Pathways to a Vital Economic Center

Bradford Buildout Analysis, Capacity Study and Economic Development Analysis

Funded by a Municipal Planning Grant from the Department of Housing and Community Development and the Town of Bradford

DuBois & King inc.

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I. INTRODUCTION

The Town of Bradford is located along the Connecticut River in Orange County Vermont. The community, with a population of just over 2700 residents, includes a downtown, commercial and industrial areas, and a wealth of natural resources for residents and visitors alike to take advantage of. Bradford is roughly 30 miles north of the Hanover/White River/Lebanon Area, which positions the community well to serve its immediate neighbors as a small hub of commerce. Commercial development is concentrated in two specific areas, Bradford Village and the Lower Plain.

Separated by less than a mile, the two areas are distinctly different. The Village is representative of many of Vermont's villages, with a high-density core (13 acres), multi-story buildings, a main commercial block and a mix of uses centered around the main road through the village, Route 5. The Lower Plain, which is served by municipal sewer and water, is located south of the Village around the junction of Routes 5 and 25. It is a larger geographic area (263 acres) than the core of the Village. As such, the lower plain lends itself to accommodating larger scale developments that would be out of scale for a densely developed village or downtown. Several large businesses have located in the lower plain, including a Hannaford supermarket, Oakes Brothers lumberyard and Farm-way, Bradford's premier outdoor outfitter. In addition to the commercial area of the lower plain, there is an adjacent 36-acre dedicated industrial park that is nearly full.

The Bradford Planning Commission has wrestled with how to encourage economic growth in the Village and Lower Plain without compromising the character of their community and negatively impacting the vitality of either area. Despite having a zoning ordinance that is very business friendly, growth over the past decade has not been as robust as is desired by the town. The Planning Commission has undertaken a planning process to:

- Determine how to bring new businesses to the community,
- Identify what barriers exist to future economic development,
- Identify new opportunities to connect the Village and the Lower Plain; and
- To develop a road map to making the community a vital commercial center for the region.

This project provides the Planning Commission with the action items necessary to foster development within the designated Village Center while allowing for good planning practice that supports the natural growth and changing needs of a town in the 21st century. Project analysis has identified some of the natural limits to growth and generated the data needed to make informed infrastructure capital planning.

II. PROJECT OVERVIEW

In 2016, the Town applied for and won a Municipal Planning Grant from the Vermont Department of Housing and Community Development, for the purposes of conducting a buildout analysis and capacity study of the lower plain, and developing an implementation plan that will provide steps to encourage economic growth while maintaining the traditional pattern of development – densely populated villages and downtowns surrounded by open countryside. The town hired DuBois & King, Inc. and Camoin Associates, to assist with this project.

The project consisted of five distinct components which have identified specific details that will provide insight for the Planning Commission as they move forward to implement their plan for economic development. The resulting information provides the town with empirical data that enables thoughtful long term planning that will support the economic sustainability of the town in conjunction with state and town goals of maintaining existing compact settlement patterns.

The components of this project include:

- Public Survey
- Economic Development Study
- Buildout Analysis & Capacity Study
- Demonstration Designs
- Implementation Recommendations

III. PUBLIC SURVEY SUMMARY

A. Response Rate and Demographics

In any planning process community input is essential for several reasons. First, it provides a level of transparency to the process, allowing the community (and in the case of this project, the greater Bradford economic region) to understand how land use policy is developed. Second, it provides local planners with valuable information that helps them determine what types of policy to implement.

The Planning Commission, with assistance from Dubois & King, developed a survey that focused on how Bradford could serve the economic region's needs, what types of businesses and resources were of interest, how and where growth should occur and what it should look like. The findings of the survey are summarized in this report, for a complete overview of the survey and its results, see Appendix A.

The Town distributed roughly 1500 paper surveys, and also offered the survey in an online format. The survey netted a response rate of about 17% (258 surveys completed), which is considered a very good return rate for a written survey. A significant majority (75%) of survey responses came from people age 55 and older. Bradford's median age is 42, and less than half of the total population is age 55 or older, which means there was a younger segment of the population that chose not to respond or was unaware of the survey. These results are not surprising, as it is often challenging to get participation in written surveys from younger generations, particularly those that are busy taking care of children.

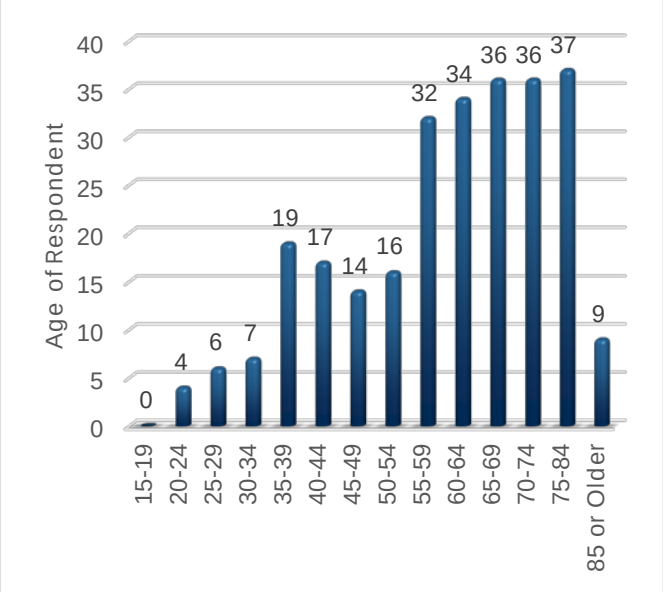


FIGURE 1 - SURVEY RESPONSES BY AGE GROUP

In future outreach efforts, the Planning Commission may want to identify ways to connect with residents under 55 to determine if their opinions vary from those already collected.

Because Bradford acts as a small economic center for the communities of Corinth, Fairlee, Newbury, Topsham, Vershire, West Fairlee, and Haverhill, Orford and Piermont, NH; residents outside of Bradford were invited to respond to the survey as well (see Figure 2). Eighty-one percent (81%) of responses came from Bradford residents.

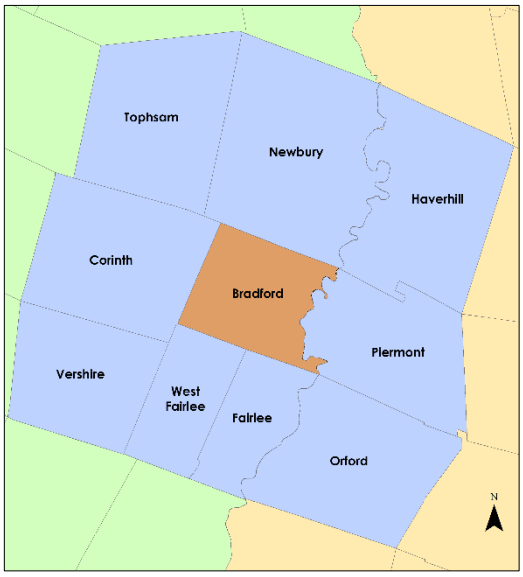


FIGURE 2 - BRADFORD AND BRADFORD'S ECONOMIC REGION

B. Shopping Habits and Business Preferences

Survey takers were asked about their shopping habits in and outside of Bradford. While there is a national trend toward buying online, respondents indicated that they do less than 1/3 (27%) of their shopping online. Nearly 50% of shopping is done locally, primarily due to the presence of Hannaford Supermarket. Retail and meals/entertainment were the most commonly frequented types of businesses in Bradford.

When asked what types of businesses they would most like to see in town, clothing stores, co-op style food stores and a classic 5 and 10 were the commonly cited. The loss of Hill's 5&10, which closed in 2015, and Perry's Appliance Store and downtown gas station clearly impacted the community, as they were mentioned as a need.

FIGURE 3 - THE TYPES OF BUSINESSES SURVEY RESPONDENTS ARE SEEKING. LARGEST WORDS WERE MENTIONED MOST OFTEN.

C. Interest in Recreational Opportunities

Residents are clearly interested in increasing indoor and outdoor recreational opportunities in Bradford. People identified movie theaters, community recreation center, community pool and a gym or workout facility as most the most important indoor recreation opportunities. Outdoors, residents desired bicycle and recreation paths, particularly a sidewalk or dedicated bike path along Route 5 that would connect the Village with the Lower Plain.

It should be noted that Bradford does have several significant outdoor recreation resources. The Wright's Mountain Trail is appropriate for hiking, skiing, snowshoeing and some horseback riding or mountain biking. The 268 acre Wright's Mountain/Devil's Den property is conserved as wildlife habitat and forestland and is open to the public for recreation. Outdoor recreation and its value to the community will be discussed further in later sections of this report.

D. Preferred Locations for Development

In an effort collect land use information that would help the Planning Commission refine the Town Plan and Zoning Bylaw, survey takers were asked where they would prefer specific types of commercial development. They were asked to choose from Downtown, Lower Plain or Service Area, but were not limited to one location. Responses ultimately indicate that survey takers were comfortable with most types of development in all locations.

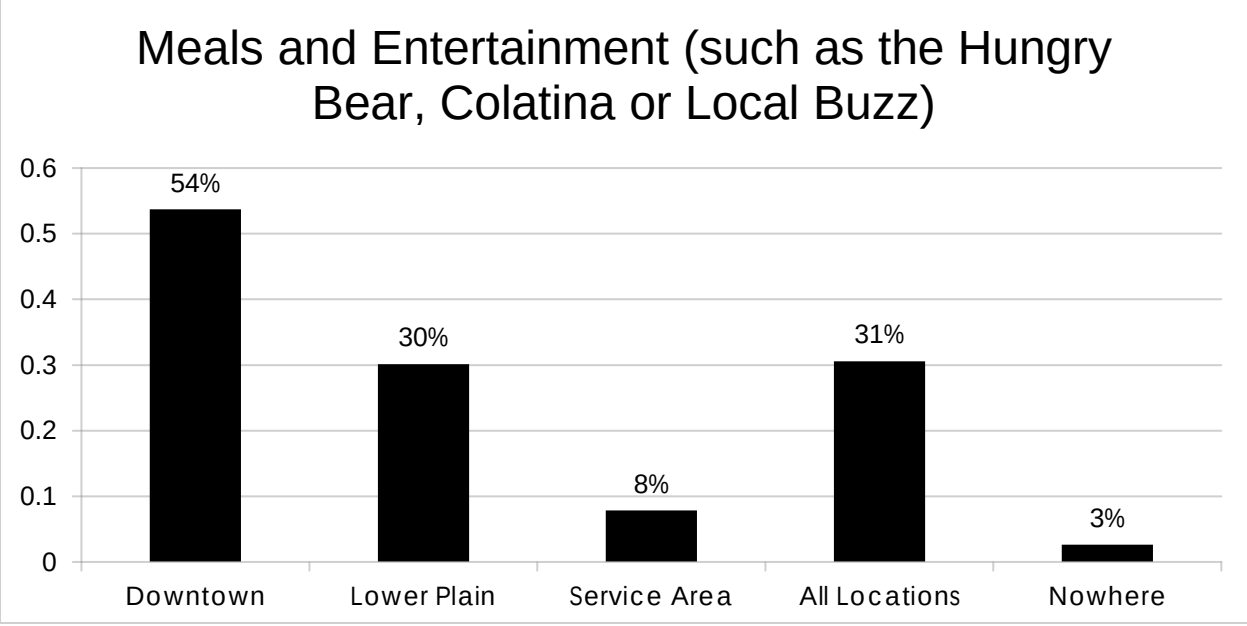


FIGURE 4 - PREFERRED LOCATION FOR MEALS & ENTERTAINMENT

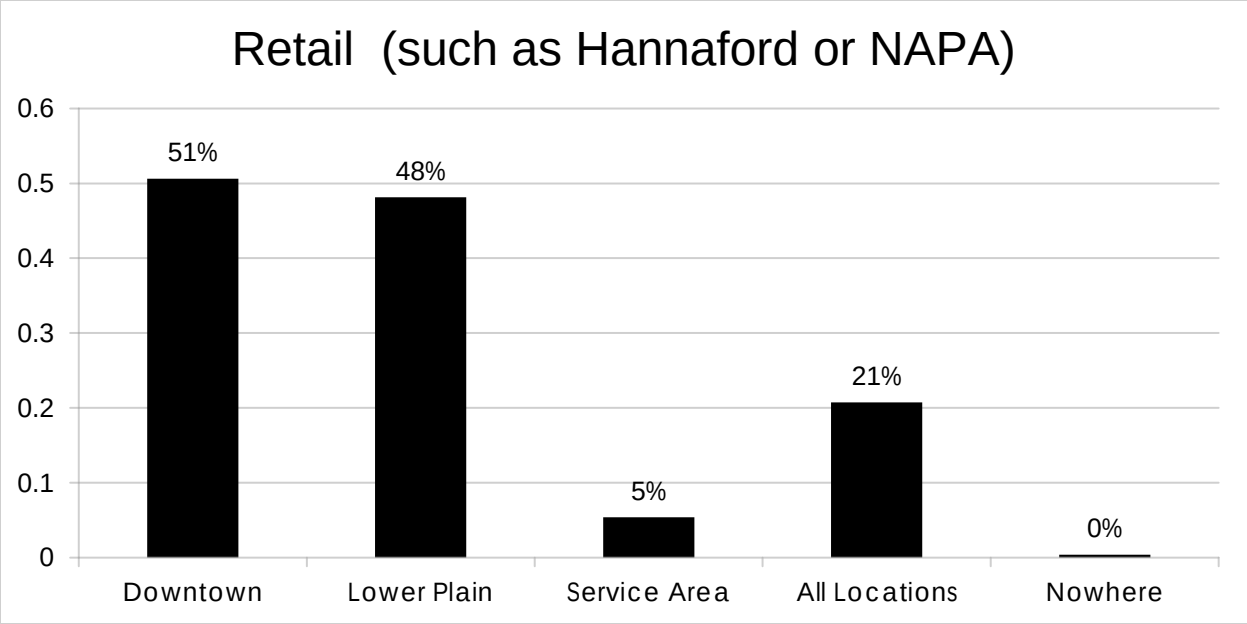


FIGURE 5 - PREFERRED LOCATIONS FOR RETAIL

It was particularly valuable to learn that retail development, which planners often identify as responsible for creating patterns of development that lead to urban sprawl, was supported relatively equally in the Downtown and the Lower Plain. This is important as it provides community support for the pattern of development proposed in the Bradford Town Plan, which includes retail development in the Lower Plain. As will be demonstrated later in this section, survey responses indicate that people are more concerned with how development looks and feels than *where* it is located in Bradford.

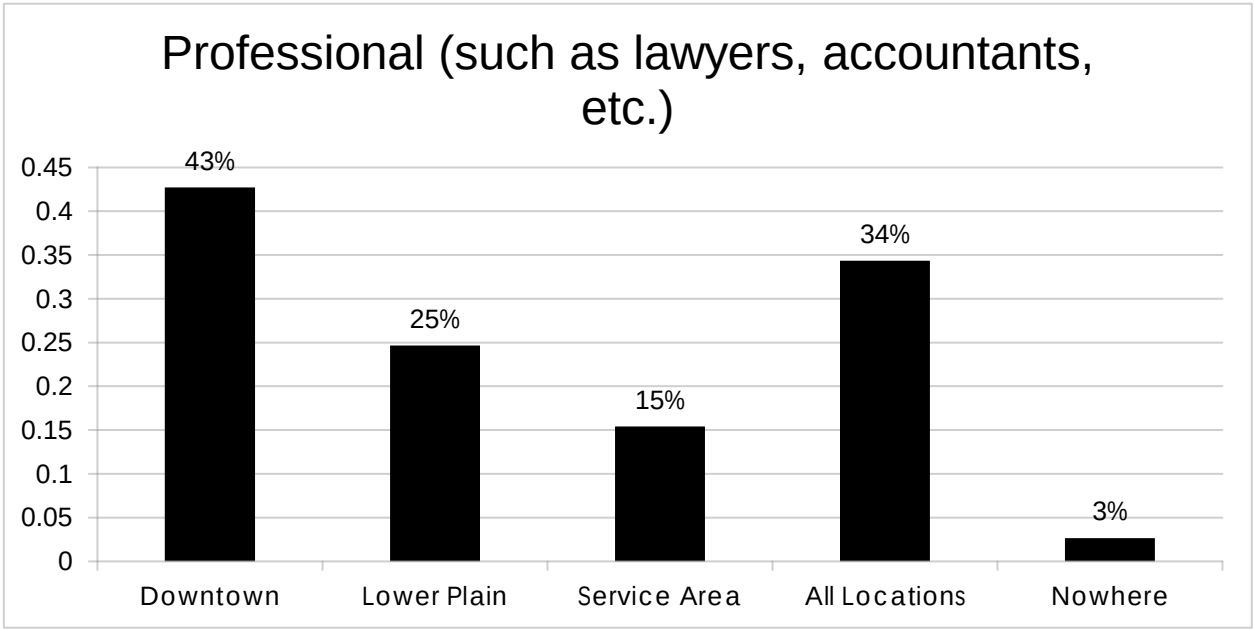


FIGURE 6 - PREFERRED LOCATIONS FOR PROFESSIONAL OFFICES

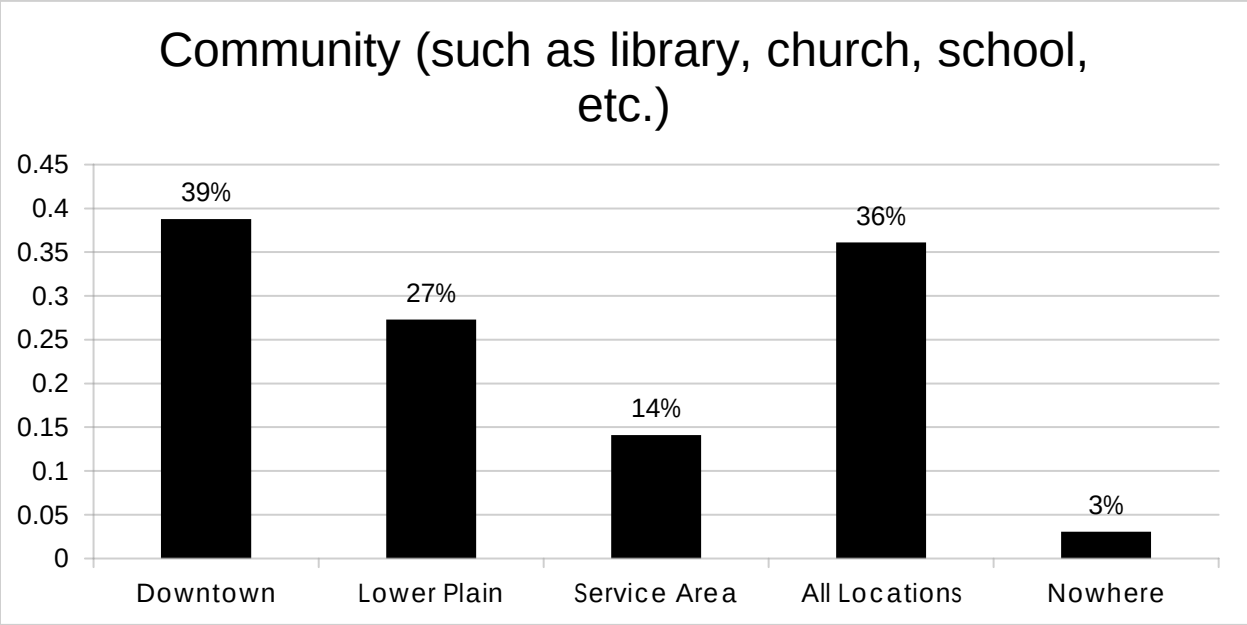


FIGURE 7 - PREFERRED LOCATIONS FOR COMMUNITY OR CIVIC INSTITUTIONS

Survey responses showed strong support for multi-family or condominium-style residential in the Lower Plain rather than in the downtown or service area. Yet, when asked if residents would be interested in occupying high density housing in the lower plain, 51% indicated that they would not, and only 31% indicated that they would. A detailed housing market analysis should be conducted to determine the economic viability of additional housing types in the Lower Plain.

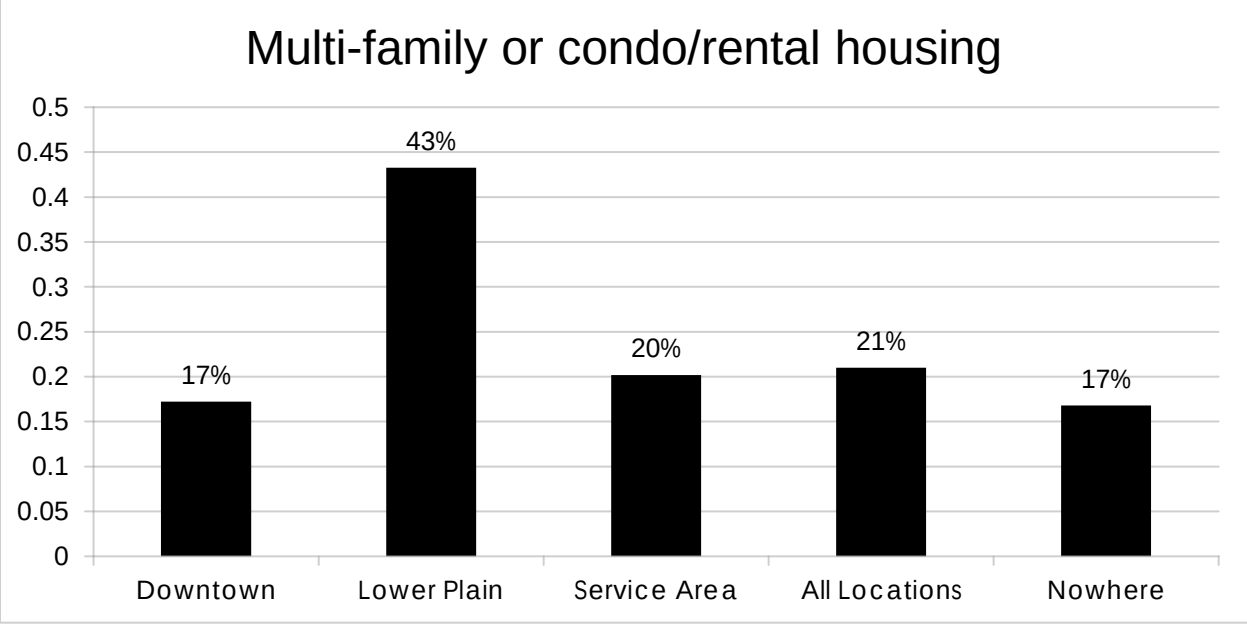


FIGURE 8 - PREFERRED LOCATIONS FOR MULTI-FAMILY OR CONDOMINIUM HOUSING

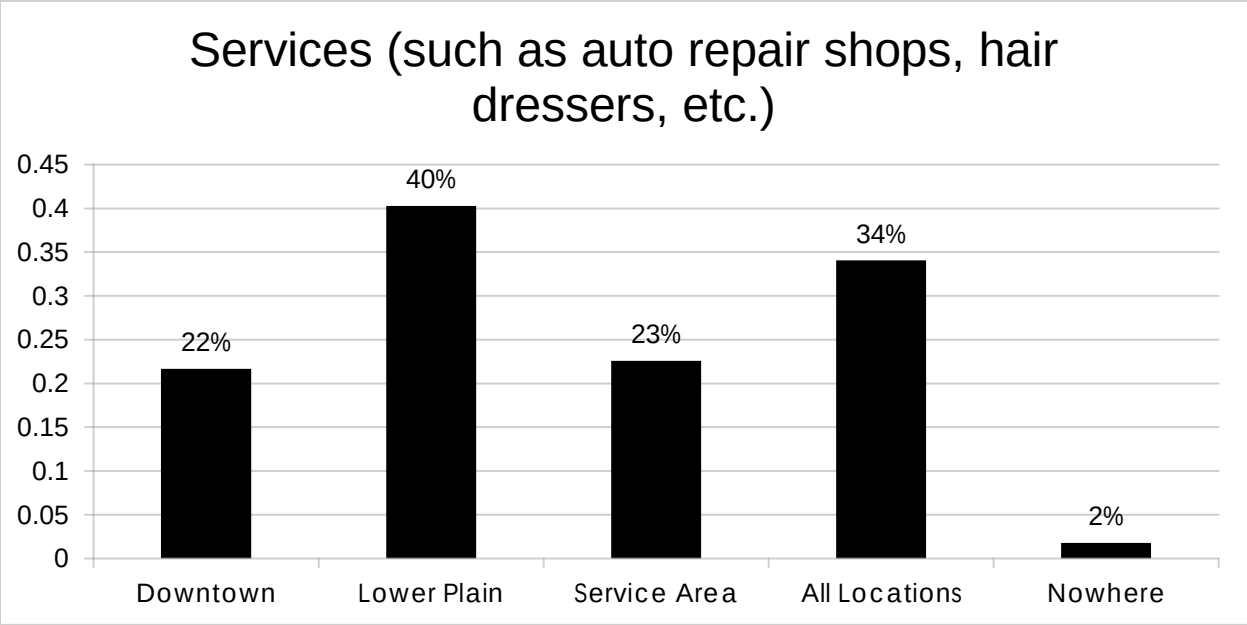


FIGURE 9 - PREFERRED LOCATIONS FOR SERVICES

Responses to open answer questions regarding indoor and outdoor recreation opportunities, clearly showed a strong desire for more things to do in Bradford, and that they should be located in all areas indicated in the survey.

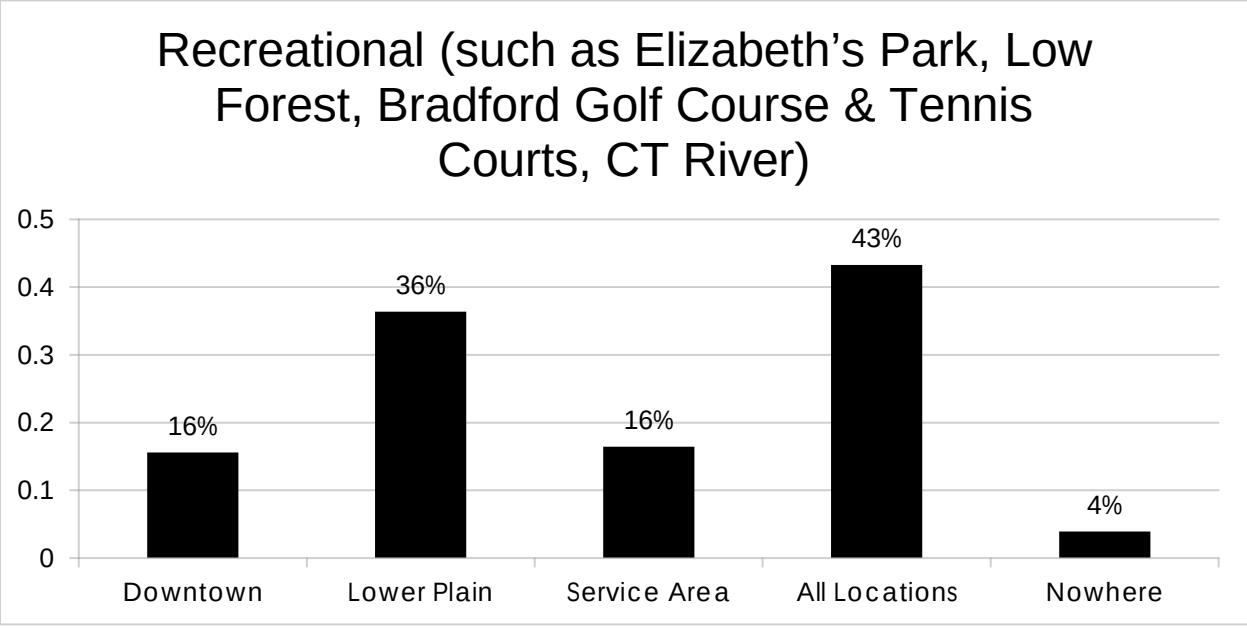


FIGURE 10 - PREFERRED LOCATIONS FOR RECREATIONAL OPPORTUNITIES

To further determine how to balance economic growth in the lower plain with the vitality of the Village, survey takers were asked whether or not they support the idea that "the types businesses in the lower plain should not compete with the types of businesses in the downtown." Responses were fairly split, with 42% indicating that they were comfortable with competition between businesses in both areas, and 39% indicating that they were not. Indicating that further analysis may be necessary.

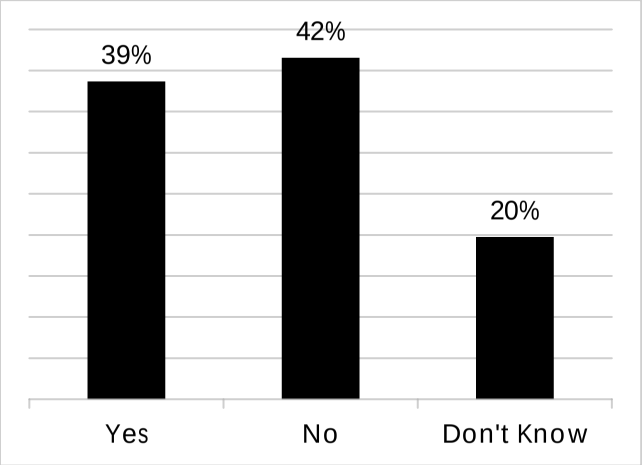


FIGURE 11 - SUPPORT FOR THE IDEA THAT BUSINESSES IN THE LOWER PLAIN SHOULD NOT COMPETE WITH THE VILLAGE.

E. Development Patterns

Vermont's statutory land use goals are clear that strip development is not the desired pattern. This goal has further been supported by changes to Act 250's criterion 9L (which relates to settlement patterns) and is mirrored by the Two Rivers-Ottauquechee Regional Plan (which discourages sprawl and prohibits retail development outside of villages and downtowns).

Strip development, as defined under Act 250 and the Regional Plan, is primarily a pattern of development. While it is the case that examples of poor planning exhibit this pattern of development in many areas in Vermont and beyond, through good planning techniques and careful consideration it is possible to allow commercial development and avoid a pattern of strip development.

Survey takers were invited to offer their preference for illustrations that showed patterns of development as it might occur in the Lower Plain. The results were very valuable for the Planning Commission (see following page for two examples). Essentially, respondents strongly preferred a traditional village style development – high density, mixed-use, multi-story and walkable. They strongly disliked the pattern of development most associated with "strip development," which favors "big-box" stores and large areas of parking.

Village style buildings, which may or may not have multiple stories, screening requirements, parking behind or to the side and sidewalks.

Photo Source: MVEC/APA Photo Library

82% Like	14% Neutral	4% Dislike

Large buildings on single lots with ample parking available to customers. Limited access by pedestrians.

11% Like	23% Neutral	66% Dislike

IV. ECONOMIC DEVELOPMENT ANALYSIS SUMMARY

In order to better understand the factors that impact commercial growth in Bradford's Village and Lower Plain, a basic market analysis was conducted by Camoin, Associates. The economic analysis focused on the specific data necessary to understand the existing small business and entrepreneurial environment in Bradford and its economic region (see figure 2. Data collection included an assessment of the average size of businesses in area, number and industry of self-employed residents, a retail leakage analysis, retail market analysis, and other economic indicators relevant to the Project. In addition, interviews with key stakeholders, including public officials, business owners, economic development professionals, real estate agents, and others who would be able to provide insight into the existing conditions and opportunities for small business development in Bradford were conducted. The complete analysis is included in Appendix B.

Photo Source: VNECAPA Photo Library

A. Retail Potential & New Business Opportunities

One of the key components of the economic analysis conducted for this project is the "Retail Leakage" analysis. This process analyzes the retail gap (the difference between retail supply and demand) to make inferences on what kinds of businesses might be successful, and sales leakage (the demand for goods and services that is not met locally), which offers insight into opportunities to capture unmet demand.

The study identified a **surplus** in the following sectors in the greater Bradford economic region:

- Gas stations
- Department stores
- General merchandise stores
- Food and beverage stores
- Grocery stores

A surplus indicates that there are likely enough, or more than needed, of these business types to serve the area. For example, it is unlikely that the Bradford economic region could support another large grocery store like Hannaford Supermarket.

The study identified sales leakage in the following sectors of the greater Bradford economic region:

- Restaurants/other eating places
- Clothing stores
- Other miscellaneous store retailers
- Sporting goods and hobby stores

- Electronics and appliance stores

When compared to data collected from the community survey regarding what types of businesses are of interest, opportunities identified by the leakage data results are supported. Survey takers specifically mention their desire to have a clothing store (such as Target), a craft/hobby store, an appliance store (to replace Perry's) and additional restaurants. However, it is important to recognize that although there are opportunities to capitalize on unmet demand, the scale of any new businesses would be small, because the Bradford economic region is compact with a relatively small population when compared to the Upper Valley (a much larger economic region).

Through a combination of average sales estimates, 10% recapture rate and average sales per square foot, a rough estimate of how many square feet of supportable commercial space is appropriate for the economic region can be determined (Figure 12).

Type of Business	# of Supportable Businesses	Total Supportable Square Feet
Restaurants/Other Eating Places	2	2450
Clothing Stores	1	2732
Other Miscellaneous Store Retailers	1	1382
Sporting Goods & Hobby Stores	1	3534
Electronics & Appliance Stores	1	1320

FIGURE 12 - SUPPORTABLE RETAIL – BRADFORD ECONOMIC REGION

Ultimately, the economic study shows that there are potential opportunities for new retail commercial businesses in Bradford, but they are only one component of business types that should be encouraged. Other options suggested through the economic analysis and survey responses include:

Brewery with accompanying restaurant: Multiple interviewees pointed to a brewery as a potential opportunity in Bradford, as well as the need for more dining options. A craft brewery would not only attract out-of-towners and passersby, but would also satisfy the local craving for additional dining options and need for entertainment. Many other small towns throughout Vermont have seen much success in opening craft breweries, as the demand has sky-rocketed for these unique experiences nationwide. A brewery would be well-suited for the Lower Plain area.

Unique restaurant: While Bradford already has several popular restaurants, interviews and the community survey indicated that residents are interested in more unique dining opportunities, similar to Samurai Soul, which is located in Fairlee. This would also attract visitors from outside the town, which will then encourage spending at other town businesses.

Multi-purpose store: Survey responses indicated that they wished to have a replacement for Hills 5 & 10 store, which closed in 2015. A similar, locally-owned, multi-

purpose store would be a great addition to Bradford and would be have the potential to be successful, based on the community survey results.

Appliance store: Many community members have felt the loss of Perry's Oil Services and have expressed need for a new appliance and repair shop in the town.

Health care businesses: Recent growth in health care demands presents an opportunity for a new health care establishment in the Bradford which can serve the surrounding economic region. This could take the form of an outpatient facility, urgent care, etc. This type of business would be best suited in the Lower Plain area.

Wellness/fitness center: Alongside growing demand for health care evolves the demand for healthy food options and unique fitness opportunities. Interviewees mentioned the lack of these amenities within the town and neighboring towns; thus, facilities for fitness and wellness pose an additional opportunity, which could be satisfied by a gym, yoga studio, or health foods store. This option is also strongly supported in the survey results.

Additional business opportunities are discussed in Appendix B.

B. Capitalize on Community Assets

While economic data indicates that the Town of Bradford has lost jobs over the past 5 years (a total of 27) at a rate of -1.9%, the economic region and the town are projected to gain jobs at a slow but steady rate of 1% over the next five years. One way to support and improve Bradford's economic outlook is to take advantage of existing assets.

Farm-way is one of Bradford's most successful businesses, selling a broad range of products ranging from outdoor wear and camping gear to furniture and saddlery. The company has strong reputation for being a "green" company having located in an area identified as a brownfield, which required clean up and monitoring. Since 2009, Farm-Way has developed a solar system that provides 100% of the electricity needed for their operation. The unique nature of the store, and their reputation for customer service, makes Farm-Way a significant draw for shoppers in and out of Bradford's economic region. Recognizing this, Bradford should encourage business growth in areas that compliment Farm-Way. Complimentary businesses might include a brewery (to take advantage of the Vermont craft brewing craze), local cheese production with a tasting room, additional outdoor outfitters/rental options, and new restaurants.

Bradford also has several significant outdoor recreational assets, including the Connecticut River and the Wright's Mountain/Devil's Den property. Wrights Mountain is Bradford's highest peak, providing excellent views and miles of footpaths and logging roads for hikers. This completely forested area appeals to multiple types of outdoor recreation enthusiasts – the type of individual who may very well shop at Farm-Way. Leveraging this asset and marketing Bradford as a place for outdoor recreation enthusiasts may be one way to stimulate the local economy.

C. Wayfinding and Marketing

In addition to Farm-Way and Bradford's recreational assets, the community also has a classic traditional downtown, which offers guests several excellent dining opportunities, access to local parks, the municipal golf course and a wide-range of historic architecture. However, for individuals who are not familiar with the area, the community's assets may not be obvious. Bradford should develop a "wayfinding" plan that includes signs that direct visitors to community assets like Farm-Way, Wrights Mountain/Devils Den and the Village (See section IV).

Bradford should work with local businesses, particularly Farm-way to direct visitors to the downtown area and advertise any local outdoor recreational opportunities, entertainment options and events, when possible. A comprehensive marketing strategy, with a designated group to lead it, should be developed. Local businesses should be allowed to contribute materials and ideas to the process.

V. BUILDOUT ANALYSIS & CAPACITY STUDY

A. Overview

A buildout analysis is a multi-purpose tool used to estimate the amount and location of potential development for an area. In the context of this project, the analysis considered several components:

- **Spatial Analysis** – Geographic Information Systems (GIS) were used to analyze existing land use regulations to determine how they are encouraging or limiting potential future development. Zoning rules, such as setback requirements, density limitations, parking requirements, etc., can all limit the potential for development in an area.
- **Capacity Analysis** – This considered the potential of the land and municipal services to carry additional development. Constraints such as floodplains, steep slopes and soil types are identified as they can limit the ability to develop a parcel. Additionally, municipal services, particularly sewer and water have a capacity that is limited by the infrastructure that makes up each system. If sewer and water capacity are reached, no additional development can be served by those systems without expensive upgrades. Some development, particularly commercial and industrial, may not choose to locate in an area that is not served by sewer and water.
- **Parcel Development Potential Analysis** – Each parcel within the project area has differing constraints that may encourage or limit potential development. The most obvious is that a parcel is completely built out. In other circumstances, a parcel may have existing development, but may include enough area to be subdivided.

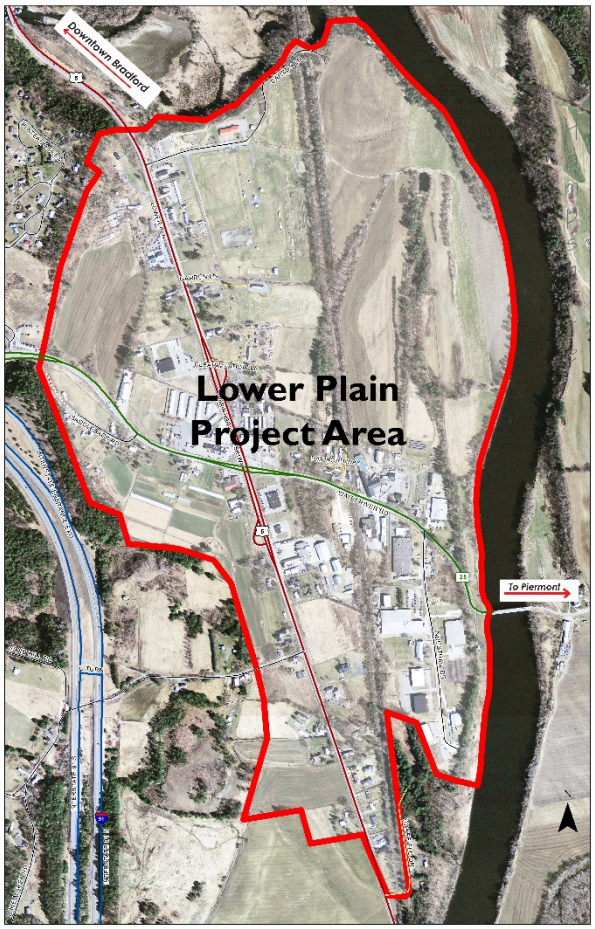


FIGURE 13 - BUILDOUT ANALYSIS & CAPACITY STUDY PROJECT AREA

Collectively, these analyses helped provide information that will guide changes to the Municipal Plan's land use policies and the community's zoning regulations.

B. Spatial Analysis Methodology & Results

In an effort to identify any potential barriers to future development in the lower plain that may exist due to current zoning regulations, a spatial analysis was conducted within the project area.

Inputs

GIS analysis was used within the project area to determine the maximum amount of square footage that would be allowable under Bradford's zoning regulations. Inputs into the analysis are primarily spatial (see sidebar).

Assumptions

To provide an effective analysis, it is necessary to make specific assumptions about how development will occur. For the buildout analysis the following assumptions were made:

- Use of Available Land - 100% of the land area in the Lower Plain was available for residential and commercial use.
- Efficiency Rating - In order to account for onsite infrastructure such as parking and stormwater retention, an efficiency rating was applied. For uses in commercial areas such as the Lower Plain Commercial zone where parking and stormwater investments would be significant, efficiency was assumed at 50% - that is 50% of the available space on a parcel would be dedicated to roads, parking, stormwater, etc. In residential areas, efficiency is assumed to be significantly higher – 80%.
- Types of Development – The Bradford Town plan describes the purpose of the Lower Plain Commercial Area is "to provide space for concentrated commercial development." As a result, it was assumed that commercial development would be favored over residential, although some residential was included in the analysis. The benefits of mixed-use development, are discussed later in this report.
- Building Scale – The Municipal Plan sets a threshold of 36,000 square feet for total building area in the Lower Plain. For the purposes of analyzing buildout, 36,000 square feet was set as the maximum, although additional analyses were conducted using multiple stories, and smaller square footages.

Lower Plain Spatial Requirements

Spatial requirements for development in the Lower Plain Commercial Area include the following:

Lot Area Minimum

Residential -10,000 ft^2 per unit

Non-Residential – None

Setbacks & Frontage

Minimum Lot Frontage – 100 ft. or 20 ft. right-of-way

Minimum Setback – 25 ft. from edge of right-of-way

Side & Rear Setback – 20 ft.

Other

Max. Building Height – 35 ft.

Maximum Allowable Building Footprint – 50% of lot area

- Developable Area – Not all parcels in the Lower Plain were identified as developable. Undevelopable areas included road and railroad rights-of-way, completely occupied parcels (such as Oaks Brothers or Hannaford), conserved properties (such as the Newmont farm property), and properties with environmental constraints (brownfields).

Results

Spatial analysis determined that roughly two million square feet of development is possible within the areas of the lower plain identified as developable. Figure 14 indicates new potential buildings in red, yellow and grey dots. Depending on the maximum allowable building area, this could amount to 150-220 new buildings in the Lower Plain. While buildout analysis is not a substitute for parcel by parcel site analysis, it does provide insight into the impacts of Bradford's zoning regulation.

It is clear that Bradford's zoning is not an impediment to development in the Lower Plain. If anything, Bradford's bylaws are extremely permissive, allowing most types of development at any scale feasible; dependent on sewer and water, parking requirements, stormwater requirements, etc. It should be noted that this analysis did not consider the potential impacts of Act 250 (discussed later in this section).

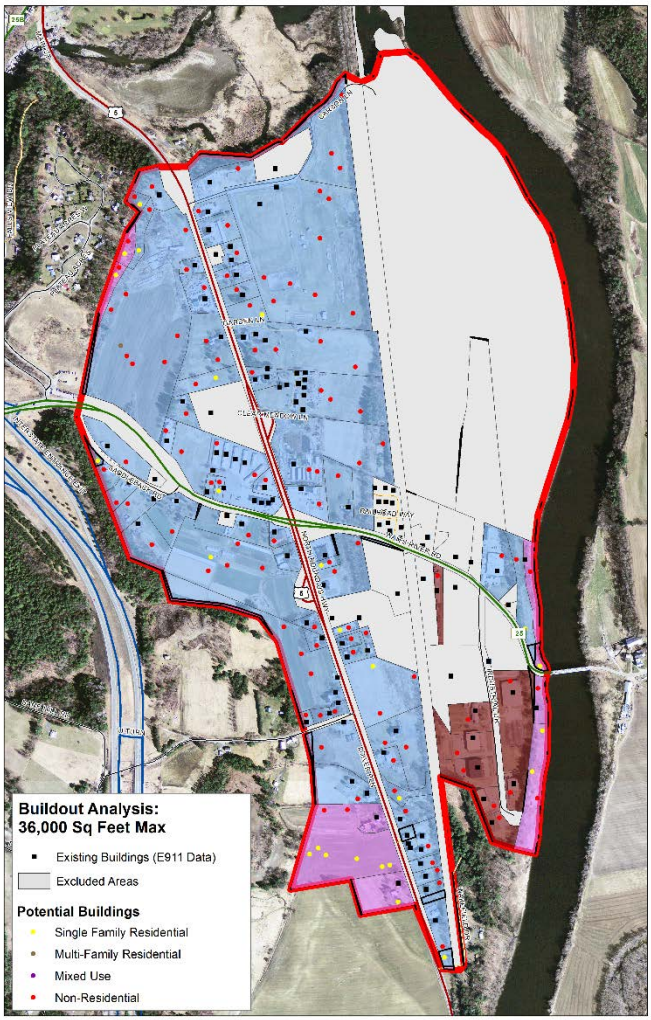


FIGURE 14 - BUILDOUT ANALYSIS RESULTS - 36,000 SQ. FT. (NOTE: A LARGER VERSION OF THIS MAP CAN BE FOUND IN APPENDIX C)

C. Capacity Study

In addition to spatial analysis, the capacity of the land and existing services was analyzed to identify any potential constraints. One of the most appealing elements about the Lower Plain in terms of development potential is its lack of physical constraints. In other places, steep slopes, wetlands and floodplains make development challenging. The Lower Plain, on the other hand, is relatively flat and contains minimal natural resource issues. The factors that limit capacity in the lower plain are described below.

Sewer and Water

Sewer and water are available in the Lower Plain, however investigations into current capacity determined that there are significant limitations to existing infrastructure. In 2012, Bradford completed an extension of their existing sewer system, which provided much needed access to businesses in the Lower Plain. The availability of this service was essential to Hannaford's Supermarket, allowing them to dismantle a smaller, older grocery store and replace it with a larger, modern and appealing store that effectively serves the Bradford economic region.

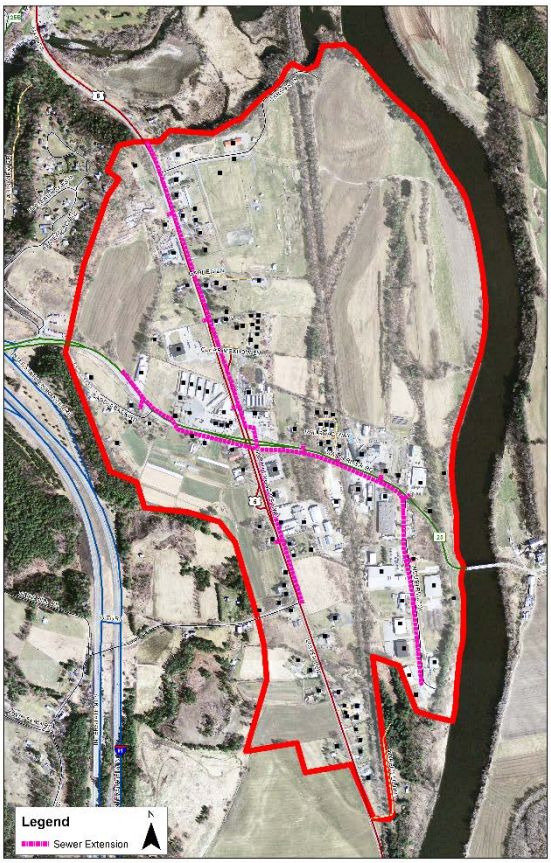


FIGURE 15 - LOCATION OF BRADFORD SEWER LINE EXTENSION (LOWER PLAIN)

Bradford's sewer system has a permitted capacity of 137,000 Gallons per day (GPD), of which 94,000 GPD is currently being used. State law requires community wastewater systems to plan for upgrades to the facility when 80% of the system capacity is reached. Eighty percent of Bradford's existing capacity is approximately 109,600 GPD. Based on this threshold, calculations determine that there are roughly 15,600 GPD of remaining wastewater capacity in the Bradford sewer system before planning for upgrades will be required.

Bradford's sewer treatment plant is located on the north end of the village. The topography between the sewer treatment plant and the Lower Plain is such that pumping of effluent is required. An engineering analysis of the sewer line extension and its pump station (which is located in the industrial park) has determined that, based on the number of active users in the Lower Plan, the pump station cannot support 15,600 GPD. The estimated remaining capacity of the Lower Plain pump station is roughly 10,000 GPD.

For the purposes of this analysis, a rough factor of 9.38ft^2 * GPD was developed to determine how many square feet of commercial development could be served by existing sewer capacity. It should be noted that this factor is an *estimate only*, and further engineering study will be required on a site-by-site and use-by-use basis to pinpoint accuracy. For planning purposes, these numbers are reasonable.

Based on the ft^2/GPD factor, there is enough capacity in the Lower Plain sewer extension to serve approximately 93,000 square feet of new mixed-use development.

Act 250

To properly understand the constraints that limit development in the Lower Plain, the impacts of Act 250 must be considered. Act 250, Vermont's landmark quasi-judicial permitting process, was designed for the purposes of managing the impacts of development, particularly as they relate to natural resources. When a proposed development in a community triggers Act 250 (see sidebar on following page) the proposed project is reviewed against ten specific criteria (and sub criteria), which include:

1. Air and Water Pollution
2. Water Supply
3. Impact on Existing Water Supplies
4. Soil Erosion
5. Traffic Safety and Congestion
6. Impact on Schools
7. Impact on Municipal Services
8. Wildlife, Historic Sites and Aesthetics
9. Impacts of Growth
10. Conformance with Local and Regional Plans.

Act 250 Triggers

Act 250 permitting becomes a consideration under a number of specific circumstances including (but not limited to) the following:

Commercial Development on 1 acre or more in communities with only zoning or subdivision (or no land use regulation).

Commercial development on 10 acres or more in communities with BOTH zoning or subdivision (or a unified bylaw).

Subdivisions of 10 lots or more, or 6 lots in towns without zoning AND subdivision regulations.

Because Bradford has only Zoning Regulations and no subdivision regulations, the lowest Act 250 trigger threshold (1 acre or more) applies for all commercial development. This means that any new commercial development on one-acre or more (or modification to an existing permit) in the Lower Plain will be subject to Act 250 review. Of specific importance in the context of capacity for new development in the lower plain, are criteria 9(B), 9(L) and 10.

- **9(B) Primary Agricultural Soils** - If a project subject to Act 250 jurisdiction contains soils that are mapped by the NRCS as "prime" and/or "statewide" agricultural soils" the Agency of Agriculture will review and provide recommendations. Typically, developers are required to design their proposals to avoid impact to Prime Ag Soils. This may mean reducing the proposed scale of the development to preserve open ag-land. In some cases, off-site mitigation, is allowed. This involves paying a fee based on the agricultural value of the soils. There are a significant number of Prime Agricultural soils in the lower plan, much of which has been identified as Ag Value 1 – the highest value, and most expensive to mitigate. As of 2017, District Three's cost per acre for mitigation was $2,654. This number is multiplied times a factor of 3 for each acre of Ag Value 1 soils mitigated. Nearly $8000 an acre for off-site mitigation of Ag Value 1 soils. See

map #4 in Appendix C for more information.

- **9(L) Settlement Patterns** – All development subject to Act 250 must demonstrate that it will make efficient use of land, energy, roads, and other supporting infrastructure; and will not contribute to a pattern of strip development along public highways; or if the development or subdivision will be confined to an area that already constitutes strip development, will incorporate infill and is designed to reasonably minimize the patterns of development as outlined in Act 250's definition of "Strip Development." If reviewed objectively, it could be argued that the pattern of development that exists in the Lower Plain does include a number of the characteristics identified as strip development. Commercial buildings in the Lower Plain are predominantly single-story, there is limited shared highway access, there is no significant connection to the village other than Route 5 and there is limited access for pedestrians.

How Act 250 Defines "Strip-Development"

Strip development means: linear commercial development along a public highway that includes three or more of the following characteristics:

- broad road frontage
- predominance of single-story buildings
- limited reliance on shared highway access
- lack of connection to any existing settlement except by highway
- lack of connection to rounding land uses except by highway
- lack of coordination with surrounding land uses
- Limited accessibility for pedestrians.

- **10 Conformance with Local and Regional Plans** – All development reviewed under Act 250 must conform to local and Regional Plans. In the event that there is a conflict between the two plans, Act 250 typically defers to the local plan. However, in the event that the Regional Commission is able to demonstrate that a development meets its criteria (defined in the TRORC Regional Plan) for Substantial Regional Impact, the District Commission shall adhere to the Regional Plan.

  The potential for conflicts between the local and Regional Plan is significant when retail development is proposed outside of the Village. The Regional Plan includes the following specific, and mandatory (due to the use of the word "must") language:

  "Principal retail establishments must be located in Town Centers, Designated Downtowns, or Designated Growth Centers to minimize the blighting effects of sprawl and strip-development along major highways and maintain rural character."

While this language can be interpreted as a prohibition on all commercial development outside of villages and downtowns, it is not, as it specifically identifies retail development. Yet, any proposed development that includes retail could be challenged by the Regional Planning Commission under Act 250 as was the case in 2007 when Gizmo Realty/VKR Associates, LLC proposed a 45,350 square foot commercial development with a retail component on a 5.7 acre parcel south of the junction of Route 5 and 25. The Act 250 permit for this development was initially denied, but when appealed to the Environmental Court, the decision was overturned. In this case, the RPC's definition of Substantial Regional Impact was not applicable.

D. Development Potential Analysis

Parcels were evaluated for their suitability for development in order to identify which parcels were the most likely to be developed. Development potential was analyzed through three different lenses:

- **Proximity to Existing Sewer**. The desirability of a parcel is based in part by the cost of providing essential services, such as power, water and sewer. Areas of the Lower Plain that are in close proximity to existing wastewater infrastructure, will be less expensive to develop because a stand-alone onsite wastewater system will not need to be designed and built. Additionally, municipal wastewater may offer the ability to generate higher quantities of effluent than could be processed onsite. See Map #7, Appendix C.

- **Proximity to Existing Roads**. Nearby road access is valuable to the developer, particularly when the nearby road is a well-maintained state transportation corridor like Routes 5 and 25. Being in close proximity to existing roads will minimize costs of building internal roads or having to negotiate an easement with an adjacent

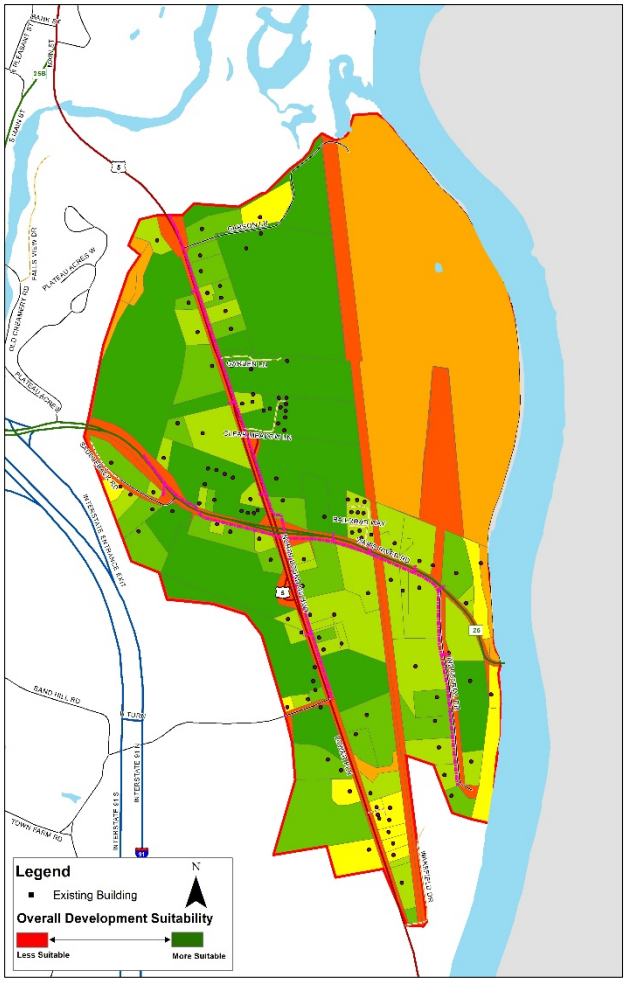


FIGURE 16 - OVERALL DEVELOPMENT SUITABILITY (NOTE: A LARGER VERSION OF MAP CAN BE FOUND IN APPENDIX C)

property owner. See Map #8, Appendix C.

- **Parcel Desirability**. Notwithstanding proximity to sewer and roads, parcels were ranked based on their desirability. Criteria included the presence of other buildings, available space for subdivision of property, natural or man-made constraints (such as rivers or roads), or conservation easements that would limit development potential. See Map #9, Appendix C.

Utilizing the rankings provided from each level of analysis for development potential, an overall ranking of parcels was developed, which identified the parcels most likely to attract developers in the future (see Map #10, Appendix C). It should be noted that most parcels in the Lower Plain have high development potential, unless they are fully developed (such as the Oaks Brothers or Hannaford properties), publically owned (such as the fire station) or conserved. While the maps included in Appendix C show a range that appears to indicate many locations are marginal,

Goal: Village Scale Development in the Lower Plain

Stakeholders have clearly identified a desire to encourage new commercial and mixed-use development in the Lower Plain, provided that it reflects a more "village-like" aesthetic.

This goal can be achieved by fostering a more human-scale style of development, one that is designed for people rather than automobiles. This means incorporating measures into development that encourage public interaction such as parks or civic spaces, or walking and biking opportunities. It means designing buildings to appeal to people on foot, rather than in cars, a very different pattern of development than has occurred in the Lower Plain over the past twenty years.

By encouraging a broader mix of uses that encourage residents to live, work and play in the same area; built at an appealing, human scale, Bradford can encourage economic growth.

VI. THE PATH TO IMPLEMENTATION

Implementation is often the most significant challenge for communities to address once a Plan has been developed. It is the step between the vision and the reality, which requires a commitment and willingness to move forward that involves town staff, volunteer boards, and community stakeholders. Implementation also often has costs associated with it.

A. Planning and Policy Implementation Activities

Bradford is focused on encouraging the growth of new economic opportunities that support a healthy and vibrant village while allowing for village-scale expansion into the Lower Plain, which represents a prime location for new development. While many projects require the assistance of expert consultants outside of the community, there are opportunities for Bradford to push forward on implementing the community's economic vision through community participation and the tools available to towns.

The priority for any new initiatives will be to prioritize the steps that need to be taken based on a unified vision. The Planning Commission has identified the desire to encourage economic growth and vibrancy in a way that balances and enhances the qualities of Bradford's Village Center with the Lower Plain. Residents have indicated support for this idea, and have helped refine the concept through their participation in the public survey.

Revise the Town Plan

Responsible Parties
Planning Commission & Selectboard

Timeframe for Implementation
As soon as possible

The Bradford Town Plan will be due for revision and re-adoption in 2021, however, a community may revise and adopt their plan at any time. Communities will often do so in the event of a significant change that makes their current plan out-of-date or out of touch with the current municipal vision. Because the municipal plan serves as the community's vision for the future, and as the foundation for land use regulation (zoning, subdivision, etc.), the Bradford Town Plan should be revised to incorporate important elements generated through this project. The Planning Commission can opt either to bring components of this project (data, implementation items, etc.) into the Plan or can adopt this report as part of the Plan by reference.

As part of the process of revising the Town Plan, it may be valuable to organize additional public input sessions to gather additional citizen input regarding building design in the lower plain. Discussion could begin with the design examples included as part of this report in Appendix D. This process could include a design charrette which allows participants an opportunity to be more "hands on" in imagining a new way to

approach development in a specific area. This process would most likely require assistance from the Regional Planning Commission or a private consultant and could be funded through a Municipal Planning Grant at minimal cost to the Town.

Adopt an Official Map

State Statue enables communities with an adopted Municipal Plan to adopt an Official Map. The Official Map is a tool that communities can use to control design by identifying locations of future public facilities. For example, an official map can include future streets, planned trails, sites reserved for public buildings, and areas reserved for stormwater or flood control. Through the official map, municipalities have the authority to require the reservation of easements

Responsible Parties
Planning Commission & Selectboard

Timeframe for Implementation
After the community has taken ample time to determine the optimal locations for future infrastructure and conducted a sound, public process that includes education and outreach to the community.

What does "village-style" development look like?

Survey takers and stakeholders indicated a preference for development that was more similar to a village center than a shopping center or mall complex. Characteristics of village-style development include:

- **Homes on narrow lots**. In many Vermont villages and downtowns, homes are on lots that are narrow, but deep. Public interaction and activity is often centered on the street.
- **Building design that is context sensitive and oriented to the street**. A neighborhood is in part defined by its architecture. Buildings often have similar design characteristics, and in villages and downtowns, they face the street.
- **Mixed Use**. Villages and downtowns always contain a dense mix of residential, civic and commercial uses. Housing types often vary in villages as well.
- **Designed for People**. In traditional villages, design is focused on the human environment, rather than on automobiles. Building scale, streets and sidewalks are generally designed in a way that enhances pedestrian safety and public interaction.
- **Encourages Social Interaction**. The nexus between private spaces like porches and yards and the streetscape provide people with opportunities for interaction.
- **Streetscaping**. Public spaces often have a specific design, including landscaping, where plants, trees and shrubs provide visual interest, shade, and other aesthetic benefits.

or land to accomplish a public purpose, such as the creation of a new road or a public park. As part of the permitting process, applicants can use the official map to understand where public facilities like roads or trails are going to be developed and how their development must be designed to accommodate them.

The adoption of an official map identifies the areas where a community plans public facilities and establishes the procedure by which sites can be acquired (typically through financial compensation) before they are developed for other uses. At any point in that process, a municipality can opt not to acquire property and allow a proposed development to proceed. Adopting an official map does not commit the municipality to purchase properties on which future public infrastructure projects are shown.

Adopt Subdivision Regulations

As noted in Chapter V, section C, Bradford has zoning but no subdivision regulations. Because of this, the Act 250 permit threshold for commercial development is one acre. If the town were to adopt Subdivision regulations as a companion to Zoning, that threshold would rise to 10 acres. This could simplify permitting for potential developers significantly.

Responsible Parties
Planning Commission & Selectboard

Timeframe for Implementation
As soon as is reasonable after adequate public education and outreach to ensure support.

In addition, Subdivision regulations control the pattern of development by creating rules for the way land is divided and infrastructure is provided. This will be particularly important if the Planning Commission seeks to implement the vision of a Lower Plain that has a pattern of development that is more similar to a village than a commercial strip. In addition to basic subdivision requirements, the Town should consider:

- **Specific lot design standards for the Lower Plain Commercial Zones**: This might include detailed requirements for the layout of lots, blocks, roads, and pathways; the placement of lot markers and survey monuments; the construction and installation of roads, curbs, sidewalks, utilities, and water, wastewater, and stormwater management facilities; the layout of recreation, common, or open space areas; and landscaping. For the Lower Plain, this might specifically require that:
    - Internal roads be designed with pedestrian comfort and safety as a critical goal along with the safe and efficient flow of traffic and other important considerations, such as the accommodation of emergency vehicles, on-street parking, etc.
    - Internal roads must connect adjacent parcels in order to limit access points to major roads.
    - Internal roads only be wide enough to accommodate slow, two lane traffic and emergency vehicle needs; and designed include on-street parking to reduce speeds on internal roads and to create a village feel.

  - Bike lanes be included in internal road design, unless a separate bike path is proposed within a subdivision.
  - Planned parking areas should not be located in front of building areas, but instead should be located behind or to the side, with the exception of on-street parking.
  - Developers should be required to include adequate space to allow for landscaping accommodations at the edge of internal roads, including trees.

- **Alternative lot design standards for the Lower Plain Commercial Zones**: This could include "cluster" or "open space design" requirements to protect open space or traditional neighborhood design to require more compact, higher density development a village style development pattern.

The Planning Commission should seek assistance from the Regional Planning Commission to implement these additions to a basic subdivision regulation. At the same time, it will be important for the Planning Commission to provide education and outreach to the community (the RPC might be able to assist with this as well) that helps them understand why Subdivision Regulations would be beneficial in Bradford. Without adequate buy-in from the community, it may be challenge to get subdivision standards adopted.

Revise and Adopt Zoning Regulations

Responsible Parties
Planning Commission & Selectboard

Timeframe for Implementation
As soon as is reasonable after adequate public education and outreach to ensure support.

Once the Bradford Town Plan has been revised to reflect the information collected through this report, a complete revision of the zoning should be undertaken. In addition to routine updating to ensure that the regulation is compliant with state law, the Planning Commission should focus on addressing its approach to regulating the pattern of development that occurs in the lower plan. Survey results indicate that citizens favor a more compact and village-like pattern of development than has occurred historically. To achieve this pattern, the following zoning principles should be considered for incorporation into revised zoning regulations:

- **Create a Design Control Overlay District for Commercial and Mixed Use Development the Lower Plain**: In order to push future development toward a more village-style pattern of development, there will be a need for greater control with regard to design and site planning. Because the Bradford Municipal Plan suggests variations on the types of uses allowed in different parts of the Lower Plain (Lower Plain 1, Lower Plain 2 and Industrial), an overlay district that imposes design controls specifically on commercial and/or mixed use development is the most logical approach. A design control overlay, will allow

the Town to regulate the design and site plan requirements for new commercial or mixed use development in the Lower Plain, while continuing to allow less-specific regulatory requirements for the same types of uses elsewhere.

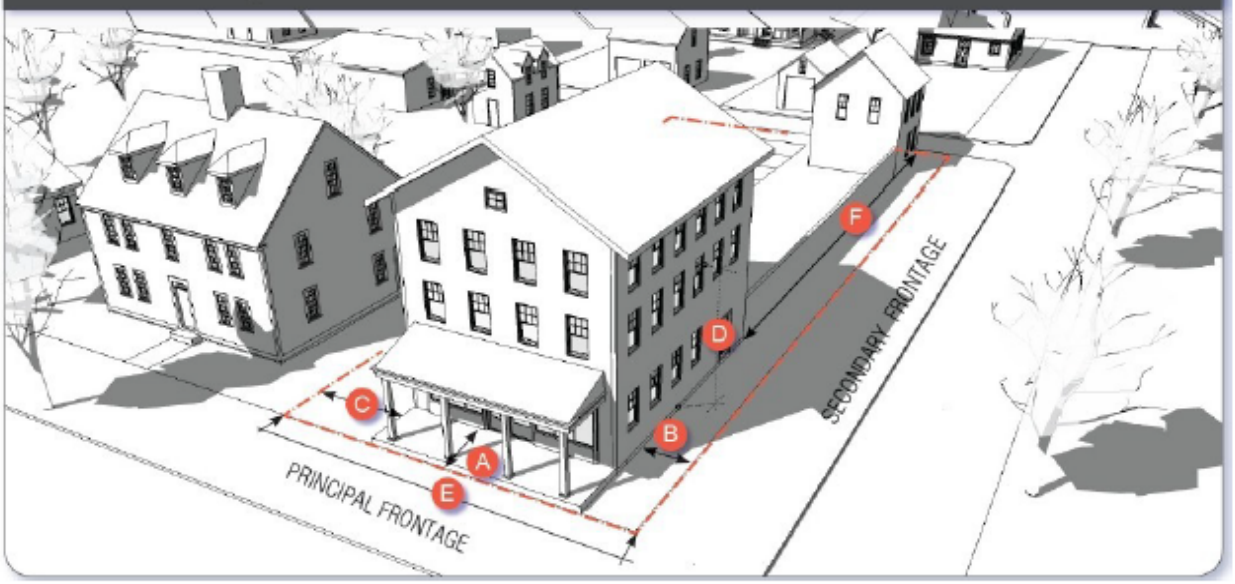
One option to address design is to utilize a Form-Base Code (see figure 17). Form based codes regulate the details that are most commonly connected to what are considered walkable, human-scaled neighborhoods. These details include building placement, height, width, and the way then interact with the public space (called "frontage"). They can also include regulations that address the layout and design of streets, parking and pedestrian infrastructure. Some communities have adopted a "hybrid" form-based code, which only applies to a specific area, usually a village or downtown.

- **Design for Village Context**: To achieve a village-style of development in the Lower Plain, developers will need to be required to orient buildings and entrances to the street (not to parking areas), break up larger buildings to maintain a visually compatible scale of development, consider pedestrian scale and orientation through street level storefronts, windows, etc. Parking should be screened and landscaped. If formula businesses (such as fast food chains or franchises) are permitted, they must be designed to fit in with a village style of development as defined in the zoning regulations.

  One of quintessential examples of how design control can be utilized to ensure that development is designed for a village context is shown in figure 16. This example shows a McDonalds franchise that match's classic village architecture, lot layout and site design. The Form-Based Code approach shown in figure 17 controls building placement, lot occupation and building form and type.

FIGURE 17 - MCDONALDS FRANCHISE, FREEPORT, ME (SOURCE: NNECAPA PHOTO LIBRARY)

CD4 Neighborhood Center District



KEY ---- Property Line (ROW)

BUILDING PLACEMENT — PRINCIPAL BLDG

Front Setback, Principal Frontage	3ft min, 20 ft max	A
Front Setback, Secondary Frontage	3ft min, 20 ft max	B
Side Setback	5 ft min - 20 ft max**	C
Rear Setback	greater of 3 ft min or 15 ft from center line of rear alley	•
Frontage Buildout	40% min - 75% max	

** Except 0 ft for common walls of Live/Works, Rowhouses, Duplexes, Small Commercial Buildings and Apartment Houses

YARD TYPES (see Table 13.4.2)

Edgeyard	permitted
Sideyard	permitted
Rearyard (Not synonymous with Backyard)	permitted

BUILDING & LOT USE

See Section 13.4.11

LOT OCCUPATION

Lot Width	18 ft min, 70 ft max
Lot Coverage	70% max

BUILDING FORM - PRINCIPAL BUILDING

Building Height	3 stories max
Ground Floor Height	12 ft min, 25 ft max
Upper Floor Height	9ft min
Facade Glazing	20% min - 70% max ***
Roof Type	gable, hip, gambrel
Roof Pitch	gable: 6:12 min, 12:12 max hip: 3:12 min gambrel: 6:12 min, 30:12 max

*** 70% min for shopfront

BUILDING TYPES ALLOWED

House, Duplex, Rowhouse, Live/Work, Small Commercial Building, Apartment House

FIGURE 18 - RIVERSIDE FLATS CHARACTER-BASED DEVELOPMENT REGULATIONS, JERICHO, VT, ADOPTED AUGUST 24, 2017.

- **Address Building Form**. One of the commonly identified components of "sprawl" or "strip development" is an excess of single-story buildings. To move beyond this pattern, establish a minimum building height that encourages multi-story development. For example, requiring a minimum of two stories, but allowing three stories will provide a variety of potential forms, while breaking free of the single-story model (note that it is important to balance this minimum height requirement with the capabilities of your fire department). To encourage more village scale buildings, consider setting a maximum building width requirement along the front right of way.

- **Address Building Placement**. Establish a "build to line" for buildings along internal roads. This will help create a more pedestrian-scale environment. To this end, setbacks from internal roads should be minimal for village-style development, only allowing for adequate space between the roadway and buildings for pedestrian and landscaping enhancements. Lot widths along internal roads should be minimized to create a more compact area in which to develop structures.

What is the Right Set-Back?

The best way to determine what an appropriate "build to line" or setback should be is to find locations that represent the community's vision; and analyze those areas for guidance. What are the general setbacks? How far apart are the buildings? What kinds of yards are there? With this reference data, the appropriate standards can be developed.

- **Revise Lot Coverage**. Bradford's current zoning ordinance sets maximum building coverage in the lower plain for commercial development at 50% of the total lot area. This ultimately makes creating village style of development more challenging because in truth, building covering in Vermont's villages and downtowns is often more than 50%. In order to ensure that a higher coverage allowance does not encourage extremely large buildings, building placement standards and lot width limitations should be instituted (see "lot occupation," figure 17 as an example).

- **Address Architectural Design**. It is possible to get extremely detailed and proscriptive with architectural design requirements, initially consider including simple architectural design guidelines that reflect traditional Vermont village architecture, while offering a range of types to allow for reasonable flexibility for differing uses that still achieves the vision for the area. Use photos or illustrations to clearly identify appropriate and inappropriate architectural styles. There are a number of styles of architecture represented in Bradford Village, including Greek revival, French Second Empire, Federal, Queen Anne and Victorian, that can serve as models for preferred styles of development.

- **Revise Parking Standards**. Bradford's parking standards are out-of-date, requiring a significant amount of space for parking depending on the use. For example, commercial uses in the Lower Plain are required to have one parking space for every business and employee vehicle, plus one space for every 200 square feet of floor area. Based on this calculation, a 10,000 square foot building would require 50 parking spaces (not including those needed for employees or company vehicles). The average parking space is 9 feet wide by 18 feet long, covering a total of 162 square feet. 50 required parking spaces would necessitate 8,000 square feet of parking, not including the necessary travel areas, pedestrian zones and stormwater infrastructure – nearly the same amount of coverage for parking as for the example 10,000 square foot building.

  The Planning Commission should remove minimum parking standards in Lower Plain and replace them with maximum parking standards. Maximum parking standards have two benefits. First, they improve the area by preserving open space and limiting impervious surfaces; encourage attractive, pedestrian-friendly urban design; and promote transportation choices. Second, from the developer's standpoint, maximum limits reduce costs for parking construction, operations, maintenance; and increase leasable space within a given floor-to-area ratio. On street public parking should be considered when calculating necessary parking. Parking lots should not be allowed in front of buildings. In areas where they are visible from streets, they should be screened with appropriate landscaping.

- **Limit Access to Routes 5 and 25**. To further establish a more village scale pattern of development, regulations should be revised to require shared access points between parcels, particularly along Routes 5 and 25.

Change Regional Future Land Use Designations

Responsible Parties
Bradford TRORC Representative, Planning Commission, Selectboard & TRORC

Timeframe for Implementation
Well in advance of next scheduled revision of the TRORC Regional Plan's Future Land Use element.

The pattern of development identified through this project suggests that changes to the Regional Plan's Future Land Use classifications in Bradford may be warranted. Currently, parts of the Lower Plain are identified in the 2017 Regional Plan as Interchange Areas (see figure 18, indicated in yellow). The Regional Plan indicates that "appropriate uses include highway-oriented lodging and service facilities, trucking terminals, truck-dependent manufacturing, and park-and-ride commuter lots." While some of the uses that are identified by the Regional Commission may be appropriate in the Lower Plain (such as lodging) based on the public input provided during this analysis, others are less so.

If the community is to foster a more village-scale, mixed use approach to development in the Lower Plain, it should work with the Regional Commission to identify the best approach to regional land use policy as it relates to Bradford. One approach (pictured in Figure 19) may be to expand the TRORC Town Center area to include the parts of the Lower Plain in which Bradford intends to encourage higher density, mixed use development.

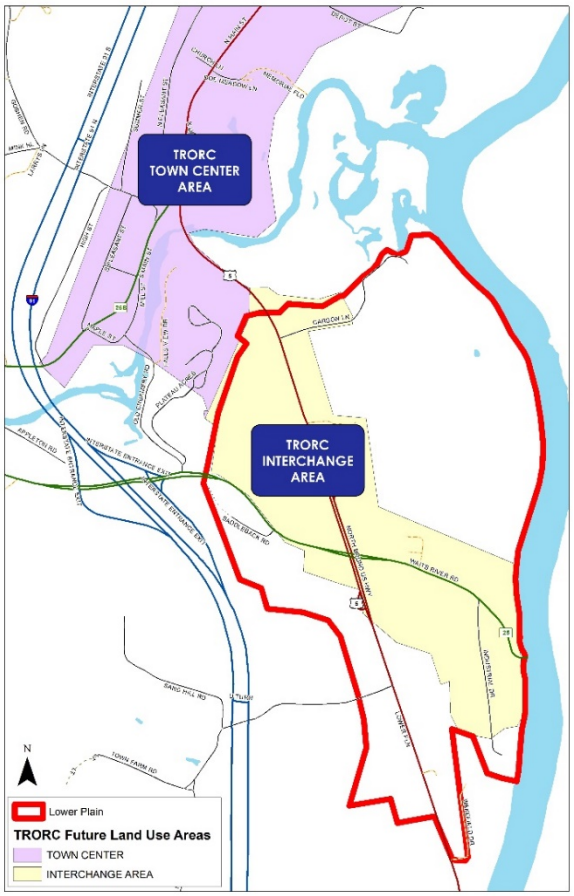


FIGURE 20 - TRORC FUTURE LAND USE AREAS, 2017

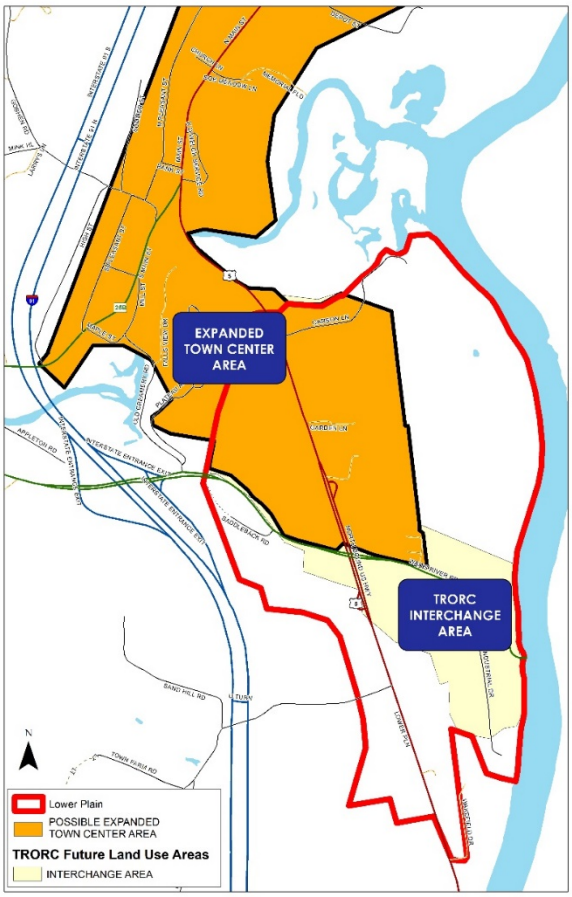


FIGURE 20 - POSSIBLE EXPANDED REGIONAL PLAN TOWN CENTER AREA

The Regional Commission identifies Town Center Areas as "those areas where central public utilities for water and sewer are available, and where there exists a central location for commercial activities and schools, cultural and civic activities for the town and the surrounding community." Considering that residents and survey responses indicate a desire to have a mix of housing, commercial and civic activities in the lower plain that complement the downtown, it would appear that such a change could be considered consistent with the general goals of the Regional Plan.

The Bradford Town Plan (which was approved by the Regional Commission) identifies areas north of the Routes 5 & 25 junction as appropriate for retail, whereas to the south retail is discouraged. With the proposed expansion of the Regional

Commission's Town Center Area into the northern section of the Lower Plain, the potential for conflicts between the Bradford Town Plan and TRORC Regional Plan relative to retail development under Act 250 would be reduced. Existing retail activities outside of the expanded Town Center area would be grandfathered. Given the limited amount of new retail potential (less than 10,000 square feet) identified by the Economic Development analysis (Chapter IV), Bradford should be encouraging economic growth through a mix of village scale uses that extend beyond retail, including services (such as restaurants), activity centers (exercise facility) and possibly light manufacturing, etc., uses that the Regional Plan is generally supportive of in most locations depending on scale.

It is important to recognize that the Regional Commission will balance the vision of the community against their statutorily mandated need to be consistent with Vermont's planning goals. While the community might prefer to have the entire Lower Plain treated as at Town Center by the Regional Commission in terms of allowed uses, such an approach would be unlikely to be viewed as consistent with state statute by TRORC.

An incremental approach to encouraging high density mixed use development in the Lower Plain is much more likely to be considered. If, for example, the Regional Plan was modified as is suggested in Figure 16, the community could focus on growth within that area. At such a time where the northern section of the Lower Plain was fully and efficiently developed and the community's vision was achieved, it might be reasonable to approach TRORC about further adjusting the Regional Town Center boundary.

Comprehensive Economic Development Strategy

A Comprehensive Economic Development Strategy (CEDS) is an economic development plan required by the U.S. Department of Commerce, Economic Development Administration (EDA) for areas to be eligible for planning and construction funds to improve their economies.

In 2016, EDA approved a revised CEDS which was developed by TRORC, Southern Windsor County RPC, and a wide group of stakeholders. This document can serve as a resource that identifies potential economic development initiatives.

B. Economic Development Activities

Land use planning policy and regulatory changes should not be the only avenue Bradford takes to achieve the vision of a Lower Plain that is vibrant and complimentary to the downtown. In order to take advantage of economic opportunities identified in the Camoin Report (Appendix B) conducted as part of this project, the Town should work to implement strategies that encourage economic growth and vitality.

Improve Economic Outreach

Responsible Parties
Bradford Business Association, Planning Commission, Selectboard.

Timeframe for Implementation
As soon as possible.

It is important that Bradford make its commitment to economic success known. The Town should provide outreach to ensure that residents understand that their desires and goals for the town are recognized and that their input is essential for the town's successful development. Resident goals should be incorporated with the town's ongoing strategies, including the Municipal Plan and any revisions to Bradford's Land Use Regulations. If residents believe that Bradford is a good place to live, work, and raise a family, they will be the strongest advocates for the town. To do so, Bradford will need to engage local businesses, business groups and the community at large to increase participation and community action. This could be done by co-hosting workshops or forums with the Bradford Business Association or Green Mountain Economic Development Corp (GMEDC) that are focused on educating local businesses about marketing, state programs that may benefit them (such as Village Center Designation), etc. At the same time, these workshops could provide valuable input to the community as to what the needs of their businesses are.

Develop a Wayfinding Plan

Responsible Parties
Selectboard, Bradford Business Association, Planning Commission

Timeframe for Implementation
As soon as possible.

Potential Funding Sources
Municipal Planning Grant

One of the key recommendations in the Camoin report was the development of wayfinding. Wayfinding is a tool used in many communities to help direct visitors to important locations, businesses, activities or resources. The Lower Plain is essentially the gateway into Bradford and, more importantly, into Bradford's downtown. There is currently limited signage to tell visitors where the downtown is, and what unique services are available.

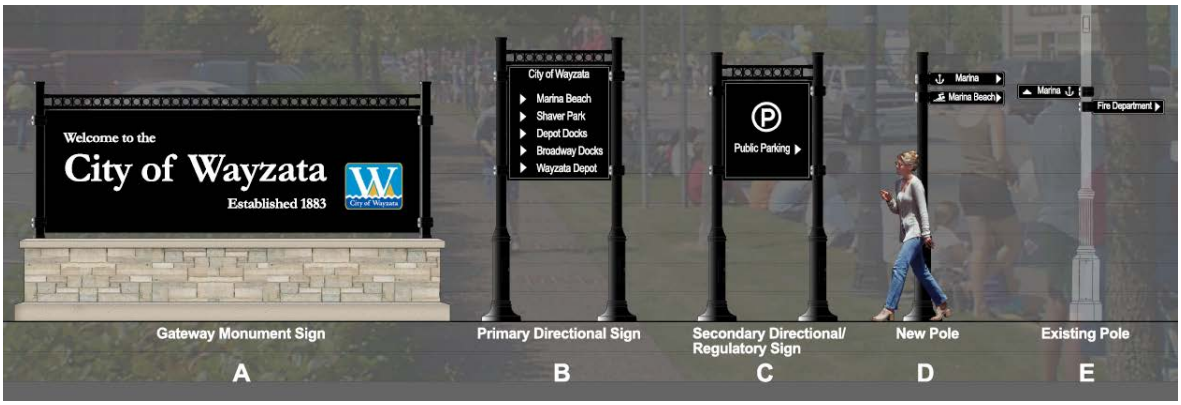


FIGURE 21 - CITY OF WAYZATA, MN, WAYFINDING DESIGN LAYOUT, DAMON FARBER ASSOCIATES

Enhance Bradford's Gateway

Responsible Parties
Selectboard, Planning Commission, TRORC, VTrans

Timeframe for Implementation
As soon as possible.

In addition to utilizing wayfinding in the Lower Plain, Bradford should ask the Regional Planning Commission to conduct a traffic study in the Lower Plain for the purposes of identifying opportunities to improve traffic circulation and safety. The area around the intersection has been identified by the Agency of Transportation as a high crash location, which may warrant a study. Future improvements to Routes 5 and 25 may be able to eliminate some of the road elements (such as the jug handles and center islands) that make Bradford's gateway less visually appealing. Plus, future improvements may be designed to accommodate bicycle travel.

Bradford should consider hiring a consultant to develop a wayfinding plan that will help visitors identify where the civic, cultural, natural and economic destinations are in the community. A wayfinding plan typically involves the development of theme for wayfinding signage including color, graphics, fonts, etc. Differing styles of signage are identified and a community-wide list of routes and destinations is determined. Signage locations are mapped and put into the plan for future placement. Implementation steps can be prioritized and completed over time, as funding allows.

Build on Farm-Way as a Destination

Responsible Parties
Bradford Business Association, Planning Commission, Farm-Way

Timeframe for Implementation
As soon as possible.

Farm-Way is one of Bradford's most significant economic assets. The store attracts a wide range of customers both local and from outside of the Bradford Economic Region. Developing businesses that compliment Farm-way, will increase the length of stay by Farm-Way visitors and circulate more spending locally. This may begin by working with Farm-way to identify what their customers want and find opportunities that will be mutually beneficial. As complimentary businesses develop, work with them to develop collaborative marketing opportunities that send customers between businesses.

Conduct a Housing Inventory

Responsible Parties
Planning Commission, Selectboard

Timeframe for Implementation
As soon as possible.

Potential Funding Sources
Municipal Planning Grant

Feedback from survey takers and interviews conducted during the economic development analysis indicates an interest in additional types of housing – particularly workforce housing. The Planning Commission believes that one of the components of village style mixed-use development in the Lower Plain should be

housing. However it is important to identify what types of housing is most needed, and what mix of housing is most likely to be economically viable. Bradford should hire a consultant to conduct a thorough analysis of the local housing market, inventory existing resources, and identify opportunities to expand housing in the Lower Plain.

Help Downtown Businesses Access Village Center Benefits

Responsible Parties
Planning Commission, Selectboard

Timeframe for Implementation
As soon as possible.

Bradford's downtown is part of Vermont's Village Center Designation program. This program, provides commercial properties in Designated Villages with access to a range of tax credits that are designed to facilitate revitalizations. As of 2018, these benefits include:

- 20% Federal historic tax credits for improvements to income producing properties that are listed or eligible for listing on the National Historic Register.
- 10% State historic tax credits for improvements to income producing properties that are listed or eligible for listing on the National Historic Register.
- 25% Tax credits for façade Improvements to buildings built before 1983 and located within the designated Village Center.
- 50% Tax credits for technological improvements including installation and improvements to data or networking wiring and heating, ventilating and cooling (HVAC) systems related to technology upgrades. Eligible buildings must be buildings built before 1983 and located within the designated Village Center.
- 50% Code improvements for elevator, sprinkler and lift systems as required by the Department of Public Safety. Eligible buildings must be buildings built before 1983 and located within the designated Village Center.

In order for businesses to take advantage of the Village Center benefits, they must be made fully aware of the program and how it relates to Bradford's downtown. The Town should contact Village Center Program representatives and invite them to present to local businesses at an organized event. Additionally, materials that provide information about the program should be provided to any commercial property owner within the Village Center.

Sidewalk/Bike Path Study

Responsible Parties
Planning Commission, Selectboard

Timeframe for Implementation
As soon as possible.

Potential Funding Sources
Municipal Planning Grant, VTrans Bicycle and Pedestrian program

Survey responses indicated support for bicycle and pedestrian connections between the Village and the Lower Plain. Walkability is essential to creating a vibrant village center. Without sidewalks and trails, pedestrians are unable to safely travel on foot to important locations in the community. While there is road shoulder available for pedestrians along Route 5 (see figure 21, from 2015), and recent upgrades to

Route 5 included a painted bike lane on the southbound lane, pedestrians walking in this area are likely to feel exposed and unsafe. When compared to a road shoulder, a sidewalk feels significantly safer. By providing facilities that are more comfortable, there is an increased likelihood that they will be used.

FIGURE 22 - A PEDESTRIAN USING ROAD SHOULDERS ON ROUTE 5. (SOURCE: GOOGLE STREET VIEW, 2015)

To facilitate village-style development in the Lower Plain, it has been suggested that bicycle and pedestrian facilities be included for internal roads. Likewise, these internal connections should be connected to a larger bicycle and pedestrian network that connects the Village and the Lower Plain. Sidewalks that have no destination are unlikely to be used, but a sidewalk that leads to places of work, stores, transit stops, restaurants and other cultural amenities will have more value.

Bradford should work with the Regional Planning Commission and the Agency of Transportation to conduct a scoping study that identifies possible alternative connections between the Village and the Lower Plain.

VII. APPENDICES

- **Appendix A** – Survey Results Summary
- **Appendix B** – Market Analysis
- **Appendix C** – Buildout Analysis Maps and Data
- **Appendix D** – Demonstration Area Maps

APPENDIX A

Survey Results Summary

APPENDIX B

Market Analysis

APPENDIX C

Buildout Analysis Maps & Data

APPENDIX D

Demonstration Area Designs

The Planning Commission, with the assistance of TRORC (Steve Bauer), updated the Bradford Town Plan through a Municipal Planning Grant.

The process was the primary task of the commission over the last two years. We undertook the update for two primary reasons:

Updating the land use area from two areas in the Lower Plain to one area. Previously TRORC required that Bradford designate the area below Route 25, as an area that would not allow principal retail. In the update, TRORC has found acceptable that Bradford have one Lower Plain Area for Future Land Use.. TRORC has agreed to allow the area below Route 25 on the eastern side of Route 5 to have principal retail and for an inconsistency between the Town and Regional plans on the western side of Route 5 as long as we indicate we prohibit principal retail on the western side.

Achieve Enhanced Energy status. This will provide the town with greater standing before the Public Utility. Commission on large renewable energy projects. TRORC has stated that the Selectboard must request this status from TRORC but a preliminary review by staff has indicated that we should qualify

In updating the plan, we needed to conform to standards of today for Town Plans, and thus, TRORC recommended a review and update to the entire 2016 plan. Plans must be updated every eight years to be in compliance.

In updating the plan, we held regular bimonthly open meetings on zoom or hybrid. We created and issued a community survey. We reached out to municipal groups, the Highway Department, Water and Sewer commission, and community groups.

We held a warned hearing on November 15, 2022 at which we received feedback from TRORC and members of the public. Based on this feedback, we updated the plan further.

The Planning Commission approved the draft subject to corrections and proofing, Now that that has been completed, the Commission has officially approved and recommended to submit the document and Appendices to the Selectboard at their Regular Scheduled Meeting on May 11, 2023.

TRORC updated the maps and Carver oversaw the corrections and proofing of the document

The next steps for the Selectboard can be found in the attached document. Once the Selectboard is satisfied with the document, they are to hold two duly warned hearings (TRORC or the Planning Commission can prepare the notices). Then the Selectboard can formally approve the Plan in a regularly scheduled Selectboard meeting.

Thank you.

Bradford Planning Commission

Bradford Town Plan

Adopted October 12, 2023

Ratified on October 26, 2023

Bradford Planning Commission

Marcey Carver

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Jared Pendak

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Bradford Selectboard

Meroa Benjamin, Chair

Dan Perry, Vice Chair

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Michael Wright

Nikki Stevens

Written in 2021-2023 by the Bradford Planning Commission with assistance from the many community members, businesses, boards, commissions, and committee members who participated via survey responses, suggestions, and comments at public hearings along with Two Rivers Ottauquechee Regional Commission (Steven Bauer and Kevin Geiger), with funding provided by a Municipal Planning Grant from the Vermont Department of Housing and Community Development. Monique Priestley and Dan Perry were members of the Planning Commission during most of the drafting of the document.

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INTRODUCTION

Bradford has a wealth of historical, cultural, recreational, educational and entertainment venues in a town with a vibrant historic downtown, a bustling industrial park and a diverse retail and commercial economy. As climate change continues to impact our daily lives, Bradford has turned its focus to in-fill development in our village and Lower Plain while maintaining and preserving our rural landscape.

The Bradford community looks to attract and retain both its people and its businesses. Due to the proximity to I-91 as well as its diverse recreation, education and cultural resources, Bradford has a long history as a thriving hub for the area.

Bradford has been able to retain a vibrant downtown even while expanding its commercial activities to the Lower Plain. Encouraging further development of this commercial area while supporting and expanding the vibrant commercial activity along Bradford's Main Street is critically important to the ongoing vitality of the entire Bradford community. By focusing efforts to encourage economic growth and stability in its Central Business Area, Lower Plain and the Industrial Park, the ongoing and expanding vitality of the Town will be achieved. The Planning Commission with the support of the Selectboard has developed this Town Plan to serve as a policy statement for the growth and development of Bradford.

This plan includes an analysis of Bradford's demographics, jobs, economy, schools, roads, housing, natural resources, and land use. This analysis of current conditions in the context of goals for our community leads to policies and recommendations that can help our community make wise choices and provide direction for the patterns of its future growth.

There are key reasons to have a Town Plan:

- **Guide for local regulations**: State statute requires that all land use regulations (zoning, subdivision, flood) must be consistent with the goals of the local plan. The municipal plan functions as the framework under which these regulations operate.
- **A guide for community investments:** Information in the plan can be used for developing the recommendations contained in a Capital Budget and Program, for establishing a community development program, and for providing direction to the Selectboard for such things as community services, emergency services, recreation, and municipal facility development, to name a few. It also serves to guide the decisions made by the Development Review Board when permit applications come before them.
- **Support for grant applications and planning studies:** Many of the state-run grant programs available to Bradford consider whether the Town has stated a need for its grant request. Studies are often called for within a plan, and the funding for such projects can come from state sources as well.
- **Support for the village center designation:** The village center designation is important to the vitality of Bradford's downtown as it offers support for grants as well as assistance to property owners in the designated village center.
- **A guide for future development:** The Area Environmental Commission considers Town Plans during an Act 250 hearing under Criterion 10. The Plan should clearly define what is and is not appropriate in terms of development within the community.

A Town Plan is a dynamic document to be reviewed at least every eight years, amended, readopted, or replaced to reflect new conditions, needs and vision of the community. State statute requires that a plan expires after eight years unless readopted or replaced. While the Planning Commission is the public body responsible for preparing and revising a Town Plan, any individual can petition the municipal government to amend the Plan. Statute also requires that an "approved" Town Plan be consistent with statewide planning goals (VSA Title 24, Chapter 117, 4302), be compatible with the Regional Plan (VSA Title 24, Chapter 117, 4350(b)(1)(B)) and other plans in the region and contains all elements of a Plan (VSA Title 24, Chapter 117, 4382). A Town Plan is the blueprint by which zoning is implemented.

Therefore, a town's land use regulations (zoning, subdivision) must conform to the Plan. A Town Plan cannot affect land use in existence prior to the plan's approval. It does not have the power of law designated to a zoning regulation and should

not be confused with that power. The goals, policies and recommended actions in this plan should be applied reasonably and uniformly. No specific goal or policy in this plan should be applied in isolation from other goals and policies within it. Users of this plan must accept that interpretation of the plan involves close review of the facts.

All energy generation and transmission development that are linked to the electrical grid are approved and regulated by the State of Vermont through the Public Service Board under Act 30 V.S.A. Section 248. Town participation in the State's review process is the best way to ensure that the Town of Bradford's goals and objectives are taken into account by the Public Service Board during the decision process.

Goals of this Plan

- To protect the constitutional right of the people to acquire, possess, and protect property.
- To balance individual property rights with the needs of the community.
- To determine current and future land use needs for the Town.
- To establish areas desirable and suitable for development.
- To maintain and enhance the vitality of the downtown (including the Village Center designated area).
- To enable efficient use and expenditure of public funds to support local governmental services.
- To serve as a standard for the evaluation and review of proposed developments.
- To determine current and future land use needs for Town-owned properties.
- To encourage the continued growth and prosperity of Bradford's economy.
- To encourage a thriving, equitable, resilient economy that preserves and honors our working landscapes, downtown and the environment.

Using the Plan

This plan is organized into twelve chapters. Most of the chapters include a series of goals, policies and actions intended to implement the vision of the Town of Bradford.

Goals state a purpose and destination, reflecting the shared vision of the Town. They articulate an overarching principle that guides decision-making, providing a framework for the more detailed action statements.

Policies are definite courses of action adopted to attain the goals and intended to guide all relevant decision making.

Actions are the next steps needed to move toward the goals. These are concrete activities that can be described in specific terms.

All the action items identified in each chapter are combined for ease of use in the implementation plan which includes a projected time horizon, responsible party, and potential funding sources for each action.

IMPLEMENTATION

IMPLEMENTATION

Putting the Plan into Action

The character of Bradford, its people and landscape have been created over the years through the individual and collective decisions of its citizens and public officials. The efficiency, attractiveness, and well-being of the community is determined, in part, by the ability of the Town to plan for its needs and to find a mechanism to put planning goals into action.

Previous elements of this Plan have been centered on existing conditions, probable trends, and policy development which, when combined, represent a vision for the kind of Town that Bradford desires for the future. One thing is certain: the community will change. Citizens and Town officials together can direct this change, consistent with their desires, using a variety of mechanisms.

The following sections describe the tools and techniques that could be used to implement the Bradford Town Plan.

