered developments.
4. Construction of new buildings should strive for energy efficiency and consideration of net-zero energy construction

Recommendations

1. Town commissions, boards, and committees are encouraged to work with housing trusts and others to assess the feasibility of a senior housing development in town.
2. The town should identify potential locations for multi-family affordable housing and consider ways the community could support its development.
3. An energy committee should be formed to work with partners such as Vital Communities or Efficiency Vermont to educate homeowners about the benefits of weatherization or home fuel switching.
4. Options should be identified that would provide transportation to job centers at lower cost than single occupancy driving.
5. The town should work with homeowners who are interested in the creation of accessory apartments or renovations to make age-friendly duplexes.

VII. Community Facilities

Facilities and services are provided by the town for safety, health, and enjoyment by residents and the general public. They include schools, telecommunications, solid waste disposal, and general town administrative services. Balancing these services and town assets with an acceptable tax rate to meet actions required by the state and residents' desires is challenging. While the town is not the only provider of services needed by residents, it is important to coordinate with outside entities to fill those gaps.

A. Town Facilities

The Town owns two public buildings, Bean Hall, and the West Fairlee Community Building. Until 2006, Bean Hall held the Town Offices, public meeting space, and a Post Office branch. The Community Building, originally a schoolhouse, was leased to various businesses that provide services to the community. Available funding was not sufficient to maintain both buildings. Due to safety concerns, Bean Hall was closed in 2006.

The Selectboard appointed a Building Committee in 2010, the culmination of which was to focus resources on the Community Building. While a bond for extensive renovations including full ADA compliance and other improvements failed in 2011, the voters approved short-term borrowing to create a Town Office and municipal records vault within the Community Building. About one quarter of the building (and a fenced area of the Green) is leased to a licensed daycare provider; the remainder houses the Town's Library, Food Shelf, and Historical Society at no charge. The Town Office serves as a public meeting space but can be inadequate for larger gatherings. Other meeting spaces are generously provided by the local churches and the Westshire School.

Each year, significant funds are added to the Community Building Reserve Fund to undertake necessary upgrades and improvements, and to accumulate funds toward larger projects. Due to the number of people occupying the building, in 2020 (?) the Town was required by the State to install a public water supply which has a strict testing regimen. New furnaces, extra cap insulation, and window replacements have all helped to improve the building's energy efficiency. The work continues – LED lighting is being installed, accessible bathrooms are in design, more weatherization of the building envelope is planned, the roof will soon need attention, and we keep a wary eye on our 40-year-old septic system. The Town has not yet reached a decision about what to do with Bean Hall, and the committee no longer exists.

The town maintains a road materials storage yard and salt shed for its highway contractor on West Fairlee Road. The property is leased from the State and serves as the location for the Town's recycling center.

Local information sharing is essential to create and sustain a sense of community. The West Fairlee Listserv and website are helpful resources to the community.

There are eight public cemeteries in West Fairlee, as listed below.

- West Fairlee Village
- West Fairlee Center

- New/Krook
- NW/Childs/Scruton Hill
- Blood Brook
- Wild Hill
- Middlebrook
- Kidderhood

Cemetery space is adequate.

B. Fire, Rescue and Police Services

Fire and medical response for West Fairlee is provided through a collaborative agreement between the West Fairlee and the Vershire Volunteer Fire Departments. Both Departments respond to mutual aid requests from neighboring towns. The West Fairlee fire department has its own station; it is not a town building. Many of the volunteers have certifications such as firefighter 1 and 2, EMT and Hazmat, and the department regularly hosts skill-building training programs. Representatives of the Fire and EMS service discussed with the Planning Commission the high costs associated with maintaining emergency response equipment and the required, frequent replacement schedule of fire protective gear and medical equipment.

Emergency medical response is provided by Upper Valley Ambulance Service in Fairlee, and by the West Fairlee Fire Department. At each year's town meeting, funding is appropriated to these organizations upon request, in recognition of their service to the town's residents.

Some police services for ordinance and traffic control are provided through a contract with the Thetford Police Department and the Selectboard is committed to expanding services and coverage as personnel becomes available. Forty percent of the people who answered the town survey said police and public safety should be improved in West Fairlee.

C. Education

West Fairlee is a member of the Rivendell Interstate School District. Westshire Elementary School serves Vershire and West Fairlee students. The district-wide elementary enrollment had fallen to 207 in 2022, with 56 from Fairlee. Middle and high school students attend Rivendell Academy. In 2022, there were 70 students from West Fairlee enrolled at Rivendell.⁸

Vocational schooling is provided by the River Bend Career and Technical Center in Bradford, Vermont, approximately 15 miles from the Village of West Fairlee. River Bend provides technical education programs for students and for adults. River Bend's facility includes a state-of-the-art automotive garage, heavy equipment training sites and shop, a complete building trades workshop, and a commercial kitchen with its own restaurant. There is a cosmetology lab, media and design lab, health science programming, and an Emergency Services program.

⁸ Rivendell 2022 Annual Report

The Rivendell district could increase its role as a community learning partner in the future. The school buildings and facilities could be utilized as year-round resources for after school and adult education.

D. Childcare

Childcare is an integral piece of Vermont's economic infrastructure and should be considered as important economically as public education, transportation, and housing. The affordability of childcare is also an issue that could be the difference in a two-parent household where one parent is forced to not work and lose out on the added salary, and potential retirement benefits due to the cost of childcare. With about 97% of the West Fairlee workforce working outside the home,⁹ it is important for working families with children to have access to this service. In the six towns that abut West Fairlee there are at least 16 registered childcare providers¹⁰, including pre-school or after school, and West Fairlee has programs available at the school. There is also one private registered provider in town.

E. Health and Social Service

The location of West Fairlee gives residents access to services such as medical and dental offices, mental health clinics, day treatment centers provided by Dartmouth Hitchcock Medical Center and Gifford Medical Center. Little Rivers Health Care provides primary care for children and adults through nearby clinics in Bradford and East Corinth. As a Section 330 Community Health Center, Little Rivers receives a federal grant to provide services on a sliding scale based on income. The town is served by the Barre and Hartford offices of the Agency of Human Services. Other services such as food and nutrition programs, home heating assistance, housing counseling and more are provided by Capstone Community Action which has an office in Bradford.

Upper Valley Pediatrics, located in Bradford and East Thetford, provides comprehensive medical care for children from birth to adulthood. In addition, mental health counselors provide counseling services for children and families, and the practice has a nutritionist on staff for exercise and diet management.

The West Fairlee Food Shelf is a critical resource addressing food insecurity in the local community and neighboring towns. The Food Shelf partners with Willing Hands for weekly distributions of groceries including fresh eggs, bread and produce.

F. Senior Services

The Central Vermont Council on Aging, based in Barre, covers the town and provides a senior helpline to provide information and assistance and case management to help residents who want to age in place. While there is no senior center in West Fairlee, many residents attend

⁹ American Community Survey, Table S0801: Commuting Characteristics by Sex, US Census Bureau, 2020

¹⁰ Vermont DCF

meals and activities, and use ancillary services (like foot care) through Orange East in Bradford and the Thetford Elder Network (TEN).

G. Postal Service

There is no post office in West Fairlee. Other town post offices deliver mail to some houses and others utilize post office boxes in West Fairlee, Vershire, Thetford, Bradford, and Fairlee.

H. Solid Waste Management

West Fairlee is a member of the Greater Upper Valley Solid Waste Management District that manages waste generated in ten Vermont member-towns. Town residents may receive periodic solid waste pickup through a contract with private firms. A similar contract for recycling has been established with Quinttown Container Company. Pursuant to Vermont law, residents may deposit compost at the town recycling center where it is picked up by a compost contractor. The recycling center is in Post Mills and has just been fixed up.

Fewer than half (43.8 %) of the 2017 survey respondents said that they were satisfied with the current level of service for solid waste management and recycling and these services should be improved. In 2022, the Selectboard obtained a state Materials Management Infrastructure grant to completely reconfigure the recycling center, improve pedestrian safety and perimeter security, and add new services. A recycling attendant was hired to further improve operations.

According to survey respondents, the State does not do enough enforcement of its own regulations on illegal dumping of junk.

I. Water and Sewer

Water supply and sewage disposal are the responsibilities of private landowners. Potable water is obtained using drilled or dug wells, springs, and lakes. Sewage disposal is accomplished through on-site septic systems with drainage fields including mound and pressure systems. In 2007, the State of Vermont - Agency of Natural Resources assumed the responsibility of permitting and overseeing all septic systems.

J. Utilities

Utilities serving West Fairlee include electricity, landline telephone, high speed internet and cable television access.

1. Electric Power

Green Mountain Power is West Fairlee's electric service provider. There are no transmission lines that run through town, but 3 phase power is available along VT 244.

2. Telecommunication

Landline telephone is provided by companies including Consolidated Communications Holdings, Inc. (formerly FairPoint Communications) and Topsham Communications, Inc. FairPoint was

acquired by Consolidated Communications Holdings, Inc. (Consolidated), on July 3, 2017. Following the acquisition, Consolidated was the 9th largest provider of fiber services in the U.S. Cellular telephone and cellular internet coverage in West Fairlee ranges from limited to non-existent.

Currently, Topsham Communications, Inc provides access to fiber-to-the-home (FTTH) telephone, internet, and cable TV along approximately 28% of town roads in West Fairlee. Digital subscriber line (DSL) service through Consolidated provides internet access via copper telephone lines to other residents in West Fairlee. West Fairlee is a member of ECFiber; a network of 24 towns that joined together as a Communications Union District (CUD) to build a community-owned fiber optic network to deliver FTTH telephone and internet service. ECFiber leases some fiber capacity from the State in order to provide FTTH services to member towns. As of this Plan, ECFiber offers fiber-based telephone and internet services to the municipal buildings in town and to some West Fairlee residents residing along Route 113.

Telecommunications have become increasingly important to the security and economic needs of residents and businesses. This trend will continue, creating new opportunities for the relocation and growth of decentralized business operations and reducing demands for travel by conventional modes. With an improved telecommunications infrastructure, large amounts of information can be conveniently moved over long distances at competitive rates. The implications for land use are significant, as this technology will enable people to move into rural areas of the Town and to "telecommute" to other remote or central offices more readily.

Eighty-four percent of respondents to the Town's planning survey said they agree that cell phone service is particularly important to the future of West Fairlee. To help the development of cell service in town, 78% of the survey respondents agreed that they would support the placement of a cell tower in West Fairlee if it increased local cell reception.

The challenge will be to find ways to balance the ease and convenience of cell phone communications with many of the other goals of this plan, including protecting scenic vistas and natural areas, preserving the rural character and appearance of the Town, protecting undeveloped lands and watersheds, and ensuring the health and safety of the community, consistent with state and federal policy and regulation.

Therefore, it is in the interest of the Town that the proliferation of communication and transmission towers and antennas be minimized through the sharing or co-location of towers, consistent with state law. It is also in the Town's interest, when feasible, to locate communications towers in non-residential locations and away from visually sensitive areas, prominent scenic areas, historic areas, Lake Fairlee and the Ompompanoosuc River. The citizens of West Fairlee desire to maintain the rural and scenic character of our community. Our undeveloped ridgelines and hillsides are scenic and valuable to the character of the Town. The integrity of our open and undeveloped spaces and particularly the integrity of our forest and agricultural soils are among West Fairlee's most valuable assets. Protection of these areas from intrusive developments when feasible, is a matter of public good.

Town bodies and Town Plans have a role to play and are afforded substantial deference in many telecommunications infrastructure siting matters under state law, including 30 V.S.A. Section 248a. Town policies for creating all towers are in the policy section of this chapter.