Adoption of the Plan

Adoption of the Bradford Town Plan by the Selectboard, in accordance with the procedures outlined in the Vermont Planning and Development Act [24 V.S.A., Chapter 117], is the first step in putting this Plan into action. Through its adoption, the Town accepts the principles and policies as set forth in this Plan as in the public interest and as a guide for the future growth and development decisions affecting Bradford.

Ongoing Planning

Planning for change is a continual process for Bradford and will require the involvement of the Planning Commission and the public to ensure that the goals and policies of the Plan are integrated into the decisions affecting land use, taxation, and public investments in Bradford.

The quality of a Town Plan is reflected in the amount of public involvement in its creation. Regular community meetings, held by the Planning Commission, which discuss critical issues relevant to the Town Plan will ensure that the document truly reflects the vision of the residents of Bradford.

The Bradford Town Plan is a dynamic document reflecting the community's visions and values. By statute [24 V.S.A., Section 4387] the plan must be revisited at least every eight years to be kept relevant. The Planning Commission is responsible for the maintenance and amendment of the plan. Within the next eight years following adoption of the plan, the Planning Commission will need to evaluate the plan in light of new conditions and needs. Adoption of an updated plan will require notice to the Townspeople and action by the Selectboard.

At any time, following adoption of the plan, the Selectboard may request the Regional Commission to approve the Plan or amendments to a plan. Before approving a plan, the Regional Commission shall find that the plan meets four basic tests [24 V.S.A., Section 4350(b)].

Approval of the plan provides an improved legal standing for Bradford to influence and integrate its planning policies with State agency planning affecting land use.

Implementation Tools

Vermont law enables Bradford to implement the adopted Bradford Town Plan through a variety of ways. Regulation of land use and development through rules adopted by the voters is one possible method. Because these regulations are susceptible to legal challenge and must clearly benefit the public, discretion must be used. Well recognized and utilized means include, but are not limited to, zoning bylaws and subdivision regulations.

Much of the work required for implementing the Plan will be the responsibility of the Planning Commission. Throughout this document there are recommendations that the Planning Commission act or at least investigate the potential impacts of action. However, other boards, such as the Conservation Commission, Selectboard and Water and Sewer Commission as well as TRORC may also have a role to play in the implementation of this plan. The following text outlines the tools that should be used to implement the recommendations of this plan.

Zoning Bylaws

Zoning bylaws are a commonly used method for guiding development at the local level. Zoning may regulate:

- Uses of land (including density of use)
- The placement of buildings on lots,
- The relationship of buildings to open space, and
- The provision of parking, landscaping, and open space.

The Town of Bradford has had zoning regulations for many years. However, changes in the patterns of land use, the economy and demographics all influence the way land use regulations should be implemented. What may have been appropriate 20 years ago may no longer be the best choice for Bradford's citizens. In several sections of this Town Plan, there are recommendations for the Planning Commission to implement changes or additions to the zoning that would allow for the creation of new zoning areas, the protection of natural resources and adjustments in density, lot coverage and size of existing zoning Areas. State statute requires that zoning regulations be in "conformance" [24 V.S.A. §4411(a)] with the plan. Therefore, the Planning Commission should be diligent in its efforts to revise the Zoning Bylaws to meet the goals, policies, and recommendations of this Town Plan.

Subdivision Regulations

Bradford recently adopted subdivision regulations. These regulations are administered by the recently created Development Review Board. Such regulations govern the division of parcels of land and the creation of roads and other public improvements. Subdivision regulations help to ensure that land development reflects land capability, and that critical open spaces and resources are protected from poor design or layout. Subdivision regulations are developed by the Planning Commission.

Flood Hazard Bylaws

Under Vermont law [24 V.S.A., §4411], the Town of Bradford regulates the use of land in a defined flood hazard area adjacent to streams and ponds. The town adopted Flood Hazard Bylaws in 2014 ensure that design and construction activities within the limits of the one hundred Year Flood Plain are designed to minimize potential for flood damage and to maintain use of agricultural land in flood-prone areas. As noted in the Flood Resilience section of this Plan, property owners are eligible for federal flood insurance on buildings and structures at relatively low federally subsidized premium rates. However, such insurance cannot be obtained for properties in Bradford unless the Town has in effect a Flood Hazard Bylaw.

Capital Budget

A capital budget and program are a financing approach that benefits the Town greatly in the selection, prioritization and costing of capital projects. Bradford is in the process of developing a Capital Budget Program. Under the capital budget, a project is selected (e.g., bridge refurbishment), a funding source determined (e.g., general taxes, and general obligation bonds) and a priority year given for each activity (e.g., construction in 2028). When used in conjunction with the Town Plan and local bylaws, it can be a powerful mechanism for limiting the rate of growth in accordance with the fiscal capacity of taxpayers and other funding sources.

In addition, it is noted that under Vermont's Act 250 law, in granting a Land Use Permit for a major development or subdivision, the Area Environmental Commission must first find that the project is in conformance with the Town's capital budget. [See 10 V.S.A. Section 6086(a)(10).] Accordingly, this mechanism gives the Town an indirect method of implementing its policies and priorities as set forth in the Town Plan.

While Bradford has an informal system of capital programming, the Planning Commission with the support of the Selectboard is formally developing a Capital Budget and Program for adoption.

Act 250

Since 1970, Vermont has had in place a statewide review system for major developments and subdivisions of land. Exactly what constitutes a "development" or "subdivision" is subject to a rather large and involved set of definitions. However, generally, commercial, and industrial projects on more than ten acres of land; construction of ten or more units of housing; subdivision of land into six or more lots; construction of a telecommunication tower over twenty feet in height; and develop-

ment over 2,500 feet in elevation are subject to Act 250 review.

Prior to these activities being commenced, the Area Environmental Commission must first grant a permit. In determining whether to grant a permit, the Commission must evaluate the project in relation to ten specific review criteria.

These criteria relate to the environmental, economic, and social impacts of the proposed project on the community and region. Parties to Act 250 proceedings include Bradford, through the Planning Commission and Selectboard, the State, and Two Rivers Ottauquechee Regional Commission (TRORC). One criterion that needs to be addressed is whether the project is in conformance with the Bradford Town Plan. If a project were determined not to be in conformance with the plan, the Area Environmental Commission would have a basis to deny a permit. Act 250 reviews can take into consideration protection of those types of resources considered important to the well-being of the community. Accordingly, it is in the interest of the Town to evaluate Act 250 projects affecting Bradford and to offer testimony, as appropriate.

Coordination of Private Actions

Citizens and private enterprises have a vested interest in the well-being of Bradford. The actions of the private sector, such as the construction of homes and businesses, land conservation, and the use of land for recreation and agriculture, should relate positively to the goals and policies set forth in this Plan.

It is in the interest of Bradford, through the Planning Commission and Selectboard, to develop a cooperative relationship with private investment activities that may have a significant impact on the community values and policies set forth in the Plan. By working together in a cooperative venture early in the process of planning for a project, an adversarial relationship can be avoided. Contacts that should be maintained include at least the following:

- Green Mountain Economic Development Corporation
- Vermont Land Trust and Upper Valley Land Trust
- Twin State Housing Trust
- Owners of significant properties of high resource or development value, and
- Major employers in Bradford.

Conservation Activities

Conservation programs are an effective means of securing protection of valuable farm forestland and significant natural resources. Techniques available involve voluntary direct work among nonprofit conservation organizations and affected landowners such as donation of conservation easements, bargain sales of land, and limited development schemes.

The land trust movement has grown immensely during the past twenty years, particularly in Vermont. Land trusts offer viable means of bringing together the needs of property owners with the community interests. The Vermont Land Trust, Upper Valley Land Trust and the Nature Conservancy are particularly well-recognized organizations. Several organizations are also involved in water quality protection. It is the intent of this Town Plan to implement its conservation policies through coordination and involvement of these organizations and others similarly dedicated to public purposes.

Bradford has an active Conservation Commission that administers the Town's Conservation Fund. Continued investment in this fund by taxpayers will allow the Town to ensure that land will be conserved into the future.

The actions identified in each chapter are summarized below with an indication of when the action is currently anticipated to occur, the parties responsible for that action, and potential funding sources for that action. The Town anticipates that priorities may evolve over the 8-year planning period and that some of the actions, once underway or completed, are likely to generate a need for follow-up actions not currently identified in the Plan. Additionally, not all the actions listed may be fully completed within the targeted time horizon. However, the Town of Bradford intends to make as much progress as possible toward the successful implementation of each action.

The Implementation Plan is in Appendix 1

PEOPLE AND ECONOMIC DEVELOPMENT

PEOPLE AND ECONOMIC DEVELOPMENT

Goals:

1.To encourage a strong and diverse local economy that provides a diverse economic base which provides jobs and sustains the local economy.

2.To support existing and new businesses.

3.To support workforce development.

4.To encourage a strong and diverse local economy that provides satisfying and rewarding employment opportunities for residents while maintaining the community's rural character.

5.To retain and enhance Bradford as a welcoming, vibrant economic hub for residents and neighboring communities.

6.To encourage the creation of affordable childcare facilities that meet the needs of Bradford residents.

7.To encourage the creation of affordable elderly housing solutions that meet the needs of Bradford residents.

8.To be a welcoming and safe place for all.

9.To support the local Creative Economy.

10.To make outdoor recreation a strong part of the year-round local economy (i.e., "recreation economy").

11.To support safely engaging in outdoor recreational activities such as hunting, fishing, hiking, mountain biking and canoeing/kayaking.

12.To support all forms of recreational activity including, but not limited to, Bear Ridge Speedway, snowmobiling, golfing, tennis, skateboarding, horseback riding, skiing and Bradford Youth Sports.

13.To encourage recreational and creative related businesses.

14.To develop long term planning for municipal recreation and supporting the creative economy.

15.To develop ways to utilize existing public and private facilities (such as the Bradford Golf Course for cross-country skiing) for year-round activities.

16.To become a desired destination for recreation and creative endeavors.

17.To support local groups that enhance recreation and the arts such as Bradford Youth Sports and Old Church Theater.

Policies:

1.It is the policy of the Town to support existing businesses and foster quality development/redevelopment that strengthens the economy, respects the environment, and complements the community's larger goals.

2.It is the policy of the Town to encourage diverse and sustainable businesses in Bradford, which create jobs and contribute to the small-town quality of life.

3.It is the policy of the Town to provide residents with high quality employment opportunities close to home and provide for reasonable zoning standards and infrastructure enabling remote work, home occupations, and home businesses to be developed or to continue.

4.It is the policy of the Town to continue to participate in the Village Designation program while investigating additional designations and tax districts to enable local businesses to take advantage of the program's benefits.

5.It is the policy of the Town to support the development of local enterprises that create markets for locally produced goods and services.

6.It is the policy of the Town to encourage new business development in appropriate locations where services such as roads, water/sewer, fire protection, and power supply are available or planned.

7.It is the policy of the Town to encourage commercial development in the Central Business and Lower Plain Areas.

8.It is the policy of the Town to maintain the pedestrian-friendly village and economically vibrant downtown as centers of community life.

9.It is the policy of the Town to support continued economic vitality of Bradford's Downtown.

10.It is the policy of the Town to support cost-effective infrastructure improvements to Bradford's historic downtown area that will encourage economic development and benefit existing businesses.

11.It is the policy of the Town to support efforts to enable residents to work closer to home through improvement of telecommunication infrastructure and other green technologies.

12.It is the policy of the Town to foster good working relationships with economic development organizations, so we ensure having a "seat at the table".

13.It is the policy of the Town to support the private development of additional childcare facilities to meet the current and future needs of Bradford residents.

14.It is the policy of the Town to support and expand upon youth and family-oriented activities.

15.It is the policy of the Town to support the development of assisted living and other facilities and services dedicated to supporting all those in need.

16.It is the policy of the Town to support the investment in creative spaces and infrastructure.

17.It is the policy of the Town to support the expansion of the Creative Economy.

18.It is the policy of the town to support the Vermont Creative Network and other networking and partnerships in support of the creative economy.

19.It is the policy of the Town to eliminate disparities across all Town Departments.

20.It is the policy of the Town to promote inclusion and engagement of all community members.

21.It is the policy of the Town to eliminate disparities in the Town.

Recommended Actions

1.To be an active participant in regional economic development planning efforts.

2.To review applications for industrial development with careful attention to environmental and fiscal impacts.

3.To investigate establishing an Economic Development Committee to work with other Town boards to drive Bradford's economic development goals.

4.To efficiently leverage public funds by identifying and applying for state and federal grant programs that enable economic development activity.

5.To form stronger relationships with organizations involved with economic development, locally, regionally, and statewide.

6.To maintain and improve public infrastructure (water, sewer, roads, flood control, etc.), including by applying for all applicable state and federal grants and by working closely with regional planning groups.

7.To support the agricultural, forestry, and recreation economy as desirable businesses and consider these lands as natural, scenic, recreational, and tourism resources. Care for environmental assets increases Bradford's desirability as a place to do business and to live.

8.To encourage and support the responsible development of information technology and communication infrastructure necessary for economic growth.

9.To encourage and support commercial building owners to actively recruit new businesses to fill vacant spaces.

10.To periodically review zoning regulations to ensure that home businesses and home occupations are encouraged and permitted.

11.To educate the public on regulations, the permit process, and allowable uses of property.

12.To actively participate in regional efforts to provide all our residents with access to modern telecommunications infrastructure, including broadband Internet access, wireless communications, and community workspaces.

13.To apply to renew the Village Center designation and maintain compliance with requirements of the program.

14.To encourage the development of appropriately scaled commercial uses in the designated Village Center, Central Business, and Lower Plain and Residential Service Areas.

15.To inform existing and new businesses about the benefits provided by the Village Center Designation program.

16.To engage business, cultural, and recreational interests in promoting environmentally friendly tourism.

17.To have the ZA and DRB review applications for new development with careful attention to availability of resources and access.

18.To support actions and projects that reduce needs for private motor vehicle use, expand EV usage, facilitate/expanded public transportation and shared vehicle usage, and increase other modes of transportation such as pedestrian and bicycles.

19.To support the efforts to enhance the attractiveness and welcoming nature of Bradford.

20.To encourage organized agricultural, arts and cultural events.

21.To revisit obtaining Downtown Designation.

22.To utilize the benefits of the Village Designation Program to continue projects such as improving sidewalks and streetscapes within the Designated Village.

23.To investigate obtaining Neighborhood Designated and Growth Center Designations to support a diverse economic base while continuing to keep our historic downtown vibrant.

24.To investigate the expansion of the industrial zone.

25.To investigate establishing an economic development group and funding an economic development position.

26.To investigate the establishment of TIF zones.

27.To support local private sector efforts to assist childcare providers seeking business advice and financial investment.

28.To support and expand on recreational offerings for all ages.

29.To investigate seeking funding for (including grant opportunities) for an economic impact study of the Creative Economy covering Bradford and the adjacent towns.

30.To consider allocating a portion of the ARPA funds to empower the local creative sector in ways which help ensure a strong, resilient, and equitable economy in Bradford.

31.To investigate conducting a study focused on the potential of the Bradford Creative community as a next step to the broader Windsor/Orange study done by the Vermont Arts Council.

32.To review all policies to ensure that they reflect policy to eliminate disparities in both hiring and in the work of the town.

33.To become educated on how to become a welcoming and safe place by seeking out and becoming informed by the State Office of Racial Equity, Vermont League of Cities and Towns' efforts and the state's program, IDEAL (Inclusivity, diversity, equity, action, leadership).

34.To consider adoption of a statement committing to equity work as a first step in a continuing process in this effort.

35.To consider the formation of an Inclusivity Committee to take a leadership role in this endeavor.

36.To maintain contact with Green Mountain Economic Development Corporation, Owners of significant properties of high re-source or development value and major employers in Bradford.

Population Patterns

The 2020 Census data is inconsistent with what we know about our Town's population. However, to date it is the best information we have available. Typically, statistics and projections can shed light on the overall development patterns of rural towns. Rapid population increases can create a demand for

new and expanded municipal services and can strain the financial ability of a town to provide public services economically. Decreases in population can have an impact on the cost of town services, lead to higher taxes and affect the culture of a community.

According to the 2020 U.S. Census, Bradford's population remained unchanged over the decade. In 2010, the population numbered 2,797 and in 2020 the population declined slightly to 2,790 though due to Covid it is believed to be artificially low.

Age of Population

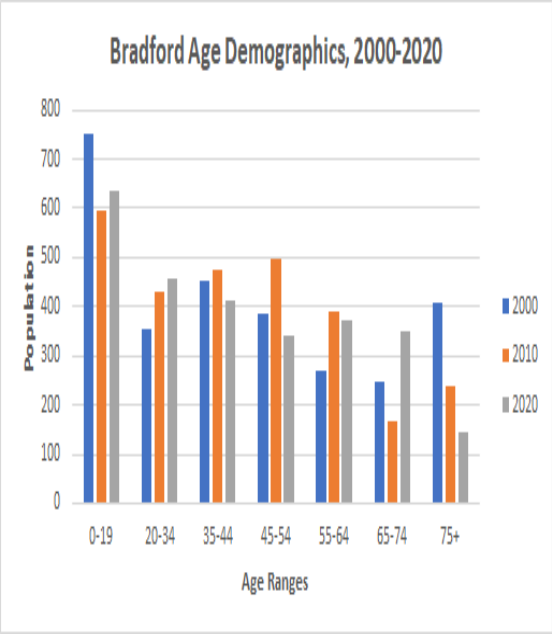
One of the most common concerns voiced in the 2007 Bradford Town Plan Survey was the lack of youth in Bradford. Residents feel that as young people graduate from high school, they are inclined to leave town and are unlikely to return. While Bradford's overall population has not changed, according to 2020 Census Data, between 2000 and 2020, Bradford experienced a 23% increase in its population of young adults aged 21 to 34.

Young working residents are the key to new arrivals, new jobs, retaining old jobs, quality of life, services in rural communities, and leadership. In short, to have a thriving community, Bradford needs to retain young adults while attracting new residents.

While the overall population of Bradford residents aged 0-19 has decreased by 16% since 2000, that number has trended upward with an increase of 6% over the last decade. This modest increase in the population of children correlates with the rebound of residents aged 20-44

In the 2022 Town Plan Survey (hereafter referred to as 2022 Survey) respondents were asked how they would like to see Bradford's population grow over the next 20 years. While there were a fair number of respondents who would prefer that the population remain stable, most respondents were supportive of growth in population. Many mentioned the need to improve the downtown both physically and in the types of businesses. Some supported a significant increase of 30-40%. There was mention of encouraging the community to be inclusive and support racial and economic diversity.

Over two thirds of respondents felt it was important to encourage Bradford's youth to stay in the area along with comments recognizing that high school graduates might initially move away but that there should be an effort to encourage their return. Suggestions on how this could be achieved centered around having good jobs and housing and improving the education that is provided. There was also mention of supporting youth based and family centered activities.



Childcare

Vermont has two classifications of regulated childcare: Registered Family Child Care Home (childcare program approved only in the provider's residence, which is limited to a small number of children based on specific criteria) and Licensed Program (childcare program providing care to children in any approved location). A Licensed program must be inspected by the Department of Public Safety Inspectors and must obtain a Water and Wastewater Disposal Permit from the Agency of Environmental Conservation. A Licensed program is considered a public building under Vermont Law. Licensed programs include early childhood programs, school-age care, family homes and non-recurring care programs.

Currently there are four active licensed childcare programs and one registered family childcare home. **My Second Home** (Saladino) has twelve slots (2 for toddler and ten for preschool. **Watch Them Grow (**Oxbow High School) is licensed for thirty-eight but currently due to a lack of three staff, has thirty-one children (8 infants, I toddlers

and fifteen preschoolers). **Bradford Elementary School** has fifteen preschoolers (the state site indicates they could have 20). **VCP Children's Center** is licensed for forty-one but currently also due to a lack of staff is only able to have twenty-six children. **Emily Bryer** is the only registered home Childcare Center, and her license indicates 6 (2 infant, two toddler and two preschools.

Most residents currently must work from home, arrange for care with friends or relatives or take their children to childcare facilities outside of Bradford. There appears to be few options for after school care for children in kindergarten through sixth grade. Bradford Elementary School does not currently offer an after-school program though OUUSD is contemplating enabling BES students to participate in Newbury Elementary School's program.

Elderly

As previously noted, while the 2020 census appears to have provided inconsistent data, the population of those over sixty-five has grown. This is consistent with what we know about Vermont and the country.

As some of those over the age of sixty-five become less comfortable with the tasks involved in managing their own homes, they seek some sort of elderly housing. Bradford unfortunately has seen a decline in the number of residential care facilities with only three currently available. (For further details, see Elderly Housing in the next chapter

However, these facilities do not have sufficient capacity for Bradford's aging population. There are other services available to the elderly who remain in their homes including Meals on Wheels, in home care services and an active senior center.

Many older residents choose to either live with their adult children in the Bradford area or relocate to an area where there is availability for assisted and/or nursing care or move closer to their adult children who have relocated out of the area.

Economic Development

According to the 2022 Survey, 69% of respondents do their weekly shopping in Bradford. Over 50% of respondents use the Town's grocery store (Hannaford), gas stations and healthcare facilities. Comments from residents indicated that The Space on Main coworking space, Farmway, Hannaford and the many restaurants were a draw.

Of those residents who shared their household income, 25% had more than $100,000. Though in Bradford, the median income is lower than the rest of the state, it should be noted that it is diverse economically.

The extension of the municipal sewer to the Lower Plain in the last decade along with improvement to the water lines has enabled the Town to have a grocery store that residents of surrounding towns now frequent along with Bradford's residents. It has also attracted business development with the expansion of Farmway and the addition of a new retail operation, Tractor Supply. Of note, the 2022 Survey indicated that over 77% felt that commercial and industrial development should be focused where both Town water and sewer are available.

In the past, industrial development has occurred in areas without municipal sewer resulting in brownfields on several properties in and around the Industrial Park. There is also a good possibility that the site where the former Bradford Veneer Plant is located is a brownfield. The Town seeks to minimize any future pollution while still fostering growth by focusing support where municipal water and sewer are available.

In the 2022 Survey, 59% felt the Town should provide more small business support.

According to the 2022 Survey, over 77% supported continued development of the Lower Plain Area. Over 85% of respondents favored continued slow growth of the Town.

As with the Build Out and Capacity Study of 2018 (see Appendix) the respondents for the 2022 Survey favored development in the form of 2-3 story buildings of mixed residential and commercial/retail use (72%) versus strip malls (21%) and/or small box stores (30%).

Comments were mixed on some recent developments on the Lower Plain. Though the Town has implemented updated Zoning Bylaws in 2019, the Design Review Standards for this area would need some changes to ensure compliance with this consistently expressed desire of the community.

Creative Economy

Creativity and innovation are the heart of the Vermont brand, attracting tourists and new residents alike, creating jobs, and advancing economic growth. The Vermont Arts Council has set up the Vermont Creative Network, which has divided the State into six different regional zones. A major statewide research study in 2019 on Vermont's creative sector found that the 3CVT Zone, of which Bradford is a part, has the highest creative sector employment statewide and the highest growth rate in creative employment statewide. Employment in the creative industries is about 10.8% of the 3CVT Zone's total employment.

The creative industries as identified in the creative economy report (see Appendix) included visual arts and crafts, media and digital arts, design and fashion, performance arts, literary arts, museums and cultural heritage, and artisanal foods.

As noted in the 2021 Vermont Council on Rural Development Visit report, Moving Bradford Forward (see appendix), there is a high potential for greater community vitality and economic stability to be gained through more focused Town investment in Bradford's artists and artisans as creative economy resources. Also as noted repeatedly in that report, Bradford is a natural economic and cultural hub for the surrounding towns, factors which play into the region's creative economy and have a largely untapped growth potential.

The 2022 Survey results showed strong support (72%) for more concerts and festivals.

Recreation Economy

Recreational activities undertaken for pleasure that occur outdoors as well as sales generated by these activities is increasing exponentially in Vermont and Bradford residents have made it clear their desire for outdoor recreation to be enhanced as an intrinsic part of the Town's livability and economy. The contribution of Vermont's outdoor recreation to the state's gross domestic product jumped from 3.7 percent in 2020 to 4.1 percent in 2021, maintaining Vermont's rank of third highest in the country.

In a 2022 survey conducted by the Parks and Recreation Commission close to 2/3rds of respondents favored the Town seeking grant funding/donations for trail building, skate park, river access park, expanded riverside walking trails, expanding elements to existing parks and creation of an ADA-compliant loop trail.

In the 2022 Survey over 75% of respondents enjoyed the use of Wrights Mountain (the Town Forest), 58% Elizabeth's Park, 48% Boch Park and 55% Artisan Markets and Farms Stands. Respondents identified as their most favored activities gardening (88%) and hiking/biking/swimming (77%)

When respondents were asked in the 2022 Survey what activities they would like to see expanded in Bradford, they said a trail along the Connecticut /Waits River (73%), and more walking/hiking loops (69%).

In addition, 57% felt that there should be more youth activities. In part this links back to the growth of the community. As youth age and become part of the work force, 68% felt it was important to encourage youth to stay in Bradford. However, the comments focused on the need for there to be employment and housing to accomplish this.

Taxes and the Cost to Operate the Town

The 2022 Survey found only 22% felt taxes were unreasonable. In fact, 55% felt additional resources should be devoted to Economic Development followed by 46% who felt additional funds for Grant Management would be beneficial.

When asked how they would like to see monies spent, 53% felt more funds should be devoted to improving sidewalks, 64% to providing more resources to Parks and Rec, 54% to Energy Conservation and 50% to increased attention on Economic Development. The only area where reduced expenditure had any significant support were police but only 24% felt this way.

Village Center Designation

Bradford strives to have its local economy grow at a pace that benefits the community but does not put a strain on municipal services. To encourage new growth and to improve the vitality of the village center downtown, Bradford has been part of the Vermont Village Center Designation Program. Businesses within the area identified by the Vermont Downtown Program

as a Designated Village Centers are eligible for various tax credits, and the municipality is given priority for specific state and federal grant programs, including access to funds exclusively for Designated Village Centers. Several businesses have utilized the tax credits available through the program including renovations at 174 Main Street (The Space on Main) and the Bradford Public Library and the Town has been able to take advantage of its benefits. Because of the priority consideration for grants and specific funding, the Town was able to access over $40,000 in funds for sidewalk improvements in 2021.as an example.

In the near term, the Town intends to apply for additional funding to continue improvements to the sidewalk system.

In the 2022 Survey, respondents were asked how Bradford's image could be improved so it would be a more attractive destination for visitors and new residents. Overwhelmingly, the comments focused on the beautification of the Central Business Area as well as the attraction of retail businesses and restaurants.

HOUSING

Housing

Housing is a key element in the character of a town. The quality, availability, variety, and affordability of a town's housing has a considerable influence on the rate and direction of economic growth and development.

The objective of this chapter is to encourage planning that creates:

- Safe, energy-efficient, and affordable housing for a diverse population of residents.
- A density and distribution of housing throughout the Town that protects the working landscape and reduces transportation energy use.
- Affordable and available workforce housing. (1/4)

Goals

1.To encourage the retention of existing housing and construction of new housing that meets the population growth.

2.To encourage the preservation of historic structures in ways that appropriately serve the need for housing.

3.To encourage the development of affordable senior and ADA compliant housing within the Town.

4.To encourage housing projects that strengthen neighborhoods by adding green space, promoting pedestrian traffic, and improving transportation options.

5.To encourage innovative planning, design, and construction of residential housing such as accessory dwelling units (ADUs) and tiny homes. which minimizes the cost, energy consumption and environmental impacts of housing while maintaining the character of the community.

6.To encourage affordable and workforce housing.

7.To promote sufficient safe, healthy, energy-efficient, and accessible housing that present and future Bradford residents can afford.

8.To encourage innovative planning, design, location, and construction of residential housing that minimizes the cost, energy consumption, and environmental impacts of housing.

9.To encourage and support year-round housing over seasonal and short-term rentals.

10.To encourage the adaptive reuse of historic structures in ways that serve housing needs.

11.To support and encourage housing in the Village Center, Lower Plain and Upper Plain areas that utilize public sewer and water where available and enables living within walking distance of goods, services, and jobs.

12.To encourage volunteer initiatives to assist property owners who face income constraints and/or physical disabilities with upkeep and maintenance.

Policies

1.It is the policy of the Town to support the development of multi-family housing within or adjacent to the Downtown, including accessory dwelling units.

2.It is the policy of the Town to ensure that the timing and rate at which new housing units are created does not exceed the community's ability to provide adequate public facilities (e.g., schools and municipal services).

3.It is the policy of the Town to encourage the location of future housing to complement existing or planned employment patterns, travel times, and energy requirements.

4.It is the policy of the Town that the location of housing, related amenities, and land uses should be planned with due regard to traditional settlement patterns, the physical limitations of the site, and its proximity to current or planned public and private services such as roads and commercial/service centers.

5.It is the policy of the Town that safe bicycle parking facilities be provided in new residential or commercial developments.

6.It is the policy of the Town to support energy efficiency in housing construction, siting, and location.

7.It is the policy of the Town to encourage EV charging stations particularly at new housing and commercial developments.

8.It is the policy of the Town to allow for growth of housing for all income levels, age groups, and ability levels, at a rate within the community's ability to provide services in a fiscally sound manner and consistent with the other goals and policies expressed in this Plan.

9.It is the policy of the Town to promote mixed-income housing by encouraging the development of accessory dwelling units, multifamily housing, and manufactured housing (including mobile homes) in locations like where single-family housing is allowed.

10.It is the policy of the Town to encourage multi-family housing within or adjacent to existing Village Center and Lower Plain and Upper Plain areas where municipal services are available.

11.It is the policy of the Town to give priority to the preservation and improvement of housing already in existence.

12.It is the policy of the Town to limit the conversion of housing stock into short-term rentals.

13.It is the policy of the Town to support the development of assisted living and other facilities and services dedicated to supporting all those in need.

Recommended Actions

1.Consider assessing impact fees to defray the cost of increases in municipal services caused by development.

2.Review the Town of Bradford Zoning Bylaws with an eye to addressing the following concerns about housing:

a. New housing should be sited to provide pedestrian access to nearby parks, existing sidewalk networks, and recreation areas.

b. Housing projects should minimize highly visible parking areas and retain as much permeable surface as possible.

c. Housing projects should provide access to shops, services, and jobs by as many transportation methods as possible (public transit, bicycle, pedestrian, and automobile).

d. Zoning should be modified to encourage EV Charging stations at multi-family housing and commercial developments.

e. Zoning should be modified for ADUs for greater flexibility while maintaining the character of the area.

f. Zoning should be modified to address the conversion of housing stock into short-term rentals.

g. Zoning should be modified to deal with the location of refuse (trash, recycling, compost) suitable for tenants and the community.

3.Work with state housing agencies, nonprofit organizations, and lending institutions to ensure the availability of loan or grant funds for Bradford residents to acquire or improve their primary homes.

4.Work with the Bradford Area Housing Committee and TRORC to evaluate Bradford area's role in meeting the region's housing needs by assessing its capacity for growth.

5.Encourage compliance with the state's Residential Building Energy Standards (RBES) for new construction by educating residents about those standards and the need to file appropriate compliance certification (RBES Certificate or Owner/Builder Disclosure Statement) with the Town Clerk.

6.Work with Efficiency Vermont and others to improve energy efficiency in existing homes to reduce long-term costs and energy consumption.

7.Encourage residents and business owners to apply for historic preservation grants.

8.Investigate the benefits of obtaining Growth Center, Neighborhood Development Area designation and investigate the housing needs of the community to develop the appropriate housing along with associated commercial and retail development.

9.Continue to maintain strong relationships with various state, regional, local agencies, nonprofits, and other groups to foster new housing development and the ongoing maintenance of existing units.

10.Modify zoning and subdivision bylaws to encourage cluster development so that farms and forests are not fragmented.

11.Encourage rehabilitation of underutilized buildings for housing on the upper floors and commercial on the lower floor in the Central Business Area, Residential Service Area, and the Lower Plain Area.

12 Take advantage of and seek out energy efficiency and weatherization programs to improve our housing particularly in older properties.

Number of Housing Units

According to the 2020 U.S. Census, there were 1,356 housing units in Bradford, with a vacancy rate of 11.1%. Since 2000, the number of housing units has increased 11%. During that span, a total of approximately 147 new housing units were built. County-wide, it is estimated that Orange County needs to construct approximately 2,113 units to meet its housing demand by 2030. Bradford alone needs an estimated 226 units to meet that projected demand.

According to the 2019 American Community Survey 5-Year Estimates, 29% of Bradford's 1200 occupied housing units are renter-occupied. Over three quarters of those renters spend at least 30% (or more) of their household income on rent. This number of rental properties seems quite high and underscores a need for the Town to do its own housing census and needs assessment.

Types of Housing

The U.S. Census defines a "housing unit" to include conventional houses, apartments, mobile homes, and rooms for occupancy. According to the 2000 Census, Bradford (including the former village of Bradford) has a total of 1217 housing units. Like most of the units in towns throughout Vermont, Bradford's housing stock is predominantly single-family homes, with multi-family homes being a distant second.

Based on the data available, unlike many of the surrounding towns, Bradford has a high rate of rental housing (29%) and a low rate of second homeowners (7%) In Orange County second homes account for 13.8% housing units and in Vermont for 14.6%.

There are positives and negatives to having too many or too few second homes in a town. In a town that has many homes that are not occupied year-round, it can have unforeseen impacts on town services. For example, Bradford's fire department depends on residents to staff its fire department, and a lack of full-time residents can make it difficult to have sufficient volunteers.

Affordable Housing

Affordable housing is defined as housing that costs less than 30% of the county median household income. According to the 2019 American Community Survey 5-Year estimates, "affordable housing" in Orange County is housing that costs less than $1523 per month. For homeowners, housing has additional costs including mortgage loan interest payments and taxes. For renters, housing costs include rent and utilities.

With the state minimum wage standing at $12.55 in 2022, an individual earning minimum wage can expect to earn $26,104 per year when working a standard 40-hour work week. However, VT Futures project found that a young family of three needs at least $67,000 to meet basic needs in Vermont. While Bradford housing is more affordable than some areas of the state, this illustrates the reality that Bradford has an affordable housing unit shortage.

To ensure that housing does not become entirely unaffordable, it is important for Bradford to maintain a diversity of housing stock. This requires a reasonable mix of single family, multi-family, units for residents with varying income levels.

A shift has occurred from previous surveys in that respondents in the 2022 Survey wanted to encourage additional housing away from the rural parts of Town and more to infilling in the village and even into the Lower Plain.

While the Lower Plain appears to have been originally conceived as entirely a commercial development area as evidenced by the only stop light in Orange Country and the proposed or actual jug handles for turns on Route 5 and 25, housing has always existed in this area.

Respondents have expressed a strong preference towards continuing the area as mixed use. It is reflected in our current zoning and with improved development review standards, will hopefully move to reflecting more of a traditional village design with both housing and businesses.

In general, while there were still respondents indicating a desire for larger stores such as Kohl's to locate on the Lower Plain, this was not the majority There was a desire for more restaurants, organic produce, a more responsive hardware store and a variety of other businesses which would fit well into a small village design.

It is well known that Vermont and New Hampshire have a shortage of housing as evidenced in such studies as the "Keys to the Valley."

One way to expand housing is thought to be Accessory Dwelling Units. Respondents in general were not particularly interested in this but those that were indicated that the primary impediment was in funding.

As to how the Town could help to increase housing, the 2022 Survey indicated that 53% supported having the Town work with developers and 47% supported offering tax relief to support those with rehabbing or developing housing.

Elderly Housing

According to the American Community Survey (ACS) for 2021, 31% of Bradford residents were 60 years or older. Of homeowners in Bradford, fewer than 27% are sixty-five or older. Thirteen percent of renters in Bradford are sixty-five or older.

As some of the elderly become less comfortable with the tasks involved in managing their own homes, they often turn to some sort of elderly housing. If health is an issue and some form of constant care is required, an elderly person may need to enter a nursing home or a residential care facility.

In 2004, the closing of the Brookside Nursing Home in Bradford left 107 elderly people and adults with disabilities without a facility to provide the care they needed. Enhanced Living Inc. (ELI), a private nonprofit, was formed to provide senior housing facilities in Bradford following the loss of Brookside Nursing Home. Working with state officials, private consultants, and community volunteers, over the past five years marketing and feasibility studies were conducted for ELI, pro-forma budgets developed, and a service provider identified.

George and Hazel Pratt made a generous donation of several acres of land on Plateau Acres to house a facility anticipated to contain up to thirty-six beds of assisted living. Among ELI's goals were to build a sustainable, affordable facility incorporating elements of Greenhouse Senior Living Design and utilizing green construction principles to the extent possible.

Margaret Pratt Community Assisted Living Facility

The result was the Margaret Pratt Community Assisted Living Facility on Plateau Acres. There are 32 Assisted Living residents with monthly fees ranging from $4695 to $9995 and 16 Memory Care residents with monthly fees from $7495 to $10,395.

While some form of housing for the elderly is essential, services available to the elderly are also particularly important. Programs like Meals on Wheels, in-home care services and an active senior center are appealing to older residents. Further their existence will provide them with more reasons to choose Bradford as their home.

Other Care Facilities

Blue Spruce Home for the Retired

Blue Spruce Home for the Retired has four private rooms and two shared rooms.

Valley View

Valley View, formerly Oasis is a small private care facility..

Upper Valley Services

Upper Valley Services is an Orange County based nonprofit providing support for those with developmental disabilities and brain injuries. One of its offices is in Bradford with a staff of fourteen people. This office serves Bradford and nine surrounding Vermont

communities. The organization provides career services and in-home and shared living support.

Averte

Averte, now a part of Trivium Life Services is a nonprofit with a local management staff of thirteen. It has four licensed homes in Bradford and forty-one licensed beds. Its mission is to improve behavioral health and long-term support services by providing a home to people with serious mental illnesses who are unable to be successful on their own.

Valley Vista

Valley Vista is a 99-bed in-patient addiction treatment program with two locations, Bradford, and Vergennes. The Bradford location is focused on men and the Vergennes on women in treatment.

Veterans Inc Vermont

Veterans Inc is a rapid response program for transitional housing for up to ten men facing homelessness. They can stay up to two years and mentored to find employment and become independent.

EDUCATION

EDUCATION

Goals

1.To provide a safe and secure learning environment where quality educational opportunities are provided for all.

2.To promote the best opportunity to educate our students at the most equitable cost to the Town's taxpayers.

3.To encourage the offering of college-level and/or technical educational opportunities in Bradford.

4.To encourage the development of training programs for solar and heat pump installation as well as for other renewable energy services.

Policies

1.It is the policy of the Town to require land development likely to result in a substantial increase in population of school children to be staged to avoid placing an undue financial burden on the Town's ability to provide educational services.

2.It is the policy of the Town to provide sufficient and appropriate physical space to meet current and projected student enrollments.

3.It is the policy of the Town that new educational facilities should be built to current energy efficiency standards. Existing buildings should be retrofitted to improve energy efficiency to the greatest extent practical.

4. It is the policy of the Town to encourage programs for afterschool especially for those under thirteen.

5. It is the policy of the Town to encourage programs and activities for youth especially for those thirteen and older.

Recommended Actions

1.Investigate obtaining Neighborhood Designation Growth Center designation to increase the amount of housing and sustain student enrollment.

2.Investigate providing access to post-secondary education and job training.

3.Support community-wide access to high-speed internet and cell coverage.

4.Support or expand youth and family-oriented activities and resources.

5.Work with neighboring towns in supporting the area schools.

Merger

A major change occurred in 2019 when a forced merger under ACT 46 occurred with the creation of Oxbow Unified Union School District (OUUSD) on July 1, 2019. Three former districts were merged into one with oversight of three distinct school campuses in Bradford and Newbury. While the merger under Act 46 was contested by some who argued among other things that community involvement in the individual schools would diminish and attempts were made to undo the merger, the merger eventually became permanent.

Orange East Supervisory Union which oversees OUUSD, Waits River Valley School, Blue Mountain School and Thetford Elementary School relocated from the second floor of the Bradford Minimart to the former Copeland Furniture store in the Bradford Central Business Area.

Enrollment in the OUUSD schools has been consistent though a dip was experienced due to an increase in home schooling (COVID). The expected enrollment for the 22/23 school year was 673. There is a significant excess capacity particularly at the high school level.

Since the merger, Newbury Elementary School and Bradford Elementary School have been working cooperatively with the objective of a more uniformly prepared student body entering Oxbow High School. The OUUSD Board has worked on a Strategic Plan along with establishing a Budget/Finance Committee and moving towards forming other committees to improve communication and to oversee facilities management.

A notable change in leadership has occurred with changes in Principals at all three schools as well as a new Superintendent and Assistant Superintendent at OESU. The initial bumpy start to the merger has evened out and there is optimism that the education our students are and will be receiving is steadily improving.

Bradford Elementary School

The Bradford Elementary School is located on nine acres of land on the west side of Fairground Road. In 2003, Bradford voters approved a $4.7 million bond to renovate and add to the existing school. In addition to classrooms, there are special education space, a music room, an art room, a large gymnasium with a stage, additional storage space, a cafeteria, and on-site parking for one hundred vehicles. The total facility is now approximately 44,000 square feet. As a result, the existing elementary school facilities should be adequate for the foreseeable future.

BAGSD Playground

The Bradford Elementary School maintains a playground, which is open to the public. A group of community members have raised money to upgrade the playground by adding a play structure. With the help of a grant from the Wellborn Ecology Fund, the school has been working to add additional features to its schoolyard designed to enhance the curriculum and enable outdoor education. The first phase of these additions included geometrically shaped butterfly garden, improvements to an existing woodland nature trail, an outdoor literacy classroom made from raised beds, establishment of an oak "life cycle" grove, and other plantings. The second phase of additions includes an outdoor amphitheater, plantings to attract birds and wildlife, and a living fence separating the playing fields from the school driveway.

Low-St. John Forest

Low-St. John Forest (owned by OUUSD) is located on Goshen Road, the Low-St. John Forest consists of roughly eighty acres of woodland with trails and picnic grounds. The forest is managed sustainably for timber and currently has a ten-year management plan. In late summer of 2007, the lower ten acres were sprayed to control poison ivy and invasive plants such as barberry, honeysuckle, and autumn olive. The forest was selectively logged in the winters of 2007 and 2008. The Low-St. John Forest is used by the elementary school in all seasons to enhance its science education curriculum. It is also widely used by community members for outdoor recreation activities. In 2020, an outdoor classroom was constructed using timber harvested from the forest. Creating an improved parking lot and a permanent rustic outhouse, are projects that have been discussed by the Low-St. John Forest Committee to increase the forest's potential for education and recreation. A recent study investigated providing pedestrian access from the village to the Low Forest.

Bradford Elementary School Library

The Bradford Elementary School library encourages K-6th grade students, staff, and community to use its collection of materials numbering around 7,000 items, including books, videos, audio-visuals, and periodicals. If materials outside this collection are needed by the school, staff, or community, the school also has access to the Vermont Automated-Library System (VALS).

Oxbow High School and River Bend Career and Technical Center

Oxbow High School is a comprehensive high school with an area vocational center, River Bend Career and Technical Center attached to it. The combined facility was designed to accommodate tuition students and vocational-technical students from surrounding towns. The existing facilities, are capable of serving seven hundred students which should be adequate for the foreseeable future. The nearly 60-acre site provides athletic facilities and ample space for any necessary future construction.

Meadow Land (Behind Bradford Academy)

There is some land abutting Memorial Field and the Bradford Golf Course that is owned by OUUSD. There has been discussion with OUUSD, the Town and the golf club about the Town acquiring the land to create recreational trails.

Oxbow High School Library

The Oxbow High School library provides unified media services: print, audio-visual, and computer, as well as access to VALS. Available resources include: fourteen computers with Internet connections, a variety of research databases and five computers providing catalog services. The library's collection includes roughly 14,000 volumes, including the periodical collection. A major non-print collection is available. A growing collection of available resources supports audio/visual digital technology. The library, like the school, meets ADA requirements and is available to the public during regular hours and by appointment. Along with the resources listed above, the local Vermont History collection draws the public to visit the library.

Higher Education

At present, Bradford has limited opportunities for residents to acquire education beyond high school. There are some continuing education classes offered through River Bend Career and Technical Center and the Oxbow High School. However, there are no post-secondary facilities within the Town. While Bradford and the surrounding area do not have a sufficient population to make a large post-secondary school institution viable, a small community college may be successful in Town. The nearest locations for the types of education offered through a college such as the Community College of Vermont or Granite State College, are in Hartford and St. Johnsbury, which are just a 30-minute drive. In some cases, students may not be able to take needed courses at the nearby locations, thus requiring an even longer commute.

In the 2007 Town Plan Survey, residents were asked if there should be post-secondary educational opportunities available in Bradford. The respondents indicated support, with almost 49% in favor, 28% against and 23% undecided.

The Mentoring Project of the Upper Valley

The mission of the organization is to "encourage self-confidence and academic growth among children and adolescents by creating mutually beneficial relationships with responsible adult volunteers" The overarching goal is to mentor and support those relationships through high school graduation via opportunities for wholesome activities, including community service projects and experiences that promote cohesiveness and a sense of community.

Central Vermont Adult Basic Education

Central Vermont Adult Basic Education, based in Barre, has a location in Bradford. Their program offers instruction in learning basic skills (reading, writing, math, computer literacy) English as a Second Language, programs for a High School diploma, GED, and college and career readiness.

UTILITIES AND FACILITIES

UTILITIES AND FACILITIES

Goals

1.To preserve, promote and enhance the cultural and recreational values of the Town and to encourage the use of these resources by the local population and visitors to Bradford.

2.To encourage diverse and environmentally appropriate recreational opportunities.

3.To preserve and maintain the Municipal facilities to meet today's needs.

Policies

1.It is the policy of the Town to conserve open and undeveloped land, while simultaneously promoting responsible economic development and affordable housing. Productive farmland and forests are particularly important for their contribution to Bradford's economy and environmental quality, and development should not significantly diminish the value and availability of outdoor recreation.

2.It is the policy of the Town that public buildings and newly constructed public facilities should be designed to the latest energy efficiency standards.

3.It is the policy of the Town to support all efforts to provide Bradford residents with expanded options for high-speed internet access provided those options do not have negative effects on the rural character of the Town.

4.It is the policy of the Town to continue to develop and maintain active sustainable forestry management plans on woodland parcels owned by the Town and the OUUSD.

5.It is the policy of the Town to maintain the historic Bradford Academy so it can continue to be a vital resource for the community.

Recommended Actions

1.Adopt a procedure for allocating the reserve capacity (based on the build-out analysis) to enable a steady growth rate for all uses and to assure the availability of service during the design period.

2.Encourage the Central Vermont Solid Waste Management Area to provide more local opportunities for the safe disposal of household hazardous wastes, such as compact fluorescent light bulbs, mercury-containing products such as thermostats, bad gasoline, solvents, pesticides, etc.

3.Monitor a Capital Budget and Program to plan for anticipated infrastructure maintenance and improvement.

4.Work with the Low St. John Forest Committee to improve recreational use of the forest.

5.Continue to coordinate efforts to enhance recreational opportunities on Wrights Mountain.

6.Explore ways to expand recreational offerings to support healthy lifestyles.

7.Work to develop an approach to ensure conservation of resources.

8.Work with the Water and Sewer Commission to develop a fee structure that is supportive of Housing and Economic Development.

9.Develop and implement a maintenance plan for the Town's buildings including the Bradford Academy to ensure they can continue to meet the needs of the community.

Municipal Facilities

The Bradford Academy

The Bradford Municipal Offices moved to the Bradford Academy/Woods School Building, at 172 North Main Street, in 1974 when offices were configured, and a vault added. The Bradford Selectboard manages the building under a 99-year lease with the Bradford Academy & Graded School Area; the lease began in 1974 and expires in 2073.

In 1998, a major renovation occurred to comply with building codes and the Americans with Disabilities Act (ADA). A back-up power generator was installed in the building in February of 2002. In 2011, the Town invested in repairs to the roof over the auditorium and improved the foundation drainage and energy efficiency .

The Academy building now houses the municipal offices and the Water and Sewer Commission office. The public spaces (auditorium, gym-

nasium, and conference rooms) are available for community use, and are commonly used by Town Boards for their meetings. Former classrooms are leased to tenants as offices and studios. The Bradford Historical Society operates a small but impressive historical museum on the third floor.

The auditorium is traditionally used for Town Meeting. The auditorium is currently leased out recently to Old Church Theater while their building is being renovated. Various groups have held concerts, shown movies, and held lectures in the auditorium.

The gymnasium is available for open basketball as well as a practice location for Bradford Elementary and Oxbow Union High School teams. The town has purchased a protective tarp for the gym floor to enable additional uses such as dances, large meetings, and dance practices.

The building is of tremendous importance to the community both as an historic building and as a gathering place for the community.

The slate roof needs regular maintenance. The addition to the original structure appears to have shifted and should be investigated by a structural engineer.

The 10,000-gallon heating oil tank should be routinely monitored as it was installed in the 1950's. It should be determined whether the Academy will continue to use fuel oil. The Town is currently investigating improvements to heating, ventilation, and other energy efficiencies and plans to take advantage of lucrative grants as they become available.

Bradford Fire Station

Built in 1997, the Fire Department had the ribbon cutting in the Spring of 1998. It has four bays. The heating system was recently replaced, and no major renovations are planned in the immediate future. A recent energy audit recommended that the heating system be supplemented with a heat pump which could reduce the amount of propane the station consumes. The station has a large meeting room available to other Town groups. Currently there are two engines and a tanker. There may be a need for an additional engine. Volunteer staffing has become increasingly challenging as many work out of Town now and there is stringent training.

Town Highway Garage

Built in 1991, it remains in good structural condition though recently leaks have developed in the roof and will need to be addressed. The Salt Shed was constructed in 2015. There are two 10-wheel dump trucks, a newer grader, a loader, and a pickup with a dump bed.

The Highway Department has recently instituted a policy of replacing equipment with battery powered devices including chainsaws. No major projects are planned.

Bradford Municipal Water System

Bradford is fortunate to have a high-quality water system. Administered by the Bradford Water and Sewer Commission, the system has a 500,000-gallon, entirely concrete underground reservoir. It was installed in 2000 adjacent to the old reservoir, a 1,000,000-gallon open reservoir which is not in service, and another 500,000-gallon concrete tank constructed in 2012. The new reservoir was designed with direct 12-inch pipeline connections to fill the reservoir directly and to enhance the supply to the Lower Plain area. The supply for the new reservoir is two gravel packed wells. These two wells can supply a total of 800-900 gallons per minute. Bradford's system is both chlorinated and fluoridated and, except in time of emergency, is not subject to surface or air contamination; it complies with the Safe Drinking Water Act. All users have water meters so that an equitable system of charging is made possible.

In 2012 Bradford undertook a major water system upgrade. This involved the construction of a new 500,000-gallon storage tank on Farr Lane, upgrade of the Fairground Road pumping station, and replacement of 15,000 linear feet of water mains. (See Public Utilities Map.)

As development continues in the industrial and commercial areas of the Lower Plain, it will be necessary to upgrade and extend some water lines there to provide adequate water and fire protection.

As a matter of policy, both the Water and Sewer Commission and the Planning Commission think regulated land use is the key to protecting the water quality of the Waits River and to maintaining the high quality of the Town water supply. To protect the primary aquifer recharge area for the water supply, the Water and Sewer Commission purchased the lower meadow surrounding the Town wells. It is critical that groundwater drawn by these wells, and then recharged, does not become contaminated by the discharge or seepage of chemical or biological wastes. One future goal is to find a second source of water to be used for back-up and supplemental water supply.

Bradford Sewerage Facilities

In October 1978, the Bradford sewage treatment plant started operation on a 5.4-acre site located off Depot Street.

The sewage treatment plant was designed to treat 137,000 gallons of raw sewage per day to the secondary level. In 2014, the facility treated an average of 65,000 gallons per day or roughly 47% of its designed capacity. By 2023, usage has increased to 76,900 gallons per day (GPD) or 56% capacity. There are 278 users presently on the system. At 85% capacity, a redesign is required. At 360 GPD for a 3 Bedroom house, 108 additional homes could be added to the system before a redesign is required.

A 5-year project to update the sewage treatment plant was completed in 2007. The open lagoon was replaced by a 200,000-gallon cement storage tank. The treatment plant had significant upgrades to all operating systems and to the building.

In 2011, voters approved the bond necessary to finance expansion of the Town's sewer system to the Lower Plain and the Industrial Park. Bradford's Lower Plain, from the junction of Carson Lane and Route 5, down almost to Lake Morey Road; and Rte. 25, from the Napa auto parts store down to Industrial Drive, as well as the industrial park itself, are now all served by Bradford's municipal sewer system. The project was completed in the fall of 2012.

In the next 5-10 years, the Town should investigate the need and opportunity for expansion of sewer capacity as the Town continues to grow.

Solid Waste Facilities

The Town is a member of the Central Vermont Solid Waste Management District (CVSWMD) that plans for solid waste disposal for its member towns. The Town has contracted with Casella Waste System to operate the transfer station to manage trash, recycling, and composting. In 2019, the Town improved the transfer station in partnership with Casella. Casella operates the transfer station on Wednesday and Saturday from 8am to 4pm.

There is a fee for trash and general recycling. Currently, metal recycling and food waste may be disposed of for free.

Several times a year, including at least once in Bradford CVSWMD has a household waste collection day.

The Town does not provide collection services to its residents or businesses, but there are at least three private services available. Subject to CVSWMD rules, these providers are required to collect recyclables and compostables.

The state has created solid waste management Areas to reduce the waste stream. CVSWMD is implementing programs under the name of "Zero Waste." These include diversion of food scraps and other organics for composting, diversion of recyclable materials, encouraging the re-use of materials instead of disposal, and urging manufacturers to reduce packaging materials and switch to re-usable or recyclable materials.

The Bradford Conservation Commission received small grants for site preparation and technical support from ten different sources. In-kind support in the form of volunteer hours and equipment has come from High Fields Institute, CVSWMD, and the Bradford Conservation Commission. There is an ongoing food waste program with the restaurants and school cafeterias with collection currently by Sandberg in Corinth.

State Owned Facilities

State owned facilities in Bradford include the National Guard Armory located on Fairground Road, the State Police Outpost located on Route 25, the Vermont Agency of Transportation garage located

on Fairground Road, a Park and Ride lot on the corner of Route 25 and Creamery Road, and the Rest Area on Interstate 91.

Recreational Lands

When residents were asked to rate Town services in the 2007 Town Plan Survey, they gave the Town's recreational facilities a passing grade (31% indicated "good", 28% indicated "fair"), but felt there was room for improvement. The need for improved recreation facilities and opportunities was voiced strongly in the survey's "open answer" section where residents suggested that Bradford should have such amenities as walking or biking paths, improved tennis courts, a swimming pool, and a larger skating rink. In 2007, the Town established the Parks and Recreation Commission whose purpose is to consult with and advise the Administrative Assistant and Selectboard in all matters affecting recreation programs, parks or facilities including maintenance, policies, and finances. The Commission is also to assist in the development of long-range planning for recreation, park needs and funding needs.

In 2014 the Town established a Recreation Director position which has enabled the Town to coordinate recreational activities in the community. There are also several independent organizations focused on youth activities (Bradford Youth Sports, Bradford Youth Football, school activities, scouts, The HUB, Bradford Public Library, and the Space on Main, etc.).

Bradford has many recreational facilities within its borders, although they are not all owned by the Town.

Town Owned Recreational Lands

Memorial Field

Memorial Field, previously owned by Bradford Academy and Graded School Area (BAGSD) was acquired by the Town as part of the Bradford/Newbury merger into Oxbow Unified Union School District (OUUSD) in 2019. Memorial Field is located east of Bradford's downtown in the floodplain of the Waits River. Formerly utilized by the Bradford Academy, it contains ball fields, a tennis court and the Bugbee boat launch (see below).

Memorial Field along with other lands some of which are owned by OUUSD and some by the Bradford Golf Association are under consideration by the Parks and Rec and Conservation Commission for the development of trails which would be easily accessed from the Central Business Area and the Village Area as well as by the community and visitors.

The Parks and Rec and Conservation Commission are also investigating the opportunity to enhance the useability of the ball fields which is complicated due to the Memorial Field being prone to flooding.

Bugbee Boat Launch

The Bugbee Boat Launch is leased by the Town to the State Fish and Wildlife Department. The Bugbee Boat Launch allows boat access to the Waits and Connecticut Rivers. There is parking for up to ten vehicles as well as a small area for camping. The Campsite is managed by Bradford Parks and Recreation Commission and is part of the Connecticut River Canoe Trail.

Wrights Mountain/Devil's Den Town Forest

Wrights Mountain-Devil's Den Town Forest is managed by the Conservation Commission. Since 1994, the Town of Bradford has acquired 517 acres on Wrights Mountain. Through the work of the Bradford Conservation Commission, with the support of the Upper Valley Land Trust, Vermont Housing & Conservation Board, Friends of Wrights Mountain, and other organizations and individuals, this effort has provided to the community an outstanding recreational and natural area. Nine miles of well-groomed and marked hiking trails have been developed and maintained, with more trails planned.

Andrew and Ida Boch Memorial Park

The Andrew and Ida Boch Memorial Park at Bradford Falls is managed by the Parks and Recreational Commission. This scenic park, adjacent to the

Bradford Public Library, overlooks the Waits River Falls at the south end of the village.

Elizabeth's Park

Elizabeth's Park is managed by the Parks and Recreation Commission. The construction of Elizabeth's Park was a large community effort: 500 individuals worked over a weekend in September of 1988 to finish the park project. Many residents participated in the Park's initial design. In March of 2007, the townspeople voted to accept the donation of Elizabeth's Park from private donors.

Children's Play Structure

The most prominent component of Elizabeth's Park is the large wooden play structure designed with towers, walkways, slides, and mazes.

The structure is in passable condition, though much of the structure is due for repair and/or renovation. The Parks & Recreation Commission is working with the Selectboard to develop a plan for these needed repairs.

Dog Park

A dog park opened on September 24, 2022. The park was built through extensive fundraising by the Parks and Rec Committee along with a very dedicated handful of volunteers.

Elizabeth Park Pavilion

A pavilion roof was constructed in 2021 over the location of the skating rink to help protect the rink from the elements and now enjoys year-round use with picnic tables under the roof where birthday parties and other gatherings occur in warmer weather along with ice skating in the winter months.

In addition, various groups including the Conservation Commission and the non-profit, Bradford Food and Forest have planted raspberries, fruit trees and a pollinator garden. Local businesses such as J and M Landscaping have donated numerous plantings over the year as well.

The Parks and Recreation Committee is in the process of developing a Master Plan for the continued and expanded use of the park.

Denny Park

Denny Park is managed by the Parks and Recreation Commission. It is a small park on North Main Street with picnic tables and a gazebo used for summer music concerts. Hod and Rosemary Palmer along with Ann Denny donated the land for the park to the Town in the mid 1990's to preserve the view across the floodplain at the confluence of the Waits and Connecticut Rivers as well as to create additional parking. It is named in honor of Mrs. Denny's husband. There are restrictions preventing the obstruction of the view, so the Gazebo was placed at the north end. In the near future, Norwich Technologies will be installing EV Charging stations through a state grant in this parking lot.

Orange Unified Union School District Owned Recreational Lands

See the Education Chapter

Additional Recreational and Community Facilities (private)

Bradford Golf Club

The Bradford Golf Club is located east of the downtown area adjacent to the Connecticut River. Opened in 1924, the 9-hole, par thirty-two golf course is a for profit corporation that is open to the public. The corporation leases the clubhouse from the BAGSD on a 10-year lease basis without charge. They currently have 70-80 members. On average 35-40 rounds of golf are played per day in season with roughly 4,800 rounds per season.

Bear Ridge Speedway

Entering its 56th year, Bear Ridge Speedway is a ¼ mile dirt track where races are held on Saturday nights from May until October. It is alcohol-free entertainment geared for all ages. Many residents compete in the various races held throughout the summer.

Bradford Fair

The Bradford Fair, formerly the Connecticut Valley Fair has been operating since 1947. Until recently the fair was located on Memorial Field behind the Bradford Academy. Several years ago, it moved to the Lower Plain off Carson Lane.

It is an agricultural fair with tractor pulls, livestock exhibits and other fun entertainment. In addition, the Fair organization holds other events at the Fairground including Halloween and the Christmas Holiday.

Several of the buildings at the Fairground were relocated from Memorial Field.

Orange East Senior Center

Located in a building owned by LELAND Properties LLC, Orange East Senior Center operates Meals on Wheels and provides Senior Meals at the property. They also provide Bingo and other Senior activities.

Old Church Theater

The Old Church Theater LLC recently acquired the historic building at the back of the Congregational Church property. The building has been undergoing extensive renovation over the last few years. Currently because the building is under renovation, the Old Church Theater has been holding their performances at the Bradford Academy. The Old Church Theater has presented over 28 years of summer productions geared for family entertainment. The actors are residents from various backgrounds, and some have gone on to make a career in the theater world. The theater is open to anyone wishing to act, direct, work backstage, help with set design, ticket sales and more.

Hub Teen Center

The Hub Teen Center, originally located in the basement of the Swenson Insurance building on the corner of Main and Barton Street, is now located in that same building but on street level on Main Street. It conducts a variety of activities for youth in seventh through twelfth grade.

The Space on Main

The Space on Main is a nonprofit community workspace (coworking space) that offers opportunities to the community that are focused on the creative economy, small business and entrepreneurship support, community/civic engagement, and technology/STEM education. The Space On Main has membership options, rooms that can be rented by the public, as well as a wide variety of programming for all ages.

Bradford Historical Society

The Bradford Historical Society, organized in 1964, is located on the third floor of the Bradford Academy Building where there are displays, meeting rooms and storage areas. Their mission is "Preserve the Past, Embrace the Future" of Bradford. They provide historical seminars, tours and do research on request.

Libraries

Bradford Elementary School Library: see Education Chapter

Oxbow High School Library: see Education Chapter

Bradford Public Library

The Bradford Public Library located at the south end of the village near the intersection of Routes 5 and 25B, the three-story brick building, designed by Lambert Packard, was built in 1895. The library is a not-for-profit corporation, with a nine-member self-perpetuating board of trustees, with three additional trustees appointed by the Selectboard for three-year terms.

The Bradford Public Library is an architectural gem and is one of the most significant buildings in Bradford's downtown area. Until recently, the building was not handicapped accessible, but a handicapped ramp now leads into the children's room in the lower level and a lift can bring patrons up to the main floor.

While many repairs and maintenance have been done, some sections of the building still need additional repair and renovation.

Major renovations completed in 2020 have resulted in the building being accessible to all. A new lift connects the main floor and the lower (children's) level. The main level has a private meeting room and refurbished reception/checkout area. An accessible bathroom with a changing table was installed in the lower level and the main floor bathroom was upgraded. The stairway connecting the two levels has been improved for ease of use and safety, new flooring and carpeting have been added, along with several new storage cabinets for the children's craft area, as well as new bookcases for more books.

The library is currently working on improving air handling quality on the main floor. Additional ongoing maintenance plan for this historic building is critically important.

Parking and patron access are a concern. With limited parking adjacent to the library, other options are being investigated including coordinating with Tri-Valley Transit and possible greater utilization of the parking area behind the building commonly referred to as the Richardson Building.

The library has 1221 accounts including families and individuals). Over one thousand additions were made in 2021 bringing the in-house collection to just under 15,000 items. The library is an integral part of the community and as part of this effort, the library's Wi-Fi is available even when the library is closed. Often as you drive by, a patron will be seen sitting at one of the picnic tables working on a tablet.

Communication Facilities

Most of the telephone-related services in Bradford are still offered via the traditional telephone lines and poles (landline). The primary phone providers are Consolidated (formerly FairPoint and Verizon), which covers most of the Town, and Topsham Telephone Company, which covers a portion of the western area of Town.

Cellular Communications

There is one cell tower located in Bradford on a hilltop off Rowell Brook Road for Verizon Wireless. Cell phone service in Bradford also comes from towers located just south of the Bradford Town Line in Fairlee, north of Town in Newbury, or across the Connecticut River in New Hampshire. Based on responses to the 2007 Town Plan Survey, residents feel cell coverage could be improved and even expressed a willingness to permit cell towers in Town provided they were properly sited.

High-speed Internet

There are presently four ways to access the internet in Bradford: landline, DSL, cable, and satellite.

Landline access is the most available to residents, but speeds over a telephone modem are slow and given the ever-increasing need for bandwidth in day-to-day use of the internet, they are not practical for more than checking email. The faster and more stable options available to residents are via cable modem and DSL.

Cable offers consistent bandwidths as it is substantially faster than dial-up. Cable coverage in Town is limited to those areas receiving expanded cable access through Comcast and Spectrum and represents only a fraction of internet users in Bradford.

Digital Subscriber Line (DSL) is like cable in speed. It is less subject to decreases in speed caused by heavy internet traffic because a certain amount of bandwidth is dedicated for each user. DSL is provided to those within the service area of Topsham Telephone, or within three-line miles of the FairPoint switching station in downtown Bradford.

Satellite Internet is provided by companies such as Dish Network, DIRECTV, Wild Blue and Starlink and is an option for residents who are unable to access the internet via cable or DSL provided they have a clear view of the southern sky from their locations. Although bandwidth over satellite is on average three times faster than a dial-up connection, it is more expensive than other methods of access and it can be affected by heavy weather such as torrential rains and blizzards.

It is likely that as many as two-thirds of the households in Bradford have access to the internet only via landline or satellite modem. When surveyed, nearly 80% of respondents indicated that they would like to see the availability of high-speed internet access increased. Because of the difficul-

ties in convincing cable and DSL providers to extend their coverage areas, other towns in the Upper Valley have considered alternatives to those listed above. In some cases, wireless internet providers have placed towers in towns that provide wireless broadband access to those within line-of-sight.

In recent months, Bradford has become a member of EC Fiber which plans to provide service to all our residents through Fiber optic cables. These offer the fastest connection speed available. It is anticipated to take several years to reach all Bradford residents.

Capital Plans

These plans will be funded through a combination of grant funding, capital budgeting and fund raising.

Bradford Academy

Slate roof requires regular maintenance.

Replacement of boiler with greener source such as geothermal is high priority.

The adequacy of the ventilation system needs to be determined and upgraded as needed.

Structural concern about addition foundation will need to be addressed in the next few years.

Town Garage

Roof maintenance within the next five years.

Improve the energy efficiency of heating and ventilation over the next several years.

Firehouse

Roof maintenance should be monitored and addressed as needed.

Improve energy efficiency and ventilation over the next several years.

Elizabeth's Park

Heating/ventilation needs to be addressed.

Park Structure needs to be repaired and a regular maintenance program in place.

Skate Park is a potential project in the next couple of years.

North Pleasant Street

Retaining bank needs to be rebuilt. This is a high priority and immediate concern.

The establishment of a Capital Program will help to ensure that the capital needs do not exceed the capacities of the community.

HEALTH AND EMERGENCY SERVICES

HEALTH AND EMERGENCY SERVICES

Bradford's vision for health, wellness and safety is that all citizens in the community have access to high quality, affordable, physical and mental healthcare through local providers; that employers and individuals support healthy lifestyles and environments; that the well-being of children is a central focus; that prevention, personal wellness and freedom from pain are strong areas of focus from birth to death; that domestic violence and substance abuse are unacceptable in our families and community; that all citizens have adequate health and wellness support to remain in their homes and remain integrated in their community; and that all residents have access to prompt and effective services in the event of an emergency.

Goals

1.High quality medical care should be available to all Bradford residents.

2.Well-equipped and well-trained emergency services personnel (police, fire, and EMS) should serve all Bradford residents.

3The Town should promote health and wellness.

Policies

1.It is the policy of the Town to support efforts to provide residents with access to high quality physical and mental healthcare through local providers.

2.It is the policy of the Town to support programs that expand medical coverage or improve medical services in Bradford.

3.It is the policy of the Town to maintain, enhance and expand recreational opportunities in Bradford in support of improving mental and physical health.

Recommended Actions

1.Explore whether the Fast Squad should officially become part of the Town government.

2.Ensure all emergency response personnel are trained in the NIMS system.

3.Investigate ways to share costs with other neighboring towns for essential services.

4. List locations where AEDs are located.

Healthcare Facilities

Healthcare facilities are essential in the prevention, treatment, and management of illness, and in the preservation of mental and physical well-being through the services they offer. Rural locations such as Bradford are served by small facilities that can assist residents with general healthcare needs but are not suited for more complex acute care services that require specialized services and equipment.

The lower population density of Vermont's rural countryside, and the larger area over which the population is distributed, can make providing adequate healthcare more difficult, particularly care for the elderly who may not be able to drive themselves to major healthcare facilities.

Likewise in rural areas, emergency care for severe trauma or major acute illnesses such as stroke and heart attack may take longer response time compared to more populated locations, risking potential loss of life.

However, Bradford has private health providers, including physicians, chiropractors, dentists, optometrists, pediatric services, two full-service pharmacies, health clinic, therapeutic care, and a state licensed alcohol and chemical dependency treatment center. Major healthcare facilities in Bradford include Little Rivers Healthcare, Clara Martin Center (for Mental Health) and Upper Valley Pediatrics.

Bradford Fire Department

The Bradford Fire Department currently has twenty members and serves Bradford and is part of the mutual aid network. It also responds to all auto-

mobile-related rescue calls. In 2022, the Bradford Fire Department responded to 206 calls, a 58% increase from the previous year. This included structural fires, chimney fires, motor vehicle accidents and mutual aid calls. The Fire Department receives policy advice and oversight from the Bradford Public Safety Commission. The Commission is also the point of contact for any complaints regarding the Fire Department.

Fire Department-Staff

Twenty-volunteer firefighters staff the Bradford Fire Department. The department needs additional volunteers to serve as firefighters, to help raise money, and to help care for the equipment, but like many volunteer fire departments in Vermont, finding new volunteers is increasingly difficult. This is a widespread problem statewide. The effects of an aging population, many residents working outside the Town limits, and the many State and Federal requirements for training have taken a toll on the pool of interested volunteers. In the future, there may need to be a combination of paid and volunteer members.

Fire Station

The Bradford Fire Station is located on 135 Carson Lane, just south of Bradford's downtown. The station was built in 1998 by the Town and contains six bays for fire and rescue vehicles, an office for the fire chief, and a large meeting room equipped with a kitchen. The building itself is in good condition, needing only routine maintenance such as painting. In February 2014, the heating system serving the fire station's truck bays was found to be badly deteriorated and was emitting dangerous amounts of carbon monoxide. The heating system was replaced in March 2014. Storage, however, is at a premium in the fire station, and soon there may be a need to add some sort of structure for equipment storage.

Fire Department Vehicles

The Town of Bradford owns four fire trucks:

- 1994 E-One engine
- 2008 E-One Pumper/Rescue truck
- 2000 tanker (lacks pump)
- 1991 Chevrolet 3500 pickup truck, equipped and operated as a "forestry truck."
- A Trailer used to refill air cylinders and serve as a command vehicle.

The 1994 E-One truck is reaching the end of its useful life. The truck is having increasingly frequent mechanical problems and replacement parts are sometimes difficult to obtain. This truck will need to be replaced soon.

The forestry truck is also reaching the end of its useful life and will need to be replaced soon. This four-wheel drive vehicle is used to reach emergency scenes in sections of Bradford and on roads where larger apparatus would have a tough time. Although Bradford has few forest fires, the forestry truck is used often where there is a fire or other emergency on a muddy unpaved road or wherever a larger truck could not easily reach.

The Fire Department is working closely with the Public Safety Commission to identify what the next steps for replacing these two important trucks should be.

There has been discussion about obtaining a "Quint" which includes an aerial apparatus as well as a basic engine truck.

The Town currently belongs to two mutual aid groups, "Hanover" which includes towns to the south of us and Piermont and "Twin State" which includes towns to the North and East of us. It is from these mutual aid groups that the Town has an aerial truck (located in Hanover and Woodsville). However, because it takes some time for this apparatus to reach Bradford, its benefit is greatly diminished.

Fire Department Structure and Funding

The Bradford Fire Department is a municipal department. The Firefighters recommend and Selectboard appoints chiefs and officers. of the Department. The Department budget is part of the annual municipal budget.

Police Protection Services

Currently Bradford has a full-time police Chief, a full-time police officer. And a part-time secretary. There are currently no part-time police officers. The Police Department receives policy advice and

oversight from the Bradford Public Safety Commission. The Commission is also the point of contact for any complaints regarding the Police Department.

In 2022, the Department responded to 621 incidents, made fifty-six criminal arrests, and executed fourteen search warrants. They also made 101 traffic stops.

State Police from St Johnsbury barracks provide supplemental police coverage for Bradford..

Police Equipment

The Police have two vehicles: 2013 cruiser and 2022 cruiser.

Currently the VSP provides free dispatching services, but it is likely soon that Bradford will need to contract for dispatching for our Police Department.

Emergency Medical Services

Bradford FAST Squad

The Bradford Fast Squad answers medical calls initially. The Fast Squad has six members trained in handling medical emergencies. The purpose of the Fast Squad is to provide immediate response to emergencies while Upper Valley Ambulance is enroute to the scene.

EMTs in Bradford respond to calls using personal vehicles. (If the Fire Department also responds they usually use the rescue truck and are trained in vehicle extrication skills.) The FAST squad is an independent organization and not a Town department, but the Fast squad receives almost all its funding through the annual municipal budget. The number of volunteers is 8 (two paramedics, one Advanced Emergency Medical Technicians, three EMTs, one Emergency Medical Responder and one member who has completed their Emergency Medical Responder Course and should be certified soon. In 2021, the call volume increased from 454 in 2020 to 484 calls. Attracting volunteers is becoming harder.

The Automated External Defibrillators (AEDs) need to be routinely upgraded and/or replaced. Currently two AEDs need replacement and four should be upgraded. A new office computer is also needed.

The Fast Squad also owns a former ambulance that is used as a warming vehicle.

Upper Valley Ambulance

Upper Valley Ambulance (UVA), in Fairlee, provides emergency medical transportation.

UVA provides primary 911 ambulance coverage to nine communities, including Bradford, Corinth, Fairlee, Strafford, Thetford, Vershire, and West Fairlee in Vermont, and Orford and Piermont in New Hampshire. In addition to emergency services, UVA provides non-emergency ambulance transportation to hospitals, nursing homes and residences.

At its Fairlee facility, UVA offers training in basic CPR and first aid as well as formal EMT training for all fast squads and fire departments in the surrounding area.

The Town of Bradford pays an annual per capita fee to UVA for its services. Residents who feel that their insurance may not cover the cost of medical transportation can become members of UVA. A household membership is available which provides unlimited necessary medical transport without additional cost above any insurance benefit payment.

Bradford Resilience

In response to COVID-19 a group of concerned citizens came together to form Bradford Resilience, which soon became an official commission of the Town of Bradford in 2020 to ensure coordination between organizations responsible for food access, health access, emergency services, schools, Town government and more.

The purpose of the commission is to bring together representatives from all sectors of the community think tank, particularly in times of crisis; to support, mobilize, and coordinate volunteers, and to make recommendations to, cooperate with, and communicate with Town officials, commissions,

groups, organizations, and appropriate agencies of regional and state government.

Municipal Emergency Management

The Town of Bradford has an Emergency Management Director (EMD) who oversees the Town's responses to all types of emergency situations. The Bradford Emergency Management Coordinator assists the EMD. The Emergency Management Director and Coordinator are trained in the National Incident Management System (NIMS), and emergency situations and future capital investments are managed in accordance with NIMS protocols.

Bradford Food Shelf

Located in the basement of the Bradford Academy Building and is operated by the Inter-Church Council, this food pantry is open to all those in need of food assistance. It primarily serves the residents of Bradford, Corinth, Fairlee, Newbury, and Topsham.

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ENERGY

ENERGY

In accordance with statewide initiatives to reduce greenhouse gas emissions and transition to an equitable energy system, Bradford should pursue the best practices in design, siting, and construction techniques with a goal of achieving net-zero before 2050. Bradford should also pursue strategies that: (1) support the decarbonization of the transportation sector; (2) significantly reduce the amount of thermal energy required; and (3) encourage that new construction to meet efficient energy standards.

Goals

1.To increase energy efficiency.

2.To decrease the use of Green House Gas resources.

3.To reduce energy consumption in all Town and school buildings.

4.To reduce greenhouse gas emissions, acid rain precursor, and other environmental toxins.

5. To encourage patterns of land use and development that use energy most efficiently, and that do not increase the use of non-renewable energy.

6.To promote the construction of energy efficient homes and buildings to lessen or postpone the need for sources of costly additional energy.

7.To increase the use of public transportation in coordination with other modes of transport.

8.To increase the use of non-fossil fueled (EV and vegetable oil) powered transportation as well as bike and pedestrian modes of transportation.

9. To participate in regional and statewide strategies and approval processes which reduce the requirement for non-renewable energy.

10.To increase awareness and use of energy conservation practices.

General Energy Policies

1.It is the policy of the Town to reduce energy consumption in all municipal activities, including buildings, transportation, and Town services.

2.It is the policy of the Town to evaluate the installation of a municipal/downtown renewable heating/energy system.

3.It is the policy of the Town to oppose plans to locate industrial scale generation and transmission facilities in Bradford that exceed five acres in size.

4. It is the policy of the Town to oppose industrial scale generation and transmission facilities that would be located where water and sewer infrastructure is already in place.

5.It is the policy of the Town to participate in the Public Service Board (Section 248) review of new and upgraded generation and transmission facilities as necessary to ensure that adopted community standards are given consideration in proposed energy facility development.

5. It is the policy of the Town that commercial energy generation facilities comply with Bradford's zoning and subdivision bylaws.

6.It is the policy of the Town to have the maximum tower height for net-metered or similar off-grid wind energy facilities to not exceed fifty feet in total height.

7.It is the policy of the Town that power generating facilities and accessory structures must meet the minimum setback requirements for the zoning area in which they are located.

8.It is the policy of the Town to encourage ground installations to be in locations that minimize their visibility such as a side or rear yard and be screened from view of public rights of way and adjoining properties.

9.It is the policy of the Town that ground mounted solar and wind energy facilities shall not be located within the 100-year flood hazard area or fluvial erosion hazard area or within fifty feet distance from the top of bank of any watercourse.

Electric Energy Policies

1.It is the policy of the Town that prior to the granting of easements for the construction of additional or upgraded transmission or distribution lines or related facilities, utilities shall

demonstrate that such public investments are justified to improve efficiency and to promote energy conservation for the consumer and for the Town.

2.It is the policy of the Town that expansion and efficiency improvements to the Waits River Dam hydro-power generators and transmission facilities are encouraged where such investments clearly benefit the residents of the Town and the region.

3.It is the policy of the Town that hydro-power development should not diminish water quality, habitat, or recreational opportunities. "Run-of-the-river" projects are preferred to projects, which require impoundments with low or minimum flows.

4.It is the policy of the Town that small-scale wind-power generation facilities are to be encouraged. Design plans must consider placement of such facilities in locations where reasonable measures have been employed to mitigate adverse impacts to health, public safety, and the environment.

5.It is the policy of the Town that large scale wood using projects, such as power generators and wood pellet production, must demonstrate that the project's demand for wood will occur in a sustainable manner.

6.It is the policy of the Town to encourage the recovery of methane from solid-waste and agriculture sites for use as an energy source wherever feasible.

7.It is the policy of the Town to encourage and support the use of solar power.

8.It is the policy of the Town to encourage and support the conservation of the use of electricity.

Transportation Policies

1.It is the policy of the Town to encourage transportation practices that promote energy efficiency, which include cycling, walking, non-fossil-fuel powered transport, public transportation, and ride-share programs to reduce the region's dependency on single vehicle trips.

2.It is the policy of the Town that any private land use development shall include transportation infrastructure and services that promote public transportation and/or provide the necessary right-of-way to allow public investment in those facilities.

3.It is the policy of the Town that all transportation systems incorporate design and location principles to complement the recommendations set forth in the Land Use Element of this Plan.

4.It is the policy of the Town to encourage the maintenance, continued operation, and expansion of the Connecticut Valley railway line to include passenger service.

5.It is the policy of the Town to encourage employers to support the use of public transit, carpooling, non-fossil-fuel powered transit as well as bikes and walking by their employees.

6.It is the policy of the Town to encourage development patterns resulting in more energy efficient transportation patterns.

7.It is the policy of the Town to encourage Bradford Elementary. Oxbow High School and Riverbend Technology be encouraged to include energy efficiency and conservation in their plans and daily operations.

8.It is the policy of the Town that social and civic services, housing, employment, and retail growth should take place in the village center or within walking distance of the village center and in the LPC Area.

9.It is the policy of the Town to support the expansion of business-related telecommunications.

10.It is the policy of the Town to encourage a program to assist landlords to achieve energy efficiencies.

11.It is the policy of the Town to encourage the establishment of incentives for developers to accommodate public transit in their plans.

Recommended Actions

1.investigate converting public buildings in Bradford to economically feasible renewable energy heating systems.

2.Consider revising the guidelines for the Revolving Loan Fund to allow low interest capital to homeowners, landlords, nonprofit organizations, and businesses to assist in making cost effective investments in energy efficiency and renewable energy.

3.Continue to support efforts to expand the Efficiency Vermont and related energy efficiency programs.

4.Encourage Bradford Elementary School and Oxbow High School to include walking, cycling and other transportation alternatives.

5.Investigate programs to encourage a reduction in CO2 emissions by the Town of Bradford.

6.Pursue grants to promote energy efficiency and energy projects

7.Investigate updating Zoning Bylaw to require RBES (Residential Building Energy Standards) and CBES (Commercial Building Energy Standards) to obtain a Certificate of Occupancy.

Background

Sound local planning can play a positive and effective role in guiding energy use by promoting appropriate land use patterns, participating in energy development decisions, facilitating alternative transportation options, and encouraging energy conservation strategies. Sustainable energy use can help to maintain a healthy environment and build a foundation for economic health and stability. The energy security of Bradford depends on being able to provide consistent and sustainable energy services such as heat for our homes, affordable transportation, and light and energy for our homes and work.

Greenhouse gas reduction must be the basic principle of a long-term energy plan. Bradford cannot rely on carbon-emitting energy sources indefinitely, as these are unsustainable and drive climate change.

Settlement and land use policies affect energy use. A dispersed and inefficient use of land and energy resources can have a significant impact on Bradford's economic future and its ability to meet the state's climate goals. Land use policies and provisions adopted by Bradford should encourage the use of public transportation and carpooling, thus reducing the consumption of energy and the need for additional parking facilities.

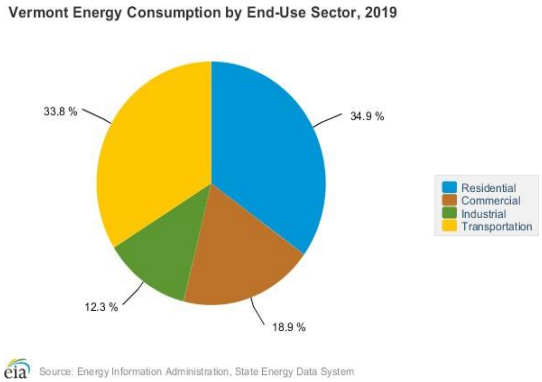
Bradford residents have expressed concern over the impact of industrial scale energy developments, particularly industrial-scale power generation and transmission facilities are inappropriate in the Town.

This includes, but is not limited to, industrial-scale wind turbines and their associated transmission facilities. Development of industrial wind turbines generally occurs at higher elevations, often along ridgelines. In Bradford, these areas are among the Town's most sensitive ecological areas, most wild and unfragmented lands, and are highly visible from conservation lands, scenic roads, and dwellings. Such large-scale energy transmission facilities are inconsistent with the Town's vision and goals.

Energy Demands

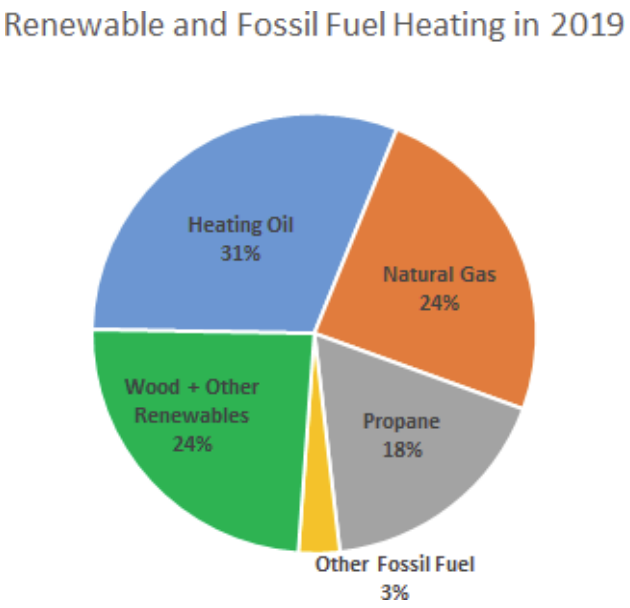
The Northeast's per capita residential-energy consumption is like the rest of the United States. In Vermont, almost 80% of residential energy is dedicated to space heating and domestic hot water. Approximately 34% of Vermont's total energy usage goes toward transportation.

Of the energy dedicated to transportation, over half is used to fuel private cars (as opposed to being used for public transit, road maintenance, or another public purpose). This fact reinforces the need for clear policies that reflect the transportation implications of land use decisions in this community.



According to 2012 data collected by Efficiency Vermont, the Town of Bradford is 15th out of thirty towns in terms of average annual electrical energy use levels in the Two Rivers-Ottauquechee Region. In 2012, this data (limited only to residential energy use) determined that Bradford the average household used 6590 kWh of electrical energy, which is almost equivalent to the average household electricity usage of all the towns in the Two Rivers-Ottauquechee Region.

Current Energy Sources



Fossil Fuels

Fossil fuels produce nearly 67% of all energy consumed in Vermont. Vermont consumes less energy than any other state, but it produces less than one-third of the total energy it needs.

About 50% of the oil consumed in the U.S. is imported. Although Bradford has several large oil and propane distribution companies, a disruption of interstate and international fuel deliveries would pose a severe problem to Bradford residents and businesses.

Bradford, like most other towns in Vermont, relies primarily on fossil fuels for heating and transportation. Fossil fuels account for 50% of all energy consumed in Vermont, much of which is used in transportation and heating.

Fifty percent of homes in Bradford are heated with oil, which means a substantial portion of Bradford's homeowners are subject to the instabilities of a reliance on oil. Vermont's economic system is so closely tied to the availability of fossil fuels that even modest price increases can lead to inflation, a slowdown in economic growth, and a destabilized economy. This can have unanticipated adverse impacts at the municipal and residential level in all communities, including Bradford. For example, increasing fuel prices make it more expensive for a town government to provide traditional public services Rising fuel prices can also make it difficult for residents to feed their family as the price and availability of food is usually influenced by fuel prices.).

The combustion of fossil fuels has been deter "greenhouse gases" (primarily carbon dioxide), which accumulate within the earth's atmosphere to create a "greenhouse effect," warming the atmosphere and threatening to create coastal flooding, unpredictable climate shifts, and alteration of the viability of the earth's most significant urban and agricultural centers.

Renewable Energy

Since Vermont Yankee closed in 2014, nearly 100% of Vermont's in-state electricity net generation has come from renewable resources, the largest share for any state. Bradford currently has a total renewable energy production capacity of approximately 6,333 MWH (2022 TRORC Report Card)

Thermal and process energy use in residential, commercial, and industrial buildings accounts for nearly 50% of Vermont's total site energy consumption, and 34% of the State's greenhouse gas emissions.

Renewable Energy Resources

The 2022 Draft Vermont Comprehensive Energy Plan recommends that Vermont meet 25% of its energy needs from renewable sources by 2025, 45% by 2035, and 90% by 2050. Bradford needs to annually generate between 14,903-18,393 MWh of new renewable energy to reach its 2025 goal. The term "renewable energy" refers to the production of electricity and fuels from energy sources that are naturally and continual-

ly replenished, such as wind, solar power, geothermal (using the earth's heat to create power), hydropower, and various forms of biomass (trees, crops, manure, etc.).

Although initial setup costs for renewable energy generation systems can be high, these systems can save users money over the long term. They reduce the consumption of carbon-based fuels which helps to protect our environment and reduce our reliance on centralized energy. In Vermont, some of these energy sources are more readily available than others, and some are more cost-effective for the individual energy producer.

Residential scale renewable energy generation systems are generally regulated through the State of Vermont, requiring a Certificate of Public Good from the Department of Public Service. State statute forbids the creation of land use regulations that prohibit renewable energy generation.

The Town is concerned about plans for major development within Bradford and in neighboring towns. These types of developments could threaten the environment and quality of life that Bradford residents value. The Town would like to have the option to be represented at the Public Service Board as an interested and/or average person in all future applications before the Public Service Board.

Energy Scarcities and Costs

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 currently. 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. There should be ample amounts of heating and transportation fuels for the life of this plan, but the Town must encourage a shift away from fossil fuels to meet the goals outlined in this plan. 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 is available..

That is not to say that plentiful energy will be cheap. Fossil fuels have varied widely in price over the last several years, and the overall trend is for dwindling supplies with resulting increase in costs. Also, whether it is carbon pricing or other methods, fossil fuels will have to increase in cost to disincentivize their use. The cost of energy is not an issue for some families, but it is still an issue for many and 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 much less than current gasoline prices.

For many, the cost barriers are not the daily or monthly energy costs but implementing these changes to the existing buildings and vehicles.

There are rebates and programs available that are income-based. Even those that have too much income to qualify will find that over time these investments pay off, but they would require getting financing or having considerable savings on hand.

Types of Renewable Energy in Vermont

Solar energy. This type of energy has the potential to provide clean, dependable, and safe energy, even in Vermont's climate. Most areas in Vermont have the potential for some solar energy production, at least on the residential scale.

There are several large net-metered solar arrays in Bradford (>15kW). The largest array has a capacity of approximately 500kW and is operated by Green Mountain Power. There are also over forty small (i.e., capacities of under 15kW) net-metered solar arrays that have been installed in the Town (Energy Action Network 2022)[1]

[1] Small net-metered solar installations list can be obtained from Energy Action Network's Community Energy Dashboard: *https://www.vtenergydashboard.org/energy-atlas*

Passive Heating and Lighting. Good building and site design are essential to taking advantage of the sun's energy through passive methods. One particularly simple passive solar technology is "solar tempering" of buildings. Solar tempered buildings orient their long axis toward true south and contain an unobstructed, south-facing window area equal to 7% or more of total floor area. Coupled with proper insulation, solar tempering can offset heat costs by 40%. This passive technology requires no additional initial investment. To maximize the passive solar benefits, the building envelope, and the windows themselves need to be well insulated and in the case of windows, coverings are highly beneficial at night and on cloudy days.

Water Heating. Solar water heating is the most usual form of residential-scale solar use in Vermont. Solar hot water (SHW) systems generally consist of a collector, a liquid medium, and a holding tank. These systems rely on the suns energy to heat the liquid medium, which in turn heats water, supplementing or supplying the hot water needs of the home. Solar hot water offers the fastest payback on investment of any type of solar.

Electricity Generation. Decreasing costs of equipment have made solar electric generation systems more prevalent in Vermont and across the U.S. Photovoltaic, or PV panels can be seen on roofs and arrays around Vermont. The sun's energy creates an electrical charge in the silicon-based solar cells in the PV panel, creating electricity that powers homes, businesses, or whole communities. Residential or commercial PV panels are typically tied into a house or building's electrical supply in an arrangement called net metering, which feeds any excess power generated back to the local utilities.

Solar arrays do not need to be located on high ground and are therefore less visually prominent. In addition, these facilities can be in already developed areas, requiring fewer access roads, requiring less infrastructure, and reducing adverse impacts on wild lands.

Wind Energy. Like solar, wind energy is an intermittent resource, and its generation fluctuates in response to environmental conditions. The amount of energy produced by a specific wind tower can depend greatly on location, height of the tower, and proximity to other obstructions. Nevertheless, most modern wind turbines (when properly sited) can generate electricity 95% of the time. There are multiple levels of potential wind energy generation, ranging from Class 1 (10-11 mph) to Class 7 (19-25 mph).

Biomass & Biogas Energy Generation. This is another form of renewable energy. The term 'biomasses refer to biologically based materials such as algae, food or vegetable wastes, grass, wood, and methane. Biomass can be converted into an energy source to fuel vehicles (e.g., biodiesel), heat homes, or even generate electricity.

According to the 2022 Comprehensive Energy Plan (statewide plan) approximately 21-22% of total heating demand in Vermont is currently met by wood heat, with cord wood alone supplying almost 18% of all heating. On a $/BTU basis, cord wood, wood chips, and wood pellets are cost competitive with current propane and heating oil prices and are much more stably priced. As the forest product industry shrinks, wood harvesting and processing will make it difficult to provide wood fuel locally.

There are no biomass energy generation facilities in Bradford. Community-scale biomass has the potential to offer cost-effective heating in small, clustered areas. Some towns have implemented combined heat and power systems that run on biomass to heat multiple municipal buildings. This does not seem to be practical in Bradford, given the current technology.

Biofuels, Biofuels and particularly biodiesel, is becoming an increasingly popular option for municipalities attempting to cut costs and reduce the environmental impacts associated with vehicle emissions. The Town could revisit the possibility of using biofuels in their road crew fleet.

According to the Vermont Biofuels Association, biodiesel is a clean-burning alternative fuel, produced from domestic, renewable resources, such as soybeans, sunflowers, canola, waste cooking oil, or animal fats. Biodiesel contains no petroleum, but it can be blended at any level

with petroleum diesel to create a biodiesel blend, which can be used in colder weather. It can be used in compression-ignition (diesel) engines or oil-fired boilers or furnaces with little or no modifications.

Growing biomass to use in biofuels may be a viable way to encourage farming or forestry in Bradford as well; however, balance should be sought for land used for energy demands vs. human and animal consumption.

Hydropower. On a small-scale hydropower was once quite common in many locations in Vermont, including Bradford, to grind grain, run mills and even supply electricity to homes. But, with the onset of centralized power, most of these small-scale power generation facilities have been replaced by massive hydro facilities, such as those owned by Hydro Quebec. There is one operational hydropower facility in Bradford which annually produces 5256 MWh of electricity (Municipal Summary Worksheet 2017 and Bradford Energy report card). The Vermont Energy Atlas also identifies potential hydro site on Roaring Brook (located on the Blodgett property) that could have 10-49KW of undeveloped potential.

Landfill Methane. This is also a source of power though currently there is no such facility in Bradford. Decay of organic materials in landfills and wastewater byproducts produce significant amounts of methane, a potent greenhouse gas and potential energy source. Use of methane may provide an alternative to conventional energy production sources. Capture technologies have experienced tremendous growth in recent years rendering methane a valuable energy source, as developed by the Washington Electric Cooperative.

Geothermal Energy. Geothermal technology harnesses the Earth's heat. Just a few feet below the surface, the Earth maintains a near-constant temperature, in contrast to the summer and winter extremes of the ambient air above ground. Farther below the surface, the temperature increases at an average rate of approximately 1°F for every 70 feet in depth. In some regions, tectonic and volcanic activity can bring higher temperatures and pockets of superheated water and steam much closer to the surface.

Ground source heat pumps can be used anywhere in the United States. Geothermal energy is considered a renewable resource. Ground source heat pumps serve heating and cooling applications.

Permitting Considerations

Energy generation in Vermont is subject to several different permitting requirements, most of which are limited to state level permitting. State statute protects residential renewable energy generation systems from regulations that will completely prohibit their development.

Section 248

Distributed power generation facilities, such as hydropower dams, fossil fuel plants, and wind power or solar systems owned by utilities, are subject to review and approval by the Vermont Public Service Board (30 VSA §248). Under this law, prior to the construction of a generation facility, the Board must issue a Certificate of Public Good. **A Section 248 review addresses environmental, economic, and social impacts associated with a particular project, like Act 250. In making its determination, the Board must consider the recommendations of municipal and regional planning commissions and their respective plans.** Accordingly, it is appropriate that this Town Plan address these land uses and provide guidance to Town officials, regulators, and utilities.

Energy Generation—Commercial Facilities

For all commercial energy generation facilities, the following policies shall apply:

Preferred Locations

The Town supports the placement of new generation and transmission facilities that reinforce Bradford's traditional patterns of growth, with compact village centers surrounded by rural

countryside, including farm and forest land. The Town also supports renewable energy generation on top of existing buildings, on landfills, on brownfields outside of the village center, on reclaimed quarries or gravel pits, on Superfund sites, or on sites that were previously covered by structures or impervious cover. The Town, by joint letter of the Planning Commission and Selectboard, may designate a site as preferred if it is not visible in the growing season from town or state highways, is not actively agriculture, and is not part of a priority or high priority forest block or habitat connector.

When designating preferred sites, the Town shall also consider the site impacts to include access roads, site clearing, onsite power lines, substations, lighting, and off-site power lines, as well as noise/sound considerations. When energy-generation facilities are going through the permitting process, the development of these elements shall be constructed in a way to minimize negative impacts to the following:

- Viewsheds and scenic areas as laid out in this Town Plan.
- Visibility from Town and state highways.
- Current and potential agricultural activities.

Ground-mounted installations shall use screening to reduce the visual impacts of energy generation, transmission, and distribution as seen from public roads and neighboring properties in accordance with the following:

> Without interfering with the project's function, make the maximum use possible of pre-existing vegetation, structures, and topographical features that screen the project on site.
>
> Install screening that distracts the viewer from the project or breaks up the view of the project.

Energy generation facilities that generate more than 500 kW of energy shall, wherever feasible, be combined with continued agricultural use of the land or habitat management, such that soil health and fertility is maintained.

Energy-generation facilities that produce more than 500 kW of energy shall have a management and decommissioning plan that will ensure the land will be returned to its prior condition when it is no longer being actively used.

Prohibited Locations

Because of their distinctive natural, historic, or scenic value, energy facility development shall be excluded from the following areas:

- Floodways shown on FEMA Flood Insurance Rate Maps.
- Fluvial erosion hazard areas shown on Fluvial Erosion Hazard Area maps.
- Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis; and
- Rare, threatened, or endangered species habitat or communities.
- The Bradford Town Forest

Prime Areas

Prime areas are identified on the Town Plan maps. Prime areas exclude unsuitable areas and locations with constraints, and must be in an area with safe, reliable access to the grid (as determined by the local power provider).

The State of Vermont defines constrained areas as those that "have the potential for renewable energy generation but include known or possible constraints that may make these locations less desirable on a site-by-site basis. These areas are neither preferred nor unsuitable for nonpermanent renewable energy projects. Development in these areas will require more detailed mapping at the site level as well as an evaluation of the impacts on the resources present.

These areas include:

- Historic districts, landmarks, sites, and structures listed, or eligible for listing, on state or national historic registers.
- State or federally designated scenic byways, and municipally designated scenic roads and viewsheds

- Special flood hazard areas identified by National Flood Insurance Program maps (except as required for hydroelectric facilities)
- Public and private drinking water supplies, including mapped source protection areas.
- Primary agricultural soils mapped by the U.S. Natural Resources Conservation Service
- Agricultural Soils (VT Agriculturally Important Soil Units)
- Protected Lands, including State Fee Lands and Private Conservation Lands
- Deer Wintering Areas (as Identified by the Agency of Natural Resources (ANR)
- Act 250 Agricultural Soil Mitigation areas, as identified by ANR.
- ANR's Vermont Conservation Design Highest Priority Forest Block Datasets
- Priority Forest Blocks: Connectivity, Interior and Physical Land Division (as identified by ANR)
- Vernal Pools (as identified by ANR or through site analysis)
- State-significant Natural Communities and Rare, Threatened, and Endangered Species
- Locations that were forested within 3 years prior to the application of the proposed development.
- Locations identified as riparian buffers.
- Hydric Soils (as identified by ANR)
- River Corridor Areas as identified by the Vermont Department of Environmental Conservation
- Class 2 Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis.
- Primary agricultural soils mapped by the U.S. Natural Resources Conservation Service
- Agricultural Soils (VT Agriculturally Important Soil Units)

Natural Resource Protection:

New generation and transmission facilities must be sited to avoid the fragmentation of, and undue adverse impacts to, the Town's working landscape, including large tracts of undeveloped forestland and core forest habitat areas, open farmland, and primary agricultural soils mapped by the U.S. Natural Resource Conservation Service.

Protection of Wildlife

Designers must gather information about natural and wildlife habitats that exist in the project area and take measures to avoid any undue adverse impact on the resource.

Consideration shall be given to the effects of the project on natural communities, wildlife residing in the area and their migratory routes; the impacts of human activities at or near habitat areas; and any loss of vegetative cover or food sources for critical habitats.

Energy Efficiency

Energy conservation and efficiency are key elements to sustainable energy use and reduction of GHG emissions. Bradford should promote energy conservation and efficiency and sustainable living in our households, schools, and community buildings and operations where we educate, empower, and challenge our community to inspire change and drive innovation.

While it is essential for homeowners to conserve energy and manage their fuel costs, the upfront capital costs can be an initial barrier to the implementation of thermal efficiency improvements. The Town should encourage partnerships that provide funding, or low interest-rate financing to lower-income residents, people with disabilities, and families to improve the efficiency of their homes.

Under 30 V.S.A. §51, new residential construction in Bradford, like all towns in Vermont, is subject to the Vermont Residential Building Energy Standards (RBES). This statute requires new contractor-built homes and large additions be certified as compliant and recorded in the Town's land records. However, towns have a limited ability to enforce these standards. Commercial development is also subject to similar standards, called Commercial Building Energy Standards (CBES).

Examples of efficiency and conservation measures that Bradford and residents can take in their buildings and houses include:

- Have an energy audit done to identify the greatest ways to save energy.
- Implement the air-sealing and insulation recommendations of the energy audit.
- Do not heat unused areas of your home.
- Insulate with high R-value (or heat flow resistance) material,
- Use high efficiency windows.
- Install energy efficient appliances like refrigerators, freezers, front loading washing machines, electric or heat pump clothes driers and heating systems without blowers.
- Use high efficiency lighting.
- Use electric or heat pump or solar water heaters.
- Site buildings to make use of existing wind blocks and natural cooling patterns derived from the landscape's topography.
- Site buildings with maximum southern exposure to capture passive solar energy.

Building Energy

New residential development in the State of Vermont must comply with Vermont Residential Building Energy Standards (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 and factory-built modular homes (not including mobile homes).

To comply with the RBES, a built home must meet all the Basic Requirements and the Performance Requirements for one of several possible compliance methods. If the home meets the technical requirements of the RBES, a Vermont Residential Building Energy Standards Certificate must be completed, filed with the Town Clerk, and posted in the home. If a home required by law to meet the RBES does not comply, a homeowner may seek damages in court against the builder.

Municipal Role in Energy Efficiency

Although communities are unlikely to have an impact on energy consumption at the global level, they do have an impact at the local level, given their demand for and use of energy.

Town leadership can set an example for the residents by ensuring and improving energy efficiency.

Energy Committee

Bradford has an active energy committee whose mission is to promote actions that reduce greenhouse gas emissions and energy costs for the Town, its residents, and its businesses.

Working with state, local, and regional stakeholders and resources, the EC will initiate and facilitate programs that promote energy conservation, increased energy efficiency and the generation and use of clean energy. It was formed for the purpose of establishing and implementing the Town's energy goals. The work that is being done in partnership with TRORC includes conducting energy audits on municipal buildings, tracking energy use for these buildings, and providing outreach to homeowners on energy efficiency and renewable energy generation. Most importantly, an active EC can help the Town and residents save money while saving energy. The Energy Committee has been working with the Intermunicipal Energy Coordinator at TRORC since 2021.

Auditing Municipally Owned Buildings

Many towns in Vermont own buildings that are old and inefficient in many respects. For instance, old-

er buildings often have insufficient insulation, wasteful heating and cooling systems, and out-of-date lighting. These kinds of infrastructure problems result in higher energy use with the resulting cost passed onto taxpayers. Bradford has implemented energy conservation methods that have resulted in reduced fuel consumption and the Town is continually looking for opportunities to conserve.

Capital Budget Planning

Given the potential expense of energy efficiency improvements, it is essential to wisely budget Town funding to cover these costs. State statute enables communities to create a Capital Budget and Program for the purposes of planning and investing in long-range capital planning.

When planning for routine major facility investments, such as roof replacements or foundation repairs, it is important to consider making energy efficiency improvements simultaneously. 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.

Efficiency Memorandum of Understanding

In addition to reducing the energy use related to facilities, Bradford can continue to implement policies that lower energy use by Town staff or encourage greater energy efficiency. Examples include:

Energy Efficient Purchasing Policy – Bradford's Memorandum of Understanding requires the Town to consider energy efficiency 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, buildings, and other products, generally use 20%–30% less energy than required by federal standards.

Staff Policies - Towns can also implement policies that are designed to reduce wasteful energy practices. Through policy making, local governments can set a clear example for townspeople and encourage sustainable behavior that will ultimately result in both energy and financial savings.

Energy and Land Use Policy

The Vermont Municipal and Regional Planning and Development Act (24 V.S.A. Chapter 117) does not allow communities to impose land use regulations that prohibit or has the effect of prohibiting the installation of solar collectors or other renewable energy devices. However, the statute authorizes towns to adopt regulatory bylaws (such as zoning and subdivision ordinances) to implement the energy provisions contained in their Town Plan.

Zoning and subdivision bylaws should be designed to control the type and density of development. It is important to acknowledge the connection between land use, transportation, and energy when creating zoning and subdivision bylaws to ensure they encourage energy efficiency and conservation.

Encouraging high-density and diverse uses in and around existing built-up areas will lead to more compact settlement patterns, thereby minimizing travel requirements. At the same time, zoning and subdivision bylaws must be flexible enough to recognize and allow for the emergence of technological advancements which encourage decreased energy consumption, and the increased use of renewable energy.

Zoning and subdivision bylaws may contain provisions for planned unit developments (PUDs). PUDs are a group of mixed use or residential structures, pre-planned and developed on a single parcel of land. The setback frontage and density requirements of a zoning area may be varied to allow creative and energy efficient design (i.e., east-west orientation of roads to encourage southern exposure of structures, solar access protection, use of landforms or vegetation for wind breaks, and attached structures), and to encourage the construction of energy efficient buildings.

Subdivision regulations are one of the most effective tools for encouraging energy efficiency and conservation. Subdivision regulations involve Town review (through the Development Review

Board) in the design process. Because subdivision regulations govern the creation of new building lots, as well as the provision of access and other facilities and services to those lots, a community can impose requirements that a developer site their building to maximize solar gain. Likewise, subdivision regulations can require that landscaping be utilized to reduce thermal loss.

Energy and Transportation Policy

According to the 2022 Vermont Comprehensive Energy Plan, the transportation sector accounts for approximately 39% of total energy demand and approximately 60% of all fossil fuels used in Vermont.

The rural character and decentralized settlement patterns of Bradford create difficult circumstances in which to minimize the consumption of traditional fuels in the transportation sector. Nevertheless, strategies can be employed at the Bradford Town level.

Because any gains in efficiency may be at least partially offset by increases in population, it is in the Town's interest to continue to plan for and promote alternative and public transportation options such as rail, bus, vanpooling, ridesharing, walking, and bicycling. These options will not only decrease energy consumption but will also reduce the infrastructure expenditures that are associated with automobile travel. Bradford is fortunate to have access to existing rail lines and some bus service.

Another strategy to reduce the demand for transportation is to develop settlement patterns that require less travel. Concentrated settlement makes it more feasible to provide public transit, park and ride facilities, ride-share programs and similar incentives that reduce dependency on the automobile. Because transportation is such a substantial portion of local energy use, it is in the interest of the community to encourage any new developments that are proposed in Bradford to be located adjacent to existing roads. Dense residential developments should be located within or adjacent to existing village centers or within designated growth areas.

Commercial development that requires trucking and freight handling should only be located on roads which can effectively manage the size of vehicle needed.

The I-91 Park and Ride lot should be monitored as necessary to accommodate increased use of carpooling and bus transportation to accommodate all who seek to use it. Additional commuter transit including rail needs to be developed. The concentration of employment opportunities, housing, municipal and social services, the expansion of telecommunication capacity, and the increased use of local informational handouts will help to achieve this objective.

The expansion of the Park and Ride should enable further increase in its use. Bradford should continue to research and determine how to reduce municipal use of fossil fuels for its operations, including the Highway, Police, Fire, Emergency Services and Water and Sewer Departments, to produce a net energy savings. With the adoption of the Memo of Understanding, departments are encouraged to prioritize energy efficiency in new purchases, including its vehicle fleet.

NATURAL RESOURCES

NATURAL RESOURCES

Bradford's Town Center lies at the confluence of the Waits and the Connecticut Rivers. Together with surrounding steep terrain, US Interstate 91 defines the western limit of the Town Center, and the Connecticut River its eastern limit. Traditionally Bradford's economy was based on agriculture and forestry, and it served as a local center of mercantile business for smaller towns nearby.

Forests, farms, and open land define Bradford's rural character. While the Bradford community wishes to allow appropriate development, it also seeks to maintain its rural character. A landscape including open farmland and working forests attracts visitors and contributes to our tourism industry. A healthy environment enhances our quality of life. Access to natural areas for recreational use promotes physical and emotional well-being. Protection of Bradford's natural resources is vital to the Town's cultural heritage, economic stability, and quality of life.

While it is the intention of the citizens of Bradford to preserve the scenic beauty and quality of wildlife habitat in all areas of the Town, lands that the Town places exceptional value upon for scenic, wildlife, and recreational importance include:

- The ridgelines
- High elevation areas, particularly Wrights Mountain.
- Ponds, rivers, and streams as well as smaller tributaries, wetlands, vernal pools and bear and deer habitat.
- Scenic roads including I91, Route 5, Route 25, South Road, Fairground Road and Goshen Road Historic Area and historic sites outside the designated Historic Area including Goshen Church

Bradford values its ridgelines and other high elevation areas and recognizes the significant importance of these areas to both residents and migratory wildlife. Therefore, commercial and industrial development at elevations greater than 1700 feet or on ridgelines should be strictly avoided. The Town discourages land development including the construction of roads and extension of utilities at these elevations except for activities related to non-commercial recreation and forest management.

These natural resources provide economic, recreational, and aesthetic benefits to both residents and visitors. Development that would compromise these benefits is inappropriate and inconsistent with the Town's vision and goals.

General Goals

1.To ensure Bradford has access to a healthy and productive natural environment.

2.To ensure Bradford residents have access to land conserved by the Town.

3.To preserve, promote, and enhance the cultural and recreational values of Bradford and encourage their use by residents and visitors.

4.To maintain non-fragmented contiguous habitat blocks of upland forests, to provide quality wildlife habitat and to provide the ecological services of flood control, erosion prevention and water purification.

General Policies

1.It is the policy of the Town to support the Conservation Commission and the Conservation Fund.

2.It is the policy of the Town to encourage diverse recreational opportunities.

3.It is the policy of the Town to encourage efforts to conserve open, undeveloped land, wetlands, and agricultural lands.

4.It is the policy of the Town to encourage incorporating the results of the Town-wide Natural Resource Inventory (Upland Natural Communities and Wildlife Habitat – see Appendices) in land use planning.

Recommended Action

Update the Natural Resource Inventory periodically.

Water Resources Goals

1.To maintain and enhance the quality and quantity of drinking water resources.

2.To allow only sustainable use of groundwater resources by new developments.

3.To protect the public right to adequate water quality and quantity.

4.To consider surface water and groundwater impacts and effects when reviewing proposed or existing uses of land.

5.To maintain or improve surface water quality and quantity.

Water Resources Policies

1.It is the policy of the Town to review, monitor and carefully control any land use activities that may potentially threaten groundwater quality to prevent undue loss of groundwater quality.

2.It is the policy of the Town to place high priority on the maintenance and enhancement of water resources for recreation, fisheries, wildlife habitats and quality aesthetics. Water resource policy and practices should protect these uses.

3.It is the policy of the Town to ensure that withdrawal of surface and groundwater by one user should not interfere with the reasonable withdrawal of water by other users. Water is for use by the public and no single user has the right to diminish the quality or quantity for others.

4.It is the policy of the Town to prohibit high-risk uses within the municipal water source (wellhead protection area).

Water Resources Recommended Actions

1.Work with the Water and Sewer Commission to encourage water conservation.

2.Support water quality monitoring and watershed planning for the Connecticut and Waits Rivers.

3.Partner with the Water and Sewer Commission in conducting a mapping study of groundwater resources in the Town..

4.Ensure long-term protection of water resources, the Water and Sewer Commission should continue to develop a detailed protection strategy for the wellhead protection area.

Wetlands and Vernal Pools Goals

To promote land use development practices that will avoid or mitigate adverse impacts on significant wetlands.

Wetlands and Vernal Pools Policies

1.It is the policy of the Town that development or intensive land use shall not be in significant wetlands or within buffer zones to significant wetlands.

2.It is the policy of the Town that developments adjacent to wetlands should not unduly disturb wetland areas or their function. Mitigating measures to protect the function of a wetland are acceptable.

Wetlands and Vernal Pools Recommended Actions

1.To foster wetland protection, Bradford should continue to refine its zoning and subdivision regulations that contain provisions for the protection of wetlands. The Conservation Commission should work closely with the Planning Commission to develop these regulations.

2.Make readily available to the citizens of Town the wetlands inventory and the Natural Resources Inventory Reports and related maps.

3.To ensure the protection of wetlands the Town should effectively enforce existing bylaws and ordinances.

4.Notify the appropriate state officials of state wetlands and vernal pools violations.

5.Identify, map and establish protective zoning regulations for vernal pools.

Ponds Goals

To encourage the proper construction of ponds, and where feasible, improve firefighting capability and provide recreational opportunities.

Ponds Policies

It is the policy of the Town to maintain and improve at least the current level of zoning controls over the location and building of ponds to

ensure that they are developed and maintained in a manner that will not create a public hazard.

Ponds Recommended Actions

1.Evaluate whether ponds are being properly permitted and regulations properly enforced, and if necessary, take steps to correct the situation.

2.Partner with the Emergency Management Director to consider adjusting the conditions under which a permit is required for the building of a pond to include smaller ponds in Town.

3.Consider making ponds holding less than 50,000 cubic feet of water a conditionally permitted use or establish a registry in the Zoning Bylaw. With permits on file, the Town would have a record of where they have been constructed.

Riparian Buffer Goals

To maintain and enhance riparian buffers.

Riparian Buffer Policies

1.It is the policy of the Town to continue to require riparian buffers for all development adjacent to rivers and streams through the Bradford Zoning Bylaws and their enforcement.

2.It is the policy of the Town to require that riparian buffers be maintained. If banks are unstable or waters more active, the width of the buffer should be determined by stream morphology.

3.It is the policy of the Town that cutting of trees and other vegetation within a riparian buffer for views, vegetation management, recreational access, and silvicultural purposes should be limited and should ensure that trees regenerate, stumps remain with root zones intact, and a duff layer and tree canopy are maintained.

4.It is the policy of the Town to require that streamside, including riprapped areas, should be vegetated with native shrubs, trees, and grasses. For stream bank stabilization, revegetation should cover as much of the stream bank as possible. Riprap and similar retaining structures should be used only to cover the lower portion of the bank, and only when bioengineering techniques may not adequately prevent significant loss of land and/or property.

5.It is the policy of the Town that Human access points to the Connecticut and Waits Rivers and their tributaries should be managed to prevent soil erosion, loss of vegetative cover, and unnecessary disruption of riparian habitats. Foot access paths should not be unnecessarily wide, or steep (no greater than 15% slope).

Riparian Buffer Recommended Actions

1.Provide information to every new riverfront landowner to explain the special challenges of owning and managing riverfront land, including the benefits of riparian buffers and the requirements of state shore land protection laws.

2.Partner with the Zoning Administrator to distribute materials developed by the Conservation Commission to waterfront landowners who apply for a zoning permit.

3.Provide materials developed by the Conservation Commission when new deeds are recorded for waterfront properties.

Plant Communities Goals

1.To minimize the spread of invasive plant species and insect-infected trees in Bradford.

2.To slow the spread of Emerald Ash Borer

Plant Communities Policies

It is the policy of the Town to adhere to procedures recommended in the 2018 Roadside Ash Tree Survey (see Appendices).

Plant Communities Recommended Actions

1.Ensure Road crews take care when ditch cleaning to minimize the spread of invasive species such as Japanese Knotweed, Wild Chervil, Wild Parsnip and Purple Loosestrife.

2.Investigate alternative means of controlling invasive species other than the use of herbicides.

3.Develop and/or distribute materials to educate landowners about invasive plant species identification and control.

4.Adequately fund the Roadside Ash Tree Removal Fund to remove trees prior to them becoming a hazard.

Forestry Goals

1.To encourage the conservation and wise management of forests within the Town.

2.To encourage the wise management of public trees in the village with the guidance of the Tree Warden and Conservation Commission.

3.To encourage forest lands to maintain and improve forest blocks and habitat connectors.

Forestry Policies

1.It is the policy of the Town to encourage foresters and loggers to adhere to best management practices for maintaining water quality and minimizing soil erosion on logging jobs.

2.It is the policy of the Town to encourage owners of forest land to enroll in the current use program which will aid in getting the maximum value from their forest, while enhancing wildlife habitat.

3.It is the policy of the Town to support landowners working to reduce the fragmentation of important forest blocks and habitat connectors (e.g., through enrollment in the Current Use Program, conservation efforts or other actions a landowner can undertake.)

4. It is the policy of the Town that wherever practical, development shall be designed and sited in a manner to preserve contiguous areas of active or potential wildlife habitat or in corridors connecting habitats.

5.It is the policy of the Town to strongly discourage fragmentation of forest blocks for roads and other development.

6.It is the policy of the Town that development of interior forest blocks should be located on the edge of such blocks to reduce impacts of fragmentation.

7.It is the policy of the Town to encourage and support the manufacture and marketing of value-added forestry products.

Forestry Recommended Actions

1. Consider designating "conservation areas" within the Zoning Bylaw to ensure that large tracts of forest located on steep slopes have minimal development.

2.Implement the recommendations in the 2006 Tree Inventory and plant and maintain trees within the village.

3.Provide the Town Clerk with copies of the State's Best Management Practices and information about the Current Use Program and make it available to the public.

4.Ensure that zoning and subdivision bylaw deter forest fragmentation. Consider expanding the Low Density Residential to include additional forest blocks.

5.Maintain contact with Vermont Land Trust, Upper Valley Land Trust and owners of significant properties in areas identified as forest blocks.

Agriculture Goals

1.To encourage the growth of agriculture while protecting the working landscape, human health, animal health, plant health, consumers, and the environment.

2.To encourage the growth, marketing, and consumption of local foods.

3.To promote self-sufficiency and sustainability through agriculture.

4.To encourage the conservation and wise use and management of the Town's agricultural resources.

5.To support the creation and maintenance of a physical, social, regulatory, and fiscal environment that encourages entrepreneurism in agricultural activities including those that add value to the region's agricultural products.

6.To support programs that educate citizens on the principles of sustainability.

7.To discourage fragmentation of agricultural and forested lands.

Agriculture Policies

1.It is the policy of the Town to support agriculture and the production of locally grown food if it is conducted at a scale consistent with historical agricultural practices in Bradford.

2.It is the policy of the Town to work with the Vermont Agency of Agriculture Food and Markets and other agencies and groups to develop viable farming opportunities in Town.

3.It is the policy of the Town to encourage the continuation of Current Use Taxation, tax stabilization and other forms of economic reimbursement to keep agricultural lands undeveloped.

4.It is the policy of the Town to support the use of public or private funds for the purchase of development rights or fee purchase of agricultural land for conservation purposes by willing landowners.

5.It is the policy of the Town that when agricultural lands are developed for non-agricultural purposes, the preservation of other prime agricultural lands shall be a priority before mitigation is considered elsewhere.

6.It is the policy of the Town to encourage residential and other non-agricultural uses or structures be sited on the soils least productive for agricultural use.

7.It is the policy of the Town to encourage clustering of dwelling units and accessory buildings or structures and proposed lots for development or sale so that they conserve the maximum feasible amount of farm, pasture or woodland and discourage fragmentation of agricultural and forested lands.

8.It is the policy of the Town to support local marketing and value added agricultural and forest products.

9.It is the policy of the Town to encourage, where appropriate, the use of carbon credits and other sustainability schemes to support local agricultural activities.

Agriculture-Recommended Action

Review and improve zoning and subdivision bylaws to reduce fragmentation by enabling clustering of dwelling units and accessory buildings.

Wildlife Resources Goals

1.To maintain or enhance the natural diversity and balance of wildlife, including natural predators and migratory routes of fish and wildlife..

2.To re-establish stable populations of endangered or threatened wildlife in appropriate habitat areas.

3.To allow ecologically sound intensities of hunting and trapping.

Wildlife Resources-Policies

1.It is the policy of the Town to encourage long-term protection of major habitats through conservation easements, land purchases, leases, and other incentives.

2.It is the policy of the Town to discourage uses that would degrade deer wintering areas.

3.It is the policy of the Town to discourage fragmentation of wildlife habitat. Development other than isolated houses and camps shall be situated to preserve continuous areas of wildlife habitat and create and maintain links between such areas.

4.It is the policy of the Town to give preference to development that utilizes existing roads and field lines.

Wildlife Resources Recommended Action

1.Encourage owners of necessary habitat for threatened or endangered species to contact the Vermont Department of Fish and Wildlife for assistance in developing management plans for these sites.

2.Identify wildlife corridors in Bradford for the purposes of revising the Town's Zoning Bylaw to protect wildlife habitat.

3.Establish beaver confusers/diverters to protect the river beavers along the Connecticut River and Waits River and at any place the beavers locate where they may be of harm to the community.

4.Continue to update the deer wintering overlay area in the Town's Zoning Bylaw.

5.Encourage planting for migratory bird populations and investigate offering incentives to farmers for maintaining crops for this purpose.

Mineral Resources Goals

To support extraction and processing of mineral resources only where such activities benefit the public and are appropriately managed.

Mineral Resources Policies

1.It is the policy of the Town that existing and proposed mineral extraction and processing facilities shall be planned, constructed, and managed so as not to adversely impact existing or planned uses within the vicinity of the project site.

2.It is the policy of the Town to not interfere significantly with the function and safety of existing road systems serving the project site.

3.It is the policy of the Town to minimize any adverse effects on water quality, fish and wildlife habitats, view sheds and adjacent land uses.

4.It is the policy of the Town to ensure reclamation and revegetation of sites following extraction.

5.It is the policy of the Town to minimize noise and concussive impacts of extraction and mineral processing on adjacent uses including residential areas.

Mineral Resources-Recommended Action

Review and improve zoning bylaws so that mineral resource goals and policies are followed.

Scenic and Historic Resources Goals

1.To preserve the historic assets of the Bradford Village Historic area.

2.To preserve outstanding scenic areas.

Scenic and Historic Resources Policies

1.It is the policy of the Town to preserve scenic areas.

2.It is the policy of the Town to encourage land development planned to minimize the unnecessary loss of historic or archeological resources determined to be of local, state, or federal significance.

3.It is the policy of the Town when land adjacent to areas of historic significance is developed, to encourage a design that fits the character of the area.

4.It is the policy of the Town to encourage preservation and the adaptive reuse of historic buildings complementary to the distinguishing characteristics of the structure or neighborhood.

5.It is the policy of the Town to avoid undue impacts on significant historic or archeological resources when conducting public improvements such as road rebuilding and utility construction.

6.It is the policy of the Town to preserve the view of the downtown from the crest of Bliss Hill.

Scenic and Historic Resources Recommended Actions

1.Investigate the feasibility of designating exceptionally scenic Town roads as Scenic Highways under Vermont's Scenic Highway Law.

2.Develop an inventory of all important historic, archeological, scenic, and cultural resources in Town in partnership with the Bradford Historical Society. While it is recognized that a portion of the village is part of the National Register of Historic Places and is a Historic District Overlay in current zoning, there are other sites warranting evaluation. Following completion of the inventory, implementation measures to conserve exceptional resources should be explored.

3.Consider establishing design control measures within the Zoning Bylaw to ensure that the Route 5 and 25B corridors entering the Historic Downtown maintain their historic character.

Soils and Topography Policies

1.It is the policy of the Town to discourage development on slopes exceeding 15%.

2.It is the policy of the Town to employ strict erosion control plans when development is considered in areas more than 10% slope.

3.It is the policy of the Town to require that installation of sub-surface sewage disposal systems follow state and local regulations

4.It is the policy of the Town to encourage forestry and conservation uses above other uses in upland areas, given their severe limitations for development.

Conservation Commission

Bradford's policies toward land use can have direct effects on natural and cultural resources. Uncontrolled development can upset the balance of nature. It is therefore essential for planners to consider how development will affect natural resources and to protect them whenever possible. To help guide this effort, the Town of Bradford has a Conservation Commission which has been active at least since 1994 under 24 V.S.A Chapter 118. One primary task of the Commission is to administer the Bradford Conservation Fund which was established in 2002 The purpose of the Conservation Fund is:

- To maintain Bradford's rural character, aesthetics, and scenic values.
- To educate the public on the value of conserving our natural resources and rural heritage.
- To stimulate the local economy through promotion and protection of our natural resources.
- To promote public access to woodlands, wetlands, and open spaces.
- To promote a working landscape by promoting local farm and forest products.
- To minimize conversion of Bradford's best farm and forestland to nonagricultural and non-forestry uses.
- To enhance wildlife habitat, water quality and recreational resources in Bradford.
- To preserve open spaces.

The Conservation Commission released the report in 2014 of the Bradford Natural Resources Inventory, entitled "Upland Natural Communities and Wildlife Habitat" (See Appendix). The recommendations have guided land use decisions in the Town, as follows:

- Large Contiguous Habitat Units (CHUs) provide critical habitat for large, wide-ranging wildlife.
- Forest fragmentation in the larger CHUs should be discouraged.
- Roads, housing, and most other human activities should be restricted to the periphery of these units.
- Roads built for timber harvesting should be allowed to regenerate when logging activities are completed in an area.

Bears require extensive remote areas to meet their yearly habitat requirements. Large areas without roads must be preserved to maintain sustainable populations.

Mapped beech and oak stands and forested wetlands utilized by bears should be protected from development activities with buffers ¼ mile in extent.

Deer winter habitats are critical to the survival and maintenance of deer populations in the Bradford region. Deer winter habitats identified in this study should be protected from human activities by a three-hundred-foot buffer.

Functioning travel corridors allow for the movement of wildlife across the landscape. Recommendations include taking steps to conserve the most important travel corridors by creating isolation buffers around them to maintain wildlife movement patterns. Limit development to the outside edge of corridors and encourage screening and other actions to limit negative effects of development in or near corridors. Improve vegetative buffer conditions along rivers and streams to provide protected movement opportunities for wildlife.

Water Resources Background

Water resources include aquifers (groundwater) and surface waters. Sustainable yields of quality water are necessary to the life and livelihood of citizens of Bradford. The continued availability of clean, high-quality drinking water is a concern for everyone.

Public Water System

The Town of Bradford owns and operates a municipal water supply and distribution system. Residents and businesses outside the service area depend on private wells and springs for their water supply. The Town also owns old wellheads on the

Upper Plain near the railroad tracks, but these are for emergency service only.

The protection of groundwater supplying the Town is critical, as this is its sole source of drinking water. Because the Town's wells are near interstate 91, accidental spills and discharges of petroleum products and other toxic and hazardous materials are a critical concern. Protection of the wellhead area and its related aquifer from contamination is critical.

The engineers who oversaw the 2012 water project discovered that the Town's well field is overlain by a thick clay layer, which should preclude downward migration of hazardous contaminants. Nonetheless, protection of the Town's water source should remain a high priority. The Water & Sewer Commission is searching for another (secondary/backup) source for municipal water.

Wetlands, Vernal Pools, and Forested Bear Wetlands Background

Wetlands and vernal pools are ecologically fragile areas important to the quality and quantity of water resources.

The Vermont Water Resources Board estimates that less than 5% of the surface area of Vermont is covered by wetlands. Despite the seemingly inconsequential land area they cover, wetlands and vernal pools serve a wide variety of functions beneficial to our health, safety and welfare including the retention of stormwater runoff, the improvement of surface water quality, the filtration of sediments and pollutants, the provision of habitats for plants, fish and other wildlife, and contribution to the beauty of the rural landscape.

In 1986, Vermont adopted legislation for the protection and management of wetlands [10 V.S.A., Chapter 37]. Determination of whether a wetland merits protection is based on an evaluation of the extent to which it serves the general functions outlined above.

By statute, if land development will have a negative impact on a protected wetland, development cannot begin unless the Vermont Agency of Natural Resources first grants a Conditional Use Determination (CUD). If granted, these CUDs often attach conditions to mitigate negative developmental impacts on wetlands.

The most significant wetlands in Bradford have been mapped and are included as part of the National Wetlands Inventory (NWI) prepared by the U.S. Fish and Wildlife Service. However, many smaller wetlands are not included in the NWI.

In 2005, the Conservation Commission conducted a local wetlands inventory. The inventory identified the largest wetlands to be those located along the Connecticut River and its confluence with the Waits River. These wetlands, plus those determined in the NWI have been delineated, and are included in this Plan.

In Bradford, final approvals cannot be granted for projects involving wetlands unless the Agency of Natural Resources has first had an opportunity to evaluate the effect of the project on the wetland [24 V.S.A., Section 4409]. Future investigations of wetlands within

Bradford may identify additional areas needing protection.

Vernal pools are temporary pools of water formed in the spring from melt water collected in low depressions in the landscape. Most dry out in the hottest months of summer, and refill in the autumn. Because they are free of fish, they provide shelter for the larvae of insects, frogs, and salamanders. Adults often return to the same pools in which they were born when they are ready to lay their eggs.

Vernal pools offer many of the same benefits as wetlands, but they are more difficult to locate. Most seasonal pools are not identified on the Vermont Significant Wetland Inventory maps and therefore are not initially protected by state and federal regulations. Vernal pools provide important amphibian habitat, and because of this function they are protected under the Vermont Water Quality Standards (Vermont Water Resources Board, adopted June 10, 1999).

Significant Wetland Resources

The 2005 wetlands inventory highlighted several significant wetland resources and provided recommendations for management of the areas. See Map 6 – VT Significant Wetland Inventory.

Marshes at the Mouth of the Waits River – At the confluence of the Waits River with the Connecticut River are seven wetlands. Taken together, these form the largest wetland complex in the Town of Bradford, nearly sixty-five acres. Given the nature of these wetlands and their position in the landscape, they significantly lessen the effects of spring floods by diffusing and retaining floodwater. They also filter nutrients and contaminants from nearby agricultural fields and the golf course. These wetlands should continue to be protected by enforcing riparian buffer regulations and discouraging the development of properties in the floodplain that might harm them.

Vernal Pool at the North portion of Low St. John Forest – Vernal pools function as significant habitat for a substantial number of plant and animal species. The conservation of vernal pools and their surrounding habitat is important for the species that rely on them.

Successful conservation of vernal pools extends beyond the pool's edge into the surrounding forest, for the life cycles of the animals inhabiting vernal pools require undisturbed forest habitat.

The 2015 Bradford Natural Resources Inventory includes a map of potential bear wetlands in Bradford and defines them as follows: "Black bear utilize a wide variety of wetlands during the spring and summer months. Forested, shrubby, beaver-flow wetlands, and forested seeps are sought out for the flush of early vegetation that often grows in these environments. In the early spring, wetlands with ground-water discharge promote an early growth of leafy green vegetation at a time when the trees are still barren of nutritious buds and new leaves. Black bears (as well as deer and turkeys among other animals) will utilize this food source and search out plant roots, grasses, sedges, and ants in these environments.

Throughout the Bradford area forested seeps are probably the most heavily utilized wetlands by bear. In many locations these seep wetlands are in remote areas relatively close to bear denning areas far away from humans. As such, they warrant special protection for their wildlife value.

Ponds

There are many small ponds in Bradford that are important for agriculture and fire protection. While ponds offer many aesthetic benefits, they must be constructed properly to prevent hazard to residents and the Town's infrastructure. During a substantial rain event, a poorly designed or maintained dam can overflow or collapse, creating a dangerous flood hazard.

At present, under Bradford's zoning regulations, dams, ponds, impoundments, and similar structures capable of impounding more than 50,000 cubic feet of water can only be constructed, or otherwise altered after an approval by the Development Review Board and a Zoning Permit has been issued.

The Bradford Emergency Coordinator has indicated that the ponds most likely to pose a flood threat are those with dams that can be breached. Dug ponds, which have no dam, are less likely to fail. The present regulations are consistent with state statute, but the 50,000 cubic feet of water permit threshold is larger than most private ponds in Bradford. Because of the potential hazards represented by private ponds, it is essential that regulations continue to be enforced and consideration given to decreasing the threshold for permitting should be discussed.

Riparian Buffers

Riparian buffers are strips of bankside vegetation along waterways that provide a transition zone between water and land use. Construction or development along shorelines, or removal or disruption of vegetation within these areas can create increased water pollution, higher water temperatures, destabilization of banks, higher soil erosion rates and loss of fish or wildlife habitats.

Plant Communities

In Bradford, there are a broad range of plant communities that exist in older forests, early successional forests, open fields, and valley floors. The diversity of plant communities indicates a healthy, thriving ecosystem. Plant communities are strongly affected by their environment.

They respond to changes in soil structure and chemistry, water availability, and climate. Unmanaged development can damage plant communities, which in turn will affect animal populations and may injure the overall ecosystem. Good management practices, such as maintaining buffer areas, protecting against silting, and locating development outside of sensitive habitats are some ways to keep plant communities healthy.

Invasive species, those that spread from human settings into the wild, are a growing problem in Vermont. Once established in the wild, invasive species may displace native species, throwing ecosystems out of alignment. For instance, Norway maples planted as landscape trees reproduce prolifically and can suppress the natural regeneration of native trees such as sugar maple. Federal and State governments have guidelines for managing invasive species, and there are resources available to interested parties through the University of Vermont and private organizations.

Between 2002 and 2004, the Conservation Commission conducted a loosestrife eradication program. Additionally, volunteers joined together to attempt to eradicate Japanese Knotweed in Boch Park.

A Roadside Ash Tree Inventory (Appendix) was completed in 2021 and should be used as guide for removal of these trees prior to infestation.

Forestry

Large, continuous areas of forest help sustain wildlife. About 80% of Bradford is forested. For some people, forestry is a source of income, and for many others, forests are an endless source of recreation and natural beauty. Bradford should manage its forest assets sustainably; both for the health of the forest itself, and to ensure that Bradford's forests will thrive for the near future.

Besides their unique habitat functions, large forest blocks also enable forestry to continue as a vital part of the local economy and energy supply. Additionally, forests sequester carbon from carbon dioxide in the air, performing a needed service.

Forests owned by the Town of Bradford cover 517 acres. Private residents have conserved over one thousand acres of forested land. Currently 4,360 acres of forested land in Bradford have been enrolled in Vermont's Current Use Program.

Trees outside of the forested landscape are also important. The Bradford Conservation Commission completed a street tree inventory that identified potential hazard trees needing removal and created a management plan for the Town's public trees.

Forest Blocks

Forest blocks are areas of contiguous forest and other natural communities and habitats, such as wetlands, ponds, and cliffs, which are unfragmented by roads, development, or agriculture. With intense development pressures headed this way, it is vital that Bradford's intact forest blocks are protected from fragmentation.

Interior Forest Blocks provide many ecological and biological functions critical for protecting native plants and animal species. Preserving large forest blocks supports natural ecological processes such as predator-prey interactions; helping to maintain air and water quality and flood resilience; supporting the biological needs of many plant and animal species, particularly those that are wide-ranging animals by allowing access to important feeding habitat, reproduction, and genetic exchange. In the next century, large, topographically diverse forest blocks will allow many species of plants and animals to shift to suitable habitat within a forest block or between forest blocks in response to climate change without having to cross developed areas to other forest blocks.

When forest land is broken up into smaller parcels from parcellation and subdivision, the result is typically an increase in the number of parcels with housing and infrastructure such as roads, septic and utility lines. When this development occurs, it "fragments" the landscape and can negatively affect plant and animal species, wildlife habitat, water quality, recreational access and the ability of forests to sequester and store carbon from the atmosphere. It can also affect the contiguous ownership and management of forest parcels, and thus the viability of large tracts of forestland to

contribute to Vermont's rural economy and working landscape.

The Bio Finder Map in the appendix identifies the key forest blocks in Bradford. The Low Density Residential Area with the larger minimum acreage and other restrictions is in two of the key forest blocks.

As a next step the Planning Commission in cooperation with the Conservation Commission plans to review this information to determine if additional Low Density Residential Areas should be identified and how the Zoning and Subdivision Bylaws can be improved to protect these ecologically critical areas while enabling ecologically appropriate development.

Agriculture

For the past several decades, the perception has been that Vermont is losing its farms. In fact, this is not the case. Vermont has been losing *dairy* farms at a rapid rate (although cow numbers have remained constant); however, other types of farming have replaced those farms. Three quarters of Vermont farms are diversified farms.

Though federal law recognizes the importance of farmland and farmland protection, local planning and zoning regulations must also address conflicts arising between expanding development and successful farming.

The working landscape gives Vermont its beauty, provides open space for wildlife habitat, and connects people to the land. To continue to receive the benefits farming has to offer, a community must encourage farming. In the 2007 Town Plan survey, respondents voiced a fervent desire to protect agriculture in Bradford.

Agriculture and Land Use Regulation

Development on active farmland immediately eliminates future agricultural productivity on the developed tract and affects related benefits of the working landscape. Restoring the agricultural viability of a residential subdivision is impractical because of the enormous expense.

Conservation Easements

Conservation easements are a common method used to preserve the working landscape. 1,164 acres of farmland in Bradford are conserved along with 1,000 acres of forest land.

Wildlife Resources

Bradford's fields, forests, wetlands, and waterways are home to a diverse and healthy wildlife population that includes bear, bobcat, moose, deer, otter, geese, ducks, turkeys, and mink. Some areas in Bradford provide critical wildlife habitat, including wetlands, deer wintering areas, bear mast stands, and edge habitats (for instance, the edge between a forest and a field). Planning for development or logging in and around these critical habitats should consider the needs of wildlife. Managing a particular species is less desirable than managing the entire ecosystem supporting it. Wildlife provides citizens of Bradford with direct and indirect livelihoods from hunting, fishing, trapping, and tourism.

Wintering areas are an important habitat requirement for deer during the winter when snow depth threatens their survival. Typically, these areas are found in mature softwood stands, at low elevations or along stream beds where snow is not as deep and there is good cover. Southerly facing slopes may be utilized even in areas of limited softwood cover. Bradford's 2015 Natural Resources Inventory Report contains maps of the active deer yards and deer wintering areas that would need protection from development.

Most important when considering development and its impact on wildlife is the concept of habitat fragmentation. "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 eliminates others (1)

To mitigate the effects of human population growth and land consumption, many scientists and

conservationists recommend the establishment of protected corridors connecting patches of important wildlife habitat. These corridors allow migration between different forest blocks and help restore otherwise fractured ecosystems.

Mineral Resources

Maintenance of adequate quantities of gravel, sand, crushed rock, and other materials is necessary for the development industry as well as state and local highways. Despite this, public and private interests are often in conflict over use of the resource. It is in the interest of Bradford's community to use these resources so that such uses do not significantly inhibit or conflict with other existing or planned land uses, are not in conflict with other stated goals in this Plan, and do not adversely affect neighboring properties or natural resources.

Scenic and Historic Resources

The Town of Bradford is blessed with a combination of fascinating history and outstanding scenic beauty. These assets have enormous social and economic benefits. The dominant scenic landscape features are the Connecticut River Valley, the Waits River Valley, the views of the White Mountains, and the views from Wrights Mountain.

Bradford contains many fine examples of 19th century architecture. The United States Department of the Interior accepted the Bradford Village Historic Area for listing in the National Register of Historic Places in 1975. A keen interest in the restoration of many of Bradford's attractive old buildings took place during the 1976 bicentennial celebration and continues to this day.

Soils and Topography

Soil characteristics and topography are primary factors influencing or limiting land development. Shallow soils, wet or poorly drained soils, or unstable soils, are critical factors in determining the type of land use that is most appropriate for an area. Steep slopes are more difficult to engineer for buildings, highways, and water disposal systems, and oftentimes are not cost effective; they can require extensive measures to overcome their environmental limitations. Upland areas generally have poor soils for development and are very steep; they are better suited for forestry and wildlife purposes. Upland areas are generally remote from public services and good public roads because the severe limitations do not warrant those investments.

FLOOD RESILIENCE

FLOOD RESILIENCE

Goals

1.To maintain large tracts of non-fragmented upland forest to slow, absorb, and clean rainwater and storm water runoff before it reaches land and streams below.

2.To ensure no net loss of flood storage capacity.

3.To enable Bradford to recover from flooding quickly and in a manner that improves flood resilience.

4.To use sound planning practices to address flood risks and to protect citizens, property, economy, and natural resources.

5.To enhance and maintain use of flood hazard areas and floodways as open space, passive recreation, or agricultural land that do not have adverse impact on flood retention or habitat.

6.To protect municipal infrastructure and buildings from potential flood damage.

7.To encourage limited activities in riparian buffers to reduce risk of flooding and fluvial erosion.

8.To reduce repetitive losses through flood-proofing, elevation and buyouts.

Policies

1.It is the policy of the Town that preferred uses for flood hazard areas shall be open spaces, green belts, and non-commercial recreation or agriculture.

2.It is the policy of the Town that land development (including filling or removal of earth or rock) should be strongly discouraged within the 100-year floodplain or the special flood hazard areas which would result in net loss of flood storage, increased, or diverted flood levels, or increased risk to adjacent areas, citizens, and businesses.

3.It is the policy of the Town to allow utilities or facilities serving existing development (e.g., water lines, electrical service, waste disposal systems, roads, and bridges) to be located within flood hazard areas only when more resilient options are not feasible, and then only provided that these utilities or facilities are relatively protected from flooding damage.

4.It is the policy of the Town to extend the limits of the flood hazard area in the Zoning Bylaw to areas identified as at risk to flood erosion.

5.It is the policy of the Town to prevent development or intensive land uses from locating in Class I or Class II wetlands (See Map 6 “Wetlands, Bradford, VT” on file in the Town Office).

6.It is the policy of the Town to require that developments, and their associated stormwater discharges, adjacent to wetlands shall not cause undue disturbance to wetland areas. Maintenance of naturally vegetated buffer strips between a wetland and a project site is strongly encouraged to prevent ground water pollution and direct discharges into a wetland.

7.It is the policy of the Town to encourage natural areas, non-structural outdoor recreational and agricultural uses as the preferred land uses within floodplains.

8.It is the policy of the Town to protect public and community water supply watersheds by limiting development to low densities and by encouraging forest and agricultural best management practices including high standards for erosion control and measures to minimize runoff.

9.It is the policy of the Town to encourage the preservation of large tracts of upland forests that provide ecological services of flood control, thus providing added protection to the low-lying areas of Bradford.

10.It is the policy of the Town to discourage commercial, industrial, and residential uses within ANR’s mapped river corridor areas outside of Bradford’s Town Center. (CBD, LP, VC and RSD)

11.It is the policy of the Town that new buildings within Bradford’s mapped floodways shall be prohibited (except development exempted by state law such as agriculture).

12.It is the policy of the Town to support moving or abandoning roads when there are more cost-effective solutions or other routes.

13.It is the policy of the Town to only re-build/install culverts and bridges that are designed at least to VTrans Hydraulics Manual and ANR Stream Alteration Standards.

14.It is the policy of the Town that new Town emergency services, wastewater treatment plants, power substations, and municipal buildings shall not be built in Special Flood Hazard Areas unless flood-proofed or elevated to at least two feet above the base flood elevation and designed to withstand erosion risk.

15.It is the policy of the Town that vegetated buffer strips should be maintained in riparian zones surrounding streams and rivers and that they be consistent with state riparian buffer guidelines. Rock riprap and retaining walls should only be used to the extent necessary and when bioengineering techniques may not be adequate to prevent significant loss of land or property.

16.It is the policy of the Town that upland forests and watersheds should be maintained predominately in forest use to ensure high quality valley streams and to ensure that flood flows are absorbed.

17.It is the policy of the Town that emergency planning for flood response and recovery is encouraged.

Recommended Actions

1.To work with TRORC and Vermont Emergency Management to ensure that their current flood hazard area requirements meet national standards.

2.To strongly consider excluding all new buildings within the 100-year floodplain or special flood hazard area in the zoning bylaw and/or the flood bylaw.

3.To take steps to correct or replace undersized water passageways or culverts that are at risk of flooding or limit fish and amphibian passage.

4.To take steps to reinforce stream banks adjacent to roadways at risk of significant erosion from seasonal flooding.

5.To consider modifying the existing ordinance to better address control of the storage of junk, garbage, or other materials which could be hazardous during a flood event, in areas identified as special flood hazard.

6.To work with the Regional Planning Commission to strengthen the Town's Flood Hazard Bylaws to mitigate risks to public safety, critical infrastructure, historic structures and municipal investments from inundation and erosion.

7.To work with VTrans and the Regional Planning Commission on advocating for and improving the flood capabilities of state and Town-owned transportation infrastructure.

8.To continue working to develop mitigation plans, and emergency preparedness and recovery procedures from flooding.

9.To identify and prioritized in concert with the ANR River Management Section and the Regional Planning Commission for mitigation actions such as elevation/relocation or purchase and demolition existing homes and businesses at serious risk of flood damage.

10.To add areas not designated in either FEMA's maps or in VT ANR's maps, but which are flooded during a weather event to local flood regulations.

11.To work to incorporate Watershed-level planning with assistance from the Regional Commission to evaluate natural and constructed flood storage options upstream of existing areas of concentrated development that are at risk of flooding.

12.To work with ANR, the Regional Planning Commission and landowners to lessen flood risk by restoring natural channel functions where appropriate.

13.To adopt road and bridge standards to the 50- or 100-year storm level for identified critical transportation routes.

14. To periodically review and update as needed the Bradford Flood Hazard Area Bylaw.

Flood Resilience and Floodplains and Flood Hazard Areas

Floods are sporadic, inevitable, and uncontrollable natural events. It is in the public interest to plan

for floods and devise land use strategies that will protect land adjacent to water courses to minimize risks to public health, safety, and property. According to the U.S. Global Change Research Program, changes in climate may result in increased extreme weather events, making it even more imperative to use proper land use planning to reduce exposure to flood damage.

According to TRORC, Bradford has approximately 850 acres in flood plain, eighty-one of which are in floodways (the deepest, fastest-flowing areas in a flood). Approximately 4% of the Town's area is in flood plain. Less than 1% may be in the developable area of the flood plain (not including wetlands). Bradford may have some areas of unmapped flood risk. There are ten residences, eleven commercial/public buildings in the flood plain and ten flood insurance policies insuring $2.7 million.

Types of Flooding

There are two types of flooding that impact communities in the state of Vermont—flooding caused by inundation and flash flooding.

Inundation flooding occurs when rainfall over an extended period and over an extended area of the river's basin leads to flooding along major rivers, inundating previously dry areas.

Flash flooding occurs when heavy precipitation falls on the land over a brief period. Precipitation falls so quickly that the soil is unable to absorb it and infiltrate it into the ground, leading to surface runoff. The quick-moving runoff collects in the lowest channel in an area—upland streams, in small tributaries, and in ditches—and the water level rises quickly and moves further downstream.. Due to the velocity of the water, a flash flood can move large boulders, trees, cars, or even houses.

In Vermont, most flood-related damage is caused by flash flooding and fluvial erosion (erosion of stream banks). Due to the topography, Bradford is vulnerable to flash flooding and fluvial erosion.

Flood Hazard and Fluvial Erosion Hazard Areas in Town Flood Hazard Areas

There are two sets of official maps which can govern development in the floodplain in Vermont. They are the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs) and VT Agency of Natural Resource's River corridor area maps. The FIRMs show the floodplain that FEMA has calculated which would be covered by water in a 1% chance annual inundation event, also referred to as the "100-year flood" or base flood. This area of inundation is called the Special Flood Hazard Area (SFHA). FIRMs may also show expected base flood elevations (BFEs) and floodways (smaller areas that carry more current). FIRMS are only prepared for larger streams and rivers. Bradford has areas of mapped flood risk by FEMA. Recent studies have shown that a sizable portion of flood damages in Vermont occur outside of the FEMA mapped areas along smaller upland streams, as well as along road drainage systems that fail to convey the amount of water they are receiving. Since FEMA maps are only concerned with inundation, and these other areas are at risk from flash flooding and erosion, these areas are often not recognized as being flood prone. Property owners in such areas outside of SFHAs are not required to have flood insurance. Flash flooding in these reaches can be extremely erosive, causing damage to road infrastructure and to topographic features including stream beds and the sides of hills and mountains, and creating landslide risk. The presence of undersized or blocked culverts can lead to further erosion and stream bank/mountainside undercutting. Change in these areas may be gradual or sudden. Furthermore, precipitation trend analyses suggest that intense, local storms are occurring more frequently.

Vermont ANR's river corridor maps will show the area needed to address these erosion hazard areas, which may be inside of FEMA-mapped areas, or extend outside of this area. In these areas, the lateral movement of the river and the associated erosion is more of a threat than inundation by floodwaters. Elevation or flood proofing alone may not be protective of structures in these areas as erosion can undermine structure. Vermont ANR is issued statewide river corridor maps in 2014.

Flood Hazard Regulations

The Town has a separate bylaw, Flood Hazard Area Bylaw, which includes flood regulations which prohibit new development in the Special Flood Hazard Area and the floodway. This bylaw was developed with assistance by TRORC and approved in 2014..

Promoting Flood Resilience Flood Hazard Regulation

Bradford's adopted Flood Hazard Area Bylaw set the minimum development standards allowed by the NFIP. To ensure the safety of the public and to protect against the loss of life and property in the Flood Hazard Area, and to access a larger portion of the disaster funds available through the Emergency Relief Assistance Fund, the Planning Commission could create more stringent regulations. Any updates to the Flood Hazard Bylaws that were more restrictive than they are now would apply only to new development; existing development would be grandfathered and could continue to operate within the area.

While no changes to the Flood Hazard Bylaws are required, it should be recognized that state disaster funding increases with the level of regulation a community applies. Strategies to improve the strength of the flood hazard ordinance (and improve flood resiliency) could include:

- **Prohibition on New Development** in the floodplain. This is the best way to avoid future damages from extreme events but it is also the most extreme way.
- **Prohibition of Specific Types of Development** Decisions on which types of uses to prohibit are best made with substantial citizen input with considerations for what will most substantially reduce risks to lives and property.
- **Increasing Standards** –These could include a requirement that structures be elevated higher than the minimum standards required by the NFIP (one foot above base flood elevation) and/or more specific requirements for tying down structures or for making them more capable of allowing floodwater to pass through them.
- **Create River Corridor Protection Area** – This can extend regulated areas beyond the mapped flood hazard areas. Often this River Corridor Protection Area uses fluvial erosion hazard data as part of its basis but can also include simple setbacks from rivers in all parts of the community to deter development in areas that may erode in the event of severe flooding.

Future revisions to the Bradford Flood Hazard Bylaw should include input from the community regarding the level of regulation they believe is necessary to protect citizens and their buildings from severe flood hazard events. Provided that all parts of the Flood Hazard Bylaw meet the minimum requirements of the NFIP, communities have a broad range of flexibility in which to regulate the flood hazard area.

Non-regulatory approaches

Easements - Bradford could pursue riparian easements to protect floodplain from development and preserve flood storage.

Home/Property Buyouts - The home/property buyout process has both positive and negative impacts on a town and the community at large.

However, while the buyout process of an at-risk home makes a community less vulnerable to flooding, there is an inherent conflict between home buyouts and the tax and housing base of a town. This situation may present challenges to the town in the future.

The buyout of homes at high-risk of flood damage is a key step in improving the resilience of a town and community to flood damage. If a town's home buyouts have significantly impacted the housing base, it is important that the town have a thoughtful and creative approach to rebuilding its housing base that will maintain its improved flood resilience and conform to the town's future land use visions or settlement patterns.

Culvert Maintenance – Adequate culverts are critical to reducing the impact of heavy rains and snow melt. Several culverts have been replaced or upgraded since 2011. To improve the flow of floodwater through the Town, Bradford upgraded culverts on several roads in the last few years.

The last official culvert inventory was completed for the Town of Bradford several years ago. Bradford routinely updates their culvert inventory with newly created and repaired culvert listings. The process of upgrading culverts is ongoing.

TRANSPORTATION

TRANSPORTATION

Land use, energy, and transportation are related. Land use, both within and outside Bradford's borders, drives the need for improvements to the transportation system. At the same time, local land use goals must be facilitated in part by providing the necessary transportation facilities to accommodate growth where growth is desired. In addition, a given land use can have vastly different impacts on the transportation system depending on how it is sited and designed. Land use and transportation are both linked to the Town's economic well-being.

Poorly planned land use patterns increase transportation costs and the tax rate, whereas well planned development can add to the tax base of the Town, providing additional funds for the transportation system.

Goals

To provide and maintain a safe, energy efficient, and cost-effective transportation system integrating all modes of travel (auto, pedestrian, bicycle, and mass transit) and meeting the needs of the public in a manner consistent with the other goals, policies, and recommendations of this Town Plan.

Policies

1.It is the policy of the Town that land development in Bradford on the State and Federal routes must be planned to be compatible with all modes of transportation discussed in this chapter. At the same time, the State's plans should take the Town's concerns into account.

2.It is the policy of the Town to focus its limited funds on preserving the existing transportation system and making necessary improvements for the general safety and welfare of the traveling public.

3.It is the policy of the Town to consider public input prior to a decision to substantially change the maintenance level, surface treatment, or class of a Town road.

4.It is the policy of the Town, when determining which roads to pave (or remove pavement from) and when, to evaluate traffic volume and maintenance costs against other factors, such as the up-front cost of paving and base improvements that may be necessary to support a paved surface and the potential quality-of-life impacts to residents.

5.It is the policy of the Town that expenditures for bridge maintenance and improvement projects should be based on a detailed survey of bridge conditions followed by a long-range plan for rehabilitation and replacement. State aid is available to help offset the cost of this survey.

6.It is the policy of the Town to integrate land use and transportation planning by encouraging concentrated growth in areas served by an adequate highway system, utilizing land use regulations and appropriate highway access management techniques to control the impacts of development on the transportation system, and making transportation improvements in areas where growth is desired.

7.It is the policy of the Town to encourage access management techniques that limit the number of access points during new development along highways to reduce driver confusion and traffic congestion and to minimize conflicts between through and local (turning) traffic via provisions on further subdivision in new access permits.

8.It is the policy of the Town to cooperate with other communities in the region through TRORC and its Transportation Advisory Committee to ensure that the region's transportation system is developed in a coordinated manner that recognizes and balances the needs and desires of each community.

9.It is the policy of the Town to consider the relationship of a road to surrounding features of the landscape when planning improvements needed to safely accommodate increasing traffic.

10.It is the policy of the Town to combine widening of roadways to accommodate safe use by bicyclists and pedestrians with traffic calming measures and enforcement of speed limits to ensure that traffic speeds do not increase.

11.It is the policy of the Town to encourage the incorporation of state-of-the-art bike racks into plans for new developments.

12.It is the policy of the Town to address the need for adequate off-street parking in reviewing proposed developments.

13.It is the policy of the Town to retain Class 4 roads, trails, and other public rights-of-way as public resources.

14.It is the policy of the Town to preserve existing pedestrian access and connections during future development, provided this does not conflict with preserving natural resources.

15.It is the policy of the Town to encourage the elimination of large through truck traffic through the Downtown.

16.It is the policy of the Town to encourage widening of sidewalks and streetscaping in the Central Business Area to enhance pedestrian safety.

17.It is the policy of the Town to support efforts of local schools to create school travel plans including walking and biking.

18.It is the policy of the Town to support the creation of public transit from Bradford to surrounding communities including Barre, Montpelier, White River Junction and Lebanon, NH.

19.It is the policy of the Town to encourage the expansion of the Connecticut Valley Railway line to include passenger commuter service.

20.It is the policy of the Town to discourage the idling of all Town vehicles.

21.It is the policy of the Town that access permits, on local or state-controlled roadways, be compatible with Town, Regional, and State Plans.

22.It is the policy of the Town to ensure that:

a. The Town utilizes State of Vermont design standards for all temporary and permanent access to include emphasis on drainage, sight distance, and access for emergency services.

b. The Town and State encourage use of shared driveways and/or permitting access that may result in a future shared driveway.

c. The Town should require a review of access for existing development whenever a change of use, ownership, or other application process is brought before the Development Review Board.

d. The Town should encourage commercial properties to use existing development nodes along US Route 5 to preserve or create road segments with few accesses.

e. The Town and State should use sight distance standards based on actual travel speeds and not the posted speed limits. If no such data exists or is not current, then the State or Regional Commission will collect the data.

f. The Town and State should utilize access or an access easement from a local road rather than a state highway.

23.It is the policy of the Town to support efforts to sustain, expand and enhance public transportation such as Tri-Valley Transit.

24.It is the policy of the Town to keep sidewalks in good repair.

Recommended Actions

1.To investigate adopting Complete Street Standards.

2.To work with VTrans and TRORC to ensure that improvements to the state highway system are sensitive to the desires of Bradford and maintain the rural character of the Town.

3.To work with Tri-Valley transit to improve service to the community, expand routes and reduce costs.

4.To work with Tri-Valley Transit to improve access to Greyhound, Dartmouth Coach and Amtrak services.

5.To work with Tri-Valley Transit to incorporate bus stops at recreational areas

6.To review and make any update to the Town policy regarding upgrading Class 4 roads and private roads to Class 3 town-maintained roads to ensure that –

a. Adequate Road construction standards are followed.

b. The landowners are required to pay to bring the road up to Town standards.

c.-Input from the Planning Commission and Conservation Commission is incorporated in the Selectboard's review and decision process to ensure the changes would be consistent with the Town Plan

7.To review and make any needed update to the Town's driveway regulations and road standards to ensure that safety and drainage issues are adequately addressed.

8.To assess whether to require new private roads and rights-of-way be constructed to Town road standards.

9.To prioritize and schedule the road segments planned for improvement.

10.To utilize the Capital Budget and Program for the purposes of planning and budgeting for major transportation projects.

11.To analyze in advance any major highway improvement project for its impact on land use, property values, the environment and impact on municipal costs and services.

12.To coordinate any major highway improvement projects with other Town infrastructure improvements to make such work as cost-effective as possible.

13.To ensure that subdivision and zoning regulations include a well-planned access policy.

14.To have any land subdivision or development include in the zoning permit, if granted, reference to road policies in effect and specify that the Town is not responsible for upgrade or maintenance of any property that intends to gain access via a Class 4 road or privately maintained drive.

15.To inventory parking and pedestrian needs within the Central Business Area and formulate a plan to make upgrades in the future.

16.To consider redesigning Main Street (Route 5) to enhance its appearance and functionality. Additionally, such enhancements as placing all utilities underground, correcting drainage, constructing more visually obvious crosswalks, completion of the elimination of the sidewalk vault on the eastern side of Main Street south of KD Welch Service Road and further upgrading of sidewalks and streetlights could be made. This project would involve state agencies, businesses, property owners, and the Town. The Town could apply for a planning grant to determine the scope and steps involved in completing the project.

17.To investigate the benefits of working with VTrans to make the area of US Route 5 and Route 25B in the Central Business Area into a Class 1 road, thus taking over the maintenance. This would allow the Town to work with VTrans to apply different weight limits or could result in a reduction in truck traffic within the downtown.

18.To continue to update and maintain a culvert inventory in Bradford to ensure that the 90%/10% grant match offered by VTrans is available to the Town. Additionally, the Town should develop a program for evaluating roads and bridges.

19.To work with VTrans to identify potential traffic calming options in the Downtown.

20.To consider developing a design for a pedestrian network.

21.To periodically update the inventory of all sidewalks and other pedestrian routes. Once inventoried, all sidewalks should be evaluated for their condition, and studied to determine the amount and type of pedestrian traffic they handle. All this information should be used to develop a priority ranking to help determine the order in which sidewalks should be extended, renovated and repaired.

22.To review the zoning bylaws to reduce the number of parking spaces required for development.

23. To support public transportation infrastructure such as bus stop shelters and signage.

Public Highways

Local, State and Federal Roads in Bradford

Class 1	0	
Class 2	12.56	
Class 3	39.01	
Class 4	2.78	
Total Town Roads		54.35
Vt Route 25, 25B	8.01	
Route 5	5.85	
Total State Roads	13.86	
I-91	6.42	
Total Road Mileage		74.62

As indicated above, there are a total of 74.62 miles of highways and roads in Bradford. Of this total, 20.28 are State or Federally maintained. These include Interstate 91 running north-south through Town west of Route 5 and Bradford's downtown, Route 5 running parallel to I-91 and Route 25, which runs east-west of the Lower Plain. Though development in Town has occurred around Route

5 and the junction with Route 25, as roads providing access to much of the Town without impacting the local budget, they provide a benefit to the Town and the area north of that junction continues to be a logical area in which to encourage continued growth. Growth must be carefully considered for impacts on traffic and the rural character of Bradford.

Route 25 is a northwest/southeast route from Central Vermont to Portland, Maine, serving Bradford residents who commute to central Vermont and the Capital Region, and providing access to Bradford from Corinth and Topsham to the west and from Piermont, Haverhill and Warren, New Hampshire across the Connecticut River Bridge to the east. Route 25 also provides access to the towns of Chelsea and Randolph via Goose Green/Chelsea Road.

Route 5, which runs through the Central Business Area and Residential Service Area, is a U.S. route and therefore subject to State weight limits. Because of the limits on I-91, large trucks travel through the Central Business Area on a regular basis. In the 2007 survey, residents commented that such traffic had a negative impact on the downtown. All State and Federal routes are subject to an 80,000-pound weight limit, with certain exceptions. The State highway weight limit for all trucks used to transport timber, milk or stone products is 100,000 pounds. Weight limits on Interstate 91 are also set at 80,000 pounds, with few exceptions. Municipalities are authorized to establish their own weight limits for local roads. Locally established weight limits must be reported to the State, so that truck traffic can be directed accordingly.

Nearly 75% of the public highway miles in Bradford are Town-maintained. Highway classifications determine the amount of state aid available to assist with repair and maintenance.

The Vermont Agency of Transportation (VTrans) and the Selectboard determine road classes. Criteria include traffic volume, road condition and function. Class 2 highways are the major connectors linking villages with each other and with state highways, and they receive a higher rate of State Aid than Class 3 highways. Twenty-two percent (22%) of Bradford's roads are Class 2, of which most are paved. Class 3 highways are other Town roads that are maintained in a manner enabling them to be driven under normal conditions in all seasons by a standard car. The majority (68%) of Bradford's roads are Class 3 and 15.5 miles of them are paved.

Bradford only has 2.78 miles of Class 4 highway. The Town is not obligated to maintain Class 4 roads except for culvert replacement. No State Aid is available for work on Class 4 highways. It is the current practice of Bradford to grade Class 4 roads periodically, and to replace culverts and maintain bridges as needed. While not suited for regular traffic, these roads do represent an asset for the Town from a recreation standpoint. Such Town-owned corridors will help ensure that there will continue to be a place to enjoy snowmobiling, cross country skiing, walking, hunting, and horseback riding.

Private Roads

Land use regulations are needed to ensure that private subdivision roads are designed safely and properly constructed and maintained. The safety of occupants and emergency personnel depends on proper road design and maintenance. The Town currently enforces standards for new public roads, but there is no legal mechanism in place to apply the standards to privately owned and maintained roads, which may be dedicated to the Town in the future. Subdivision regulations can be used to apply Town road standards to all new private roads and rights-of-way.

Road Maintenance

Maintaining the network of roads in Bradford is time-consuming and represents a substantial part of the Town's annual budget. In 2022, the total Town budget (not including state aid) for Bradford highways was $2,587,213. In 2022, fees for driveway permits and State Aid was budgeted to be $114,500, 4% of the revenue the Town needed for road and sidewalk maintenance. The remaining 96% of the Town's Road maintenance budget was raised through local property taxes. Because of the expense of major road reconstruction, the most sensible and financially affordable method of road maintenance is proactive maintenance.

A 2005 study by the Two Rivers-Ottauquechee Regional Commission showed that one Town

saved 75% in costs by maintaining a program of proactive maintenance over more costly large-scale rehabilitation or replacement projects. The Town has twenty-three miles of paved roads. Re-paving is an ongoing maintenance requirement along with patching. It is a significant challenge for towns to maintain their paved roads with small highway crews like Bradford's along with budgetary constraints. When surveyed in 2007, over 60% indicated that Bradford's roads were "adequately maintained" and similarly almost 60% categorized the quality of the roads as "good." In the 2022 Survey, 87% of respondents were satisfied with road maintenance in the winter and 81% with the maintenance the rest of the year.

Culvert replacement is an essential element of road maintenance. Undersized or poorly engineered culverts are subject to clogging, which can create flooding that will damage roads. In the case of the 1998 flood in Bradford, a substantial amount of damage was caused to Goshen Road due to culvert failure. Bradford Highway Department has been trained by TRORC to conduct an ongoing culvert inventory and maintenance program. An up-to-date culvert inventory benefits the Town because VTrans offers a preferential match (90% VTrans/10% Town) in grant funding to towns which maintain the inventory. In 2005 the Town also attempted to begin a Road Surface Maintenance System (RSMS), but the system was abandoned because it was too complicated to be implemented.

In late August 2011, Bradford's culverts and roadside ditches were put to the test and performed well. Tropical Storm Irene struck Vermont, and wreaked havoc throughout the State. Bradford was incredibly lucky to be spared the destruction that devastated so many other communities, but Bradford's good fortune resulted from a lot of hard work, and a good bit of luck. Since the flood of 1998, the road crew concentrated on replacing undersized culverts with larger ones. When Irene struck, the drainage system for our roads was able to manage the extraordinary water flow. On that one day all the culvert replacement work over the past decade paid for itself.

Road resurfacing makes up a significant part of the Bradford Road Crew's work. Although paving roads can lead to reduced maintenance costs when compared to maintaining a gravel road with high traffic volumes, paving represents a sizeable amount of Bradford's Road Budget. The average life of a paved road in Vermont is 7-12 years if properly maintained. Nearly 40% of the roads maintained by the Town are paved. Although VTrans periodically offers grants to towns for paving projects, this funding stream is insufficient to maintain them properly. For example, a grant from VTrans for $200,000, depending on the current cost of asphalt and related materials, might only pay to pave a quarter mile of road. Alternatively, the Town could reclaim the existing asphalt, add material, and then pave 7/10th of mile with three inches of asphalt. In 2022, the cost of materials was so high, $275,000 would not have enabled the crew to pave even 7/10th of a mile. As a result, the highway crew deferred spending and will apply 2022 budget to the 2023 budget so that there will be sufficient funds to complete two years of paving in one year (There is a savings when more material is purchased at one time.). This will be a challenge for the road crew as typically, they can pave 1.2 miles of road per year.

Before undertaking any new paving projects, the Town should conduct a cost-benefit analysis to enable prioritizing of road maintenance.

Because of the expense of major road projects, it is essential that they be undertaken in consultation with other Town departments. For example, if a road in the downtown is being torn up and redesigned, there is an excellent opportunity for other infrastructure improvements to occur. Much of the infrastructure is underground and runs under the road system. Therefore, replacement of infrastructure like aging water and sewer pipes should be coordinated with major road projects to allow the efficient utilization of Town equipment and to avoid having to re-do projects.

Major Projects

In addition to consulting with different Town departments, Bradford's officials should have a Capital Budget and Program that allows them to plan and save for major infrastructure investments of all kinds. Although the Town does have a Capital Fund, it is not formally organized into a Capital Budget and Program.

The following road projects have been identified as priorities:

Bridge on Chelsea Road - The Town maintained bridge on Chelsea Rd. needs re-decking and re-structuring.

North Pleasant Street - The drainage on North Pleasant St. needs to be re-configured and the bank needs to be stabilized. This is becoming of increasing concern as there are cracks in the road surface and deterioration noted on the bank.

K.D. Welch Road - KD Welch Rd. needs drainage repairs to stop erosion on the golf course.

Route 5 bridge over Waits River replaced or renovated. This bridge is the State's responsibility and as of 2022, the bridge has not risen high enough on the VTrans list to be in the queue for repair. Currently the sidewalk on the bridge is in extremely poor condition.

Route 5 Bridge over Roaring Brook: This bridge is on the State's list for replacement.

Access Management

Proper siting and design of the access points of driveways and private roads is necessary to ensure the safety of users, as well as that of drivers, bicyclists, and pedestrians. Adequate sight distances are essential. Drainage from a driveway is also a critical issue as improperly directed stormwater runoff can damage adjacent roadways and contribute to pollution and sedimentation of nearby streams and rivers.

Access to private property from highways and local roads is a critical issue to consider when assessing the potential impacts of future development. Access impedes mobility and can decrease safety. Single access driveways to multiple lots should be encouraged in new development.

Bradford can help minimize the effect of development and can decrease sprawl[2] along highways by concentrating future development activity in existing village centers and/or specific "nodes" along local roads where adequate infrastructure exists or can be provided to support intensive development and where natural constraints to future development are minimal. Bradford can also apply specific access management techniques designed to reduce the number of curb cuts or driveways needed to serve roadside development.

These techniques include:

- Requiring driveways to serve adjoining lots.
- Prohibiting curb cut access from the main thoroughfare for corner lot properties.
- Requiring off-street access and traffic circulation to adjoining parking lots in commercial areas.
- Imposing restrictions on the number, width, and placement of curb cuts on major highways.
- Requiring specific setbacks from road intersections for all new curb cuts; and
- Requiring subdivisions adjoining major thoroughfares to provide internal street access only for all lots fronting on the thoroughfare. The resulting lots would have double frontage (along the front and rear yards.)

Traffic Calming and Parking

Parking within the downtown is a concern for Bradford. Anecdotal evidence suggests that some businesses with interest in locating within the Central Business Area have declined specifically because of the lack of parking. Additionally, the 2007 Town Plan Survey contained comments regarding the lack of parking in the downtown.

Bradford's Central Business Area is served by parking along Route 5 with spaces aligned diagonally to the road on the eastern side. This configuration might be acceptable if it were reserved for cus-

[2] Sprawl is a pattern of land use that is characterized by dispersed, automobile-dependent development outside of compact urban and village centers, along highways, and in the rural countryside. Sprawl is typically identified by excessive land consumption, lower densities of development in comparison with older centers of development, lack of transportation options, fragmented open space, wide gaps between development, a scattered appearance, lack of choice in housing types and prices, separation of uses into distinct areas, repetitive one-story development, commercial buildings surrounded by large expanses of parking, and lack of public spaces and community centers.

tomers only, but owners and employees of downtown businesses frequently park in those spots as well, which creates a shortage of parking spaces.

Residents have expressed concerns about the rate of speed with which drivers travel through Bradford, particularly in the downtown. Speeds are primarily governed by the motorists and their ability to navigate the roads using their vehicles, rather than by traffic congestion or aggressive law enforcement activities. Time of day, road conditions, trip type, proximity to origin or destination, law enforcement visibility and type of vehicle are all variables influencing the motorists' decision to drive a certain relative speed. In 2006, the Town, through the Public Safety Study Group, requested traffic speed data be collected along South Road, Fairgrounds Road, South Main Street and North Main Street.

The results of the study, conducted by TRORC indicated that the speed limit is being exceeded by most drivers on all the tested roads, but South Road, Fairground Road and North Main Street are of greatest concern.

As speed increases beyond the posted limit, safety decreases. Increased speeds contribute to higher levels of road noise, vibrations, and air pollution. Crashes become more severe, with the greatest risk borne by bicyclists and pedestrians. Enforcement of existing speed limits is important, but the best way to slow down traffic is to utilize traffic calming methods. The main objectives of traffic calming are to:

- Reduce the speed of car traffic.
- Promote other forms of non-motorized transportation.
- Minimize the negative effects of automobile travel.
- Create attractive streets.
- Improve the safety and convenience for pedestrians and cyclists.

When asked if residents would support traffic calming through the downtown, nearly 65% of the responses were supportive. Although there are several methods that can be used to slow the pace of traffic, only a few would be appropriate in Bradford's downtown, in great part due to state rules regarding vertical elements such as raised crosswalks and speed humps. These are the options that would be possible:

Expand or Reconfigure On-street Parking – On-street parking helps slow down traffic through what is called road friction. Expanding the availability of on-street parking would achieve multiple goals.

Chokers and Neckdowns – Chokers and neckdowns (also known as bump outs) are effective tools for slowing traffic. The curb line is extended into the street, thereby narrowing the street width, and slowing traffic.

In addition to slowing traffic, such alterations to the Central Business Area might be designed to improve parking and to allow improvements such as improved sidewalks, new lighting, street benches, trees, greenspace, and buried utility lines.

Other Forms of Transportation

Air

There is no airport located in Bradford. However, there are several airports located close by in North Haverhill, NH, Berlin, VT, Burlington, VT, and Lebanon NH. In addition, residents often travel to Logan Airport in Boston, MA, Bradley International Airport in Windsor Lock, CT, Manchester-Boston Regional Airport in Manchester, NH as well as the major airports in the New York Metro area.

Railroad

The former Boston & Maine Railroad, currently owned by the State of Vermont, runs through the Town along the Connecticut River. The line connects to an active freight section north of Wells River and to an active freight and passenger section in White River Junction.

The Town views this section of the rail line as vital to our transportation system and long-term economic development. Rail access for the Town's Industrial Park Area and the Industrial Mixed Use Area abutting the Industrial Park is considered crucial for reinvigorating the park. Iron Road Railroad, the owner of the facility north of Wells River, has discussed tourism excursions on this line.

Bradford strongly encourages the reactivation of this railroad line and encourages the State to repair the railroad crossings and signals for the safety of the citizens of Bradford.

Pedestrians and Bicyclists

A primary benefit of mixed-use downtowns and villages, where development is concentrated, is the reduction in automobile use. By locating stores, services, public facilities and high-density residential development in proximity, many residents can walk for trips that would otherwise require driving. It is essential that plans for future development and improvements to Bradford's downtown and village incorporate upgrades to the existing system of sidewalks, crosswalks, and pedestrian paths. Much improvement is needed in this area.

The following bicycle/pedestrian projects have been identified:

Routes 5 and 25 to Piermont Bradford Bridge – A bike lane could run along Route 25 from the Route 5 intersection to the Piermont Bridge. However, it would require a feasibility study to determine whether implementation is possible. This would connect the industrial park, the mobile home park, and the Town of Piermont to downtown Bradford.

Downtown to Lower and Upper Plain – Residents who wish to walk or bicycle from the Downtown to the Lower Plain or Upper Plain must travel on the shoulder of Route 5. A sidewalk could be built to accommodate pedestrians. Bike lanes should be marked along both shoulders to accommodate bicyclists. The cost of extending the sidewalk could be borne by developers as they continue to expand development in the Lower Plain.

The 2022 Survey found that over 86% of respondents supported a Pedestrian/Bike path between the Central Business Area and the Lower Plain.

North Pleasant St. Sidewalk – Poor drainage and a weak bank are causing this sidewalk to deteriorate at a rapid pace. Sidewalks should be restored after repairs have been made to drainage and the bank has been stabilized.

Main Street Sidewalk - Because Main Street is the downtown core of the village, and its aesthetics reflect on the Town itself, it is important to have the pedestrian infrastructure in good working order. Projects that involve upgrading of sidewalks in the downtown should also include beautification improvements such as better lighting, burying utility lines, and streetscaping.

In addition, the sidewalk network has gaps throughout and a plan should be established to connect them to Little River Health Clinic, Bradford Elementary School, and Oxbow High School.

The 2022 Survey found support for completing the existing network of sidewalks, particularly to Oxbow High School (66%).

A plan should be developed to link recreational areas, many of which are near the Central Business Area.

Regional Connecticut River Valley Bike Route – Bradford is located along a scenic byway (U.S. Route 5). To capture additional tourist traffic and improve commerce within and around the downtown, a bike route and associated accommodations for bicyclists should be considered.

Snowmobiles and All-Terrain Vehicles

The Vermont Association of Snow Travelers (VAST) maintains snowmobile trails throughout much of Vermont. VAST trails have the potential to bring additional commerce to towns provided they allow access to the Town.

All-terrain vehicles (ATVs) are used primarily in spring, summer, and fall. Because ATVs are used when the ground is not frozen, they can damage woodland trails. ATVs can pose a safety hazard if they are driven on public roads. Bradford has been unwilling to take on the liability of opening public roads to ATVs. Opening public lands such as the Town Forest to ATV use should be considered only with great care. If the Town decides to allow construction of ATV trails, they should be designed in consultation with wetlands specialists and the Bradford Conservation Commission and should be built to comply with State and Federal regulations.

Public Transportation

Bradford currently has access to a small regional public transportation system, Tri-Valley Transit.

which offers regular transportation to West Lebanon, NH and has recently expanded its service both with stops/routes and schedule. There is now a route called “The Circulator” which provides local service for anyone living in the Bradford Area to access the grocery store, medical appointments, the pharmacy and other shopping and personal trips. Their southern route to West Lebanon, “The River Route,” has regular stops located in the village and at the newly expanded Park and Ride near the I91 interchange on Route 25. The River Route has numerous stops along the way including Fairlee, Thetford, and Hanover as it winds its way to the VA Hospital in Hartford and connects with Advanced Transit (which offers service in NH) and Dartmouth Hitchcock Medical Center. Stops include King Arthur Flour, Greyhound Bus Terminal, and Upper Valley Haven. Tri-Valley Transit also offers limited public transportation in the form of special requests for individuals who need transportation for medical reasons. There are ongoing efforts from the community to expand services to encourage usage. Unlike Advanced Transit, which is free, there is a charge to use the service which can prove cost prohibitive for students and those with limited resources. (Note: At this time, “The Circulator” is free.)

The Park and Ride has been significantly increased in size and a small bus stop structure has been constructed along with Level one electric charging stations (electrical outlets) and bicycle racks.

Tri-Valley Transit recently constructed a bus depot where it houses its buses for the Bradford Area. Located to the rear of the Park and Ride, it is a highly energy efficient building with an innovative rainwater collection system as well as a small solar array.

Given that Bradford's elderly population is growing, the need to maintain an affordable source of public transportation that can bring the elderly to major medical facilities like Dartmouth-Hitchcock and larger commercial centers for day-to-day shopping needs is important.

[1] Albert Todd, the Environmental Protection Agency liaison, in the February 1999 issue of Journal of Forestry.

LAND USE

LAND USE

In terms of planning for the future, one of the most complex discussions is about land use. How a town uses its land and plans for future land development directly impacts the character and its ability to provide adequate and affordable services. To ensure that the impact of future development in Bradford does not have unintended consequences, the town's growth must be managed to reflect the vision of this Town Plan.

This section discusses both current and future land use patterns and provides goals, policies, and recommendations for future implementation. V.S.A. Title 24, §4411(a) authorizes towns to implement land use regulations, such as zoning, subdivision, and site plan review, provided that those regulations are in conformance with this plan and §4302 of Title 24, which addresses the state's planning goals. In 2004, the state legislature passed Act 115 to define more clearly "conformance with the plan". It states that:

"*All such regulatory and nonregulatory tools shall be in conformance with the plan, shall be adopted for the purposes set forth in section 4302 of this title, and shall be in accord with the policies set forth therein." [§4411(a)]*

The Planning Commission has the task of implementing the Town Plan through the wide range of tools offered in state statute. All these tools must conform to the policies of the Town Plan and once drafted, the Planning Commission is required to issue a report on how the newly drafted tools implement the plan.

General Land Use Goals

1.To guide industrial and commercial development in a way that will provide for appropriate economic activities on a scale that largely maintains the Town's existing settlement patterns.

2.To preserve open space and the rural character and present population distribution of the Town.

3.To protect agricultural and forestry land uses by promoting practices that are economically viable while protecting natural resources and wildlife habitat.

4.To provide orderly growth in the Downtown (Central Business, Village Residential and Residential Service). by planning for transportation, water, sewage, and public recreation facilities through public funding.

5.To preserve natural areas, unique habitats, and the quality of ground and surface waters.

6.To retain the essential rural character of the Bradford community while fostering its growth and economic vitality.

7.To improve/enhance the visual entrances into the Town.

8.To enhance the walkability and bikeability of the more densely developed parts of Town, by renovating, maintaining, and expanding sidewalks, bike lanes, and other non-motorized methods of transportation.

9.To work with the Bradford Business Association to plan and host events that draw customers to both Lower Plain and Main Street businesses.

10.To safeguard natural resources and maintain/enhance open space and recreational infrastructure which is key to long term health and quality of life in the community.

11.To maintain, enhance and expand recreational opportunities.

12.To encourage development of outdoor recreational use in harmony with the surrounding area.

Policies-General Land Use

1.It is the policy of the Town to make capital investment decisions taking into consideration open spaces and areas for recreational purposes.

2.It is the policy of the Town to encourage patterns of land use that maintain and enhance opportunities for outdoor recreation.

Recommended Actions-General Land Use

1.To preserve Town Right of Ways when they could provide recreational benefits.

2.To work with VAST, the Upper Valley Trails Alliance and other recreational groups to maintain and install trails.

3.To coordinate recreational activities by the Town and other organizations and work with surrounding communities to develop mutual support in

shared facilities (i.e., Elizabeth's Park, Dog Park, Northeast Slopes, Halls Lake)

4.To consider the creation of additional small parks.

5.To make the play structures at Elizabeth's Park a high priority for renovation/rebuild and an ongoing well-conceived maintenance plan should be put in place.

6.To investigate establishing a pool facility in support of the long-held desires of the community going back many decades.

7.To educate the public about recreational uses of the Town's parks and Town Forest.

Goals – Central Business Area

1.To provide a thriving and robust commercial and civic center that benefits all residents of Bradford and draws people from surrounding communities.

2.To encourage mixed use development in the Central Business Area

3.To maintain and enhance Bradford's center village as the pedestrian-friendly center of community life.

4.To maintain Bradford's Village Designation and encourage the full utilization of the benefits from the ACCD designation.

5.Encourage the installation of public Wi-Fi routers to increase digital access while in the Central Business Area as well as improved cell phone service.

Policies – Central Business Area

1.It is the policy of the Town to support creative and adaptive re-use of existing buildings within the Central Business Area.

2.It is the policy of the Town to support and maintain Bradford's Designated Village Center by dedicating resources to maintaining and improving infrastructure in the Designated Village Center.

3.It is the policy of the Town to encourage commercial growth in the Central Business Area if it maintains or enhances the historic character of the Village and creates no undue burden on taxpayers regarding public services.

4.It is the policy of the Town to encourage the development of streetscaping, including the addition of green space, benches, lighting, sidewalks, and façade improvements.

5.It is the policy of the Town to collaborate with developers to maintain the architectural aesthetics of the Central Business Area.

6.It is the policy of the Town to retain a post office in the Central Business Area.

7.It is the policy of the Town to encourage complementary infill development within the downtown.

8.It is the policy of the Town to encourage new businesses to locate where properties are already served by public water and sewer.

9.It is the policy of the Town to maintain the Historic District Design Standards to maintain the architectural aesthetics of the Central Business Area.

10.It is the policy of the Town to locate major public investments including public recreation areas in or near the Central Business Area.

Recommended Actions – Central Business Area

1.To investigate revising the lot coverage requirements of the Zoning Bylaws in the Central Business Area to allow for greater density.

2.To encourage development of second floors as offices and other commercial and residential activities provided such development creates no undue burden on emergency services or other municipal services.

3.To investigate options for the creation of streetscaping including green space, façade improvements, sidewalks, benches, and buried utility lines.

4.To continue to encourage the installation of EV charging stations.

Goals – Lower Plain Area

1.To encourage a mix of land uses which complement the vitality of Bradford's downtown and employ residents within the Bradford area in well-paying jobs.

2.To protect and expand the economic engine of the Lower Plain Area, while preserving scenic and natural resources.

3.To maintain and enhance traffic safety on Routes 5 and 25.

4.To facilitate and expand non-motorized transportation and increase Bike/Ped safety

5.To conduct careful site planning and administration of design standards for development.

6.To encourage the development of businesses that meet the needs of Bradford's population and contribute to Bradford's self-sufficiency.

Policies – Lower Plain Area

1.It is the policy of the Town to encourage the development of businesses in the Lower Plain Area that are compatible with and complimentary to those located in the Central Business Area.

2.It is the policy of the Town to provide opportunities for concentrated growth within the Lower Plain Area, without putting an undue financial burden on municipal services.

3.It is the policy of the Town to encourage cluster development whenever possible within the Lower Plain Area.

4.It is the policy of the Town to encourage development of sustainable low-carbon commercial enterprises.

5.It is the policy of the Town to prohibit principal retail (as defined by TRORC) south of VT-25 and west of US-5, except within 200 feet of Route 25 where Valley Floors and Pierson's Market currently are located, as well as on the eastern side of US-5 south of where Tractor Supply is located. Principal retail establishments may be located throughout the rest of the Lower Plain Area as indicated on the Future Land Use map.

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Recommended Actions – Lower Plain Area

To continue implementing design review within the Lower Plain Area (and the Central Business Area) to better define the desired aesthetics of development in these areas.

Goals – Residential Service Area

To encourage an area of transition between the Central Business Area and the Village Residential Area while protecting the historic residential character of the Downtown.

Policies – Residential Service Area

1.It is the policy of the Town to support the rehabilitation and reuse of historic residential structures for the purpose of small-scale mixed use.

2.It is the policy of the Town to encourage the establishment of green spaces, gathering places, and streetscaping.

3.It is the policy of the Town to promote safe pedestrian and non-motorized traffic within this area.

Recommended Actions – Residential Service Area

1.To continue to review lot sizes, uses, and encourage the adaptive reuse of properties.

2.To maintain and expand bike/ped "complete" streets in this area.

Goals—Village Residential Area

To provide an area for densely populated residential development within proximity of the Central Business Area.

Policies – Village Residential Area

1.It is the policy of the Town to encourage new and concentrated residential development in areas adjacent to the Central Business Area if they are served by municipal services.

2.It is the policy of the Town that development in this area should provide for uses that are of a scale, type, density, and character that maintain or enhance Bradford's Historic Central Business Area.

3.It is the policy of the Town that, as development increases in the residential area, pedestrian/bicycle access to the Central Business Area should be occur.

Recommended Actions – Village Residential Area

1.T0 utilize an inventory of the sidewalks to establish a schedule for repair, maintenance, and expansion.

2.To repair the retaining wall along North Pleasant Street.

3.To encourage and support infill, Accessory Dwellings, and other creative approaches to expanding housing units in this area.

Goals – Residential Area

1.To encourage residential growth in a pattern and density that reflects the traditional rural pattern of development.

2.To protect open space, agriculture, and forestry.

3.To ensure that the basic premise of this Plan for future land uses is sensitive to both the physical limitations of the site and the overall rural character of the Town.

Policies – Residential Area

1.It is the policy of the Town to ensure that residential uses be planned to concentrate development, maximize open space, and provide privacy.

2.It is the policy of the Town to continue to encourage the establishment and operation of small entrepreneurial enterprises and home businesses as they are consistent with the general purpose of this Area.

3.It is the policy of the Town to ensure that any home business or rural small enterprise shall be sited on a large enough lot, and that the project shall be adequately screened to prevent significant odor, visual, or audible effects from extending past the property boundary. Any use shall comply with state pollution and land use laws. These enterprises should not cause an undue burden on the ability of the Town to provide services such as emergency services and fire protection.

Recommended Actions – Residential Area

1.To protect open space and the working landscape in Bradford, the Planning Commission should consider increasing the minimum lot size in the Residential Area and creating areas of varying density.

2.The Planning Commission should investigate reducing minimum lot size where Town water and/or sewer exist.

Goals – Industrial Area

1. To allow for the growth of industrial development that is in harmony with the surrounding area

2.To foster industrial development while protecting natural resources, including wildlife, wetlands, and groundwater, from environmental hazards.

3. To be sure industrial development is on Town sewer

Policies – Industrial Area

It is the policy of the Town to encourage industrial development in appropriate locations provided that such development does not pose an environmental issue or health hazard to the community or put an undue burden on municipal services.

Recommended Actions – Industrial Area

1.To consider allowing accessory commercial uses within the Industrial Area particularly the parcels in the Lower Plain Industrial Park.

2.To evaluate current site plan requirements within the industrial area to ensure that auto, pedestrian, and bicycle safety are appropriately managed.

Goals – Low-Density Residential Area

To allow for residential development while protecting important natural and scenic resources, including (but not limited to) topography and wildlife habitat.

Policies - Low Density Residential Area

1.It is the policy of the Town to encourage development that is built in such a manner as to avoid fragmentation of large forest tracts and that habitats between two or more land developments or subdivisions are maintained.

2.As it is the policy of the Town to promote lower density in the Low-Density Residential

Area, the minimum lot size within this area should be at least seven acres.

3.It is the policy of the Town to protect all open and active deer wintering areas and wetlands.

4.It is the policy of the Town to encourage sustainable forest management practices.

Recommended Actions-Low Density Residential

To modify zoning and subdivision to discourage forest fragmentation.

Goals for Mixed Use Industrial

1.To support small commercial and industrial type activity.

2.To support the potential use of the rails by establishments abutting the railroad.

Policies for Mixed Use Industrial

It is the policy of the Town to permit various uses with a focus on retail, commercial and small industrial usage.

Recommended Actions for Mixed Use Industrial

To review and implement appropriate standards for the area.

Current Land Use

Traditionally, the Town has served as a local center of commerce for the surrounding smaller communities. This pattern of settlement and development has resulted in two areas of concentrated development:

- The historic Bradford Village,
- The Lower Plain area surrounding the intersection of Vermont Route 25 and U.S. Route 5.

These two areas lie on opposite sides of the confluence of the Waits and Connecticut Rivers. While this separation is a natural outcome of Bradford's topography, it poses unique challenges as the Town attempts to meet the state planning goal 24 VSA, 4302(c)(1): "to plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside."

While this goal is often interpreted to mean a town has only one center of development, Bradford has long had two. Townspeople are very committed to maintaining the vitality of the historic village, while recognizing the critical importance of the area around the intersection of Routes 5 and 25 to the economic vitality of Bradford.

Growth in Bradford has generally reflected a pattern common in much of Vermont. Within areas of more concentrated development, the uses have remained mixed, including residential, commercial, and industrial.

Outside of those areas, land use is located along Town and State highways and is primarily residential in nature, with a wide range of home businesses and some farms.

Bradford's land use patterns have not changed dramatically since 2001. Much of the shift in land use by parcel relates to the conversion of second (vacation) homes to permanent homes. There has been a modest increase in commercial and industrial development particularly with the extension of the sewer to the Lower Plain Area.

Future Land Use

The future land use section of a Town Plan is intended to function as a guide for future development, and to aid local planners in the process of implementing the plan through regulatory tools. Future land use areas are not intended to mimic the current pattern of land use, but instead should reflect Bradford's vision of the future. That is to say – even if the land is being used one way today, it can be used differently in the future.

Based on the public input gathered in the 2022 Survey and meetings, this plan delineates the future land use and provides guidance for local planners to implement the vision expressed by Bradford residents.

Economic Relationship between Central Business Area and Lower Plain Area

Bradford, unlike many Vermont towns, is a community that can support both the Lower Plain and the Center Village. Both areas provide Bradford residents and visitors with a variety of options.

While we desire both the Central Business Area and the Lower Plain Area to prosper, the two Areas are best suited to host different types of businesses. Limited parking and small store sizes make the Central Business Area less than ideally suited for large retail businesses. But its good sidewalks, good nighttime lighting, and the proximity of the storefronts make Bradford's Central Business Area ideally suited for cafes, coffee shops, art galleries, specialty shops, restaurants, and similar enterprises.

Meanwhile, good parking and access to Route 5 make the Lower Plain Area well suited to larger principal retail businesses where they are allowed (not, however, "big box" stores or formula retail businesses).

One of the biggest challenges Bradford faces is integrating the economic activities in the Central Business Area and the Lower Plain Area so that they support and reinforce each other. Several Lower Plain Area businesses draw large numbers of customers from significant distances. Farm Way, Hannaford, Valley Floors, Oakes Brothers, Tractor Supply, J&M Landscaping, and the Tool Barn are examples. Many of the customers who patronize these Lower Plain Area businesses do not come into the Central Business Area.

Bradford needs to adopt a strategy that will draw the people who already come to the Lower Plain Area into the Central Business Area. One strategy could be to create a marketing campaign for customers of the Lower Plain Area business to receive a coupon with each purchase that would provide a free appetizer or beverage at a Central Business Area eatery. Whether or not these specific ideas ever come to fruition, businesses in Bradford's Central Business Area and the Lower Plain Area should work together on cross promotional efforts.

Central Business Area

Bradford's Central Business Area is a cultural and economic hub for the citizens of Bradford. Bradford's Central Business Area should invite and provide for community gatherings and interaction. The purpose of the Central Business Area is to promote commerce in Bradford, while offering a mix of uses and concentrated density. The types of uses that are appropriate for this area are retail establishments, restaurants, professional offices, public buildings, and high-density residences.

Such uses should be developed at a scale, type, density, and character that maintain or enhance Bradford's Historic Downtown as the prime Central Business Area for the municipality.

Bradford's Central Business Area is contained within Bradford's Designated Village Center. (Other parts of the Village Center Designation include parts of the Residential Service and the Village Residential Areas.)

Every eight years, Bradford's Village Center designation status is reviewed by the Vermont Agency of Commerce and Community Development. If ACCD's review committee is not convinced a community is working to maintain and improve its downtown, the Agency may revoke a community's Village Center status. As of the date of this plan, Bradford's designation is up for renewal in 2024.

Maintaining Bradford's Village Center Designation is essential, as it opens more opportunities for grant funding for infrastructure improvements and makes tax credits available to property owners who improve their facades, make improvements such as handicapped accessibility and follow code compliance requirements when remodeling their buildings.

Lower Plain Area

The Lower Plain Area is located south of the designated Village which runs as far south along U.S. Route 5 as a stream that borders the Tool Barn and two parcels to the south of Lake Morey Road on the west. Like the Central Business Area, the Lower Plain Area is vital to the economic vitality of Bradford.

It is important to encourage commercial and residential development in this area. Existing commercial uses are concentrated around the junction of Routes 5 and 25, South of that junction, land

uses consist of residences, a working vegetable farm with a retail market, lumber yard/hardware store, car wash, a Tractor Supply store, a tool and tent rental business and a church.

Development north of the intersection is primarily commercial in nature, although zoning for the entire area does allow for all types of housing, including residential care facilities, treatment centers and the like. Because the land in this area is flat, has good access to Route 5, is served by both municipal water and sewer, and has well-drained soils, it is a desirable location for housing and commercial development.

Although much of the land within the Lower Plain Area is already developed, the land could be used more efficiently, particularly on properties behind those which front directly on either Route 5 or 25. Planned commercial subdivisions and developments utilizing common access roads, and cluster site planning principles, are encouraged and should be given high priority. At present, 70% of the lot may be dedicated to the building footprint. Increasing the allowed building coverage and reducing parking requirements expands opportunities for infill development. Mixed uses should continue to be encouraged in this area. However, the scale of proposed development must be considered carefully.

The purpose of the Lower Plain Area is to provide space for concentrated commercial (retail, professional offices) and housing development that does not unnecessarily consume land.

Although a mix of uses, this area is intended to be primarily commercial in nature. Land use activities planned for this area should be of a type, scale and design that complements rather than competes with the Central Business Area. No uses should impose a burden on the financial capacity of the Town to accommodate the growth caused by the project.