K. Capital Budget and Planning

State statutes enable communities to create a Capital Budget and Program (CP&B) for the purposes of planning and investing in long-range capital planning. When planning for routine major facilities investments, such as roof replacements, foundation repairs, etc., it is important to also consider making energy efficiency improvements at the same time. The cost to replace or renovate a community facility will only be slightly higher if energy efficiency improvements are done at the same time, rather than on their own. At present, the town of West Fairlee has not adopted a formal Capital Budget and Program (as described in §4443) to help guide investments in community infrastructure and equipment because the community has such limited infrastructure. However, the Selectboard is involved in long-range capital budgeting.

L. Shared Services

As the costs and quality of municipal services continue to be strained, pooling resources between different towns and regions is one avenue to reducing the financial burden for each community to pay for the same service. Having communities and regions working together to provide necessary services to their residents creates an opportunity for collaboration as well as cost saving. West Fairlee has benefitted from such an Interlocal Agreement by joining with Fairlee & Thetford to create the TriTown Lake Fairlee Commission which oversees the replaced Lake Fairlee Dam.

84.8 % of survey respondents were in favor of cooperative arrangements for similar or better services such as policing, snow removal, road maintenance and many others if the overall cost to the town was reduced. In 2015 enabling language to coordinate shared services and shared purchases among willing communities was created with the regional planning commissions.

M. Community Facilities Goals, Policies, Recommendations

This section and all its parts serve as a clear written community standard intended to preserve the resources, aesthetics, and scenic beauty of the Town of West Fairlee. Accordingly, it is the intent that this section be utilized by the District Environmental Commission, the Natural Resources Board, or the Public Utility Commission as part of an aesthetics and resource analysis for all wireless or other broadband telecommunications facilities, particularly those developed under Title 30. These policies shall be used, in part, to determine whether or not a project fits the context in which it will be located, possesses acceptable visibility features, and has acceptable levels of scenic impact.

Goals

1. Provide community facilities and services that meet the needs of the residents of West Fairlee.

2. To promote high quality broadband access for the Town
3. Preserve the rural character and appearance of the Town.
4. Protect the scenic, historic, environmental, and natural resources of the Town.
5. Promote increased cell coverage by working with interested wireless service providers.

Policies

1. The Town will continue to use public facilities for public community events.
2. The Town will continue to support community programs.
3. Growth and Development shall not exceed the capacities of local facilities and services.
4. Encourage the deployment of fiber optic cable and other high speed internet services for communications services in West Fairlee.
5. Encourage wireless service providers to allow other providers to co-locate on existing facilities, subject to reasonable terms and conditions, and subject to state and federal law. The principal of co-location is the Town's favored choice. When making their determinations on the feasibility of co-location, prospective developers shall conduct a duly diligent effort to evaluate space available on existing towers, the tower owners' ability to lease space, mechanical or electrical compatibilities, and regulatory limitations.
6. The use of ridge lines for telecommunication towers and related facilities should be undertaken in a manner that will not unduly detract from or unduly adversely affect these scenic values, when possible. Protection of these areas from insensitive development is a matter of public good, therefore facility siting, design and construction should employ the following principles:
 - a. Towers should not be sited in highly visible areas such as at public use areas, on shorelines or lands immediately adjunct to the Ompompanoosuc River and Lake Fairlee; Towers should be located in forested areas or be sufficiently landscaped to screen the lower portions of the towers and related fixtures from public vantage points;
 - b. When possible, towers should utilize materials, architectural styles, solar schemes, lighting, mass and other design elements to promote aesthetic compatibility with surrounding uses and to avoid undue adverse visual impacts (such as the necessity of aviation lighting);When possible, where prominent views of a site exist, it is preferable for towers not to be located on peaks and ridges that are locally significant or regional focal points;
 - c. Where construction of access roads is involved, these should comply with the Department of Environmental Conservation Low Risk Site Handbook for Erosion Prevention and Control;
 - d. When towers no longer are used for the purposes for which they were originally constructed, they shall be dismantled and removed from the original site. Local

and state land use permits should incorporate removal of inactive fixtures as a condition of approval unless an acceptable new use exists.

7. Illumination of towers by artificial means should be limited and towers should not display strobe lights unless required by law.
8. In planning for telecommunication facilities, consideration should be given to the environmental limitations of any given site. The impacts of communication towers and related fixtures, as well as their construction and maintenance on wildlife habitats, soil erosion, forestry and agricultural lands, and similar resources should be reasonably addressed consistent with state law.
9. When telecommunication projects are situated on lands owned by the State, design plans should be compatible with current Management Plans for Public Lands adopted by the Agency of Natural Resources.
10. The Town supports high quality, convenient childcare available within and/or near the town, or near employment centers for working families with children.

Recommendations

1. The Selectboard should develop management plans for each public structure, addressing both immediate needs and long-term requirements.
2. With reference to the Town Plan, the Selectboard should adopt a Capital Budget and Program that addresses the needs of municipal buildings and infrastructure.
3. The town should promote the expansion of high-speed internet access in town. West Fairlee joined ECFiber in May 2020 and will be part of ECFiber's future construction plans.
4. The Town should explore opportunities to increase cell coverage.
5. The Town should continue to examine possibilities for further collaborations with neighboring towns to share municipal services and facilities.
6. The Town should work with the Westshire school to integrate educational opportunities for students and adults and continue to support vocational training at the secondary level.
7. The Town should work with childcare providers to ensure that safe, affordable childcare is accessible to working families in town.

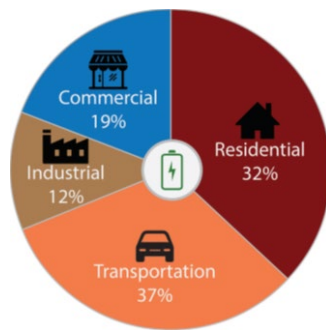
VIII. Energy

Energy use and generation plays an important role in the environmental, economic, and social well-being of our community. Energy is a major component of the cost of living and as we continue to use more energy, those costs continue to rise. Given that there is a finite amount of fossil fuels available globally, collectively in West Fairlee we must alter everyday activities such as how we heat and power our homes or how we travel to work or the grocery store. As we continue to use petroleum-based fuels, the negative impacts on the environment that contribute to the global climate change problem further emphasize the need to plan for conserving energy as well as fuel switching to renewable resources emerging technologies.

Vermont strongly supports reducing its reliance on fossil fuels and increasing energy independence for the state by improving the energy efficiency of residential, business, and government buildings, and utilizing in-state renewable energy resources. The 2022 Vermont Comprehensive Energy Plan (CEP) addresses the major factors to our energy use by addressing the state's energy future for electricity, thermal energy, transportation and land use. Through this process the CEP set a long-term statewide goal of obtaining 90% of Vermont's Energy needs from renewable sources by 2050, while eliminating our reliance on oil. Expanding upon the statutory goal of 25% renewable by 2025 (10 V.S.A. § 580(a)), the CEP established the following set of goals:

- Reduce total energy consumption per capita by 15% by 2025, and by more than one third by 2050.
- Meet 25% of the remaining energy need from renewable resources by 2025, 40% by 2035 and 90% by 2050.
- Three end use sector goals are: 10% renewable for transportation by 2025, 30% renewable for buildings by 2025, and 75% renewable for electric power by 2032.

“Energy” as used in this Plan and the state's Comprehensive Energy Plan (CEP) is not the same as electricity. It is **all** forms of energy used by people. This is commonly broken down into four sectors: commercial (this involves running machinery, heating and lighting), residential (mainly heating and lighting), industrial (process energy such as smelting or concrete production), and transportation (mainly gasoline and diesel).



A. Current Energy Use

Vermonters use a high percentage of fossil fuels for energy on heating and transportation compared to the nation. However, Vermonters also generate very little per capita in terms of greenhouse gases, primarily due to the high percentage of energy generated from hydro and nuclear plants in our electric mix, reaching nearly 100% renewable. We no longer have VT Yankee in our power mix, but have increased in-state commercial wind power, photo voltaic and use a variety of out of state power sources.

Understanding our current energy use is important to evaluate where West Fairlee needs to go with our energy future. Transportation contributes a large percentage of residents’ total energy use. This is mainly due to land use patterns, fuel costs, and the dependence on the automobile. According to the 2015 American Community Survey, 88% of residents drove alone to work, with an average commute of 30 minutes. With many residents working outside of town, approximate resident fuel use is 34 billion BTU’s or 278,000 gallons of gasoline.

Vehicles must switch to being powered by electricity (EVs), and that electricity must be generated from renewable sources. One of the benefits of powering cars with electricity is that they use energy much more efficiently, and they can also function as giant batteries, storing the intermittent surges of power created from solar arrays and serving as power sources in brief outages. The current numbers for EVs are low due to a variety of reasons such as cost, range on one charge, lack of charging stations available in the region. The goal is for EV ownership to increase to 42 vehicles by 2025, but then really climb to 299 by 2035 and 623 by 2050. This will take state and federal action to make these vehicles easily available and comparably priced.

Electricity usage in town is shown by the table below with data displayed in kWh.

Sector	2015	2016	2017
Commercial & Industrial	383,722	372,789	354,001
Residential	2,078,390	2,039,892	2,090,013
Total	2,462,112	2,412,681	2,444,014
Count of Residential Premises	332	332	333
Average Residential Usage	6,260	6,144	6,276

There are no scarcities of energy foreseen in the 8-year life of this Plan. Our electrical providers have plenty of power supply resources either under contract or available to purchase now. Total energy demand is likely to shrink modestly in the near term as population is not expected to grow much and efficiency is constantly improving.

That is not to say that plentiful energy will be cheap. Fossil fuel prices have varied widely over the last several years, and the overall trend is for dwindling supplies. Also, whether through carbon pricing or other methods, fossil fuels will likely increase in cost to disincentivize their use. Though there should be ample amounts of fuel for the life of this plan, we must encourage a shift away from fossil fuels to meet our goals. Wood is a plentiful local source of heating fuel, and many more cords could be sustainably harvested than are being cut now. Plenty of sun and wind are available if we decide to use them.

The cost of energy is an issue for most families, but it will be less of an issue for all if targets for better insulating buildings, switching to EVs, and using heat pumps and advanced wood heat systems are met. An EV has much less maintenance costs, as they have no engine or exhaust system, and the cost of electricity to power a car comes out to the equivalent of about \$1.50 per gallon (in today’s value), much less than current gasoline prices. For many, the cost barriers are not the daily or monthly energy usage costs but paying for improvements to buildings, appliances, and heating systems, and purchasing EV. There are rebates and programs available

that are income-based, and even for those that have too much income to qualify over time these investments will pay off, but they still require getting financing or having considerable savings on hand. Programs at the state and federal level need to take on solving these capital hurdles.

West Fairlee residents rely on a variety of heating sources, with most heating through oil, wood-based systems, or propane. As noted above, residents do not experience a scarcity of heating sources but the variability in costs from year to year, especially in the winter, can make picking a fuel source and a heating system that will last many years difficult for residents. Programs through Efficiency Vermont and community action agencies can help limited income residents with weatherization upgrades and heating costs.

More than half of the households in town heat their homes with either propane or oil. The remaining households are using wood as a fuel source for heating. The Vermont Department of Public Service estimates that the average household burns three to four cords of wood each year during the heating season. Given that about 82 homes in West Fairlee were heating with wood,¹¹ we can estimate that between 246 and 369 cords of wood were burned in 2020.

Increased reliance on wood as a heating source and solar as an energy source is likely to offset some of the demand for expanding alternative sources. West Fairlee has thousands of acres of timberland that could be managed to supply all the Town's homes and other buildings with firewood. Modern catalytic converters installed on wood burning stoves and furnaces are a partial solution to the problem of air pollution associated with the burning of wood. Advanced wood heat boilers for larger buildings that run off wood chips or pellets, and pellet stoves for individual homes can provide thermal needs very efficiently using a local resource.

Additional sources of renewable energy include biomass, solar, wind, hydro, methane, and geothermal. Each of these sources can play a role in our town's energy supply. Biomass fuels sustainably grown on existing fields can be used as stock for ethanol or gasification systems. Solar systems can directly heat water and photovoltaic (PV) systems can create electricity. Residential and commercial PV installations can "net meter", selling surplus power back into the grid. Small and larger commercial scale wind turbines are being installed in Vermont. Methane, being generated on farms with a large supply of manure (cow power) or from old landfills, can run electric generators

Most locations in Vermont can generate solar energy through photovoltaic panels or solar thermal systems. Vermont Energy Investment Corporation (VEIC) reported earlier that West Fairlee has at least 8 net-metered photovoltaic (used to generate electricity) sites. Through a statewide mapping study, there are over 1500 acres that have potential to produce over 200 MW¹². Some of that land through further studies may be deemed unsuitable for renewable energy development but provides for 60 times the amount of land needed to meet the town's renewable energy generation target. Additionally, it is estimated that the Town of West Fairlee has 80 residences with the potential for rooftop solar.

¹¹ American Community Survey, Table B25040: House Heating Fuel, US Census Bureau, 2020

¹²Vermont LEAP model and maps

There are several ways West Fairlee can meet its local energy demand, first by lowering it, and then by working to meet the remaining need with local, untapped energy resources.

From the 2017 town survey, respondents were in favor of privately-owned, small-scale electric generating wind towers and solar panels. For commercial scale generation, respondents did not want to help meet the state goals with large scale wind towers but were open to the idea of large-scale solar panel arrays. Some respondents said that with large-scale energy generation they did not oppose the potential projects if they were screened properly.

In West Fairlee I support the development of:	YES		NO		NO OPINION		NO RESPONSE	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Privately owned small-scale electric generating wind towers.	63	60%	20	19%	10	9.5%	12	11.4%
Commercial large-scale electric generating wind towers.	37	35.2%	47	44.8%	10	9.5%	11	10.5%
Privately owned small-scale electric generating solar panel arrays.	86	81.9%	2	1.9%	6	5.7%	11	10.5%
Commercial large-scale electric generating solar panel arrays.	46	43.8%	34	32.4%	14	13.3%	11	10.5%

B. Decreasing Energy Use by Changing Behavior

Raising awareness about wasteful energy behaviors and energy saving behaviors reduces the strain on existing energy resources, and helps residents and businesses save money, and makes the town a more affordable place to live with a higher quality of life.

Examples include:

- Turning off lights when you leave a room.
- Using a programmable thermostat.
- Use a clothesline rather than a dryer.
- Use a cold-water laundry wash.
- Doing multiple errands for car trips.

C. Decreasing Energy Use by Increasing Energy Efficiency

For those necessary or desired services that require energy, we can apply the principles of energy efficiency to ensure that we use less energy to provide the same level and quality of service. Examples include:

- Insulating with high R-value (or heat flow resistance) material,
- Using high efficiency windows,
- Installing energy efficient appliances like refrigerators, freezers, front loading washing machines, gas heated clothes driers and heating systems without blowers,
- Using high efficiency lighting,
- Using gas and/or solar hot water heaters,

- Siting buildings to make use of existing wind blocks and natural cooling patterns derived from the landscape's topography(permaculture).
- Siting buildings with maximum southern exposure to capture passive solar energy.

New residential development in the State of Vermont is required to comply with Vermont Residential Building Energy Code (RBES). Commercial development is subject to similar code regulations. Some examples of the types of development the RBES applies to include:

- Detached one- and two-family dwellings.
- Multi-family and other residential buildings three stories or fewer in height.
- Additions, alterations, renovations, and repairs.
- Factory-built modular homes (not including mobile homes)

To comply with the RBES, a home, as built, must meet all the Basic Requirements and the Performance Requirements for one of several possible compliance methods. If the home meets the technical requirement of the Residential Energy Code, a Vermont Residential Building Energy Standards Certificate must be completed, filed with the Town Clerk, and posted in the home. Currently there is no enforcement of the filing requirement at the state level. The town may want to consider innovative ways to encourage filing, such as requiring an additional fee with a building permit that would be reimbursed if an RBES certificate is filed. If a home required by law to meet the Residential Energy Code does not comply, a homeowner may seek damages in court from the builder. The RBES includes heating and cooling systems as well.

Although communities are unlikely to impact energy consumption globally, they can create opportunities to impact energy use reduction at the local level.

D. Form an Energy Committee

West Fairlee does not have an energy committee, but towns are statutorily enabled to create one. An energy committee (EC) is a volunteer group formed to establish and implement the town's energy goals; the group can act independently or request to be formally appointed by the Selectboard. The work that can be done by an EC includes conducting energy audits on municipal buildings, tracking energy use for these buildings, working with the Planning Commission on the Energy Plan. Most importantly, an active EC can help the town save money while saving energy.

E. Auditing Municipally Owned Buildings

The town has continued to make progress on the energy efficiency of town owned buildings. Following an energy audit of the Community Building in 2014, additional insulation and window replacements have improved energy efficiency.

In addition to reducing the energy use related to facilities, municipalities can implement policies that lower energy use by town staff or encourage greater energy efficiency. An example is an Energy Efficient Purchasing Policy. A policy of this nature would require energy efficiency to be considered when purchasing or planning for other town investments. For example,

purchasing Energy Star rated equipment is a well-documented way to increase energy efficiency. Devices carrying the Energy Star logo, such as computer products and peripherals, kitchen appliances, building and other products, use 20%–30% less energy than required by federal standards.

F. Permitting and Siting

Energy generation in Vermont is subject to many different permitting requirements, most of which are limited to state level permitting. Towns are prohibited from regulating energy generation facilities, from house-scale to commercial projects, if they connect to the grid. However, the town can make its voice heard in the state review process as these facilities require a Certificate of Public Good (CPG) as part of their Section 248 permitting, and this Plan is considered during the state review. Most commercial projects would like to be a “preferred site”, as that results in a better rate for the power they produce. The town has not designated any areas as preferred sites, and many sites get preferred status by statute (such as on top of buildings, in former gravel pits, etc. However, an applicant can also get preferred status if the town’s Selectboard, Planning Commission and the regional planning commission support a project.

Most renewable generation in town can be expected to be from solar photovoltaic installations. New hydropower is unlikely, and we do not have good wind power sites. The main issue that usually comes up in solar energy generation permitting is the aesthetic impact, and occasional impacts from the development cutting trees or building access roads through wetlands. Most of these issues are handled well during the state permitting process, but our Town Plan can add our say in this process. To that end, we have put policies below on siting and on when the Selectboard and Planning Commission should support a site as having ‘preferred site’ status.

G. Energy Goals, Policies, Recommendations

Goals

1. To promote the design and construction of energy efficient buildings and structures.
2. To encourage the public and private use of local renewable energy sources while minimizing the impacts on our water, land and habitat resources and on the air we breathe.
3. To increase public awareness and use of energy conservation practices.
4. To promote public and private energy efficiency and conservation.

Policies

1. It is the policy of the Town of West Fairlee to encourage reducing the dependence on fossil fuels; increase energy efficiency and conservation; and reduce municipal energy costs through energy efficiency, conservation, and a full evaluation of purchasing practices. All energy alternatives, efficiencies and conservation measures shall be balanced against environmental and scenic degradation or harm to natural resources, which should be avoided whenever possible.

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2. Major public investments, such as schools, public playgrounds, and town facilities should be situated within or near the Village of West Fairlee.
3. Rehabilitation of existing public buildings, or design of new ones, should use energy efficient design principles and practices with the lowest life cycle costs when practical.
4. Design plans for new public buildings shall reflect sound energy conservation principles.
5. To the extent possible, energy generation, transmission, and distribution facilities or services should be compatible with the land use and natural resources patterns recommended within this Plan.
6. It is a policy of the Town to encourage the development of local renewable energy sources at an appropriate scale, provided that development of these sources is done to minimize environmental or scenic degradation or harm to West Fairlee or its citizens.
7. The town should only grant preferred status to commercial scale solar generation in the Agriculture/Residential Area, and only when the project does not unduly impact wetlands or critical wildlife habitat.
8. Solar projects must take reasonable measures to limit the visual impact as seen from adjacent properties.
9. Solar projects are encouraged to incorporate agricultural use within the project area, promote insect populations through planting of pollinator food species, or be managed for grassland bird habitat.

Recommendations

1. The Town should continue to implement energy saving measures for town facilities such as considering energy costs in the purchase of building appliances as well as considering the use of alternative energy sources in public facilities.
2. The town supports reducing the use of fossil fuels in transportation and should seek grants to install public EV charging stations at the Community Building.
3. Renewable energy-based systems should be included in the options considered for all proposed, existing, or new buildings and equipment and a life cycle cost analysis will be conducted. At a minimum, solar orientation for passive heat gain and solar supplied domestic hot water should be evaluated.
4. Despite the lack of zoning in town, the Town should develop a means of ensuring that those building in town have a copy of the state energy building standards (RBES and CBES) and know they need to file certificates with the Town.

IX. Transportation

Early settlers constructed roads that served as a framework for West Fairlee's future development. A safe, convenient, and efficient transportation system continues to be essential to support the economic progress and quality of life goals identified in this Plan.

A. Overview - Infrastructure Inventory

Transportation in West Fairlee is comprised of paved and gravel highways that provide connections within the community and the world beyond. There is an important connection between land use, energy and transportation and we recognize that new development, technology, and travel modes may alter demands on the current system.

1. **Minor Arterial Highways** - Class 1 (State) Highways: State-maintained Vermont Routes 113 and 244 serve major portions of West Fairlee. These are the main routes to access Interstate 91 interchanges; and are the most traveled routes for transporting materials, commuters, and other travelers.
2. **Local Collector Roads** - Class 2 & 3 Town Highways: Most of West Fairlee's Town highways are Class 2 or Class 3. Class 2 are the most important all-season highways in town and are generally, but not always, paved. These include Middlebrook and Wild Hill Roads, Beanville Road, and West Fairlee Road. Class 3 roads are a mix of paved and unpaved all-season roads. These include Blood Brook Rd., Jennings Road, and other small side roads.
3. **Class 4 Town Highways and Private Roads**: The remainder of the Town's road inventory is Class 4 -- narrow, gravel, seasonal roads which receive limited maintenance and are not plowed by the Town in winter. It has been a long-standing policy of the Town that maintenance of Class 4 roads be limited to minimums required by the State. However, to protect water quality, Municipal Roads General Permitting (MRGP) requires more consistent monitoring and intervention on hydrologically connected segments of these remote and unpopulated roads. To protect our investment in these often-fragile areas, the Town updated its Class 4 Road Policy and ROW Work Permit in 2021 to reflect current maintenance standards and practices.

While not included in road mileage, **private roads** are mentioned in as much as they intersect with the Town highway rights-of-way and access management is important to preventing expensive repairs caused by poorly sited driveways or agricultural/forestry access.