Such large-scale development as big box stores must be restricted. This is achieved in current zoning by setting a maximum footprint of 36,000 square feet per commercial building. Additionally, formula businesses[3] should be discouraged because residents indicated they wished to develop commercial enterprises that complement the designated Village Center. Restricting this type of business has been successful using several methods, including a ban on drive-through facilities and/or prohibiting formula retail through zoning regulations.

One of the distinct disadvantages to encouraging formula business is that it creates a homogenous and unnatural landscape. The architecture used by nationwide chains does not generally represent the traditional architecture of the area in which it is built.

[3] Formula businesses include retail stores, restaurants, hotels, and other establishments that are required by contract or other arrangement to adopt and maintain a standardized array of services, merchandize, methods of operation, uniforms, logos, standardized architecture and decor, or other features virtually identical to businesses located in other communities.

Additionally, businesses of this nature are often set back from the road with large expanses of parking, which is not representative of the traditional pattern of development in Vermont. To ensure that new development reflects the desired character in a town, state statute has enabled the creation of "design control" areas.[4] These areas specifically regulate the siting, layout and design of new development and construction. According to the Vermont Land Use Implementation Manual (2006), "design regulations have been shown to have economic benefits – they allow for higher densities of development, increase property values and create attractive neighborhoods and communities that encourage new investment."

The 2022 Survey results indicate that the community supports commercial development where

[4] [3] Several communities have banned certain types of formula businesses. A design control ordinance would be one way to regulate formula business. These laws do not prevent a chain store from coming in, but they do require that the incoming chain look or operate in a way defined by the community rather than by the business formula. This may prove a deterrent to chains, which may refuse to veer from their standardized, cookie-cutter approach. When enacting a formula business ordinance, a community should articulate within the ordinance and its legislative history the public purposes the law will serve and specify how the restrictions will fulfill those purposes. This is key to crafting a sound ordinance. Bradford residents have expressed a clear desire to retain the rural nature of the Town and to protect the historic character of the Downtown. Bradford seeks to maintain vibrant and diverse commercial areas, and the unregulated proliferation of formula businesses would frustrate this goal and lessen the commercial areas' appeal.

there is municipal water and sewer (77%). The expansion of the sewer to the Lower Plain Area enables such development to occur.

The community also strongly feels that a more village like look to development is preferred. According to the 2022 Survey, 72% would prefer development to be of 2-3 story structures while only 21% favor strip mall look and 30% favor small box store development with separate parking lot.

While over 85% favored Bradford growing, the predominant comments were that slow growth is most desired.

While the entire area is designated as being suitable for commercial development, Principal Retail (as defined by TRORC) is not permitted in the area Southwest of the Route 25-US % intersection (except the Valley Floors/Pierson Market parcels) and below the Tractor Supply parcel. Certain retail businesses are permitted throughout the Lower Plain Area such as restaurants and lumberyards which require a significant amount of land.

The portion of the Lower Plain Area south of Route 25 on the western side of Route 5 south of existing retail development is well suited for a variety of residential and commercial development, although large scale retail developments (principal retail as defined by TRORC) are not permitted. Of note, in 2012, the water system was greatly improved, and the sewer has been extended along Route 5 southerly to the parcel where Tractor Supply is located. This extension of infrastructure has enabled Hannaford and Tractor Supply to locate in Bradford.

Residential Service Area

The area presently designated as "residential service" begins just north of the Central Business Area. It is a relatively narrow area designed to accommodate residential and small commercial establishments while maintaining the historic character of the area. Many structures within this area are older homes with classic architectural features.

The primary difference between the Residential Service Area and the Village Residential Area (see below) is the allowance of professional offices, small retail and multifamily housing as permitted uses. Such uses are generally low impact and do not negatively affect surrounding residences.

These uses should continue to be encouraged. In the most recent Zoning Bylaw (2019), the Residential Service area has been extended up to the former greenhouse and Town Cemetery. The area north of Fairground Road, particularly near the high school, has the potential for greater development. Its proximity to the Central Business Area makes it very walkable, which is of importance to the State and Two Rivers-Ottauquechee Regional Commission from a land use perspective.

The purpose of this area is to allow for additional service establishments to be located adjacent to the Central Business Area, while maintaining the present residential nature of the area. Businesses allowed in this area should be appropriate to the area that is primarily residential and should not negatively impact the historic character of the older buildings.

Village Residential Area

This area is primarily residential in nature and represents the historic pattern of development, which grows around a downtown or village center. The uses allowed in this area are those which are most likely to be compatible with residential development. Increased density of development within the Village Residential Area is reasonable. Currently zoning has a minimum lot size of 6,000 square feet (approximately one-eighth acre) and maximum lot coverage of 70%. This should enable infill, but this should be done cautiously, with an eye toward maintaining the present character of the neighborhoods.

Residential Area

The bulk of Bradford's land is located within the Residential Area. This area is almost exclusively residential uses and it represents the classic "open countryside," outlined in state planning goals.

Although the pattern of development in the Residential Area is mostly one- and two-family dwellings, the present Zoning Bylaws allow for a wide-range of uses, some of which are more appropriate for areas with greater density of development or immediate proximity to the Central Business Area. For example, larger more concentrated residential development like nursing care facilities or

assisted living facilities should be encouraged to be located closer to the Central Business and Lower Plain Areas.

Given that the classic pattern of development in Vermont is lower density outside of the traditional village centers, the Planning Commission should consider increasing the minimum lot size from one acre. If houses were built on every acre, Bradford would no longer be a rural town. Instead, it would appear like the types of suburbs found near cities like Burlington, Vermont. Such high-density residential development would have a detrimental effect on rural character as well as a negative impact on wildlife, their habitats, and the corridors they use for migration. At the very least, areas with sensitive natural or scenic resources should be preserved in the Residential area, especially wildlife corridors. Another possibility is that the Town could create multiple residential zones of differing density.

The purpose of the Residential Area is to provide locations for residential uses while maintaining Bradford's rural character. Uses allowed in this area that are not residential in nature should only be allowed if they create low-impact changes to the land. Additionally, all uses should preserve the agricultural, forestry and recreational assets that are present, and should not place an undue burden on the Town to provide municipal services. Uses that are public in nature, such as schools, post offices and Town buildings should be discouraged from developing in the Residential Area.

Industrial Area

Bradford had three areas designated as Industrial as of 2008, the Lower Plain Industrial Park, the Bradford Veneer Plant, and sections of Depot Street. In this Town Plan, the area on Depot Street is now Industrial Mixed Use and The Bradford Veneer Plant is now included in Village Residential.

The purpose of this area is to provide employment opportunities in manufacturing, warehousing, research and development, and related uses. Residential uses should be discouraged. The Town supports efforts to promote industrial development in this area where they provide ongoing employment for its citizens.

The Town of Bradford regards large scale industrial structures that exceed 125 feet in height as inappropriate and inconsistent with the Town's vision and goals.

In the 2022 Survey, 77% felt industrial development should be where there is municipal water and sewer. In the past, serious pollution has occurred in the Town due to industrial activity resulting in several brown fields.

Low-Density Residential Area

It is a purpose of this plan to encourage the protection of open space, including agricultural and forested lands. High-density residential development can have negative effects on the rural character of a Town and on its wildlife and open space. Dense development in extremely rural areas can greatly increase the cost of municipal services as steep slopes and long distances can make road maintenance expensive. Steep slopes have the potential to make emergency response difficult if not impossible. The Low-Density Residential Area is in two areas, one around Wrights Mountain and the other north of Narrow Hill between Kenyon Rd. and Hackett Hill Rd. This Plan recommends further investigation into forest blocks and wildlife corridors to determine whether the zoning and subdivision regulations should be changed. This is further discussed in the Natural Resource chapter.

The purpose of the Low-Density Residential Area is to require that residential uses be at a lower density than that allowed in other Areas. Uses allowed should be primarily residential, recreational, agricultural, or silvicultural in nature. Because of the distance from Town, and the steep nature of the terrain in this area, commercial uses should be prohibited. Some parcels within the Low-Density Residential Area might be appropriate for conservation.

Mixed Use Industrial.

There are two areas in Bradford that are categorized as Mixed-Use Industrial:

- Near the end of Depot Street beginning with the Sewage Treatment plant and Carroll Concrete to the end of the road at the railroad tracks. Oxbow Veterinary and ARC Mechanical are in this area.

- Abutting the Industrial Area on Route 25 from the river to the railroad tracks. Whistle Stop Mobile Home Park, Farm-way and a building formerly the site of printing press operation is in this area.

With Town water and sewer available, these areas have long had various types of businesses and is well suited for such diverse uses.

RELATIONSHIP TO OTHER PLANS

RELATIONSHIP TO OTHER PLANS

Bradford is bounded by the Vermont towns of Corinth, West Fairlee, Fairlee, and Newbury, and by Piermont, New Hampshire to the east of the Connecticut River. All the Vermont towns have planning programs and planning commissions with Town Plans in effect: Corinth (2019), West Fairlee (2017), Fairlee (2020) and Newbury (2015).

These towns have land use regulations as follows:

- **Corinth** has subdivision regulations. These regulations were revised in 2002.
- **Fairlee** has zoning and subdivision regulations. Their zoning and subdivision regulations were last updated in 2018.
- **West Fairlee** does not have any land use regulations except for Flood Regulations
- **Newbury** has both zoning and subdivision regulations which were revised in 2017. The town is in the process of updating their Town Plan.

Bradford shares numerous activities and services with surrounding towns, including school services, ambulance service and fire protection. The Town is also a member of the Two Rivers-Ottauquechee Regional Commission (TRORC).

TRORC's regional plan covers thirty towns including Bradford. Since the preparation of the Bradford Town Plan was done with the assistance 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.

The neighboring plans have been read in the context of the proposed Bradford Town Plan. Once again, no conflicts exist in either general philosophy or specific development proposals along town borders.

Recommendations:

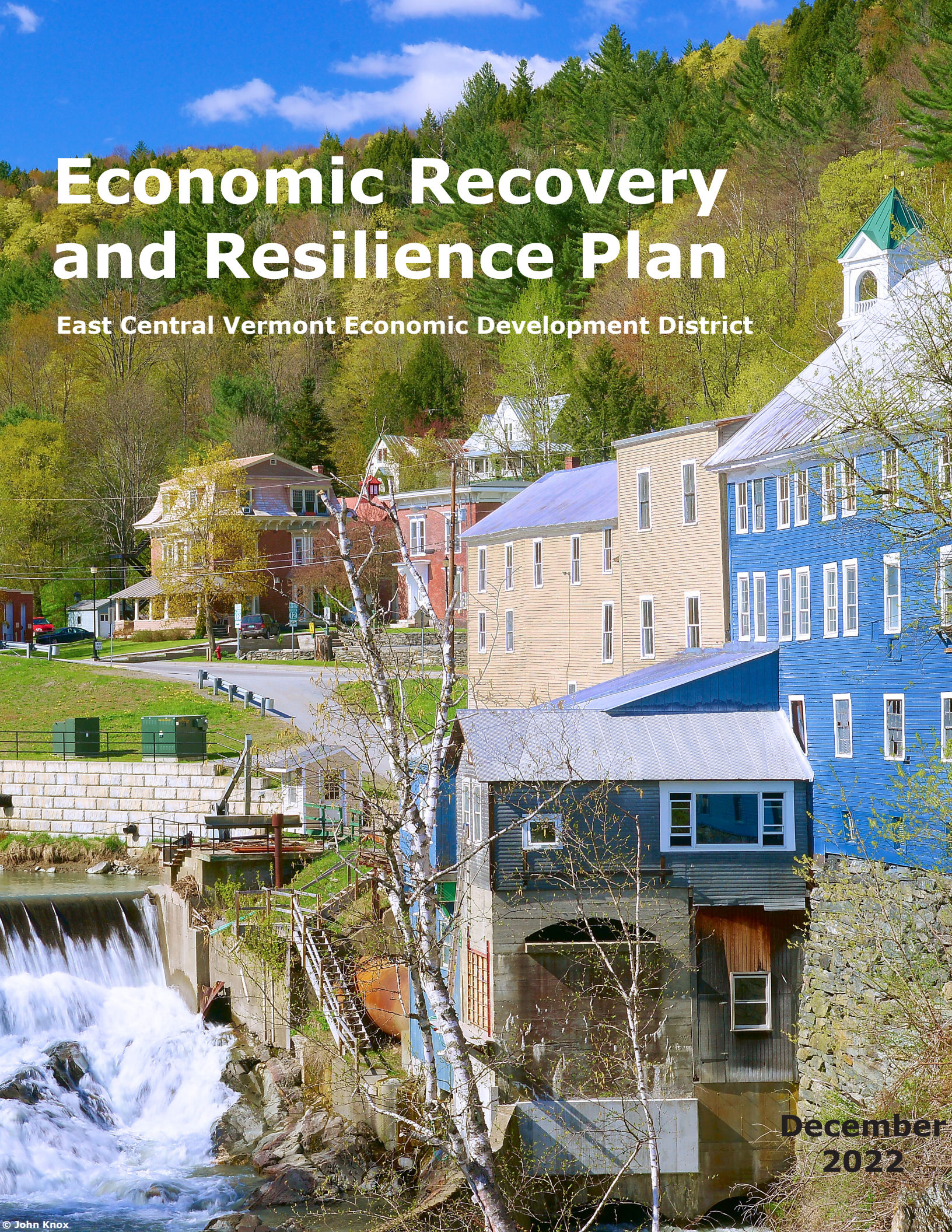
1.To encourage continued communication and cooperation between Bradford and its neighboring towns.

2.To continue participation in the Two Rivers-Ottauquechee Regional Commission provided TRORC continues to serve the needs of the Town of Bradford.

3.To exchange planning information and development data with neighboring communities.

APPENDICES

1. Implementation Schedule
2. Land Use Maps
3. TRORC Energy Report
4. 2022 Town Plan Survey
5. Upland Natural Opportunities and Wildlife Habitat
6. Forest Block Map (BioFinder)
7. Roadside Ash Tree Inventory
8. ECVEDD Economic Recovery and Resilience Plan (for the Creative Economy
9. Build Out and Capacity Study of 2018



Economic Recovery and Resilience Plan

East Central Vermont Economic Development District

December 2022

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The eligible members of the ECVEDD are 40 towns within Addison, Orange, Rutland, and Windsor Counties as well as the following partner organizations:

- Green Mountain Economic Development Corporation (GMEDC)
- Mount Ascutney Regional Commission (MARC)
- Springfield Regional Development Corporation (SRDC)
- Two Rivers-Ottauquechee Regional Commission (TRORC)

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Introduction

This Economic Recovery and Resilience Plan (ERRP) addresses the twin subjects of recovery and resilience for the forty communities and many businesses of the East Central Vermont Economic Development District (ECVEDD). Recovery functions help communities and businesses regain, to the extent possible, what was lost during and after a disaster event. Recovery work alone doesn't address the underlying vulnerabilities that existed prior to the disaster and that exacerbated the disaster's impacts on the community. To mitigate the impacts of future disasters, recovery must be paired with resilience.

Resilience is an attribute of systems that means they are resistant to damage from disaster events, and when such events do happen, they have coping and adaptive mechanisms that help them absorb shocks and find opportunities to not only survive but improve. The ERRP is meant to specifically address the stresses imposed by the COVID-19 pandemic, as well as to strengthen the District against other disasters. The ERRP is complementary and integrated with the 2020-2025 Comprehensive Economic Development Strategy (CEDS), which is its foundation. The CEDS has six primary goals, with the first being "A Resilient Region."

The CEDS was finalized during the early months of the Covid-19 pandemic and briefly acknowledges the need for economic recovery work. This plan is not a furthering of all parts of the CEDS, but is focused on recovery and resilience. Thus, this ERRP is centered primarily around Goal 1 of the CEDS (A Resilient Region): "a resilient region in the face of economic shocks and climate disasters (and) . . . that is rapidly resilient in the face of such challenges." To a lesser extent, other CEDS goals are also addressed.

The CEDS lays out strategies to support each goal, and then actions and tasks under these. Not all strategies are relevant to the particular issue of resilience to a pandemic, but many are. The CEDS strategies and actions that are relevant to the ERRP are cross-referenced in the Appendix of this plan.

ECVEDD Comprehensive Economic Development Strategy (CEDS) 2020-2025 Goals:

- **A Resilient Region**
- **An Innovative Business Environment**
- **A Robust and Ready Workforce**
- **Infrastructure and Homes for Growth**
- **Quality of Life and Place**
- **Healthy Communities**

Resilience Planning

Resilience is the ability to withstand the impacts of an incident and return reasonably quickly to a normal state, or preferably to a different state that is even better at thriving under difficult circumstances in the future. For example, restaurants that have seen less in-person dining during the Covid-19 pandemic have increased their take-out service. This can continue after the pandemic and produce income from a market that was not as fully tapped before, allowing more meal sales than the existing seating would allow under any circumstance.

Resilient systems are not overly specialized, and have 'slack'; they are not efficient in the classical sense. Any system that is strong in multiple ways will fare better under stress than a weak one will. If we are healthy, our bodies do better when challenged by an illness. And health has multiple dimensions (e.g., physical, mental, emotional). The same is true for an economy. It is not simply a matter that there are sufficient jobs that pay well, but that these are diversified, that the workforce is nimble and talented, and that all of the underlying support systems are stable. The same is also true for the businesses that make up the economy, both on their own and in their interrelationships.

Seen in this light, recovery and resilience planning to a particular stressor, in this case the global Covid-19 pandemic, can and should be done in such a way that it also serves to protect the region and its businesses and people against other stressors as well. It would be poor planning (and not very resilient) to craft a plan that works for one type of disaster but not for another. This is widely recognized in the disaster field, and most disaster planning is built around creating core capacities that are useful in many scenarios, rather than just getting really good at responding to a single type of disaster (known as an 'incident' in emergency management).

Floating Bridge, Brookfield, VT

Impacts of COVID-19

Resilience and recovery planning begins with asking, what does one need to be resilient from and recover from? The impacts of the particular incident of a pandemic are different than other expected types of incidents, but they are not all unique. The duration of each impact varies, and not all impacts are negative. Below are some of the particular impacts of Covid-19:

- Limited ability to travel and congregate
  - Resulting in an increased need for broadband to support remote working, learning, telemedicine, social connection
  - Resulting in less travel and tourism economic activity, and lower room and meals and sales taxes

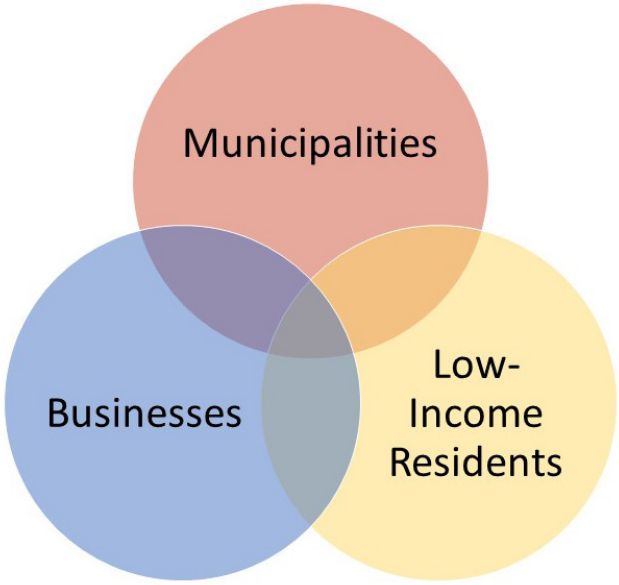
- Increased demand on delivery services
  - Resulting in an increased need for drivers
  - Underscoring the importance of road maintenance as deliveries became increasingly essential
- Greater focus on public health
- Supply shortages of 'upstream' suppliers to businesses
  - Resulting in supply disruptions, lack of specific products, and higher prices at times.
- Worsening of the preexisting trucking shortage (including backhaul shortage and lack of full load demand)
  - Resulting in an increased need to create export businesses
  - Resulting in increased demand for drivers
- Increased demand for housing
  - Resulting in an increased need for broadband and cell service by new residents
  - Resulting in increased cost in building supplies and continued construction trades labor shortage
  - Resulting in elevated rental and sale prices, and exacerbated scarcity of affordable housing
- Total non-farm private employment fell sharply, with the worst losses in the leisure and hospitality sector. The Vermont Department of Labor's seasonally-adjusted employment data show that many sectors are regaining jobs, but leisure and hospitality sector employment is experiencing the slowest recovery.[1]
  - Labor supply shortages are impacting many small businesses' ability to sustain or grow their operations.
- Exodus of women from workforce as childcare and schools closed

[1] December 2021 employment numbers for accommodation and food services were 21.4% below January 2020 levels. For arts, entertainment, and recreation, employment was 14% lower. (Source: http://www.vtlmi.info/ces.cfm)

Systemic Approach

In devising resilience strategies, it is important to understand interrelationships. Optimally, resilience actions designed for an incident such as the pandemic also function well across a wide range of other incidents. Anytime one is planning to make one system better, it is important to be aware that there may be a corresponding effect on other systems where they overlap. Optimally, the effects on other systems should be synergistic and in line with other desired outcomes.

To bring this to the local level, municipalities, in practice, are just a legal way of creating an organization that serves the needs of their residents and businesses. If the municipality is poorly run, the residents and businesses suffer. Conversely, the municipality is funded (in Vermont) in large part through property taxes, and these are paid by residents and businesses located in town, and so a municipality is also dependent on the financial soundness of the properties within its bor-



ders. All businesses depend upon residents as consumers and employees, and upon their municipality for basic services such as road maintenance, fire protection, etc. Each entity is interdependent on the other.

Some places forget that lower-income households are an integral part of their success, thinking that only high-value property and high-income residents contribute to economic well-being. However, that is because they have narrowly bounded the 'community' or simply failed to see the 'essential' support systems that underly modern life. An equitable community does not shift its burdens onto other places or people. As the pandemic has shown, all households and businesses (and hence their communities) are dependent on grocery store clerks, delivery drivers, road maintenance workers, broadband installers, butchers, farmers, child care providers, cleaners, garbage collectors, etc. Our communities would not be able to function without them. Yet so many of our essential workers are disproportionately burdened with risks to their well-being, and have the least access to resources to mitigate those risks. Local governments and businesses have important roles to play in identifying systemic inequities and changing systems or creating new systems to support and empower marginalized community members.

Action Areas

To address the impacts noted above, and within the context of the current CEDS and in a synergistic manner, four action areas stand out:

Action Area #1: Support creatives, farmers and other working landscape businesses, and makers. This approach relies on the strength of Vermont's place-based economy, making it less vulnerable to outside shocks. It strengthens local production capacity of essential goods such as food and lumber. It adds value to raw materials instead of just exporting them as low-value feedstock for outside businesses. It increases local business profitability, which in turn supports local households and municipalities, versus supporting extractive corporations that do not recycle wealth at the small scale.

Action Area #2: Support low-income renters and homeowners. This approach focuses on the foundational side of the economy. Low-income renters and homeowners are all customers and many are essential workers. Discredited economic theories such as 'trickle-down' posit that by having a strong, but tiny top, the structure of the economy below it will be sound, whereas a foundational ap-

ERRP Action Areas

- **Support creatives, makers, working landscape businesses**
- **Support low-income renters and homeowners**
- **Create resilient municipalities**
- **Improve workforce development and support systems**

Weathersfield, VT

proach first ensures that the bottom of a structure is stable before worrying about the upper floors. Lower-income households not only provide essential workers to make the economy function, they also tend to spend their dollars close to home and they contribute to community life in diverse and valuable ways. In a just and equitable world, they should be equal beneficiaries of society, but the reality is that systemic injustice operates in nearly every aspect of society. Supporting low-income households in having stable homes (be they owned or rented) is crucial for their well-being and helps them continue contributing to the well-being of our communities.

Action Area #3: Create resilient municipalities.

Most towns in the ECVEDD area have minimal staff. These staff are essential, and need to be well-trained. Towns can be thought of as providers of services – primarily of mobility (over a road network) and of emergency services. (Towns are also thought of as providing schools, but these are technically separate school districts that use town boundaries to elect board members.) Every town struggles to keep roads in good shape and emergency services going, and in most places they are deficient or steadily degrading (due to underfunded capital programs and a withering volunteer base). Roads are also at risk from severe rain events, which are becoming more frequent due to climate change.

This situation is the opposite of what is needed going into a disaster situation. You don't want to go in with a lean operation; you want spare capacity. Municipalities have to take a clear hard look at ways to cut costs and increase revenue. Some of this will be through using what infrastructure they do invest in more wisely (such as building more densely in sewered areas), cutting costs (such as downgrading Class

3 roads that go to one house), doing things a new way (such as using regional services more), and increasing capital reserves.

Action Area #4: Improve workforce development and support systems.

This approach recognizes that the workforce is foundational to the local and regional economy. Workforce shortages and high employee turnover were identified as regional concerns even before COVID-19 arrived. Businesses cannot recover from the pandemic or become resilient to future disasters if they cannot attract or retain employees. Necessity is driving employers to think more holistically about the personal and professional needs of their workers, and many are embracing innovative solutions to make work commitments more livable and sustainable. From an equity standpoint, such systemic changes are especially important for helping low-income and other marginalized community members access the resources they need to work towards their goals on their own terms.

Action Area #1: Support creatives, farmers and other working landscape businesses, and makers.

Our region is full of businesses that are based off the working landscape and that use our residents' creative juices in everything from pottery to coding. Many of these small business owners are managing all aspects of their business by themselves, which requires an exceptionally diverse skill set and puts tremendous strain on their time and resources. That strain is intensified in times of personal or community crisis. Strengthening business owners' skill sets and connecting them with community support systems will increase their resilience in the face of stressors, which in turn helps sustain their families and the critical economic functions their businesses provide in our communities.

Bethel, VT

Strengthen Foundational Business Skills

Regardless of what a business does, a well-run business is financially stable, uses the best practices available, and limits its risks from shocks. For all types of businesses, basic bookkeeping is needed to have a realistic and accurate sense of how the business is faring and where it makes and loses money. Too many businesses do not take advantage of available resources in terms of training or assistance programs that would improve their financial literacy. Moreover, when serious crises hit, many businesses are ill-prepared to continue providing goods/services in a new and more challenging environment. Training for businesses, especially small operations that cannot free up staff during working hours, needs to be done in a manner that businesses can access.

TASK 1A: Provide low-cost, accessible business needs assessments and basic financial literacy training. Work with community partners to provide direct assistance through channels that are trusted and culturally competent.

Partners: Springfield Regional Development Corporation (SRDC), Green Mountain Economic Development Corporation (GMEDC), Chambers of Commerce, Vermont Small Business Development Center, area banks, Cooperative Extension, Better Business Bureau, Vermont Professionals of Color Network, and others

TASK 1B: Provide low-cost, accessible training in basic continuity of operations planning for businesses.

Partners: SRDC, GMEDC, Two Rivers-Ottauquechee Regional Commission (TRORC), Mount Ascutney Regional Commission (MARC), Chambers of Commerce, SBDC, Vermont Emergency Management (VEM), and others

Chester, VT

Hit the market / Fit the market

Some businesses have a product or service they think is great, but that does not have a market. They may just need better marketing to get the word out; too many of our local business lack an effective digital presence for their products or services. In this day and age, if your product or service is not found in a web search, it is very difficult to be successful. It may also be that the product or service is not really what consumers want. In this case, the business needs to see if it can align better with market demand trends.

TASK 1C: Provide occasional market analysis by sector for the benefit of area businesses. Large companies can do this alone, but smaller companies can best access this as a group. Factor in climate change as a business driver.

Partners: SBDC, Vermont Agency of Commerce and Community Development, SRDC, GMEDC

TASK 1D: Provide low-cost, accessible training in basic digital marketing, digital record-keeping, and other skills critical for long-term business success and growth. Work with community partners to provide direct assistance

through channels that are trusted and culturally competent.

Partners: SRDC, GMEDC, Chambers of Commerce, Vermont Professionals of Color Network, local web services, and others

TASK 1E: Conduct digital searches for area businesses and identify those that searches do not find. Work to update business listing data to yield better search engine results.

Partners: SRDC, GMEDC, Chambers of Commerce

TASK 1F: Create a broader regional brand and means of attracting customers to the area/multiple businesses, rather than just individual businesses.

Partners: SRDC, GMEDC, Chambers of Commerce

TASK 1G: Connect small business owners and employees with sector-specific skills training opportunities that will empower them to adapt their operations or service/product offerings in the event of disruptions, with particular emphasis on market niches that are under-developed in our region. Identify and address financial and other barriers in order to maximize access by marginalized community members.

Partners: SRDC, GMEDC, Chambers of Commerce, Vermont Professionals of Color Network

Learn / Support

Specialized training and classes can be useful, but they are often expensive. Networking with peers may be much more fruitful, enjoyable, and much less expensive. Many business owners are not natural networkers, nor have ready-made ways to mingle. Others may even fear sharing knowledge with their "competition." There are ways for firms to collaborate without jeopardizing their respective market shares or their brand image as local small businesses. A fine furniture maker from Vermont creates more opportunity for other makers at various points of the supply chain, can band together with other makers on marketing to hit larger audiences, and can even refer clients to other firms in times of disaster or overbooked work.

TASK 1H: Create social events by sector as opportunities for knowledge sharing, networking, and establishing mentor/mentee relationships.

Partners: SRDC, GMEDC, TRORC, MARC, Chambers of Commerce, industry/trade associations, others

TASK 1I: Encourage/facilitate subsidization and/or cooperative models for providing services to very small businesses. Possible examples include joint purchasing, reduced-cost legal services, shared websites or ordering/delivery systems, etc.

Partners: SRDC, GMEDC, Chambers of Commerce, industry/trade associations

TASK 1J: Create supply chain/service symbiosis so that area loggers feed area woodworkers, farmers supply restaurants, lodging establishments feature local products, etc.

Partners: SRDC, GMEDC, Chambers of Commerce, industry/trade associations

TASK 1K: Facilitate the creation and expansion of formal networks that connect our region's small business owners with capital investors, and lower the barriers to local investment.

Partners: SRDC, GMEDC, Vermont Community Loan Fund, Vital Communities

TASK 1L: Provide technical assistance to help small businesses access assistance from state and federal programs.

Partners: SRDC, GMEDC, TRORC, MARC

Action Area #2: Support low-income renters and homeowners

Low-income renters and homeowners are valued community members and are a critical piece of the regional economy. They are disproportionately impacted by the lack of physical mobility options, digital access, and safe and affordable housing in our communities. Improving access to these basic resources is essential for the health and well-being of all our residents.

TASK 2A: Improve and expand transit services in the region. This will lower transportation costs for residents and provide mobility to those who cannot drive or don't have a car.

Partners: TRORC, MARC, Tri-Valley Transit (Stagecoach), Advance Transit, and Southeast Vermont Transit

TASK 2B: Expand broadband access to all residents.

Partners: TRORC, MARC, Vermont Department of Public Service, Communication Union Districts

TASK 2C: Review area zoning bylaws to identify regulations that prevent or deter the creation of affordable housing and propose revisions to correct these areas.

Partners: TRORC and MARC

Thetford, VT

TASK 2D: Continue regional coordination to produce affordable housing options.

Partners: TRORC, MARC, Twin Pines Housing Trust, and Windham & Windsor Housing Trust

TASK 2E: Continue the Keys to the Valley project, including exploring the possibility of creating a non-profit housing production "utility" to produce small-scale housing solutions; expanding the Work United program to small businesses; expanding Homeshare; and preserving mobile home parks.

Partners: TRORC and MARC

TASK 2F: Continue to provide weatherization services to improve indoor air quality and reduce energy costs for residents.

Partners: Capstone Community Action, Southeastern Vermont Community Action

Action Area #3: Create resilient communities.

Towns are important providers of services (e.g. roads, emergency response, planning and permitting, etc.) that dramatically impact quality of life and capacity for economic development. Towns may benefit from joining together to provide services. Town leadership also helps set the "tone" for the area, projecting stability and welcome, or infighting. Towns can also be active participants in their local economy, and this will subsequently strengthen the towns.

TASK 3A: Provide assistance to towns on capital budgeting in order to properly fund services and avoid abrupt tax increases.

Partners: TRORC and MARC

TASK 3B: Inventory road systems for municipalities so that they can be better maintained.

Partners: TRORC and MARC

TASK 3C: Work with towns to access regular and emergency funding to repair and improve road systems to withstand the projected increases in frequency and severity of flood events.

Partners: TRORC and MARC

TASK 3D: Continue training local officials in basic management skills (holding meetings, conducting outreach, managing staff, permitting, communicating to the public, etc.) so that towns are well-run.

Partners: TRORC, MARC, VLCT, others

TASK 3E: Improve intermunicipal regional disaster coordination through mutual aid systems or formally regionalized emergency services.

Partners: TRORC, MARC, VEM, others

TASK 3F: Provide technical assistance to municipalities in their efforts to support local businesses. Town support could take the form of grant or loan funds (RLFs, facade improvement funds, etc.), space, events, revisions to ordinances or regulations (if needed and appropriate), etc.

Partners: Vermont League of Cities & Towns (VLCT), MARC, TRORC

Action Area #4: Improve workforce development and support systems

Increasing numbers of employers are recognizing that support systems for potential and current workers make good business sense. People who have what they need to grow and thrive are best positioned to make valuable contributions to their workplaces and their communities. Moreover, there is a growing understanding that training and professional development are necessary but not sufficient for building a robust and resilient workforce. Life outside of work impacts work life, and vice versa. Employees who are managing crises outside of work must struggle harder than their co-workers to meet job demands. Creative dialogue between workers, employers, and social service providers can help identify opportunities for innovation in workforce management to make our communities more equitable and livable.

TASK 4A: Work with employers to evaluate what workforce gaps exist within their respective sectors.

Partners: SRDC, GMEDC, Chambers of Commerce, SBDC, industry associations and leaders

TASK 4B: Bring together employers and educators from diverse settings to evaluate training needs and to build and/or strengthen workforce training pathways.

Partners: SRDC, GMEDC, industry associations and leaders, Vermont Technical College, area vocational programs and other educational institutions

TASK 4C: Work with employers to strengthen apprenticeship programs and other structured opportunities for entry-level employees to train while on the job.

Partners: SRDC, GMEDC, industry associations and leaders, educational institutions, Vital Communities Corporate Council

TASK 4D: Coordinate dialogue among social service providers to share lessons learned about the goals and needs of low-wage workers, entry-level workers, and workers with significant barriers to employment (e.g., criminal records, recovery needs, long-term unemployment, racial and ethnic discrimination, etc.).

Partners: MARC, TRORC, SRDC, GMEDC, social service providers, Vermont Professionals of Color Network

TASK 4E: Coodinate dialogue among workers, social service providers, housing agencies or non-profit developers, and employers to develop innovative ways of collaborating to support workers' basic needs (workforce housing, transportation, childcare, food access, medical/recovery needs, etc.).

Partners: MARC, TRORC, SRDC, GMEDC, social service providers, health care providers, housing agencies/developers, industry associations and leaders, Vermont Professionals of Color Network, childcare providers, and others

TASK 4F: Organize forums and produce informational materials for employers to share ideas and experiences of innovative models for employee support (e.g., flexible and autonomous scheduling systems, employee cohorts for mutual aid, recovery-friendly workplaces, company counselor services, etc.).

Partners: MARC, TRORC, SRDC, GMEDC, industry associations and leaders

Appendix

Crosswalk to the 2020-2025 ECVEDD Comprehensive Economic Development Strategy (CEDS)

ERRP TASK	CEDS ACTION PLAN ITEM
Task 1A: Business needs assessments and basic financial literacy training for businesses	Goal 2, Strategy 2.2, Action 1 Goal 2, Strategy 2.3, Action 1
Task 1B: Continuity of operations training for businesses	Goal 1, Strategy 1.2, Action 1
Task 1C: Market analysis by sector	Goal 2, Strategy 2.1, Action 1
Task 1D: Digital literacy and other critical skills training for businesses	Goal 2, Strategy 2.2, Action 1 Goal 2, Strategy 2.3, Action 1
Task 1E: Digital listing updates	Goal 2, Strategy 2.2, Action 1
Task 1F: Regional branding and marketing	Goal 2, Strategy 2.2, Action 1 Goal 2, Strategy 2.3, Actions 1 and 2 Goal 5, Strategy 5.1, Actions 2 and 3
Task 1G: Sector-specific skills training for business resilience	Goal 1, Strategy 1.5, Action 1 Goal 1, Strategy 1.7, Action 3 Goal 2, Strategy 2.2, Action 1
Task 1H: Sector-specific networking events	Goal 1, Strategy 1.7, Action 3 Goal 2, Strategy 2.2, Action 2 Goal 2, Strategy 2.3, Action 1
Task 1I: Subsidization and/or cooperative models for service provision to small businesses	Goal 1, Strategy 1.7, Action 3 Goal 2, Strategy 2.2, Action 1 Goal 2, Strategy 2.3, Action 1
Task 1J: Regional supply chain/service symbiosis	Goal 2, Strategy 2.2, Action 2 Goal 2, Strategy 2.3, Action 1 Goal 5, Strategy 5.2, Action 3 Goal 6, Strategy 6.2, Action 3
Task 1K: Connect small business owners with capital investors	Goal 2, Strategy 2.2, Action 1
Task 1L: Technical assistance to help small businesses access government assistance	Goal 1, Strategy 1.7, Action 1
Task 2A: Improve and expand regional transit	Goal 4, Strategy 4.2, Action 1
Task 2B: Expand broadband access	Goal 4, Strategy 4.2, Action 4
Task 2C: Revise local zoning to facilitate affordable housing development	Goal 4, Strategy 4.2, Action 2 Goal 5, Strategy 5.1, Action 1
Task 2D: Affordable housing development	
Task 2E: Implement Keys to the Valley Plan	

ERRP TASK	CEDS ACTION PLAN ITEM
Task 2F: Weatherization services for residents	Goal 4, Strategy 4.2, Action 2
Trask 3A: Assist Towns with capital budgeting	Goal 4, Strategy 4.1 Goal 4, Strategy 4.2, Action 1
Task 3B: Road inventories	Goal 1, Strategy 1.4, Action 1
Task 3C: Assist Towns in accessing road funding	
Task 3D: Train local officials in basic management skills	Goals 1 and 4
Task 3E: Intermunicipal disaster response coordination	Goal 1, Strategy 1.6, Action 1
Task 3F: Technical assistance to Towns for supporting small businesses	Goal 1, Strategy 1.7, Actions 2 and 3 Goal 2, Strategy 2.2, Action 1
Task 4A: Evaluate workforce gaps by sector	Goal 3, Strategy 3.1, Actions 1 and 3 Goal 3, Strategy 3.2, Action 1
Task 4B: Evaluate workforce training needs and build/strengthen training pathways	Goal 3, Strategy 3.1, Actions 1-3 Goal 3, Strategy 3.2, Actions 1-2
Task 4C: Apprenticeships and on-the-job training	Goal 3, Strategy 3.2, Action 2
Task 4D: Facilitate dialogue about goals and needs of workers who face the greatest barriers to job access and sustainability	Goal 3, Strategy 3.2
Task 4E: Facilitate dialogue about innovative ways to support workers' basic needs	Goal 3, Strategy 3.2
Task 4F: Facilitate communication among employers about innovative models for employee support	Goal 3, Strategy 3.2

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**				
		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**	
People and Economic Development									
3.01	To be an active participant I regional economic development planning efforts	X	X					O/G	
3.02	Review applications for industrial development with careful attention to environmental and fiscal impacts			ZA, DRB				O/G	
3.03	Investigate creating an Economic Development Committee to work with other town boards to drive Bradford's economic development goals.	X	X	various	X			2023	
3.04	Efficiently leverage public funds by identifying and applying for state and federal grant programs that enable economic development activity.	X	x	ECON			x	O/G	
3.05	Form stronger relationships with organizations involved with economic development, locally, regionally, and statewide.	x	x	various				O/G	
3.06	Maintain and improve public infrastructure (water, sewer, roads, flood control, etc.), including by applying for all applicable state and federal grants and by working closely with regional planning groups.	X		HWY, W+S	x	x	x	O/G	
3.07	Support the agricultural, forestry, and recreation economy as desirable businesses and consider these lands as natural scenic, recreational, and tourism resources. (Care for environmental assets increases Bradford's desirability as a place to do business and to live.)	X	X	DRB				O/G	
3.08	Encourage and support the responsible development of information technology and communication infrastructure necessary for economic growth.	X			x			O/G	

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People and Economic Development									
3.09	Encourage and support commercial building owners to actively recruit new businesses to fill vacant spaces.	X		ECON					
3.10	Periodically review zoning regulations to ensure that home businesses and occupations are encouraged and permitted.		X					23/24 27/28	
3.11	Educate the public on zoning regulations, the permit process and allowable uses of properties.		X	ZA	X		X	O/G	
3.12	Actively participate in regional efforts to provide all of our residents with access to modern telecommunications, infrastructure, including broadband internet access, wireless communications and community workspaces.	X			X		X	O/G	
3.13	Apply to renew the Village Center Designation and maintain compliance with requirements of the program.	X	X					O/G	
3.14	Encourage the development of appropriately scaled commercial uses in the designated Village Center, Central Business, Lower Plain and Residential Service Districts.		X	ZA,DRB				O/G	
3.15	Inform existing and new businesses about the benefits provided by the Village Designation program.	X	X	ZA	x			O/G	
3.16	To engage business, cultural, and recreational interests in promoting environmentally friendly tourism.	X	P+R,ECON					O/G	
3.17	Review applications for new development with careful attention to availability of resources and access.			ZA,DRB				O/G	

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		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**	
People and Economic Development									
3.18	Support actions and projects that reduce needs for private motor vehicle use, expand EV usage, facilitate expanded public transportation and shared vehicle usage, and increase other modes of transportations such as pedestrian and bicycles.	x	x	C, EC,DRB				O/G	
3.19	Support the efforts to enhance the attractiveness and welcoming of Bradford.	X	x	econ dev				O/G	
3.20	Encourage organized agricultural, arts and cultural events.	X		P+R				O/G	
3.21	Revisit obtaining Downtown Designation.	X	X					23/24	
3.22	Utilize the benefits of the Village Designation Program to continue projects such as improving sidewalks and streetscapes within the Designated Village.	X		highway	X	X		O/G	
3.23	Investigate obtaining Neighborhood Designated and Growth Center designation in order to support a diverse economic bae while continuing to keep our historic downtown vibrant.		X	highway		X	X	24,25	
3.24	Investigate the expansion of the industrial zone.		X				23,24 and 27/28		
3.25	Investigate establishing an economic development group and funding an economic development position.	X	X		X			23/24	
3.26	Investigate the establishment of a TIF zone.	X	X					24	
3.27	Support local private sector efforts to assist childcare providers seeking business advice and financial investment.	X		ZA, DRB	X	X		O/G	

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People and Economic Development									
3.28	Support and expand on recreational offerings for all ages.	X		P+R	X	X	X	O/G	
3.29	Investigate seeking funding for (including grant opportunities)for an economic impact study of the Creative Economy covering Bradford and the Adjacent towns.	X	X		X		X	O/G	
3.30	Consider allocating a portion of the ARPA funds to empower the local creative sector in ways which help ensure a strong, resilient, and equitable economy in Bradford.	X						23/24	
3.31	Investigate conducting a study focused on the potential of the Bradford Creative community as a next step to the broader Windsor/Orange study done by the Vermont Arts Council.		X		X		X	24-26	
3.32	Review all policies to ensure that they reflect policy to eliminate disparities in both hiring and in the work of the town.	X						O/G	
3.33	Become educated on how to become a welcoming and safe place by seeking out and becoming informed by the State Office of Racial Equity, Vermont League of Cities and Towns' efforts and the state's program, IDEAL (Inclusivity, diversity, equity, action, leadership).	X						O/G	
3.34	Consider adoption of a statement committing to equity work as a first step in a continuing process in this effort.	X						23	
3.35	Consider the formation of an Inclusivity Committee to take a leadership role in this endeavor.	X						23	

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People and Economic Development									
3.36	Maintain contact with Green Mountain Economic Development Corporation, Owners of significant properties of high resource or development value and major employers in Bradford.	**X**	**X**					**O/G**	

Implementation									
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		SB	**PC**	**Other**	**Budget**	**Grant**	**Capital**		
Housing									
4.01	Consider assessing impact fees in order to defray the cost of increases in municipal services caused by		X	ZA	X			24/25	
4.02	Review the Zoning and Subdivision bylaws with an eye to addressing the following concerns about housing:		X						
4.02A	New housing should be sited to provide safe pedestrian access to nearby open space, existing sidewalk networks and recreation areas.		X	ZA,DRB,EC		X	X	O/G	
4.02B	Housing projects should minimize highly visible parking areas and retain as much permeable surface as possible.		X	DRB,ZA				O/G	
4.02C	Housing projects should provide access to shops, services, and jobs by as many transportation methods as possible (public transit, bicycle, pedestrian, and automobile).		X	DRB,ZA				O/G	
4.02D	Zoning should be modified to encourage EV Charging stations at multi-family housing and commercial developments.	X	X	DRB,ZA		X		23/24	
4.02E	Zoning should be modified for ADUs for greater flexibility while maintaining the character of the area.		X	DRB,ZA				23/24	
4.02F	Zoning bylaw should be modified to address the conversion of housing stock into short term and transitional rentals.		X					23/24	
4.02G	Zoning regulations should be modified to deal with location of refuse (trash, recycling, compost)suitable for tenants and the community.		X	ZA				23/24	
4.03	Work with state housing agencies, nonprofit organizations, and lending institutions to encourage the availability of loan or grant funds for Bradford residents to acquire or improve their primary homes.	X	X			X		O/G	

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Housing									
4.04	Work with the Bradford Area Housing Committee and Two Rivers-Ottauquechee Regional Commission to evaluate Bradford area's role in meeting the region's housing stock by assessing its capacity for growth.	**X**	**X**		**X**	**X**		**23/24**	
4.05	Encourage compliance with the state's Residential Building Energy Standards (RBES) for new construction by educating residents about those standards and the need to file appropriate compliance certification (RBES certificate or Owner/Builder Disclosure Statement with the Town Clerk.		**X**	**ZA,DRB**				**O/G**	
4.06	Work with Efficiency Vermont and others to improve energy efficiency in existing homes to reduce long-term costs and energy needs.			**EC**	**X**	**X**		**O/G**	
4.07	Encourage residents and business owners to apply for historic preservation grants.		**X**	**ZA**				**O/G**	
4.08	Investigate the benefits of obtaining Growth Center, Neighborhood designations and investigate the housing needs of the community in order to develop appropriate housing along with associated commercial and retail development.		**X**					**24/25**	
4.09	Continue to maintain strong relationships with various state, regional, local agencies, nonprofits and other groups to foster attracting new housing development and the ongoing maintenance of existing units.	**X**						**0/G**	
4.10	Modify zoning and subdivision bylaws to encourage cluster development so that farms and forests are not fragmented.		**X**				**23/24,27/28**		

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Housing									
4.11	Encourage rehabilitation of underutilized buildings for housing on the upper floors and commercial/retail on the lower floor.		**X**	**ZA,DRB**				**O/G**	
4.12	Take advantage of and seek out energy efficiency and weatherization programs to improve our housing particularly in older properties.	**X**		**EC**		**X**		**O/G**	

Implementation								
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Education								
5.01	Investigate obtaining Neighborhood Designation and Growth Center designation to increase the amount of housing and sustain student enrollment.		**X**			**X**		**25**
5.02	Investigate providing access to post-secondary education and job training.	**X**	**PC**					**26**
5.03	Support community wide access to high-speed internet and cell coverage.	**X**			**X**	**X**		**23**
5.04	Support or expand youth and family -oriented activities and resources.	**X**		**P+R**	**X**	**X**		**O/G**
5.05	Work with neighboring towns in supporting the area schools.	**X**						**O/G**

Implementation								
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Utilities and Facilities								
6.01	Adopt a procedure for allocating reserve capacity to enable steady growth rate for all uses and to assure the availability of service during the design period.	**x**	**X**	**W+S**				**23**
6.02	Encourage the Central Vermont Solid Waste Management Area to provide more opportunities for the safe disposal of household hazardous wastes such as compact fluorescent light bulb, mercury containing products such as thermostats, bad gasoline, solvents, pesticides, etc.			**CC**				**23, o/g**
6.03	Monitor Capital Budget program in order to plan for anticipated infrastructure maintenance and improvements.	**X**	**X**				**X**	**O/G**
6.04	Work with the Low St John Forest Committee to improve recreational use of the forest.		**X**	**P+R**		**X**		**O/G**
6.05	Continue to coordinate efforts to enhance recreational opportunities on Wright's Mountain.		**X**	**CC, P+R**		**X**		**O/G**
6.06	Explore ways to expand recreational offerings to support healthy lifestyles.			**P+R**	**X**	**X**	**X**	**O/G**
6.07	Work with the Water and Sewer Commission to develop an approach to ensure conservation of resources.			**EC, W+S**				**O/G**
6.08	Work to develop a fee structure that is supportive of Housing and Economic Development.		**X**	**W+S**				**23**

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Utilities and Facilities								
6.09	Develop and implement a maintenance plan for the town's buildings including the Bradford Academy to ensure they can continue to meet the needs of the community.	**X**		**Facilities**	**X**	**X**	**X**	**O/G**

Implementation								
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Health and Emergency Services								
7.01	Explore whether the Fast Squad should officially become part of the town government.	**X**		**EM**				**25**
7.02	Ensure all emergency response personnel should be trained in the NIMS system.			**EM**				**O/G**
7.03	Investigate ways to share costs with other neighboring towns for essential services.		**X**	**EM**				**O/G**
7.04	List locations where AEDs are located	**X**		**EM**				**O/G**

Implementation									
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Energy									
8.01	Investigate converting public buildings in Bradford to economically feasible renewable energy heating	**X**		**EC**		**X**		**O/G**	
8.02	Consider revising the guidelines for the Revolving Loan Fund to allow low interest capital to homeowners, landlords, nonprofit organizations and businesses to assist in making cost effective investments in energy efficiency and renewable energy.			**RLF, EC**			**23, O/G**		
8.03	Continue to support efforts to expand the Efficiency Vermont and related energy efficiency programs in Bradford.			**EC**	**X**	**X**		**O/G**	
8.04	Encourage Bradford schools to include walking, cycling and other transportation alternatives.		**X**	**EC**	**X**	**X**		**O/G**	
8.05	Investigate programs to encourage a reduction in CO2 emissions by the town.			**EC**		**X**		**O/G**	
8.06	Pursue grants to promote energy efficiency and energy projects.			**EC**		**X**		**O/G**	
8.07	Investigate updating Zoning Bylaw to require RBES and CBES to obtain a Certificate of Occupancy		**X**					**23**	

Implementation									
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		SB	**PC**	**Other**	**Budget**	**Grant**	**Other**		
Natural Resources									
9.01	Update the Natural Resource Inventory.			**CC**		**X**		**24 &29**	
9.02	Work with Water and Sewer Commission to encourage water conservation.			**CC, W+S**	**X**			**O/G**	
9.03	Support water quality monitoring and watershed planning for the Connecticut and Waits Rivers.			**CC**	**X**			**O/G**	
9.04	Partner with the Water and Sewer Commission in conducting a mapping study of ground water resources in Bradford.			**CC, W+S**		**X**		**24**	
9.05	Ensure long-term protection of water resources by having the Water and Sewer Commission continue to develop a detailed protection strategy for the wellhead protection area.			**W+S**	**X**			**23, O/G**	
9.06	Foster wetland protection by refining subdivision and zoning bylaws to contain provisions for the protection of wetlands.		**X**	**CC**				**23, 24**	
9.07	Make readily available to public the wetlands inventory and the Natural Resources Inventory Report and related maps.			**CC**				**O/G**	
9.08	Ensure that the Wetlands Inventory and the Natural Resources Inventory Reports and related maps are readily available.			**CC**				**O/G**	
9.09	Ensure the Wetlands are protected via municipal enforcement of existing bylaws and ordinances.	**X**		**ZA, CC**				**O/G**	
9.10	Notify the appropriate state officials of state wetlands and vernal pools violations.	**X**		**ZA**				**O/G**	
9.11	Identify and map vernal pools and establish related zoning restrictions.		**X**	**CC**		**X**		**25**	
9.12	Evaluate whether ponds are being properly permitted and regulations properly enforced and take corrective action as needed.		**X**	**ZA**				**O/G**	

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Natural Resources									
9.13	Partner with Emergency Management Director to consider adjusting the conditions under which a permit is required for the building of a pond to include smaller ponds in town.		**X**	**EM**				**23**	
9.14	Consider making ponds holding under 50,000 cubic feet of water a conditionally permitted use and/or establish a registry in the Zoning Bylaws. (Permits would enable town to have record of where ponds have been constructed.)		**X**	**EM, CC, ZA**				**23, 24**	
9.15	Provide information to every new riverfront landowner to explain the special challenges of owning and managing riverfront land, including the benefits of riparian buffers and the requirements of state shore land protection laws.			**CC**	**X**			**O/G**	
9.16	Partner with the Zoning Administrator should distribute materials developed by the Conservation Commission to waterfront landowners who apply for a zoning permit.			**CC, ZA**				**O/G**	
9.17	Provide materials developed by the Conservation Commission to landowners when new deeds are recorded for waterfront properties.	**X**		**ZA**				**O/G**	
9.18	Ensure Road crews take care when ditch cleaning to minimize the spread of invasive species such as Japanese Knotweed, Wild Chervil, Wild Parsnip and Purple Loosestrife.	**X**		**Hwy**				**O/G**	
9.19	Investigate alternative means of controlling invasive species other than the use of herbicides.	**X**		**CC**				**O/G**	
9.20	Develop and/or distribute materials to educate landowners about invasive plant species identification and control.			**CC**	**X**	**X**		**O/G**	

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Natural Resources									
9.21	Adequately fund the Roadside Ash Tree Removal Fund in order to remove trees prior to becoming a hazard.	X		CC	X	X	X	23 O/G	
9.22	Consider designating "conservation areas" within the Zoning Bylaw to ensure that large tracts of forest located on steep slopes have minimal development.		X	CC				23,24	
9.23	Implement recommendations in the 2006 Tree Inventory and should plant and maintain trees within the Downtown.	X		CC	X			O/G	
9.24	Ensure that zoning and subdivision bylaw deter forest fragmentation. Consider expanding the Low Density Residential to include additional forest blocks. Consider expanding the Low Density Residential Area to include additional forest blocks.		X	CC				23/24	
9.25	Provide copies of the state's Best Management Practices and information about he Current Use Program to the Town Clerk and make available to the public.	X		ZA,CC	X			O/G	
9.26	Ensure zoning and subdivision bylaw deter forest fragmentation. Consider expanding the Low Density Residential to include additional forest blocks.		X	CC				23/24	
9.27	Maintain contact with Vermont Land Trust, Upper Valley Land Trust, owners of significant properties in areas identified as forest blocks.	X	X	CC				O/G	
9.28	Review and improve zoning bylaw to enable clustering of dwelling units and accessory buildings.		X					23,24	

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Natural Resources									
9.29	Encourage owners of necessary habitat for threatened or endangered species to contact the Vermont Dept of Fish and Wildlife for assistance in developing management plans for these sites.	X		CC				O/G	
9.30	Identify wildlife corridors in Bradford for the purpose of revising the Zoning and Subdivision bylaw to protect wildlife habitat.		X	CC		X		23, 24	
9.31	Establish beaver confusers/diverters should be established to protect the river beavers along the Connecticut and Waits Rivers at any place the beavers locate where they may cause harm to the community.			CC		x		O/G	
9.32	Continue to update the deer wintering overlay area in the Zoning Bylaw.		X	CC		X		24 and 27	
9.33	Encourage planting for migratory bird populations investigate offering incentives to farmers for maintaining crops for this purpose.	X		CC	X			25	
9.34	To review and improve zoning bylaws so that mineral resource goals and policies are followed.		X	CC	X			23,24	
9.35	Investigate the feasibility of designating exceptionally scenic Town Roads as Scenic Highways under Vermont's Scenic Highway Law.	X	X	CC				25	
9.36	Partner with the Bradford Historical Society, ,to develop an inventory of all important historic, archaeological, scenic and cultural resources in Town and following completion of the inventory, implement measures to conserve exceptional resources should be explored.		X	CC, Hist Soc		X		25	
9.37	Consider establishing a Design control measure within the Zoning Bylaw to ensure Route 5 and 25B corridors entering into the Historic Downtown maintain its historic character.		X					23, 24	

Implementation								
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Flood Resilience								
10.01	Work with TRORC and Vermont Emergency Management to ensure that their current flood hazard area requirements meet national standards.	**X**		**Safety**				**23,28**
10.02	Strongly consider excluding all new buildings within the 100-year floodplain or special flood hazard area in the zoning bylaw and/or the flood bylaw.		**X**					**23-24**
10.03	Correct or replace undersized water passageways or culverts that are at risk of flooding or limit fish and amphibian passage.	**X**		**Hwy**	**X**	**X**	**X**	**O/G**
10.04	Reinforce stream banks adjacent to roadways at risk of significant erosion from seasonal flooding.	**X**		**Hwy**	**X**	**X**	**X**	**O/G**
10.05	Consider modifying the existing ordinance to better address control of the storage of junk, garbage, or other materials which could be hazardous during a flood event, in areas identified as special flood hazard.	**X**		**ZA**				**23**
10.06	Partner with TRORC to strengthen the Flood Hazard Bylaws to mitigate risks to public safety, critical infrastructure, historic structures and municipal investments from inundation and erosion.		**X**		**X**	**X**		**25**
10.07	Work with VTrans and TRORC to advocate for and improve the flood capabilities of State and Town-owned transportation infrastructure.	**X**						**O/G**
10.08	Continue working to develop mitigation plans, emergency preparedness, and recovery procedures from flooding.	**X**		**Safety**				**O/G**

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Flood Resilience								
10.09	Identify and prioritize in concert with the ANR River Management Section and TRORC for mitigation actions such as elevation/relocation or purchase and demolition of existing homes and businesses at serious risk of flood damage.	**X**		**Safety**				**O/G**
10.10	Add areas not designated in either FEMA's maps or in VT ANR;s maps, but which are flooded during a weather event to local flood regulations.	**X**	**X**	**Safety**				**25**
10.11	Work to incorporate watershed-level planning with assistance from TRORC to evaluate natural and constructed flood storage options upstream of existing areas of concentrated development that are at risk of flooding.	**X**		**Safety**				**O/G**
10.12	Work with ANR, TRORC and landowners to lessen flood risk by restoring natural channel functions where appropriate.	**X**		**Safety**				**O/G**
10.13	Adopt road and bridge standards to the 50- or 100-year storm level for identified critical transportation routes.	**X**	**Safety,HWY**					**O/G**
10.14	Periodically review and update as needed the Bradford Flood Hazard Area Bylaw		**X**					**25**

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**			**Year**	
		SB	**PC**	**Other**	**Budget**	**Grant**	**Capital**		
Transportation									
11.01	Investigate adopting Complete Street Standards.	X	X			X		24/25	
11.02	Work with VTrans and TRORC to ensure that improvements to the state highway system are sensitive to the desires of the Bradford community and maintain the rural character of the town.	X			X	X		O/G	
11.03	Work with Tri-Valley Transit to improve service to the community, expand routes and reduce costs.	X						O/G	
11.04	Work with Tri-Valley Transit to improve access to Greyhound, Dartmouth Coach and Amtrak services.	X						O/G	
11.05	Work with Tri-Valley Transit to incorporate bus stops at recreational areas.	X		P&R				O/G	
11.06	Review and make any update to the Town policy regarding upgrading Class 4 roads and private roads to Class 3 town-maintained roads to ensure the following:	X		HWY	X			23,27	
11.06A	Adequate road construction standards are followed.	X		HWY	X		X	O/G	
11.06B	Landowners are required to pay for bringing the road up to Town standards	X		HWY				O/G	
11.06C	Input from the PC and Conservation Commission is incorporated in the SB's review and decision process to ensure the changes would be consistent with the Town Plan.	X	X	CC				O/G	
11.07	Review and make any needed update to the town's driveway regulations and road standards to ensure that safety and drainage issues are adequately addressed.	X		HWY				O/G	
11.08	Assess whether to require new private roads and ROW be constructed to Town road standards.		X	DRB,ZA				23/24	

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**			**Year**	
		SB	**PC**	**Other**	**Budget**	**Grant**	**Capital**		
Transportation									
11.09	Prioritize and schedule the road segments planned for improvement.	X		HWY		X	X	O/G	
11.10	Follow a formal Capital Budget Program for the purpose of planning and budgeting for major transportation projects.	X	X			X		23/24	
11.11	Analyze in advance any major highway improvement project for its impact on land use, property values, environment and governmental costs on services. These projects should be coordinated with other town infrastructure improvements to make such work as cost-effective as possible.	X	X	CC,HWY	X			O/G	
11.12	Coordinate any major highway projects with other town infrastructure improvements to make such work as cost effective as possible.	X		HWY				O/G	
11.13	Ensure that Subdivision and zoning bylaws include a well-planned a well planned access policy.		X	HWY			23/24,27/28		
11.14	To have any land subdivision or development include in the zoning permit, if granted, reference to road policies in effect and specify that the Town is not responsible for upgrade or maintenance of any property that intends to gain access via a Class 4 road or privately maintained drive.		X	ZA,DRB				O/G	
11.15	Inventory parking and pedestrian needs within the Central District and formulate a plan for making upgrades.		X	HWY				23,27	

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**			**Year**	
		SB	**PC**	**Other**	**Budget**	**Grant**	**Capital**		
Transportation									
11.16	Consider redesigning Main Street to enhance its appearance and functionality-all utilities underground, correcting drainage, more visually obvious crosswalks, elimination of sidewalk vault (may be complete by adoption of plan), upgrading sidewalks and streetlights. A scoping project using an MPG might be first step.	X	X	HWY		X	X	25	
11.17	Investigate the benefits of working with VTrans to make the area of Route 5 in the downtown into a Class 1 road, thus taking over the maintenance. This would allow the town to work with VTrans to apply different weight or length limits than are presently allowed which could result in a reduction in truck traffic within the downtown.	X	X	HWY				24/25	
11.18	Continue to update and maintain a culvert inventory in Bradford in order to ensure that the 90/20 grant is available.	X		HWY		X		O/G	
11.19	Work with VTrans to identify potential traffic calming options in the Downtown.	X							
11.20	Consider developing a design for a pedestrian network.		X	HWY		X		25	
11.21	Periodically the inventory of sidewalks and other pedestrian routes for their condition, and studied to determine the amount and type of pedestrian traffic they handle. This should be used to develop a priority ranking on renovation and repair.	X	X	HWY		X		23,27	
11.22	Review the zoning bylaw to determine the appropriate regulations for parking spaces for commercial development.		X				23/24,27/28		
11.23	Support public transportation infrastructure such as bus stop shelters and signage.	X	X	EC		X		O/G	

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**				
		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**	
Future Land Use									
12.01	**Central Business Area**								
12.01A	Revise the lot coverage requriements of the Zoning and Subdivision Bylaws to allow for greater density if appropriate.		**X**					**23, 24**	
12.01B	Encourage development of second floor as offices and other commercial and residential activities provided such development creates no undue burden on emergency services or other muncipal services.		**X**	**DRB**				**O/G**	
12.01C	Investigate options for the creation of streetscaping including green space, façade improvements, sidewalks, benches and buried utlitiy lines.	**X**	**X**				**X**	**O/G**	
12.01D	Contiue to encourage the installation of EV charging stations.	**X**		**EC**	**X**		**X**	**O/G**	
12.02	**Lower Plain**								
12.02A	Contiue implementing design review within the Lower Plain and Central Busiiness area to better define the desired aesthetics of development in this area.		**X**	**ZA, DRB**			**23, 24 O/G**		
12.03	**Residential Service Area**								
12.03A	Contiue to review lot sizes, uses and encourage the adaptive reuse of properties.		**X**				**23/24 28/29**		
12.03B	Maintain and expand bike/ped "complete' streets" in this area as well as CBD and LP.	**X**	**X**			**X**	**X**	**O/G**	

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**				
		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**	
Future Land Use									
12.04	**Village Residential**								
12.04A	Utilize an inventory of the sidewalks to establish a schedule for repair, maintenace and expansion.	**X**			**X**			**O/G**	
12.04B	Repair the retaining wall and associated sidewalk and road along North Pleasant Street.	**X**	**X**	**HWY**	**X**	**X**	**X**	**ASAP/27**	
12.04C	Encourage and support infill, accessory dwellings and other creative approaches to expanding housing units in this area.	**X**	**x**	**DRB**				**O/G**	
12.05	**Residential Area**								
12.05A	Protect open space and the working landscape in Bradford, the PC should consider increasing the minimum lot size in the Residential Area and creating areas of varying density.		**X**				**23/24, 28.29**		
12.05B	Investigate further reducing minimum lot size where town water and/or sewer exist.		**X**					**23,24**	
12.06	**Industrial Area**								
12.06A	Consider allowing accessory commercial uses within the Industrial Area particularly the parcels in the Lower Plain Industrial Park.		**X**				**23/24, 27/28**		
12.06B	Evaluate current site plan requirements within the industrial rea to ensure that auto, pedestrian and bicycle safety are appropriately managed.		**X**				**23/24 27/28**		
12.08	**Low Density Residential Area**								

Implementation									
Action Key	**Action Step**	**Responsible Party**			**Funding Source**				
		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**	
Future Land Use									
12.08A	Modify zoning and subdivision to discourage forest fragmentation.		**X**	**CC**			**23,24 27/28**		
12.09	**Mixed Use Industrial**								
12.09A	Review and implement appropriate standards for the area.		**X**				**23/24 27/28**		

Implementation								
Action Key	**Action Step**	**Responsible Party**			**Funding Source**			
		SB	**PC**	**Other**	**General Fund**	**Capital Budget**	**Grant**	**Year**
Other Plans								
13.01	Encourage continued communication and cooperation between Bradford and neighboring towns.	**x**	**x**	**ALL**				**O/G**
13.02	Continue participation in TRORC provided TRORC continues to serve the needs of the the Town of Bradford.	**X**	**X**	**ALL**	**x**			**O/G**
13.03	Exchange planning information and development data with neighboring communities.	**X**	**X**					**O/G**

Two Rivers-Ottauquechee
REGIONAL COMMISSION

April 28, 2017

Marcey Carver
Planning Commission Chair
Town of Bradford
P.O. Box 339
Bradford, VT 05033

RE: Municipal Summary Worksheet - Energy

Ms. Carver:

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

cc: Peter G. Gregory, Executive Director, Ed Wendell Energy Committee Chair, File

Municipal Template - Energy Data

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

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.

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)

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.

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)	1,672
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	18,987,232
Realized MPG (VTrans)	18.6
Total Gallons Use per Year	1,020,819
Transportation BTUs (Billion)	123
Average Cost per Gallon of Gasoline (RPC)	2
Gasoline Cost per Year	2,358,092

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	37	3.1%	3,775,800,000	4
Propane	343	28.9%	31,543,320,000	32
Electricity	100	8.4%	7,727,040,000	8
Fuel Oil	449	37.9%	43,483,320,000	43
Coal	0	0.0%	0	0
Wood	240	20.3%	26,377,800,000	26
Solar	0	0.0%	0	0
Other	16	1.4%	1,540,680,000	2
No Fuel	0	0.0%	0	0
Total	**1185**	**100.0%**	**114,447,960,000**	**114**

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	17	.725	12

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)	7,252,563
Commercial and Industrial (kWh)	9,464,450
Total (kWh)	16,717,013

*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)	120	315	666

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	48.6%	61.2%	93.2%

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)	15,703-19,193

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	155	1,097	2,283

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	272	512	865

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	0.37	454
Wind	0.00	0
Hydro	1.50	5256
Biomass	0.00	0
Other	0.00	0
Total Existing Generation	**1.87**	**5710**

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	1	1,558
Ground-mounted Solar	539	661,030
Wind	30	91,214
Hydro	0	39
Biomass and Methane	0	0
Other	0	0
Total Renewable Generation Potential	**570**	**753,839**

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)	15,703-19,193

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	4220%

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.

Existing Energy Generation

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

Created:2017

BRADFORD

BIOMASS KW

- 19
- 20 - 375

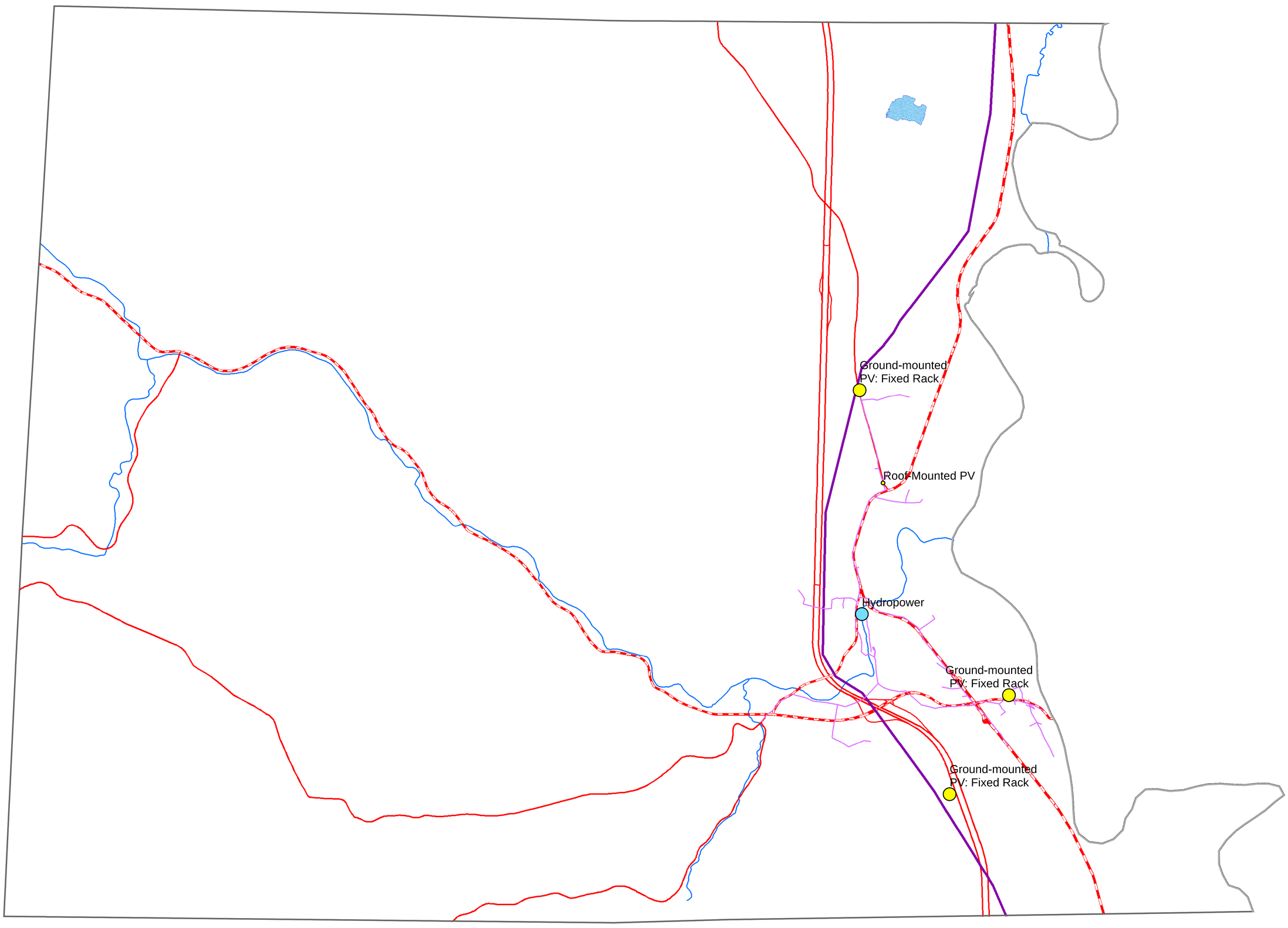
HYDRO KW

- 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



0 0.5 1 2 Miles

N

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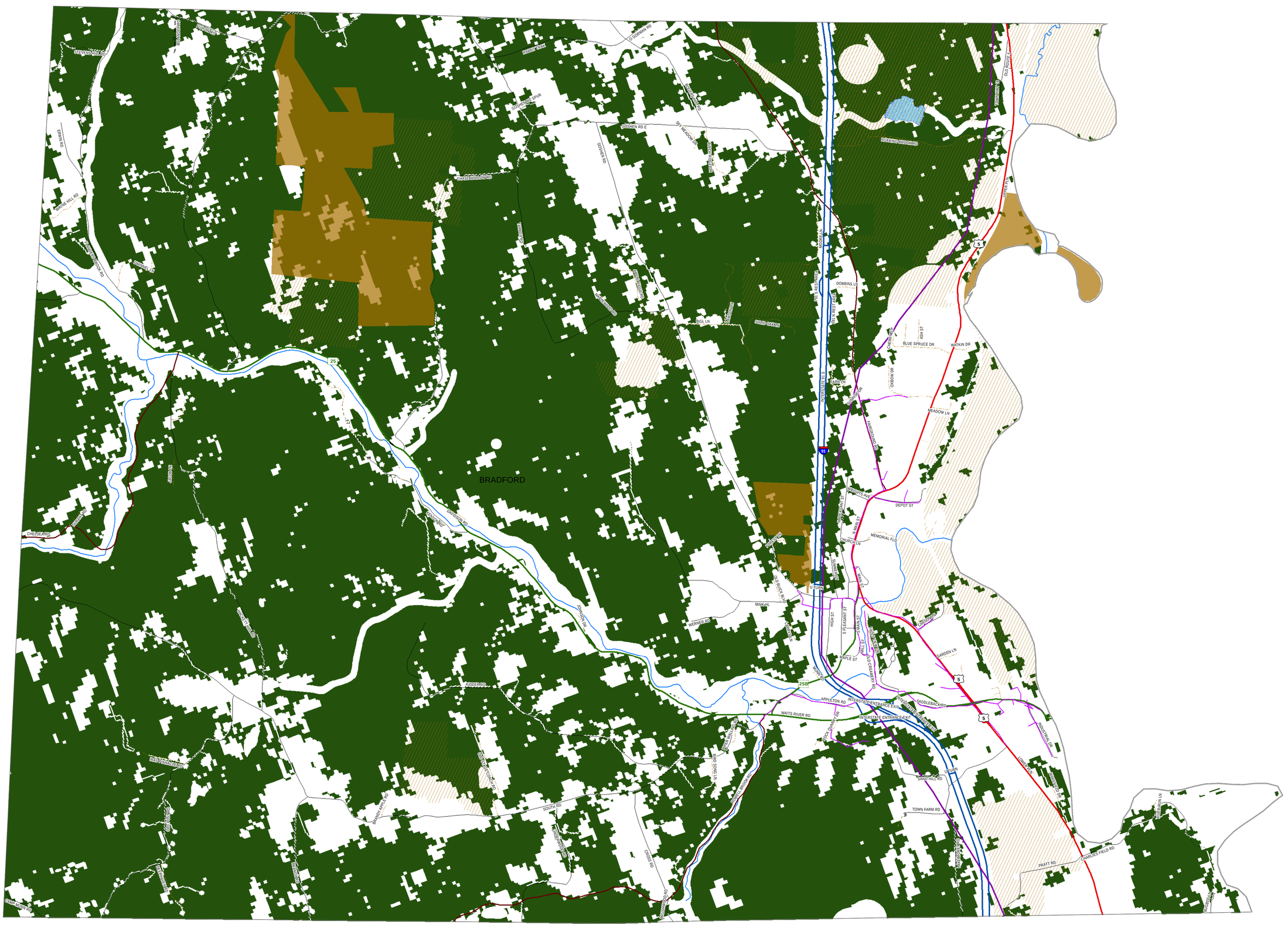
BIOMASS Energy Potential

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

BRADFORD



0 0.5 1 2 Miles

N

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.

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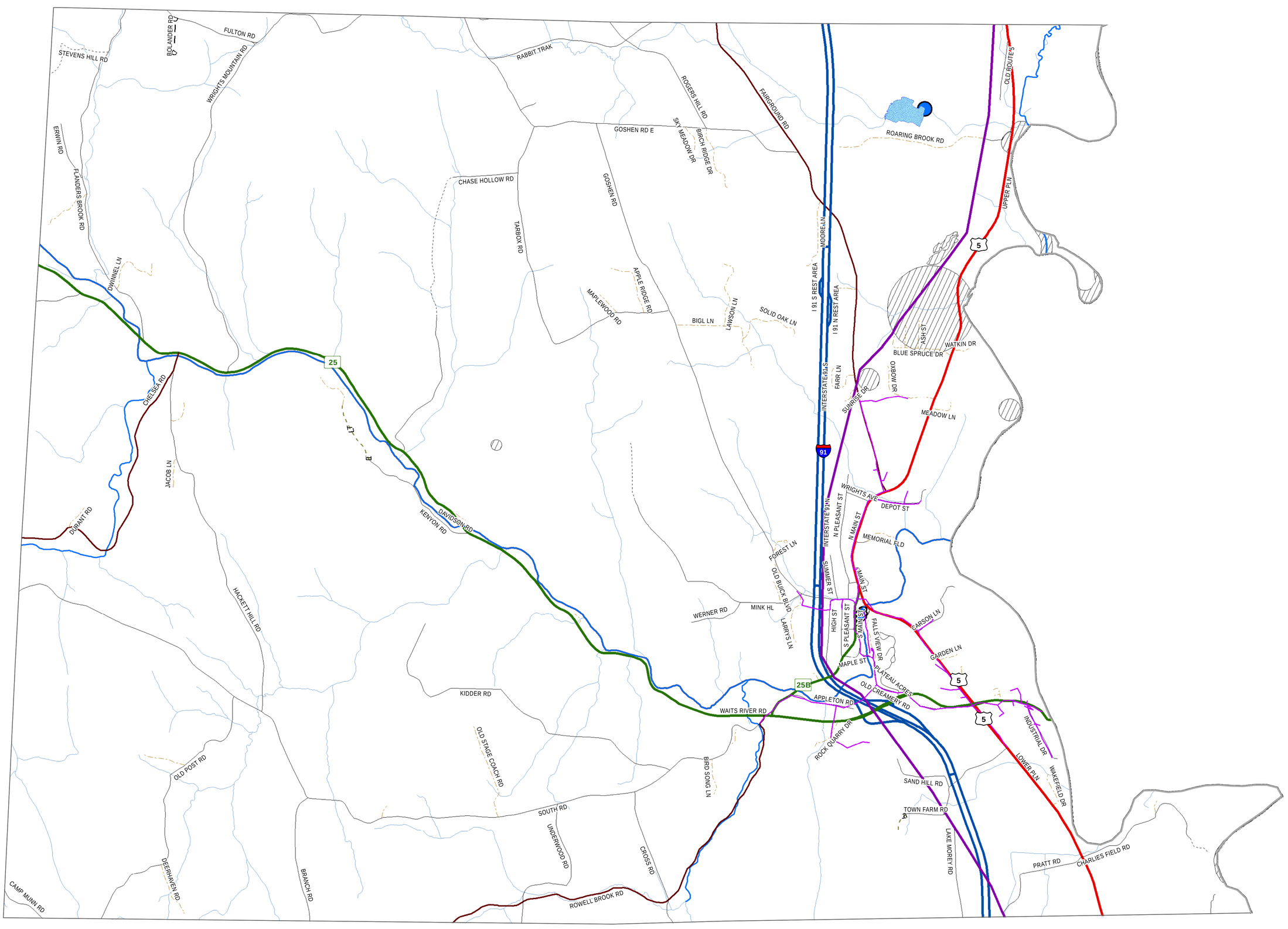
Conserved
- Public Cons
- Private Cons
- Substations
- 3 Phase Power Lines
- Transmission Lines
- Lakes/Ponds
- Rivers/Streams
- Woody Biomass

Hydroelectric Energy Potential

BRADFORD

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
- Operational Hydroelectric Facilities
- < 50 kW Capacity
- > 50 kW Capacity
- High Hazard with < 50 kW Capacity
- High Hazard with > 50 kW Capacity
- Impaired Waters
- Stressed Waters
- Designated Outstanding Resource Waters
- 0-3
- 4 - 6
- 7 - 9
- Rare and Irreplaceable Natural Areas (RINAs)



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.

~ http://www.vtenergyatlas-info.com/wp-content/uploads/2010/02/DPS-Undeveloped-Hydro-Potential-FINAL-VERSION.pdf

N

0 0.5 1 2 Miles

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.

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Solar Energy Potential BRADFORD

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

- Substations
- 3 Phase Power Lines
- Transmission Lines
- Structures w/1ac buffer

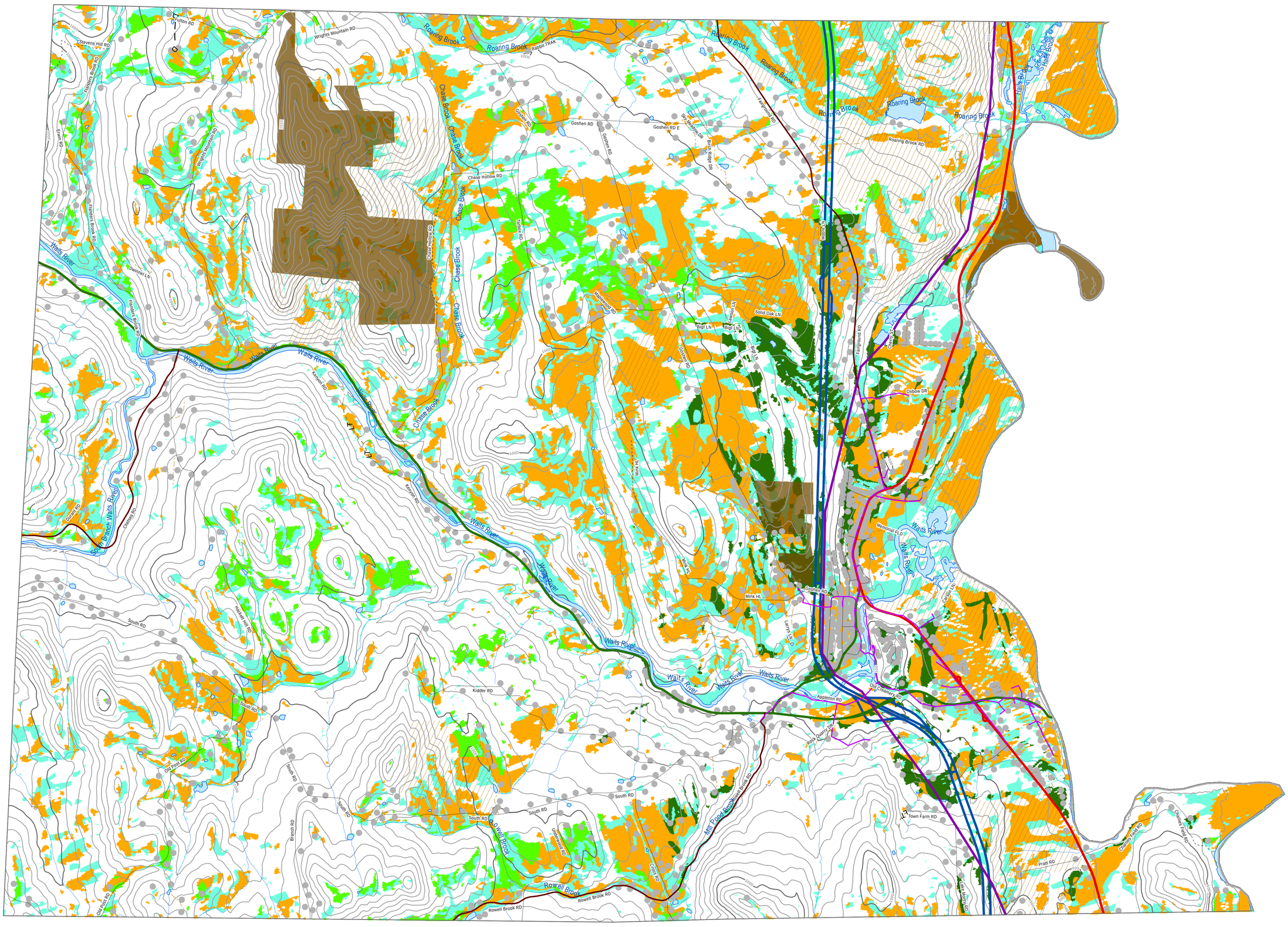
Conserved

- Public Cons
- Private Cons

SOLAR POTENTIAL

Suitability

- Prime
- Constraints
- Prime 1m 3phase
- RAW solar



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

N

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0 0.5 1 2 Miles

Wind Energy Potential

BRADFORD

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

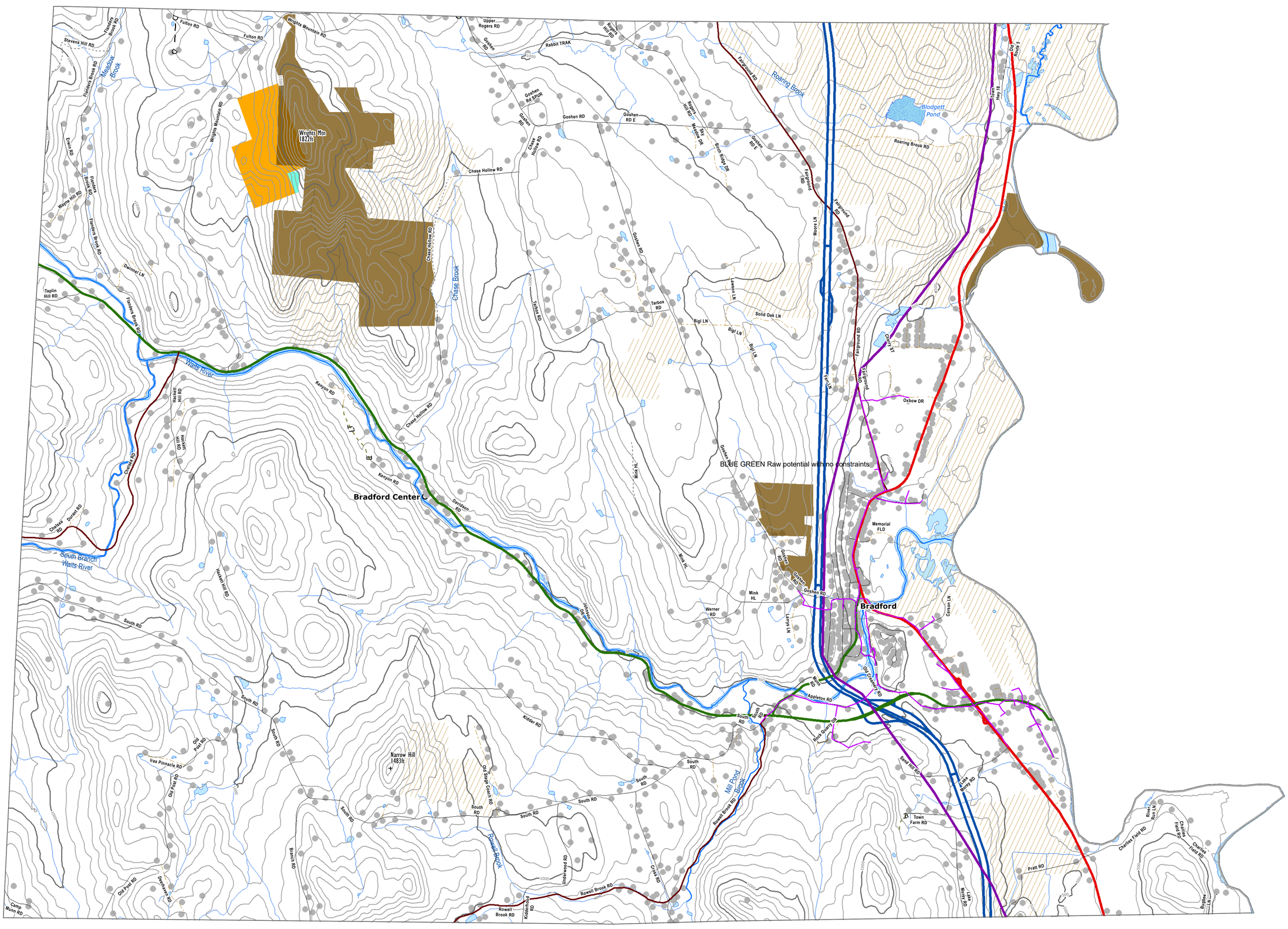
Conserved

- 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 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

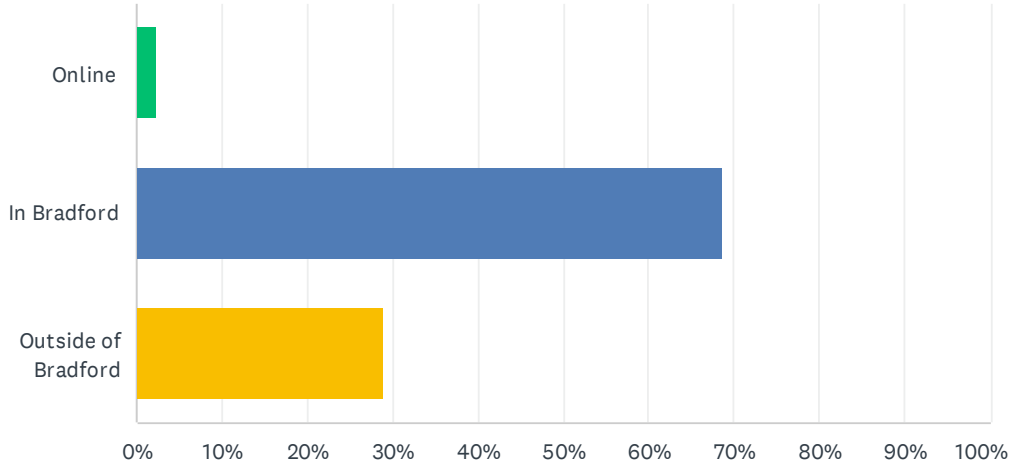
N

Two Rivers-Ottauquechee REGIONAL COMMISSION
trorc.org

0 0.5 1 2 Miles

Q1 Where do you do the majority of your weekly shopping"

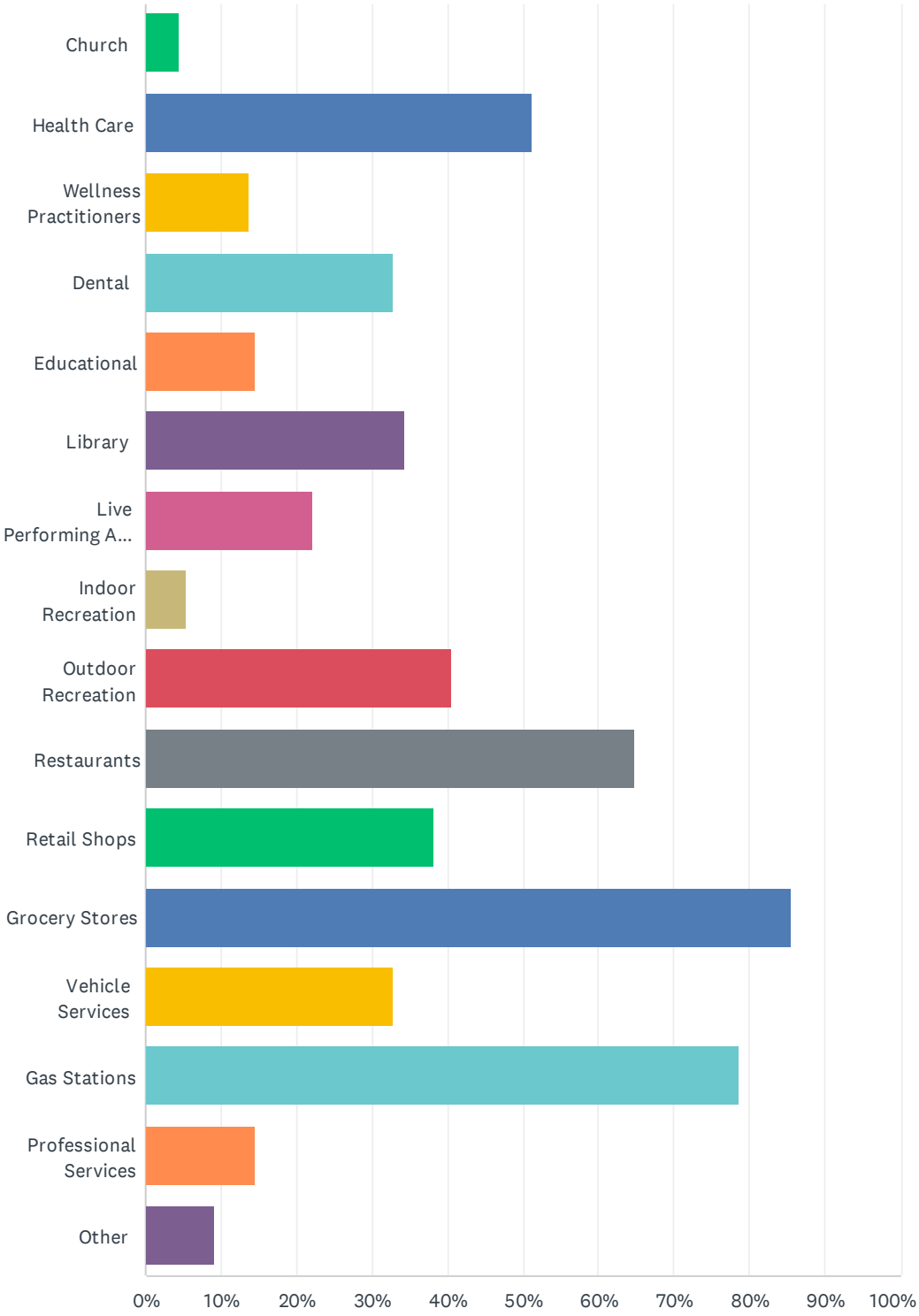
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Online	2.29%	3
In Bradford	68.70%	90
Outside of Bradford	29.01%	38
TOTAL		131

Q2 What services in Bradford do you frequent on a regular basis. Select all that apply.

Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Church	4.58%	6
Health Care	51.15%	67
Wellness Practitioners	13.74%	18
Dental	32.82%	43
Educational	14.50%	19
Library	34.35%	45
Live Performing Arts and Music	22.14%	29
Indoor Recreation	5.34%	7
Outdoor Recreation	40.46%	53
Restaurants	64.89%	85
Retail Shops	38.17%	50
Grocery Stores	85.50%	112
Vehicle Services	32.82%	43
Gas Stations	78.63%	103
Professional Services	14.50%	19
Other	9.16%	12
Total Respondents: 131		

#	COMMENT	DATE
1	Veterinarian	4/18/2022 8:15 AM
2	Oakes and valley floors	4/11/2022 9:03 AM
3	J&m	4/8/2022 7:56 AM
4	trash transfer station	4/7/2022 1:01 PM
5	Space on Main	4/5/2022 8:36 PM
6	The Space on Main	4/4/2022 8:40 AM
7	Bradford has the potential of becoming like Freeport Me	4/3/2022 6:32 PM
8	FarmWay is a big draw for me.	4/2/2022 9:11 PM
9	safe ship/post office	4/2/2022 5:09 PM
10	Senior Center Exercise class	4/2/2022 11:26 AM
11	If I am not buying local, it is because of lack of availability. Specifically, Hannaford only carries a fraction of the food that my family eats. Even their organic section is inadequate and comes from large scale farming practices.	4/2/2022 7:28 AM
12	Post Office	3/28/2022 10:59 AM
13	Things are much cheaper 30 minutes away.	3/26/2022 1:23 PM
14	Coworking Space	3/24/2022 9:17 PM
15	Vet	3/24/2022 6:20 PM

16	Nothing. Maybe restaurant once in a while.	3/24/2022 6:02 PM
17	I’m considering professional services as my hair dresser	3/24/2022 5:23 PM

Q3 Which types of businesses or activities would you like to see come to Bradford?