Highway	Mileage
Class 1	4.35
Class 2	9.35
Class 3	10.83
Class 4	14.09
Total Town Highways	34.27
Total State Highways	4.35
Total All Highways	38.62

Source: Vermont Agency of Transportation

B. Highway Maintenance

West Fairlee does not employ a road crew or own trucks or heavy equipment. Instead, general road maintenance, including culverts, ditching, grading, and snow plowing, is provided by contractors hired by the Town. These contractors supply their own equipment, fuel, and cover their own insurance. This maintenance model has been in place -- and successful -- for decades. In lieu of a town garage, West Fairlee leases a former VTrans outpost from the State which includes a small salt shed and surrounding property adequate for storage of winter sand and other materials.

Town highway maintenance practices are governed by Municipal Roads Codes and Standards for all town highways; and Municipal Roads General Permitting (MRGP) focused on hydrologically connected road segments. The standards provide clear and detailed specifications for design and maintenance of all components of the town highway system; and compliance is linked to our receipt of State Aid and grants. West Fairlee embraced these "best practices" long before they were required. As a result, the 2019 Road Erosion Inventory (REI) indicated only a handful of road segments that did not meet the standard. Our culvert inventory, now in GIS format, can be updated on an on-going basis. The ability to keep these data sets current is particularly valuable for highway planning and budgeting.

C. Transportation Funding

Highway funds come from two major sources, property taxes and limited state and federal grants. West Fairlee receives about \$56,700 in annual State Aid for highways; a figure determined by combined Class 2 and Class 3 road mileage. Highway capital planning and budgeting puts the Town in a better position to plan for highway needs in an efficient and cost-effective manner. Beyond funding the Highway Budget, the Town makes significant annual contributions to a Highway Projects Reserve Fund for future capital projects, paving, local grant match, and emergencies. The Reserve Fund should maintain a balance sufficient to initiate emergency highway repairs and meet the local "match" requirements for State and Federal emergency relief funds.

Local funds are extended by competing for a variety of State grants which require a percentage of local matching funds. West Fairlee is eligible once every 6 to 8 years for a VTrans' Class 2 Road Grant; allocated by a formula based on the Town's Class 2 mileage. VTrans' Structures Grants assist with repair or replacement of bridges and large culverts on Class 2 and 3 highways. **However, for capital planning purposes, it is important to note that new design standards for flood resilience and passage of aquatic organisms will require replacement structures that are substantially larger in size and expense than those that currently exist.**

West Fairlee regularly seeks grants from the Vermont Better Roads (VBR) and Grants-In-Aid (GIA) Programs. VBR projects have included major drainage improvements, bank stabilization, and most recently, completion of a Road Erosion Inventory required under MRGP and a culvert inventory update in GIS format. Annual GIA funds are used for eligible drainage treatments within designated "water-connected" highway segments. Unlike most highway grants, GIA funds may be used on Class 4 roads.

D. Access Management

Access Management protects the Town's investment in its highway system by assuring that access points are in safe locations and private drainage into Town systems can be properly handled. West Fairlee updated its Highway and Driveway Access Ordinance and supporting documents in 2018 to reflect current design and safety standards. The Ordinance, specifications/construction standards, and Permit applications are all available on the Town website,

E. Bicycle and Pedestrian Infrastructure

While there are no formal bicycle lanes or routes, local and visiting bicyclists regularly make use of Town roads. Route 113 through the village and Route 244 along Lake Fairlee are relatively level, affording good biking routes.

Sidewalks in the village are limited in their reach; recent Route 113 repaving marginally improved shoulder width for pedestrians. Establishing crosswalks in village center and at school entrance and increased speed enforcement are critical to pedestrian safety.

Both formal and informal networks of trails exist and traverse both public and private lands. Our 1,000+ acre Brushwood Community Forest has a growing number of trails through upland forest, and around unique and sensitive wetlands. The 38-mile Cross Rivendell Trail bisects West Fairlee and connects the four towns of our interstate school district.

F. Transit, Air and Rail

Currently, public transportation is nonexistent within West Fairlee. Commuters may access the region's Tri-Valley Transportation Services' "River Route" along the US 5 and I-91 corridor at stops in neighboring Bradford, Fairlee, and Thetford. Commuter parking is available at I-91 interchanges in Thetford & Bradford. Despite the lack of public transit service, a survey in 2017 showed that 78 people (out of 333) are using alternatives to driving alone to their work outside their homes. There is no rail or air service in town. The closest rail service is AMTRAK in White River Junction, and the nearby regional airport in Lebanon, NH serves as our closest airport.

G. Transportation Goals, Policies and Recommendations

Goals

1. To maintain a transportation system that is safe for all modes of transportation, is more resilient to both normal wear and extreme weather events and complements the other goals and policies of this Plan.
2. To ensure that future development does not unnecessarily or unreasonably impact public investment in Town and regional transportation systems or facilities, including highways, bikeways, and trails.

3. To minimize transportation energy consumption by encouraging energy efficient travel such as public transit, carpooling and creative alternatives for sharing transportation resources.

Policies

1. Public highways and private roads should be designed and maintained in compliance with VTrans and MRGP codes and standards to mitigate adverse impacts to natural or scenic resources.
2. Town Class 4 highways should be maintained only to the minimum requirements of the State.
3. Any landowner, utility, or other contractor proposing work within the Town highway and/or right of way must seek a ROW Work Permit and pay for such improvements or damages as required by the Selectboard.
4. Roads and driveways accessing Town highways shall meet current access/driveway standards.
5. Public input shall be sought and considered in any proposal to substantially change the classification, maintenance level, or surface treatment of any town highway.
6. As an alternative to discontinuance of a Class 4 road, the Town should consider reclassification as a trail to retain the public's interest in these rights-of-way and their availability for outdoor recreation
7. The Town supports Tri-Valley Transit Services and other regional strategies to develop energy efficient transportation alternatives.

Recommendations

1. The Town will continue to replace undersized culverts, bridges and other structures with appropriately sized infrastructure and maintain its roads according to current codes and standards to increase road resilience and mitigate the impact on water quality.
2. The Selectboard should continue to engage in long-term maintenance planning and develop a five-year road maintenance plan to minimize the extent of road repair and cost over time.
3. The Town must maintain the Town Highway Reserve Fund at a level sufficient to address capital projects and the re-paving schedule; to provide local match for highway grants; and maintain a balance adequate to initiate emergency repairs and provide local match for disaster relief grants.
4. When project complexity dictates, the Town must engage an engineering assistance through VT Local Roads or a private firm to assist in developing replacement options for structures and overseeing other major projects.
5. The Town should work with the Tree Warden and private landowners to encourage roadside landscaping beyond the right of way that preserves tree canopy, provides for

succession growth, and contributes to the roadway's aesthetic character; and work to address impacts from emerald ash borers.

6. The Town should expand the scope of the current traffic enforcement contract with the Town of Thetford Police Department, to deter speeding and increase safety for all.
7. The Town should investigate improvements in the Village's Route 113 corridor to improve pedestrian safety including crosswalks, traffic calming devices, and sidewalks.
8. Whenever feasible, town highway projects should incorporate principles of "Complete Streets" to accommodate and increase safety for cyclists and pedestrians.
9. The Town should consider local strategies to reduce transportation energy consumption and fossil fuel use, including investigation of funding for construction of a small Park & Ride within the town and continued advocating for transit services.

X. Relationship to Other Plans

A. Neighboring Towns and the Region

The town of West Fairlee is bordered by the towns of Fairlee, Bradford, Corinth, Vershire, Strafford, and Thetford. All these towns have planning programs and planning commissions. All have Town Plans in effect: Fairlee in 2020, Bradford in 2016, Vershire in 2017, Strafford in 2021, Corinth in 2019, and Thetford in 2020. All of them have zoning except for Corinth which only has subdivision regulations.

In general, each community's land use policies are similar to West Fairlee's in that they encourage densely populated village centers surrounded by open countryside. There are no significant differences in land use patterns and therefore there are no conflicts with this Plan. Vershire's Open Space Area, Fairlee's large Rural Uplands areas mesh particularly well with our Plan.

West Fairlee shares numerous activities and services with surrounding towns such as schools. West Fairlee, Fairlee and Thetford also cooperate on water quality and dam issues for Lake Fairlee, which lies within all three towns.

The town is also a member of the Two Rivers-Ottawaquechee Regional Commission (TRORC) TRORC's Regional Plan covers 30 towns including West Fairlee. Since the West Fairlee Town Plan was prepared with the help of the Regional Commission, no conflicts between the two have arisen. In fact, the two plans have similar policy statements regarding the need for development that does not overburden services. In addition, no specific development goals in this Plan conflict with any regional goals.

B. Relationship to Other Plans Goals, Policies, and Recommendations

Goal

1. Cooperate with neighboring communities by addressing shared concerns in a regional context.

Policies

1. Maintain the distinct rural character and natural beauty of the region while guiding appropriate growth.
2. West Fairlee supports regional solutions to shared problems and can benefit by working with neighboring towns.

Recommendations

1. The Selectboard and other bodies are encouraged to continue communication and cooperation between West Fairlee and its neighboring towns, including exploring shared services agreements when practical.
2. The Town will continue participation in the Two Rivers-Ottawaquechee Regional Commission.

3. The Planning Commission should exchange planning information and development data with neighboring communities.
4. The Planning Commission and Conservation Commission should work with neighboring towns and landowners on connecting large, forested areas so they function as a whole.

XI. Implementation

A. Putting the Plan into Action

The Town Plan provides a guide for the protection and enhancement of our natural and cultural resources. The Plan aims to help the citizens of West Fairlee better define and direct the future of their community. It is a planning tool that provides a vision of what the community would like to become over the next 5 to 10 years.

The Plan is to be used by the Town Boards, Commissions, Departments, residents, and businesses in several ways:

1. To provide a framework for planning the future of the Town;
2. To assist in the development of a Capital Budget and Program;
3. To direct the formulation of departmental policies and strategies;
4. To serve as a basis for responding to Act 250 permit requests;
5. To present a framework for developing subdivision bylaws;
6. To supply data and solutions for planning issues;
7. To recommend future planning studies and funding sources.

The adoption of this new Town Plan presents an opportunity to direct the changes that are already occurring in West Fairlee. The primary tools for directing growth are this Town Plan, the Town's existing by-laws and ordinances, and the volunteer work of West Fairlee's citizens.

B. Ongoing Planning

The Town Plan is a dynamic document and represents a process just as much as it does a product. The nature of growth and change quickly dates the data contained within the Plan. To remain effective, the Plan must be readopted at least every eight years. When possible, updated statistics should be added to the plan being readopted. Of course, other revisions and modifications may be needed to reflect changing conditions. While the Planning Commission is responsible for maintaining the Town Plan, any individual or group may initiate changes. Title 24 of Vermont Statutes Annotated (V.S.A.) Section 4384 details the procedures to be followed for the adoption of plans and any amendments.

C. Implementation Tools

The Town of West Fairlee has an array of regulatory tools to carry out the land use goals of this Town Plan. These tools include:

- **Solid Waste Management Implementation Plan (SWIP)** – The Greater Upper Valley Solid Waste Management District has recently revised its Solid Waste Implementation Plan and the Board of Supervisors (with participation from West Fairlee) formally adopted it on August 10, 2006. SWIP will be in force for five years. This Plan describes municipal policy on separation, recovery, collection, removal, storage, and disposition of solid waste including recyclables.
- **Emergency Management and Hazard Mitigation Plans** – The Town has a Local Emergency Management Plan (LEMP) updated and adopted annually in late spring each year, and a Local Hazard Mitigation Plan (LHMP) adopted in 2019. The LEMP identifies people to contact in the event of an emergency, as well as basic information on shelters and disaster resources. The LHMP identifies the hazards to which the Town is vulnerable and measures to mitigate them.
- **Flood Hazard Area Zoning Bylaws** - This bylaw was rewritten in 2007 and outlines regulations that apply to any construction or filling in areas of town deemed to be flood hazard zones in accordance with the Flood Insurance Study prepared by the Federal Emergency Management Agency.
- **Official Map** – The "official map," as it is called in the Statutes, documents the location and width of existing and proposed highways and drainage ways and the location of all existing and proposed parks, schools, and other public facilities

Town Ordinances and policies are another tool for carrying out West Fairlee’s land use goals. Current ordinances and policies are listed on the Town website <https://westfairleevt.gov> They include:

- **ATV Ordinance** - Lists town roads that may be used for ATV travel between May 1 and November 30, VASA-posted speed limit and traffic control signage, and other regulations.
- **Class 4 Roads & Trails Policy** - defines the standards by which the Town maintains its Class 4 highways and sets reasonable expectations for the use of those highways
- **Dog Ordinance** - regulates the keeping of dogs [and wolf hybrids] and provides for their licensing, leashing, muzzling, restraint, impoundment and destruction and their running at large, to protect the public health and safety, and the quiet enjoyment of its residents’ homes and properties
- **Highway & Driveway Access Ordinance** - Requires an access permit from the town for any driveway onto a town road. A permit is required for any new construction and for any change in access configuration or property use.
- **Junk Cars and Trash Ordinance** - Prohibits accumulating three or more unregistered vehicles or junk (tires, household appliances, furniture, construction debris, batteries, and other trash or waste) where such items are visible from the traveled way. Fines assessed for violations.
- **Town Properties Ordinance** – governs the use of all town-owned properties including the Village Green, Southworth Park, Brushwood Forest, and other lands held in trust by the town and describes terms for use, prohibited acts, and penalties for misuse.

- **Town & State Speed Limit Ordinance** – This ordinance establishes speed regulations on Town highways and State Routes 244 and 113.
- **Traffic Ordinance** - Establishes the location of stop and yield intersections.
- **Truck Ordinance** - Prohibits truck loading and unloading on town roads and rights of way; and prohibits skidding operations on town roads.

Town ordinances shall be reviewed and revised based on this Town Plan as well as current needs and conditions. These revisions, guided by the policies and objectives of the Town Plan, will be extremely important to the future of the Town. They will be based on decisions made with the long-term common good in mind.

Based on the 2017 survey, 70.5 % of respondents agreed that the town should have a **subdivision ordinance**. Such a bylaw would regulate the division of any single lot, tract, or parcel of land into two or more lots, tracts, or parcels of land. The purposes of such a bylaw would be:

- To provide for the orderly growth of the Town while protecting its unique setting, environmental integrity, and scenic beauty,
- To protect the quality of the natural resources of the Town, and
- To encourage the maintenance of the working landscape for recreation, agriculture, and forestry.

Act 250: Presently, the State Land Use and Development Law regulates some land development by requiring permits prior to construction. These permits, issued by the District Environmental Commission, determine the objectives for land development in the Town of West Fairlee based on the ten permit criteria stated in the law.

By law, the District Environmental Commission must consider West Fairlee’s Town Plan as input in deciding permit conditions for commercial developments on more than one acre or for residential development of six or more lots. Also, by law, both the Selectboard and the Planning Commission have party status in all Act 250 proceedings involving land in West Fairlee and may testify on each of the ten criteria. The Town Plan provides the Town and the District Environmental Commission with an important standard for review and comment on Act 250 applications.

Capital Budget and Program: The Town does not have a formal Capital Budget and Program but does have capital reserve funds for major projects.

Individual residents or property owners: Private citizens may also choose to implement development control and guidance techniques to achieve land use goals. These tools include:

- **Land Trusts:** Typically, land trusts are non-profit organizations dedicated to the protection of land resources and assist individuals to conserve their land. Property owners can also create a land trust. Because of their non-profit status, most contributions of lands or funds are deductible from federal income taxes.
- **Restrictive Covenants:** An individual property owner can achieve the long-term conservation of land through placing development restrictions or covenants in deeds used to transfer land to new owners.

- **Use Value Appraisal (“Current Use”) Program:** A State program designed to enable owners of working farms and managed woodlots of over 25 contiguous acres to pay property taxes that are based on the agricultural or forestry value of the land as opposed to the development value of the land.

Many of the Plan’s recommendations relate to one or more of these existing tools. In addition, the recommendations focus on new studies to be conducted by the Planning Commission, citizen advisory groups, Town departments, state and regional agencies and others. Recommendations also call for the adoption of an official map, Subdivision regulations, and many other specific actions.

Appendix A

This appendix contains the Municipal Energy Data for West Fairlee, Vermont.

April 28, 2017

John Benjamin
Planning Commission Chair
Town of West Fairlee
870 VT Route 113
West Fairlee, VT 05083

RE: Municipal Summary Worksheet - Energy

Mr. Benjamin:

TRORC is pleased to have prepared and enclose a copy of the Municipal Summary Worksheet and maps for your town, which summarizes the type of data that is required to be in an “Enhanced Energy Plan” under the energy planning law passed last year and known as “Act 174”. As you are aware, writing an “Enhanced Energy Plan” and seeking a determination of energy compliance is optional for communities. If your town chooses to write one and meets the municipal standards set by the Department of Public Service, the town plan receives substantial deference in renewable energy generation Certificate of Public Good process. The data in the attached document provides analyses and targets derived from regional analyses and targets. Municipalities *may* choose to rely on these “municipalized” analyses and targets to meet the standards in this section.

Municipalities which elect to use the analysis and targets provided by the TRORC will be presumed to have met the Analysis and Targets standards. Alternatively, municipalities may develop their own custom analyses and targets or supplement the analyses and targets provided by the RPCs with specific local data; if this option is chosen, the analysis and targets must include all of the same components and meet the standards required of regions, as described in the standard checklist. Some of the numbers such as current electricity use by town will need to be updated when TRORC receives new data. The Summary worksheet, maps, and the excel worksheet that feeds the data into the summary sheet will be emailed out and can also be found on the TRORC website under your respective town page site. If you have any questions about the attached document or energy planning for your community please don't hesitate to contact us.

Sincerely,



Christopher Damiani
Planner

128 King Farm Rd.
Woodstock, VT 05091
802-457-3188

trorc.org

cc: Peter G. Gregory, Executive Director, Nancy Malmquist, TRORC
Commissioner, File

William B. Emmons, III, Chair
Peter G. Gregory, AICP, Executive Director

Municipal Template - Energy Data

The following is an explanation of the information displayed in the Municipal Template for West Fairlee.

The intent of the Municipal Template is to provide the municipality with data that can be used to ensure compliance with the requirements of Act 174 and “Enhanced Energy Planning” (24 V.S.A. 4352). The spreadsheet contains data that estimates current energy use and provides targets for future energy use across all sectors (transportation, heating, and electricity). It also sets a target for renewable energy generation within the municipality.

This data is meant to be a starting point for the municipality to begin planning its energy future and to talk about the changes that may need to occur within the municipality to ensure that local, regional and state energy goals are met. This includes the goal that 90% of all energy demand be met by renewable sources by 2050.

Estimates of current energy use consist primarily of data available from the American Community Survey (ACS), the Vermont Agency of Transportation (VTrans), the Vermont Department of Labor (DOL), and the Vermont Department of Public Service (DPS). Targets for future energy use are reliant upon the Long-range Energy Alternatives Planning (LEAP) analysis for the region completed the Vermont Energy Investment Corporation (VEIC). Targets for future energy generation have come from the regional planning commission and DPS. Targets for both future energy use and energy generation have been generally developed using a “top down” method of disaggregating regional data to the municipal level. This should be kept in mind when reviewing the template. It is certainly possible to develop “bottom up” data. For those municipalities interested in that approach, please see the Department of Public Service’s Analysis and Targets Guidance.

There are some shortcomings and limitations associated the data used in the Municipal Template. For instance, assumptions used to create the LEAP analysis are slightly different than assumptions used to calculate current municipal energy use. Regardless, the targets established here show the direction in which change needs to occur to meet local, regional and state energy goals. It is important to remember that the targets established by LEAP represents only on way to achieve energy goals. There may several other similar pathways that a municipality may choose to take in order to meet the 90x50 goal.

Figure 1 - Data Sources

American Community Survey (ACS)
Vermont Department of Labor (DOL)
Vermont Department of Public Service (DPS)
Energy Information Administration (EIA)
Efficiency Vermont (EVT)
Long-range Energy Alternatives Planning (LEAP)
Vermont Energy Investment Corporation (VEIC)
Vermont Agency of Transportation (VTRANS)

Below is a worksheet by worksheet explanation of the Municipal Template spreadsheet:

1. Municipal Summary

The Municipal Summary worksheet summarizes all data that is required to be in the Municipal Plan if the plan is to meet the “determination” standards established by the Vermont Department of Public Service.

1A. Current Municipal Transportation Energy Use

Transportation Data	Municipal Data
Total # of Vehicles (ACS 2011-2015)	456
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	5,178,336
Realized MPG (VTrans)	18.6
Total Gallons Use per Year	278,405
Transportation BTUs (Billion)	34
Average Cost per Gallon of Gasoline (RPC)	2
Gasoline Cost per Year	643,116

This table uses data from the American Community Survey (ACS) and Vermont Agency of Transportation (VTrans) to calculate current transportation energy use and energy costs.

1B. Current Municipal Residential Heating Energy Use

Fuel Source	Municipal Households (ACS 2011-2015)	Municipal % of Households	Municipal Square Footage Heated	Municipal BTU (in Billions)
Natural Gas	0	0.0%	0	0
Propane	81	25.4%	7,857,480,000	8
Electricity	0	0.0%	0	0
Fuel Oil	140	43.9%	13,191,240,000	13
Coal	0	0.0%	0	0
Wood	98	30.7%	9,822,000,000	10
Solar	0	0.0%	0	0
Other	0	0.0%	0	0
No Fuel	0	0.0%	0	0
Total	319	100.0%	30,870,720,000	31

This table displays data from the ACS that estimates current municipal residential heating energy use.

1C. Current Municipal Commercial Energy Use

	Commercial Establishments in Municipality (VT DOL)	Estimated Thermal Energy BTUs per Commercial Establishment (in Billions) (VDPS)	Estimated Thermal Energy BTUs by Commercial Establishments in Municipality (in Billions)
Municipal Commercial Energy Use	3	0.725	2

The table uses data available from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (DPS) to estimate current municipal commercial establishment energy use in the municipality.

1D. Current Electricity Use *

Use Sector	Current Electricity Use
Residential (kWh)	2,109,105
Commercial and Industrial (kWh)	540,826
Total (kWh)	2,649,931

*This table displays current electricity use within the municipality with data from the ACS, DPS, and VT DOL. More accurate data will be available soon from Efficiency Vermont (EVT).

1E. Residential Thermal Efficiency Targets

	2025	2035	2050
Residential - Increased Efficiency and Conservation (% of municipal households to be weatherized)	33%	67%	100%

This table displays targets for thermal efficiency for residential structures based on a methodology developed by DPS using data available from the regional Long-range Energy Alternatives Planning (LEAP) analysis and ACS. The data in this table represents the percentage of municipal households that will need to be weatherized in the target years.