Answered: 126 Skipped: 5

#	RESPONSES	DATE
1	hair dresser, Hearing clinic, market basket, nursing Home - small, dermatology, retail	4/22/2022 8:55 PM
2	.	4/22/2022 8:37 PM
3	Educational opportunities - like Film series Block Parties	4/18/2022 6:12 PM
4	Eating Establishments sit down takeout repaired food café etc.	4/18/2022 4:23 PM
5	Bakery	4/18/2022 12:48 PM
6	Hardware store	4/18/2022 11:03 AM
7	More sports for adults, town swimming pool, paths for walking, riding bikes or hiking. Outdoor music, food co-op, community kitchen, art spaces, murals.	4/18/2022 10:25 AM
8	Restaurants. Retail shops Cannabis Retail	4/18/2022 9:49 AM
9	Indoor recreation, indoor pool	4/18/2022 9:26 AM
10	a natural/organic foods grocery store (I drive almost every weekend to Littleton or Montpelier for the coop because there are many things there you can't get at Hannaford). Would like to see a good bakery, better recreational opportunities (indoor pool) and walking trails near the river.	4/18/2022 8:50 AM
11	Restaurants, retail	4/18/2022 8:48 AM
12	More restaurant options, more festivals/ music/ etc.	4/18/2022 8:34 AM
13	bakery	4/18/2022 8:16 AM
14	Local shops and activities downtown	4/18/2022 8:15 AM
15	A first rate bakery - eat in for beverages in the morning - but mostly for fresh pastry and pies to go.	4/18/2022 8:11 AM
16	physical therapist, fitness center, indoor pool	4/18/2022 6:40 AM
17	Healthy food options, gym, copy place, better family hardware like aubochon’s was,	4/18/2022 6:25 AM
18	None	4/18/2022 5:57 AM
19	A family style restaurant A healthy food restaurant (love Coli, but all carbs and fat except salads) Concert venue (outdoor concerts at Notch Above Auto not ideal, but people like live music Town pool Walking trails that are cleared so not so many ticks as deep grass trails	4/16/2022 2:53 PM
20	Small movie theater; brewery; more live music and visual arts exhibits.	4/14/2022 10:11 PM
21	more boutiques and cafes	4/14/2022 12:02 PM
22	Five and dime, clothing	4/14/2022 9:49 AM
23	Non franchise restaurants and shops. Small farms	4/14/2022 9:35 AM
24	Appliance sales & service; bike sales & rental; canoe & kayak sales & rental	4/14/2022 8:49 AM
25	Recreation and wellness based businesses.	4/14/2022 8:41 AM
26	TJ Maxx, mcDonalds, etc	4/14/2022 8:26 AM
27	General merchandise/hunting store	4/14/2022 7:28 AM

28	A health club/gym, a fast food restaurant, a gallery or art space	4/14/2022 7:24 AM
29	Anything	4/14/2022 5:49 AM
30	store like aubucon's that is open every day, bakery, health food store, tax prep like they used to have at the library	4/12/2022 9:02 AM
31	I would like to see a fast food restaurant, and large retail store. I think that being so close to the interstate that a restaurant and store such as McDonald's or Target would bring many travelers off of the interstate and into Bradford.	4/12/2022 8:22 AM
32	I'm not sure.	4/12/2022 7:13 AM
33	child/teen activities - swimming, gymnastics, dance, pre-school, etc	4/11/2022 6:25 PM
34	Hardware store open on weekends, organic food coop, middle earth type venue	4/11/2022 9:03 AM
35	Hardware that is open weekends and has good inventory (unlike Oakes Bros).	4/11/2022 7:02 AM
36	movie theatre, pickelball court, Christmas market, holiday activites	4/10/2022 2:20 PM
37	A couple smaller fast food businesses, more activities for our kids like a theater(movie) or bowling. Many of our kids have to travel over half an hour to an hour for events like this!	4/9/2022 3:32 PM
38	low income housing	4/9/2022 3:09 PM
39	Performing arts, indoor public spaces	4/8/2022 9:13 PM
40	Craft store Folk Music	4/8/2022 1:19 PM
41	Gym More restaurants	4/8/2022 10:29 AM
42	Bakery, natural foods, another Hills type store (outdoor goods included), more restaurants	4/8/2022 9:02 AM
43	I can get everything other than homedepot needs	4/8/2022 7:56 AM
44	Gym	4/8/2022 7:02 AM
45	Cafe, bakery (I'm so sad about Colatina closing), farmers market, outdoors/hiking gatherings	4/8/2022 6:36 AM
46	Canabis	4/8/2022 5:41 AM
47	A swimming pool, inside, heated so that older folks can use.	4/7/2022 1:01 PM
48	Organic and local food store and/or farm stand, arts center	4/5/2022 8:36 PM
49	Mountain bike trails, XC ski trails (groomed and ungroomed), kid-safe cycling/ski route connecting Elizabeth Park, Oxbow, Elementary School, Downtown, Park and Ride, and Low St. John.	4/5/2022 1:48 PM
50	Movie theater, bowling alley, skating rink, live music venue with great performers (like Middle Earth!)	4/5/2022 8:16 AM
51	Biking/Walking paths, swimming (indoor pool or better access to swimming holes), sushi restaurant	4/4/2022 4:03 PM
52	I would love to have classes like dance and yoga more local. More diverse food options would be pretty great. Fixing up the sidewalks, maybe even creating more outdoor seating would be awesome.	4/4/2022 2:21 PM
53	Fitness center, more outdoor walking spaces, farmers market, bulk food.	4/4/2022 9:10 AM
54	Food truck. Bike paths. Outdoor dining.	4/4/2022 8:40 AM
55	small retail shops	4/3/2022 6:32 PM
56	Low impact high paying manufacturing. Transport to big box stores in Lebanon..... more bus trips per day at Valley Transport. Pickleball with chance at tournaments.... spartan races..... regatta on the river	4/3/2022 3:22 PM
57	bike and kayak rental live music/food venue Indian restaurant Mexican restaurant organized adult recreation league running events	4/3/2022 1:21 PM
58	Small owner-operated stores; also a return of a general store like Hills.	4/2/2022 9:11 PM

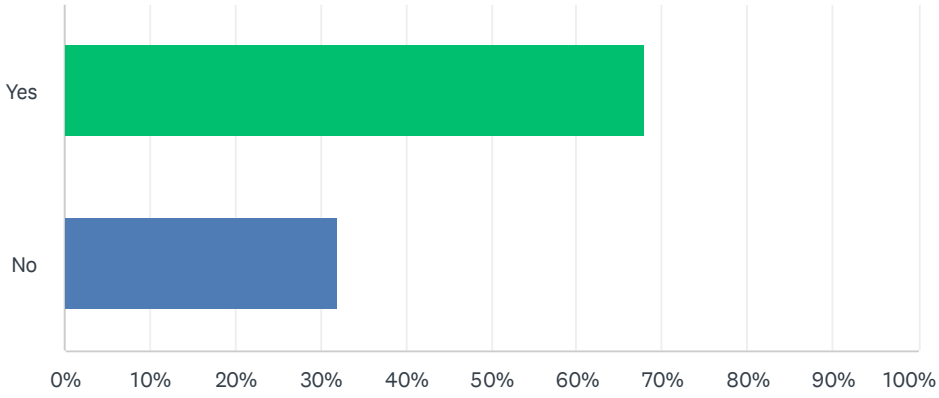
59	Global is not doing a very good job with the minimart, would be great to see some competition on the corner. Would be great to see more support for the fairgrounds, allowing for more advance at the grounds	4/2/2022 6:59 PM
60	A "maker space" established in or near Bradford would be great. I'd also love to see a fix it fair (or whatever they are called) happen in town	4/2/2022 5:09 PM
61	Bookstore, theater and performance space and some kind of regular forum for discussion of both broad and specific topics of interest to many.	4/2/2022 3:07 PM
62	Movie theater Bowling Alley Clothing store like Kohls	4/2/2022 11:26 AM
63	Healthy and collaborative arts organization; greater community solidarity between diverse groups; higher degree of active diversity inclusion work being done at all levels: personal, organizational, municipal, educational	4/2/2022 11:09 AM
64	Light industry and manufacturing. A higher concentration of education geared toward technical training (CNC, electrical, plumbing, construction etc.).	4/2/2022 9:50 AM
65	mexican restaurant	4/2/2022 9:30 AM
66	Rock climbing gym. Bike and cross country ski trails	4/2/2022 9:29 AM
67	Bring back 5 and 10!	4/2/2022 9:22 AM
68	Healthy drive thru Fitness center with indoor pool	4/2/2022 8:56 AM
69	More music and arts	4/2/2022 8:54 AM
70	More live music venues, bookstore, natural foods/products store, more locally-owned restaurants (no chains!).	4/2/2022 8:43 AM
71	A health food store. And anything that is not a chain store.	4/2/2022 7:28 AM
72	Another Hills store	4/2/2022 5:11 AM
73	Kids summer camp	4/2/2022 2:39 AM
74	A higher end, farm to table restaurant like Perfect Pear and/or Peyton Place used to be. Maybe a local craft beer/local wines/ciders.	4/1/2022 10:16 PM
75	Activities for families. Community events. Farmers market	4/1/2022 10:08 PM
76	Indoor sporting facilities	4/1/2022 9:31 PM
77	Higher end retail; expanded library; hardware store which provides the “small” purchases and is open at reasonable times. Currently an issue when have to waste a whole weekend day to drive to Lebanon or Woodsville for a five dollar purchase.	3/30/2022 11:10 PM
78	ethnic food retail	3/30/2022 1:40 PM
79	More live music, health food store or co-op	3/28/2022 5:37 PM
80	I would like to see a shop to re-fill common household items like shampoo and washing detergent. I would like to see restaurants other than pizza places.	3/28/2022 5:01 PM
81	Restaurants, jiu jitsu, dance, swimming pool, dog park, nicer volleyball net, basketball court	3/28/2022 3:51 PM
82	More retail in the downtown area More restaurants Both of high quality please We’ve got second hand shops for days so no more of those please.	3/28/2022 1:14 PM
83	Better restaurants	3/28/2022 10:59 AM
84	Outdoor music in summer	3/28/2022 9:31 AM
85	More recreation	3/27/2022 11:12 PM
86	Farm stands	3/27/2022 7:12 PM
87	A bookstore selling new books, and another cafe.	3/27/2022 5:39 PM
88	Paved roads. Entertainment that isn’t centered around food or alcohol.	3/26/2022 10:40 PM

89	Not sure if we really “need” anything that’s not here and we’re new enough to the area that I’m not even 100% of everything that’s already here. Though, I’d love a more local waste management option that doesn’t cost as much as Casella, their service is great but it’s more than double what I’ve paid in other states.	3/26/2022 10:25 PM
90	Some sort of family entertainment would be cool, maybe a bowling alley? A community pool?	3/26/2022 3:17 PM
91	Bradford allows businesses?	3/26/2022 1:23 PM
92	Small businesses	3/26/2022 12:12 PM
93	Car dealership	3/26/2022 10:30 AM
94	A family style restaurant and ice cream options	3/26/2022 5:46 AM
95	More food options	3/25/2022 9:11 PM
96	More Organically grown food Mailing Labels Good whole grain breaker Reduced speed on Main Streets to 15mph Safe cycling for children Movie Theater Canoe/kayak rental at boat launch	3/25/2022 7:48 PM
97	Something similar to the old 5 and 10 or dan and witts where there is a variety of stuff so I dont have to shop online so much. Dance/club/bar	3/25/2022 6:11 PM
98	Large retail store IE: Khol's	3/25/2022 10:25 AM
99	Hobby/craft store	3/25/2022 9:25 AM
100	Clothing stores (other than Walmart and Farmway) Comedy shows Concerts More outdoor rec opportunities (in town walking trail)	3/25/2022 8:37 AM
101	Self grooming station!!!	3/25/2022 12:13 AM
102	Riverside boardwalks, bike trails, lawyers, accountants, a community kitchen, and cooperative retail/food spaces. I would like to see us support the expansion of businesses that are already here (growth of businesses that may outgrow the Industrial Park). I would also like to see us create spaces for entrepreneurs to start businesses (most of which need 1,000 sqft or less to start). I'd love to see mixed commercial with residential buildings that could foster growth of families as well as businesses.	3/24/2022 9:17 PM
103	None	3/24/2022 9:06 PM
104	Dunkin	3/24/2022 9:04 PM
105	The kinds of stores teens might frequent, to encourage and capture after-school foot traffic.	3/24/2022 8:53 PM
106	apartment buildings	3/24/2022 8:39 PM
107	Yoga, cannabis dispensary, more indoor kids activities in the winter (indoor playground/activities center)	3/24/2022 8:35 PM
108	Dunkin Donuts, family diner	3/24/2022 7:25 PM
109	Nice sandwich shop	3/24/2022 6:58 PM
110	Bakery	3/24/2022 6:49 PM
111	Steakhouse or seafood restaurant, small business with variety of goods, bigger grocery store, hobby lobby	3/24/2022 6:22 PM
112	More restaurants, rock climbing gym, looking forward to the dog park	3/24/2022 6:20 PM
113	Indoor game centers. Batting cages.	3/24/2022 6:17 PM
114	Better restaurants. Affordable variety of businesses	3/24/2022 6:02 PM
115	nothing	3/24/2022 5:47 PM
116	Chain restaurant	3/24/2022 5:45 PM
117	Restaurants, unique local shops	3/24/2022 5:43 PM
118	More retail and restaurants.	3/24/2022 5:38 PM
119	Better trail access. Entertainment businesses bowling / skating. Beach access.	3/24/2022 5:25 PM

120	Gym! With both classes and just general workout equipment. Would be nice to have more restaurants (diner, thai, sandwich shop, ect)	3/24/2022 5:23 PM
121	Dispensaries	3/24/2022 5:10 PM
122	Teen entertainment (NOT teen center), family entertainment, NO more eateries. SMALL businesses.	3/24/2022 5:06 PM
123	And indoor pool, rec center.	3/24/2022 4:49 PM
124	A bakery! Bowling alley. More restaurants. Small market.	3/24/2022 4:15 PM
125	Movie theatre, bowling alley, indoor rec activities.	3/24/2022 11:50 AM
126	hardware store open on sundays, community center/fitness, walking loops,	3/23/2022 9:00 PM

Q4 Do you think Bradford should permit retail sale of Cannabis/Marijuana when it becomes permissible in Vermont in October?

Answered: 131 Skipped: 0



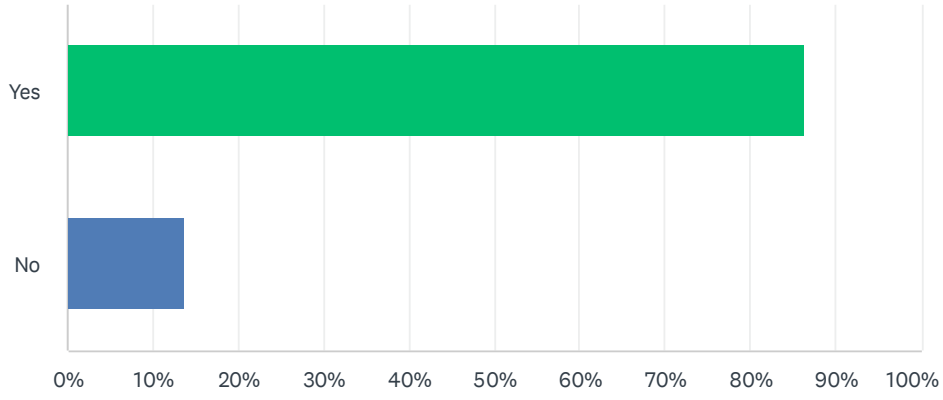
ANSWER CHOICES	RESPONSES	
Yes	67.94%	89
No	32.06%	42
TOTAL		131

#	COMMENT	DATE
1	Folks will buy elsewhere.	4/22/2022 8:26 PM
2	It will be everywhere soon enough...just like liquor stores	4/18/2022 6:12 PM
3	why not	4/18/2022 8:50 AM
4	Defiantly this would not be favorable to the Town’s image !	4/18/2022 8:11 AM
5	But there should be a test that can be performed if irrational driving as with DUI	4/16/2022 2:53 PM
6	It would be a boon to Main Street and/or Lower Plain.	4/14/2022 10:11 PM
7	Your youth need goals, hopes, and dreams and pot steals all of this	4/14/2022 8:26 AM
8	It would be a great business in downtown— and help revitalize the empty storefronts. In Massachusetts they cannabis industry is well run and there is no sweeping epidemic of pot related crime—they are too busy giggling and eating Oreos to commit crimes	4/14/2022 7:24 AM
9	We don't need any more drug addicts in Bradford!	4/12/2022 8:22 AM
10	Why open that door?	4/11/2022 7:02 AM
11	Not sure	4/8/2022 7:47 AM
12	Absolutely. The tax income alone is a solid argument. Using that income to beautify main street and attract more tourism is the way to attract a younger population, a problem all of VT is having right now.	4/4/2022 2:21 PM
13	however in one location only with a 25% tax	4/3/2022 6:32 PM
14	Absolutely, we have good growing space in town, why would we want to make people drive to buy a legal product?	4/3/2022 1:21 PM

15	It is not yet a profitable business, and would have back door sales	4/2/2022 6:59 PM
16	don't feel strongly one way or the other	4/2/2022 5:09 PM
17	Probably best in cooperation with other nearby towns.	4/2/2022 3:07 PM
18	No Vaping either	4/2/2022 11:26 AM
19	I think it will attract potential customers to town	4/2/2022 9:30 AM
20	It would bring in customers	4/2/2022 9:22 AM
21	Open to changing mind	3/30/2022 1:40 PM
22	Unsure- would need more info	3/28/2022 1:14 PM
23	Definitely Not!!	3/26/2022 1:23 PM
24	Absolutely yes, locally owned and operated ONLY.	3/25/2022 7:48 PM
25	We are not a druggie town. Let’s keep it that way	3/24/2022 9:04 PM
26	It's not as if people won't buy it if it's only available in other communities.	3/24/2022 8:53 PM
27	We have enough illegal drug use and the fall out from it	3/24/2022 6:22 PM
28	It’s bad enough in Bradford with no police presence.	3/24/2022 6:02 PM
29	Doesn’t really matter either way.	3/24/2022 5:25 PM
30	on lower plain	3/23/2022 9:00 PM

Q5 Would you support connecting the Village/Downtown with the Lower Plain by a walk/bike path?

Answered: 131 Skipped: 0



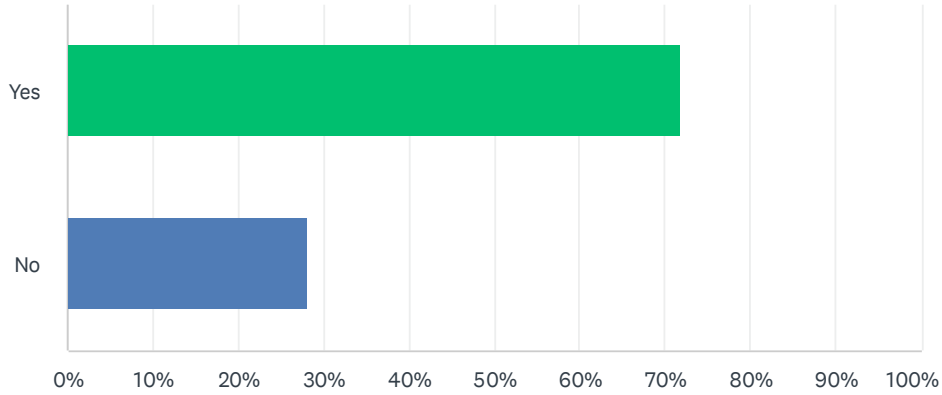
ANSWER CHOICES	RESPONSES	
Yes	86.26%	113
No	13.74%	18
TOTAL		131

#	COMMENT	DATE
1	one more headache for maintenance and safety	4/22/2022 8:55 PM
2	away from route 5?	4/22/2022 8:26 PM
3	Yes, yes, yes! AND all the way to Oxbow.	4/18/2022 6:12 PM
4	YES YES YES	4/18/2022 8:50 AM
5	This would be awesome!	4/18/2022 8:34 AM
6	Make it SAFE- read up on Netherlands style bike lanes. They need to be protected bike lanes, continuous sidewalks. Walkable and bikeable is the future! And disability friendly too. Make cars have to slow down. Make sure there are enough places for people to park their bikes. How about also some electric charging stations!	4/18/2022 8:15 AM
7	Make bike accessible if you go to that effort - with perks like park long the River.	4/18/2022 8:11 AM
8	Although I'm not sure what you would walk to on the lower plain?	4/16/2022 2:53 PM
9	Absolutely!	4/14/2022 10:11 PM
10	There is already space for working & biking with the exception of the Route 5 bridge over the Waits River. That needs to be improved.	4/14/2022 8:49 AM
11	Kids should be encouraged to walk and ride to school.	4/14/2022 8:41 AM
12	I would support a better "side of the road" for those walking or biking	4/10/2022 2:20 PM
13	YES! And MORE PLEASE!	4/5/2022 1:48 PM
14	I would use this ALL the time!	4/4/2022 4:03 PM
15	YES!! A paved path would be fantastic, especially if it went along the river a ways. IT would be	4/4/2022 2:21 PM

	great for runners and local kids who want to skate board. I am in my 40's and would use it to rollerblade safely so it's not just kids that would really appreciate it. A river walk would be wonderful, and again, draw visitors.	
16	I think this is very important! Good pedestrian access should be considered in the upcoming Route 5 bridge construction.	4/4/2022 8:40 AM
17	and Fairground. A Must for small shopps	4/3/2022 6:32 PM
18	YES YES YES!	4/3/2022 1:21 PM
19	But there's really not much to do, shoulder is very wide. The worst part is the bridge	4/2/2022 6:59 PM
20	Don't know anything about pros or cons of this project- it would improve the town's walkability, but does not seem to be a huge priority. If the area is going to be a focus of small commercial/residential development, then having a walk/bike path would help maintain the feeling that it is part of the town. I strongly oppose strip mall and box store type development	4/2/2022 5:09 PM
21	Only if interest was strong enough to justify the expense.	4/2/2022 3:07 PM
22	The roads are wide enough as they stand	4/2/2022 11:26 AM
23	It would need cameras	4/2/2022 9:22 AM
24	Doesn’t matter to me	4/1/2022 9:31 PM
25	Desperate need	3/30/2022 1:40 PM
26	1000000000%	3/28/2022 5:01 PM
27	If I don’t get a paved road people in town can rough it without another bike-hike path.	3/26/2022 10:40 PM
28	Of Course. Need to separate the sidewalk from the highway with a barrier.	3/25/2022 7:48 PM
29	Yes! And 25 B! As a walker, thats the best way to walk to town, but it's hazardous walking 25B around the corners.the lower plain int too bad until you hit the traffic lights with no crosswalk or the crosswalk by the library that EVERY motorist (not an exaggeration) ignores	3/25/2022 6:11 PM
30	Already have bike & pedestian lane	3/25/2022 10:25 AM
31	This is essential.	3/24/2022 9:17 PM
32	Having made the trek to and from the grocery store on foot and on bike, I can attest that it's not very safe. Sidewalks and a bike lane would go a long way toward uniting the two parts of town.	3/24/2022 8:53 PM
33	especially with ball fields going in	3/24/2022 8:39 PM
34	There is already a bike line down route 5 and a sidewalk across the bridge by the Mill with crosswalks connecting the the Main Street sidewalks. Both Route 25 and Route 5 are state highways, why is this a project for Bradford Planning?	3/24/2022 5:47 PM
35	I think so, not sure until plans are proposed	3/24/2022 5:38 PM
36	The lack of a trail network is something that really separates Bradford from surrounding areas.	3/24/2022 5:25 PM
37	Would be nice to connect the current sidewalks to create something that looped from mini mart (Route 25) to Route (25B) to the library. Also something down to Farmway, the golf course and up to Low Forest.	3/24/2022 5:23 PM
38	Yea, like a rail trail? My only worries are people that avoid it… the typical offenders of addicts	3/24/2022 5:06 PM
39	YES!!!	3/24/2022 4:15 PM
40	the town should support healthy lifestyle and walking and biking are excellent ways to do this.	3/23/2022 9:00 PM

Q6 Would you support improving the access to the Park & Ride to the Village/Downtown for both vehicles and pedestrians along Creamery Road?

Answered: 131 Skipped: 0



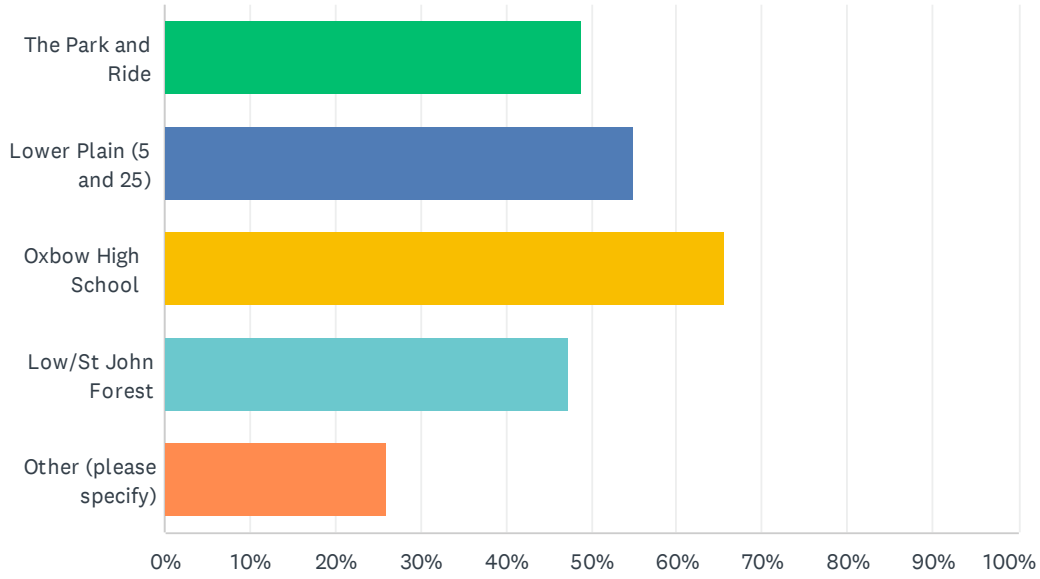
ANSWER CHOICES	RESPONSES	
Yes	71.76%	94
No	28.24%	37
TOTAL		131

#	COMMENT	DATE
1	too dangerous	4/22/2022 8:55 PM
2	at what cost	4/22/2022 8:26 PM
3	for pedestrians!! so dangerous to walk on creamery Rd.	4/18/2022 6:12 PM
4	YES YES YES	4/18/2022 8:50 AM
5	it's dangerous at night and in inclement weather	4/18/2022 8:16 AM
6	Don’t see a need or value for this.	4/18/2022 8:11 AM
7	I've walked it and it's a tight area if two cars are going in opposite directions	4/16/2022 2:53 PM
8	Old Creamery Road should be widened or closed to through traffic.	4/14/2022 10:11 PM
9	access to park & ride and TVT buses would be a huge help	4/14/2022 11:56 AM
10	Not needed	4/14/2022 8:41 AM
11	Might be better big just bike and pedestrian	4/11/2022 9:03 AM
12	I don't think that road blends itself to widening or additional lanes; there is a wetkland on one side and visibility is poor	4/11/2022 7:02 AM
13	never thought of it before, but that's a dangerous stretch of road, unlit, narrow, etc	4/10/2022 2:20 PM
14	The current road is not very safe for pedestrians.	4/8/2022 9:02 AM
15	This would be amazing. I walk to the downtown bus stop, but would love a safer walk to the park and ride via Creamery road in the dark hours.	4/8/2022 6:36 AM

16	I love walking on this road but it's dangerous.	4/4/2022 4:03 PM
17	Yes, this town could be so much more pedestrian friendly. Part of the benefit of living in the village should be the ease of getting around on foot instead of driving everywhere.	4/4/2022 2:21 PM
18	Signage would be good. bike path would be good.	4/4/2022 8:40 AM
19	Really not sure; would depend on the anticipated use and impact to Creamery Rd.	4/2/2022 9:11 PM
20	Price for this would be astronomical, Think about the bridge	4/2/2022 6:59 PM
21	It's not uncommon to see people walking along RT 25, it would be great to have improved pedestrian access. Don't see a problem regarding vehicles.	4/2/2022 5:09 PM
22	Provided the need could be shown to be great enough to justify the expense	4/2/2022 3:07 PM
23	It is not wide enough and to dangerous to walk/bike	4/2/2022 11:26 AM
24	Pretty walk along the river	4/2/2022 9:22 AM
25	Why? Always plenty of parking in town	4/2/2022 5:11 AM
26	Doesn’t matter to me	4/1/2022 9:31 PM
27	Don’t know where Creamery Road is located so unable to provide fair answer.	3/30/2022 11:10 PM
28	prioritize village/LP access first	3/30/2022 1:40 PM
29	Those resources already get enough attention. We need passable roadways year round .	3/26/2022 10:40 PM
30	Unsure, would like to know who this would impact	3/25/2022 9:11 PM
31	For ped/bikes only. Ban cars along that route	3/25/2022 7:48 PM
32	This makes so much sense if we are encouraging sustainable options. We may want to think about locking storage/cover for bikes at the Park & Ride.	3/24/2022 9:17 PM
33	also through proposed ball fields	3/24/2022 8:39 PM
34	Creamery is currently used as a cut through for out of town resident. I feel it should be limited to local residents only. We have repair the bridge once due to heavy traffic, there simply is not the infrastructure to support current overuse	3/24/2022 6:22 PM
35	That is not an appropriate project. The cost to blast the ledge on one side and the environmental impact on the river side of the road to widen the road and allow a sidewalk is cost prohibitive and not practical with RTE 25 and 5 already having both vehicle and pedestrian routes to the village.	3/24/2022 5:47 PM
36	Is there a need?	3/24/2022 5:38 PM
37	Make it a one way road maybe? Traffic only entering from the Mill side.	3/24/2022 5:06 PM
38	a lot of people walk this way and it is quite dangerous.	3/23/2022 9:00 PM

Q7 Which of these sections that currently do not have complete sidewalk would you be in favor of connecting to the existing network of sidewalks? Select all that apply.

Answered: 131 Skipped: 0



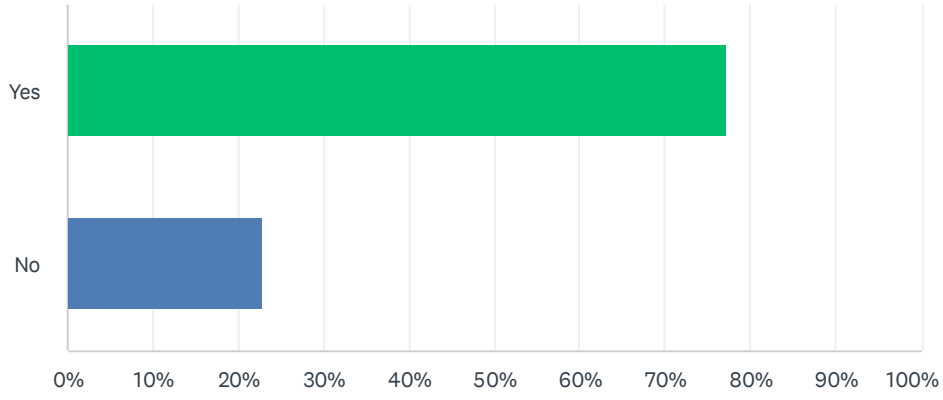
ANSWER CHOICES	RESPONSES	
The Park and Ride	48.85%	64
Lower Plain (5 and 25)	54.96%	72
Oxbow High School	65.65%	86
Low/St John Forest	47.33%	62
Other (please specify)	25.95%	34
Total Respondents: 131		

#	OTHER (PLEASE SPECIFY)	DATE
1	North Pleasant Street needs attention	4/22/2022 8:55 PM
2	low /st john forest sounds impossible	4/22/2022 8:26 PM
3	Don’t know	4/18/2022 4:23 PM
4	Old creamy rd and maple st	4/18/2022 10:13 AM
5	Extend sidewalk from Elizabeth’s park entrance up fairground rd hill to where the emergency access rd behind oxbow is (near solar panels)	4/18/2022 9:26 AM
6	Section of Goshen between N. Pleasant and S. Pleasant/High St needs a sidewalk. Also the section between High St (other side) and 25 to S. Pleasant.	4/18/2022 8:50 AM
7	None	4/18/2022 5:57 AM
8	No sidewalk between South Pleasant and High St. near health center	4/16/2022 2:53 PM

9	The more sidewalks the better - well worth the investment in order to encourage walking, which enhances community in myriad ways.	4/14/2022 10:11 PM
10	to plateau acres	4/12/2022 9:02 AM
11	Connect existing sidewalks, sidewalk from cottage to elementary	4/11/2022 9:03 AM
12	Upper Plain side walk	4/9/2022 3:09 PM
13	Berms on Upper Plain are plenty wide, but could use a barrier like a curb or bumps. Tired of inconsiderate drivers playing "let's see how close we can come to the biker."	4/5/2022 1:48 PM
14	If it is possible to create a loop that can be used for bikes etc, I would absolutely support this idea.	4/4/2022 2:21 PM
15	Improving/ widening pedestrian access across the Route 5 bridge.	4/4/2022 8:40 AM
16	And it would be splendid if Bradford maintained the sidewalks it has so that people can walk and run in the winter! Currently its safer to walk/run in the snowy street than on the sidewalks.	4/3/2022 1:21 PM
17	None; I do not think it is worth the cost and the concrete for the amount of use they would get.	4/2/2022 9:11 PM
18	There's too many to fix now, irresponsible to add more	4/2/2022 6:59 PM
19	From South main st to beyond Little Rivers - it used to be there and still is visible in places but not kept up	4/2/2022 11:26 AM
20	Make Bradford more walkable everywhere.	4/2/2022 8:43 AM
21	I want a paved sidewalk next to paved road on Goshen (you know the part named for the church that’s currently dirt.)	3/26/2022 10:40 PM
22	None	3/26/2022 1:23 PM
23	None	3/26/2022 10:30 AM
24	To Industrial Park and Farmway	3/25/2022 7:48 PM
25	25 b and south main!	3/25/2022 6:11 PM
26	none	3/25/2022 10:25 AM
27	We have so many dead end sidewalks that do not connect around town.	3/24/2022 9:17 PM
28	None	3/24/2022 9:06 PM
29	Fix what we have	3/24/2022 9:04 PM
30	End of South Main to 25, or at least Little Rivers	3/24/2022 6:22 PM
31	D	3/24/2022 6:20 PM
32	None, all but Low/St John have pedestrian space to the sidewalks that already exist. Low/St John would be costly to the taxpayers to both install and maintain due to the brook and limited space under the interstate overpass.	3/24/2022 5:47 PM
33	Golf Course area. That driveway is quite narrow	3/24/2022 5:23 PM
34	None	3/24/2022 5:06 PM

Q8 Should commercial and industrial development be focused in areas already served by town water and sewer ?

Answered: 131 Skipped: 0



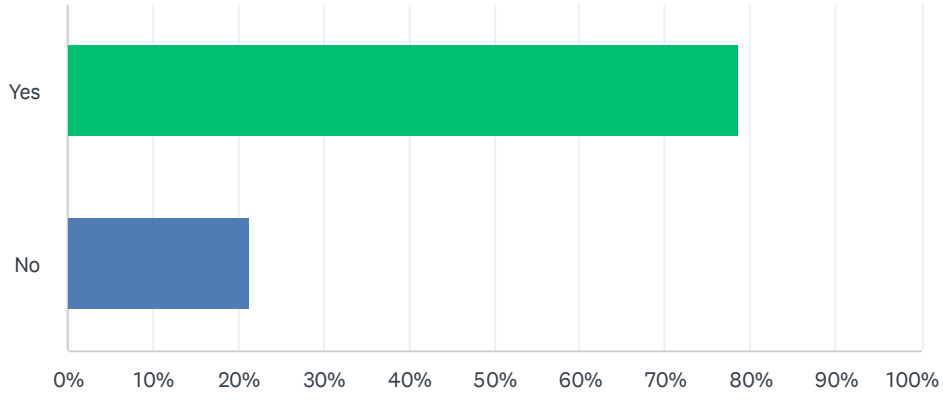
ANSWER CHOICES	RESPONSES	
Yes	77.10%	101
No	22.90%	30
TOTAL		131

#	COMMENT	DATE
1	not necessarily	4/22/2022 8:55 PM
2	until run out of space	4/22/2022 8:26 PM
3	I think it is crucial to the future of our town that the future of any commercial or industrial development does not include large scale companies and corporations.	4/18/2022 10:25 AM
4	I'm not sure what those areas are. Development should first be focused on vacant or run down buildings	4/18/2022 9:26 AM
5	unsure	4/18/2022 8:16 AM
6	Sprawl costs towns and cities money	4/18/2022 8:15 AM
7	Attract business into The industrial street opposite Farmway that will employ people, not just house product (warehouse). Need firms that will build the worker base.	4/18/2022 8:11 AM
8	Water and sewer should be expanded.	4/14/2022 10:11 PM
9	This development should be focused away from the village center.	4/14/2022 8:41 AM
10	But we need to be open to expanding if there is a need	4/14/2022 7:24 AM
11	safer for environment	4/12/2022 9:02 AM
12	Tricky question. Leveraging new development to acquire additional grants for water extension also has potential.	4/11/2022 6:25 PM
13	Of course	4/11/2022 9:03 AM
14	This depends on sewer/water capacity.	4/11/2022 7:02 AM
15	unsure	4/8/2022 1:19 PM

16	No opinion	4/8/2022 10:29 AM
17	Growth should happen in the industrial park area.	4/8/2022 7:56 AM
18	Keep town from sprawling. Make what we have even better	4/8/2022 7:47 AM
19	I'm not sure what these areas are, so can't answer confidently.	4/5/2022 1:48 PM
20	I don't have enough information to answer this	4/4/2022 2:21 PM
21	only	4/3/2022 6:32 PM
22	Would also prefer no more big box stores and chains!!!	4/2/2022 9:11 PM
23	Every business has different needs, some may not need substantial utilities	4/2/2022 6:59 PM
24	Not sure. IF this priority impedes community solar development,then answer is no.	4/2/2022 5:09 PM
25	Except for the field planned for recreation on 25B - that has been empty for many years and a good place for sports !	4/2/2022 11:26 AM
26	... although I recognize that I don't have the greatest level of awareness around the potential impacts of that.	4/2/2022 11:09 AM
27	I don’t understand this	4/1/2022 9:31 PM
28	As most of the land available for this type of development is already in this zone or close to it.	3/30/2022 11:10 PM
29	I think it should be limited to those areas.	3/28/2022 5:37 PM
30	I think we should leave avenues open for folks to create business where they can. I would hate to see folks excluded from opening a little shop aside they’re house just because they’re not in town water.	3/28/2022 1:14 PM
31	Expanding the town water and sewer is unimportant. Businesses can pay for it themselves if the want it.	3/26/2022 10:40 PM
32	Not sure how far out they’d have to be in our area, to not be on town water & sewer	3/26/2022 10:25 PM
33	Should be able to go where they want to go.	3/26/2022 1:23 PM
34	That is why we installed it	3/25/2022 10:25 AM
35	Yes, but we need to expand our Industrial areas to support growth of current businesses.	3/24/2022 9:17 PM
36	As became all too painfully obvious in Woburn, MA (massive cancer cluster thanks to W.R Grace polluting groundwater, resulting in a giant hazardous waste brownfield and pushing dozens of families out of their homes), industrial wastewater needs to be monitored and controlled, which is much easier if it's feeding into a town sewer system.	3/24/2022 8:53 PM
37	depends on how many people will be in the building. It would be nice to have water and sewer in the industrial park.	3/24/2022 8:39 PM
38	Not necessarily	3/24/2022 5:38 PM

Q9 Would you support continued expansion of commercial/retail and housing in the Lower Plain?

Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	78.63%	103
No	21.37%	28
TOTAL		131

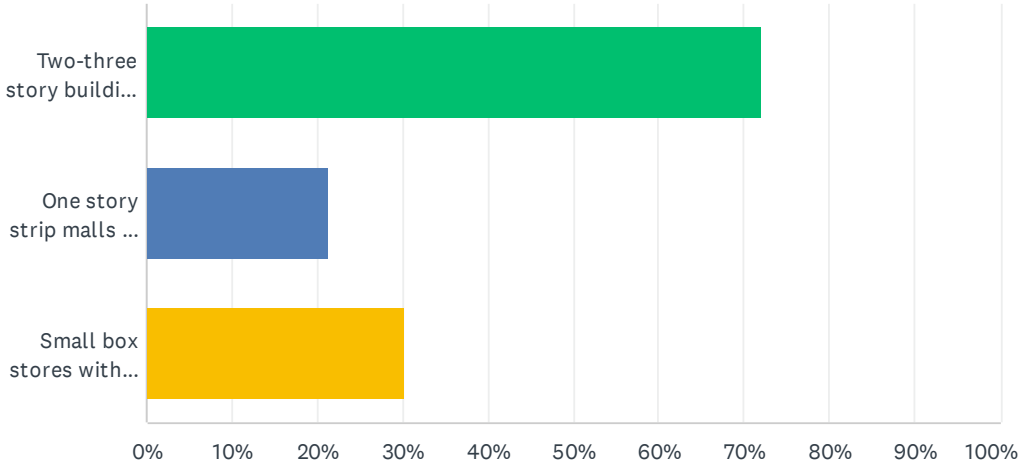
#	COMMENT	DATE
1	no more big box stores in Bradford	4/22/2022 8:37 PM
2	I would like to see more businesses return to the downtown and stop the sprawl along 5.	4/18/2022 11:03 AM
3	It depends on if there were rules in place to protect the town from any more large scale companies. These companies are not a sustainable part of a long term plan for our town.	4/18/2022 10:25 AM
4	Housing. There is an upper valley housing crisis.	4/18/2022 9:26 AM
5	To a point - not happy about the Tractor Supply - kind of an eyesore and duplicates existing services/retail in town. I'm not expanding the commercial footprint of the town into the lower plain, but as is it's pretty haphazard and would like to see a more curated expansion with the possibility of residents' input.	4/18/2022 8:50 AM
6	Depends on how it is designed and built. Mixed use space. Include affordable and “missing middle” housing for middle income people.	4/18/2022 8:15 AM
7	Housing is #1 need in the whole Upper Valley ! Be a leader and provide for families to come to Bradford.	4/18/2022 8:11 AM
8	Especially if sewer is already accessible there.	4/16/2022 2:53 PM
9	Particularly the housing piece is vitally imperative.	4/14/2022 10:11 PM
10	As long as it is small businesses	4/14/2022 9:35 AM
11	but not south of 5 & 25 intersection	4/14/2022 8:49 AM
12	No more development. It has been ruined by Tractor Supply!	4/14/2022 8:41 AM
13	No public housing else you will end up with more crime than you can handle	4/14/2022 8:26 AM

14	We could fill a large need for housing outside the Dartmouth area	4/14/2022 7:24 AM
15	of course. development where there is already water and sewer	4/12/2022 9:02 AM
16	If it was for retail purposes.	4/12/2022 8:22 AM
17	Balance support of businesses in the downtown area to keep it vibrant, with support of new business and industry which need larger parking in Lower Plane /Rte 5/25 area.	4/11/2022 6:25 PM
18	Except stores like tractor supply are horrible for local economy.low paying jobs, no real community investment	4/11/2022 9:03 AM
19	Housing and small retail only	4/8/2022 1:19 PM
20	Filling up our quaint town with junk stores is unnecessary.	4/8/2022 7:56 AM
21	It is needed. I'm not sure if this is the place to mention it but the housing shortage + rise of air bnb rentals is going to increasingly be a problem.	4/4/2022 2:21 PM
22	Mostly housing.	4/4/2022 9:10 AM
23	housing north and west yes. let the business district be large enough for many shops. for real growth	4/3/2022 6:32 PM
24	I would prefer we use the downtown space before taking over open space in the Lower Plain. Fixing up blighted property, rebuilding aging buildings and building on empty lots is better for our town than building on ag lands.	4/3/2022 1:21 PM
25	Current developments are ruining the town's character.	4/2/2022 9:11 PM
26	Not so keen on more Tractor Supply type development, housing however is to be encouraged	4/2/2022 5:09 PM
27	But only as need and prospects for success would justify.	4/2/2022 3:07 PM
28	Property by Hannafords, Field just beyond Tractor Supply on right side of road just beyond Town Farm road and industrial park	4/2/2022 11:26 AM
29	... preferably locally-owned, managed and focused	4/2/2022 11:09 AM
30	Not sure	4/2/2022 9:29 AM
31	Any businesses would help	4/2/2022 9:22 AM
32	The lower plain is starting to look like West Leb. Not a good thing.	4/2/2022 8:54 AM
33	I think businesses should be concentrated in the downtown area.	4/2/2022 7:28 AM
34	I feel this should be two separate questions as the zoning for these could be different. I would support housing for mid-level income as this is an underserved sector of the area and state. I am not in favor of further retail as we have enough as it is. We have franchises and national chains enough we do not need to encourage further development of this sort.	3/30/2022 11:10 PM
35	Only housing at this point.	3/28/2022 5:37 PM
36	Depending on the look of the buildings- less industrial buildings and not overcrowded	3/28/2022 3:51 PM
37	Only if it is planned.	3/28/2022 10:59 AM
38	Mostly housing would be good if needed. Not sure if there is a huge need for new stores, and it would depend on the type of stores.	3/27/2022 5:39 PM
39	Give me a passable, paved roadway before worrying about catering to nonexistent businesses.	3/26/2022 10:40 PM
40	To some extent, yes. Wouldn’t want a ton of it, but realize it’s probably needed.	3/26/2022 10:25 PM
41	Ok to build compact housing on the lower plain above the four corners.	3/25/2022 7:48 PM
42	Yes. Yes. Yes. Yes. Yes. This is critical to us being able to grow as a town. We need to support population growth, overflow from the Hanover area, business growth, as well as new business starts.	3/24/2022 9:17 PM
43	Walkable communities have carefully planned mixed residential, retail and commercial developments. The careful planning is critical.	3/24/2022 8:53 PM

44	especially housing - high density/apartment buildings that would be in walking distance to downtown, Hannaford's, and park and ride.	3/24/2022 8:39 PM
45	Housing needs to be better managed than current housing project. On site management as was required of Downstreet and not enforced. Rent em and leave ‘em is not fair to single home owners in the area.	3/24/2022 6:22 PM
46	Affordable condos and not Downstreet Housing. South main st is a nightmare with drugs, domestics, fights. Etc.	3/24/2022 6:02 PM
47	Commercial and retail yes	3/24/2022 5:38 PM
48	I rather see current space used up first (main street and the industrial park). Also the fields by Hannaford should be utilized before building more stores like Tractor Supply	3/24/2022 5:23 PM
49	AFFORDABLE housing, NOT subsidized housing.	3/24/2022 5:06 PM

Q10 What would you like to see the Lower Plain look like as it is developed

Answered: 122 Skipped: 9



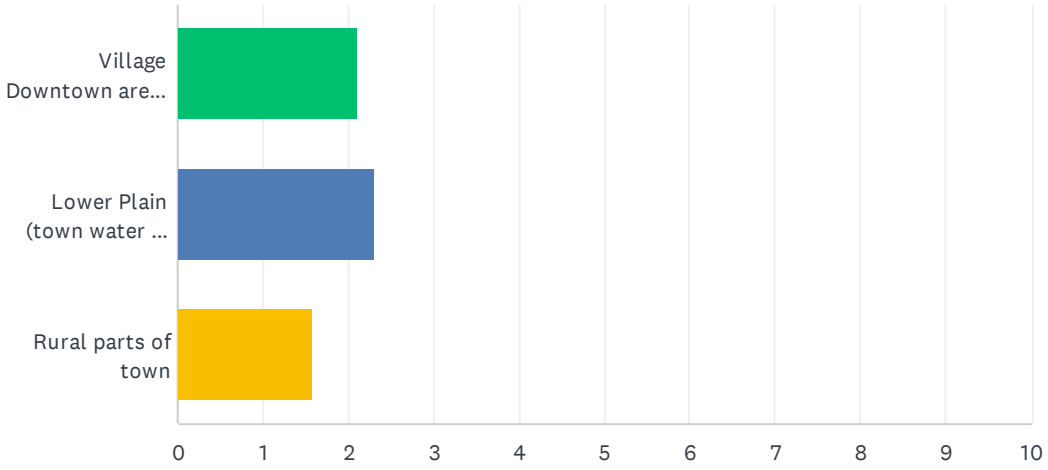
ANSWER CHOICES	RESPONSES	
Two-three story buildings with mix of businesses and residential	72.13%	88
One story strip malls of small retail shops.	21.31%	26
Small box stores with individual parking lots	30.33%	37
Total Respondents: 122		

#	COMMENT	DATE
1	no more major development	4/22/2022 8:37 PM
2	really can't imagine it building up in my lifetime. fewer driveways.	4/22/2022 8:26 PM
3	Natural areas with commerce centered in the village. No more box store strip malls or parking lots	4/18/2022 4:23 PM
4	None of the above but especially not strip malls!!!!	4/18/2022 10:25 AM
5	Please do not make mini Lebanon out of Bradford!!!	4/18/2022 8:15 AM
6	Again...housing preferred over retail !	4/18/2022 8:11 AM
7	I'd like it to stay as is. No development	4/18/2022 5:57 AM
8	No doubt this would be best.	4/14/2022 10:11 PM
9	If it has to be. Definitely NO BIX STORES!	4/14/2022 8:41 AM
10	Do the Littleton thing invite retail, but keep it small	4/14/2022 8:26 AM
11	I would prefer plaza style rather than individual shopping space	4/14/2022 7:24 AM
12	it was so disappointing when tractor supply and the dollar store came.	4/12/2022 9:02 AM
13	We need more stores and restaurants in Bradford.	4/12/2022 8:22 AM
14	I'd like to see small retail shops in the existing downtown area, so small box stores in Lower Plain. I'd like to see a mix of additional residential, possibly 2-3 story apartments, but also support for rehab existing residential, especially historical residential.	4/11/2022 6:25 PM

15	Individuals should be supported not corporate entities, besides Bradford will never be a shopping mecca. The vista, whatever it is, should never be sacrificed.	4/11/2022 7:02 AM
16	Affordable housing	4/8/2022 9:13 PM
17	If any, I would prefer houseing only, keep the business focused in downtown. there area already empty storefronts.	4/8/2022 1:19 PM
18	I would like to see this area develop naturally as it best suits businesses, customers and employees.	4/8/2022 10:29 AM
19	I do not support bringing Tractor Supply to Bradford and the placement by residents was unacceptable. Moving the town road maintenance behind Wrights Ave, Pleasant St and Cottage street devalued the area and is a huge disturbance to homes. We now have to look at big machines, hear loud beeping at all hours and it has devalued the area. Just as Tractor supply devalued the homes it was placed in front of. I am appalled at these decisions.	4/8/2022 7:56 AM
20	If you’re going to do it, do it well. Might be expensive to do it nicer but it’ll be worth it in the long run. Walkable and bikable	4/8/2022 7:47 AM
21	Bringing in new businesses etc that keep downtown Main Street and Bradford Village alive	4/5/2022 8:16 AM
22	A mix of options would be good	4/4/2022 4:03 PM
23	Again, making walkability should be a priority. Less parking lots, more space focused on living.	4/4/2022 2:21 PM
24	UUUUGH!!! none of the above!!! small quaint retail shops, no more than two stories tall	4/3/2022 6:32 PM
25	mixed use commercial and residential would be less distasteful, but let's infill downtown first.	4/3/2022 1:21 PM
26	None of the above; let the development happen in Lebanon and WRJ.	4/2/2022 9:11 PM
27	It cost potential new businesses too much money to conform to a single standard.	4/2/2022 6:59 PM
28	Would be uneasy with either of the other two options. If Tractor supply has had a negative impact on established businesses in the area (Oakes Bros, Farm Way,Tool Barn)-then this type of development is not an enhancement.	4/2/2022 5:09 PM
29	There are enough condo type buildings along with single family homes there	4/2/2022 11:26 AM
30	... almost like a downtown expansion, NOT like a corporate sprawl.	4/2/2022 11:09 AM
31	We need housing	4/2/2022 9:22 AM
32	I'd prefer it not be developed. This question should have a button that indicates the person taking the survey does not want development of any kind	4/2/2022 7:28 AM
33	Feel we have this on Main Street but the units are dated.	3/30/2022 11:10 PM
34	Or preferably just residential	3/28/2022 5:37 PM
35	None of that shit. If paving a dirt road ruins the rural experience so do convenient shopping malls that sink small businesses and then leave.	3/26/2022 10:40 PM
36	Non of the above	3/26/2022 12:12 PM
37	But only above the four corners.(traffic light)	3/25/2022 7:48 PM
38	I think it's essential that the town rally around this. The town needs an actual vision that it rallies behind, not just a passive document. It is critical to our future that we develop the Lower Plain in a useful and constructive way that promotes economic development. There are real threats to this in progress.	3/24/2022 9:17 PM
39	Spend any time in places where zoning was not strong enough, and you'll find it to be a strip mall wasteland, rather than a vibrant community. Vermont is in a unique position to grow our communities in ways that make them resilient, vibrant, and pleasant communities, rather than cookie cutter, litter-strewn, traffic jammed thruways.	3/24/2022 8:53 PM
40	VT has some great, nice looking mix housing developments that could be used as examples.	3/24/2022 6:22 PM
41	No strip malls. Local business.	3/24/2022 5:25 PM

Q11 Where would you prefer to see additional housing located? Please rank with 1 = most preferred.

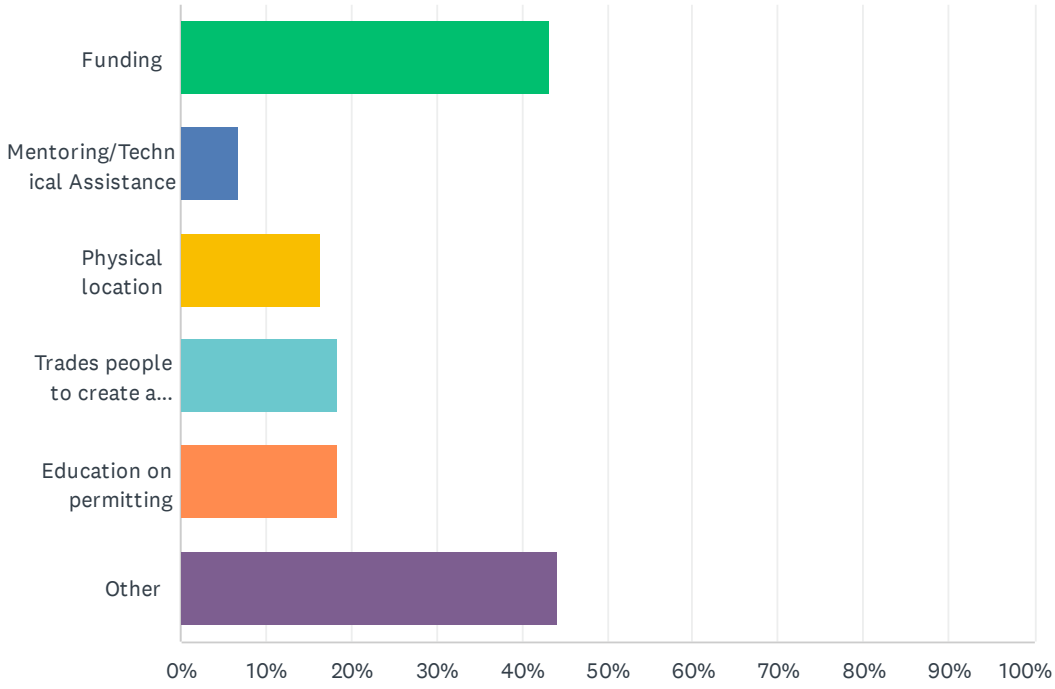
Answered: 129 Skipped: 2



	1	2	3	TOTAL	SCORE
Village Downtown area (infill)	40.00% 50	32.00% 40	28.00% 35	125	2.12
Lower Plain (town water and sewer)	40.94% 52	49.61% 63	9.45% 12	127	2.31
Rural parts of town	19.67% 24	18.03% 22	62.30% 76	122	1.57

Q12 If you are interested in having a rental unit in your home or starting a business, what is holding you back?

Answered: 104 Skipped: 27



ANSWER CHOICES	RESPONSES	
Funding	43.27%	45
Mentoring/Technical Assistance	6.73%	7
Physical location	16.35%	17
Trades people to create a space	18.27%	19
Education on permitting	18.27%	19
Other	44.23%	46
Total Respondents: 104		

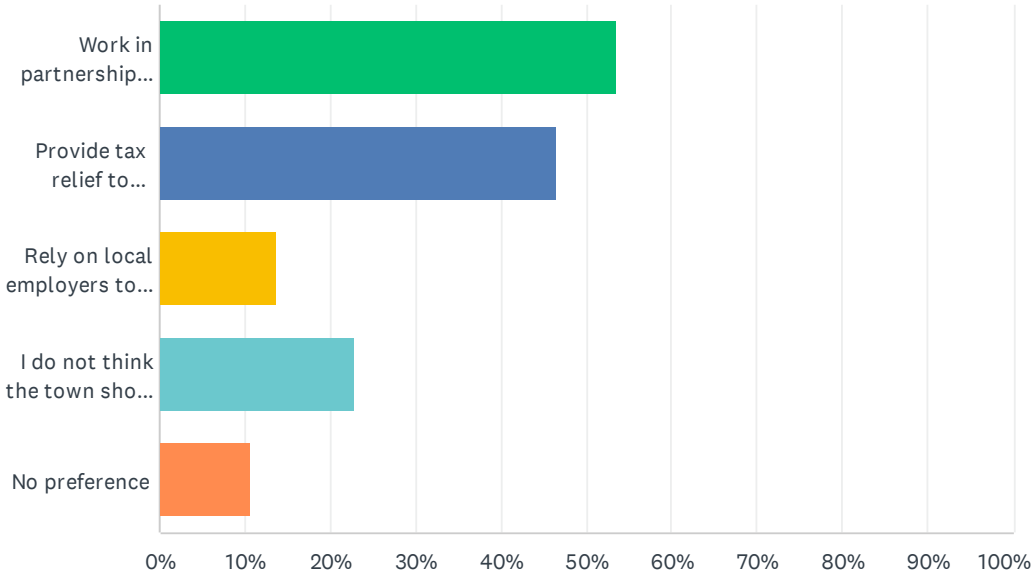
#	COMMENT	DATE
1	no. single home and need privacyl you're pushing for too much increase in population and then will be more taxes.	4/22/2022 8:55 PM
2	no	4/22/2022 8:37 PM
3	no	4/22/2022 8:26 PM
4	Not interested	4/18/2022 9:49 AM
5	Need money! have the space for a unit.	4/18/2022 8:50 AM
6	n/a	4/18/2022 8:34 AM

7	n/a	4/18/2022 8:16 AM
8	I own property in Fairlee	4/18/2022 8:15 AM
9	N/a	4/18/2022 6:25 AM
10	N/A	4/16/2022 2:53 PM
11	These are all barriers, real of perceived. Walking away from my "real job," with consistent hours and benefits, is also a tough sell.	4/14/2022 10:11 PM
12	Not interested	4/14/2022 9:49 AM
13	not interested	4/14/2022 8:49 AM
14	Not interested	4/14/2022 8:26 AM
15	Cost	4/14/2022 5:49 AM
16	Not interested in starting a business or a rental unit.	4/12/2022 8:22 AM
17	Not interested	4/12/2022 7:13 AM
18	Contractor availability is a current issue for residential renovation here. Funding would also be an issue if we wanted to switch from single family to multifamily building.	4/11/2022 6:25 PM
19	I'm not.	4/11/2022 7:02 AM
20	n/a	4/10/2022 2:20 PM
21	NA	4/8/2022 1:19 PM
22	My mother rents in town and I would like to fix up a building on my property for her.	4/8/2022 7:56 AM
23	N/A	4/8/2022 6:36 AM
24	Dirt road has deep ruts during mud season etc and our neighbors have a business where heavy and big equipment go up and down the road year-round, plus our road isn't a two-lane road for a good chunk of it which is a major safety concern as well.	4/5/2022 8:16 AM
25	Not interested	4/4/2022 4:03 PM
26	Making a safe and nice rental space is costly and building materials are very expensive	4/4/2022 9:10 AM
27	not interested	4/3/2022 6:32 PM
28	There's really not much land available for future potential business.	4/2/2022 6:59 PM
29	Not interested, but if I were, the dirt road is a problem	4/2/2022 5:09 PM
30	Not our interest.	4/2/2022 3:07 PM
31	Zoning is easy and Planning chairman is too hard to get permission and takes too long for approval	4/2/2022 11:26 AM
32	I periodically offer AirBNB rooms to long-term people who come to work temporarily in the region, or are transitioning to moving here	4/2/2022 11:09 AM
33	N/A	4/2/2022 9:50 AM
34	not interested	4/2/2022 9:30 AM
35	Na	4/2/2022 9:29 AM
36	Not interested	4/2/2022 9:22 AM
37	I don't live in Bradford	4/2/2022 8:56 AM
38	N/A	4/2/2022 8:54 AM
39	Not interested	4/2/2022 8:43 AM
40	Again, a button for those NOT interested in having a rental unit	4/2/2022 7:28 AM
41	Not interested in starting a business	4/1/2022 10:08 PM

42	n/a	3/30/2022 1:40 PM
43	Not interested	3/28/2022 5:01 PM
44	Not interested	3/28/2022 3:51 PM
45	N/a	3/28/2022 9:31 AM
46	Not	3/27/2022 11:12 PM
47	Not interested	3/27/2022 5:39 PM
48	Dirt roadways	3/26/2022 10:40 PM
49	Not Applicable	3/26/2022 10:25 PM
50	Nothing, question doesn't pertain to me.	3/26/2022 1:23 PM
51	Not enough local support taxes out of control, Andover management of elected ad appointed officials	3/26/2022 10:30 AM
52	Don't want rental unit or business	3/25/2022 7:48 PM
53	N/a	3/25/2022 6:11 PM
54	not interested	3/25/2022 10:25 AM
55	What I'd like to open I don't believe would be successful in Bradford	3/25/2022 9:25 AM
56	N/a	3/25/2022 8:37 AM
57	None	3/24/2022 9:06 PM
58	nothing	3/24/2022 8:39 PM
59	N/A	3/24/2022 7:25 PM
60	Am not	3/24/2022 6:20 PM
61	We don't need any more rentals, we need affordable single family homes that add to the tax base.	3/24/2022 5:47 PM
62	Not interested	3/24/2022 5:45 PM
63	Not	3/24/2022 5:43 PM
64	N/a	3/24/2022 5:25 PM
65	Na	3/24/2022 5:23 PM
66	Not interested.	3/24/2022 4:49 PM
67	Nothing	3/24/2022 11:50 AM

Q13 How should the town encourage increasing the supply of residential housing? Check all that apply.

Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Work in partnership with housing developers	53.44%	70
Provide tax relief to support rehabilitation and development	46.56%	61
Rely on local employers to build workforce housing	13.74%	18
I do not think the town should encourage more affordable housing	22.90%	30
No preference	10.69%	14
Total Respondents: 131		

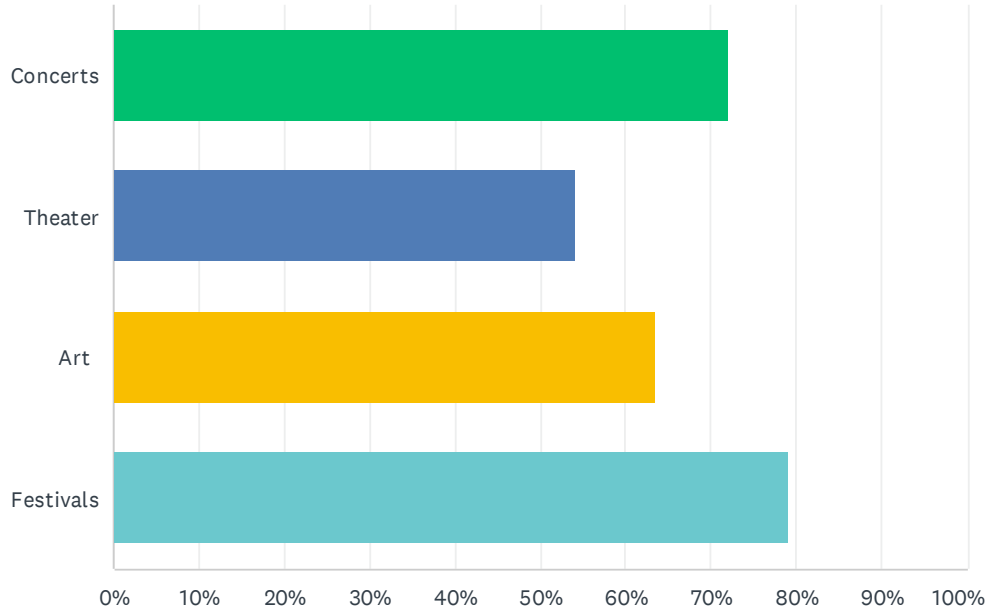
#	COMMENT	DATE
1	Zoning mixed use and encourage smaller more affordable development not all single family units. Also keep some investment in the historic nature of Bradford. Development needs to include green space and sustainable design.	4/18/2022 8:15 AM
2	It should not	4/18/2022 5:57 AM
3	There are about a dozen abandoned homes in bradford in need of rehab. I'd love to see them brought back to life. Affordable housing yes, I think we have enough income based section 8 housing.	4/16/2022 2:53 PM
4	It's not only more affordable housing that we need. There should be an emphasis on workforce housing and housing for young professionals and families.	4/14/2022 10:11 PM
5	Build elderly housing if you’re itching to get get federal funds but public housing will only bring serious crime as you open up Bradford	4/14/2022 8:26 AM
6	We don't need anymore low income families. We need to make Bradford more of a middle class town.	4/12/2022 8:22 AM

7	Focus on local people	4/11/2022 9:03 AM
8	There is a synergy that has not been explored between RiverBend building trades and local housing.	4/11/2022 7:02 AM
9	I think the town did a good job fixing up houses along S. Pleasant. I also like the housing area that sits off the road across from Oxbow. How can the schools handle and increase in population? And will this also increase more special needs care in the schools?	4/8/2022 7:56 AM
10	Relying on local employers to build housing is not addressing the problem. Improving existing structures while also building sounds more likely to produce the desired results.	4/4/2022 2:21 PM
11	Encourage infill dwellings by helping residents with the technical support and permitting necessary to add tiny homes to existing lots and convert outbuildings to living space. Get the local tech center involved in rehabbing homes.	4/3/2022 1:21 PM
12	Affordable housing belongs where the jobs are: in Lebanon and WRJ, not 20 miles away.	4/2/2022 9:11 PM
13	Not sure what "work in partnership with housing developers" entails exactly.	4/2/2022 5:09 PM
14	Bradford has always been the cheapest place to live for Section 8	4/2/2022 11:26 AM
15	Why should it be up to the town to control the market regarding housing? This only encourages urban sprawl (think Florida from 1960 to 2010).	4/2/2022 9:50 AM
16	housing grouped together while providing green space	4/2/2022 9:30 AM
17	Rent control. There are houses that are empty that could be remodeled into apartments, perhaps with subsidies from the state?	4/2/2022 7:28 AM
18	Focus on restoring the beautiful older homes to maintain their historic integrity vs. allowing flippers to slap together the cheapest options.	4/1/2022 10:16 PM
19	The whole process is expensive. This is an issue out of the town’s control. It is a issue of economics. Feel this idea gives people false impression that the town can sway housing growth. Other than permitting, this is out of the hands of town government. My idea of affordable is housing for middle class people who don’t want a house but are out of the subsidized housing bracket. There are many who would like a small home or apartment but can’t find quality housing which is reasonable.	3/30/2022 11:10 PM
20	redevelop blighted properties	3/30/2022 1:40 PM
21	Local employers here would never build workforce housing	3/28/2022 10:59 AM
22	We can’t maintain the town as it is. Why are we wasting time and resources to gain more landlords.	3/26/2022 10:40 PM
23	We do not need it. We do not need more people that are a drain to the system.	3/26/2022 1:23 PM
24	We need residents that are not a drain on taxes and services	3/26/2022 10:30 AM
25	Town should build housing.	3/25/2022 7:48 PM
26	Don't feel town government should be involved in affordable housing that should be left to the private sector	3/25/2022 10:25 AM
27	Work on a partnership with the Housing Committee to work on an incentive grant program as other towns are doing.	3/24/2022 9:17 PM
28	I'd emphasize working with developers who specialize in low-energy-use buildings and walkable communities.	3/24/2022 8:53 PM
29	don't just ALLOW higher density development, ENCOURAGE it.	3/24/2022 8:39 PM
30	Work with existing homeowners to create rehabilitation grants	3/24/2022 8:35 PM
31	The town should encourage more middle income housing. Low income housing in Bradford sits empty for months on end. Encourage retires and middle income earners to stay in town by making townhomes, condos and garden homes available.	3/24/2022 6:22 PM
32	Your choices should have included “Other”. I chose the above answer while focusing on Rental Housing. We don't need any more low income or general apartment rentals in Bradford, we	3/24/2022 5:47 PM

	need affordable single family homes that add to the tax base and reduce the burden on the already overtaxed residents of Bradford.	
33	No big developers.	3/24/2022 5:25 PM
34	I would encourage small home development over more apartments. A similar development to plateau acres is what we need.	3/24/2022 5:23 PM

Q14 What area of the creative economy would you like to see more of in Bradford? Check all that apply.

Answered: 129 Skipped: 2



ANSWER CHOICES	RESPONSES	
Concerts	72.09%	93
Theater	54.26%	70
Art	63.57%	82
Festivals	79.07%	102
Total Respondents: 129		

#	OTHER/NONE	DATE
1	none. had to pick one.	4/22/2022 8:55 PM
2	we have enough ....checked festivals as no option to say no	4/22/2022 8:37 PM
3	band concerts at Denny park for years but few attended	4/22/2022 8:26 PM
4	Gardens	4/18/2022 8:15 AM
5	Would make the town exponentially more attractive.	4/14/2022 10:11 PM
6	wood products	4/14/2022 8:49 AM
7	something for little folks	4/10/2022 2:20 PM
8	Folk music, craft shop/fairs	4/8/2022 1:19 PM
9	Any and all!	4/4/2022 4:03 PM
10	Yes!	4/4/2022 2:21 PM

11	At the Fairground	4/3/2022 6:32 PM
12	It would be lovely to see the old Lowe Mansion lot above the Library cleared and converted to public gathering space for outdoor concerts and a bit of overflow parking for library and downtown. Farmers market could be there. Heck, we should be moving OCT to that lot to be the focal point of a downtown arts district.	4/3/2022 1:21 PM
13	All are welcome and encouraged	4/2/2022 6:59 PM
14	Encourage Fair Grounds to host activities - it is already there - utilize it !	4/2/2022 11:26 AM
15	... TO BE A TRUE REFLECTION AND OUTGROWTH OF THE CREATIVE ECONOMY, THESE TYPES OF EVENTS MUST COMPENSATE LOCAL PROFESSIONAL-LEVEL ARTISTS COMMENSURATE WITH THEIR (OUR) WORK AND VALUE--Y'ALL KNOW THIS IS JENN GROSSI HELLO :)	4/2/2022 11:09 AM
16	There is already a plethora of entertainment venues available locally.	4/2/2022 9:50 AM
17	miniature golf	4/2/2022 9:30 AM
18	Main Street stores	4/2/2022 9:22 AM
19	And paved roads that are passable year round.	3/26/2022 10:40 PM
20	Workshops	3/26/2022 10:25 PM
21	Support the arts! :)	3/26/2022 3:17 PM
22	None	3/26/2022 1:23 PM
23	My answer is none but this survey won't accept none	3/26/2022 10:30 AM
24	None	3/26/2022 5:46 AM
25	none of the above, please disregaurd concerts it was the only way that I could submit my survey!	3/25/2022 10:25 AM
26	A program that works in collaboration with artists to create public art. Murals. Street Art. Paint on blank walls. Painted crosswalks. Painted benches. Sculpture bike racks.	3/24/2022 9:17 PM
27	None	3/24/2022 9:06 PM
28	None	3/24/2022 9:04 PM
29	all of the above	3/24/2022 5:47 PM

Q15 How would you like to see Bradford's population grow over the next 20 years

Answered: 126 Skipped: 5

#	RESPONSES	DATE
1	an increase means more taxes - traffic, noise.	4/22/2022 8:55 PM
2	grow very slow	4/22/2022 8:37 PM
3	slowly, young people	4/22/2022 8:26 PM
4	by 10-20%	4/18/2022 6:12 PM
5	Businesses concentrated in the village and housing rehabilitation of existing structures	4/18/2022 4:23 PM
6	Younger	4/18/2022 12:48 PM
7	The focus should be on reinvigorating the existing downtown.	4/18/2022 11:03 AM
8	I would like to see more young people with families and without and more diversity.	4/18/2022 10:25 AM
9	I would like to see more community events the town need to grow with the times order to attack or keep the next generations to come. It's time to get real.	4/18/2022 10:13 AM
10	Rapidly	4/18/2022 9:49 AM
11	As the southern side of the upper valley becomes more expensive, Bradford could become a great and affordable alternative. Some of the housing projects could be higher end to suit professionals rather than only focusing on affordable housing for lower incomes. The housing crisis is for all income levels. Would love to see the population grow in general with a socioeconomic mix.	4/18/2022 9:26 AM
12	Professional. Limit low income housing	4/18/2022 8:48 AM
13	more mixed housing to allow for people of all salary ranges to find housing	4/18/2022 8:34 AM
14	slowly	4/18/2022 8:16 AM
15	It depends on how well the city design for humans and not cars.	4/18/2022 8:15 AM
16	By becoming a 30 minute commute " bedroom community" to work in Lebanon, DHMC, and Hanover. That's were jobs are, and insufficient housing exists. Promote Bradford as that solution…..little competition between those jobs and Bradford. Focus on housing not workplace issues.	4/18/2022 8:11 AM
17	more families	4/18/2022 6:40 AM
18	Balance rural with downtown - preserve small town character with affordable housing for those that make our town livable	4/18/2022 6:25 AM
19	No growth	4/18/2022 5:57 AM
20	Gradually, but find ways to keep younger people from fleeing upon graduation. Better jobs.	4/16/2022 2:53 PM
21	By 30-40 percent.	4/14/2022 10:11 PM
22	improve downtown physically- improve residences and gardens, bring in new businesses.	4/14/2022 12:02 PM
23	Up 50%	4/14/2022 9:49 AM
24	I wouldn't	4/14/2022 9:35 AM
25	Have a balanced demographic in age, gender and ethnicity	4/14/2022 8:49 AM
26	Very slowly or not at all.	4/14/2022 8:41 AM

27	Very slowly. You can reap the benefits of retail and tourism without bring in crime if you don't build housing. People will drive to you since there isn't much around	4/14/2022 8:26 AM
28	I want people who live here year round, rooted in the local economy	4/14/2022 7:28 AM
29	Ideally slowly so the workforce is not abruptly shifting— the hardest part is these incoming people need jobs so you can't build housing with no work— and you can't build business with no employees without places to live. Our mom and pop places are closing because of no workforce— and we need to address that	4/14/2022 7:24 AM
30	Steady increase of families with young children.	4/14/2022 5:49 AM
31	slowly but welcome all	4/12/2022 9:02 AM
32	I would like to see Bradford grow with middle class families and not low income families. I would like Bradford to be considered a nice, safe place to live, close to the interstate and in between St. Johnsbury and Lebanon instead of being known as a low income, run down town.	4/12/2022 8:22 AM
33	Increase by 300-400 people.	4/12/2022 7:13 AM
34	I'd like to see a mix of bedroom community commuters and local workers. Improved infrastructure to support telecommuters. I'd like Bradford to be a family centric community with a side helping of tourist appeal and a mix of small industry and retail businesses to increase the capture rate of consumers and visitors.	4/11/2022 6:25 PM
35	Slowly and diverse including refugees and immigrants	4/11/2022 9:03 AM
36	Slowly	4/11/2022 7:02 AM
37	increase up to 20% - younger working people with families(key word is working)	4/10/2022 2:20 PM
38	Make it affordable. You continue to raise taxes and it's driving residents out. I've been here for 20 years in Bradford' and taxes are out of control now!	4/9/2022 3:32 PM
39	I don't know	4/8/2022 9:13 PM
40	slowly	4/8/2022 1:19 PM
41	More professional working families feeling comfortable there, along with attractive businesses that help maintain self sufficiency.	4/8/2022 9:02 AM
42	I am ready to move out of town myself. My home is surrounded by more noise. I do understand more housing is needed everywhere. I also notice the the rental spaces, there are 3 on my street, always look a mess and have tons of junk outside! I have to remove sticks, toys and bricks off the road on N. Pleasant often outside one building. I don't feel the town is being respectful of long time home owners. My neighbors now have a view of backhoes and dirt piles in their back yard.	4/8/2022 7:56 AM
43	Slowly	4/8/2022 7:47 AM
44	N/a	4/8/2022 7:02 AM
45	I can imagine a more diverse population as folks working in Lebanon/ Hanover discover the town and its convenience/public transportation.	4/8/2022 6:36 AM
46	Up by 5-10 percent	4/8/2022 5:41 AM
47	No comment.	4/7/2022 1:01 PM
48	More diversity, artists	4/5/2022 8:36 PM
49	This is a vague question. Taken literally, I'd like to see us boost the birthrate through making having a family attractive. I'd also like to see support for immigration (state, nation, and international)	4/5/2022 1:48 PM
50	More young families and couples, professionals	4/5/2022 8:16 AM
51	Keep young adults, more middle income housing.	4/4/2022 4:03 PM
52	Growing but not exploding. More diversity!	4/4/2022 2:21 PM
53	Not very much, but I want those who do live here to have safe, affordable, and	4/4/2022 9:10 AM

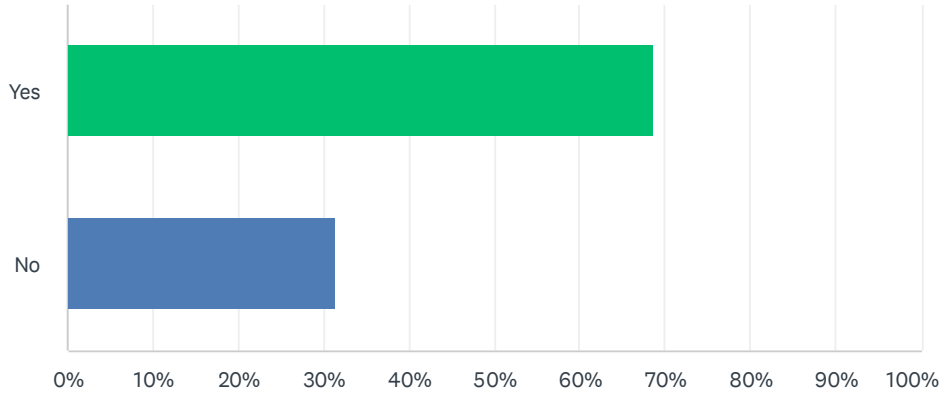
	nice/comfortable housing.	
54	In favor of growth. It brings new ideas.	4/4/2022 8:40 AM
55	gradually	4/3/2022 6:32 PM
56	More professionals.... more people to fill trades and service positions	4/3/2022 3:22 PM
57	Bradford should be a welcoming community for asylum migrants, with economic development support and tax breaks for new families to start businesses in our downtown.	4/3/2022 1:21 PM
58	Would like to see it stay the same or grow only 1-5%.	4/2/2022 9:11 PM
59	Would be nice to see a steady or slightly increase, but unfortunately with Oxbow you're not going a decrease.	4/2/2022 6:59 PM
60	It would be good if the population could acquire a more diverse age structure (more young/working adults) without necessarily expanding in size.	4/2/2022 5:09 PM
61	Not very much and mostly for those who work in town, at home or nearby.	4/2/2022 3:07 PM
62	Retired people, Business owners, Retail stores	4/2/2022 11:26 AM
63	no opinion	4/2/2022 11:09 AM
64	VERY SLOWLY! That's why people live in Vermont in the first place...to escape urbanization. There's nothing wrong with maintaining a small, stable population.	4/2/2022 9:50 AM
65	slow increase without burdening our schools	4/2/2022 9:30 AM
66	Younger population	4/2/2022 9:29 AM
67	Keep the young people here	4/2/2022 9:22 AM
68	?	4/2/2022 8:56 AM
69	I don't see growth as necessarily a good thing. The goal should be sustainability.	4/2/2022 8:54 AM
70	More young professionals and families who stay because the schools are great and well-paying jobs are available. NEED high-speed internet!	4/2/2022 8:43 AM
71	I wouldn't. I live here because I like rural areas. First, we should focus on making it more affordable to live here, instead of relying on second homeowners and people from out of state buying houses that local people can't afford.	4/2/2022 7:28 AM
72	Bigger	4/2/2022 5:11 AM
73	Not grow	4/2/2022 2:39 AM
74	Create an inviting place for people of all types to to settle here and build roots and community. The school system has to get better to attract young families.	4/1/2022 10:16 PM
75	I'd like to see more kids staying around instead of having to move away	4/1/2022 10:08 PM
76	Forward thinking, change..... oxbow staff changes to support the current population staying and not using school choice	4/1/2022 9:31 PM
77	Would be nice to have new families move in. Most of the population that stays are members of a multi-generational family. Need new blood that remains. Need to have a more diverse population socially and economically.	3/30/2022 11:10 PM
78	by 1,000 people	3/30/2022 1:40 PM
79	In diversity	3/28/2022 5:37 PM
80	I would like to see a diverse population of people both in age and all other aspects of human-ness.	3/28/2022 5:01 PM
81	A small increase- I would be more interested in making Bradford more of a destination with community activities and restaurants	3/28/2022 3:51 PM
82	I'd like to see growth in the creative economy which would encourage more retail and revenue flow. I'd also like to see it appeal more to young professionals wanting to be in the countryside.	3/28/2022 1:14 PM

	But they'll need housing and they'll want certain community staples in order to have that happen	
83	With some responsible degree of planning.	3/28/2022 10:59 AM
84	I don't want it to become a big busy city!	3/28/2022 9:31 AM
85	Not a whole lot more than now	3/27/2022 11:12 PM
86	Remain stable	3/27/2022 7:12 PM
87	It would be nice to see more people move to the area.	3/27/2022 5:39 PM
88	Smaller.	3/26/2022 10:40 PM
89	It'd be neat to see it grow closer to something like Barre or maybe something in between it & Bradford. More restaurants, more parks & walking paths or public spaces, a few more shops & companies. Definitely more lodging options; that's desperately needed for out of town family when they visit because they want to stay in Bradford near us, but there aren't many suitable options.	3/26/2022 10:25 PM
90	Not sure exactly what this question is referring to. I would like to see more people live here and raise families, but I still want it to qualify as a rural town. I don't want it to turn into another West Lebanon.	3/26/2022 3:17 PM
91	It will take more jobs. And to lower the crippling taxes in Bradford.	3/26/2022 1:23 PM
92	Slowly	3/26/2022 12:12 PM
93	Growth would be great we have a failings school with half the enrollment that in the 70s. And the cost per student is higher than most private schools.	3/26/2022 10:30 AM
94	More working Families	3/26/2022 5:46 AM
95	Healthy growth, but not over populated	3/25/2022 9:11 PM
96	Replace those who leave or kick the bucket.	3/25/2022 7:48 PM
97	I dont understand the question.	3/25/2022 6:11 PM
98	when the population increases we will loose the small town that is the reason that we live here	3/25/2022 10:25 AM
99	Younger generations coming here to start families	3/25/2022 9:25 AM
100	By having the availability of jobs and recreation to attract young families and by creating acceptance and tolerance of diversity.	3/25/2022 8:37 AM
101	Grow baby grow	3/25/2022 12:13 AM
102	Bringing back people who grew up here. Bringing in remote workers while also promoting community involvement. Young families. A diverse population of people. People who want to start businesses.	3/24/2022 9:17 PM
103	None	3/24/2022 9:06 PM
104	More good paying jobs. Lower taxes	3/24/2022 9:04 PM
105	With climate disruption hitting Boston and NY, I think we'll have little say in the population changes in the entire region.	3/24/2022 8:53 PM
106	modest, gradual growth that does not overwhelm infrastructure and stalls out when the current sewer treatment capacity is met.	3/24/2022 8:39 PM
107	Encourage young families to move here, responsible growth that allows residents to live and work in town.	3/24/2022 8:35 PM
108	Slowly	3/24/2022 7:25 PM
109	Not at all	3/24/2022 6:58 PM
110	Same	3/24/2022 6:49 PM
111	Supporting middle income with well managed housing development. Low income housing is	3/24/2022 6:22 PM

	poorly managed and sits empty more than it should. Downstreet housing is NOT a good company. Even their renters complain of not being able to reach them.	
112	More young professionals	3/24/2022 6:20 PM
113	More young people stating in town growing their families	3/24/2022 6:17 PM
114	It would be nice to see more population come in.	3/24/2022 6:02 PM
115	More family homes and small businesses.	3/24/2022 5:47 PM
116	Stay even	3/24/2022 5:45 PM
117	Ns	3/24/2022 5:43 PM
118	Gradual increase spread out across town so no one area gets congested. Affordable neighborhoods.	3/24/2022 5:38 PM
119	I would like to see it grow diversely and thoughtfully. My old neighborhood was ruined by developers and house flippers.	3/24/2022 5:25 PM
120	I think we shouldn’t plan to grow over 3500k	3/24/2022 5:23 PM
121	hopefully bradfords population can healthily increase to support a larger local economy	3/24/2022 5:10 PM
122	Less “riff raff”	3/24/2022 5:06 PM
123	Slow	3/24/2022 4:49 PM
124	Not sure	3/24/2022 4:15 PM
125	A little growth would be good but not a lot or Bradford would lose its charm	3/24/2022 11:50 AM
126	organically.	3/23/2022 9:00 PM

Q16 Is it important to you to encourage Bradford's youth to stay in the area

Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	68.70%	90
No	31.30%	41
TOTAL		131

#	COMMENT	DATE
1	they need to find employment	4/22/2022 8:26 PM
2	If it's viable, then they'll stay...or come back.	4/18/2022 6:12 PM
3	Or at lest return to settle down.	4/18/2022 10:13 AM
4	We need strong enough opportunities for younger residents to want to stay to develop careers. However I see value in stretching wings to find themselves while living farther away; but more importantly what will lure them back and want them to raise their family here in Bradford? We won't ever have a nightlife/social scene for 20-something's that can compete with larger towns/cities. But we can focus on being the community they want to return to when they settle down.	4/18/2022 9:26 AM
5	In the area is relative, but it's more that if young professionals couples with kids they need quality places to live and work.	4/18/2022 8:15 AM
6	Have housing options - and promote that !	4/18/2022 8:11 AM
7	Most people I know are in the "retirement years"	4/16/2022 2:53 PM
8	Very important for the vitality of our community.	4/14/2022 10:11 PM
9	I think it is good for young people to go experience new places, but Bradford should support youth, provide opportunities for young adults that do want to stay and encourage former residents to return home to Bradford	4/14/2022 11:56 AM
10	Retail will do that	4/14/2022 8:26 AM
11	it is important to have good jobs and provide good schools and recreation. but young people who have grown up in bradford area should explore the world and be welcomed back	4/12/2022 9:02 AM
12	That will be an uphill battle. But maybe concentrate on making it a place they will want to	4/11/2022 6:25 PM

	come back to when they start their own families.	
13	I think it is great for young people to leave but encourage some to return by having good paying jobs	4/11/2022 9:03 AM
14	affordable housing is needed	4/9/2022 3:09 PM
15	Very much!!!	4/8/2022 9:02 AM
16	Mixed on this. Great for them to stay of they desire, but good for them to experience broader world as well	4/8/2022 6:36 AM
17	Sometimes people need to leave and experience new things as long as we find ways to attract new people	4/5/2022 8:36 PM
18	If by encourage you mean make the area attractive to young people in general.	4/5/2022 1:48 PM
19	Making Bradford more appealing to stay in will benefit everyone. Another way to ask this might be, "do we keep our town unfriendly to youth to keep the damn kids off our lawn"	4/4/2022 2:21 PM
20	high paying jobs	4/3/2022 6:32 PM
21	I think youth should get away for a time in their early 20s. We should be making Bradford welcoming to our young families, so youth want to return to Bradford to raise their own children. Affordable housing, vibrant downtown, good schools will bring them back.	4/3/2022 1:21 PM
22	No opinion.	4/2/2022 9:11 PM
23	I think it's nice for recent graduates to feel like they could stay	4/2/2022 6:59 PM
24	But it is unrealistic to imagine all or even many would stay if it were more possible for them to stay.	4/2/2022 3:07 PM
25	Take advantage of Oxbow Vocational for graduates instead of college - learn a trade that you didn't get before graduating	4/2/2022 11:26 AM
26	Youth are attracted to vibrant, high-population centers.	4/2/2022 9:50 AM
27	Not so much for youth to stay, but for them to come back after going elsewhere	3/30/2022 1:40 PM
28	Go out! And then come back! But go somewhere first!	3/28/2022 1:14 PM
29	It should be a good choice, but not the only one.	3/27/2022 5:39 PM
30	Why would they want to? So they can get a shitty retail job at a box store?	3/26/2022 10:40 PM
31	Wherever possible, it’d be nice to have a portion of our population be close to our age (30s).	3/26/2022 10:25 PM
32	Encourage kids to follow their dreams, even if that means moving out of the area.	3/26/2022 3:17 PM
33	There is nothing here for them.	3/26/2022 1:23 PM
34	They have to learn about the world beyond Bradford	3/25/2022 10:25 AM
35	I think it's important for youth to explore the world and come back.	3/24/2022 9:17 PM
36	leaving the nest is important. If we make it appealing enough, some will come back because it is a great place to live.	3/24/2022 8:39 PM
37	I think it’s important that they have an opportunity to stay if they want - no one should feel like they have to leave in order to find a good job or affordable housing.	3/24/2022 8:35 PM
38	Extremely	3/24/2022 6:17 PM
39	Nothing to do here though.	3/24/2022 6:02 PM
40	it is understandable why people would wish to leave.	3/24/2022 5:10 PM
41	it's okay, maybe good for people to leave, see the world but then somehow make it so they want to come back.	3/23/2022 9:00 PM

Q17 How can Bradford encourage 20-40 year olds to stay/return to Bradford?

Answered: 130 Skipped: 1

#	RESPONSES	DATE
1	encourage vocational education more	4/22/2022 8:55 PM
2	.	4/22/2022 8:37 PM
3	housing, employment, activities	4/22/2022 8:26 PM
4	by having jobs and housing	4/18/2022 6:12 PM
5	Affordable housing concentration of the downtown	4/18/2022 4:23 PM
6	Continue recreation and arts development.	4/18/2022 12:48 PM
7	Improve internet connectivity in rural areas. Support locally owned businesses that build a sense of community and ownership vs additional national chains/box stores that don't offer good long term jobs.	4/18/2022 11:03 AM
8	The best way is to protect it from becoming like west lebanon. I am 35 and I want my town to be beautiful. Large corporate stores like the dollar store and tractor supply detract from the charm of our town. If more box stores come in it will be a reason for me to leave and other young people too.	4/18/2022 10:25 AM
9	Better Business opportunities, timely and efficient process for the community to obtain permits or answers & Making things available on line and available to process forms online too.	4/18/2022 10:13 AM
10	Provide work sites Community college	4/18/2022 9:49 AM
11	Building their rec department, investing in and valuing education. Not having empty storefronts or dilapidated buildings as you drive through Main Street.	4/18/2022 9:26 AM
12	assuming many can work remotely: affordable housing, better cultural offerings, better food	4/18/2022 8:50 AM
13	More opportunity for growth.	4/18/2022 8:48 AM
14	good jobs and housing availability	4/18/2022 8:34 AM
15	offer competitive salaries and opportunities offer financial incentives to tradesmen who locate in town	4/18/2022 8:16 AM
16	It’s something have to work at state level. Part of issue is workforce training decent jobs that don’t involve lots of student debt. Younger generations don’t want long commutes in private cars. They do want high speed internet. Community building in common spaces that make people feel good.	4/18/2022 8:15 AM
17	Affordable housing in a vibrant community that is within 30 minute commute to good steady employment (I.e. : DHMC, DC and other work south of Bradford.	4/18/2022 8:11 AM
18	Invest in education. The high school looks like a prison.	4/18/2022 6:40 AM
19	Good jobs and good transportation options	4/18/2022 6:25 AM
20	Incentive program to start their own business or find partnerships with like-minded individuals.	4/16/2022 2:53 PM
21	Better live entertainment options; more recreational programs and opportunities; increased broadband Internet.	4/14/2022 10:11 PM
22	more work opportunities	4/14/2022 12:02 PM
23	Affordability, good paying jobs in a variety of fields, entertainment and opportunities to be involved in the community	4/14/2022 11:56 AM

24	Better jobs	4/14/2022 9:49 AM
25	Make Bradford attractive by incentivizing small businesses that attract young folks. Concerts, festivals, small restaurants and brewery	4/14/2022 9:35 AM
26	Provide affordable housing for young families; offer well-paying employment opportunities	4/14/2022 8:49 AM
27	Offer recreation opportunities.	4/14/2022 8:41 AM
28	You'll soon get an influx of flatlanders leaving the cities due to crime. Construction should include homes and upscale apartments, not soliciting for federal housing which only draws potheads and drug dealers. Learn from the mistakes of others	4/14/2022 8:26 AM
29	Affordable housing and good internet	4/14/2022 7:28 AM
30	Jobs with fair wages that is not entry level work or factory work—or hospitality/restaurant work. It would be nice to see other kinds of business like come in and give opportunities	4/14/2022 7:24 AM
31	Job opportunity that are beyond minimum wage pay.	4/14/2022 5:49 AM
32	strong education, fun downtown like concerts and places to hike but most importantly jobs that pay well and are satisfying.	4/12/2022 9:02 AM
33	Offer more large retail stores and chain restaurants to provide employment and social opportunities.	4/12/2022 8:22 AM
34	It can't. That is a region-wide issue of providing jobs that allow for someone to have a career and raise a family.	4/12/2022 7:13 AM
35	Excellent schools and enrichment opportunities for their children. Infrastructure for telecommuting. Easy access to work opportunities either here or by easy commute, or by public transportation. Safe community. Affordable/accessible housing.	4/11/2022 6:25 PM
36	Good paying jobs, maintain the rural beauty and focus on keeping downtown looking good, have good internet, public transportation, outdoor activities for health like walking and hiking and biking	4/11/2022 9:03 AM
37	If there is no independent economic engine then =if transportation were available, and its notoriously high cost, low value rents were controlled, it might be a logical extension of housing for Lebanon/Hanover.	4/11/2022 7:02 AM
38	Make it affordable, make sure the broadband, etc is good	4/10/2022 2:20 PM
39	Stop raising taxes, make it affordable for families to live here	4/9/2022 3:32 PM
40	Housing and well playing jobs	4/9/2022 3:09 PM
41	Vibrant social community	4/8/2022 9:13 PM
42	School quality, fast internet service	4/8/2022 1:19 PM
43	Employment, shopping, housing	4/8/2022 10:29 AM
44	Affordable housing, interesting businesses and events. Safety.	4/8/2022 9:02 AM
45	Respectfully to do what? Work at a low paying job and rentals are expensive here. We are a small town in Vermont. If to much development happens we lose that.	4/8/2022 7:56 AM
46	Quality jobs	4/8/2022 7:47 AM
47	Less restrictive permitting (especially in historic area). More businesses downtown- encourage old and rundown properties to be transformed into new businesses	4/8/2022 7:02 AM
48	More housing, highlight closeness to jobs, highlight living/working/eating local	4/8/2022 6:36 AM
49	Give them a reason to.	4/8/2022 5:41 AM
50	Art. Inclusivity. Energy.	4/7/2022 1:01 PM
51	WiFi, internet service throughout the downtown, town leadership that makes it easy for people to establish new businesses	4/5/2022 8:36 PM
52	JOBS AND AFFORDABLE HOUSING. Arts, education, and recreation. Turn more of the farms	4/5/2022 1:48 PM

	towards thinking local.	
53	Bring in more job opportunities, culture/events going on etc	4/5/2022 8:16 AM
54	More housing/apartments, internet in rural parts of town, fitness/recreation, arts/festivals.	4/4/2022 4:03 PM
55	More nightlife. Stores that stay open after 5pm (i'm looking at you, Oakes bros). Greater variety of restaurant choices. Recreational dispensaries will probably help too.	4/4/2022 2:21 PM
56	More vibrance in the town, supporting more niche type shops, stronger creative economy	4/4/2022 10:29 AM
57	Schools systems, safety, outdoor space, and business.	4/4/2022 9:10 AM
58	By making the quality of life as good as it can be.	4/4/2022 8:40 AM
59	high paying jobs	4/3/2022 6:32 PM
60	Much better internet…cell phone coverage and speed.… big one is much more competition in rural areas…consolidated is absolutely worthless	4/3/2022 3:22 PM
61	Affordable housing, diverse population, vibrant downtown with mixed retail and food establishments, arts/entertainment scene, good schools, recreational opportunities.	4/3/2022 1:21 PM
62	It is a decision that young people should make for themselves; there in no one path or solution as everyone's needs and desires, both career-wise and personal, differ.	4/2/2022 9:11 PM
63	Oxbow!!! It's ranked 3 out of 10	4/2/2022 6:59 PM
64	Encourage affordable housing, better internet access, childcare options	4/2/2022 5:09 PM
65	The only way for this to happen would there to be meaningful work here or nearby for them. We don't want this to become a bedroom community for people who work elsewhere.	4/2/2022 3:07 PM
66	More jobs and less taxes - school taxes are way out of proportion to number of students - OOESU budget is WAY TOO HIGH	4/2/2022 11:26 AM
67	Each one of us does our personal work to learn about what true inclusion means, and what it looks like... and then make the ongoing, uncomfortable efforts to actually enact it. Yes, in my opinion, THIS answer is the key to keeping youth here (and is also the answer to the next question).	4/2/2022 11:09 AM
68	Build trade schools (not universities). Encourage good-paying light industry. Ditch the state income tax and the state sales tax (use NH as a model). Improve the relationship with local agriculture to retain farm workers instead of bringing in transient workers.	4/2/2022 9:50 AM
69	jobs, affordable housing, child care	4/2/2022 9:30 AM
70	High speed internet.	4/2/2022 9:29 AM
71	Good paying jobs in town	4/2/2022 9:22 AM
72	?	4/2/2022 8:56 AM
73	Higher skilled (and paying) jobs. Improve Oxbow's reputation. More arts, music and recreation.	4/2/2022 8:54 AM
74	High-speed internet, more pubs/restaurants, live music, festivals	4/2/2022 8:43 AM
75	Affordable housing, more vibrant downtown, and better buying options (can we focus on local, instead of bringing in chains like the dollar store and Tractor supply?)	4/2/2022 7:28 AM
76	More jobs with good salaries. State of the art access to technology.	4/2/2022 5:11 AM
77	Lower taxes	4/2/2022 2:39 AM
78	Dramatically improve the school system or encourage a variety of different types of learning environments so parents can know their kids have options that will fit different learning styles and create options for success in our changing world. Internships, apprenticeships, and a variety of options for young people to be able to make a living doing work they love in a strong, locally focused community.	4/1/2022 10:16 PM
79	More housing/jobs	4/1/2022 10:08 PM
80	Local activities, movie theaters, shopping, affordable restaurants and coffee.… Better high	4/1/2022 9:31 PM

	school	
81	Housing; adequate jobs representing growth sectors; access to jobs for those who don't have adequate transportation into the town proper from rural parts of town; community connection developed through high school connection	3/30/2022 11:10 PM
82	Making resources available to young families so they can support their elderly parents who remain here.	3/30/2022 1:40 PM
83	More well-paid jobs with career paths, more educational opportunities and access to it, more diversity, and affordable, decent housing	3/28/2022 5:37 PM
84	Affordable housing. Allowance of pets in rentals. Invest in education. Keep taxes low.	3/28/2022 5:01 PM
85	Make education top priority and enhance the look of the town	3/28/2022 3:51 PM
86	More creative economy work done in town!!!!!! There's some slow take-off and it feels we're teetering on the edge of many good changes but we need to keep pushing for evolution in town in order to draw in the 20-40 crowd.	3/28/2022 1:14 PM
87	Availability of interesting and challenging employment and affordable housing.	3/28/2022 10:59 AM
88	♀	3/28/2022 9:31 AM
89	Offer more to do	3/27/2022 11:12 PM
90	Unsure	3/27/2022 7:12 PM
91	More interesting cultural events, investing more in our schools.	3/27/2022 5:39 PM
92	Pave the roads. Provide cell service and high speed internet to everyone. Get our education system out of the 1800s. Get meaningful jobs for them, not just menial jobs. Encourage things that are more culturally interesting than monster truck shows.	3/26/2022 10:40 PM
93	Might need an outreach/remote college branch here or something like that, in order to achieve that a bit easier. Or find ways to encourage them to come back after they "go off" to college or trade school or whatever.	3/26/2022 10:25 PM
94	Make housing affordable. Allow pets, allow kids. Make the landlords/property owners have to keep up on their properties and fix large problems within the buildings, such as poor insulation, rodent infestation, leaky roofs, broken windows, black mold, etc. Hold them accountable. Everyone deserves to live in an affordable home that is safe and warm. I think promoting solar energy would also be a great thing.	3/26/2022 3:17 PM
95	Why come back and pay these sky high taxes.	3/26/2022 1:23 PM
96	More community togetherness. Activities for all, to bring the town together as a whole	3/26/2022 12:12 PM
97	That need jobs to social programs and local coffee shops	3/26/2022 10:30 AM
98	Better economy, lower taxes, more involvement and voice in the town	3/26/2022 5:46 AM
99	I think the 20 years olds need to go out and see the "world" and then the 30- 40 year olds need the home town vibe to want to return to with their children to feel safe easing them.	3/25/2022 9:11 PM
100	Provide amenities that are meaningful. Public Transit, good schools, pleasant environment. Make a good town and the people will come.	3/25/2022 7:48 PM
101	Jobs, high speed internet, local entertainment	3/25/2022 6:11 PM
102	We can't. Many who grow up here what to see other places that are larger and have high tech& high paying jobs	3/25/2022 10:25 AM
103	Offer more for the younger crowds to do	3/25/2022 9:25 AM
104	Diversity and variety: Jobs, food, technology, music/arts, recreation	3/25/2022 8:37 AM
105	Growth!!!	3/25/2022 12:13 AM
106	Housing, housing, and more housing. Support of our coworking space. Support for business starts and development.	3/24/2022 9:17 PM
107	None	3/24/2022 9:06 PM

108	Lower taxes	3/24/2022 9:04 PM
109	Broadband, affordable rental units, tapping into well-paying industries - either remote employers or encouraging professional/technical employers to relocate in town. Plus have things for younger adults to do. Outside of occasional small events, the town (and those around it) are pretty boring if you're in your 20s & 30s. Having stronger supports for families with young children will help with the 30 - 40 yr olds.	3/24/2022 8:53 PM
110	Provide world class internet speed/access and cellphone coverage.	3/24/2022 8:39 PM
111	Affordable housing, employment opportunities, things to do.	3/24/2022 8:35 PM
112	No opinion	3/24/2022 7:25 PM
113	More things to do	3/24/2022 6:58 PM
114	Lower taxes	3/24/2022 6:49 PM
115	Housing, law enforcement, zoning enforcement, fair treatment (ending good ole boy favoritism).	3/24/2022 6:22 PM
116	Idk	3/24/2022 6:20 PM
117	Affordable house pricing. Not cheap multi unit apartments. More businesses.	3/24/2022 6:17 PM
118	Unknown	3/24/2022 6:02 PM
119	More jobs and businesses like tractor supply.	3/24/2022 5:47 PM
120	Vibrant night life	3/24/2022 5:45 PM
121	Restaurants and activities open after 8 pm	3/24/2022 5:43 PM
122	More varied job opportunities, more to do like restaurants, shopping, entertainment. Affordable middle class housing. Decrease school tax.	3/24/2022 5:38 PM
123	Opportunities and affordable housing.	3/24/2022 5:25 PM
124	Remove stigma that students need to leave. Provide job opportunities and exploration for high schoolers.	3/24/2022 5:23 PM
125	Provide jobs that aren’t at box stores	3/24/2022 5:10 PM
126	Rein in politics, let people be people and not be so micromanaged.	3/24/2022 5:06 PM
127	affordable housing	3/24/2022 4:49 PM
128	Housing, jobs, amenities	3/24/2022 4:15 PM
129	More job opportunities. Make sure the school system is thriving	3/24/2022 11:50 AM
130	quality jobs, not just low paying service jobs like tractor supply.	3/23/2022 9:00 PM

Q18 How could Bradford become more welcoming and inclusive?