1F. Commercial Thermal Efficiency Targets

	2025	2035	2050
Commercial - Increased Efficiency and Conservation (% of commercial establishments to be weatherized)	6%	9%	18%

This table shows the same information as Table 1E, but sets a target for commercial thermal efficiency. Information from the VT DOL is required to complete this target.

1G. Thermal Fuel Switching Targets (Residential and Commercial) - Wood Systems

	2025	2035	2050
New Efficient Wood Heat Systems (in units)	0	0	0

This target was calculated using data from LEAP and ACS. This table provides a target for new wood heating systems for residential and commercial structures in the municipality for each target year. Due to the LEAP model forecasting a large decrease in wood use resulting in a negative number of targets we have put zero in for this section. Towns are encouraged to use efficient wood heat.

1H. Thermal Fuel Switching Targets (Residential and Commercial) - Heat Pumps

	2025	2035	2050
New Heat Pumps (in units)	32	85	179

This table provides a target for new heat pump systems for residential and commercial structures in the municipality for each target year. This target was calculated using data from LEAP and ACS.

1I. Electricity Efficiency Targets

	2025	2035	2050
Increase Efficiency and Conservation	-0.6%	5.7%	9.9%

Data in this table displays a target for increased electricity efficiency and conservation during the target years. These targets were developed using regional LEAP analysis. Towns are encouraged to consider increased efficiency targets.

1J. Use of Renewables - Transportation

	2025	2035	2050
Renewable Energy Use - Transportation	9.6%	23.1%	90.3%

This data displays targets for the percentage of transportation energy use coming from renewable sources during each target year. This data was developed using the LEAP analysis.

1K. Use of Renewables - Heating

	2025	2035	2050
Renewable Energy Use - Heating	48.4%	61.0%	93.3%

This data displays targets for the percentage of heating energy use coming from renewable sources during each target year. This data was developed using information from the LEAP analysis.

1L. Use of Renewables - Electricity

	2050
Renewable Energy Use - Electricity (MWh)	3,660- 4,474

This data displays the target for electricity generation coming from renewable sources within the municipality for 2050. This data was developed using information from the regional planning commission and DPS. This data is the same as the data in Table 1Q.

1M. Transportation Fuel Switching Target - Electric Vehicles

	2025	2035	2050
Electric Vehicles	42	299	623

This tables displays a target for switching from fossil fuel based vehicles (gasoline and diesel) to electric vehicles. This target is calculated on Worksheet 2 by using LEAP and ACS data.

1N. Transportation Fuel Switching Target - Biodiesel Vehicles

	2025	2035	2050
Biodiesel Vehicles	74	140	236

This tables displays a target for switching from fossil fuel based vehicles to biodiesel-powered vehicles. This target is calculated on Worksheet 2. by using LEAP and ACS data.

1O. Existing Renewable Generation

Renewable Type	MW	MWh
Solar	0.04	49
Wind	0.00	0
Hydro	0.00	0
Biomass	0.00	0
Other	0.00	0
Total Existing Generation	0.04	49

Table 1O shows existing renewable generation in the municipality as of 2015, in MW and MWh, based on information available from the Vermont Department of Public Service.

1P. Renewable Generation Potential

Renewable Type	MW	MWh
Rooftop Solar	0	410
Ground-mounted Solar	237	290,350
Wind	161	492,093
Hydro	0	67
Biomass and Methane	0	0
Other	0	0
Total Renewable Generation Potential	398	782,919

Renewable generation potential is based on mapping completed by the regional planning commission that is based on the Municipal Determination Standards and associated guidance documents developed by DPS. The renewable generation potential is expressed in MW and MWh by the type of renewable resource (solar, commercial wind, hydro, etc.).

1Q. Renewable Generation Target

	2050
Total Renewable Generation Target (in MWh)	3,660- 4,474

Renewable generation target for municipalities was developed by the town's population percentage within the region.

1R. Sufficient Land

	Y/N
Renewable Sources	Y
Surplus of Generation	19151%

This table shows whether or not there is sufficient land in the municipality to meet the renewable generation targets based on the renewable generation potential in the municipality.

BIOMASS KW




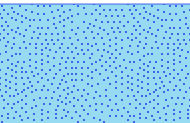
- 19
- 20 - 375

HYDRO KW

- 15 - 100
- 101 - 500
- 501 - 2000
- 2001 - 37400

SOLAR KW

- 15 - 25
- 26 - 100
- 101 - 500
- 501 - 2200

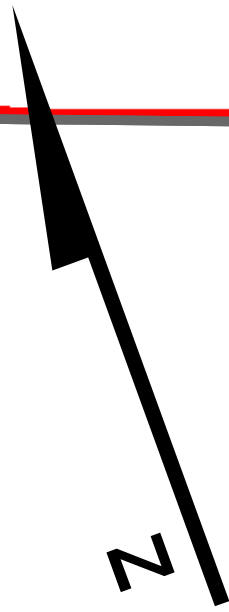
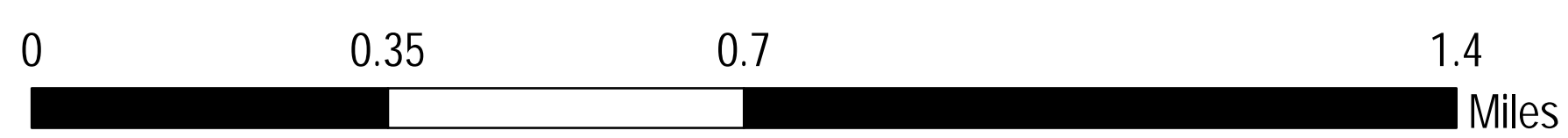
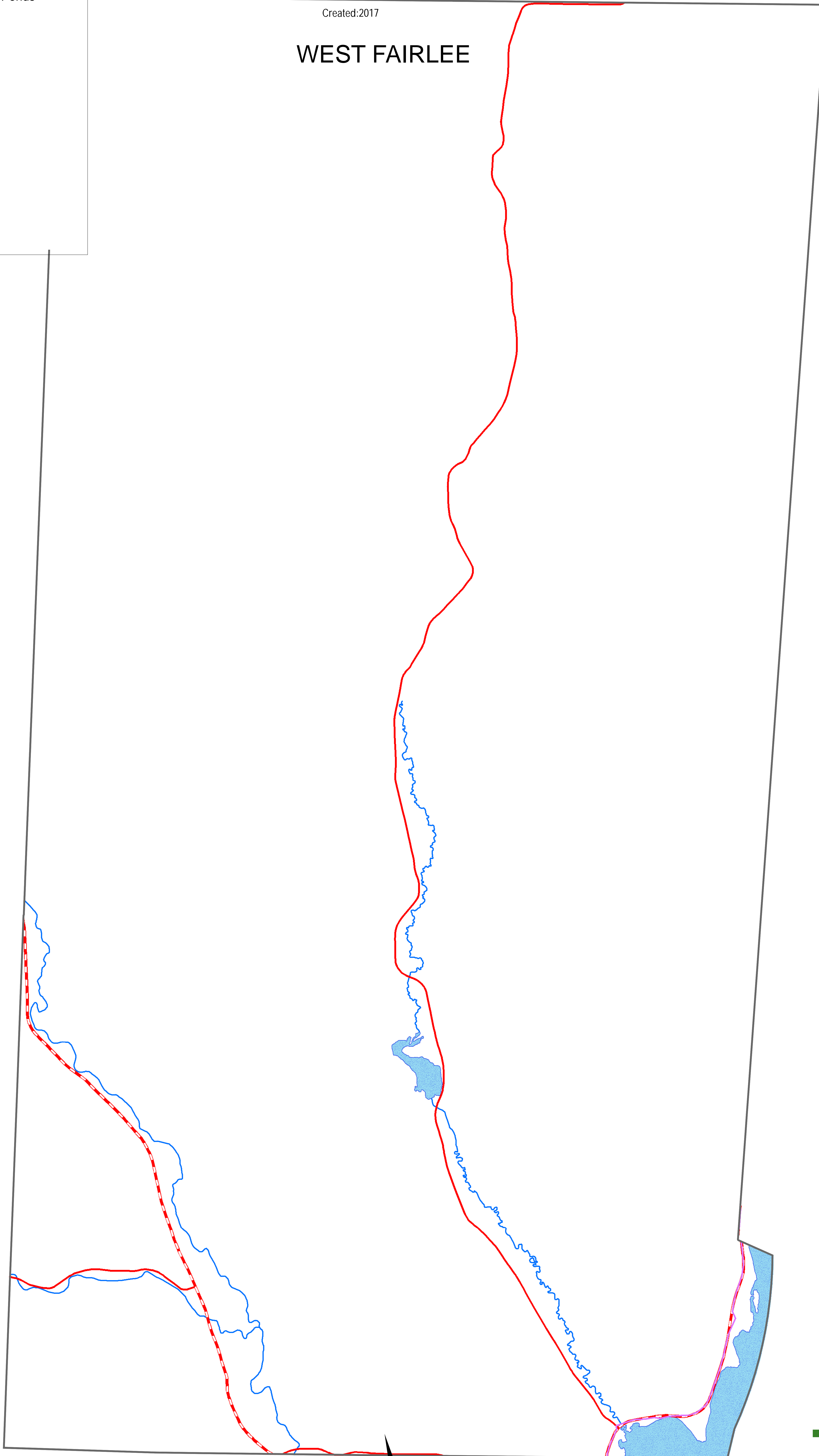
 Substations
 3 Phase Power Lines
 Transmission Lines
 Lakes/Ponds

Existing Energy Generation

This map was created as part of a Regional Energy Planning Initiative being conducted by the Two Rivers-Ottawaquechee Regional Commission, and the Vermont Public Service Department.

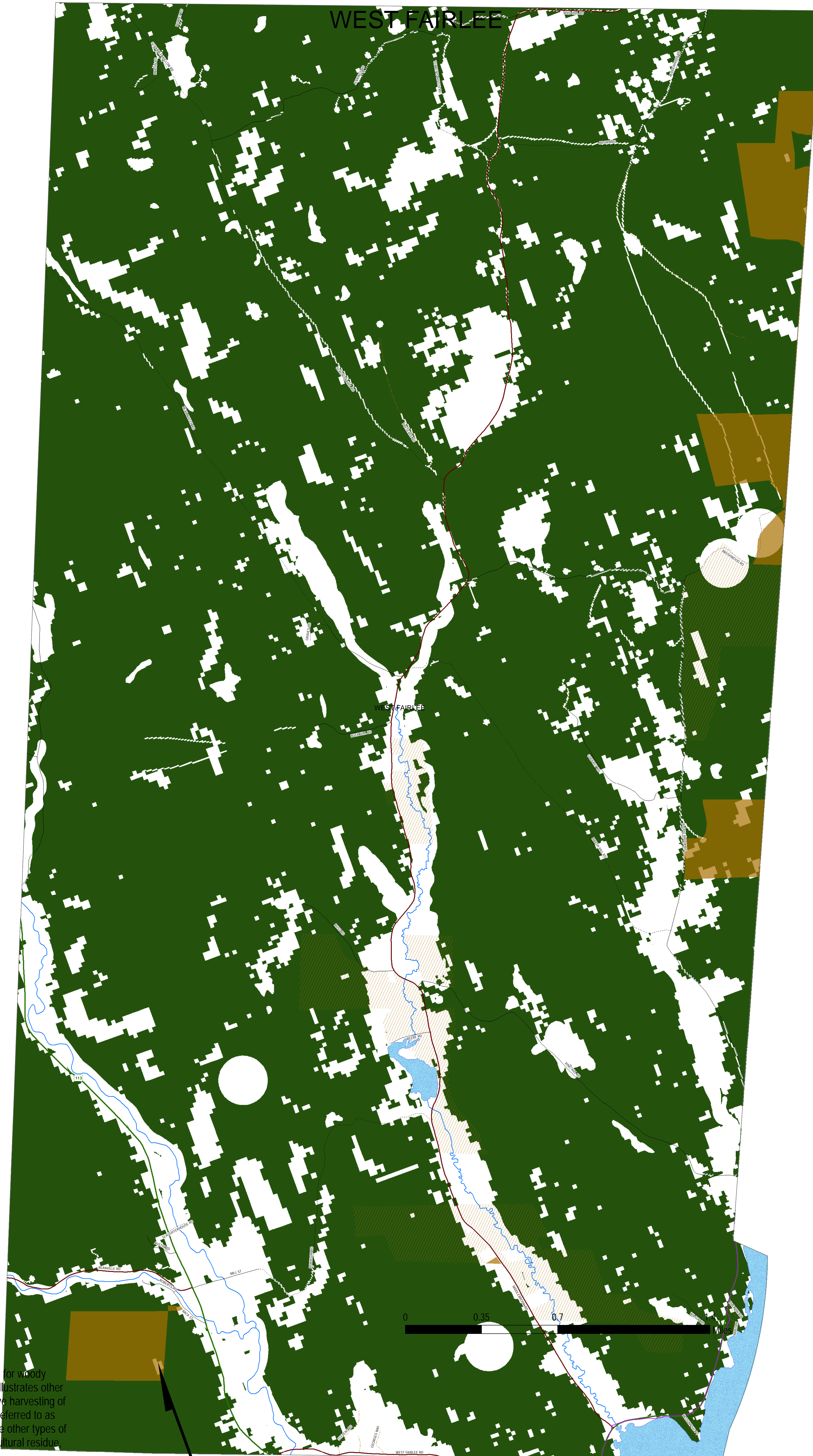
Created:2017

WEST FAIRLEE



BIOMASS Energy Potential

This map was created as part of a Regional Energy Planning Initiative.
Created: 2017



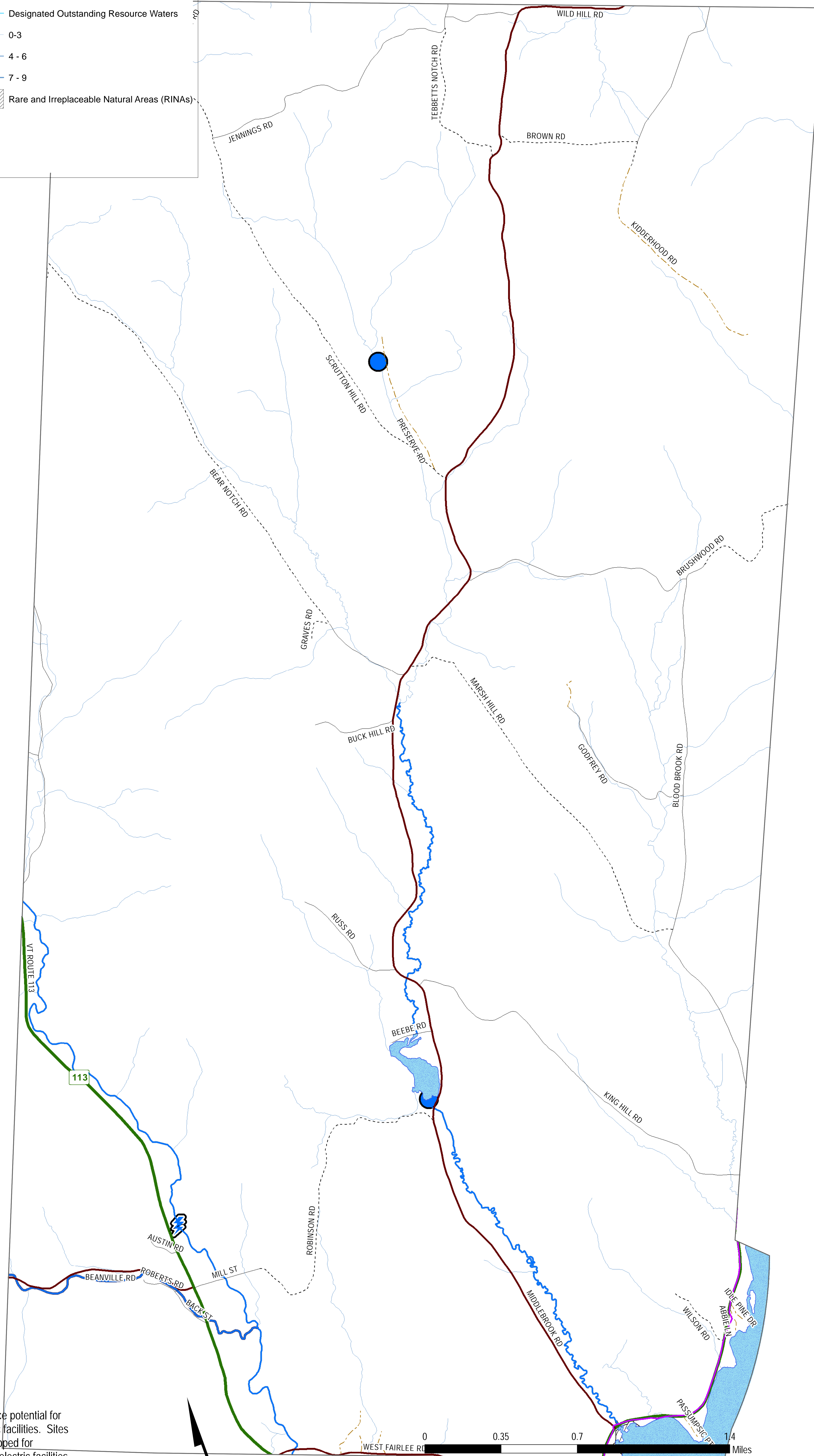
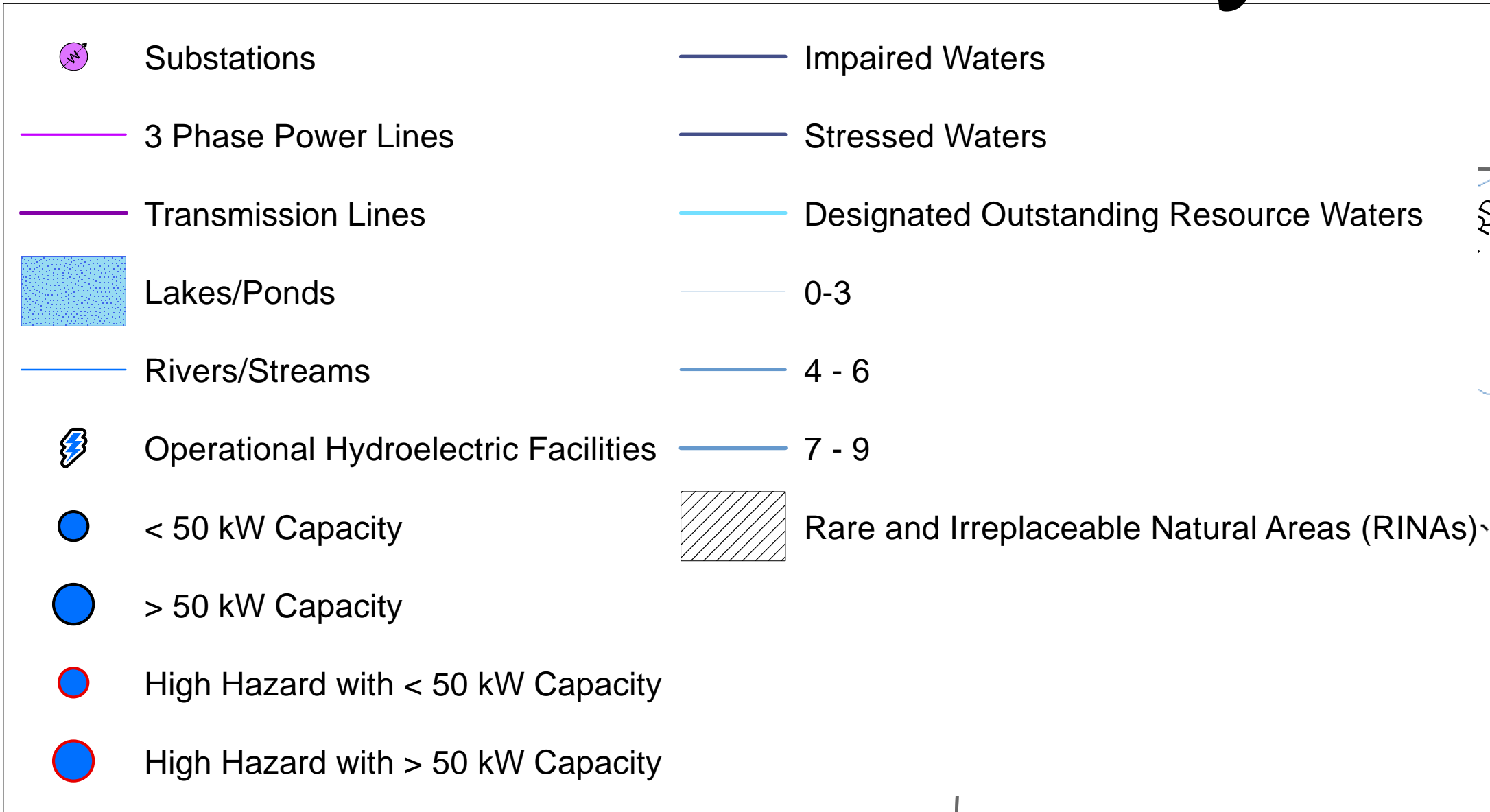
Biomass
Methodology: This map shows areas of potential for woody biomass production and harvest. The map also illustrates other conditions that may limit the feasibility of extensive harvesting of wood for energy use. These limiting factors are referred to as constraints. The map does not show areas where other types of biomass, such as biomass from grasses or agricultural residue, could be grown/harvested.

Constraints: Physical features or resources that make extensive harvesting infeasible are considered Level 1 constraints. Level 1 constraints include: FEMA floodways, river corridors, federal wilderness areas, rare and irreplaceable natural areas (RINAs), vernal pools, and class 1 and 2 wetlands. These areas have been removed and are not shown in any way on this map.

- Conserved**
- Public Cons
 - Private Cons
 - Substations
 - 3 Phase Power Lines
 - Transmission Lines
 - Lakes/Ponds
 - Rivers/Streams
 - Woody Biomass

Hydroelectric Energy Potential WEST FAIRLEE

This map was created as part of a Regional Energy Planning Initiative.
Created: 2017



Hydroelectric Methodology: This map shows areas of resource potential for renewable energy generation from hydroelectric facilities. Sites identified are existing dams that could be developed for hydroelectric generation as well as active hydroelectric facilities. Information on existing hydroelectric facilities was obtained from the Vermont Dam Inventory and data on potential hydroelectric sites was obtained from a study conducted by Community Hydro in 2007-. Potential hydroelectric generation capacity for several of the larger dams are noted below.