Answered: 131 Skipped: 0

#	RESPONSES	DATE
1	It won't work. attitude and unfriendly personalities now. Income levels "distance" togetherness, etc.	4/22/2022 8:55 PM
2	.	4/22/2022 8:37 PM
3	.	4/22/2022 8:26 PM
4	The office staff are very unwelcoming to new people and always gossiping whenever I'm paying my bills. They need to be more professional and discrete.	4/18/2022 6:12 PM
5	We're downtown shops	4/18/2022 4:23 PM
6	I don't know.	4/18/2022 12:48 PM
7	Focus on maintenance of existing structures. Build more sidewalks.	4/18/2022 11:03 AM
8	More community events bringing people together	4/18/2022 10:25 AM
9	By allowing people to come in and try their ideas	4/18/2022 10:13 AM
10	Offer incentives to live here	4/18/2022 9:49 AM
11	More community learning and rec activities. Many towns have bulletins of courses or events etc printed or posted online to document everything happening and release it each season. Have those offerings in partnership with our schools (could easily tie in with adult education offerings at River Bend, for example.) Accessibility.	4/18/2022 9:26 AM
12	more events on the weekends, more high end retail (coop) so we don't have to leave town to shop, easier to do stuff (less obstruction at the SB)	4/18/2022 8:50 AM
13	Keep the small town quaint appearance . While increasing the arts , shops	4/18/2022 8:48 AM
14	I love the coffee shop with the rainbow flag- we enjoyed the music series with minority musicians- I love all that Bradford does to make people feel welcome/ included. (so more of this!)	4/18/2022 8:34 AM
15	welcome wagon	4/18/2022 8:16 AM
16	More inclusive to people of color is not an easy task for white Vt. There is a lot of hidden bigotry that has cone out of the closet recently. Engage with the people who are here and who might want to live here and ask them… actually take their feedback.	4/18/2022 8:15 AM
17	Has the roots ready - just publicize.	4/18/2022 8:11 AM
18	stop doing things the way they have always been done. Explore a paid town manager.	4/18/2022 6:40 AM
19	Fill all available retail stores	4/18/2022 6:25 AM
20	Keep it the way it is	4/18/2022 5:57 AM
21	Closing off an area of town for a street dance/flea market	4/16/2022 2:53 PM
22	Wayfinding signage to attractions; better lodging option for visitors; better access to our rivers (the Waits and especially the Connecticut; we desperately need a boat launch/riverside park on the Connecticut).	4/14/2022 10:11 PM
23	more restaurants and shopping	4/14/2022 12:02 PM
24	just a thought, but by showcasing other cultures in local events - food, the arts, etc., it could encourage people that identify with different cultures to be more engaged in the community and help current residents develop a better understanding of and appreciation for other people and cultures as well.	4/14/2022 11:56 AM

25	Better jobs	4/14/2022 9:49 AM
26	It’s already welcoming. Keep Bradford quaint	4/14/2022 9:35 AM
27	Adopt a Town-wide logo that denotes a welcoming atmosphere.	4/14/2022 8:49 AM
28	Schools play a huge toll in this. Get together with them.	4/14/2022 8:41 AM
29	It looks pretty dirty when you drive through. It looks like the only people who live there are pot smokers and welfare cases Look, the best hand anyone can get is at the end of their own arm and that is where people learn self respect, grow self esteem, and learn to take care of what they have. Stop trying to heal your residents and instead teach them to fish as they say. Make THEM pull themselves up by their own bootstraps, grow dreams and not pot which only encourages depression and poverty.	4/14/2022 8:26 AM
30	Less empty storefronts/unrented appartments	4/14/2022 7:28 AM
31	Stop the overt racism, have more community gathering opportunities that are meaningful, think about working parents when you plan voting times and recognize that in person is not always required	4/14/2022 7:24 AM
32	Encourage more community family events.	4/14/2022 5:49 AM
33	welcome info to new residents, more cooperative town government, better communication on volunteer things and events	4/12/2022 9:02 AM
34	Again, have more retail and restaurant options.	4/12/2022 8:22 AM
35	Make official statements of inclusiveness and discuss them at town meeting. Have people in positions of power that want to be more inclusive. Most people don't want inclusivity as it means giving up power.	4/12/2022 7:13 AM
36	I don't know. I keep to myself. Ask an extrovert.	4/11/2022 6:25 PM
37	Have code of behavior by town employees. Town clerk is great but wow on the others in that office.	4/11/2022 9:03 AM
38	Cleanerperhaps and/or better signage.	4/11/2022 7:02 AM
39	Continue to clean up the worst areas. Place park benches and good lighting in safe spots.	4/10/2022 2:20 PM
40	Lower taxes and have theaters and some retail stores. Make it affordable for retailers to stay. Too much turn over of shops on Main Street	4/9/2022 3:32 PM
41	more affordable Housing for working people who do not qualify for low income housing	4/9/2022 3:09 PM
42	Open air markets, cultural events, presentations	4/8/2022 9:13 PM
43	I don't know.	4/8/2022 1:19 PM
44	Not sure	4/8/2022 10:29 AM
45	Easy parking, incentives for new businesses.	4/8/2022 9:02 AM
46	I think Bradford does this.	4/8/2022 7:56 AM
47	More happening in town center. More associated with Hannaford. I live in Corinth but do all my shopping at Hannaford every week.	4/8/2022 7:47 AM
48	Less run-down buildings, more art events, more culturally inclusive events	4/8/2022 7:02 AM
49	Time, offer ways to share cultures/food/etc, create partnerships with residents and new residents, or helpers for immigrants/refugees who come here.	4/8/2022 6:36 AM
50	Promote what we have and be open about the workings of the town. Make the downtown more inviting and do more concerts that are inclusive	4/8/2022 5:41 AM
51	I find the Selectboard very defensive about almost everything. That doesn't help. When I moved here 16 years ago I suggested to one of the town staff that perhaps the town could give new residents a welcome kit which could include all sorts of information about services, etc. They looked at me like I was nuts. That says it all.	4/7/2022 1:01 PM

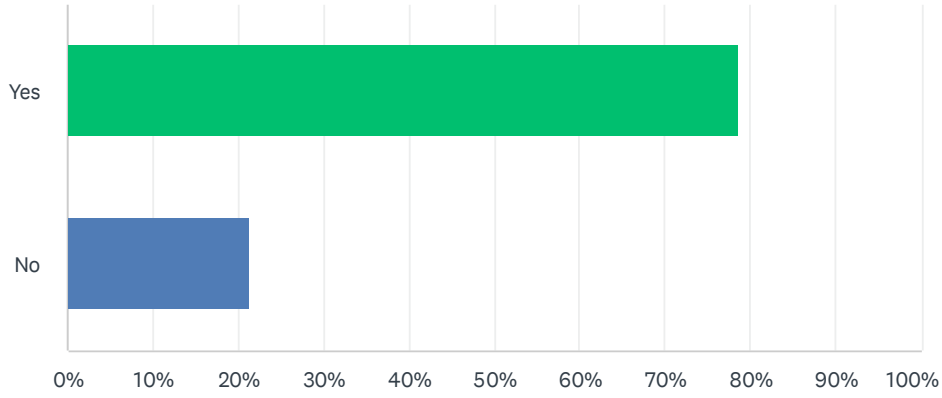
52	More community events, street festivals, concerts	4/5/2022 8:36 PM
53	We have made big strides, but the "Take Back Vermont," and "Thin Blue Line" attitudes come from a racist base that needs to be educated and addressed in other ways.	4/5/2022 1:48 PM
54	More community events	4/5/2022 8:16 AM
55	Better town website. "Get to know Bradford" pamphlets or welcome kits	4/4/2022 4:03 PM
56	Reach out to diverse groups and ask them what would help.	4/4/2022 2:21 PM
57	Being visibly welcoming, encouraging diverse businesses that feature marginalized folks, art in town that features marginalized folks, supporting the Black Voices Matter concert, possible latin festial to highlight our migrant worker population	4/4/2022 10:29 AM
58	Encourage people who want to start businesses to move tot he area. Including refugees, and people just looking to relocated. Offer incentives to bring their trades and skills.	4/4/2022 9:10 AM
59	By being open and accepting to new ideas and outside opinions.	4/4/2022 8:40 AM
60	work together, support the conservation commissions programs	4/3/2022 6:32 PM
61	No thoughts	4/3/2022 3:22 PM
62	Branding it on all our promotional materials. Oh, well, I guess that means we NEED promotional materials. Yeah, we should promote ourselves.	4/3/2022 1:21 PM
63	Does it need to be?	4/2/2022 9:11 PM
64	Diversity! Both population and available resources/businesses.	4/2/2022 6:59 PM
65	Don't know. I do not have any first hand experience of exclusion or lack of welcome though I can imagine this might exist	4/2/2022 5:09 PM
66	More community events and gatherings and a more vibrant and welcoming political process.	4/2/2022 3:07 PM
67	Make zoning and planning committee more approachable	4/2/2022 11:26 AM
68	See above.	4/2/2022 11:09 AM
69	Vague question...what are you really asking?	4/2/2022 9:50 AM
70	jobs, affordable housing, child care, entertainment	4/2/2022 9:30 AM
71	I don't know ow	4/2/2022 9:29 AM
72	Upgrade Main Street. No more stores that look like yard sales	4/2/2022 9:22 AM
73	?	4/2/2022 8:56 AM
74	Not sure	4/2/2022 8:54 AM
75	Hold inclusive/diverse music and food-based events to educate and eliminate the fear of unknown cultures. Encourage marginalized business owners to set up shop.	4/2/2022 8:43 AM
76	I don't think that's possible unless people in this town are able to look to their own personal growth-you can't force people to be more inclusive.	4/2/2022 7:28 AM
77	More small retail stores, art galleries, etc instead of empty spaces in the downtown area. Buy the eyesore next to the little park and extend the park.	4/2/2022 5:11 AM
78	Things for kids to do	4/2/2022 2:39 AM
79	Greater variety in the downtown retail offerings. Take the parking off of main street and to make the downtown more aesthetically pleasing. Create bike lanes and a variety of different housing options.	4/1/2022 10:16 PM
80	More community events	4/1/2022 10:08 PM
81	Become more affordable with business and less trashy curb appeal	4/1/2022 9:31 PM
82	Let outsiders in. Restructure sectors of town government structure to bring in people. Full time positions which encourage people with a vision of the future. Focus on more than just the	3/30/2022 11:10 PM

	village proper. Encourage connections and communication with those living outside of the village.	
83	younger people involved in leadership	3/30/2022 1:40 PM
84	Increase education to as broad a spectrum of people as possible about the broad spectrum of humanity (age, race, SES, religion, ability, sexual orientation, gender, etc) through educational events like public meetings, forums, free films and concerts. Welcome refugees and immigrants and provide services. Promote revitalization and avoid gentrification- there are great resources on the internet- Look at HUD Affirmatively Furthering Fair Housing process. Rent control and public transportation are good.	3/28/2022 5:37 PM
85	See above. Also many of the inclusive and welcoming aspects of a society are not challenging for me as a white, middle class, cisgender person in a heterosexual relationship.	3/28/2022 5:01 PM
86	More festivals, restaurants, areas to walk, activities indoors and outdoors	3/28/2022 3:51 PM
87	More public art. More bipoc celebrations. More public forums on how to build inclusivity and what white folk need to do to make the atmosphere more welcoming- this includes learning about privilege, equity, and advocacy.	3/28/2022 1:14 PM
88	Bradford suffers by not having a town common like Fairlee and Newbury. Perhaps a central spacious open park. Neither the Boch park nor the little gazebo on Main Street accomplish this	3/28/2022 10:59 AM
89	It already is welcoming	3/28/2022 9:31 AM
90	Have more community events and don’t rely on facebook	3/27/2022 11:12 PM
91	More community events	3/27/2022 7:12 PM
92	By working with the schools to decrease discrimination.	3/27/2022 5:39 PM
93	Could start by actually embracing the concepts and making them a staple in our educational institutes instead of talking about it.	3/26/2022 10:40 PM
94	When we moved here it would’ve been nice to get a welcome packet (physical or digital) or Bradford town guide so we know what’s around, from professional services & local businesses to restaurants, shopping, outdoor activities, local parks, where our voting precinct is, where/how to find out about local events, etc.	3/26/2022 10:25 PM
95	Inclusive -- it would be nice to see a few minority owned businesses pop up. Not that that is something you can really change, but it would be cool.	3/26/2022 3:17 PM
96	Lower taxes.	3/26/2022 1:23 PM
97	Be more neighborly	3/26/2022 12:12 PM
98	Lower taxes	3/26/2022 10:30 AM
99	Allow more people to have a voice	3/26/2022 5:46 AM
100	I wish I knew	3/25/2022 9:11 PM
101	Clean streets, shoveled sidewalks, inclusivity...welcome all. Fight hatred and racism. And good schools, inviting participation in Town affairs. Friendly law enforcement.	3/25/2022 7:48 PM
102	I dont know	3/25/2022 6:11 PM
103	We are welcoming and inclusive	3/25/2022 10:25 AM
104	More entertainment opportunities	3/25/2022 9:25 AM
105	Talk to POC and the LBGTQ community to hear what they experience and what they need to feel safe and welcome here. Education for kids/adults around acceptance and tolerance of people who are different by hosting diverse events.	3/25/2022 8:37 AM
106	Stop calling us flatlanders and acting like we don't belong here	3/25/2022 12:13 AM
107	Required training in inclusivity, diversity, equity, accessibility, and social justice (IDEAS) for all town employees, elected officials, and appointed individuals. A town wide audit to check for IDEAS. An IDEAS vision and plan. Public workshops and education in IDEAS.	3/24/2022 9:17 PM

108	I don't think we are not welcoming	3/24/2022 9:06 PM
109	Lower taxes and better jobs	3/24/2022 9:04 PM
110	By *being* more welcoming and inclusive. There's a lot of "flatlander syndrome" that makes it hard for newcomers to connect in any meaningful way, if they don't have some kind of social network hook (such as being into the theater, music, or political scene) to help them. I can't speak to inclusion of people who have more melanin than the average porcelain sink, since I'm in the porcelain sink crowd, but I imagine others can speak from that perspective. I suggest listening to what they have to say, as if you are an outsider looking in, rather than reacting defensively.	3/24/2022 8:53 PM
111	Introduce everyone to Monique Priestly and they'll know it already is.	3/24/2022 8:39 PM
112	Find other ways to communicate with residents (not everyone has Facebook). Maybe a town welcoming packet that gives newcomers information on the town (available at the library and town hall).	3/24/2022 8:35 PM
113	No opinion	3/24/2022 7:25 PM
114	More things to do	3/24/2022 6:58 PM
115	Taxes rate	3/24/2022 6:49 PM
116	End good ole boy treatment.	3/24/2022 6:22 PM
117	Idk	3/24/2022 6:20 PM
118	Continue bringing in more unique businesses and beautifying downtown and LP	3/24/2022 6:17 PM
119	Stop catering to the transplants. Offer affordable housing. Keep the businesses in check and abiding by their permits. Stop the favoritism. Offer more police protection. Community outreach.	3/24/2022 6:02 PM
120	I fell in love with Bradford 40 years ago, because it was a comfortable and affordable family oriented small town, centrally located to anything I or my family may need or have an interest in, such as skiing, shopping, dinning, and other outdoor recreation including hiking, fishing and hunting et cetera.	3/24/2022 5:47 PM
121	Welcome wagon	3/24/2022 5:45 PM
122	Ns	3/24/2022 5:43 PM
123	More varied employment opportunities and places like the space on main	3/24/2022 5:38 PM
124	By making Bradford a town people want to live and take pride in.	3/24/2022 5:25 PM
125	Provide a monthly e-newsletter and welcome to residents	3/24/2022 5:23 PM
126	as a community we need to start holding people more accountable for the things they say.	3/24/2022 5:10 PM
127	Be like tunbridge… tight knit community with litter interference. Extend property boundaries. Put a cap on Ron Huntington properties. Hold landlords and tenants accountable for better kept residences- increase property boundaries.	3/24/2022 5:06 PM
128	Having more handicap assessable business's.	3/24/2022 4:49 PM
129	My family moved here 3 years ago and I've generally found the area very unfriendly and very in welcoming—I don't even know how to begin answering this on a survey.	3/24/2022 4:15 PM
130	We are new to Bradford and have felt very welcomed by the community	3/24/2022 11:50 AM
131	good question. at a minimum, the selectboard should establish a policy for inclusivity and create a committee to focus on this and give the committee seed money.	3/23/2022 9:00 PM

Q19 Should Bradford work to network trails with neighboring communities such as Wrights Mountain with Tucker Mountain in Newbury.

Answered: 131 Skipped: 0



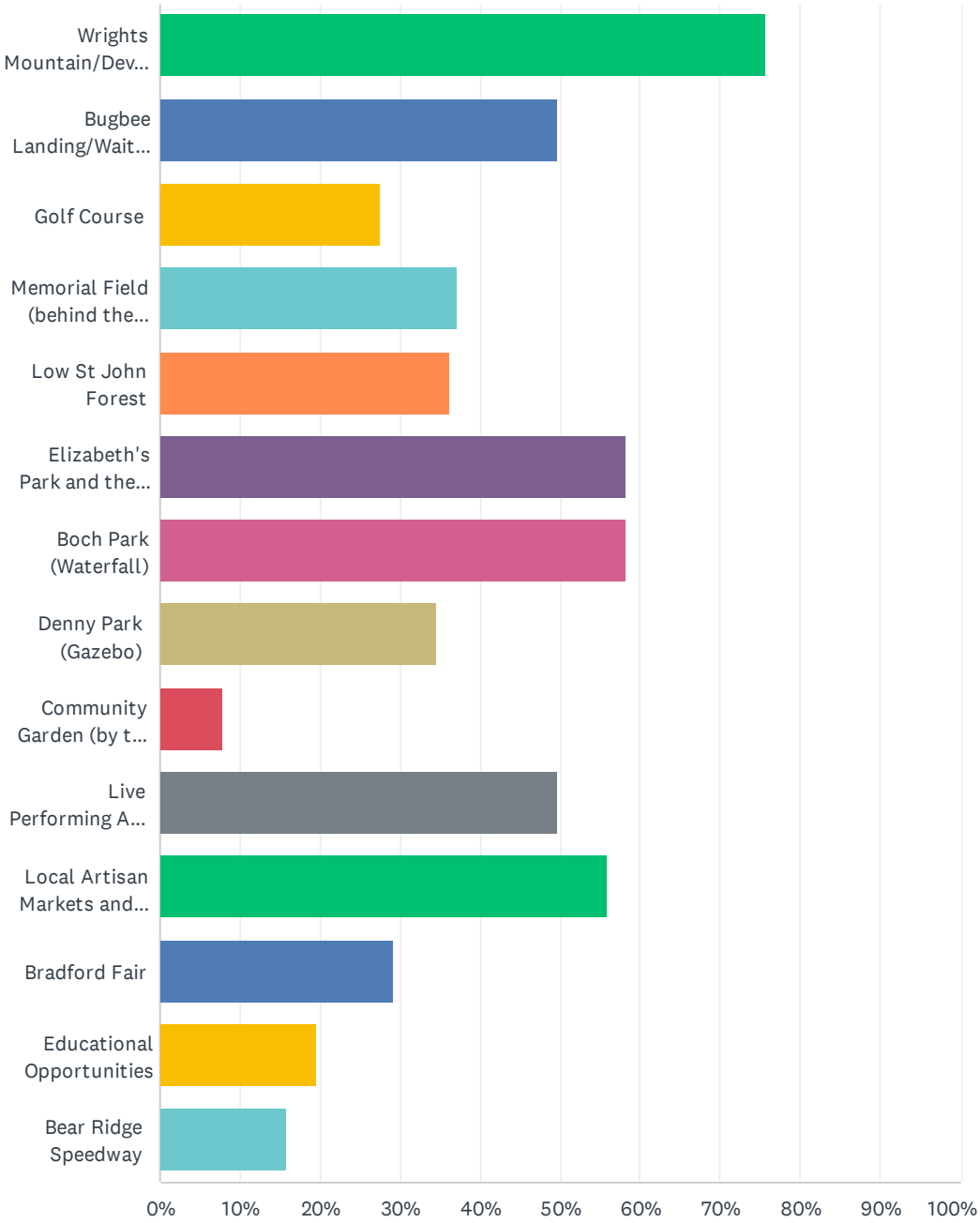
ANSWER CHOICES	RESPONSES	
Yes	78.63%	103
No	21.37%	28
TOTAL		131

#	COMMENT	DATE
1	no opinion	4/22/2022 8:26 PM
2	So much grant money for trails. Why is selectboard not directing this activity?	4/18/2022 6:12 PM
3	If it’s possible	4/18/2022 10:13 AM
4	What about connecting somehow to Cross Rivendale trail?	4/18/2022 8:15 AM
5	Absolutely !	4/18/2022 8:11 AM
6	Long-distance, interconnected hiking trail networks are a huge draw. Case in point: the Sunapee-Ragged-Kearsarge Greenway in south central New Hampshire.	4/14/2022 10:11 PM
7	Fantastic idea!	4/14/2022 8:41 AM
8	Yes it’s a good idea but there are other better ways to spend money	4/14/2022 7:24 AM
9	They will just be trashed.	4/11/2022 7:02 AM
10	if there is interest in this, it would be really a good way to "get back to the earth". Schools should introduce the students to the mountains - grade school and high school	4/10/2022 2:20 PM
11	NONE	4/9/2022 3:09 PM
12	Why nit	4/8/2022 10:29 AM
13	I love hiking opportunities near here. More trails always welcome, but cost/benefit analysis needed!	4/8/2022 6:36 AM
14	Definitely!	4/4/2022 8:40 AM
15	I think that they do a great job and get a decent, check from the town already. If they wanted to set some goals and receive more funding that would be great	4/2/2022 6:59 PM

16	Don't see why not, unless it would mix in mountain biking and motorized access on hiking trails	4/2/2022 5:09 PM
17	But no destructive mountain biking trails.	4/2/2022 3:07 PM
18	We need to STOP giving Wrights Mountain our tax dollars to put in CD's	4/2/2022 11:26 AM
19	More trails will help make Bradford a destination and a great place to live.	4/2/2022 8:43 AM
20	yes...but priority should be to improve access to Low St. John Forest for village residents...town forest accessible to downwton/village residents is underpromoted.	3/30/2022 1:40 PM
21	As long as it's not displacing wildlife or disturbing their habitats.	3/28/2022 5:37 PM
22	Absolutely	3/28/2022 5:01 PM
23	Unsure, but if someone wants to take it on?	3/28/2022 1:14 PM
24	Pave the roads	3/26/2022 10:40 PM
25	There are enough trails.	3/26/2022 1:23 PM
26	Are you looking at taking private land to make more trailes,	3/26/2022 10:30 AM
27	Build a trail from West Fairlee Town Forest to Wrights Mtn, to Tucker Mtn.	3/25/2022 7:48 PM
28	Yes, yes, yes.	3/24/2022 9:17 PM
29	I would love to see something like this. I'd also love to see the planning and creation of wildlife corridors among all the towns in the Lower Cohase region.	3/24/2022 8:53 PM
30	Absolutely, this is a no brainer.	3/24/2022 5:25 PM

Q20 Which resources do you and/or your members of your household take advantage of? Select all that apply

Answered: 127 Skipped: 4



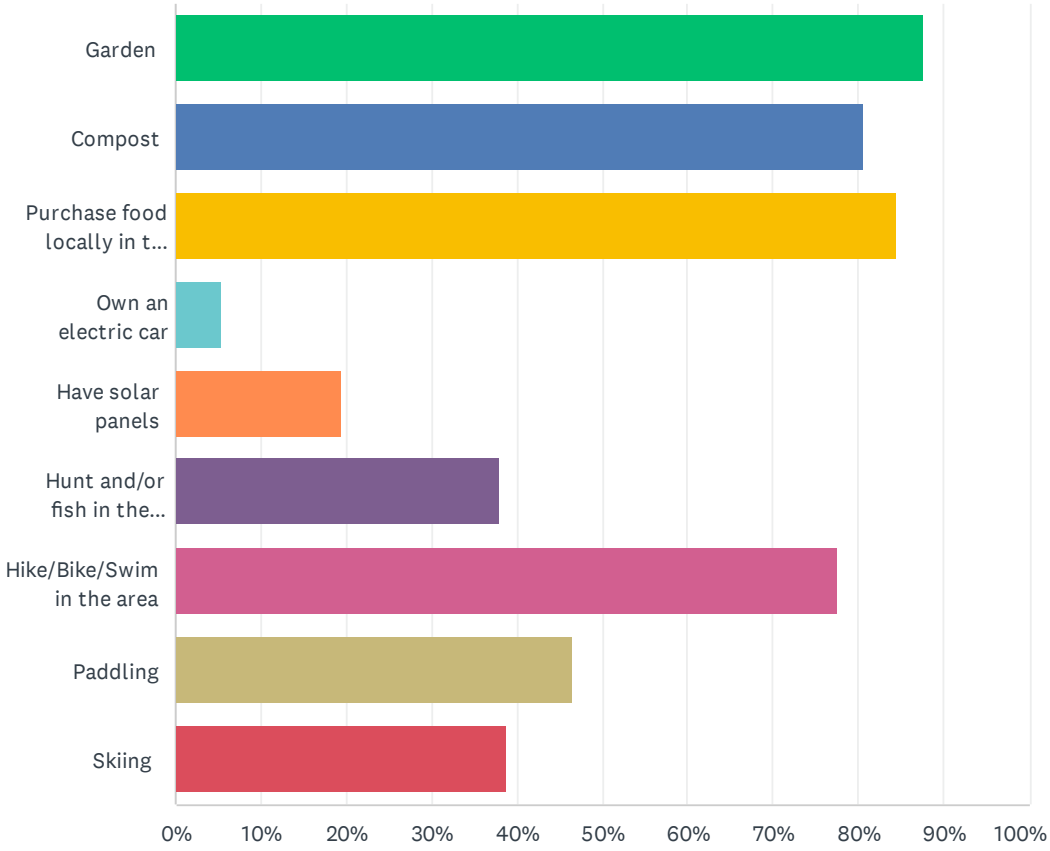
ANSWER CHOICES	RESPONSES	
Wrights Mountain/Devils Den Town Forest	75.59%	96
Bugbee Landing/Waits River/Connecticut River	49.61%	63
Golf Course	27.56%	35
Memorial Field (behind the Bradford Academy)	37.01%	47
Low St John Forest	36.22%	46
Elizabeth's Park and the Skating Pavillion	58.27%	74
Boch Park (Waterfall)	58.27%	74
Denny Park (Gazebo)	34.65%	44
Community Garden (by the Veneer Mill)	7.87%	10
Live Performing Arts and Music in Bradford	49.61%	63
Local Artisan Markets and Farm Stands	55.91%	71
Bradford Fair	29.13%	37
Educational Opportunities	19.69%	25
Bear Ridge Speedway	15.75%	20
Total Respondents: 127		

#	COMMENT	DATE
1	too old	4/22/2022 8:55 PM
2	I just moved back to UV last year in the middle of Covid and I'm vulnerable so I haven't had much opportunity. One thing I did was a garden/art tour last year with chamber of commerce and really liked that!!!	4/18/2022 8:15 AM
3	Would love to see the old Lowe Mansion Lot made into a parking area for the library and a small park with picnic tables.	4/16/2022 2:53 PM
4	unfortunately, I only work in Bradford and don't' spend a lot of recreation time in the community.	4/14/2022 11:56 AM
5	Can bear ridge be sold or moved outside the residential area??!! It's far to loud to surrounding area	4/14/2022 9:35 AM
6	community theater	4/11/2022 6:25 PM
7	Huggtyhvvdfjj	4/8/2022 10:29 AM
8	I highly value our green spaces.	4/8/2022 7:56 AM
9	None of these.	4/7/2022 1:01 PM
10	If Bear Ridge had some flat-track motorcycle nights, I'd be stoked!	4/5/2022 1:48 PM
11	Bradford needs to beautify the bridge at the Mill....including lights and flower baskets and plague to tell about Bradford. Maybe gazebo and small library for people to stop and enjoy	4/3/2022 3:22 PM
12	Great to see more events at each!	4/2/2022 6:59 PM
13	I didn't know some of these existed	4/2/2022 5:09 PM
14	Growing up in Bradford we had a bowling alley where Colatina Bakery is now, Ball room dancing lessons over top of Electra, square dances at BA gym, and a movie theature where Denny Park is now -- some thing for every age group	4/2/2022 11:26 AM

15	I haven’t lived here long enough	4/1/2022 10:16 PM
16	I'd use more of these if I lived closer.	3/28/2022 5:37 PM
17	Memorial field could be much better utilized. Last year when walking my dog I was asked to leave because I was told it was school property and I needed written permission to be there.	3/28/2022 10:59 AM
18	Sadly, I don’t really know anything about any of that	3/26/2022 10:25 PM
19	Library? Don't forget the Library!	3/25/2022 7:48 PM
20	The Space On Main, Bradford Public Library	3/24/2022 9:17 PM

Q21 Which of the following activites do you and/or your household do?

Answered: 129 Skipped: 2



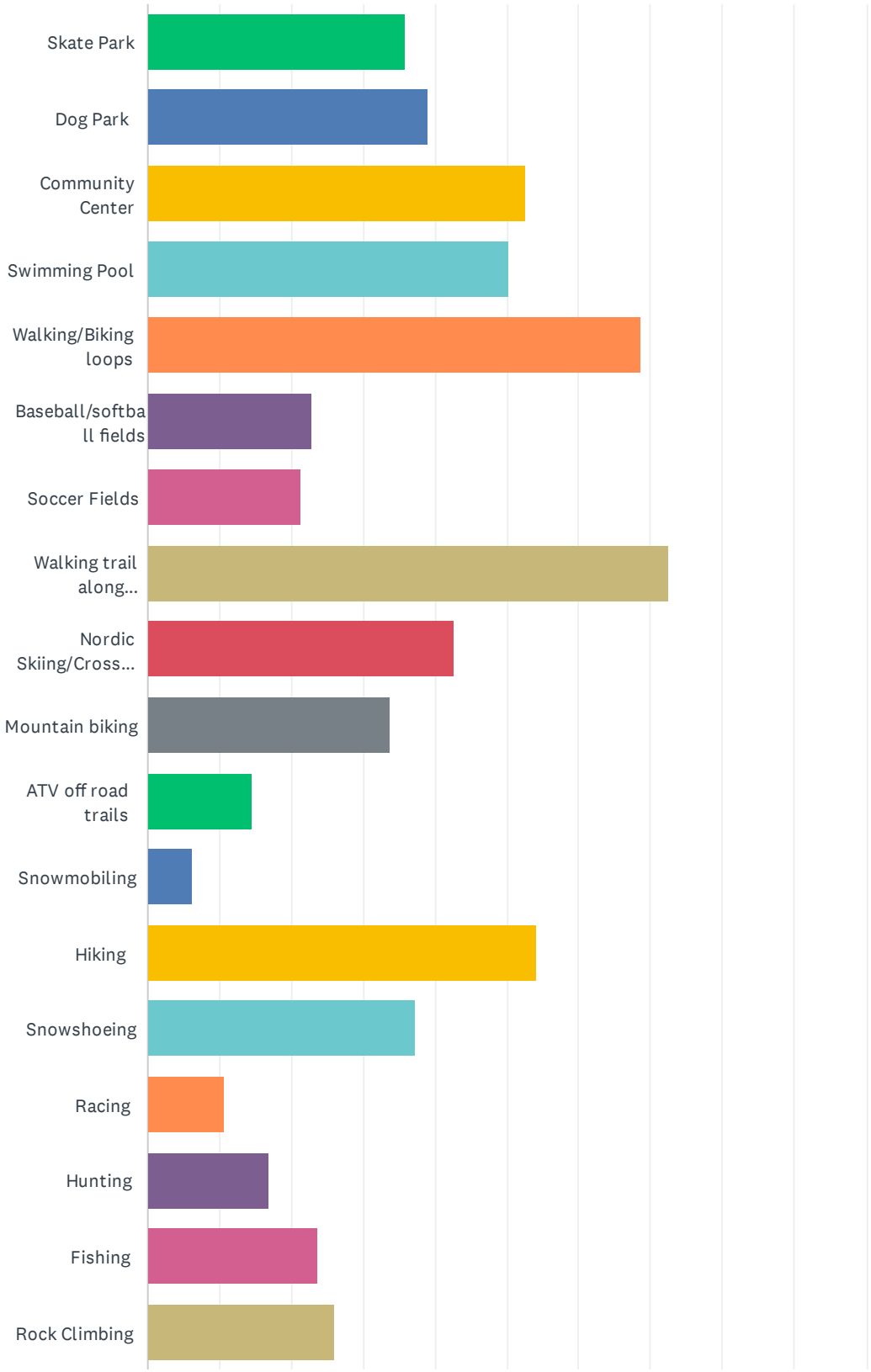
ANSWER CHOICES	RESPONSES	
Garden	87.60%	113
Compost	80.62%	104
Purchase food locally in the summer	84.50%	109
Own an electric car	5.43%	7
Have solar panels	19.38%	25
Hunt and/or fish in the area	37.98%	49
Hike/Bike/Swim in the area	77.52%	100
Paddling	46.51%	60
Skiing	38.76%	50
Total Respondents: 129		

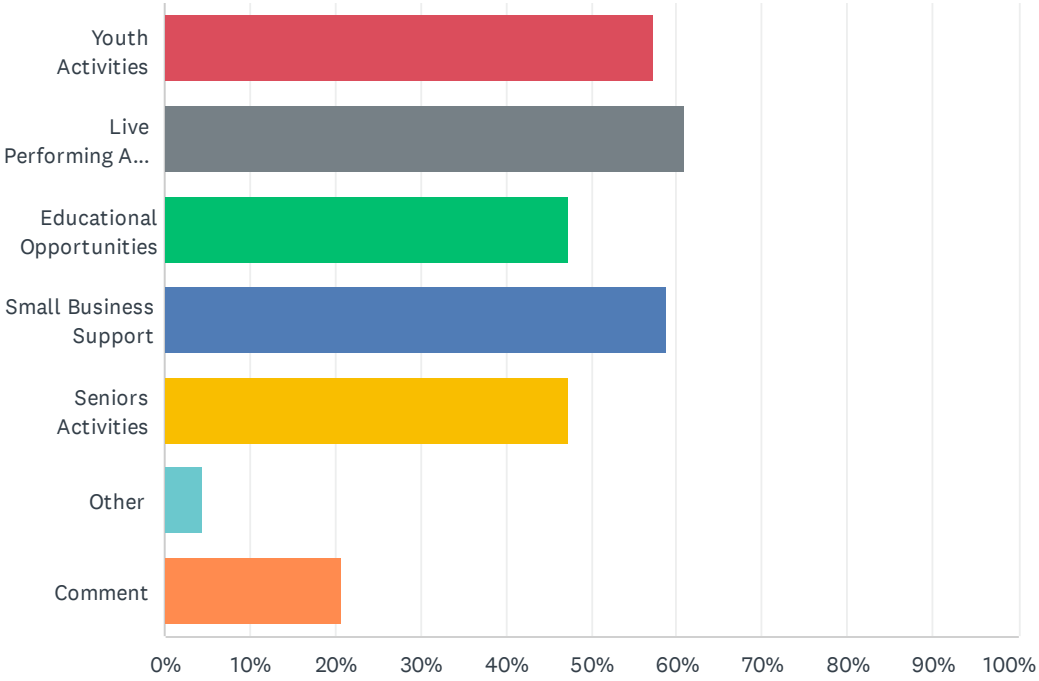
#	COMMENT	DATE
1	Hike on private property	4/22/2022 8:55 PM

2	Eventually we will have an electric car- we have a hybrid now.	4/18/2022 8:34 AM
3	Want to relearn to fish. Xcountry ski. Working on the solar and electric vehicle. Affordability is the issue. We are saving up money to do it.	4/18/2022 8:15 AM
4	Newbury store has kayak rentals. It'd be great to have that at the water behind the B.A., even if fir just weekends	4/16/2022 2:53 PM
5	Would like to have solar panels and own an EV. Affordability is the big issue!	4/14/2022 10:11 PM
6	Camping	4/12/2022 8:22 AM
7	I wish I could afford an electric car or solar panels. Maybe one day soon	4/8/2022 7:47 AM
8	Climbing at Eagle Hollow	4/5/2022 1:48 PM
9	Hybrid car	4/5/2022 8:16 AM
10	electric cars are an albatross	4/3/2022 6:32 PM
11	None	4/3/2022 3:22 PM
12	I work	4/2/2022 6:59 PM
13	(thinking about paddling...)	4/2/2022 5:09 PM
14	Boat rides on the Conn. River but have to go out from Orford or North Haverhill Bedell Bridge park because the Waits River access is too shallow now for motorized boats	4/2/2022 11:26 AM
15	Skiing within half hour from home	3/30/2022 11:10 PM
16	I'd love solar panels and an electric car, but can't afford the initial cost.	3/28/2022 5:37 PM
17	I have had to hike a lot more recently because poorly maintained dirt roads are impassable. Pave them before you worry about anything else.	3/26/2022 10:40 PM
18	We take our dog for walks fairly regularly in the summer & fall, but mostly just in our neighborhood	3/26/2022 10:25 PM
19	Having solar panels are not activities - bias options?	3/24/2022 6:22 PM
20	Activities aren’t owning a solar panel or an electric car	3/24/2022 6:02 PM

Q22 Which activities would you like to see offered or expanded in Bradford? Select all that apply.

Answered: 131 Skipped: 0




Youth Activities
Live Performing A...
Educational Opportunities
Small Business Support
Seniors Activities
Other
Comment
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

ANSWER CHOICES	RESPONSES	
Skate Park	35.88%	47
Dog Park	38.93%	51
Community Center	52.67%	69
Swimming Pool	50.38%	66
Walking/Biking loops	68.70%	90
Baseball/softball fields	22.90%	30
Soccer Fields	21.37%	28
Walking trail along Connecticut and/or Waits River	72.52%	95
Nordic Skiing/Cross Country Skiing	42.75%	56
Mountain biking	33.59%	44
ATV off road trails	14.50%	19
Snowmobiling	6.11%	8
Hiking	54.20%	71
Snowshoeing	37.40%	49
Racing	10.69%	14
Hunting	16.79%	22
Fishing	23.66%	31
Rock Climbing	25.95%	34
Youth Activities	57.25%	75
Live Performing Arts and Music	61.07%	80
Educational Opportunities	47.33%	62
Small Business Support	58.78%	77
Seniors Activities	47.33%	62
Other	4.58%	6
Comment	20.61%	27
Total Respondents: 131		

#	COMMENT	DATE
1	think we do ok	4/22/2022 8:55 PM
2	Would love to see the twin support events that brings people to our town.	4/18/2022 10:13 AM
3	Lectures and other educational experiences	4/18/2022 9:49 AM
4	Dogs in common/public spaces should be leashed for the safety of other dogs and people. I speak as a dog lover with a rescue dog.	4/18/2022 8:15 AM
5	A centralized announcement spot for all activities	4/16/2022 2:53 PM

6	Non-motorized trails.	4/14/2022 8:41 AM
7	Don’t build a skate park. All teen activities should be monitored else you end up with kids being recruited for all kinds of stuff. This isn’t the fifties	4/14/2022 8:26 AM
8	Additional space for public use like fairgrounds should be more open for community bbq or picnics or fireworks. We have things that are used so infrequently that sit vacant all year long — it’s wasteful. Second— the people who own the downtown building should be doing more to fill those vacant business spaces	4/14/2022 7:24 AM
9	Low impact activities that do not come with high maintenabnce costs (trash) are best. Activities that can train and employ your and be enjoyed by elders too are desirable (like a community center/pool).	4/11/2022 7:02 AM
10	Off-road motorcycle trails. The ATV trails often exclude motorcycles, plated or not.	4/5/2022 1:48 PM
11	(Don't know how much small business support is there already)	4/2/2022 5:09 PM
12	Utilize what we already have - you came here from there because you didn't like there and now you want to change here to be like there , most of us like here the way it is	4/2/2022 11:26 AM
13	resource stretching: prefer walking/biking loops idea to be combined with sidewalk expansion needs	4/2/2022 11:09 AM
14	A good rock climbing gym would attract young and old athletic/outdoorsy people for sure!	4/2/2022 8:43 AM
15	I am not against hunting and fishing, but I don't think it's necessary to try to expand either of those activities.	4/2/2022 7:28 AM
16	More walking trails would be the best	3/27/2022 5:39 PM
17	Paved roads	3/26/2022 10:40 PM
18	I love all of these!!	3/26/2022 3:17 PM
19	None	3/26/2022 1:23 PM
20	A ropes course, a fishing derby for kids, fishing tournament for all ages	3/26/2022 12:12 PM
21	walking- biking on town roads and through down town	3/25/2022 7:48 PM
22	This is the same question that was on the Parks& Rec survey	3/25/2022 10:25 AM
23	Public art projects.	3/24/2022 9:17 PM
24	The region is at an inflection point, developmentally. This is the right time to be planning for the future we want to see, including building long-term funds to support future amenities.	3/24/2022 8:53 PM
25	Go fund mes to support businesses irritates me to no end. I’m not here to pay your rent and support you by buying products. Either your business model, such as your attitude, needs to change or you need to rethink if you able to sustain	3/24/2022 6:22 PM
26	Turn the Academy Building back over to the school and build a new town office, community center and police station next to the Bradford Fire Department .	3/24/2022 5:47 PM
27	Camping, athletic activities	3/24/2022 5:23 PM

Q23 What events/opportunities would you like to see offered locally?

Answered: 118 Skipped: 13

#	RESPONSES	DATE
1	.	4/22/2022 8:55 PM
2	plenty already in area to do.	4/22/2022 8:37 PM
3	see #22	4/22/2022 8:26 PM
4	Local get togethers. Festivals. When I saw a vendor at the Bradford Fair that was selling anti-Biden wear, I promised never to go back.	4/18/2022 6:12 PM
5	Affordable housing and downtown development	4/18/2022 4:23 PM
6	More/better festivals. Better promotion of festivals to those outside Bradford.	4/18/2022 12:48 PM
7	More music, farmers market, cooking classes, financial planning workshops,	4/18/2022 10:25 AM
8	Hold sporting tournaments Softball soccer football etc.	4/18/2022 10:13 AM
9	Theatre , Dance, and other cultural events	4/18/2022 9:49 AM
10	Art and music community classes	4/18/2022 9:26 AM
11	more concerts that are not folk music (anything: jazz rock etc etc) edgier theater art classes town-wide parties (say for green up day or another town-wide event) walking tour of Bradford architecture regular film series on a weekend night dance classes yoga classes (where's Sheena these days)? and on the weekend please	4/18/2022 8:50 AM
12	Expand the space on main street	4/18/2022 8:48 AM
13	disc golf, bike trails, skate park, community bike rides, more things like the bonfires at the skating rink, etc.	4/18/2022 8:34 AM
14	flea market trade fair	4/18/2022 8:16 AM
15	Live outdoor music - small venues. Community education events. How to build Vocational technical training into the community.	4/18/2022 8:15 AM
16	Larger trail networks for bikes and pedestrians	4/18/2022 6:40 AM
17	Do not know	4/18/2022 6:25 AM
18	A place like "Middle Earth". A restaurant with some ethnic foods (besides Italian and Mexican)	4/16/2022 2:53 PM
19	More live music/poetry readings/visual art and photography exhibits.	4/14/2022 10:11 PM
20	Outdoor concerts. Movie theater. Dance	4/14/2022 12:02 PM
21	Concerts festivals	4/14/2022 9:49 AM
22	Adult team sports complex. Concerts. Brewery	4/14/2022 9:35 AM
23	Street festivals; well-attended/supported farmer's market; more farms & forested lands conserved	4/14/2022 8:49 AM
24	More bike riding.	4/14/2022 8:41 AM
25	Bring back the outdoor drive in!	4/14/2022 8:26 AM
26	Continued adult education in the trades	4/14/2022 7:28 AM
27	Movies, dances, charity events, community meeting, education, public use of space like AA meetings or other helpful peer based groups, more welcoming signage— why don’t we look to thriving main streets like Littleton and ask how they keep their town vital?	4/14/2022 7:24 AM

28	performances like middle earth used to have, do more with the academy auditorium. maybe have movies there.	4/12/2022 9:02 AM
29	Concerts and activities for youth.	4/12/2022 8:22 AM
30	Help with being more energy efficient	4/11/2022 9:03 AM
31	See above. What I would not like to see are activities that encourage recklessness and destruction of natural resources, like mud bogs.	4/11/2022 7:02 AM
32	a special town-wide event - like the old Cracker Barrel Newbury had- that people from neighboring towns would want to attend. Maybe a Christmas/holiday tree lighting event with music, Christmas shopping market, carol singing, Santa, fire engines. The holiday lighting this past year was pretty cool.	4/10/2022 2:20 PM
33	.	4/9/2022 3:32 PM
34	Adult education/ trade school	4/8/2022 9:13 PM
35	music, fairs, children's events	4/8/2022 1:19 PM
36	Outdoor music venues. Community center with fitness classes.	4/8/2022 9:02 AM
37	I tend to keep to myself.	4/8/2022 7:56 AM
38	Anything	4/8/2022 7:02 AM
39	Farmers market on occasion, or listing of local farms easily accessible	4/8/2022 6:36 AM
40	Summer camps	4/8/2022 5:41 AM
41	A way for locals to meet each other -- new ways, new ideas, new outreach.	4/7/2022 1:01 PM
42	Cross country skiing, more local music, local food coop	4/5/2022 8:36 PM
43	I think what is missing is feeling like my children can commute by bicycle to town safely. This would be a game changer for families like mine.	4/5/2022 1:48 PM
44	Live music performances	4/5/2022 8:16 AM
45	Pride parade or event.	4/4/2022 4:03 PM
46	Festivals and music	4/4/2022 2:21 PM
47	all	4/3/2022 6:32 PM
48	Running races... canoe racing..... autoracing.....	4/3/2022 3:22 PM
49	Farmers Markets, live music, street festivals,	4/3/2022 1:21 PM
50	More small farms.	4/2/2022 9:11 PM
51	Nice to see some school oriented events, perhaps better utilizing the lot behind the BA	4/2/2022 6:59 PM
52	Fix it fair: it would be educational,save people money, and keep salvageable items out of the waste stream. Expanded adult Ed offerings?	4/2/2022 5:09 PM
53	Seeall above	4/2/2022 3:07 PM
54	Tractor pulls, cattle shows for 4H, horse shows for 4H, Farmers markets, crafts sales at fairgrounds	4/2/2022 11:26 AM
55	see above re: creative economy	4/2/2022 11:09 AM
56	Trade schools	4/2/2022 9:50 AM
57	flea market	4/2/2022 9:30 AM
58	Swimming is a great idea.	4/2/2022 9:29 AM
59	A full Main Street like Littleton NH	4/2/2022 9:22 AM
60	?	4/2/2022 8:56 AM
61	Not sure	4/2/2022 8:54 AM

62	Live indoor/outdoor music, professional crafts fairs (like the League of NH Craftsmen fair in Sunapee), a natural food CoOp.	4/2/2022 8:43 AM
63	I enjoyed the LEAF festival when it happened; something like that would be great. More presentations on topics such as nature, history, anthropology, etc.	4/2/2022 7:28 AM
64	Art/craft fairs	4/2/2022 5:11 AM
65	Children’s summer camp	4/2/2022 2:39 AM
66	Farmers market	4/1/2022 10:16 PM
67	I'd love to see book clubs, craft clubs and other educational gatherings. Play groups for kids	4/1/2022 10:08 PM
68	An indoor sports arena for winter seasons (all seasons). Families travel hours to practice softball, soccer and basketball all year. If we could have a facility it would bring in so much money and help families	4/1/2022 9:31 PM
69	Local music; access to services outside typical hours as I work a professional job which affects my ability to access services between 6 AM to 4:30PM.	3/30/2022 11:10 PM
70	Outdoor events that draw intergenerational mixing	3/30/2022 1:40 PM
71	Cultural and educational events. Free or by donation to increase access.	3/28/2022 5:37 PM
72	See above	3/28/2022 5:01 PM
73	Farmers market, festivals	3/28/2022 3:51 PM
74	More arts performances and community art in public spaces	3/28/2022 1:14 PM
75	Bradford has long suffered from a lack of community togetherness and spirit. I believe this is partly because of a lack of a welcoming place where people who live here can go. Denny park was motivated by good intentions but it is not a community focal point by any means. Boch park is a nice place for tourists to take pictures, but again it is not a place where we feel like going to be part of the community.	3/28/2022 10:59 AM
76	♀	3/28/2022 9:31 AM
77	A town picnic , fundraising events (softball Tourny), a Turkey bowl	3/27/2022 11:12 PM
78	Interpretive trips in the town forest	3/27/2022 7:12 PM
79	Free summer camps, performences	3/27/2022 5:39 PM
80	Paved roads.	3/26/2022 10:40 PM
81	Not an event, but I would love to have a ‘luxury’ style, stress-free place to board our dog, similar to the Pet Paradise chain that was available where we used to live. Our adopted rescue dog doesn’t board well, so places like that make it easier for us to go on vacation without worrying about her as much. Haha	3/26/2022 10:25 PM
82	I miss when the strawberry festival and midnight madness were both really big deals and it was a lot of fun.	3/26/2022 3:17 PM
83	Vermonster	3/26/2022 1:23 PM
84	Atv offroad	3/26/2022 12:12 PM
85	Reevaluate zoning and permit system so it does not take forever to get through the process	3/26/2022 10:30 AM
86	I don’t know	3/26/2022 5:46 AM
87	Concerts	3/25/2022 9:11 PM
88	Getting repetitive here. See previous answers. Safe cycling in downtown.	3/25/2022 7:48 PM
89	I dont know	3/25/2022 6:11 PM
90	Better shopping opportunities on Main St, can't do it with restaurants and antique shops	3/25/2022 10:25 AM
91	Bradford night out where everyone in the community comes out, enjoys food vendors, has music, takes an all community photo. My hometown does this and it’s really popular. Get the	3/25/2022 9:25 AM

	police, fire, Ems involved to show off their vehicles like a touch a truck event.	
92	Already addressed this in prior questions	3/25/2022 8:37 AM
93	Pet friendly	3/25/2022 12:13 AM
94	Street festivals.	3/24/2022 9:17 PM
95	None	3/24/2022 9:06 PM
96	Mud bogs and stuff for rednecks to do	3/24/2022 9:04 PM
97	Performance space(s) that can host/attract musicians and other performers, and not conflict with the theater schedule. Middle Earth was great. Gathering/Event space for meetup-type gatherings.	3/24/2022 8:53 PM
98	outdoor concerts	3/24/2022 8:39 PM
99	Not sure	3/24/2022 8:35 PM
100	Fall Festival	3/24/2022 7:25 PM
101	Not sure	3/24/2022 6:58 PM
102	Farmer market	3/24/2022 6:49 PM
103	More community events not revolving around kids. Summer concert series (all inclusive, not BLM focused solely) pot licks, ice cream socials, etc	3/24/2022 6:22 PM
104	Idk	3/24/2022 6:20 PM
105	Use of fairgrounds more	3/24/2022 6:17 PM
106	Concerts	3/24/2022 6:02 PM
107	flea market, craft fair	3/24/2022 5:47 PM
108	College courses	3/24/2022 5:45 PM
109	Ns	3/24/2022 5:43 PM
110	Open ATV trails to connect to other towns to develop more tourism. Example of what the Hatfield McCoy trail system has done for the economy of rural West Virginia	3/24/2022 5:38 PM
111	Xc skiing would be easy as would a beach area. Again. More trail connectivity.	3/24/2022 5:25 PM
112	Na	3/24/2022 5:23 PM
113	More local foods	3/24/2022 5:10 PM
114	Bring back big events like the Vermonster… those were actually good for the community.	3/24/2022 5:06 PM
115	Jobs	3/24/2022 4:49 PM
116	Not sire	3/24/2022 4:15 PM
117	Just answered this question above	3/24/2022 11:50 AM
118	like guidance on composting, gardening, do it yourself weatherization and repair/carpentry, energy efficiency, music like Middle Earth, interesting films.	3/23/2022 9:00 PM

Q24 What are the top three things you love about Bradford?

Answered: 126 Skipped: 5

#	RESPONSES	DATE
1	.	4/22/2022 8:55 PM
2	1. Not too crowded yet. 2. the town has enough selection so you can pretty much stay here.	4/22/2022 8:37 PM
3	my home, people, access to shopping	4/22/2022 8:26 PM
4	Waits River, access to I-91, great neighborly people	4/18/2022 6:12 PM
5	Existing businesses restaurants	4/18/2022 4:23 PM
6	Downtown. Old Church Theater. Restaurants.	4/18/2022 12:48 PM
7	1. Beautiful and rural 2. Access to stores like hannafords and farmway 3. Safety/low crime	4/18/2022 11:03 AM
8	1)That it doesn't have too many big corporate stores 2) the green spaces 3) it's focus on growing in an intentional way (this survey!)	4/18/2022 10:25 AM
9	Potential and what the town can be with the access from the Connecticut river and the highway	4/18/2022 10:13 AM
10	It's people, beauty, library	4/18/2022 9:49 AM
11	Size, conveniences (pharmacy and grocery), small businesses.	4/18/2022 9:26 AM
12	sidewalks - seriously love being able to take a 45 min walk most of the time on sidewalks ability to get involved in the community (though it's been slow - people from Bradford not as friendly as transplants) i love the topography - the river valley, view of mountains, great hikes in close range, more mild weather than places further up in elevation	4/18/2022 8:50 AM
13	Location, overall feel of the area	4/18/2022 8:48 AM
14	Elizabeth's park (skating, sledding, playground), Colatina Exit, views of White Mountains	4/18/2022 8:34 AM
15	safety, friendship, community	4/18/2022 8:16 AM
16	Downtown. Library. The Falls.	4/18/2022 8:15 AM
17	Small town feel - decent dining spots - beauty from River & rural views.	4/18/2022 8:11 AM
18	Low forest It has a large grocery store Bugbee landing	4/18/2022 6:40 AM
19	Sense of community, my center of gravity near my home in Corinth, the garden store and Farmway	4/18/2022 6:25 AM
20	Rural, quiet	4/18/2022 5:57 AM
21	Being able to walk downtown from my home The new sidewalks in some areas without uneven edges Knowing many of the people I meet in town	4/16/2022 2:53 PM
22	1. Scenic beauty; 2. Friendly neighbors; 3. Geographic location and climate	4/14/2022 10:11 PM
23	charming town, a couple good restaurants, nice, friendly people.	4/14/2022 12:02 PM
24	Shopping recycling walking	4/14/2022 9:49 AM
25	Location location location	4/14/2022 9:35 AM
26	The views of the River Valley; recognizing people by face & name in the PO & stores; people willing to help other people	4/14/2022 8:49 AM
27	Architecture, friendly people and landscape/surrounding environment.	4/14/2022 8:41 AM
28	Right now, only Tractor Supply. Really, it's always so dirty looking. Maybe you could help residents on art Five fix up their homes to make it look cleaner. So disheveled	4/14/2022 8:26 AM

29	Small, efficient, not too clean	4/14/2022 7:28 AM
30	Quiet, the town and shopping is all central so even those without transportation could walk if need be, it’s central to Lebanon, barre, and Littleton	4/14/2022 7:24 AM
31	Charm of old buildings Small businesses Scenery	4/14/2022 5:49 AM
32	the downtown, wrights mountain, close to interstate.	4/12/2022 9:02 AM
33	1. Small Town 2. Close to interstate 3. Has a lot of potential to be a great place to shop and dine without feeling like a big city if we had more options available.	4/12/2022 8:22 AM
34	The small downtown, the waits river, the quiet	4/11/2022 9:03 AM
35	Small, spots of excellent architecture, New England charm.	4/11/2022 7:02 AM
36	Town politics are pretty smooth, the water falls and old brick buildings and churches, ease of getting onto interstate	4/10/2022 2:20 PM
37	.	4/9/2022 3:32 PM
38	Old Church Theater Historic downtown Vintage shops	4/8/2022 9:13 PM
39	sense of community, the waterfall, the river	4/8/2022 1:19 PM
40	Downtown Rivers Potential	4/8/2022 10:29 AM
41	Historic (including the mill and waterfall), downtown walking, local businesses	4/8/2022 9:02 AM
42	The view, the river and walking the loop around town. Our down town strip on Main Street is beautiful. We basically have everything I need in a daily basis.	4/8/2022 7:56 AM
43	The river, the dam/waterfall, the friendly checkout people at Hannaford, and the fact you can get anything you need (at Napa, the pharmacy, etc - just need that hardware store back!) sorry that’s 4 things	4/8/2022 7:47 AM
44	Community, natural areas	4/8/2022 7:02 AM
45	Library Parks and rec History of the place	4/8/2022 6:36 AM
46	Location to interstate, community involvement, schools	4/8/2022 5:41 AM
47	Can't think of three.	4/7/2022 1:01 PM
48	Architecture of the downtown, easy access to a variety of services (gas, supermarket, etc), easy access to the highway	4/5/2022 8:36 PM
49	Community can-do attitude	4/5/2022 1:48 PM
50	The downtown and village area being tastefully developed/businesses in place, beautifying the town and making it more enjoyable to be outside (park near the Bradford Falls and old Mill, restoring and improving the library, Elizabeth’s Park, Lowe Forest walking trails etc). Having public transportation is also awesome to be able to hop on a bus in town and be able to go to Hanover, DHMC etc! A real grocery store and pharmacies are also great!	4/5/2022 8:16 AM
51	The river, the parks, the hiking trails	4/4/2022 4:03 PM
52	Location, the falls, the view as you enter town with the mill building the falls and the library.....not the bridge!	4/4/2022 10:29 AM
53	Small community with everything a family needs.	4/4/2022 9:10 AM
54	Community. Outdoors. The village.	4/4/2022 8:40 AM
55	the conservation commission, the police force, THE BLISS STORE	4/3/2022 6:32 PM
56	Restaurants..... small stores ..... golf course	4/3/2022 3:22 PM
57	historic downtown/village recreation on river and Wrights Mtn restaurants	4/3/2022 1:21 PM
58	Open land, historic and small downtown, rural character and town that is not trying to reinvent itself as a yuppie town trying to attract more flatlanders.	4/2/2022 9:11 PM

59	I think Main Street is great, and would love to see it be vibrant. I travel for my job all over the state and the town of Woodstock by far has the most active vibrant downtown. You never see a business vacancy on main street. Could be a great chitchat with town officials on how they've done it	4/2/2022 6:59 PM
60	The people, the downtown area, Wright's Mountain	4/2/2022 5:09 PM
61	The land and its biodiversity and the people who live here.	4/2/2022 3:07 PM
62	Small town, you know your neighbors, you can shop locally	4/2/2022 11:26 AM
63	*location as a hub *natural resources *lots of LOVEing people within the community	4/2/2022 11:09 AM
64	Small, quaint village that should be preserved as such.	4/2/2022 9:50 AM
65	It's beauty, good balance of rural and small town, the people	4/2/2022 9:30 AM
66	Local food music and trails	4/2/2022 9:29 AM
67	We can shop, recreate and see providers in one town	4/2/2022 9:22 AM
68	Wellness resources Local foods Easy access, only 1 traffic light.	4/2/2022 8:56 AM
69	Small town, rural character, natural assets (rivers, mountains)	4/2/2022 8:54 AM
70	Quaint downtown, river and natural scenery views, restaurants	4/2/2022 8:43 AM
71	It's rural location, easy access to hiking and paddling, and many of the music events or Midnight Madness, etc, when they occur.	4/2/2022 7:28 AM
72	Still a small town, diagonal parking, storekeepers know you	4/2/2022 5:11 AM
73	Every thing you need is right in town	4/2/2022 2:39 AM
74	It’s natural beauty, the historic homes, the new coffee shop in downtown	4/1/2022 10:16 PM
75	I enjoy being able to live in a small town. The walks are amazing. I love our little stores on main st	4/1/2022 10:08 PM
76	The space on Main Bradford elementary …. Chans?	4/1/2022 9:31 PM
77	Proximity to other locals	3/30/2022 11:10 PM
78	Bradford Falls, downtown golf course/Moosilauke view from Welch Loop, rural landscapes	3/30/2022 1:40 PM
79	My job, Wright's Mountain, the swing upstairs in Farmway Honorable mention to Vittles	3/28/2022 5:37 PM
80	1 - I like that moves are being made to make Town Government more accessible and noticeable to everyone. Such as moving Town Meeting to a Saturday and making Selectboard items more visible. 2 - I love our public green spaces and hope for more connectivity. 3 - I love the revitalization of businesses in downtown like Vittles and The Space on Main	3/28/2022 5:01 PM
81	The proximity to things, but still has great views and rural areas Shopping Affordability of housing compared to other towns near norwich	3/28/2022 3:51 PM
82	The view from Goshen road, the good teachers at Bradford Elementary, Monique and the other vibrant few that make this place more alive and interesting.	3/28/2022 1:14 PM
83	1. The people here are wonderful. 2. The town officials are helpful and friendly. 3. Access to hiking and kayaking.	3/28/2022 10:59 AM
84	Safe, quiet, caring folks	3/28/2022 9:31 AM
85	That it’s not a big town but not a small one. It’s just far enough away from my family where they can’t pop over for a few minutes It’s where my daughter is growing up	3/27/2022 11:12 PM
86	Geographic location Population density Town forest	3/27/2022 7:12 PM
87	the tight-knit community, the beautiful nature, and the affordability	3/27/2022 5:39 PM
88	That some people are lucky enough to live on paved roads and not have to worry every time it rains if their road will be passable. That our schools generally fall behind standards. That we	3/26/2022 10:40 PM

	have a dollar general and tractor supply so we can keep China afloat by bullying cheap shot made there.	
89	It’s very small, but it has most of the basics we need, and a few extras we really love having so close by: Tractor Supply comes in handy, FarmWay is really helpful to have, and Hannaford is wonderful. I love the dam downtown & the quaint downtown strip seems to be thriving, considering the size of the town. Everyone we meet has been so nice, too!	3/26/2022 10:25 PM
90	I love the community, I love the beauty of the rural aesthetic, and I love all the small business in town	3/26/2022 3:17 PM
91	Nothing	3/26/2022 1:23 PM
92	My family The Hub BES	3/26/2022 12:12 PM
93	One stop light	3/26/2022 10:30 AM
94	Small community, hiking close by, skiing close by	3/26/2022 5:46 AM
95	Community, access to resources, and ability to live in country	3/25/2022 9:11 PM
96	small size that's just big enough, diverse population, Library	3/25/2022 7:48 PM
97	Affordable homeownership. Access to trails. Small town	3/25/2022 6:11 PM
98	the smallness of the popultion, lack of change, the welcoming demeanor	3/25/2022 10:25 AM
99	My family lives here The pride the town has in the school The size	3/25/2022 9:25 AM
100	Beautiful location/setting. That there is a desire to make the town more desirable to younger families. The library	3/25/2022 8:37 AM
101	Scenery, cleanliness, safe	3/25/2022 12:13 AM
102	Our volunteers. This town wouldn't run without them. The richness of talent that we have in the region e.g. artists, professional. The Space On Main	3/24/2022 9:17 PM
103	Small town. Location	3/24/2022 9:06 PM
104	Grew up here Family here Close to Leb and Woodsville	3/24/2022 9:04 PM
105	The new life being brought to downtown by Space on Main and Vittles.	3/24/2022 8:53 PM
106	Main Street core, affordable rents, FarmWay	3/24/2022 8:39 PM
107	Lots of community engagement, small town with a surprising amount of amenities, the people	3/24/2022 8:35 PM
108	Rural, golf course, Elizabeth’s park	3/24/2022 7:25 PM
109	Elementary school Having a nice grocery store The view from my house	3/24/2022 6:58 PM
110	Everything that we need is right here	3/24/2022 6:49 PM
111	Nothing. Actually hate living here. Tired of no services outside downtown.	3/24/2022 6:22 PM
112	Library, the River, Elizabeth park	3/24/2022 6:20 PM
113	Location. Ease of getting to big box stores.	3/24/2022 6:17 PM
114	It’s a quaint little town with great prospects. Unfortunately there is nothing here right now and hope to move soon unless things change.	3/24/2022 6:02 PM
115	Location, Location and Location	3/24/2022 5:47 PM
116	The history and how we persevere it Variety of faith based services Bradford Academy Building as a town hub	3/24/2022 5:45 PM
117	People, Natural Beauty, great restaurants/shops	3/24/2022 5:43 PM
118	It isn't crowded and most houses have space around them. Welcoming and supportive neighbors.	3/24/2022 5:38 PM
119	Walkable downtown. Proximity to hiking, but you have to drive to get there. Elizabeth park	3/24/2022 5:25 PM

120	Rural feel with easy access to interstate and hannafords Farmway Wrights Mountain	3/24/2022 5:23 PM
121	small woods local	3/24/2022 5:10 PM
122	When it’s busy and thriving… OLD school midnight madness. Convenience of Tractor Supply, Farmway & Hannaford	3/24/2022 5:06 PM
123	Parks, schools, restaurants.	3/24/2022 4:49 PM
124	The public library is amazing, love the idea of a walkable downtown but it needs some love, love the river/river proximity	3/24/2022 4:15 PM
125	Small local businesses. Community. People	3/24/2022 11:50 AM
126	the rural small town with beautiful countryside, proximity to hanover/montpelier and not that far from amtrak.	3/23/2022 9:00 PM

Q25 What would make Bradford a better place for you and your family to live?

Answered: 131 Skipped: 0

#	RESPONSES	DATE
1	.	4/22/2022 8:55 PM
2	I like Bradford the way it is.	4/22/2022 8:37 PM
3	can't imagine	4/22/2022 8:26 PM
4	Fewer vacant, dilapidated houses on Main St.	4/18/2022 6:12 PM
5	Concentration of businesses in downtown area	4/18/2022 4:23 PM
6	Better promotion. Easier access to town information.	4/18/2022 12:48 PM
7	Better internet access in rural areas.	4/18/2022 11:03 AM
8	If there were guidelines put in place preventing certain types of development. A corporate size restriction to promote local business thriving and keeping our town beautiful and sustainable.	4/18/2022 10:25 AM
9	Having better sporting facilities, different/more shopping accessibility (allow stores to come in)	4/18/2022 10:13 AM
10	If the downtown area offered more concerts, restaurants, shopping	4/18/2022 9:49 AM
11	More outdoor recreation - more trails, investment in outdoor track at Oxbow, dog park, bigger recreational department especially sports opportunities for young children thru adulthood.	4/18/2022 9:26 AM
12	I would like more commuting options to Hanover, where I work (3 buses in the AM before 7 AM is very good, but not great); I'd like a coop for reasons already stated; better trail network so I can get off the roads for a long walk (I lived in Lambertville NJ where there was an amazing rail trail by the river); more arts and culture, more engagement with newcomers who are bringing good energy, and if there's money to convert space into an apartment, I would love to know about it!	4/18/2022 8:50 AM
13	Cut down on the amount of trash thrown along the roadsides	4/18/2022 8:48 AM
14	More outdoor dining options, more restaurants (especially Indian/ Thai/ ethnic), more festivals, a bike path so the kids have somewhere nice to ride, XC ski options, a craft beer store, movie theater, walking options to connect town spots.	4/18/2022 8:34 AM
15	more kids!	4/18/2022 8:16 AM
16	My husband has some vision challenges but he drives from Fairlee to Bradford for work. Making the biking safer between the two towns would make it a lot better for us. We appreciate having Hannaford and Pharmacy nearby. Would be nice if there was more local food and more bulk foods … a Food Co-op. The middle light with rte 5 gas station area is an ugly area - needs more trees, round about. Needs to be safer for pedestrians etc.	4/18/2022 8:15 AM
17	Housing !	4/18/2022 8:11 AM
18	Better schools	4/18/2022 6:40 AM
19	One good healthy restaurant with fresh greens and healthy food options. Vittles is great and we need more alternatives.	4/18/2022 6:25 AM
20	That it continues to stay the way it is.	4/18/2022 5:57 AM
21	Getting funding for the Old Church Theater and making it a venue for everyone to use Less litter/more pride	4/16/2022 2:53 PM
22	A healthier tax base and a more organized and active municipal government staff.	4/14/2022 10:11 PM
23	More activities and theater	4/14/2022 12:02 PM

24	I love Bradford, but don't live there now. If I were to relocate , Bradford would be at the top of my list!	4/14/2022 11:56 AM
25	Housing	4/14/2022 9:49 AM
26	Lower property taxes. A more vibrant night life	4/14/2022 9:35 AM
27	a public swimming pool that is close and easy to drive or walk to.	4/14/2022 8:49 AM
28	Walking/biking to school. No bus pickups from the village, route 25 or blue spruce areas.	4/14/2022 8:41 AM
29	Stores other than used stuff	4/14/2022 8:26 AM
30	Ability to do more shopping locally	4/14/2022 7:28 AM
31	More to do as a family that is not only done by the schools that is geared towards the needs of families not just small kids— more opportunities for teenagers to find belonging and space for themselves here to put roots down	4/14/2022 7:24 AM
32	Higher paying job opportunities	4/14/2022 5:49 AM
33	better internet and cell service, expand stagecoach schedule	4/12/2022 9:02 AM
34	More restaurants and more retail stores.	4/12/2022 8:22 AM
35	Replace the trash cans on main street. Maintain the town sidewalks better during winter.	4/12/2022 7:13 AM
36	It's pretty good.	4/11/2022 6:25 PM
37	Organic food, better internet and cell service, sidewalk/paths to go on walks around near the downtown. And along the waits river	4/11/2022 9:03 AM
38	A better High School.	4/11/2022 7:02 AM
39	I am currently look at moving back to NH due to tax situation with upcoming social security. It is expensive to live in Vt.	4/10/2022 2:20 PM
40	More activity and stop raising taxes	4/9/2022 3:32 PM
41	Working class affordable housing	4/9/2022 3:09 PM
42	More affordable housing	4/8/2022 9:13 PM
43	Beautification, internet and cell service	4/8/2022 1:19 PM
44	More commercial activity/vibrance	4/8/2022 10:29 AM
45	More places to gather and walk. Gardens. Beauty. Return of full businesses.	4/8/2022 9:02 AM
46	Peace and quiet	4/8/2022 7:56 AM
47	Train stop to commute to Dartmouth	4/8/2022 7:47 AM
48	N/A	4/8/2022 7:02 AM
49	Walking and biking paths or lanes would be great	4/8/2022 6:36 AM
50	More things to offer for family activities	4/8/2022 5:41 AM
51	A more inclusive and welcoming atmosphere. An attempt to make those who live outside of the downtown area feel as though they are part of the town. A less defensive Selectboard.	4/7/2022 1:01 PM
52	Food coop, more arts events, the elimination of Bear Ridge speedway	4/5/2022 8:36 PM
53	Safe bike/ski corridors adjacent to Upper Plain, Lower Plain, Creamery, Goshen to Low St John, and Creamery. Reliable hours for local businesses.	4/5/2022 1:48 PM
54	Live inside music venue/performances year-round (such as LOH), a movie theater and bowling alley, indoor skating rink (rollerblading and roller skating, more biking and walking paths that aren’t on or include having to be on the road/shoulders of the road	4/5/2022 8:16 AM
55	Better walking opportunities in the winter.	4/4/2022 4:03 PM
56	Improving downtown	4/4/2022 2:21 PM

57	More folks helping the town be more vibrant	4/4/2022 10:29 AM
58	More diversity, more businesses/restaurants.	4/4/2022 9:10 AM
59	A network of outdoor trails and bike paths.	4/4/2022 8:40 AM
60	what is being worked on by you	4/3/2022 6:32 PM
61	High paying jobs in town.... better internet in rural areas..... couple more small box stores ..... restuarants..... transport to larger shopping areas	4/3/2022 3:22 PM
62	more diversity in our population, fewer blighted homes in our town, trash cans in the downtown so I can throw away the trash I pick up every day, street sweeping and sidewalk maintenance that says, "we are proud of the beauty of our town".	4/3/2022 1:21 PM
63	Staying simple.	4/2/2022 9:11 PM
64	I think you've gotta have a better school....	4/2/2022 6:59 PM
65	More public transportation. Better internet. The transfer station should allow people to collect signatures (Cassella shouldn't be allowed to apply its new policy against this given that they are an important community space).	4/2/2022 5:09 PM
66	A more thriving agricultural economy and more small scale, community oriented businesses and work opportunities. More concentration energy efficiency and sustainability.	4/2/2022 3:07 PM
67	LOWER TAXES - less politics-more transparency-use the COVID money to update BA with heat, ventilation in case of Covid again - so meetings can be held in person, make sure our schools are up to date also because remote learning did harm our students learning ability --- it is not to be used for recreation purposes - it is Covid relief money !!	4/2/2022 11:26 AM
68	greater acceptance of diversity, greater investment-- of $$$ and time!!!-- in all the local artists who already live here	4/2/2022 11:09 AM
69	It's fine now.	4/2/2022 9:50 AM
70	downtown walking trails, bike lanes, food trucks	4/2/2022 9:30 AM
71	More trails	4/2/2022 9:29 AM
72	Fill up Main Street with good quality stores	4/2/2022 9:22 AM
73	And affordable fitness center with indoor pool that would work for all ages including those who need rehabilitation	4/2/2022 8:56 AM
74	Better housing for young people	4/2/2022 8:54 AM
75	High-speed internet is #1. We cannot live anywhere without it for our jobs!	4/2/2022 8:43 AM
76	Being able to afford building a house on the land we own. Also, a real health food store.	4/2/2022 7:28 AM
77	More retail stores with a variety of services so we dint have to buy on-line	4/2/2022 5:11 AM
78	Don’t know	4/2/2022 2:39 AM
79	I live in Newbury but having more/higher end restaurant options, craft beers/cocktails/pub like places… local and organic food is a priority for me.	4/1/2022 10:16 PM
80	A better sense of community	4/1/2022 10:08 PM
81	Oxbow high school is in serious need of a reboot of their athletics and some teachers. Restaurants are also really expensive. We have so much low income housing but things are so expensive here.	4/1/2022 9:31 PM
82	Oversight of my part of town by local law enforcement. I live in a part of town where people take advantage of little oversight and have to deal with illegal activity on my roads which makes it unsafe on a regular basis. My road is getting destroyed by those who don’t pay for it and tired the cop.	3/30/2022 11:10 PM
83	less ed money for admin/more for children	3/30/2022 1:40 PM
84	See #17, 18, 26 Also work on community solutions to issues of racism, homophobia,	3/28/2022 5:37 PM

	transphobia, and classism, starting conversations to bridge differences.	
85	Keep taxes low. Make the community more walk-able. Keep up the new Parks & Rec activities and expand them. Make access to Town Government EASY and clear - like quality Zoom for all Selectboard meetings, updating the Town website.	3/28/2022 5:01 PM
86	Better education, more extracurricular opportunities, continuing to upgrade buildings downtown. Upgrade internet options and cell phone service	3/28/2022 3:51 PM
87	More arts and art events. The schools do well with sports but there aren't enough other creative non sports outlets for young people.	3/28/2022 1:14 PM
88	A real community center concept. Not sure where it could be but there is nothing now.	3/28/2022 10:59 AM
89	Lower taxes!	3/28/2022 9:31 AM
90	Affordable childcare Taxes that accommodate middle class	3/27/2022 11:12 PM
91	Less raceway traffic	3/27/2022 7:12 PM
92	more investment into local schools	3/27/2022 5:39 PM
93	Paved roads. Excellent and dependable school systems. Meaningful, well paying job opportunities.	3/26/2022 10:40 PM
94	It's missing a Target-type department store. FarmWay is great but not always in our budget. Seems like there could be room for both types of dept stores, since they are probably different target markets. That said, more lodging options would also be really helpful for family visits. And a good city website to learn more about what's already here in town that we haven't found yet & an online way to know about upcoming events easier.	3/26/2022 10:25 PM
95	Personally, something that would be amazing for my family would be an indoor area for children to play during the winter. It gets so cold here, the kids don't like being outside for more than maybe 15 minutes. Some sort of children's center would be perfect. Trampolines and ball pits, a few arcade games, a sensory area for children with spectrum disorders, maybe a tiny rock climbing wall? And a small lounge area for parents/caregivers to socialize while the kids play. A parenting support group too maybe?	3/26/2022 3:17 PM
96	Lower taxes	3/26/2022 1:23 PM
97	A sense of community for all. More teen support.	3/26/2022 12:12 PM
98	Lower taxes	3/26/2022 10:30 AM
99	More inclusivity	3/26/2022 5:46 AM
100	Keep the cost of living from rising so we can enjoy country living with the resources we have	3/25/2022 9:11 PM
101	More repetition. Reduced, enforced speed limits. More public transit.	3/25/2022 7:48 PM
102	If we didn't ave to drive to west leb for restaurants and shopping	3/25/2022 6:11 PM
103	Lower taxes, better shopping options	3/25/2022 10:25 AM
104	More things to do	3/25/2022 9:25 AM
105	Larger tax base	3/25/2022 8:37 AM
106	More to do	3/25/2022 12:13 AM
107	A town government that appreciates and engages the public, encourages volunteerism, and practices transparency. A town government that has a vision, a strategic plan, and leverages state and federal funds.	3/24/2022 9:17 PM
108	Better internet access	3/24/2022 9:06 PM
109	Less low income housing. Lower taxes	3/24/2022 9:04 PM
110	To quote my 20-something daughter, "it's like people born in the '60s are trying to keep the town old fashioned, so when I think of Bradford, I think of mothballs. It's like visiting your grandparents, and Vittles is that one cool cousin and Space on Main is the aunt who 'gets it'."	3/24/2022 8:53 PM
111	better cell coverage	3/24/2022 8:39 PM

112	More slots at the Bradford Elementary preschool program	3/24/2022 8:35 PM
113	Lower taxes, improve school education	3/24/2022 7:25 PM
114	More things to do	3/24/2022 6:58 PM
115	Keep taxes low, clean up junkie yards	3/24/2022 6:49 PM
116	Zoning and law enforcement. We have by laws and laws for a reason. Tired of “we don’t have the authority to enforce zoning”, “it’s good enough”, “I can’t listen to this anymore”, and “there is not an officer on duty”. Our LE should be at every event, talking with our kids and walking out town. Zoning should be enforcing permits and zoning laws. Too many junk yards in town	3/24/2022 6:22 PM
117	Better waterfront	3/24/2022 6:20 PM
118	More for kids to do	3/24/2022 6:17 PM
119	Enforcement of permits. Both residential and businesses. Better law enforcement.	3/24/2022 6:02 PM
120	Lower property and school taxes.	3/24/2022 5:47 PM
121	Stop trying to make it something we are not. We are a small town in New England. Offer good paying jobs. Clean up rental properties, abandoned buildings, land that has trash laying around. Appreciate what we have and value it instead of always wanting more	3/24/2022 5:45 PM
122	High speed internet	3/24/2022 5:43 PM
123	Not having to travel 30+ minutes to get to other shopping and restaurants.	3/24/2022 5:38 PM
124	More neighbors.	3/24/2022 5:25 PM
125	Would be great if we could expand some of the bus options to Hanover/Leb.	3/24/2022 5:23 PM
126	more resources	3/24/2022 5:10 PM
127	Having a store open 24 hours for EMERGENCIES, if you need to make a dash at 2 am and now can’t get gas. Or ya know the problems when state trucks can’t gas up after hours? Get rid of Global- they’ve destroyed mini mart and all of its values that were important to the town.	3/24/2022 5:06 PM
128	Trash pick up, better, cell service.	3/24/2022 4:49 PM
129	More things to do. More trails/trail access, more river access. Swimming hole or a beach.	3/24/2022 4:15 PM
130	Lower school tax	3/24/2022 11:50 AM
131	community center, walking paths, public transportation that was connected to amtrak/dartmouth coach, hardware store open on sundays, carpenters.	3/23/2022 9:00 PM

Q26 What should Bradford focus on to attract new residents and improve its image?

Answered: 120 Skipped: 11

#	RESPONSES	DATE
1	.	4/22/2022 8:55 PM
2	We have enough people.	4/22/2022 8:37 PM
3	promote sale or get rid of troublesome areas	4/22/2022 8:26 PM
4	Getting rid of the unsightly, falling-down houses on Rt. 5. Give Vince P new shutters.	4/18/2022 6:12 PM
5	Develop downtown	4/18/2022 4:23 PM
6	Improve internet and cell access beyond downtown.	4/18/2022 12:48 PM
7	Better internet. Beautification as you come from the interstate.	4/18/2022 11:03 AM
8	First protect the image it has before it changes anymore!	4/18/2022 10:25 AM
9	You need to think of the future and the people who want to come to the town in order to make the town more appealing younger people means new ideas	4/18/2022 10:13 AM
10	Retail cannabis	4/18/2022 9:49 AM
11	Cleaning up Main Street - filling storefronts and incentives for homeowners to keep homes and front yards looking nice	4/18/2022 9:26 AM
12	i think low hanging fruit (though i realize it's labor and cost intensive) is to create the trail network along the river AND improve sidewalks. Then i'd focus on getting more high end retail/restaurants into town. A coop would make all the difference. I'd love to have extracurricular classes available for my young son (art, dance, sports, whatever). more town parties.	4/18/2022 8:50 AM
13	More professional growth opportunities	4/18/2022 8:48 AM
14	More housing- reigning in housing costs. High Speed Internet options. Inclusive activities.	4/18/2022 8:34 AM
15	fun at no cost	4/18/2022 8:16 AM
16	Tree City USA. Living wage. Green infrastructure.	4/18/2022 8:15 AM
17	Housing !	4/18/2022 8:11 AM
18	EDUCATIONAL OPPORTUNITY	4/18/2022 6:40 AM
19	Clean up and fill storefronts	4/18/2022 6:25 AM
20	Downtown main street is a bit sad looking at times. The storefronts are starting to fill. A bit more color perhaps with plants/flowers/trees?	4/16/2022 2:53 PM
21	Consider reincorporating the village; new bicycle and pedestrian infrastructure; expanded water, sewer and broadband cable/Internet.	4/14/2022 10:11 PM
22	improve the look of the tone- the buildings that need a fresh coat of paint, sidewalks that need repairing, add flower boxes (flower box contest?)	4/14/2022 12:02 PM
23	Housing	4/14/2022 9:49 AM
24	Really clean up and expand village area	4/14/2022 9:35 AM
25	Offer more affordable housing and employment opportunities; improve the Town's website to make it more interesting appealing and easy to navigate.	4/14/2022 8:49 AM
26	Classic store fronts, local food, healthy activities.	4/14/2022 8:41 AM

27	Retail, a diner, a mcDonalds where early mornings would encourage vets to grab coffee and sit around. (The best thing about a McDonalds is that!)	4/14/2022 8:26 AM
28	Outdoor recreation	4/14/2022 7:28 AM
29	Housing that is not JUST low income to raise tax revenues, but a mixed market housing would be ideal. Jobs— a thriving downtown community that doesn't close its doors by 6 pm— we need evening options and adult recreation options.	4/14/2022 7:24 AM
30	Develop in a way that brings high paying jobs to town.	4/14/2022 5:49 AM
31	fix bridge into village, have outdoor events in the village	4/12/2022 9:02 AM
32	Offer more restaurants and stores, without making it feel like a big city.	4/12/2022 8:22 AM
33	Showcase Bradford businesses in its advertising.	4/12/2022 7:13 AM
34	Safety, walkability, family activities, historic beautification.	4/11/2022 6:25 PM
35	Town office open more hours, better info about town, flowers or flags or something along route 5 and south main	4/11/2022 9:03 AM
36	Schools, dressing up the commercial section, mitigating eye sores like Mr. Benzie's boat that can't float.	4/11/2022 7:02 AM
37	Make sure school system is modern enough, taxes are reasonable, keep the town clean-looking	4/10/2022 2:20 PM
38	.	4/9/2022 3:32 PM
39	Affordable Housing, Well paying jobs	4/9/2022 3:09 PM
40	Affordable housing Encourage artisan shops/stores A more positive way for people to interact with town government	4/8/2022 9:13 PM
41	Cell and internet services, quality schools	4/8/2022 1:19 PM
42	More business	4/8/2022 10:29 AM
43	Beautify Main Street. Community events. Assist residents who need support.	4/8/2022 9:02 AM
44	Not growth of new big buildings. Pay our teachers better to help improve our schools.	4/8/2022 7:56 AM
45	Make what is in town already better. Don't just expand mediocrely	4/8/2022 7:47 AM
46	Affordable housing, more grocery options downtown, businesses, tear down old and falling apart buildings	4/8/2022 7:02 AM
47	The possibility of living/eating/playing locally	4/8/2022 6:36 AM
48	Recreational activities and affordable housing	4/8/2022 5:41 AM
49	Improving the relationship with existing residents will turn them into ambassadors for the town.	4/7/2022 1:01 PM
50	Internet service, supporting the Space on Main, Sprucing up the façades of downtown buildings	4/5/2022 8:36 PM
51	Job opportunities/employment, affordable housing, quality public school education, affordable and quality daycare options, increase tourism via places to stay in town	4/5/2022 8:16 AM
52	Town website needs overhaul. Oxbow needs better communication and a focus on diversity training.	4/4/2022 4:03 PM
53	Be more pedestrian friendly and have more nightlife.	4/4/2022 2:21 PM
54	Creative economy, interesting small business	4/4/2022 10:29 AM
55	Business support.	4/4/2022 9:10 AM
56	A better website. A positive welcoming message and tone. Even advertising.	4/4/2022 8:40 AM
57	all past items listed	4/3/2022 6:32 PM

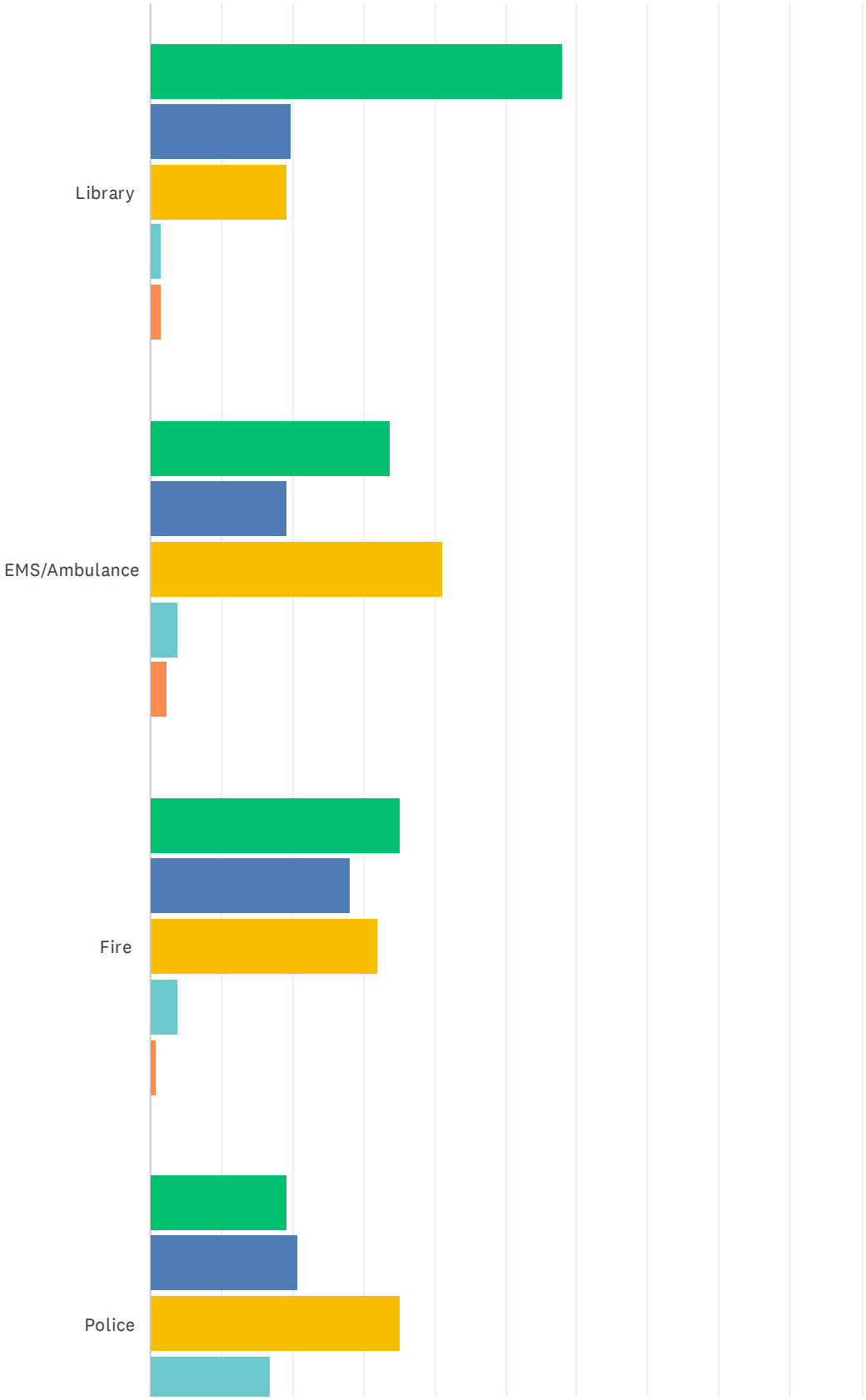
58	blighted properties dilapidated sidewalks/infrastructure infilling downtown businesses	4/3/2022 1:21 PM
59	See above.	4/2/2022 9:11 PM
60	Not sure what Bradford's image is. Affordable housing (that has been weatherized) is key.	4/2/2022 5:09 PM
61	See all above.	4/2/2022 3:07 PM
62	Healthier environment - better jobs - lower taxes - stop giving away our tax dollars to community clubs and places of business every year at town meeting votes	4/2/2022 11:26 AM
63	*Real* investment in the creative economy (as opposed to current lip service), substantial and multi-level focus to raise the bar on all inclusion factors (which will mean LOTS of pro-active self-education on the part of all our leaders)	4/2/2022 11:09 AM
64	Work at retaining the few businesses that remain. Why is there such a push to bring in "new" residents?	4/2/2022 9:50 AM
65	High speed internet	4/2/2022 9:29 AM
66	Advertise everything we have to offer.	4/2/2022 9:22 AM
67	?	4/2/2022 8:56 AM
68	All of the above	4/2/2022 8:54 AM
69	High-speed internet! More paths and trails and things for kids to do.	4/2/2022 8:43 AM
70	Improve the downtown, more walking paths, and more (and better) festivals	4/2/2022 7:28 AM
71	Access to the internet and technology, excellent schools; developing art and craft galleries to attract tourists	4/2/2022 5:11 AM
72	The local young adults can’t afford to live here with the houses selling so high	4/2/2022 2:39 AM
73	Fix the building on the north end of Main Street and invite an eclectic mix of retail offerings. Don’t allow any more sprawl or box stores. Make more bike and electric bike and car options.	4/1/2022 10:16 PM
74	Readily available resources	4/1/2022 10:08 PM
75	Indoor sports facilities. Affordable restaurants Things to do for teens other than Tucker Mountain	4/1/2022 9:31 PM
76	Clean up housing/houses. Improve infrastructure. Stop being a resting place for rehabilitation. Several of these are within proximity to schools which is concerning to families.	3/30/2022 11:10 PM
77	Turn Welch Loop into pedestrian-only zone, reorient Main Street so businesses/restaurants face that view	3/30/2022 1:40 PM
78	Provide services that people want and find useful, like public transportation, adult education opportunities. Keep housing affordable. Be bike-friendly. Work on environmental/sustainable, affordable solutions to town. management issues.	3/28/2022 5:37 PM
79	Don't dis-credit forms of media/communication just because they have not been used before.	3/28/2022 5:01 PM
80	Helping people to be able to afford home improvements, fixing up older buildings that need work, enhance trails/sidewalks	3/28/2022 3:51 PM
81	More public art and better use of the downtown retail spaces.	3/28/2022 1:14 PM
82	A good school system. We have neighbors who have sent their kids to neighboring school systems so they can get a good education. Everyone knows Bradford's schools are not very good, but nobody wants to say it.	3/28/2022 10:59 AM
83	It already has a good image as a nice town!	3/28/2022 9:31 AM
84	More community events, more cohesive sport/recreation department	3/27/2022 11:12 PM
85	Community solar	3/27/2022 7:12 PM
86	more investment in local schools	3/27/2022 5:39 PM
87	Take care of the existing population. Solve the problems already plaguing the town and it will	3/26/2022 10:40 PM

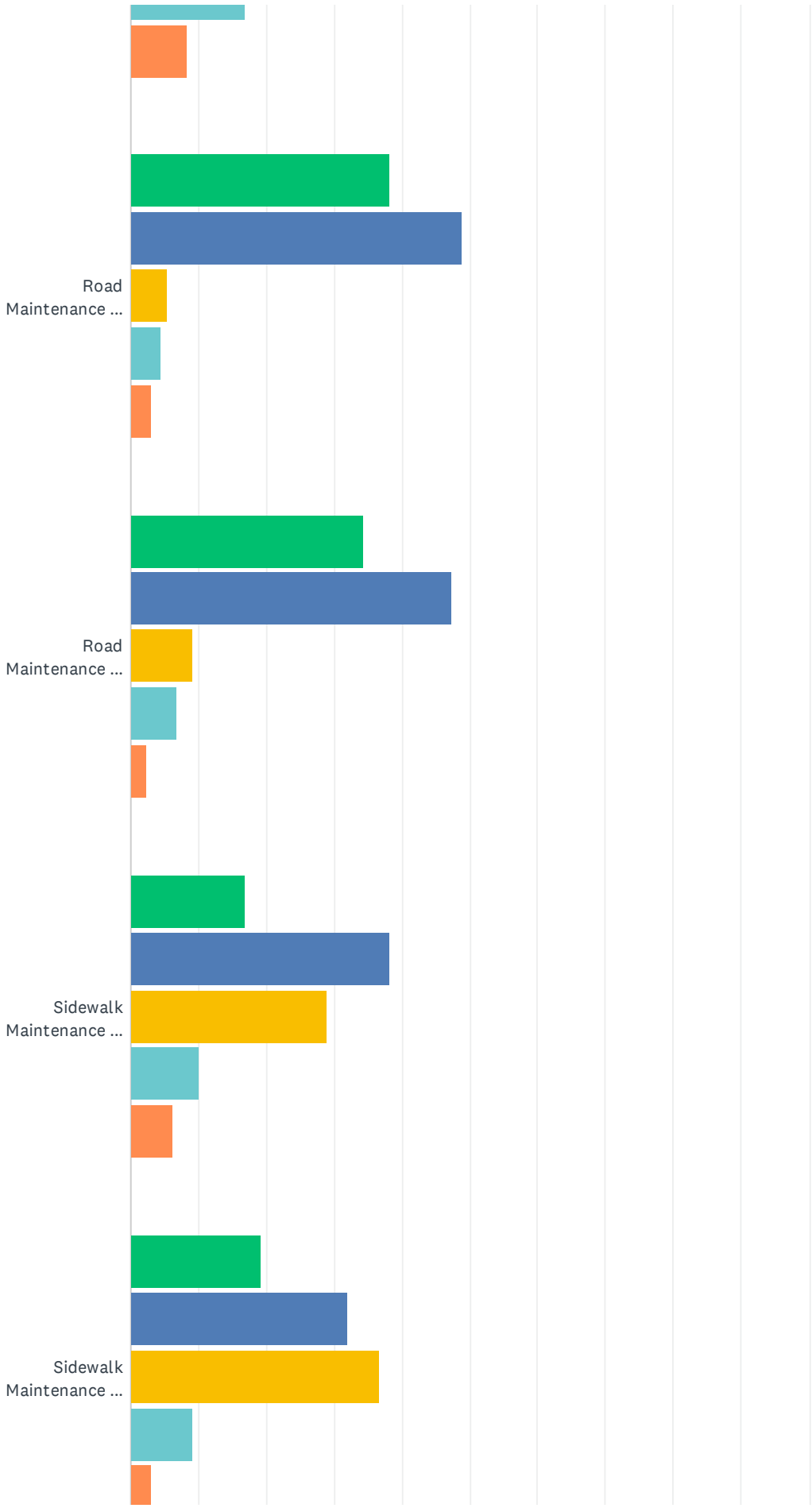
	become more attractive to outsiders and those of us already here.	
88	Bring the city into the modern digital age & create an online place for people to know more about events, local businesses & opportunities nearby. Bradford doesn't seem to have much of an online presence, even for a rural area.	3/26/2022 10:25 PM
89	Again, the most important thing to attract new people would be affordable housing that allows pets and children and isn't owned by slumlords. I see a lot of elderly people that work two jobs to support themselves because they can't make it on their pension alone. Animal lovers who have to give up their pets or move far out of town because of "no pets" rules. And so on ..	3/26/2022 3:17 PM
90	Lower taxes. Drug town image.	3/26/2022 1:23 PM
91	More activities for teens like a ropes course, and to support The Hub	3/26/2022 12:12 PM
92	Lower taxes and draw people that don't need low income housing. We need residents that grow community not drawing the bank account.	3/26/2022 10:30 AM
93	Cleaning up So Main Street, and Main Street, better schools	3/26/2022 5:46 AM
94	Keep the cost of living from rising in reasonable so we can enjoy country living with the resources we have	3/25/2022 9:11 PM
95	Just clean the streets, and shovel the sidewalks, make great schools, reduce speed limits.	3/25/2022 7:48 PM
96	lower taxes, if Bradford changes it will lose it's small town charm	3/25/2022 10:25 AM
97	Cater to the younger generation	3/25/2022 9:25 AM
98	Continue to change the mindset of conservative NE to a more open accepting mindset that appeals to millennials and gen xyz	3/25/2022 8:37 AM
99	Marketing and communication.	3/24/2022 9:17 PM
100	Low taxes so people can afford to live here	3/24/2022 9:04 PM
101	Internet, stuff to do (Activities currently available via Space on Main and Vittles are good examples), movies, places to hang out (both indoor and outdoor), more variety of restaurants, food delivery, more car-free access to the rest of the Upper Valley and Montpelier, Event/Conference space.	3/24/2022 8:53 PM
102	update/upgrade/improve downtown core	3/24/2022 8:39 PM
103	More things like The Space on Main. I think the more innovative the town is, the more it will be known for the cool/unexpected things it has to offer.	3/24/2022 8:35 PM
104	No opinion	3/24/2022 7:25 PM
105	Improve the High School	3/24/2022 6:58 PM
106	Clean up the outside of lower plains store fronts	3/24/2022 6:49 PM
107	See 25. Zoning and enforcement Our town looks like a run down junk yard	3/24/2022 6:22 PM
108	Waterfront	3/24/2022 6:20 PM
109	Town emblem/logo. Cute inn. Clean up Bradford Motel Dump. Drugs. Homelessness. Cleanliness of yards and houses	3/24/2022 6:17 PM
110	Clean up the residences and businesses that have trash all over and things stored where they shouldnt be.	3/24/2022 6:02 PM
111	Stop attacking town government and employees because they do not agree with your ideas of how things need to be run in town or what projects need to be done.	3/24/2022 5:47 PM
112	Affordable taxes and water/sewer rates.	3/24/2022 5:45 PM
113	Publicity and town government transparency	3/24/2022 5:38 PM
114	Fixing up abandoned properties. Trail access.	3/24/2022 5:25 PM
115	Median income housing-Family homes on 1-5 acres. Making sure we have viable and attractive businesses on main street. There are too many antique stores or stores that don't	3/24/2022 5:23 PM

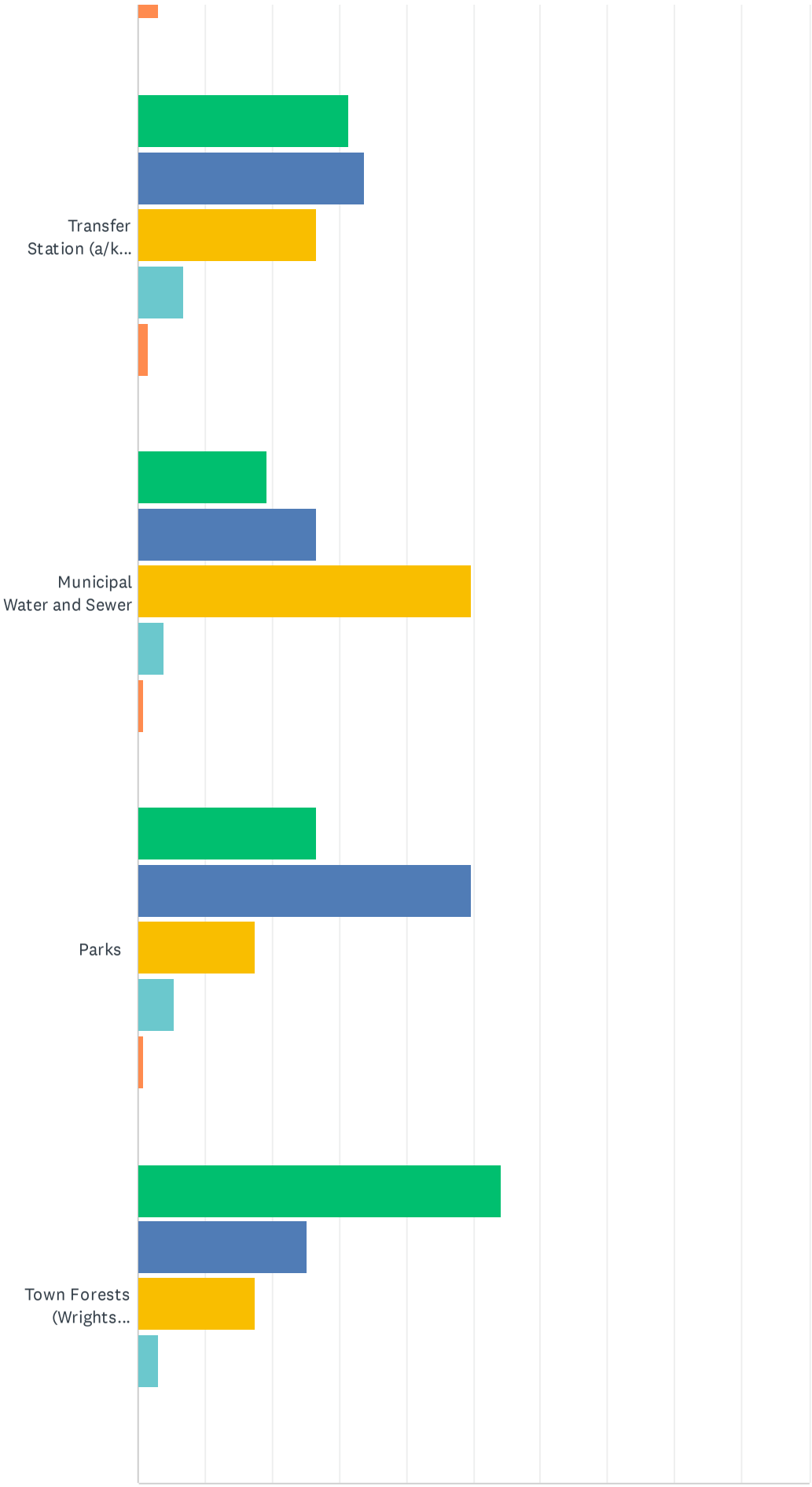
	have anything. Also we need better internet yesterday	
116	be more accepting of newcomers. advertise the job market more	3/24/2022 5:10 PM
117	Be involved with the kiddos sports more. Invest in our futures…	3/24/2022 5:06 PM
118	I like Bradford's image.	3/24/2022 4:49 PM
119	Lower taxes. It’s an expensive town to live in.	3/24/2022 11:50 AM
120	improve communication, encourage and support community participation in the activities of the town,	3/23/2022 9:00 PM

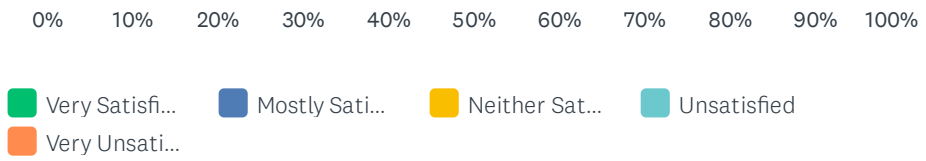
Q27 How satisfied are you with the following

Answered: 131 Skipped: 0




Road Maintenance ...
Road Maintenance ...
Sidewalk Maintenance ...
Sidewalk Maintenance ...

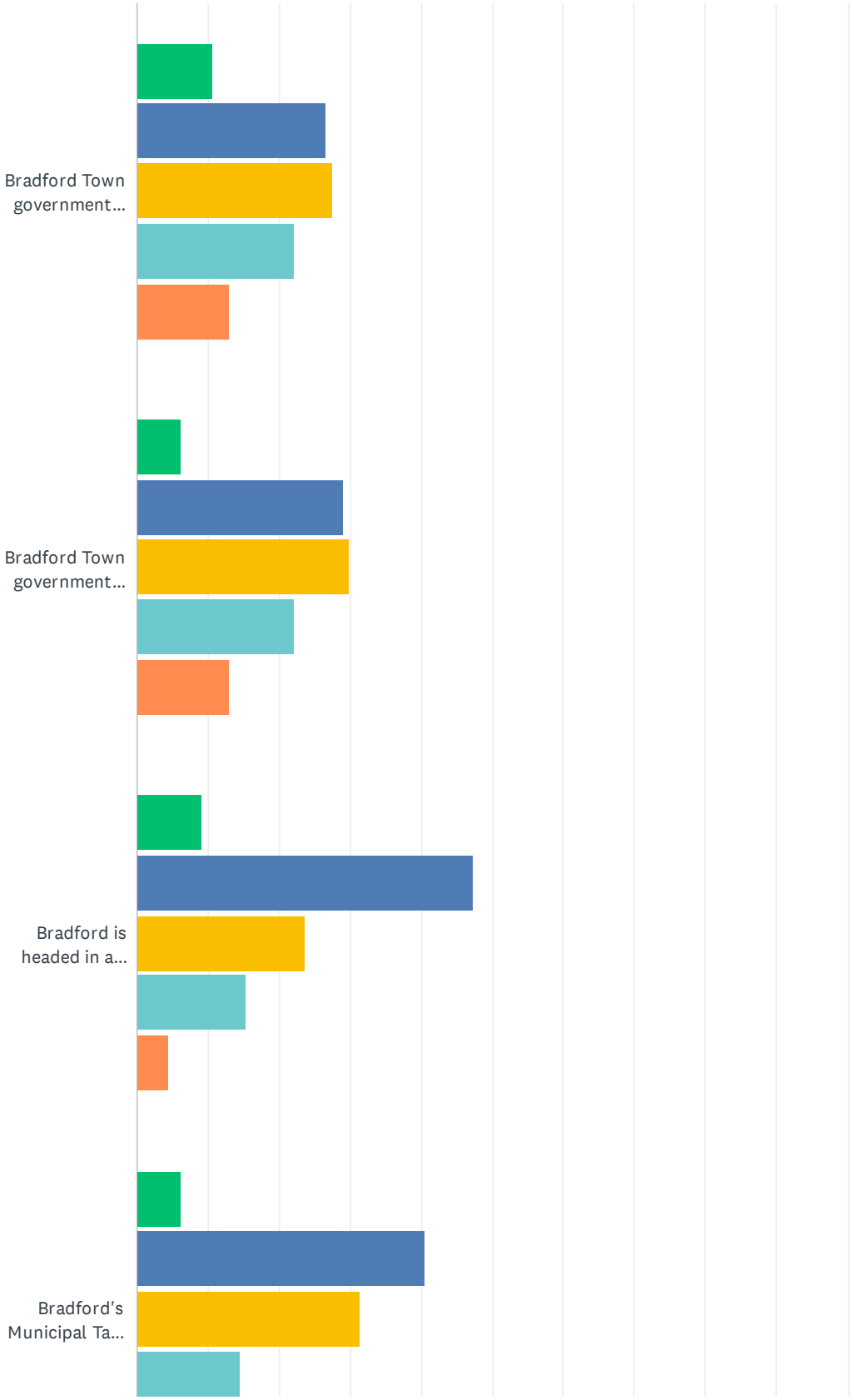

Transfer Station (a/k...
Municipal Water and Sewer
Parks
Town Forests (Wrights...

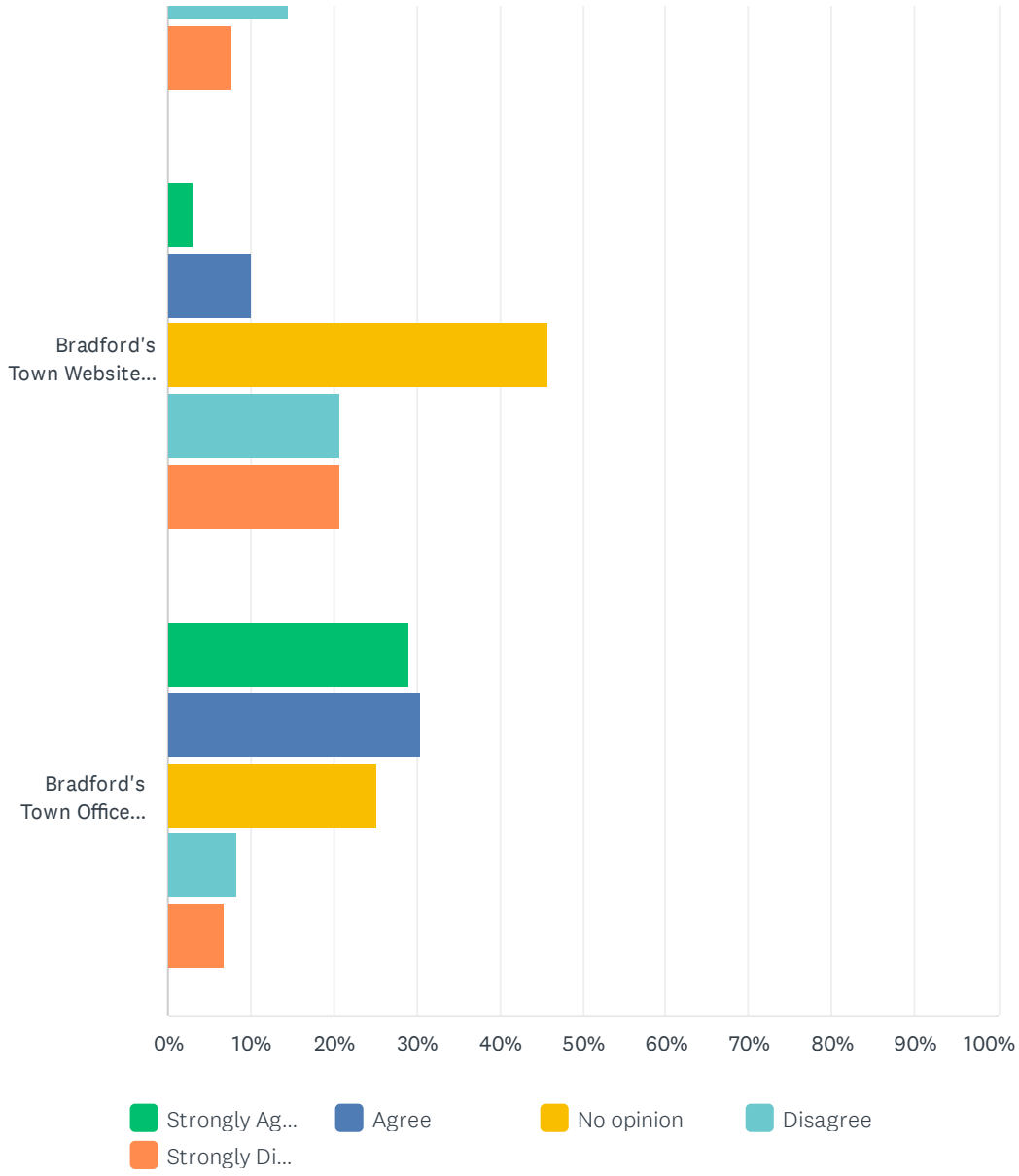


	VERY SATISFIED	MOSTLY SATISFIED	NEITHER SATISFIED OR UNSATISFIED	UNSATISFIED	VERY UNSATISFIED	TOTAL
Library	58.02% 76	19.85% 26	19.08% 25	1.53% 2	1.53% 2	131
EMS/Ambulance	33.59% 44	19.08% 25	41.22% 54	3.82% 5	2.29% 3	131
Fire	35.11% 46	28.24% 37	32.06% 42	3.82% 5	0.76% 1	131
Police	19.08% 25	20.61% 27	35.11% 46	16.79% 22	8.40% 11	131
Road Maintenance in the Winter	38.17% 50	48.85% 64	5.34% 7	4.58% 6	3.05% 4	131
Road Maintenance in the rest of the year	34.35% 45	47.33% 62	9.16% 12	6.87% 9	2.29% 3	131
Sidewalk Maintenance in the Winter	16.79% 22	38.17% 50	29.01% 38	9.92% 13	6.11% 8	131
Sidewalk Maintenance in the rest of the year	19.08% 25	32.06% 42	36.64% 48	9.16% 12	3.05% 4	131
Transfer Station (a/k/a Dump)	31.30% 41	33.59% 44	26.72% 35	6.87% 9	1.53% 2	131
Municipal Water and Sewer	19.08% 25	26.72% 35	49.62% 65	3.82% 5	0.76% 1	131
Parks	26.72% 35	49.62% 65	17.56% 23	5.34% 7	0.76% 1	131
Town Forests (Wrights Mountain/Devils Den)	54.20% 71	25.19% 33	17.56% 23	3.05% 4	0.00% 0	131

Q28 Do you agree, disagree or have no opinion on the following:

Answered: 131 Skipped: 0





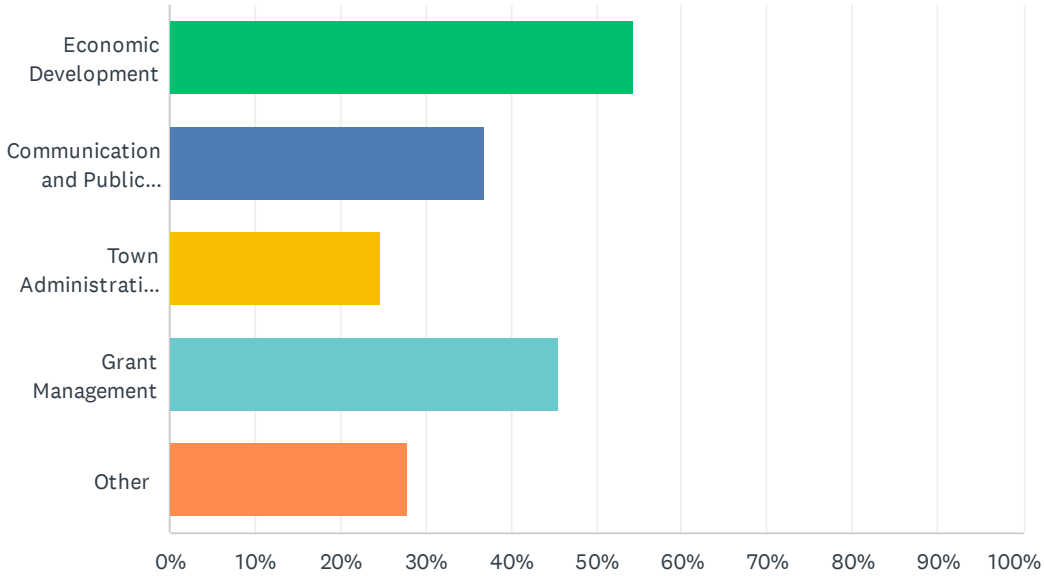
	STRONGLY AGREE	AGREE	NO OPINION	DISAGREE	STRONGLY DISAGREE	TOTAL
Bradford Town government encourages community participation	10.69% 14	26.72% 35	27.48% 36	22.14% 29	12.98% 17	131
Bradford Town government enables me to be well-informed	6.11% 8	29.01% 38	29.77% 39	22.14% 29	12.98% 17	131
Bradford is headed in a positive direction	9.16% 12	47.33% 62	23.66% 31	15.27% 20	4.58% 6	131
Bradford's Municipal Taxes are reasonable	6.11% 8	40.46% 53	31.30% 41	14.50% 19	7.63% 10	131
Bradford's Town Website provides up-to-date information that allows me to stay informed	3.05% 4	9.92% 13	45.80% 60	20.61% 27	20.61% 27	131
Bradford's Town Office employees are helpful and accessible when I need assistance	29.01% 38	30.53% 40	25.19% 33	8.40% 11	6.87% 9	131

#	COMMENTS	DATE

1	I rarely get replies back from Selectboard admin. And when I do they are missing information. The Selectboard should have reached out to the residents that were most effected by the current parking change in the village. Although the treasurer seems very timely about getting bills paid, she is very negative and unprofessional about certain people in the community. She seems to have a bit too much power over the selectboard's actions. Often the selectboard won't go against what treasurer has downloaded to Selectboard's administrator. thereby rendering the selectboard powerless. They should have improved the camera and microphone situation 2 years ago when Monique's petition 1st asked for it. Dan Perry's hurt feelings that a petition was done has hindered the community from hearing the zoomed selectboard meetings for 2 years now.	4/18/2022 6:12 PM
2	Police: frustrating to hear the two officers have very similar schedules. Would be nice to have schedules only slightly overlap so they are able to communicate with each other, but the town has coverage for greater percentage of the day/week.	4/18/2022 9:26 AM
3	I'd like to see more resources for the municipal taxes I pay. I know they needed to fill in a hole...but seriously...! Does not seem like a great use of my money. A trail network on the other hand is something I would be proud of.	4/18/2022 8:50 AM
4	The website is insultingly non-functional; it is a major source of embarrassment for our community and entirely inexcusable.	4/14/2022 10:11 PM
5	Feels very old boys/clicky	4/11/2022 9:03 AM
6	I have heard feedback that the town office employees are not kind to the folks working at the food pantry. They made a person bringing food there cry. That is unacceptable for people accessing a service that is already heavy with stigma.	4/4/2022 9:10 AM
7	Clerk is accessible, Selectboard/admin is not	4/3/2022 1:21 PM
8	Town offices hours of service are not always good for working people	4/2/2022 11:26 AM
9	I don't live in Bradford (because high-speed internet was not available when we were house hunting a few years ago).	4/2/2022 8:43 AM
10	Due to my job I am unable to access the town office when it is open. This has been the case for over 20 years. Might be time to rethink this accessibility as there are many professionals in town who have similar issues due to their work schedules.	3/30/2022 11:10 PM
11	I don't live in town, so a lot of these don't apply to me. Same with the above- I don't use the police, fire department, transfer station, or EMTs	3/28/2022 5:37 PM
12	This section is very important. This is where the town is lacking most.	3/26/2022 1:23 PM
13	Town employees are excellent.	3/25/2022 7:48 PM

Q29 Which of the following would you support for the town even if it meant an increase in property taxes? Check all that apply.

Answered: 125 Skipped: 6



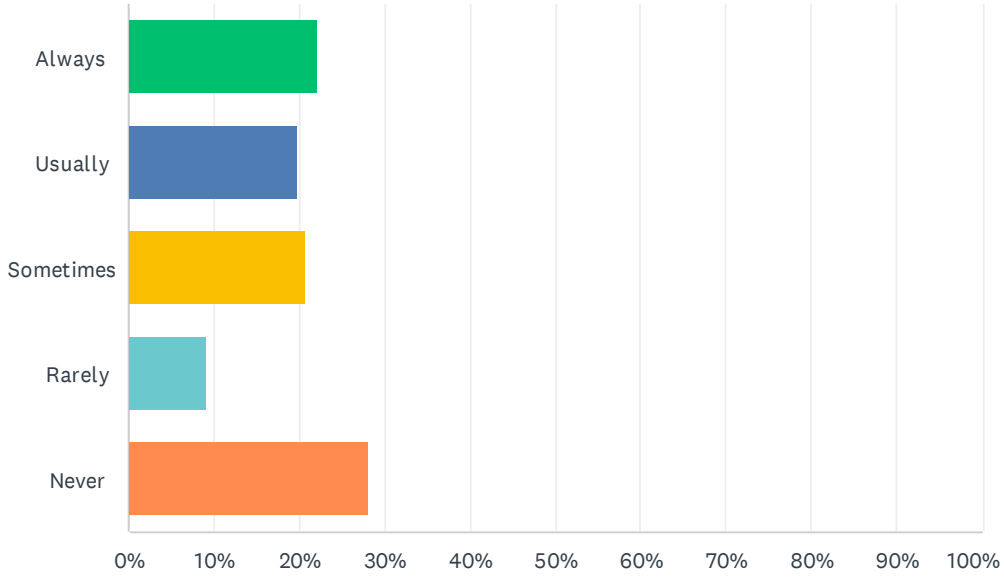
ANSWER CHOICES	RESPONSES	
Economic Development	54.40%	68
Communication and Public Relations	36.80%	46
Town Administration and Financial Management	24.80%	31
Grant Management	45.60%	57
Other	28.00%	35
Total Respondents: 125		

#	COMMENT	DATE
1	no increase	4/22/2022 8:55 PM
2	none	4/22/2022 8:37 PM
3	don't know enough to answer	4/22/2022 8:26 PM
4	Not sure because the approach matters	4/18/2022 8:15 AM
5	None	4/18/2022 5:57 AM
6	prefer federal $//grants vs. taxes, but not always possible	4/16/2022 2:53 PM
7	Grant management would fall under economic development.	4/14/2022 10:11 PM
8	Get some of that structure money from Biden. Your residents can’t afford higher taxes for anything!	4/14/2022 8:26 AM
9	None of these	4/14/2022 7:28 AM

10	Improved cell service in commercial area	4/11/2022 9:03 AM
11	I am a Newbury resident with Bradford phone and address so I don't pay these fees. However, Economic Development within the scale already discussed makes sense.	4/11/2022 7:02 AM
12	I am not a resident, so should not answer this,	4/8/2022 1:19 PM
13	More school funding. Better sidewalks.	4/4/2022 8:40 AM
14	NONE..... these are able to be self funded. If not they are not sustainable anyway	4/3/2022 6:32 PM
15	Support for small farmers.	4/2/2022 9:11 PM
16	This question seems redundant and it isn't clear what "grant management" or "communications and public relations" is or isn't intended to accomplish	4/2/2022 5:09 PM
17	We need to lower our taxes	4/2/2022 11:26 AM
18	Why does government always use the argument that tax increases are a "good thing"? Again, use the NH model.	4/2/2022 9:50 AM
19	I don't live in Bradford.	4/2/2022 8:43 AM
20	As a non-resident, I'm not sure.	3/28/2022 5:37 PM
21	Education	3/28/2022 3:51 PM
22	Community development	3/28/2022 10:59 AM
23	I would not support higher taxes. They are too high already.	3/28/2022 9:31 AM
24	Pave the dirt roads. Especially the ones that are main roadways with many homes.	3/26/2022 10:40 PM
25	Absolutely none of these!	3/26/2022 1:23 PM
26	None	3/26/2022 12:12 PM
27	Taxes already to high	3/26/2022 10:30 AM
28	It would depend what each category actually meant	3/25/2022 9:11 PM
29	See previous answers	3/25/2022 7:48 PM
30	none of the above	3/25/2022 10:25 AM
31	None. Taxes are high enough!	3/25/2022 9:25 AM
32	Diversity, Equity, Inclusion, Social Justice, and Accessibility Training for all staff, elected officials, and appointed individuals.	3/24/2022 9:17 PM
33	None	3/24/2022 9:04 PM
34	Not living in town, I can't comment on this. For the questions below, I'm using our time living in the town:	3/24/2022 8:53 PM
35	None	3/24/2022 7:25 PM
36	Dog park	3/24/2022 6:49 PM
37	None	3/24/2022 6:20 PM
38	None	3/24/2022 6:17 PM
39	We pay too much taxes as it is for no services.	3/24/2022 6:02 PM
40	None, All of the above, except Economic Development are the apparent agenda of certain individuals that have been attacking the town government and have nothing to do with town planning. You should be ashamed of your selves to include this crap in what I thought was a legitimate survey!!!	3/24/2022 5:47 PM
41	Do not increase spending. Be more effective with what we already have	3/24/2022 5:45 PM
42	Trail improvement	3/24/2022 5:25 PM
43	If businesses are coming in then taxes should decrease for residents.	3/24/2022 11:50 AM

Q30 How often have you attended the Annual Town Meeting in March?

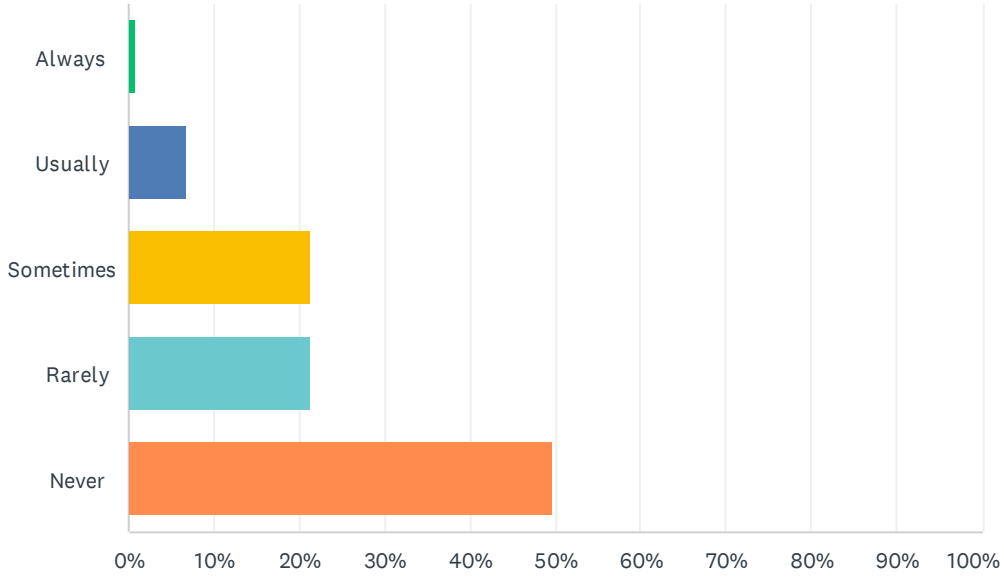
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Always	22.14%	29
Usually	19.85%	26
Sometimes	20.61%	27
Rarely	9.16%	12
Never	28.24%	37
TOTAL		131

Q31 In the past year, how often have you attended Selectboard meetings?

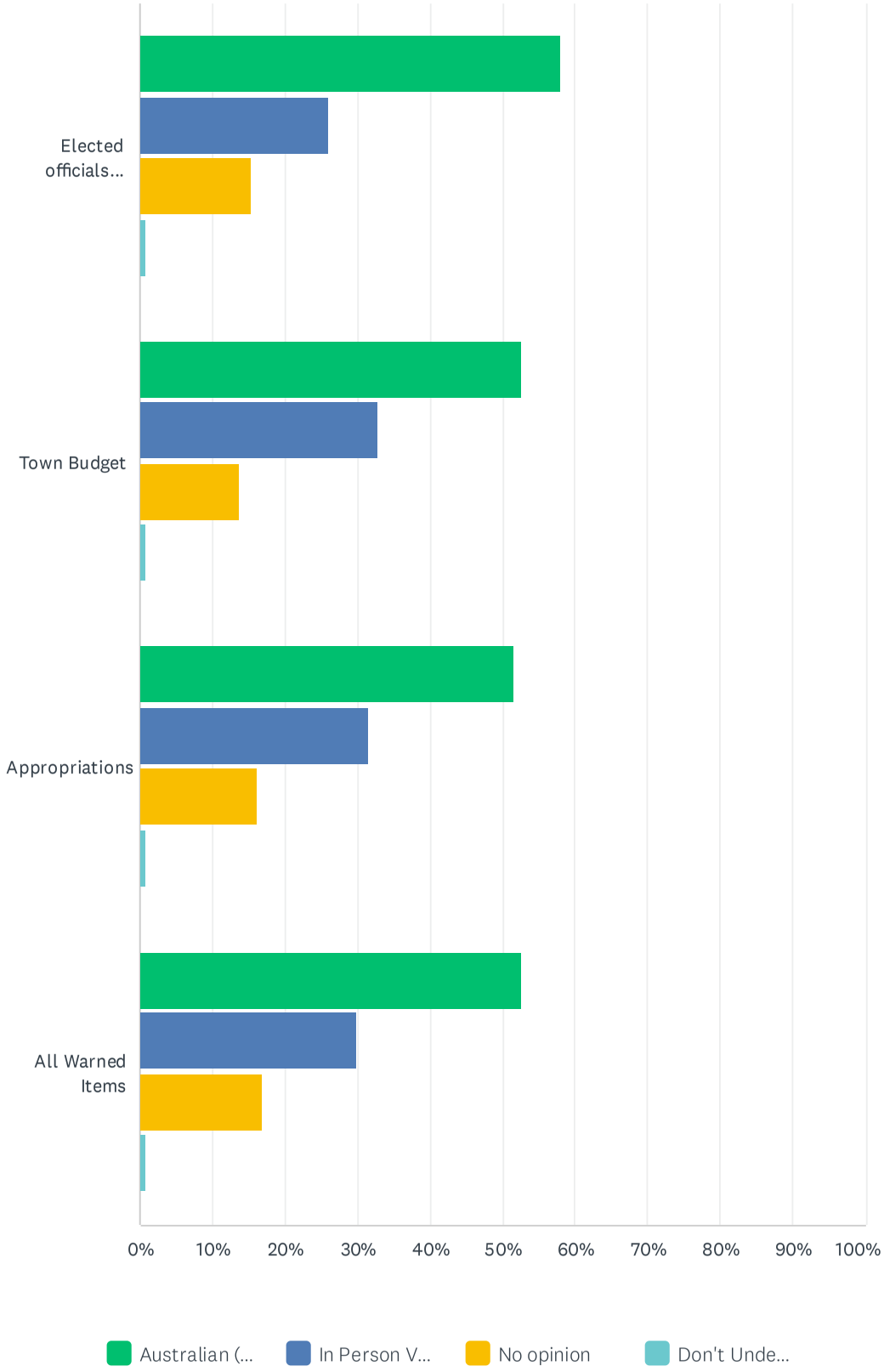
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Always	0.76%	1
Usually	6.87%	9
Sometimes	21.37%	28
Rarely	21.37%	28
Never	49.62%	65
TOTAL		131

Q32 Due to COVID. the town budget, appropriations, elected officials and other warned items were voted on by paper ballot (Australian ballot). Previously, these were voted on in-person by those who attended the annual meeting. What voting method would you prefer in the future?

Answered: 131 Skipped: 0


Elected officials...
Town Budget
Appropriations
All Warned Items
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Australian (...
In Person V...
No opinion
Don't Unde...

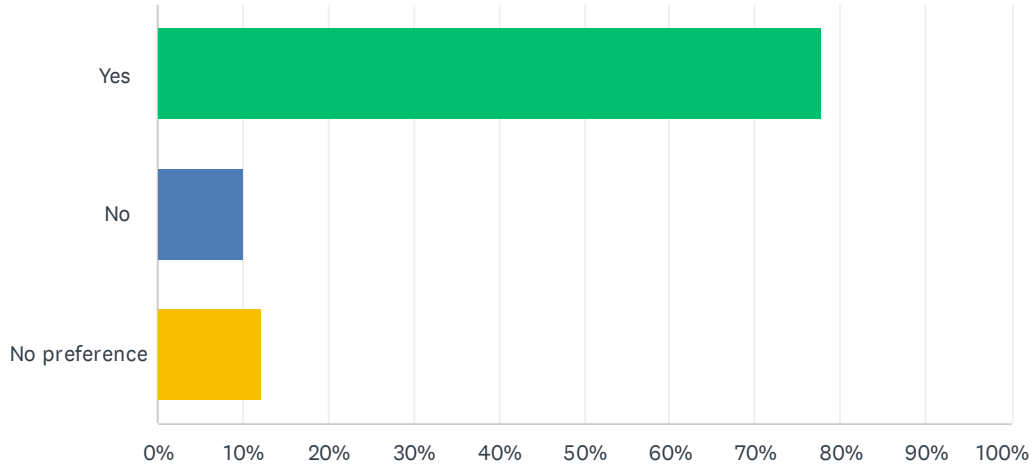
	AUSTRALIAN (PAPER) BALLOTS	IN PERSON VOTING AT THE ANNUAL MEETING	NO OPINION	DON'T UNDERSTAND THE DIFFERENCE	TOTAL	WEIGHTED AVERAGE
Elected officials (Selectboard, Town Clerk, etc.)	58.02% 76	25.95% 34	15.27% 20	0.76% 1	131	1.75
Town Budget	52.67% 69	32.82% 43	13.74% 18	0.76% 1	131	1.77
Appropriations	51.54% 67	31.54% 41	16.15% 21	0.77% 1	130	1.83
All Warned Items	52.67% 69	29.77% 39	16.79% 22	0.76% 1	131	1.83

#	COMMENT	DATE
1	send to every taxpayer. then no one can say they didn't know and those working can vote	4/22/2022 8:55 PM
2	I like town meeting, but balloting is easier. I do miss the camaraderie though and sense of shared spirit. So I would vote for either in person (IF ON THE WEEKEND) or the ballots.	4/18/2022 8:50 AM
3	As much as I enjoy the democratic process of town meeting, Australian (paper) ballots help prevent instances where 1-2 naysayers might swaying public opinion away from needed programs and services.	4/14/2022 10:11 PM
4	It is essential we bring town meeting back the way it was.	4/12/2022 7:13 AM
5	Mail ballots to ALL voters	4/11/2022 9:03 AM
6	I own land in Bradford but can't vote here. I do think Australian ballot and absentee ballots are fair because many people work out of town. It seems only people who get paid day off go to meetings during the week.	4/10/2022 2:20 PM
7	not a resident	4/8/2022 1:19 PM
8	I don’t live in Bradford. I’m on the town line in West Fairlee	4/5/2022 8:36 PM
9	My work does not give time to leave for voting.	4/4/2022 9:10 AM
10	get people involved, those involved care	4/3/2022 6:32 PM
11	I think it's so very important to have in person Townmeeting to answer questions, but when it comes to voting I think people tend to vote differently if they're being observed	4/2/2022 6:59 PM
12	prefer in person meetings if there were accommodations for people who can't attend. Meetings should be held when working people can participate	4/2/2022 5:09 PM
13	Hours of voting should be 7 a.m. to 7 p.m. -- always paper voting	4/2/2022 11:26 AM
14	make the town meeting accesible to working people by holding it on a Sat. or week night.	4/2/2022 9:30 AM
15	I have always had to work on town meeting day	4/2/2022 9:22 AM
16	I don't live in Bradford.	4/2/2022 8:43 AM
17	Whatever the people of Bradford want.	3/28/2022 5:37 PM
18	As an introvert I will ALWAYS be a fan of paper ballots	3/26/2022 3:17 PM
19	Australian ballots need to be mailed to every registered voter. This method is sure to get to the voter. The communication about voting is atrocious.	3/26/2022 1:23 PM
20	Automatically sent to all registered voters	3/26/2022 10:30 AM
21	We need an informed meeting on all issues	3/26/2022 5:46 AM
22	Do not end Town Meeting!	3/25/2022 7:48 PM
23	in person is the truest form of democracy	3/25/2022 10:25 AM

24	Have the option of paper ballots for those who can’t attend town meeting or prefer paper ballot voting	3/25/2022 8:37 AM
25	We should encourage campaigning, forums, and discussion of elected positions.	3/24/2022 9:17 PM
26	In all instances, I think hybrid is best - allow those who have the option to attend in person to vote that way, but allow those who can't to vote, too. Requiring in-person voting of everyone disenfranchises anyone who can't get time off from work. Given the # of people in the area who work in NH, not everyone can get the day off.	3/24/2022 8:53 PM
27	Moved here during COVID, so I haven’t had the opportunity to attend an in-person town meeting	3/24/2022 8:35 PM
28	I think the townspeople should be more informed via a website, email, notifications in the mail prior to any elections. I beverage people who can get to town should vote in person. I don't trust mail in ballots. Id's should be provided in order to vote	3/24/2022 6:17 PM
29	Ballots are fine as long as it’s fair unlike the school budget where they sent ballots out to everyone and it didn’t pass and then they only sent ballots out to those who requested them and was highly publicized and of course it passed. Very unfair	3/24/2022 6:02 PM

Q33 Do you think the Town of Bradford should provide remote video access (on Zoom) for all public meetings?

Answered: 131 Skipped: 0



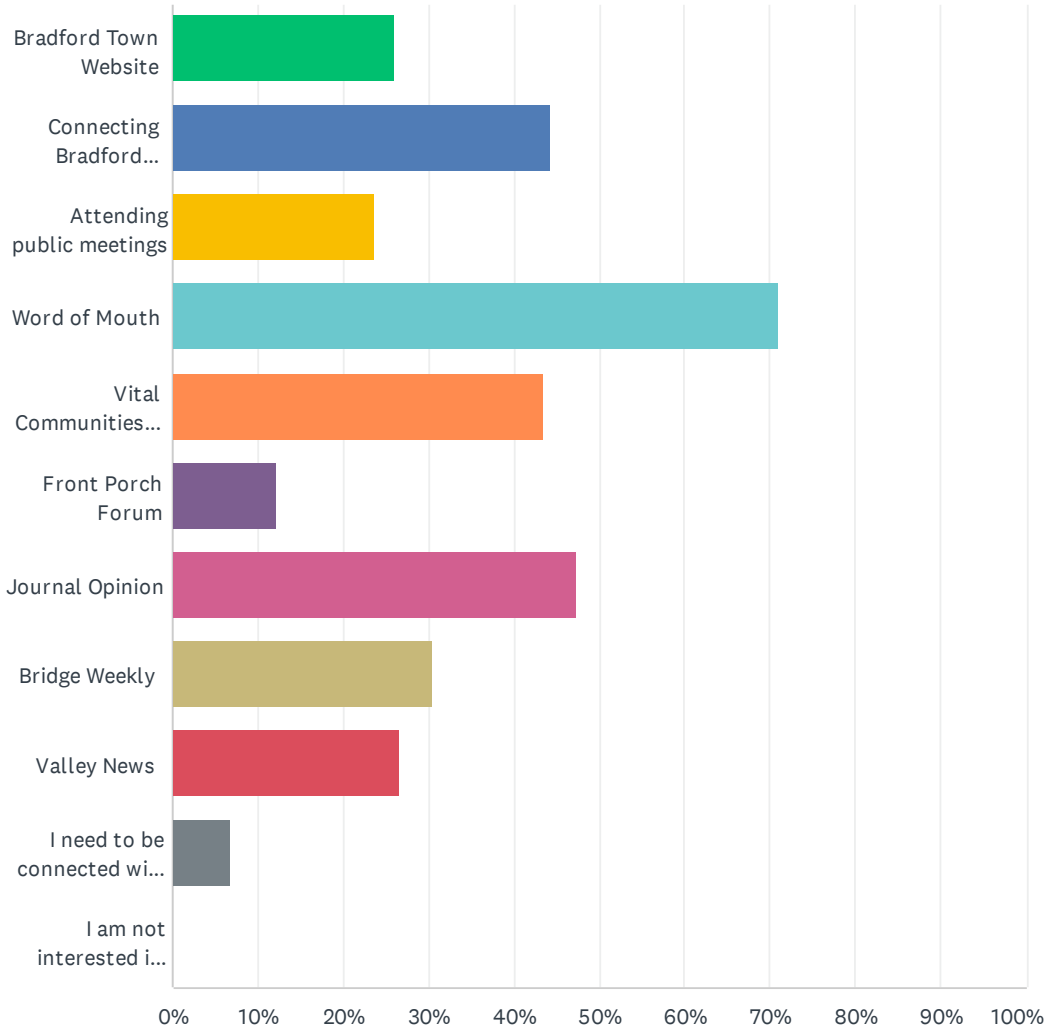
ANSWER CHOICES	RESPONSES	
Yes	77.86%	102
No	9.92%	13
No preference	12.21%	16
TOTAL		131

#	COMMENT	DATE
1	I don't have a computer or skills	4/22/2022 8:26 PM
2	I think it would be good but possibly a too much of a burden.	4/12/2022 7:13 AM
3	I would like to get more involved and zoom would help. I also think it would make those in charge more accountable.	4/8/2022 7:56 AM
4	Yes!!!	4/4/2022 8:40 AM
5	ALWAYS, and listed on the Bradford list	4/3/2022 6:32 PM
6	Absolutely	4/3/2022 1:21 PM
7	If you have an issue and feel passionate about it, you should attend a meeting	4/2/2022 6:59 PM
8	Not unless the quality could be greatly improved without enormous expense	4/2/2022 5:09 PM
9	an extra expense and prefer to see committee members in person	4/2/2022 11:26 AM
10	10000000000%	3/28/2022 5:01 PM
11	A waste.	3/26/2022 1:23 PM
12	If you don't live in town internet is poor at best. Older people are disinfranc by having to keep up yo date with new systems	3/26/2022 10:30 AM
13	It shouldn't even be a question in 2022. Access isn't enough if the access is inadequate. The town needs to actively invest in decent technology.	3/24/2022 9:17 PM

14	giving people the zoom option will result in more participation	3/24/2022 8:39 PM
15	As long as it’s not cost prohibitive	3/24/2022 8:35 PM
16	and just having a laptop on zoom in the room is not providing video access when you can't hear or see what's going on.	3/23/2022 9:00 PM

Q34 Where do you typically get your information about the town? Check all that apply.

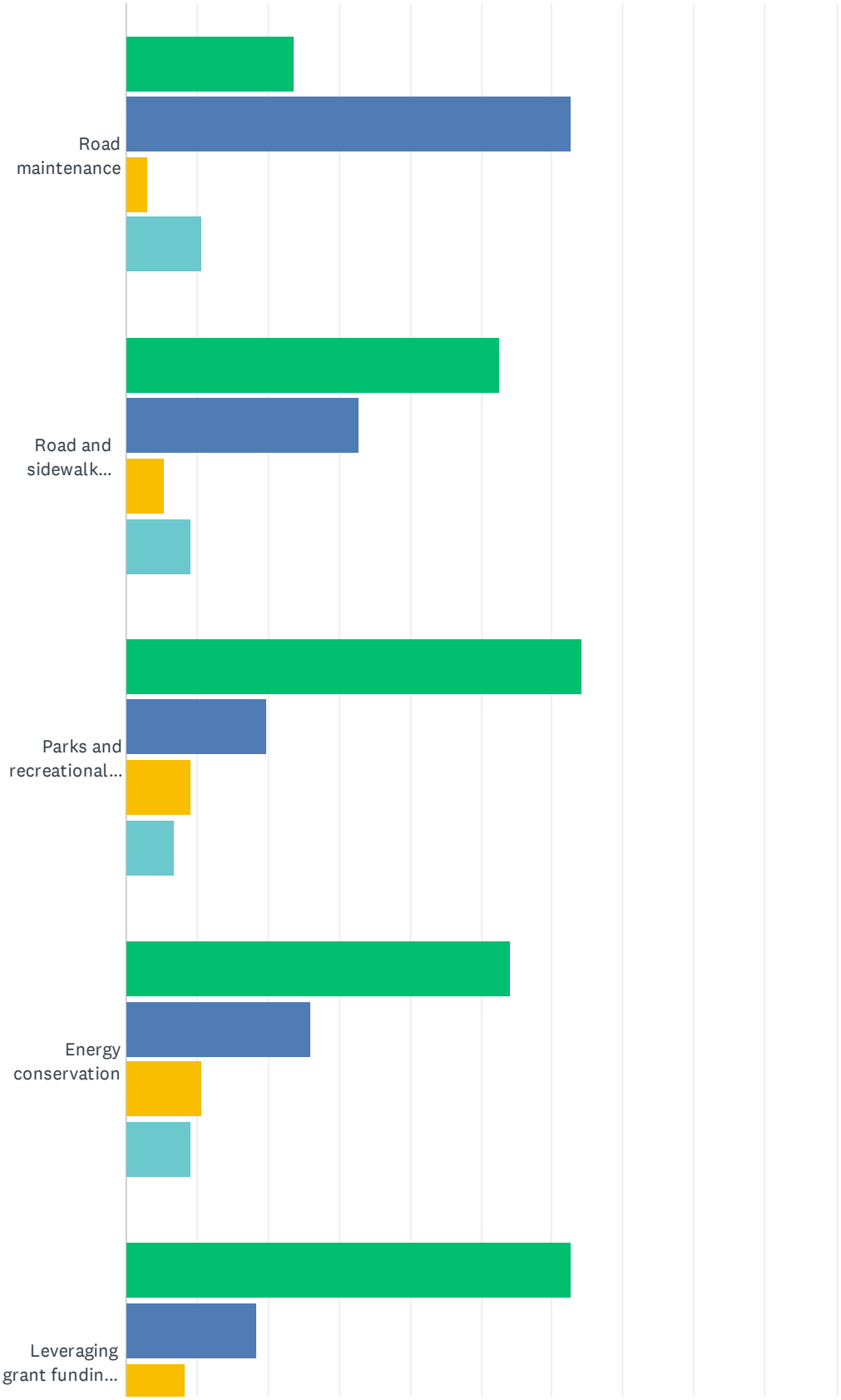
Answered: 131 Skipped: 0

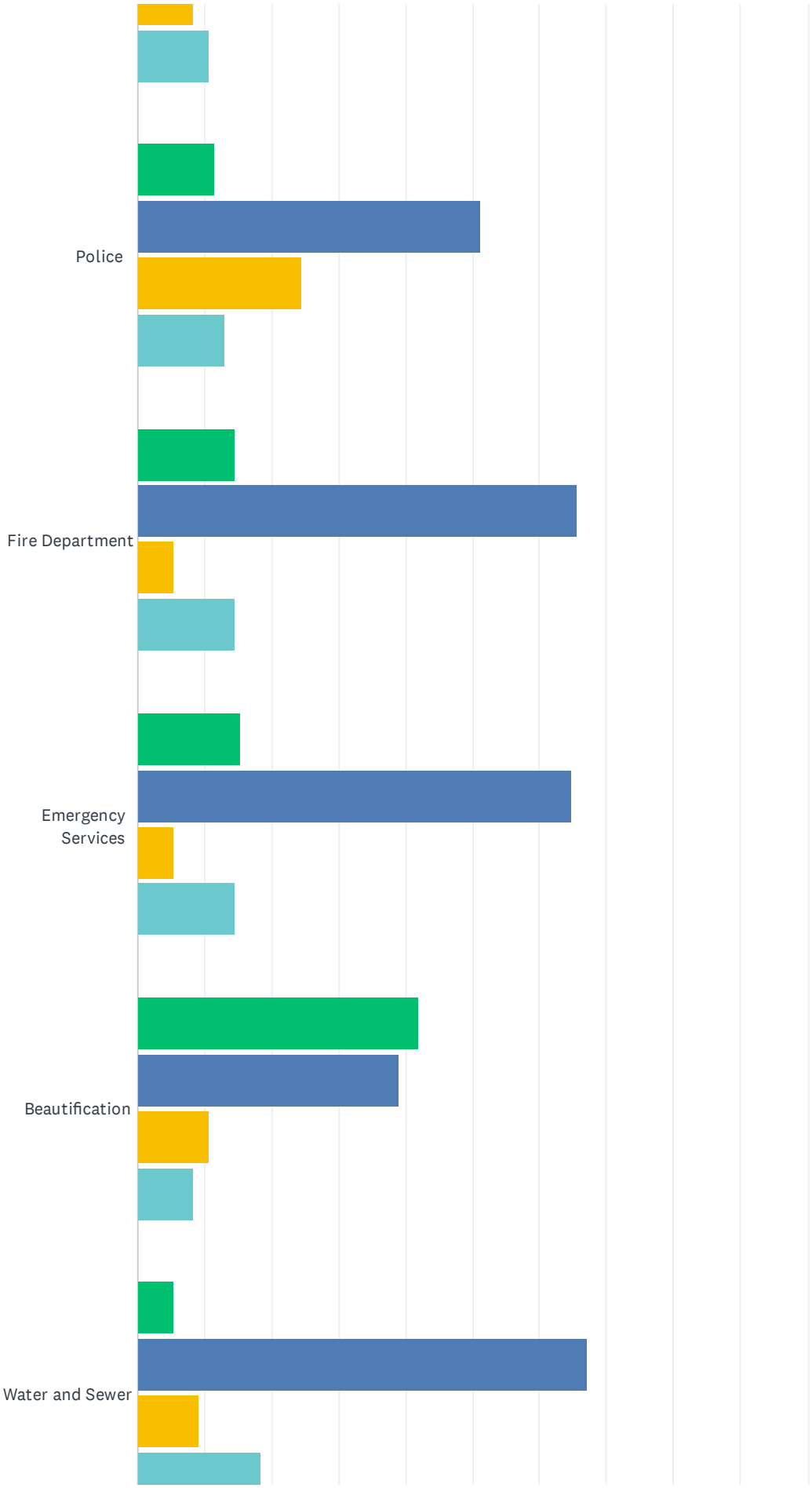


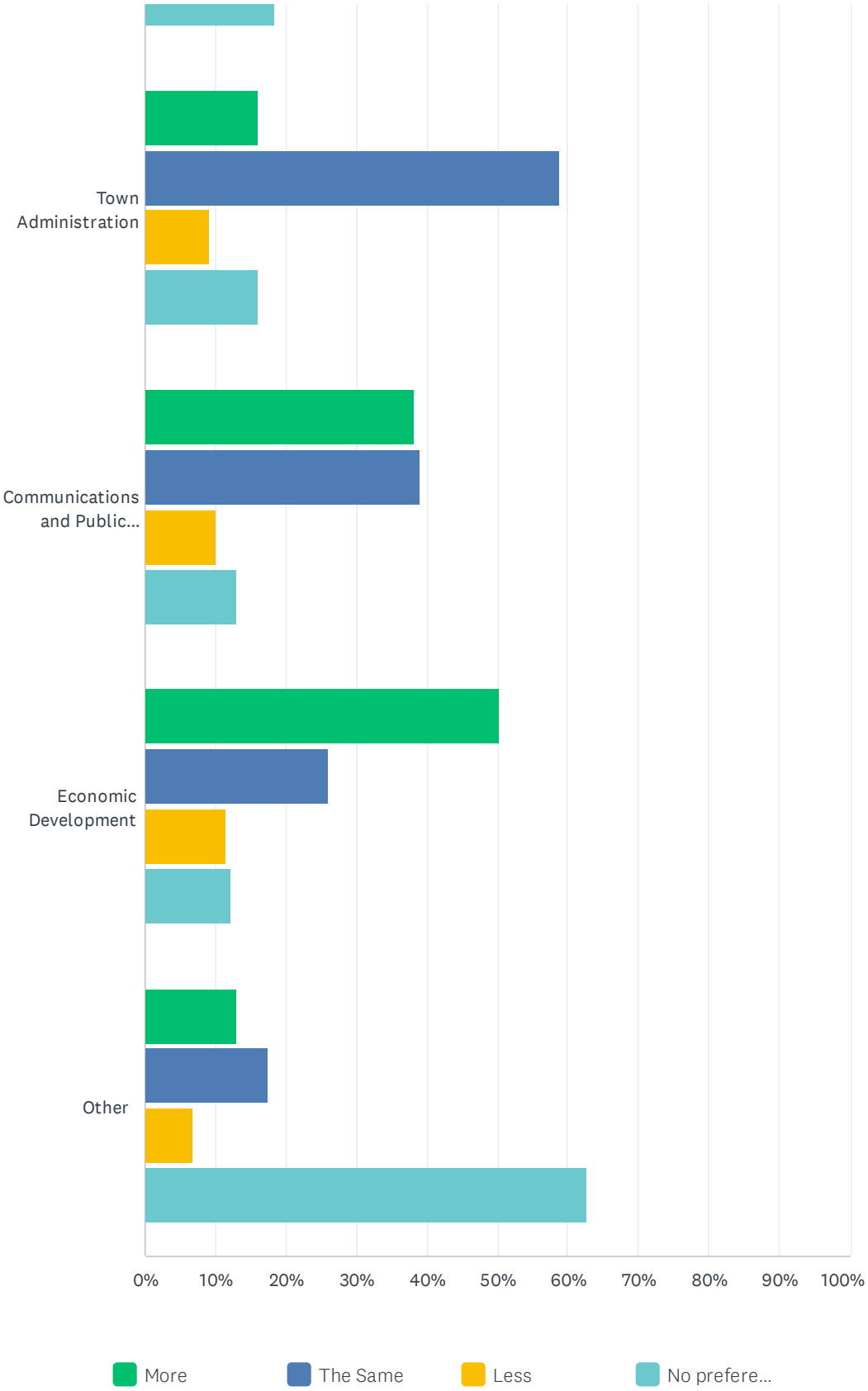
ANSWER CHOICES	RESPONSES	
Bradford Town Website	25.95%	34
Connecting Bradford Facebook Page	44.27%	58
Attending public meetings	23.66%	31
Word of Mouth	70.99%	93
Vital Communities List serv	43.51%	57
Front Porch Forum	12.21%	16
Journal Opinion	47.33%	62
Bridge Weekly	30.53%	40
Valley News	26.72%	35
I need to be connected with resources	6.87%	9
I am not interested in being informed about the town.	0.00%	0
Total Respondents: 131		

Q35 How should the town spend taxpayer money on the following areas?

Answered: 131 Skipped: 0




Police
Fire Department
Emergency Services
Beautification
Water and Sewer


Town Administration
Communications and Public...
Economic Development
Other
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
More
The Same
Less
No prefere...

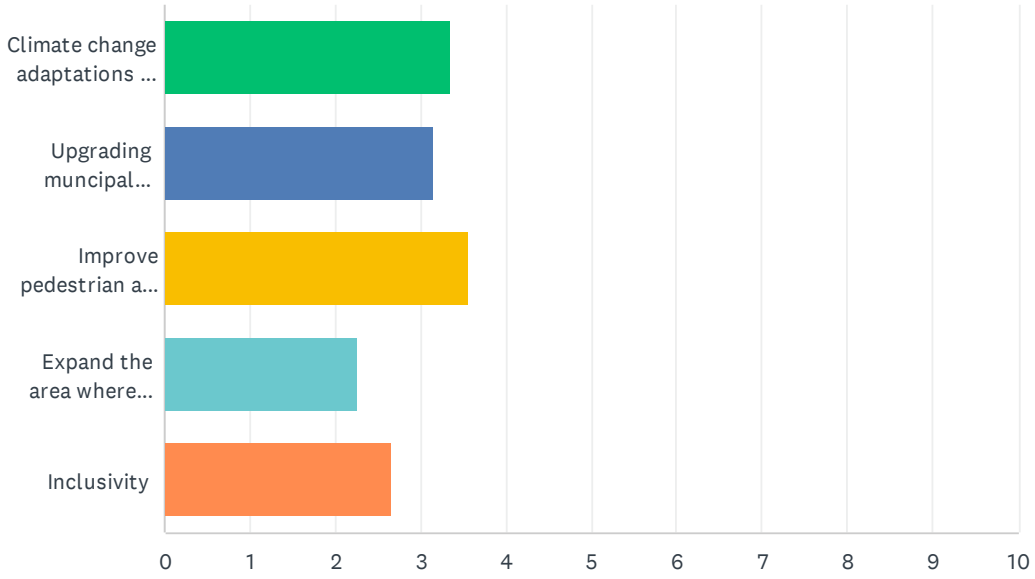
	MORE	THE SAME	LESS	NO PREFERENCE/OPINON	TOTAL	WEIGHTED AVERAGE
Road maintenance	23.66% 31	62.60% 82	3.05% 4	10.69% 14	131	0.52
Road and sidewalk imporvements	52.67% 69	32.82% 43	5.34% 7	9.16% 12	131	0.53
Parks and recreational opportunities	64.12% 84	19.85% 26	9.16% 12	6.87% 9	131	0.55
Energy conservation	54.20% 71	25.95% 34	10.69% 14	9.16% 12	131	0.69
Leveraging grant funding to support town initiatives	62.60% 82	18.32% 24	8.40% 11	10.69% 14	131	0.68
Police	11.45% 15	51.15% 67	24.43% 32	12.98% 17	131	1.25
Fire Department	14.50% 19	65.65% 86	5.34% 7	14.50% 19	131	0.74
Emergency Services	15.27% 20	64.89% 85	5.34% 7	14.50% 19	131	0.74
Beautification	41.98% 55	38.93% 51	10.69% 14	8.40% 11	131	0.66
Water and Sewer	5.34% 7	67.18% 88	9.16% 12	18.32% 24	131	1.01
Town Administration	16.03% 21	58.78% 77	9.16% 12	16.03% 21	131	0.92
Communications and Public Relations	38.17% 50	38.93% 51	9.92% 13	12.98% 17	131	0.82
Economic Development	50.38% 66	25.95% 34	11.45% 15	12.21% 16	131	0.83
Other	12.98% 17	17.56% 23	6.87% 9	62.60% 82	131	2.71

#	COMMENT	DATE
1	clean up village properties on north pleasant, wright's ave, corner of main and depot, old truck in front of bob jones. get palmer barn eyesore rid of, "miss dickey's" apt looks a mess. no pleasant sidewalk and road dangerous.	4/22/2022 8:55 PM
2	The police blotter has @5 actions every week and I never see the police at town meetings or other functions	4/18/2022 6:12 PM
3	no reason why the police are the highest paid employees in the town when they don't work nights and weekends.	4/18/2022 8:50 AM
4	n	4/18/2022 8:34 AM
5	Climate change mitigation and adaptation	4/18/2022 8:15 AM
6	More community/social gatherings once Covid is down.	4/16/2022 2:53 PM
7	Economic development is the biggest piece; many of the other categories in this question fall under it.	4/14/2022 10:11 PM
8	School budget should decrease	4/14/2022 9:35 AM
9	Improve the Town's website	4/14/2022 8:49 AM
10	I don't feel well informed enough to comment.	4/11/2022 6:25 PM

11	make the road from RT 25 to Creamery Bridge and the other road from RT 25 to S.Pleasant St better lighted. Fix the RT 5 bridge by the falls and add some nice solar lighting - lamp posts or something- to make it impressive.	4/10/2022 2:20 PM
12	What would “other” include???	4/5/2022 8:16 AM
13	More focus on the realities of the climate crisis - it is everyone's problem support for weatherization,community wind and solar	4/2/2022 5:09 PM
14	Educational, community, outdoor and cultural events and opportunities.	4/2/2022 3:07 PM
15	our town police officers are being paid to much for the hours and work they do - we were told many years ago we needed them because the state police were leaving town - well they do more work than our own officers do 3 fold	4/2/2022 11:26 AM
16	LOCAL ARTISTS	4/2/2022 11:09 AM
17	N/A	4/2/2022 8:54 AM
18	Education- all our towns need to improve this.	3/28/2022 5:37 PM
19	Public Art	3/28/2022 1:14 PM
20	I'm not sure why Bradford has two policemen or what they do. Maybe there is a reason but it is a mystery to me.	3/28/2022 10:59 AM
21	Pave the dirt roads.	3/26/2022 10:40 PM
22	We need more businesses	3/26/2022 5:46 AM
23	Technology, Data Collection, and Strategic Planning	3/24/2022 9:17 PM
24	I can't speak to this as a non-resident, but not investing in conservation and energy efficiency will come back to bite everyone in town.	3/24/2022 8:53 PM
25	Less on LE as they do nothing	3/24/2022 6:22 PM

Q36 Rank from highest (1) to lowest (5) the areas the town should prioritize.

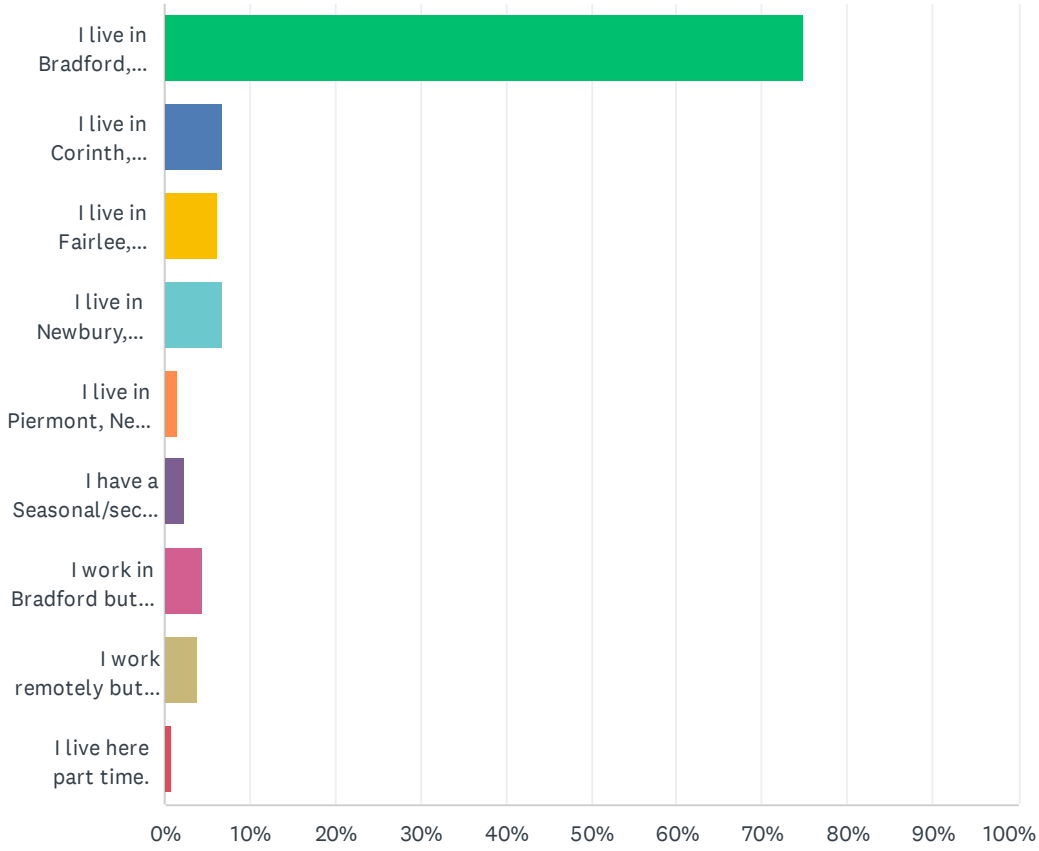
Answered: 131 Skipped: 0



	1	2	3	4	5	TOTAL	SCORE
Climate change adaptations and energy conservation for residents and businesses.	29.01% 38	20.61% 27	17.56% 23	22.14% 29	10.69% 14	131	3.35
Upgrading muncipal buildings to improve energy conservation and ventilation	11.45% 15	30.53% 40	31.30% 41	16.03% 21	10.69% 14	131	3.16
Improve pedestrian and bike access	34.35% 45	17.56% 23	22.90% 30	19.85% 26	5.34% 7	131	3.56
Expand the area where industrial activity is allowed.	11.45% 15	12.98% 17	9.92% 13	21.37% 28	44.27% 58	131	2.26
Inclusivity	13.74% 18	18.32% 24	18.32% 24	20.61% 27	29.01% 38	131	2.67

Q37 Which of the following applies to your situation? Check all that apply.

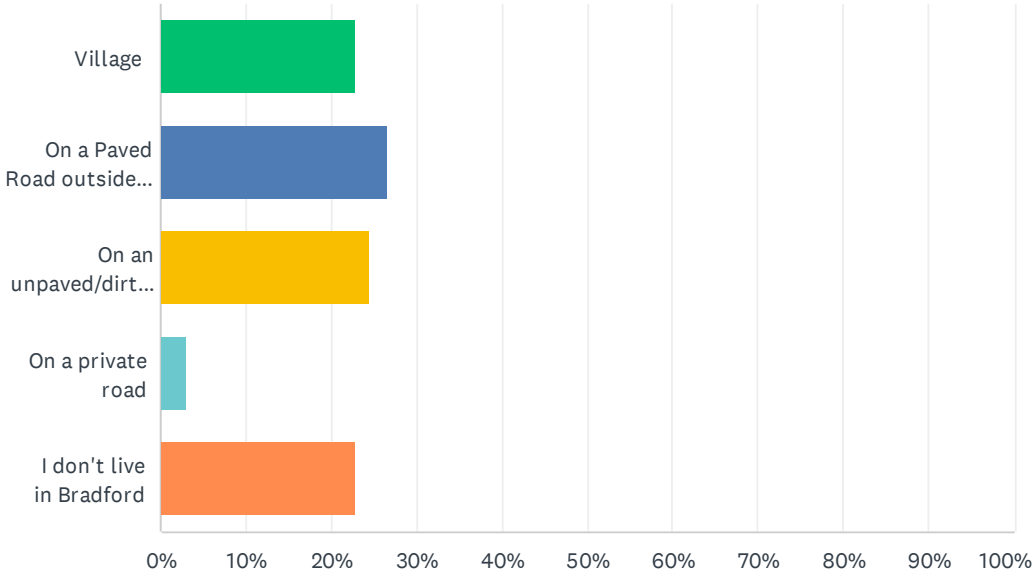
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
I live in Bradford, Vermont	74.81%	98
I live in Corinth, Vermont	6.87%	9
I live in Fairlee, Vermont	6.11%	8
I live in Newbury, Vermont	6.87%	9
I live in Piermont, New Hampshire	1.53%	2
I have a Seasonal/second home in this area.	2.29%	3
I work in Bradford but I don't live here	4.58%	6
I work remotely but outside my home.	3.82%	5
I live here part time.	0.76%	1
Total Respondents: 131		

Q38 Where in Bradford Vermont do you live?

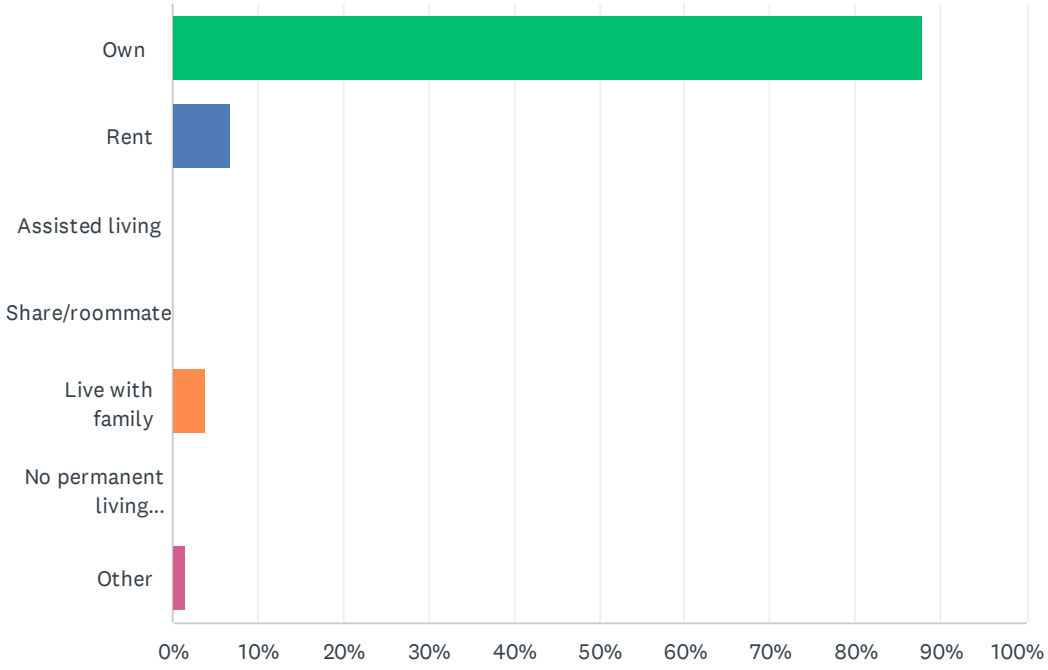
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Village	22.90%	30
On a Paved Road outside of the Village	26.72%	35
On an unpaved/dirt road	24.43%	32
On a private road	3.05%	4
I don't live in Bradford	22.90%	30
TOTAL		131

Q39 What best describes your living situation?

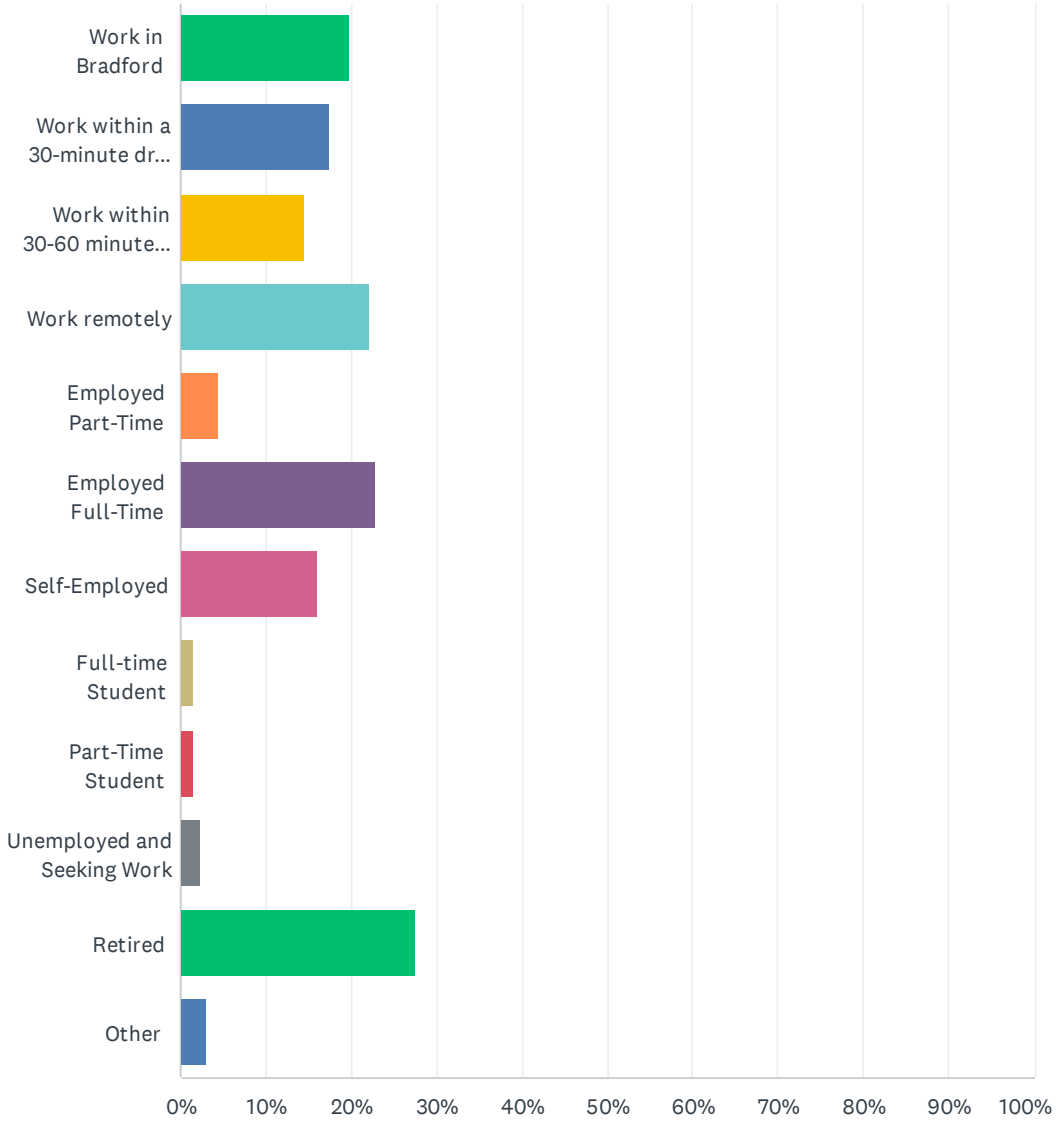
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Own	87.79%	115
Rent	6.87%	9
Assisted living	0.00%	0
Share/roommate	0.00%	0
Live with family	3.82%	5
No permanent living arrangement	0.00%	0
Other	1.53%	2
TOTAL		131

Q40 What best describes your employment situation?

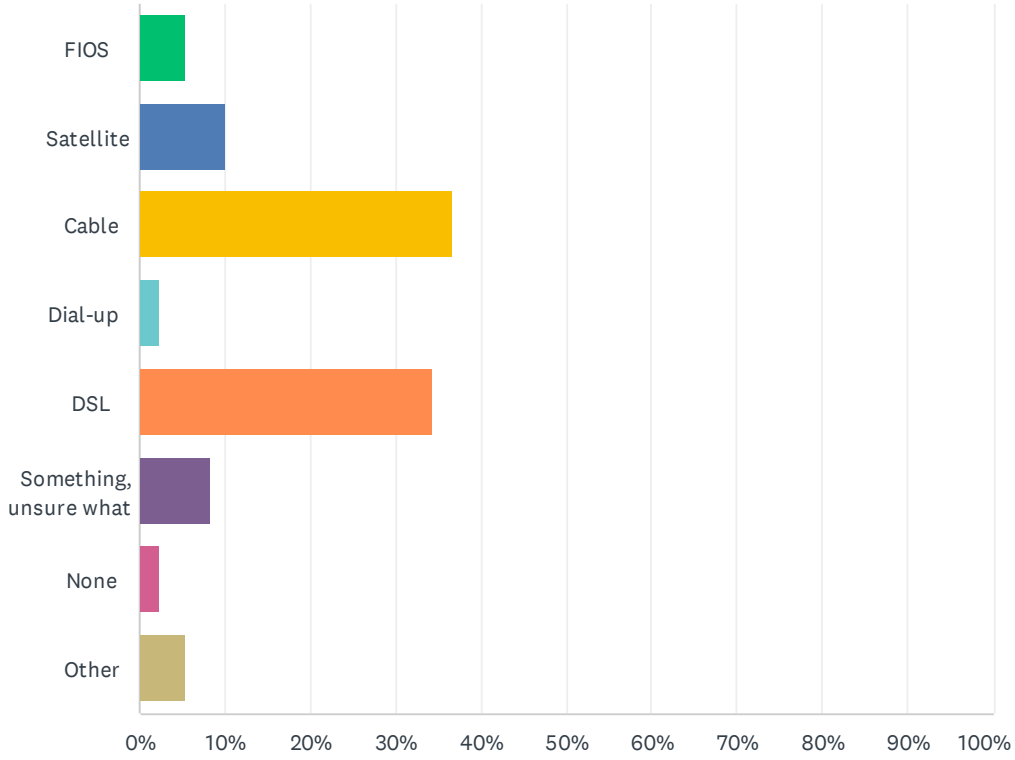
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Work in Bradford	19.85%	26
Work within a 30-minute drive of Bradford	17.56%	23
Work within 30-60 minute drive of Bradford	14.50%	19
Work remotely	22.14%	29
Employed Part-Time	4.58%	6
Employed Full-Time	22.90%	30
Self-Employed	16.03%	21
Full-time Student	1.53%	2
Part-Time Student	1.53%	2
Unemployed and Seeking Work	2.29%	3
Retired	27.48%	36
Other	3.05%	4
Total Respondents: 131		

Q41 What best describes your access to broadband/internet at home?

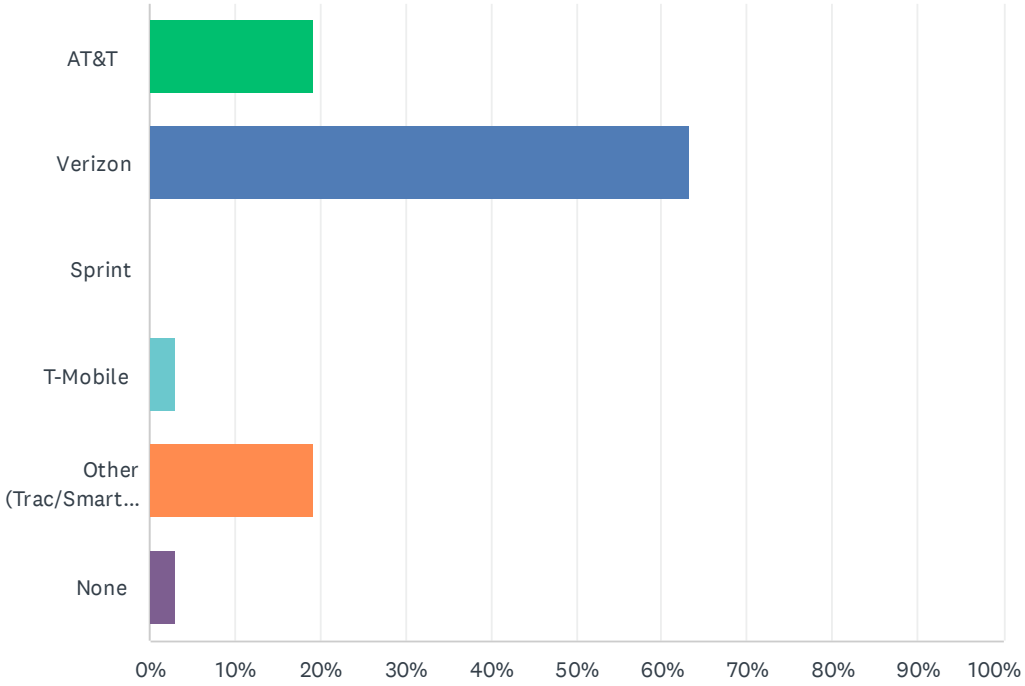
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
FIOS	5.34%	7
Satellite	9.92%	13
Cable	36.64%	48
Dial-up	2.29%	3
DSL	34.35%	45
Something, unsure what	8.40%	11
None	2.29%	3
Other	5.34%	7
Total Respondents: 131		

Q42 What cell phone carrier is used by members of your household?

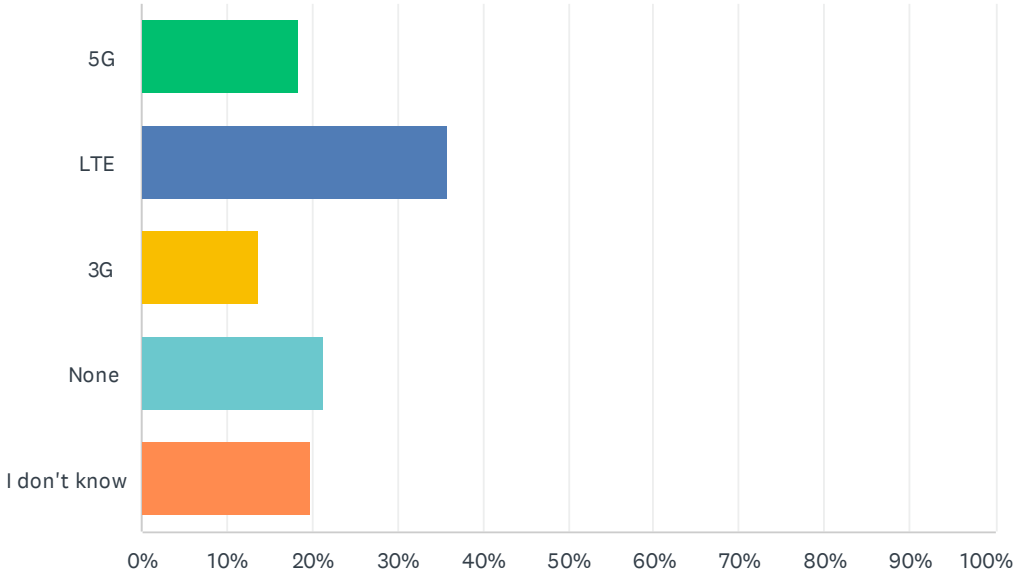
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
AT&T	19.08%	25
Verizon	63.36%	83
Sprint	0.00%	0
T-Mobile	3.05%	4
Other (Trac/Smart Talk)	19.08%	25
None	3.05%	4
Total Respondents: 131		

Q43 What cellular reception is accessible at your home?

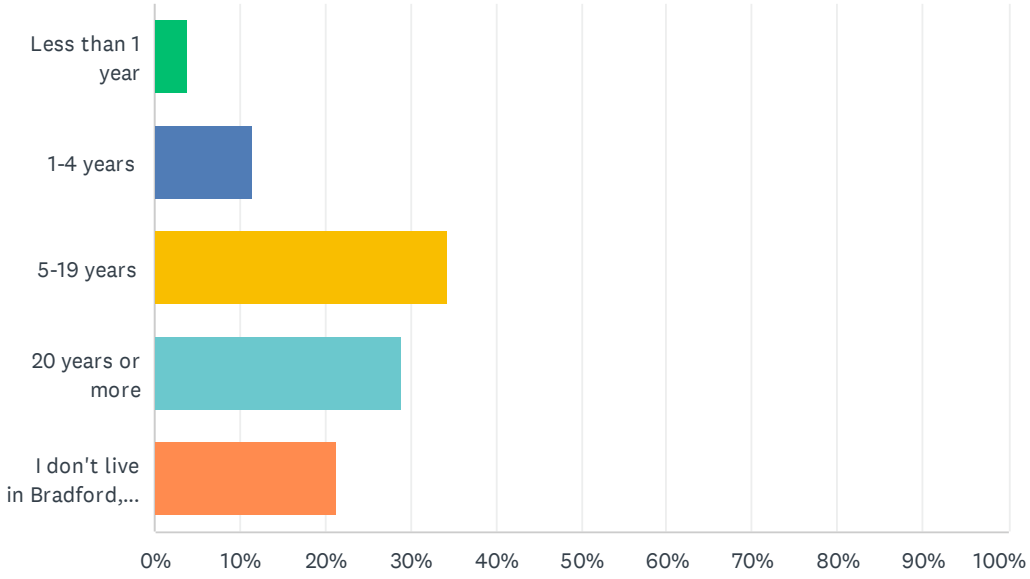
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
5G	18.32%	24
LTE	35.88%	47
3G	13.74%	18
None	21.37%	28
I don't know	19.85%	26
Total Respondents: 131		

Q44 How long have you lived in Bradford?

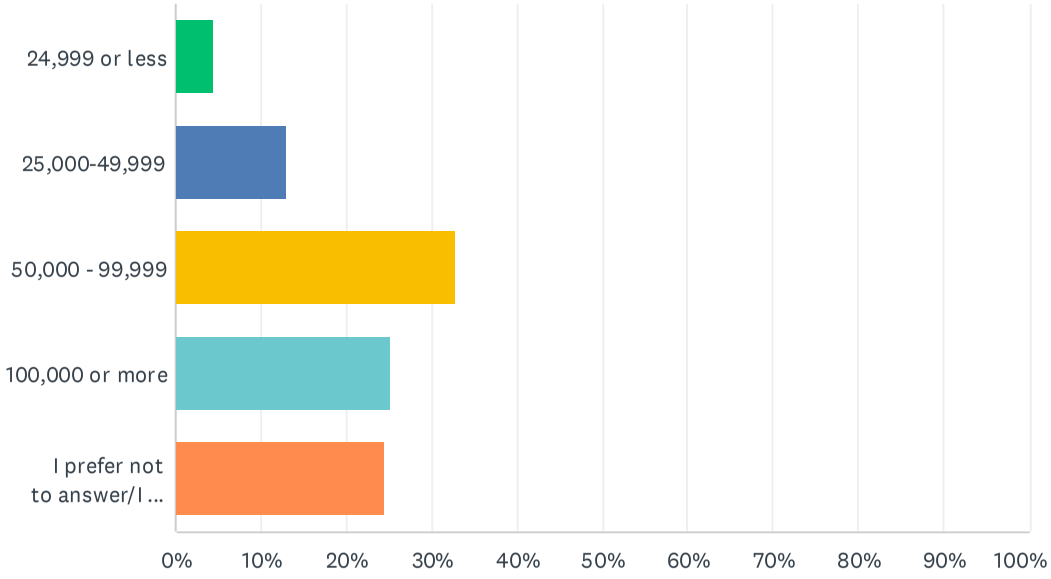
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than 1 year	3.82%	5
1-4 years	11.45%	15
5-19 years	34.35%	45
20 years or more	29.01%	38
I don't live in Bradford, Vermont	21.37%	28
TOTAL		131

Q45 What is your household income?

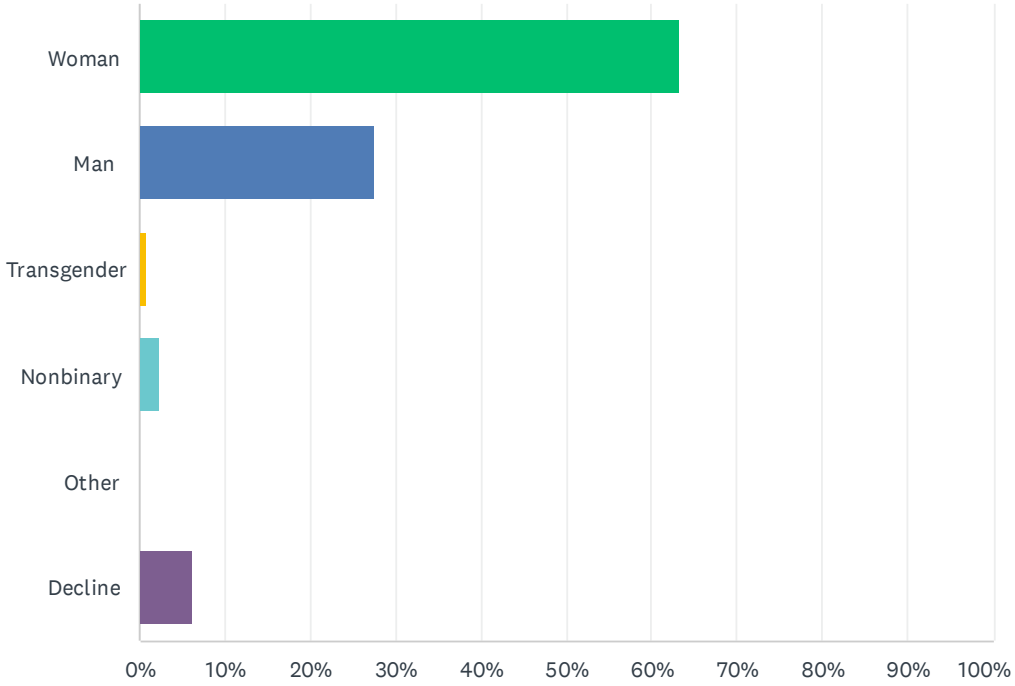
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
24,999 or less	4.58%	6
25,000-49,999	12.98%	17
50,000 - 99,999	32.82%	43
100,000 or more	25.19%	33
I prefer not to answer/I do not know	24.43%	32
TOTAL		131

Q46 What is your Gender Identity

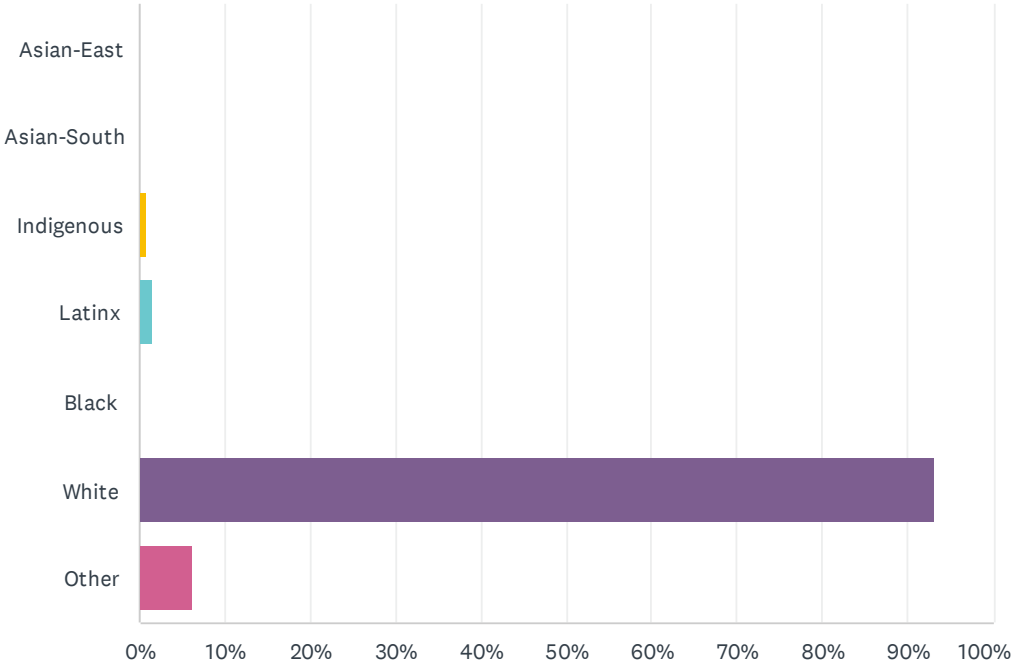
Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Woman	63.36%	83
Man	27.48%	36
Transgender	0.76%	1
Nonbinary	2.29%	3
Other	0.00%	0
Decline	6.11%	8
TOTAL		131

Q47 What best describes you?