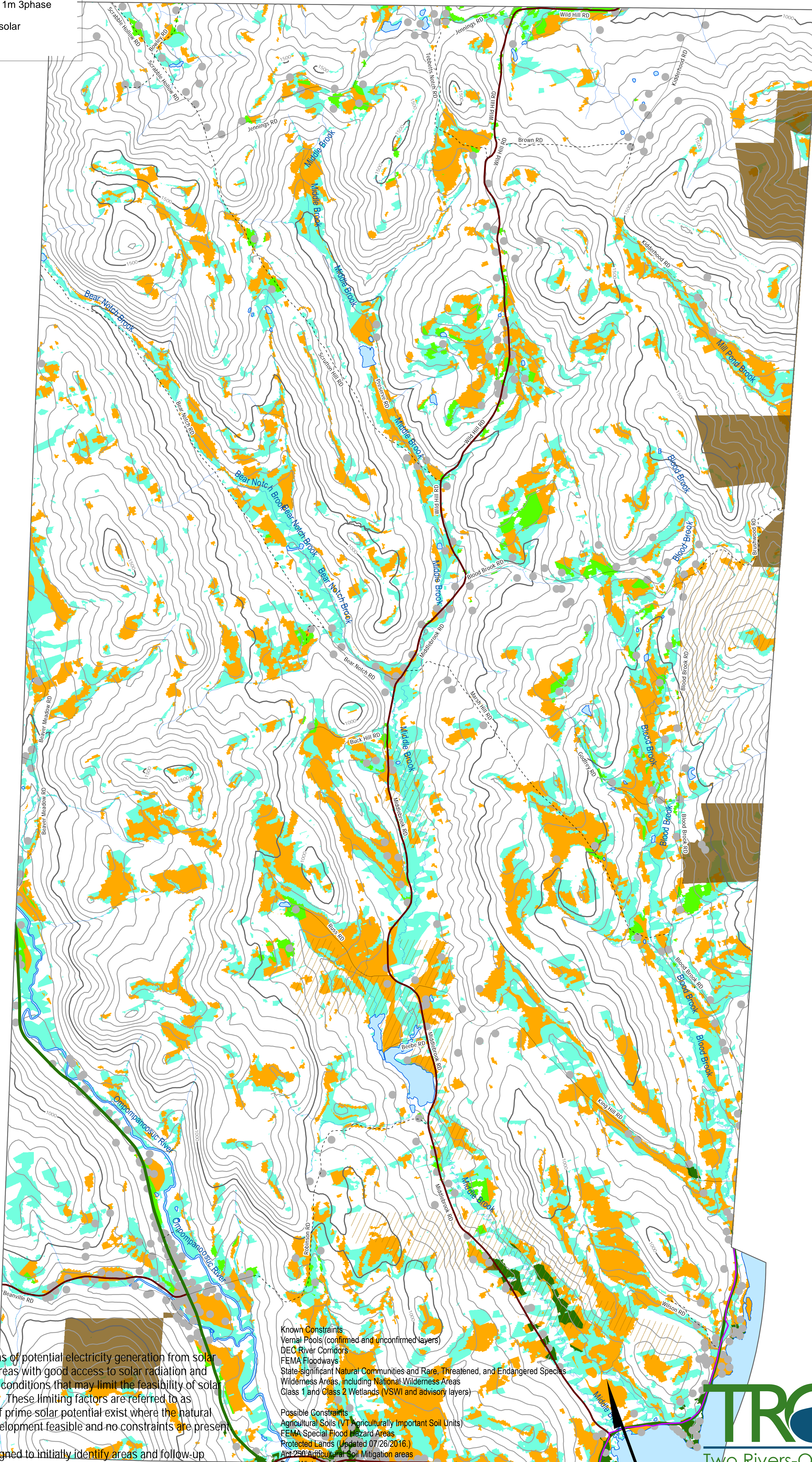
Hydroelectric Constraint Description
* Rare and Irreplaceable Natural Areas (RINAs) are significant natural communities. They do not include the following rank descriptions: uncommon to common breeder in VT, common to very common in VT, historic in VT, not applicable, unrankable, unrankable breeding population, and extirpated.

Solar Energy Potential

WEST FAIRLEE

This map was created as part of a Regional Energy Planning Initiative.
Created: 2017

Substations	SOLAR POTENTIAL
3 Phase Power Lines	Suitability
Transmission Lines	Prime
Structures w/1ac buffer	Constraints
Conserved	Prime 1m 3phase
Public Cons	RAW solar
Private Cons	



Solar

This map shows areas of potential electricity generation from solar energy. It includes areas with good access to solar radiation and also considers other conditions that may limit the feasibility of solar energy development. These limiting factors are referred to as constraints. Areas of prime solar potential exist where the natural conditions make development feasible and no constraints are present.

These maps are designed to initially identify areas and follow-up on-site work is required to verify the areas are feasible for projects. They are subject to revision and are NOT intended to green-light or fast-track projects.

DARK GREEN Prime: No Constraints within 1 mile 3 phase power
GREEN Prime: No Constraints no known or possible constraints present
ORANGE Constraints: no known but at least one or more possible constraints
BLUE GREEN Raw potential: with constraints

- Known Constraints**
 Vernal Pools (confirmed and unconfirmed layers)
 DEC River Corridors
 FEMA Floodways
 State Significant Natural Communities and Rare, Threatened, and Endangered Species
 Wilderness Areas, including National Wilderness Areas
 Class 1 and Class 2 Wetlands (VSWI and advisory layers)
- Possible Constraints**
 Agricultural Soils (VT Agriculturally Important Soil Units)
 FEMA Special Flood Hazard Areas
 Protected Lands (Updated 07/26/2016.)
 Act 250 Agricultural Soil Mitigation areas
 Deer Wintering Areas
 ANR's Vermont Conservation Design Highest Priority Forest Block Datasets
 Forest Blocks - Connectivity
 Forest Blocks - Interior
 Forest Blocks - Physical Land Division
 Hydric Soils

- TRORC Unsuitable areas (included in known constraints)
 FEMA Floodways
 Wilderness Areas, including National Wilderness Areas
 Class 1 Wetland

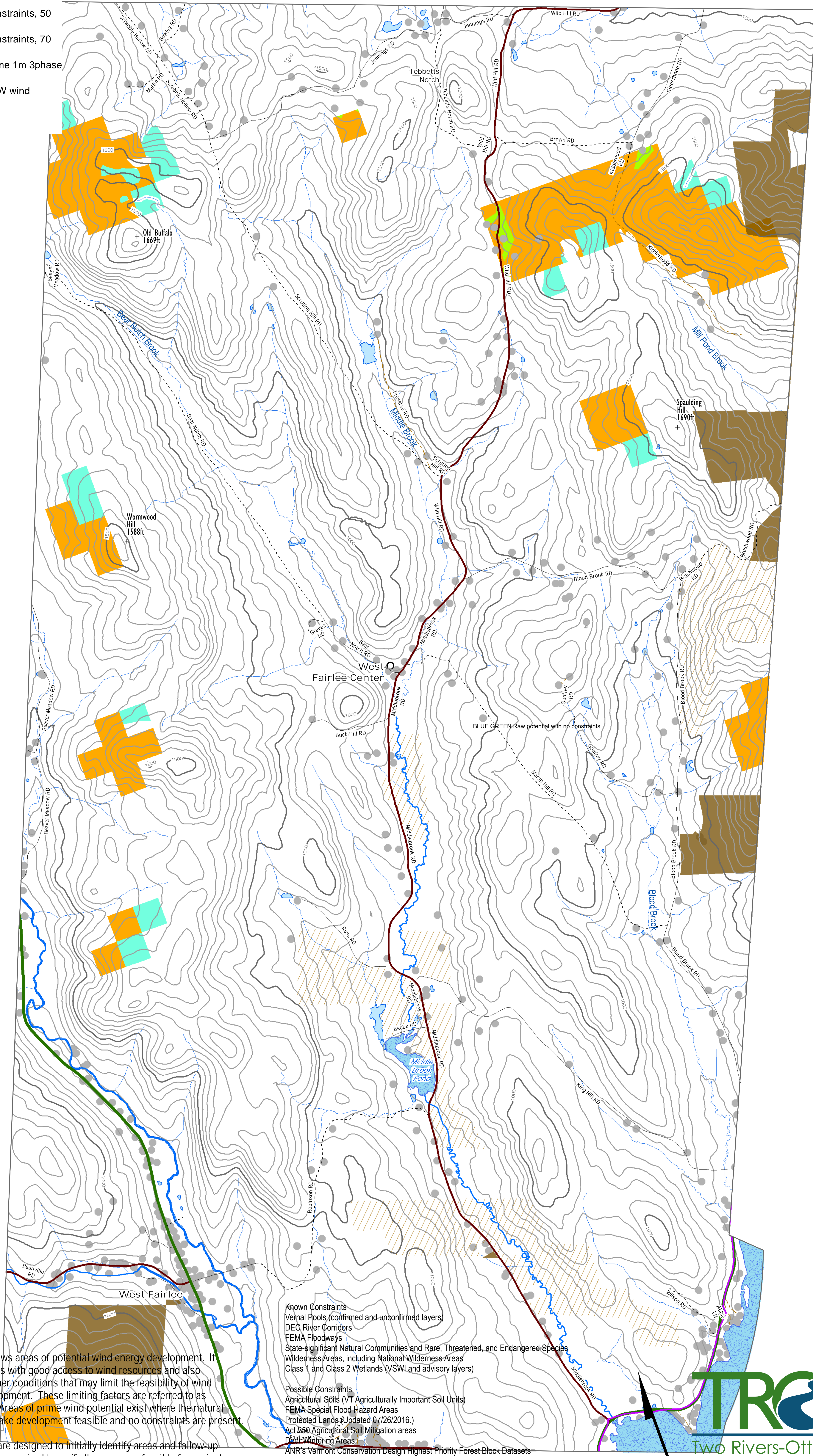


Wind Energy Potential

WEST FAIRLEE

This map was created as part of a Regional Energy Planning Initiative.
Created: 2017

	Substations
	3 Phase Power Lines
	Transmission Lines
	Lakes/Ponds
	Rivers/Streams
Conserved	
	Public Cons
	Private Cons
	Structures w/1ac buffer
Wind Potential Suitability, HubHeight	
	Prime, 50
	Prime, 70
	Constraints, 50
	Constraints, 70
	Prime 1m 3phase
	RAW wind



Wind
This map shows areas of potential wind energy development. It includes areas with good access to wind resources and also considers other conditions that may limit the feasibility of wind energy development. These limiting factors are referred to as constraints. Areas of prime wind potential exist where the natural conditions make development feasible and no constraints are present.

These maps are designed to initially identify areas and follow-up on-site work is required to verify the areas are feasible for projects. They are subject to revision and are NOT intended to green-light or fast-track projects.

DARK GREEN Prime: No Constraints within 1 mile 3 phase power
GREEN Prime: No Constraints no known or possible constraints present
ORANGE Constraints: no known but at least one or more possible constraints
BLUE GREEN Raw potential: with constraints

- Known Constraints**
Vernal Pools (confirmed and unconfirmed layers)
DEC River Corridors
FEMA Floodways
State-significant Natural Communities and Rare, Threatened, and Endangered Species
Wilderness Areas, including National Wilderness Areas
Class 1 and Class 2 Wetlands (VSWI and advisory layers)
- Possible Constraints**
Agricultural Soils (VT Agriculturally Important Soil Units)
FEMA Special Flood Hazard Areas
Protected Lands (Updated 07/26/2016.)
Act 260 Agricultural Soil Mitigation areas
DNR Wetting Areas
ANR's Vermont Conservation Design Highest Priority Forest Block Datasets
Forest Blocks - Connectivity
Forest Blocks - Interior
Forest Blocks - Physical Land Division
Hydric Soils

TROC Unsuitable areas (included in known constraints)
FEMA Floodways
Wilderness Areas, including National Wilderness Areas
Class 1 Wetland