Answered: 131 Skipped: 0



ANSWER CHOICES	RESPONSES	
Asian-East	0.00%	0
Asian-South	0.00%	0
Indigenous	0.76%	1
Latinx	1.53%	2
Black	0.00%	0
White	93.13%	122
Other	6.11%	8
Total Respondents: 131		

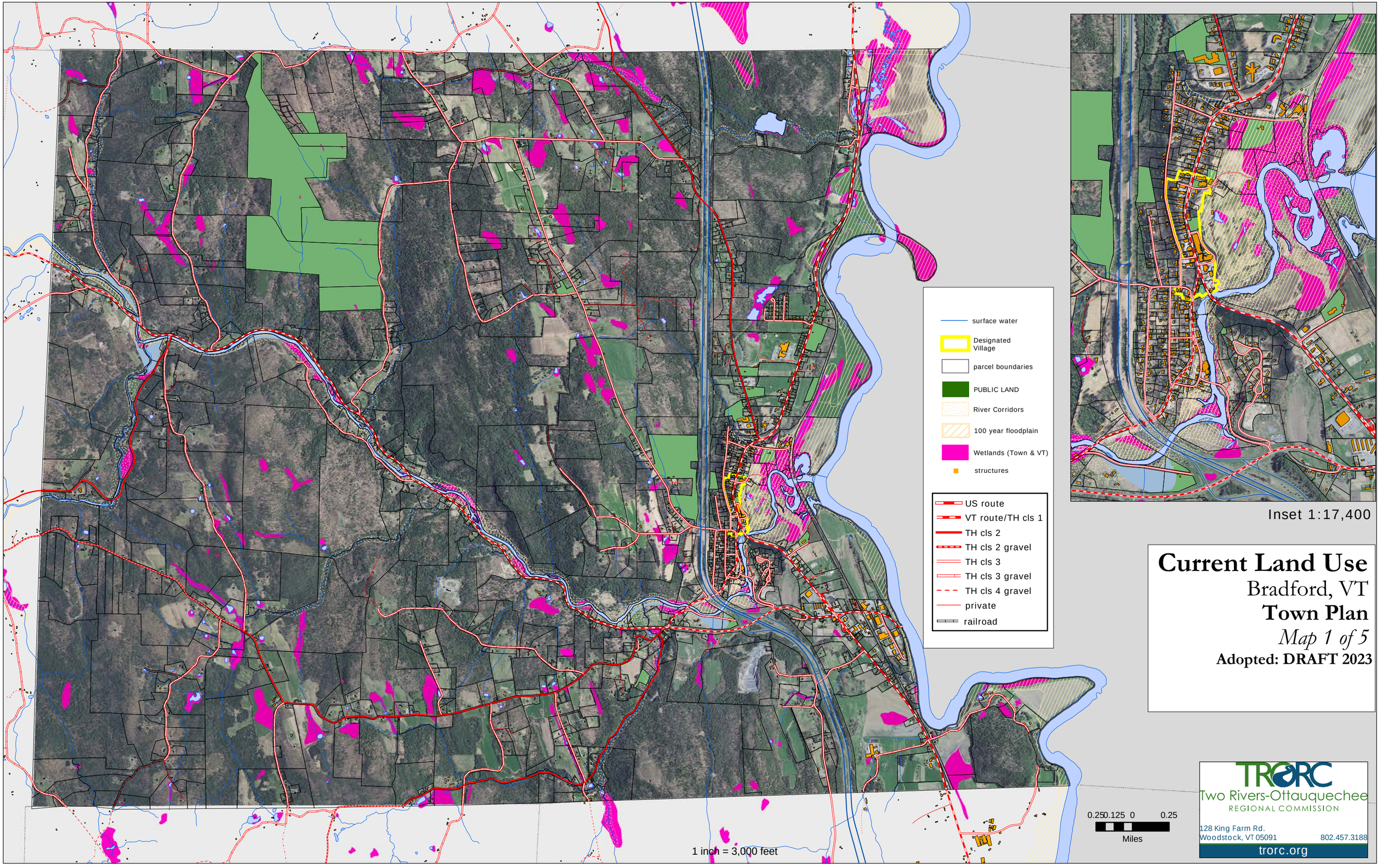
Q48 Additional comments?

Answered: 65 Skipped: 66

#	RESPONSES	DATE
1	additional housing on waits river road, hackett hill, south road. no more in village. north pleasant st is overrun with vehicles and noise - fast cars!	4/22/2022 8:55 PM
2	Too old to offer suggestions. I'm happy here -- so far.	4/22/2022 8:26 PM
3	Thanks. This was kind of fun to think about what would make things better. The sidewalk winter maintenance has still not been improved even though it was a major bone of contention at Town Meeting 4 or 5 years ago. Summer maintenance on S. Main St near the library is awful. That should be mowed twice as much. Poison ivy is creeping onto sidewalk from Low Mansion hillside.	4/18/2022 6:12 PM
4	Economic development incentives downtown	4/18/2022 4:23 PM
5	Question 36 was hard to answer. The answers were a strange mix of concrete and vague, such as, what does the planning board mean by inclusivity? (This was one of the first questions that even broached the topic.) Also, I think addressing energy efficiency and resiliency is super important! hard to have to prioritize one over the other...I chose the pedestrian/bike answer because it was concrete and actionable - increasing inclusivity is not unless you can break that down some more for me. But I appreciate you doing this survey and reminding us multiple times ot take it! Glad to contribute some thoughts.	4/18/2022 8:50 AM
6	n	4/18/2022 8:48 AM
7	Make sure development doesn't push Pierson's farm out. It's such a convenient spot for local food. Keep agriculture in Bradford.	4/18/2022 8:15 AM
8	I love Bradford and appreciate all the businesses that make it work.	4/18/2022 6:25 AM
9	Thank you for doing this survey	4/16/2022 2:53 PM
10	Bradford is a wonderful place to live, work and play. Thank you for your efforts to help improve it. In my view, the single most important needed improvement is the recruiting of a trained, knowledgable and experienced economic development officer that can work with residents and businesses -- both existing and incoming -- to improve the commercial, residential and cultural landscape in our community. Vermont and Northern New England are widely considered climate resilient, and people are migrating to our area. Having sufficient economic development measures in place will help Bradford compete with other desirable towns in the region.	4/14/2022 10:11 PM
11	None	4/14/2022 9:49 AM
12	Please expand high speed internet to include underwood road!!! Currently only one provider and they are weak	4/14/2022 9:35 AM
13	Bradford seems overly interested in equality so why not remove all gender, race, and financial questions from your surveys, job applications, and school records? You really can't be "A," unless you are "B."	4/14/2022 8:26 AM
14	No	4/14/2022 7:28 AM
15	Might also be time to invite new people to take seats at the table—- the select board is the same people from 15 years ago when I moved here— as are most of the town positions. How do we invite new voices to the table with new ideas, in ways that doesn't make it feel like a good ole boys club runs the town? I know it's voted on— but so people run unchallenged every term?? What can we do to get the young people more engaged in town politics?	4/14/2022 7:24 AM
16	None	4/12/2022 8:22 AM
17	I come into Bradford at least once or twice a week from my bordering residence in Newbury. I worked in Bradford until 1997 and family members graduated Oxbow. Bradford, in my opinion,	4/10/2022 2:20 PM

	has changed for the better since I moved here in 1983. I wish Vt government cared more about this side of the state.	
18	Make it a liveable Area. Since pandemic people from out of state have moved in which is fine, but don't raise taxes because of it.	4/9/2022 3:32 PM
19	Please make an effort to deal with abandoned buildings and others in disrepair. More affordable housing is needed in the area. Bradford can benefit from Old Church Theater as a performing arts center, and having the kind artisanal, unique marketplace on Main Street that people will travel here to visit. Stores like Out of the Whey and Farm Way help represent this	4/8/2022 9:13 PM
20	No	4/8/2022 9:02 AM
21	I appreciate everyone who has been putting in the effort to help guide the town. Thank you for the survey.	4/8/2022 7:56 AM
22	No	4/8/2022 7:02 AM
23	Na	4/8/2022 6:36 AM
24	Bear Ridge is very noisy and benefits very few people. It would be great if the could end races earlier or stop altogether. It lowers the value of homes in the area.	4/5/2022 8:36 PM
25	The road on Mink Hill needs to be widened where the pavement ends and it goes to dirt road. There is a steep, blind hill, most of the road is single lane width the rest of the way, there is heavy vehicular traffic with big equipment (Longto Tree Service business) goes up and down the road several times a day, heavy vehicles and equipment causing huge ruts to the point where a Honda CRV bottoms out and it's unavoidable because the ruts go across the entire road so you can't straddle the ruts…	4/5/2022 8:16 AM
26	Thank you for doing this!	4/4/2022 8:40 AM
27	what is, what is your agenda?	4/3/2022 6:32 PM
28	Internet stinks.... cell phone could be better.... need more transport to Lebanon area for large box store shopping....more retail for Bradford	4/3/2022 3:22 PM
29	none	4/3/2022 1:21 PM
30	I have lived in Fairlee and Thetford most of my life; and am still shocked and horrified by the recent construction of Tractor Supply, which—like the Dollar Store in Fairlee—destroyed beautiful open land and makes the town look cheap.	4/2/2022 9:11 PM
31	If you want to see a better prosperous community you've got to focus on Oxbow/OESU. I worked for a local business that needs a new manager, we lost three because they wouldn't move to the area because the school wasn't good enough.	4/2/2022 6:59 PM
32	A lot of these questions were also on the Park and Rec questionnaire -	4/2/2022 11:26 AM
33	Why is question 47, of all the questions, incomplete?	4/2/2022 11:09 AM
34	Nope	4/2/2022 9:29 AM
35	I live in East Thetford but come to Bradford at least every other week.	4/2/2022 8:56 AM
36	Comments about town meeting were my practice of attendance in the Town of Corinth where I live.	4/2/2022 8:54 AM
37	We live in West Fairlee and Bradford has the closest grocery store (and Farmway). We travel to Lebanon most of the time for groceries to the CoOps because we want organic options. If Bradford had a natural foods CoOp we'd definitely choose that over driving to Lebanon.	4/2/2022 8:43 AM
38	None	4/2/2022 2:39 AM
39	Filled out by couple that bought a Bradford house in March 2022. Looking forward to living here!	4/1/2022 10:08 PM
40	Thank you for creating this survey and wanting community input	4/1/2022 9:31 PM
41	Thompson Telephone is what I have for internet snd TV even though we officially live within the Verizon zone according to the FCC maps. Access is a monopoly which TT will not relinquish even though what they are doing is illegal and price gouging. People with this service	3/30/2022 11:10 PM

	are paying three times what others pay for internet with satellite or DSL. Then we have to have a separate cell bill which brings our telecommunication cost to over $300 a month. But we have no choice. I am writing this here as there was no place for comments above.	
42	None	3/28/2022 5:01 PM
43	None	3/28/2022 9:31 AM
44	None	3/27/2022 7:12 PM
45	Pave the dirt roads.	3/26/2022 10:40 PM
46	I run a brand & web design online-only business from home & have 15+ years of professional design experience. I have limited free time these days, but if my schedule allows & there is a need, I might be interested in participating or helping with small, local hands-on workshops to help our local business owners if there was interest. I specialize in providing education, & strategy-based design services for micro-businesses that give autonomy back to the business owner once the site is set up, empowering them to maintain their websites themselves if that's what they want. I love to train, educate & share my expertise with people who want to learn. :)	3/26/2022 10:25 PM
47	Thank you for your initiative!	3/26/2022 3:17 PM
48	Bradford taxes are way too expensive, causing people to leave. Town communication is very poor.	3/26/2022 1:23 PM
49	We need a better business tax base and better management of our town and school taxes	3/26/2022 5:46 AM
50	To the person who wrote this survey, you should learn how to use spell checker. Why didn't PC& parks & Rec do one survey and save money	3/25/2022 10:25 AM
51	It's nice to see Bradford's efforts to be progressive!	3/25/2022 8:37 AM
52	Thank you for conducting this survey!	3/24/2022 9:17 PM
53	Bradford Police need to be more involved in the community. Fire department and fast squad are involved in parades etc and we rarely see a Bradford police officer and when we do they don't waste any time getting out of there and home.	3/24/2022 9:06 PM
54	In question 36, Climate adaptation would include municipal buildings, so the first 2 options should really be rolled into one, which is why I de-prioritized the municipal buildings.	3/24/2022 8:53 PM
55	N/a	3/24/2022 7:25 PM
56	None	3/24/2022 6:58 PM
57	None	3/24/2022 6:22 PM
58	Solar. Energy costs. Cell towers. Internet. All need large improvements	3/24/2022 6:17 PM
59	Bradford has the potential to be a great little town. Unfortunately the town administrators, planning and zoning have done no justice to the town. Allowing properties to become eye sores, allowing businesses to conduct their work not abiding by the permits where they know no action will be taken on them. Allowing the historic district to be taken over by low income housing (not an issue in itself) with no on site management as promised and actually ruining the neighborhood. I could go on but I'll stop there.	3/24/2022 6:02 PM
60	Native American	3/24/2022 5:47 PM
61	Results of the survey should be publicly available to Bradford residents	3/24/2022 5:38 PM
62	I think many of the school board officials and town officials try to decrease education and involvement by making information less available and making voting difficult. We really can't increase taxes without a larger tax base. We have a number of retirees who don't bare as much of a tax burden, which is why we need single family homes.	3/24/2022 5:23 PM
63	no	3/24/2022 5:10 PM
64	No	3/24/2022 11:50 AM
65	nope	3/23/2022 9:00 PM



Current Land Use

Bradford, VT

Town Plan

Map 1 of 5

Adopted: DRAFT 2023

Two Rivers-Ottauquechee
REGIONAL COMMISSION
128 King Farm Rd.
Woodstock, VT 05091
802.457.3188
trorc.org

NEWBURY

Goshen

Wrights Mtn
1822ft

LDR

Blodgett Pond

CORINTH

Bradford Center

R

LDR

Narrow Hill
1483ft

VR

RS

IM

CBA

Bradford

LPC

IM

I

R

WEST FAIRLEE

FAIRLEE

ORFORD

Residential
Central Business Area
Industrial
Industrial-Mixed
Low Density Residential
Lower Plain Commercial
Residential Service
Village Residential

Future Land Use Areas

Bradford, VT

Town Plan

Map 2 of 5

Adopted: DRAFT 2023

TRORC
Two Rivers-Ottauquechee
REGIONAL COMMISSION
128 King Farm Rd.
Woodstock, VT 05091
802.457.3188
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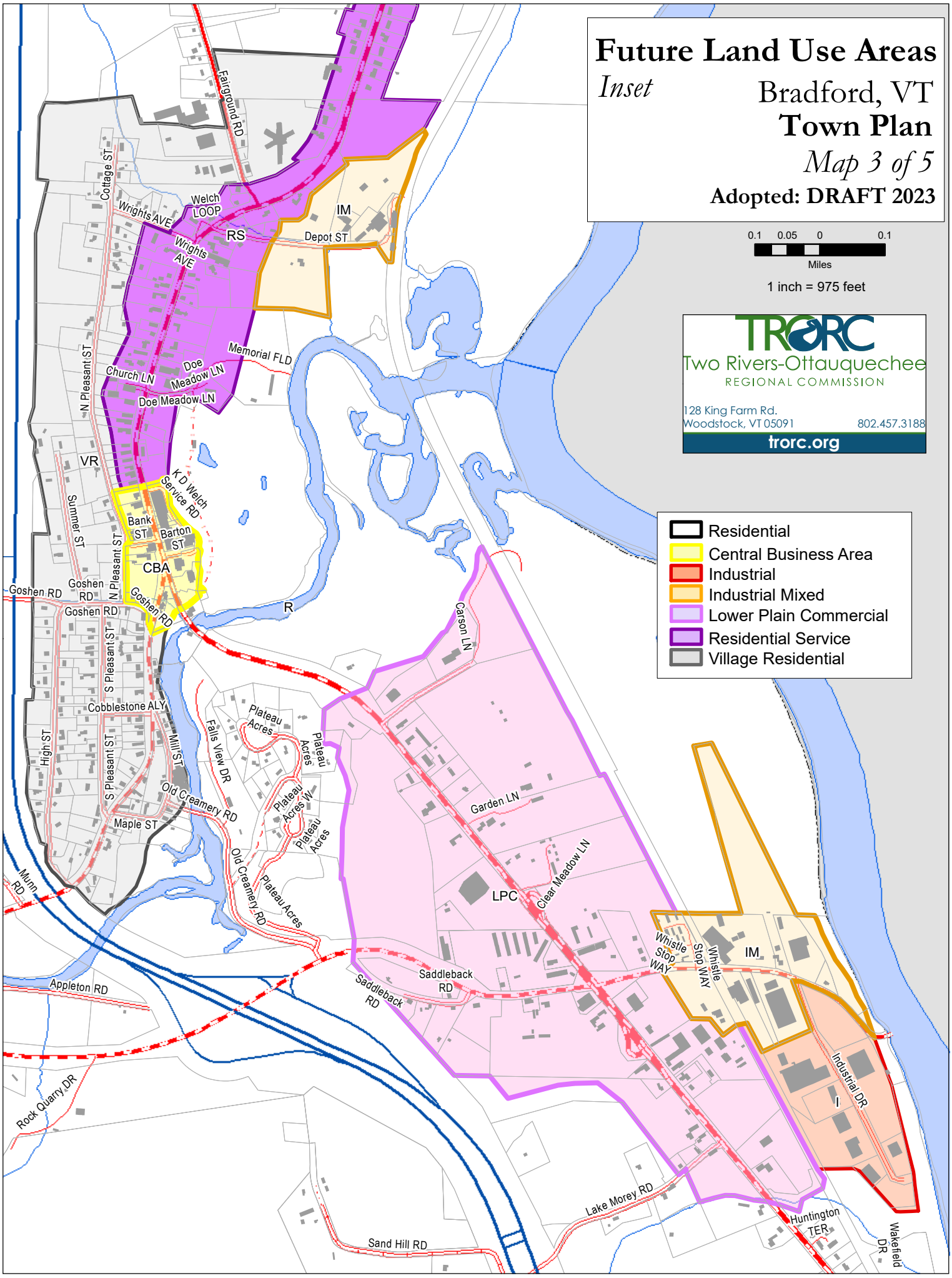
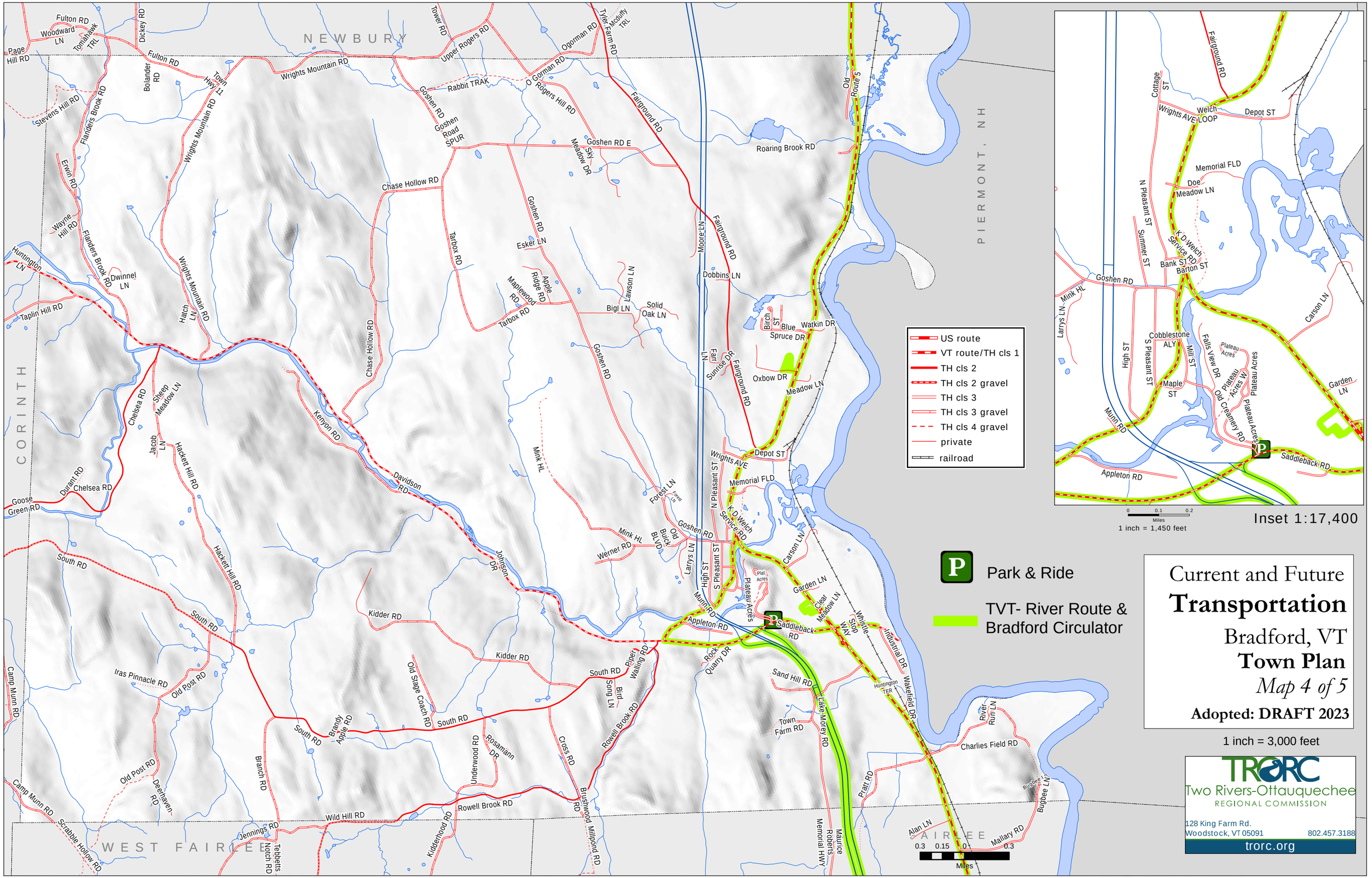
1:31,515

1 inch = 2,626 feet

0 0.5 1

Miles


Future Land Use Areas
Inset
Bradford, VT
Town Plan
Map 3 of 5
Adopted: DRAFT 2023
0.1 0.05 0 0.1
Miles
1 inch = 975 feet
TRORC
Two Rivers-Ottauquechee
REGIONAL COMMISSION
128 King Farm Rd.
Woodstock, VT 05091
802.457.3188
trorc.org
Residential
Central Business Area
Industrial
Industrial Mixed
Lower Plain Commercial
Residential Service
Village Residential
Fairground RD
Cottage ST
Welch LOOP
Wrights AVE
RS
IM
Depot ST
Memorial FLD
Church LN
Doe Meadow LN
N Pleasant ST
VR
K D Welch Service RD
Summer ST
Bank ST
Barton ST
CBA
Goshen RD
S Pleasant ST
R
Carson LN
Cobblestone ALY
High ST
Mill ST
Falls View DR
Plateau Acres
Old Creamery RD
Maple ST
Garden LN
Clear Meadow LN
LPC
Munn RD
Appleton RD
Saddleback RD
Whistle Stop WAY
Industrial DR
I
Rock Quarry DR
Lake Morey RD
Huntington TER
Wakefield DR
Sand Hill RD



Current and Future **Transportation**

Bradford, VT **Town Plan**

Map 4 of 5

Adopted: DRAFT 2023

1 inch = 3,000 feet

Two Rivers-Ottauquechee REGIONAL COMMISSION
128 King Farm Rd.
Woodstock, VT 05091
802.457.3188
trorc.org

NEWBURY

CORINTH

PIERMONT, NH

WEST FAIRLEE

FAIRLEE

Churches
1. Evangelical Free Church
2. UCC Cong. Church
3. Grace Methodist Church
4. Our Lady of Perpetual Help
5. Goshen Church (historic)

Schools
6. Bradford Elementary School
7. Oxbow Union High School & River Bend Career and Technical Center

Cemeteries
8. Upper Plain Cemetery
9. Sawyer Cemetery
10. Wright's Mtn. Cemetery
11. West Bradford Cemetery
12. Goshen Cemetery

Municipal
13. Town Office
14. Town Garage/Recycle
15. Memorial Field
16. Sewer Plant
17. Fire Station
18. Police
19. Water Wells
20. Reservoirs
21. OESU
22. State Garage
23. State Police
24. Library
25. National Guard Armory
26. Post Office

Recreation
27. Low-St. John Forest
28. Rest Area
29. Elizabeth's Park
30. Wright's Mtn. Rec. Area
31. Denney Memorial Park
32. Boch Park
33. Bugbee Boat Landing
34. Bradford Golf Course
35. Park & Ride

surface water

PUBLIC LAND

100 year flood plain

Well Head Protection Area

Historic District

Designated Village

water lines

sewer lines

3 Phase Lines

Transmission Lines

0.3 0.15 0 0.3
Miles
1 inch = 3,000 feet

0 0.1 0.2
Miles
1 inch = 1,450 feet

Inset 1:17,400

Bugbee Ln

US route
VT route/TH cls 1
TH cls 2
TH cls 2 gravel
TH cls 3
TH cls 3 gravel
TH cls 4 gravel
private
railroad

Current and Future
Education, Utilities, & Facilities
Bradford, VT
Town Plan
Map 5 of 5

Adopted: DRAFT 2023

TRORC
Two Rivers-Ottauquechee
REGIONAL COMMISSION
128 King Farm Rd.
Woodstock, VT 05091 802.457.3188
trorc.org

Existing Energy Generation

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

Created:2017

BRADFORD

BIOMASS KW

- 19
- 20 - 375

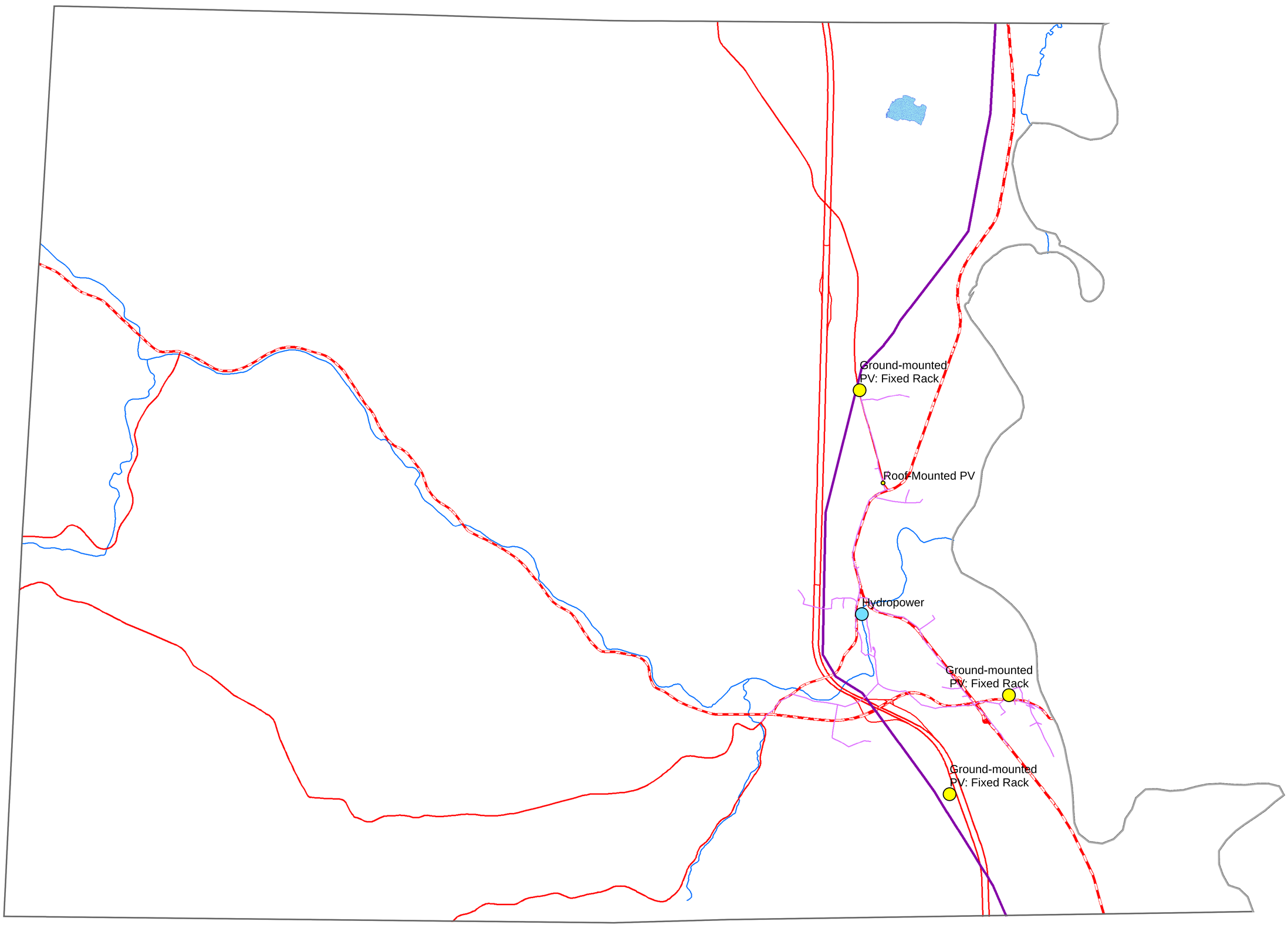
HYDRO KW

- 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



0 0.5 1 2 Miles

N

Two Rivers-Ottauquechee REGIONAL COMMISSION
trorc.org

Solar Energy Potential BRADFORD

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

- Substations
- 3 Phase Power Lines
- Transmission Lines
- Structures w/1ac buffer

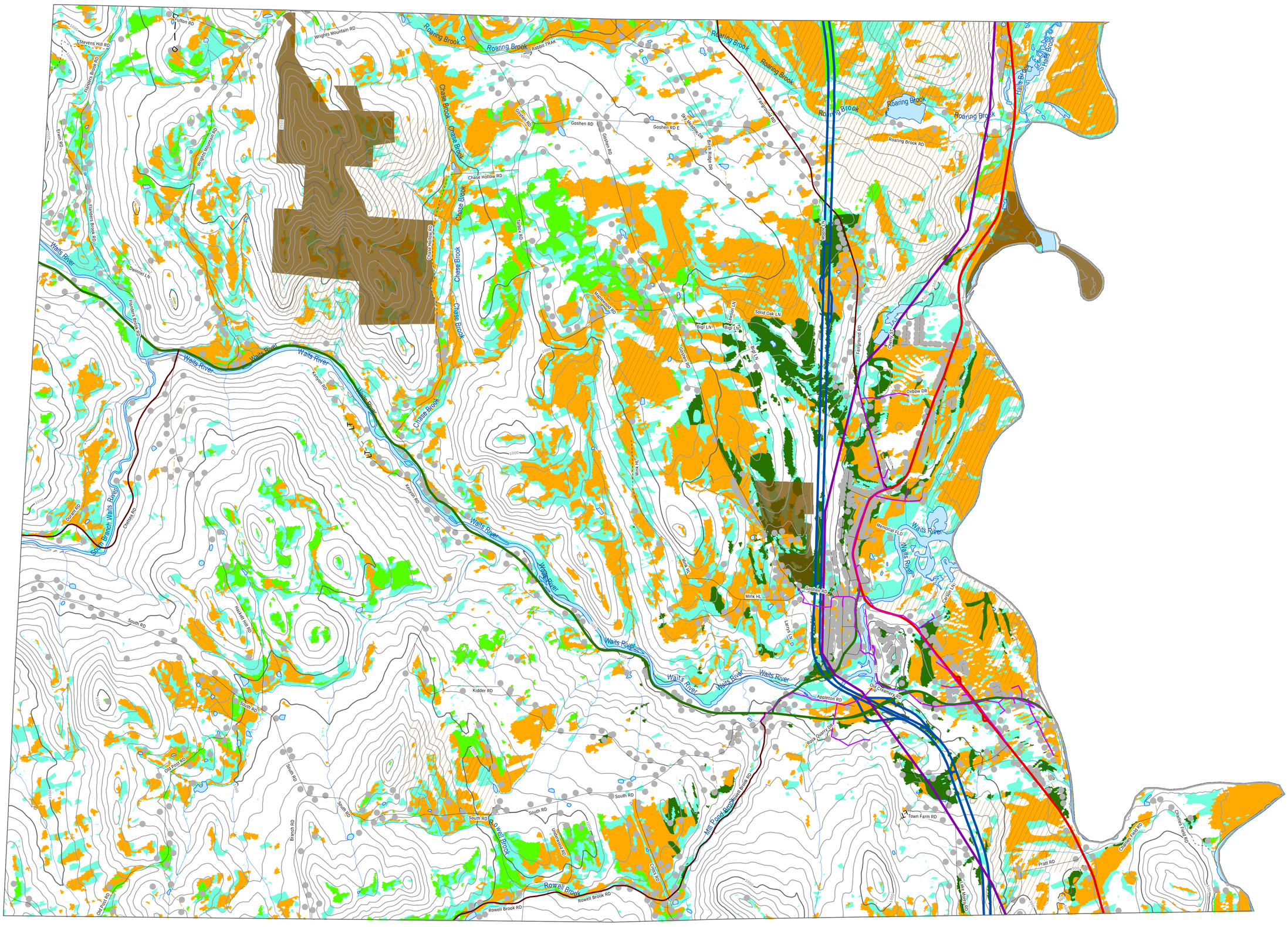
Conserved

- Public Cons
- Private Cons

SOLAR POTENTIAL

Suitability

- Prime
- Constraints
- Prime 1m 3phase
- RAW solar



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

N

Two Rivers-Ottauquechee REGIONAL COMMISSION
trorc.org

0 0.5 1 2 Miles

Wind Energy Potential

BRADFORD

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

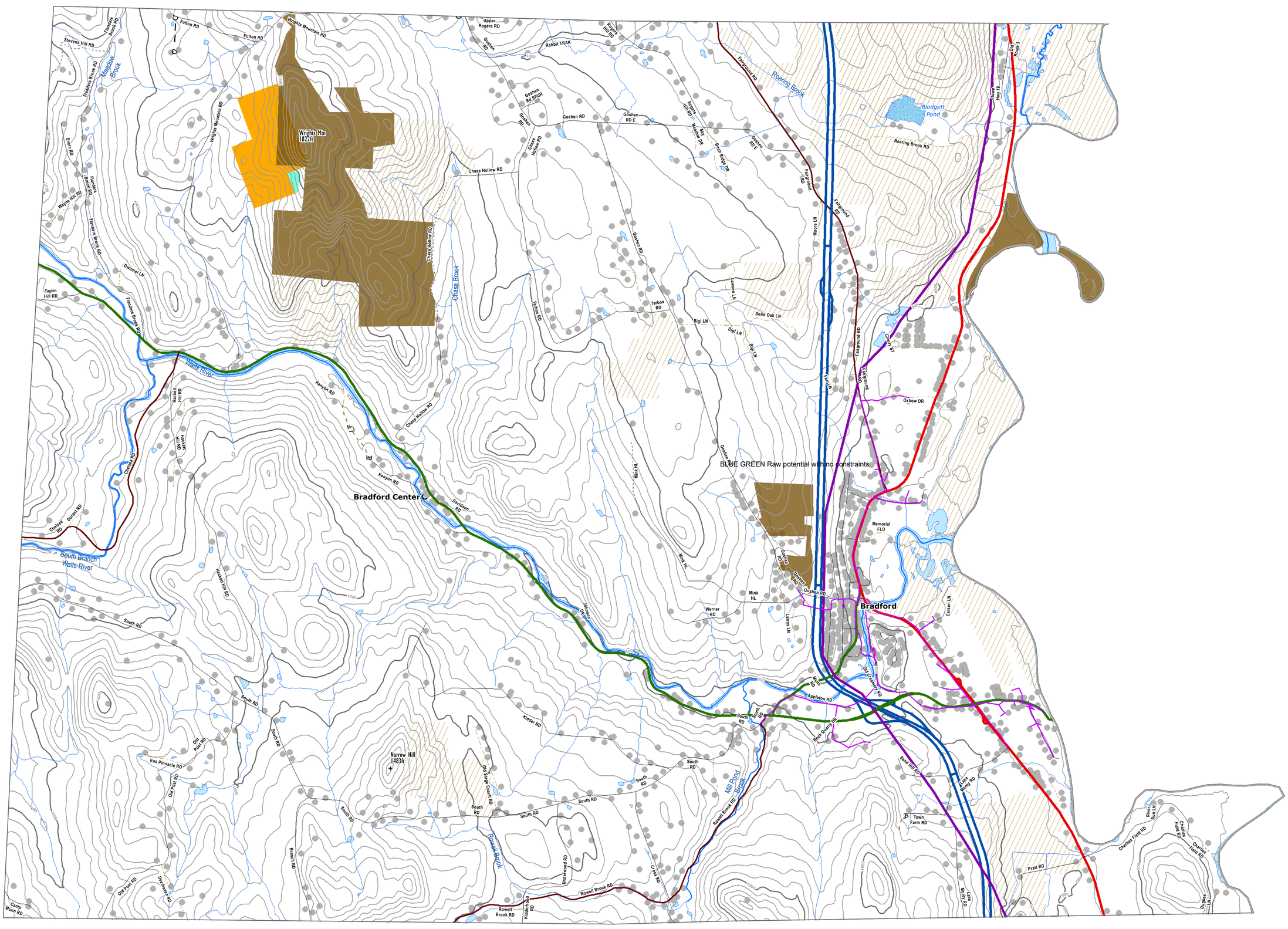
Conserved

- 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
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Vernal Pools (confirmed and unconfirmed layers)
DEC River Corridors
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State-significant Natural Communities and Rare, Threatened, and Endangered Species
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TRORC Unsuitable areas (included in known constraints)
FEMA Floodways
Wilderness Areas, including National Wilderness Areas
Class 1 Wetland

N

Two Rivers-Ottauquechee REGIONAL COMMISSION
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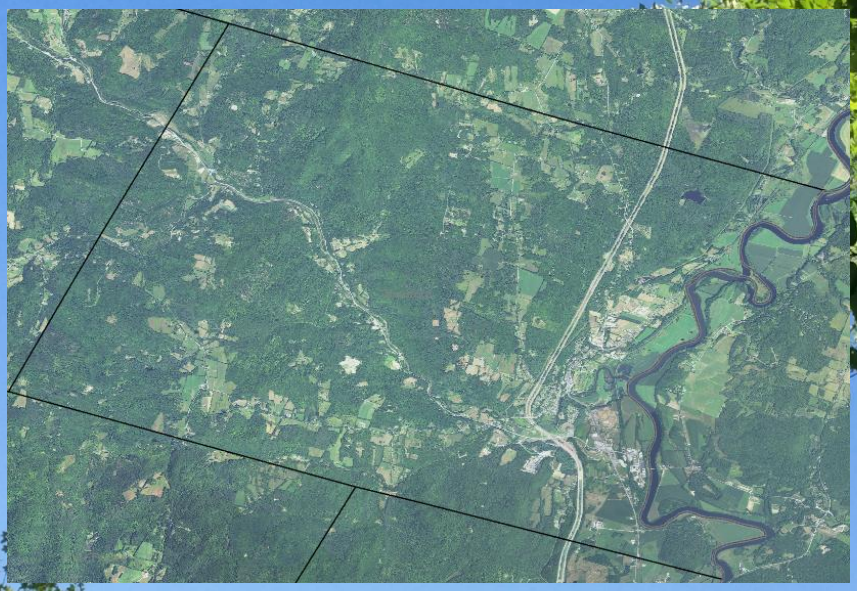
0 0.5 1 2 Miles

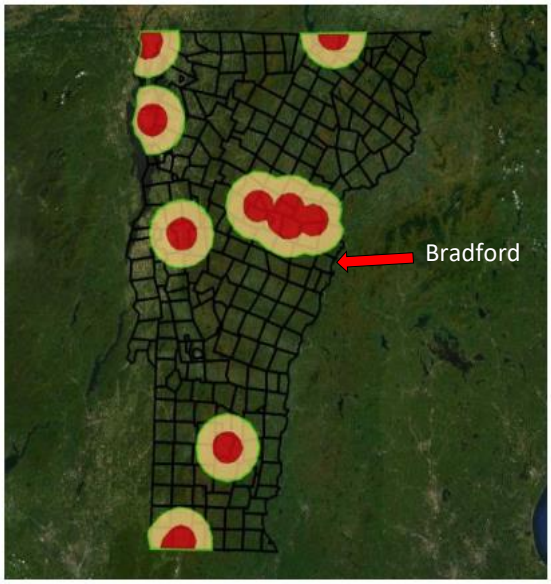
Bradford Roadside Ash Inventory Summary



AJ Follensbee
Ben Rubinfeld
4-14-2020

Introduction:
In February 2018 Emerald Ash Borer was found in Orange, Vermont. Emerald Ash Borer (EAB) is a beetle native to northern Asia. This insect was first discovered in the United States in Detroit Michigan in 2002. It has spread rapidly since then, mostly being moved by humans. EAB only attacks ash trees. Native ash trees have very little resistances to EAB, 95-99% of the trees infected will die. The larva of EAB feeds in the cambium layer of the tree. This feeding affectively girdles the tree by stopping the flow of nutrients. Infested trees will die within 5 years. On its own, EAB can move 2 miles a year. If it is not moved by humans through firewood or movement of contaminated wood. Since being discovered in Orange, EAB has been discovered in 8 counties as of 2019, Grand Isle, Washington, Windham, Orleans, Orange, Caledonia, Addison and Bennington Counties.

Areas of know infestation have been mapped by the Department of Forests, Parks and Recreation. As part of mapping these areas, FPR has split up known infested areas into Confirmed Infested and High-Risk Areas. Each surround a known infestation. Confirmed Areas are within 5 miles of a known infestation. High risk areas extend another 5 miles from the Confirmed Infested area. The town of Bradford is roughly 7-10 miles from a known EAB infestation. The north west corner of Bradford is within a High-Risk area. The red areas on the map are Confirmed Infested areas and the Yellow areas on the map are High-Risk Areas. As long as infested ash material is not moved into Bradford from an infested area we have 3-6 years before the EAB will spread into town on its own. It is critical to prepare for the eventual introduction of EAB in Bradford.



To help Bradford prepare for EAB it was decided to do a roadside ash inventory. This survey was designed to give the town an estimate of how many roadside ash trees the town is responsible for along town roads. This is important because when ash dies it becomes brittle quickly. Ash tends to have large branches, so once an ash trees dies these branches and will fall apart and become a hazard.

The survey was complete in March of 2020 by Ben Rubinfeld, Tree Warden for the town of Bradford and AJ Follensbee, member of the Bradford Conservation Commission. This survey provides an estimate of the number of trees by size class along Bradford's town roads. This will give an estimate of the cost to the town to have these trees either removed or treated. It is more costly to remove dead trees then it is to remove a live tree. There is also the possibility of a small offset to costs by selling the firewood these trees could provide.

The survey also mapped the location of ash trees along Bradford's town roads. Which should help with deciding which roads are priority.

Method:

- Trees were tallied using Vermont Urban & Community Forestry (UCF), Ash Tree Inventory Program on smart phones
- Only ash trees were counted during this inventory
- Tree were counted if they were within the Right of Way of the road or would impact the ROW if they die. The ROW was considered to be 50'
- Tree 4" and up in diameter were counted
- Trees were not counted if they under the power line ROW.
    - The power company will be responsible for these trees.
- Tree inventoried were put into 3 class sizes based on diameter size, 0-12", 12"-24" and 24"+. These 3 classes were predetermined in the UCF program.
- Trees with poor form, die back, dead and dead stems were given priority to for removal.
- All class 2 town roads were inventoried
- A portion of class 3 town roads were inventoried

Roads Surveyed

- Chase Hollow rd.
- Fairground rd.
- Goshen rd.
- Goshen rd. East
- Rogers Hill rd.
- Wrights Mountain rd.
- Kidder rd.
- Branch rd.
- Chelsea rd.
- Hackett Hill rd.
- South rd.
- Mill St.
- N. Pleasant St.
- S. Pleasant St.
- Wrights Ave.
- Old Creamery rd.
- Maple St.
- Cobblestone Aly
- Cottage St.
- Bank St.
- Rowel Brook rd.
- High St.

Results:

A total of 611 points were taken along town roads. These points represent 1,622 ash trees. Trees were only counted if they were not in the powerline ROW. A total of 20.75 miles of town road was surveyed. Bradford has 12.5 miles of class 2 town roads. All these roads were surveyed. Bradford has 39 miles of class 3 roads, 47% of these roads were surveyed or 18.25 miles. It was decided that Bradford's class 2 roads get higher amounts traffic. Therefore, the class 2 roads were surveyed completely. Because not all class 3 roads were survey it reasonable to assume there are an additional 600-800 trees on the remaining class 3 roads not surveyed.

Size Class	Total	Class 2 Roads	Class 3 Roads
4"-12"	1192	608	584
12"-24"	380	134	246
24"+	50	9	41
Total	**1622**	**751**	**871**

Most of the trees tallied were in the 4"-12" size class. This is a wide range of sizes to be lumped together. A 4" to 6" tree will take much less resources to remove then a 10" or 12". Roughly 60-70% of the trees in the 4"-12" size class are 6" or smaller.

The majority of the tree surveyed were in good condition and should no sign of dieback or serious defects. Only 21 trees we designated as high priority for removal due to their condition.

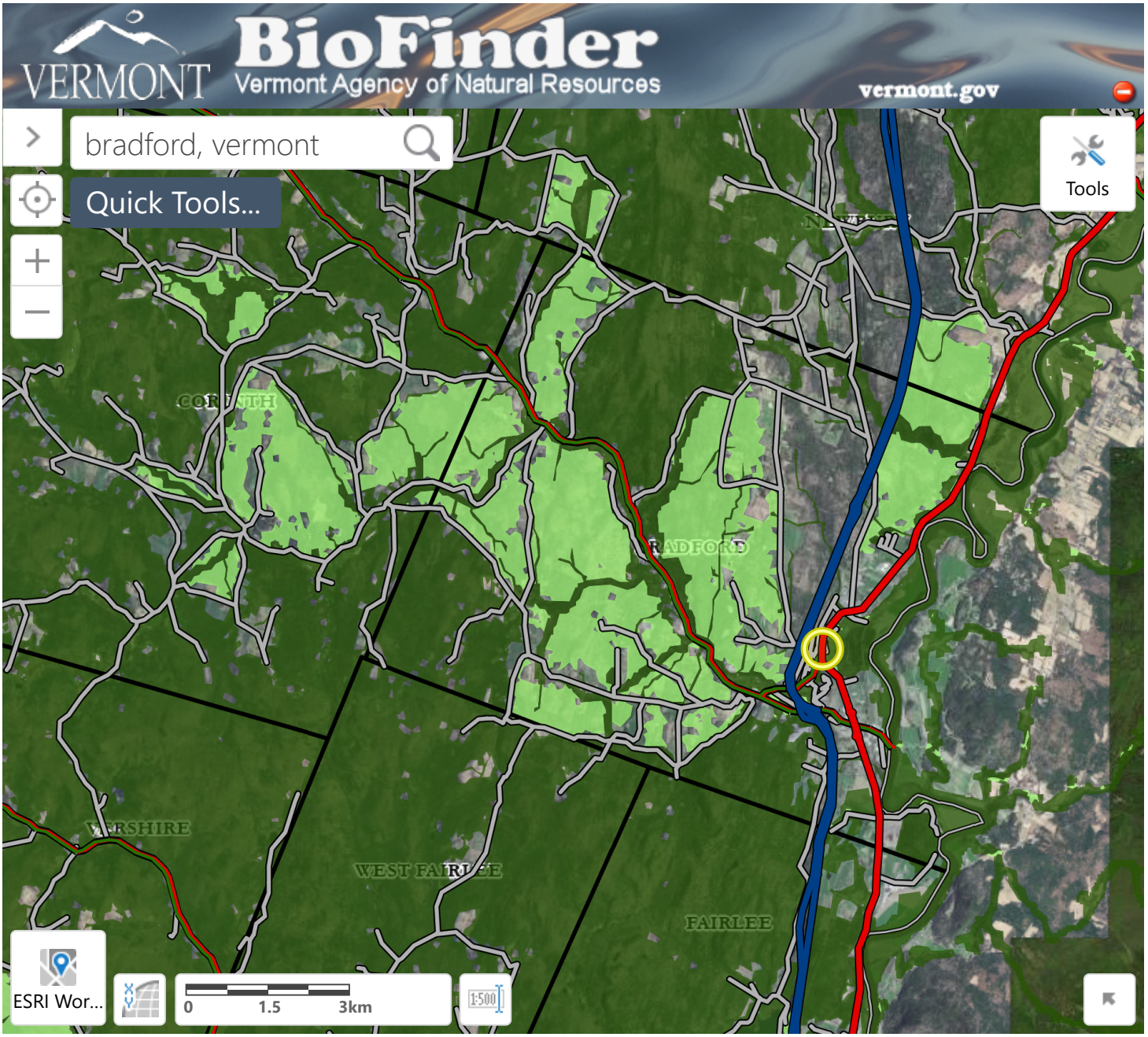
Suggestions:
The town has options for mitigating the impact of the EAB on the community. It is recommended that the town focus on the removal ash trees along it's town roads before EAB has begun to kill ash trees in town. As stated, dead trees are more dangerous and therefore more expensive to remove then trees that are alive.

The town road crew could do much of the removal of smaller less hazardous trees if time allows. Most of the trees surveyed were smaller than 12". Not all the trees could be hand fell due to overhead hazards. The road crew could focus on the dirt roads in town. If it is decided to have road crew remove ash trees, they should go through the Game of Logging Chain Saw Safety training beforehand.

There is the potential to hire a logger to remove ash trees a long the ROW's. This has happened in the town of Corinth. A logger was hired there to run his feller-buncher to remove trees along the ROW. A feller-buncher is a machine capable of grabbing trees, cutting them and felling them in certain spots. This option would be the least costly option to remove trees. This option works the best during the winter on Bradford's dirt roads. These machines are normally tracked and would damage paved roads. There are some of feller-bunchers with rubber tires. If a rubbered tired feller-buncher is found it could be run along paved roads. If this method is chosen it could be treated like a timber sale. Trees marked for removal could be tallied and volumes estimated. The volume removed could mitigate some of the costs.

Some trees will require that the town hire a tree removal company. Tree that are near high risk targets, like houses or powerlines will require the expertise of an arborist. If they are hired to only remove hazardous and dangerous trees this cost will be lowered. This option is the most expensive option and it is recommended to find alternatives to remove low risk trees.

Bradford should start to put a side some money in it annual budget for EAB preparedness. Ash removal along ROW's could cost $50,000-$75,000. These number double if tree removal is postponed until the trees are dead.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BioFinder
Vermont Agency of Natural Resources
vermont.gov
bradford, vermont
Quick Tools...
Tools
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FAIRLEE
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Bradford Natural Resources:

Prepared for the Bradford Conservation Commission

May 1, 2015

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1. Introduction

In 2014, Arrowwood Environmental conducted a natural resources inventory in the town of Bradford. The purpose of the inventory was to map and assess the wildlife habitat and upland natural communities that are important to the natural heritage of the town. This inventory built upon a previously conducted wetland inventory (Arrowwood Environmental, 2005). The information in these inventories can be used to inform town planning decisions, further develop the town's sense of community and establish priorities for natural resource conservation.

The scope of the 2014 inventory involved three phases: 1) a remote landscape analysis; 2) field assessments; and 3) final resource ranking and map creation. The methodology used in mapping and assessing these resources is presented in Appendix 1. The results of the inventory are presented below and divided into Upland Natural Communities and Wildlife Habitat sections.

2. Upland Natural Communities

2.1 Overview

The town of Bradford sits along the banks of the Connecticut River in the "Upper Valley" of Vermont. Topographically, the town can be divided into two broad areas: the relatively flat lowlands along the Connecticut River, and the rolling hills west of the River. These two areas correspond to the two different biophysical regions in the town, the Southern Vermont Piedmont (along the River) and the Northern Vermont Piedmont. Both of these regions are warmer and drier than the adjacent Green Mountain regions and this is reflected in the composition of the natural communities found here.

The town is also bisected by the Waits River, which flows into the Connecticut River near Bradford village. Along both the Connecticut and Waits Rivers, the soils and surficial geology of the town are dominated by sediments from glacial Connecticut Valley Lake. These are mostly lake shore sediments such as sand and gravel, though some areas contain finer lake bottom sediments such as silt and clay. Some areas along the Connecticut River also have more recent river sediments (sands and gravels) overtopping the sediments lain down by the glacial lake. The remaining parts of the town consist mostly of unsorted glacial till derived soils. These different geologic histories manifest in different land-

uses and natural communities. The flat, rich river bottom areas were typically the first to be converted to agriculture, and most remain in agriculture today. Those that have been abandoned are slowly reverting to forest. Since white pine typically becomes established on abandoned pasture, it is a common component of these recovering forests. Areas along the rivers that typically experience flooding may revert to floodplain forest communities.

The bedrock underlying the surficial geology in the town is largely composed of quartzite and phyllite from the Gile Mountain Formation. Lesser amounts of quartzite, limestone and schists from the Waits River and Albee Formations exist in the northeastern and northwestern parts of town. Both the Waits River and Gile Mountain formations often give rise to calcium rich ("sweet") soils due to their calcareous nature. This can result in enriched natural communities such as Rich Northern Hardwood Forests or Mesic Maple-Ash-Hickory-Oak Forests.

2.2 Bradford's Upland Natural Communities

The natural communities of Bradford are the product of the land, climate and history of the area. The geologic history outlined above gives rise to 20 different types of soils in the town. This geology and soils, combined with elevation, slope, aspect, landscape position and land-use history result in a diverse set of upland natural communities in the town. Hemlock Forests and Hemlock-Northern Hardwood Forests dominate the low, rolling hills in most of the town. Northern Hardwood Forests and White Pine-Northern Hardwood Forests are also common, especially on more gentle slopes or in areas reverting from agriculture. Because of the relatively warmer climate (compared to the spine of the Green Mountains) red oak community types are also very common. This includes large acreages of Mesic Red Oak-Northern Hardwood Forest and a few small areas of Dry Red Oak-Pine Forests.

A summary of the upland natural communities is presented in Table 1. The most abundant natural community type, in both number of occurrences and total acreage is the Hemlock-Northern Hardwood Forest. Combined with the Hemlock Forests, these communities comprise 2/3's of the forest types in the town.

Table 1. Summary of Upland Natural Community Types in Bradford		
Community Name	**Number of Occurrences**	**Total Acreage**
Dry Red Oak-Pine Forest	3	20.7
Hemlock Forest	38	1068.6
Hemlock-Northern Hardwood Forest	172	8861.1
Northern Hardwood Forest	151	1144.5
Plantations	10	70.8
Mesic Red Oak-Northern Hardwood Forest	45	1031.3
Red Spruce-Northern Hardwood Forest	15	428.2
White Pine-Northern Hardwood Forest	121	1843.9
Total Acreage of Forested Communities		**14752.5**

2.3 Significant Upland Natural Communities of Bradford

The methodology for determining state significance of natural communities is based on the Vermont NonGame and Natural Heritage Program guidelines and is detailed in Appendix 1. The significant upland communities identified in Bradford are summarized in Table 2 and shown in Figure 1. A description of each significant community is included below.

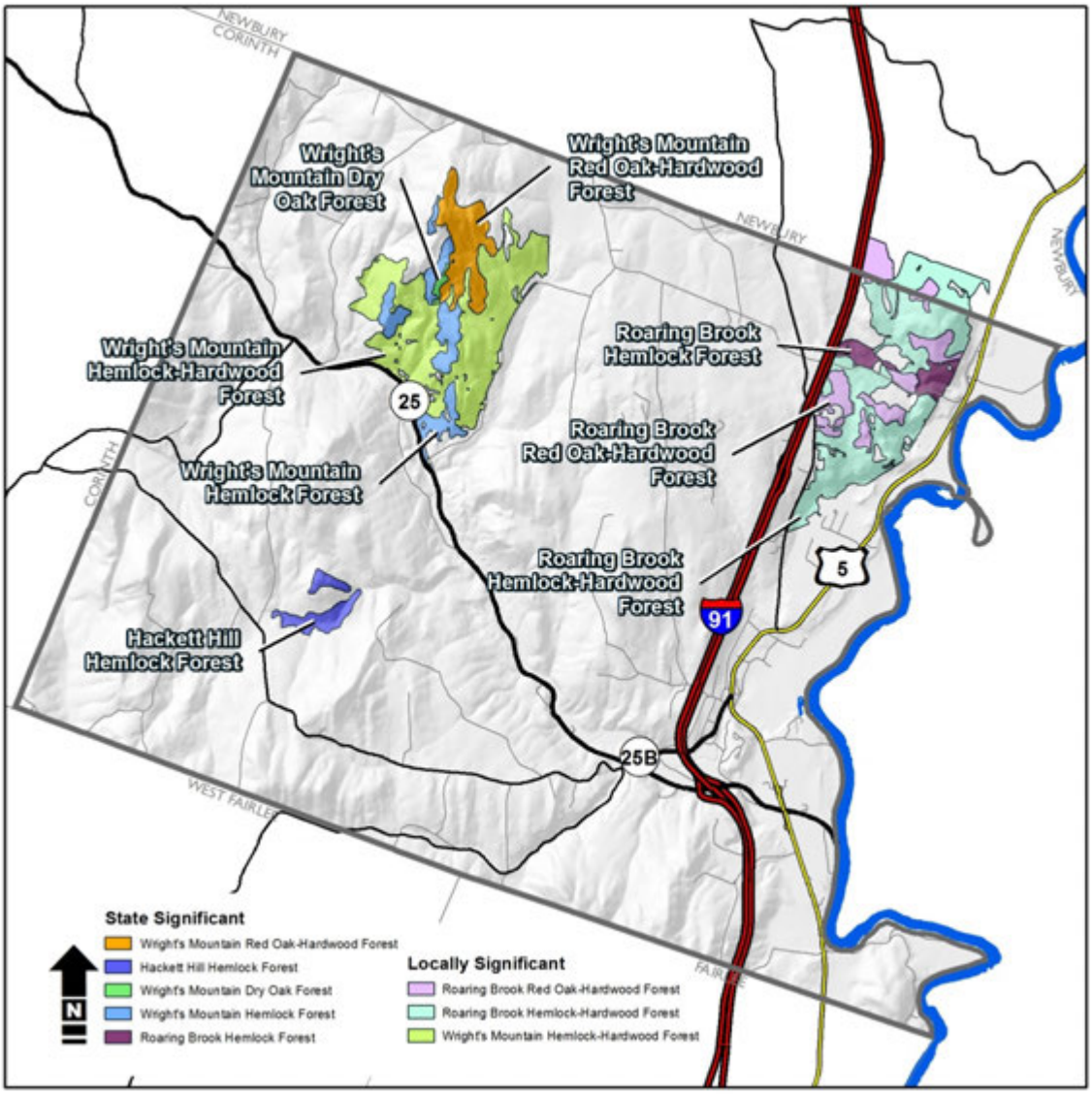

Figure 1. Significant Upland Natural Communities Map

Table 2. Significant Upland Natural Communities in Bradford

Site Name	Natural Community	Size (acres)	Locally Significant	State Significant
Hackett Hill Hemlock	Hemlock Forest	61	Yes	Yes
Roaring Brook Forests	Hemlock-Northern Hardwood Forest	520	Yes	No
	Hemlock Forest	64	Yes	Yes
	Mesic Red Oak-Northern Hardwood Forest	178	Yes	No
Wright's Mountain Forests	Dry Red Oak-Pine Forest	8	Yes	Yes
	Hemlock Forest	150	Yes	Yes
	Hemlock-Northern Hardwood Forest	531	Yes	No
	Mesic Red Oak-Northern Hardwood Forest	144	Yes	Yes

2.3.1 Hackett Hill Hemlock

The Hackett Hill Hemlock forests consist of two stands of hemlock near the West Bradford cemetery. One of the stands occupies the slopes above a tributary of the Waits River, the other occupies the summit and eastern slope of a small hill. Both sites are typical of the Hemlock forest community in that hemlock trees dominate the canopy to the near exclusion of other species. Red spruce, red maple and sugar maple are found in smaller amounts, but not enough to provide extensive canopy openings. Understory vegetation is sparse in these stands, largely due to the dense conifer canopy. Bedrock outcrops and scattered surficial rock are common in these sloped forests.

Figure 2. The Hackett Hill Hemlock Forest contains numerous rock outcrops.

The Hemlock Forest community is relatively common in the state, but large examples in good condition are infrequent. The Hackett Hill forest shows very little sign of human disturbance. Indeed, the northern stand may have areas of old growth hemlock. The size, community condition and landscape position combine to make these forests state significant examples of the Hemlock Forest natural community.

2.3.2 Roaring Brook Forests

Figure 3. Roaring Brook Hemlock-Northern Hardwood Forest

The Roaring Brook Forests sit in the northeast corner of the town and contain some extensive hemlock and red oak forest communities. The matrix, or background, forests at this site are Hemlock-Northern Hardwood Forests. Taken together, these forests comprise 520 acres. The canopy is largely a mixture of hemlock and red oak with lesser amounts of paper birch, white ash, beech and hop-hornbeam. The shrub layers consist mostly of red oak, hemlock and beech

regeneration. The understory is variable but often includes bracken fern, hay-scented fern, sword fern and intermediate fern.

This is a variable site, in terms of canopy cover and species dominance, but clearly has a history of responsible forest management. Areas of younger forest are intermixed with older forests where red oak reach 18-20" DBH. There are no signs of invasive species or other human impacts to most of these forests, though the two major stands are separated by the infrequently used Roaring Brook Road. Overall, this is a very nice forest; its size, community condition and landscape position combine to make it a state significant natural community.

Though smaller than the mixed type, the Hemlock Forests in this area are much more distinctive. Located on the banks and slopes above Roaring Brook, these forests are characterized by a dense hemlock canopy, accompanied by occasional red oak, white pine, and red spruce. The dense conifers cast deep shade and create a forest with virtually no understory. Occasional intermediate and marginal wood ferns and bunchberry herbs are found, but only where some scattered light reaches the forest floor. Bedrock outcrops are common, colonized by sparse lichens and polypoid ferns. The stand to the west also contains some flatter areas that appear to have been pasture in the past. These sites contain more open grown trees and grade into the White Pine-Northern Hardwood Forest to the north. Though common in the state, the Hemlock Forest community does not typically occupy large areas. This 150 acre forest is exceptional in that regard. This, combined with the community condition and landscape result in a state significant designation.

Figure 4. Hemlock Forests occupy the banks of Roaring Brook

Figure 5.Mesic Red Oak-Northern Hardwood Forest at the Roaring Brook Site

The Mesic Red Oak-Northern Hardwood Forests in this area are scattered throughout the site in 7 different stands. These have much in common with the surrounding mixed types and the lack of conifers may be the result of forest management. The canopy consists of a mixture of red oak, red maple, white birch, beech and occasional white pine. They differ from the mixed types by lacking a significant conifer component in the canopy. The shrub layers consist of regenerating canopy species as well as witch hazel shrubs. The herbaceous layer is variable but often includes bracken fern, club-mosses, sword fern and Pennsylvania sedge. Aside from forest management, there is no sign of invasive species or other human disturbance. These sites meet the criteria as a locally significant natural community.

2.3.3 Wright's Mountain Forests

The forests in the Wright's Mountain area are the crown jewel of natural communities in Bradford. They are one of the largest blocks of forest and contiguous habitat blocks and contain a wide diversity of natural community types. Particularly unique is the example of Dry Red Oak-Pine Forest. This is an uncommon natural community in the state and is restricted to dry ridges and summits on south-facing slopes. The southern exposure coupled with shallow, droughty soils results in conditions where the maples and ashes cannot compete with red oak. In some cases, like the example at Wright's mountain, the conditions are severe enough that even the red oak trees are stunted, giving the community an elven woodland appearance. In addition to red oak, the canopy also contains

Figure 6. Dry Red Oak-White Pine Community at Wright's Mountain

scattered white and red pine trees. All of these species have evolved to flourish at sites that routinely burn.

The understory consists of hop-horn beam, canopy species and a dwarf shrub layer of blueberries. The herbaceous layer consists mostly of sedges and grasses, giving a lawn appearance. This "lawn" however, is frequently interrupted by bedrock outcrops and surficial rocks. Mosses and lichens can be found on these rock outcrops and dry soil margins. This natural community appears to be in very good shape, showing no signs of recent logging or other human disturbance and no occurrences of invasive species. The condition, size and landscape of this forest combine to make this a state significant example of this natural community.

Figure 8. The Wright's Mountain Hemlock forests contain bedrock outcrops and a dense conifer canopy

Equally impressive in this forest are the Hemlock Forests that surround the Dry Red-Oak Pine Forests. These are sites of steep, east and west facing slopes with shallow soils and frequent bedrock ledges and outcrops. The dense conifers give the forests a dark and secluded feel. Hemlock, the main canopy species, can form nearly 90% cover in some places. Typically, hemlock shares the canopy with scattered red oak and an occasional red pine. The red pine is especially interesting in that it shows signs of historic fire in these communities. Because of the dense conifers, the understory is sparse. There are a few scattered seedlings of the canopy species but virtually no herbaceous layer. This is a common community type in Vermont (S4-ranked) but large examples like the ones found in the Wright's Mountain are uncommon. The size, condition and landscape

Figure 7. The Hemlock-Northern Hardwood Forest at Wright's Mountain contains a mix of hardwoods and hemlock.

together warrant a state significance designation for these forests.

In the southern half of the Wright's Mountain land, the matrix, or background forest is a large Hemlock-Northern Hardwood Forest. This forest is a mixture of hemlock, red and sugar maple, red oak, and white pine. The understory is highly variable depending on local conditions, but typically includes shrubs of beech, balsam fir and other canopy species. The herbaceous layer is dominated by ferns such as bracken fern and hay-scented fern and sedges such as graceful sedge and Pennsylvania sedge. Various parts of this forest have more recent signs of logging, but the forest appears to be regenerating well. These areas are much younger than others and contain more canopy openings. Given the variations in topography, aspect, soils and human management, this is a highly variable forest. This is a common natural community in the state, and this site falls short of the state significance standards. However, because of its size and condition, it should be considered locally significant.

Figure 9. The Devil's Den site is surrounded by Mesic Red Oak-Northern Hardwood Forest

Devil's Den, the centerpiece of the Wright's Mountain forests, is part of a 144 acre Mesic Red Oak-Northern Hardwood Forest. This forest occupies the north central portion of the Wright's Mountain forests and contains inclusions of Northern Hardwood Talus Woodland and Rich Northern Hardwood Forest as well as areas that tend toward Dry Red Oak-Pine forest. This variation is the result of variable topography, aspect and soil conditions that exist throughout this site. A common theme in the canopy is red oak, but this can be accompanied by sugar maple, ash, paper and yellow birches, and red and white pine depending on the microsite. The understory is likewise variable and can contain richer herbs such as bellwort and geranium or species indicating more "standard" conditions such as wild sarsaparilla, lycopodiums and Canada may-flower. There is sign of logging in some areas from about 20+ years ago, but the community seems otherwise free from human-caused disturbance. The combination of community condition, size and landscape position make this a state significant natural community.

2.3.4 Potentially Significant Sites

In addition to these significant communities, there are a number of communities that may be significant but could not be visited during this inventory due to time constraints. These potentially significant sites were identified during the remote mapping and based on size, landscape position and community type. A final determination of significance, however, can only be made after a site visit. So these sites were identified as "Potentially" significant in the attached GIS layers.

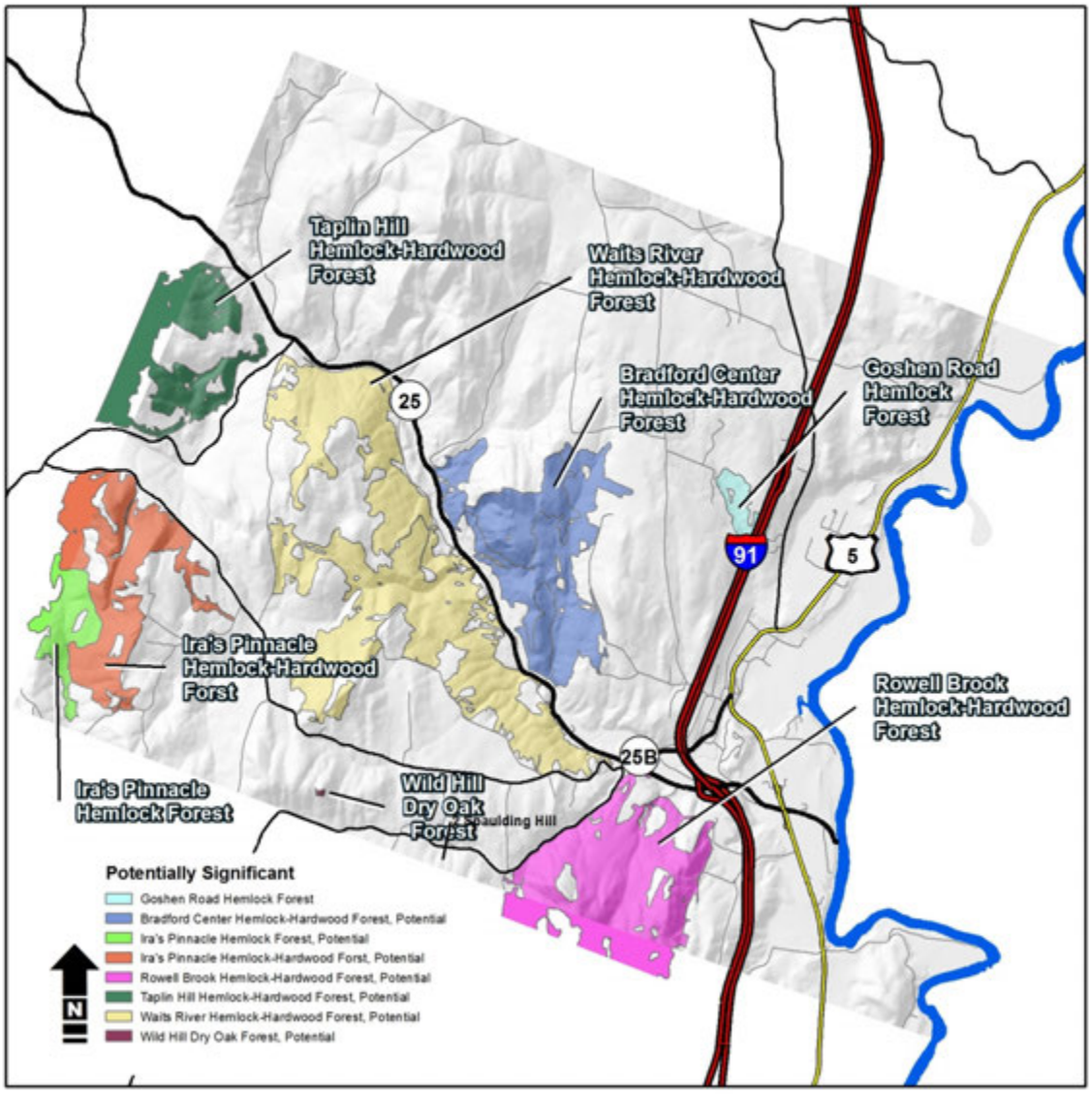

Figure 10. Potentially Significant Natural Communities

Of particular interest is the very large Waits River Hemlock-Northern Hardwood Forest. This forest consists of two nearby stands together comprising 1345 acres. A stand of this size typically has a lot of variation in terms of forest composition, land-use history and condition, but from remote sources, this large forest appears to be intact.

Other mixed hemlock forests such as the Pond Brook, Bradford Center and Ira's Pinnacle sites may be significant communities given their size. There is also a very small site, the Wild Hill Dry Oak forest that warrants investigation. From remote sources, it appears that this may be a dry oak type similar to the one found on Wright's Mountain. As such, even small acreages of this uncommon community could be significant. Future inventory work is warranted to determine the significance of these sites.

2.4 Management Recommendations for Significant Upland Communities

Management recommendations for upland communities that are considered significant depend largely on the type of forest, how rare the community is, and how large of an area it typically occupies on the landscape. Communities are broken up into rarity ranks (S-ranks, see Appendix 1) as well as typical patch size. Large types like the Northern Hardwood Forest occur as matrix-forming forests. Forests like Hemlock-Northern Hardwood Forest occur in large to medium patches and forests like the Dry Red Oak-Pine communities occur in small patches.

2.4.1 Matrix Communities

Large, common, matrix-forming communities such as Northern Hardwood Forests are much more resilient to small perturbations than rarer communities that occur in small patches. Activities such as well-planned logging operations would not likely have a detrimental effect on the overall community. Indeed, a forest management plan that incorporates wildlife habitat and mimics natural disturbance regimes can increase diversity on the landscape and ensure long-term regeneration of the stand. Because they are larger and more resilient, these forests can readily "recover" from most logging operations if the managers adhere to the Best Management Practices. Maintaining the integrity of these communities is more an issue of limiting the overall fragmenting development that would break up the forests and degrade their condition. For this reason, infringement by residential development on the edges of these communities is not a cause for concern as much as the development of large fragmenting features into the heart of the community.

2.4.2 Patch Communities

The recommended management for large-medium patch communities (such as Hemlock Forests and Rich Northern Hardwood Forests) is similar to that presented above for the matrix communities. It differs primarily in the matter of scale. Large fragmenting developments that cut across or reach into the center of these sites should be discouraged. Some degree of encroachment around the margins of these sites is tolerable as long as it does not impact or degrade a significant section (>20%) of the community. If some impact to these communities is inevitable, development that is clustered near the edges is preferable to those that are scattered over a wider area. Logging operations in medium-patch communities can also occur and not degrade the condition of the stand. However, large clear cuts that may be appropriate in matrix communities are not typically appropriate in these sites. Smaller patch cuts and thinning operations are generally recommended.

Communities that occur in smaller patches such as Dry Red Oak-Pine Forests are generally more sensitive to disturbance than larger patch communities. The site conditions that give rise to these communities (geology, soils, slope, aspect etc.) are typically localized. This, coupled with the fact that they are small, means that any development in part of the community could have a detrimental effect on the entire stand. Responsible forest management operations in these sites can also be a challenge. If any cutting is to occur, only light selective logging is recommended. Fortunately, the trees in many of these sites are short, stunted and have very little marketable value. Because of their uncommon or rare status, excluding these sites from forest harvest operations is sometimes recommended.

3. Wildlife Habitat

The wildlife habitat in this study is defined by Contiguous Habitat Units (CHU). Each CHU is an assemblage of wildlife habitat features such as forested riparian buffers, ledges, deer wintering areas, wetlands, mast stands and early successional habitats which function together as a unit of diverse and relatively continuous wildlife habitat. The largest forested area, often the most valuable wildlife habitat, is the core area (largely free from most human activities). CHUs are largely a human-derived construct (as they are bound by our roads), but they represent the largest contiguous wild areas in the study area. The CHUs can be the basis of wildlife management and planning for wildlife in the town of Bradford.

3.1 CHU Wildlife Habitat Components

In constructing CHUs, core forest areas are combined with early succession habitats, forested riparian habitats, wetlands, deer wintering habitat, mast stands, and ledge or cliff habitats. In some cases these specific wildlife habitat features (like riparian areas) may not add new area to the already mapped central core as they are often already subsumed within the core area boundary. In other cases (when they are tangential but not within the mapped core area) they add new area and additional acreage to the CHU. Each of the following habitat components can serve as a source of food or water, seasonal or year-round habitat, escape cover, breeding and rearing habitat, movement habitat or all of the above for one or more species of wildlife. Each of the CHU component features is discussed in detail below.

3.1.1 Core Area

Core habitat is forested wildlife habitat that is far removed from human activities and their artifacts such as roads, houses, and active farmlands. For the purposes of this analysis, it is defined as forested land 100 meters or more from regular human disturbance such as development, open fields and roads. This remote wildlife habitat is qualitatively distinct from small, fragmented habitats, in that it provides important mating, nesting, feeding, and denning habitats for species that cannot survive in these human-dominated landscapes. These animals typically require travel corridors between various landscape patches that provide other distinct habitat elements.

Core habitat is generally characterized as having a lower amount of forest edge habitat. Also in core areas, edge habitat is often "soft" and the result of differences in ecological conditions such as a variable site aspect. In contrast, our human-caused "abrupt or hard" edges, occur where different land-uses have created different cover types or ages of communities. Edge habitat, and especially abrupt edge habitat, is characterized by extremes in climatic variables such as temperature and wind speed. Bird species composition and behavior is often different in edge habitat.

Figure 11. Woodpecker snag tree

A wide-variety of birdlife in the northeast utilizes the larger contiguous forests available only in core areas. These birds include species such as the broad-winged and red-shouldered hawks, owls, and forest songbirds like the ovenbird, wood thrush, scarlet tanager, pileated woodpecker, and the Canada and black and white warblers. Several of these species suffer from greater nest predation (by animals such as squirrels, raccoons, snakes and other birds) and nest parasitism (by other birds such as the brown-headed cowbird) where nesting grounds are near human disturbance and the habitat edges it creates. Bird populations throughout Bradford and the region, therefore, benefit from the deep forest "interior" habitat provided by core areas See Figure 12 for core forested habitat locations in Bradford.

Figure 12: Core Forest Map

Remote wildlife habitat found in core areas can provide the various habitat elements for wide-ranging species such as fisher, bobcat, and black bear. Core areas are often hilly or mountainous, without easy access, and only rarely or seasonally visited by landowners, hunters, and loggers. Wide ranging species thrive in the remote habitat of the core areas.

Core areas are often the most important "source areas" where reproductively active female bear, bobcat, fisher, and coyote can defend territories, have their young and contribute to the overall population of these species. In general, the larger the core area size, the greater the population (and territories) of individual species it can support. Larger populations are generally more stable over

Figure 13. Black bear

longer periods. Core areas often provide the breeding grounds and nurseries that support relatively high populations of these deep forest species. Although most human wildlife observations may be near town, within our small woodlots and crossing roads, it is these core areas that produce a surplus of young and without them many populations would likely decline.

The smaller more fragmented wildlife habitats throughout Bradford, are dependent upon these large core habitats, for maintaining stable, self-sustaining populations of species that have relatively large home ranges (such as bear, bobcat and fisher). Animals living near humans, roads, pets, hunters, and trappers suffer higher rates of mortality than do animals deep in core wildlife habitats. The long-term maintenance of wildlife populations in Bradford may be dependent on keeping these core habitats biologically meaningful and free from deleterious fragmentation.

3.1.2 Ledge, Talus and Cliff Habitat

Ledge habitat is generally associated with steep land and vertical rock structure. Vertical rock structure itself is only valued by a limited number of species such as nesting peregrine falcon, common ravens, and the small-footed bat. If the ledge is broken, that is, with crevices, hollows and caves, it becomes important habitat for a wider variety of animals.

Figure 14. Talus slope

In many areas throughout the northeast, bobcats use ledges for courting and breeding grounds and the broken ledge (often at the foot of a ledge) for birthing and rearing of their young. Broken ledge is considered defendable from predators like the coyote that may try to kill and eat bobcat young. Bobcats (and other animals) are reported to also utilize broken ledge (similar to coyote and fisher) when it's cold and snowy as well as when it's hot (for relief from the heat). There is some evidence that ledges facing south and west (areas that generally are more exposed to the sun) may receive higher use by certain species and are more valuable to wildlife.

Porcupines and raccoons also live in ledge hollows, under larger rocks, and in deeper cave-like structures in ledge and talus environments. Fisher and coyote often use these sites for protection from the weather while moving throughout their home ranges. Ruffed grouse and small rodents often utilize these areas for varying periods of time. Figure 15 shows the likely ledge and talus areas that were identified in Bradford, and more are assumed to exist.

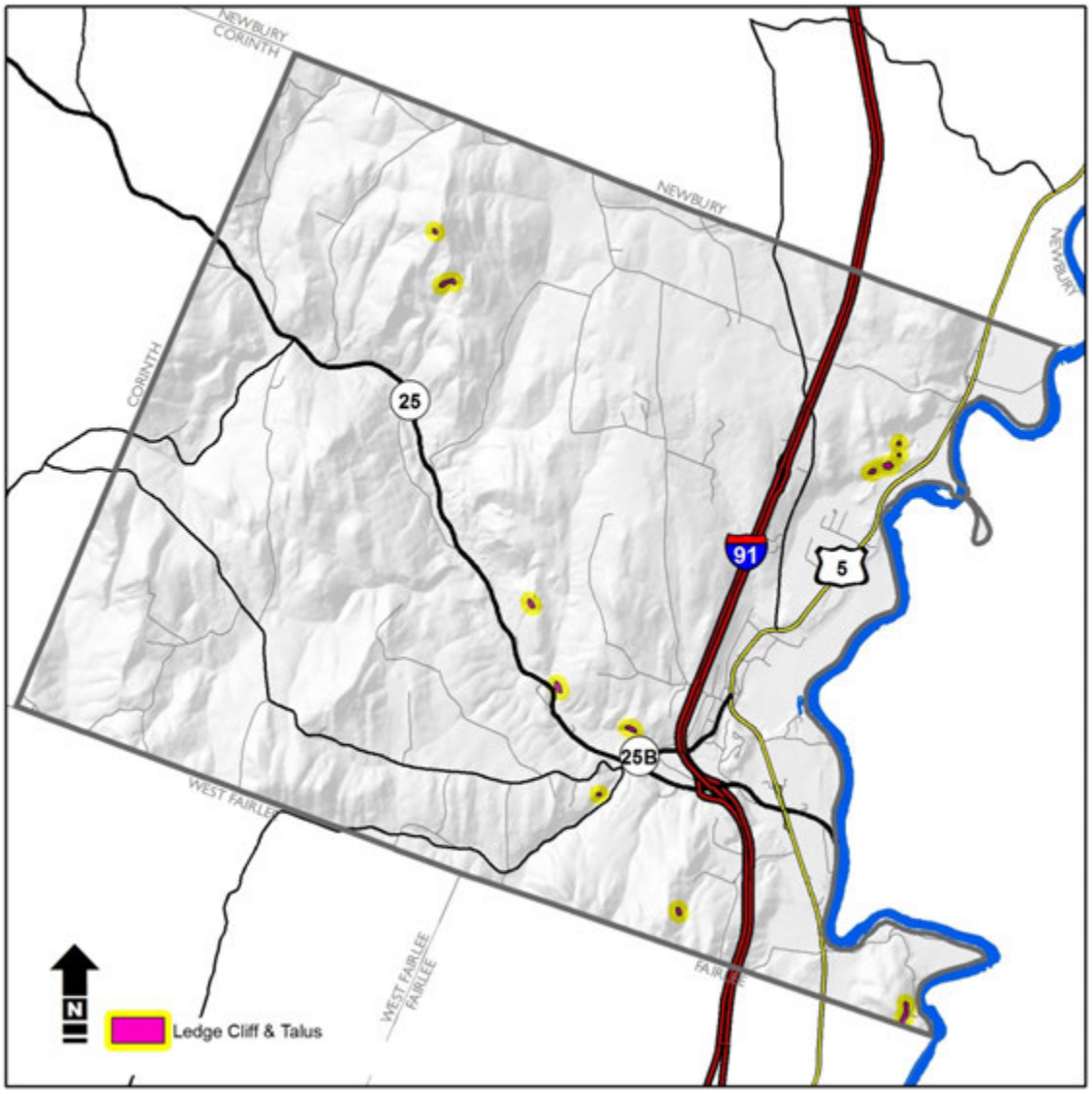

Figure 15: Potential Ledge, Cliff and Talus Habitats

3.1.3 Bear Wetlands

Black bear utilize a wide variety of wetlands during the spring and summer months. Forested, shrubby, beaver-flow wetlands, and forested seeps are sought out for the flush of early vegetation that often grows in these environments. In the early spring, wetlands with ground-water discharge promote an early growth of leafy green vegetation at a time when the trees are still barren of nutritious buds and new leaves. Black bears (as well as deer and turkeys among other animals) will utilize this food source and also search out plant roots, grasses, sedges and ants in these environments. Free flowing water is

also available at many of these wetlands. Bear wetlands typically have shrubs or tree vegetation nearby which provide concealment.

Figure 16. Potential bear wetland

Throughout the Bradford area forested seeps are probably the most heavily utilized wetlands by bear. In many locations these seep wetlands are located in remote areas relatively close to bear denning areas far away from humans. As such, they warrant special protection for their wildlife value.

The wetlands identified as preferential bear habitat in this study represent a mix of wetlands that were either observed in the field to have sign of bear use or were determined to be potential candidates to fulfill bear wetland habitat requirement (i.e. sufficient cover for bear use and potential food resources) based on their community type and cover characteristics.

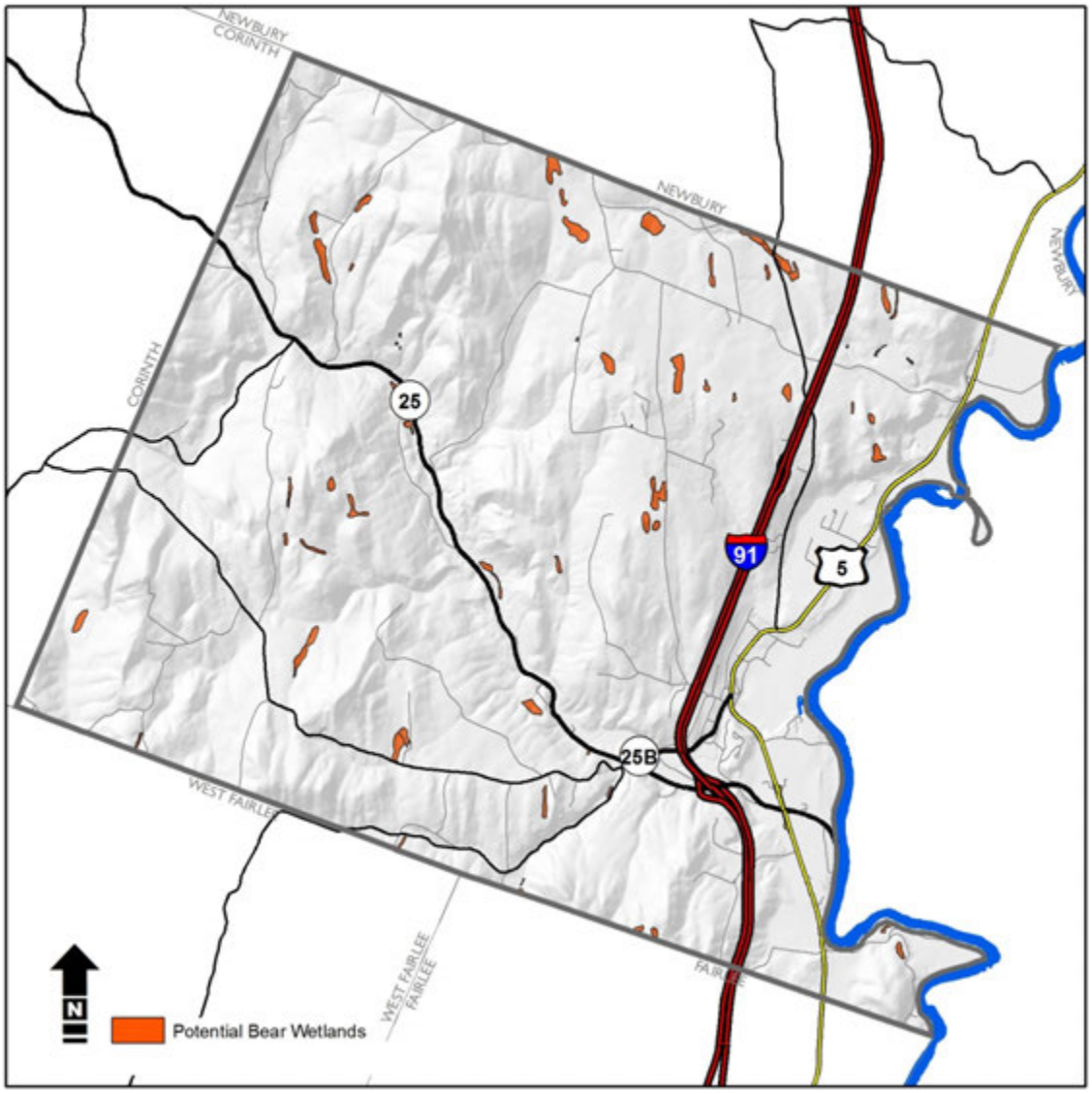

Figure 17: Map of Potential Bear Wetlands

3.1.4 Early Successional Habitat (ESH)

ESH is forested habitat that is characterized by regenerating young, often dense shrubs, saplings or trees. Active forest management or natural disturbances such as disease infestation, ice storms, or wind blow can sufficiently open the forest canopy to sunlight and encourage a new growth of woody vegetation. Old fields and power line ROWs with a substantial shrub component were also identified as ESH in this study. ESHs are important for many species of birds and mammals. Bird species that thrive in areas with tree saplings and shrubs include: the song sparrow and field sparrow, chestnut-sided and

golden-winged warbler (rare), common yellowthroat, gray catbird, indigo bunting, brown thrasher, American woodcock, and ruffed grouse.

Figure 19. Bobcat

ESH that is interspersed with older forestland, old fields, and wetlands harbors many small mammals that are prey for predators. Snowshoe hare, woodchucks, white-footed and woodland jumping mice, and shrews are often found in high densities in areas of successional patches on the landscape. Red and gray fox, coyote, ermine, skunk, raccoon, and bobcat will search these patches for food. Black bears and other animals will utilize these areas extensively in years when berry-producing shrubs are thick with fruit.

Figure 18. Hare

Recently, early succession patches within an otherwise forested matrix have been shown to provide feeding habitat to bird species that were otherwise thought to be forest "interior" specialist. These birds visit the fruit and insect rich openings between the end of the breeding season and beginning of migration to bulk up on the copious foods in preparation for the long migratory flights.

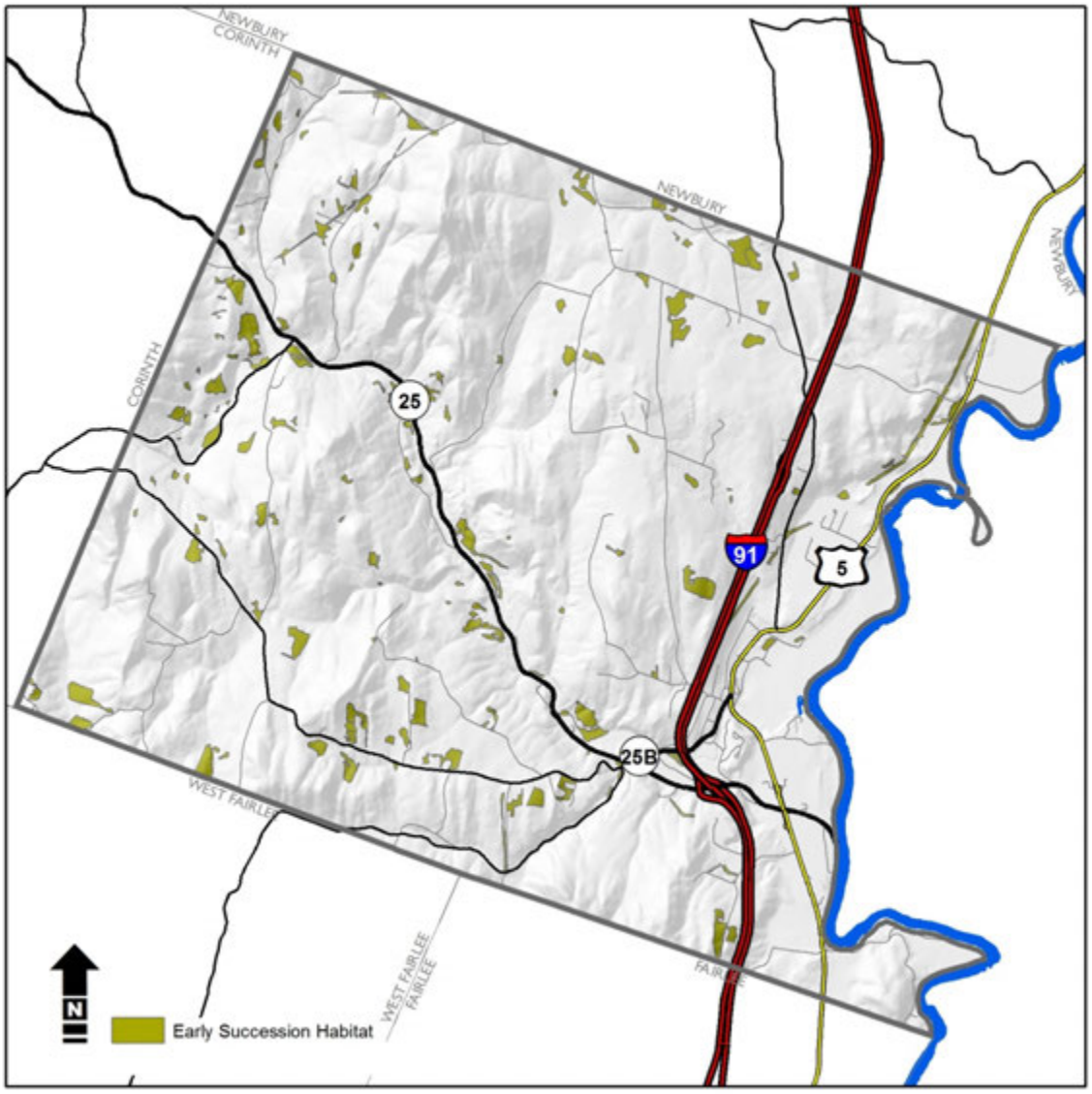

Figure 20: Early Successional Forest Habitat Map

3.1.5 Forested Riparian Habitat

Forested streamside riparian habitats are important for species that utilize the aquatic habitats, terrestrial vegetation and cover that are provided. Riparian forested vegetation anchors the stream shoreline and limits streambank erosion. It also provides coarse woody debris to streams which adds to the stream structural and substrate diversity as well as provides food that fuels stream food chains. In addition, the tree canopy provides critical shade important for maintaining cooler water temperatures necessary for fish survival. The contribution of coarse woody debris (especially during leaf-fall on low order streams) to energy budgets of shady headwaters streams is pronounced.

Figure 21. Waits River forested riparian area

Amphibians such as the green frog and the Northern dusky and two-lined salamanders live along streams in forested habitat and utilize the adjacent riparian environment. The raccoon and long-tailed weasel use streamside forested habitats to hunt for food and for denning habitat. The moose and white-tailed deer use streams and streamside forested habitats for cover and water. Aquatic animals such as the river otter, mink, muskrat, and beaver use streamside vegetation for cover, denning and food. Several species of bats such as the little brown myotis and the big brown bat use these environments to hunt for insects. Birds such as the belted kingfisher, wood duck, red-shouldered hawk, snipe, Eastern screech and barred owl, the wood pee-wee and alder flycatcher, American gold finch, tufted titmouse, and the yellow, Canada, and cerulean warblers make extensive use of forested riparian habitats.

Forested riparian areas also function as important travel corridors for a variety of wildlife species. Often these zones are the only treed route affording cover and facilitating movement.

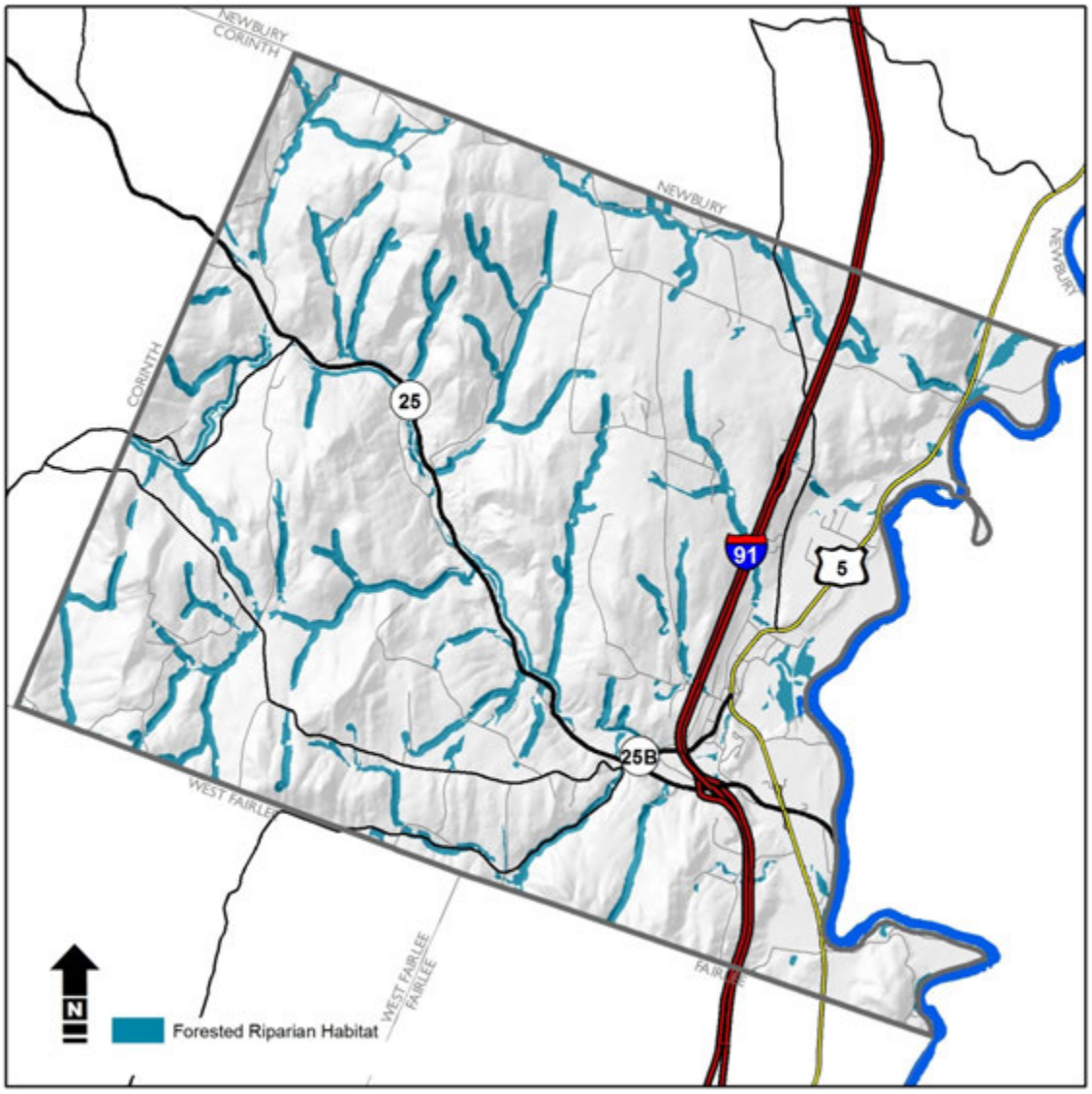

Figure 22: Forested Riparian Habitat Map

3.1.6 Mast Stands

Masting trees are those which synchronize fruit production in an area. Within Bradford "hard mast" trees are Northern red oak and American beech trees. These trees, when found clumped into stands, are regularly frequented by many species of wildlife.

Various sized beech and oak stands have been identified within Bradford. When beech and oak stands are remote, use by black bear is generally higher than stands near human activities. Wildlife attracted

to the fruits of American beech (beechnuts) and oak trees (acorns) include squirrels, wild turkey, deer, and bear.

Figure 23. Bear scarred beech tree

Bear will climb the beech trees in fall to gather beechnuts, leaving scars from their climbing activities. They often return in spring and scavenge beechnuts from the ground under the beech trees. Bears act in a similar fashion in search of acorns, however, their climbing activities do not usually leave persistent scars and their use is therefore difficult to detect on the tree itself.

This study compiled known mast resources, field identified stands and utilized natural community designations to identify probable stands of mast trees. Additional mast stands, especially American beech stands are likely present on the landscape.

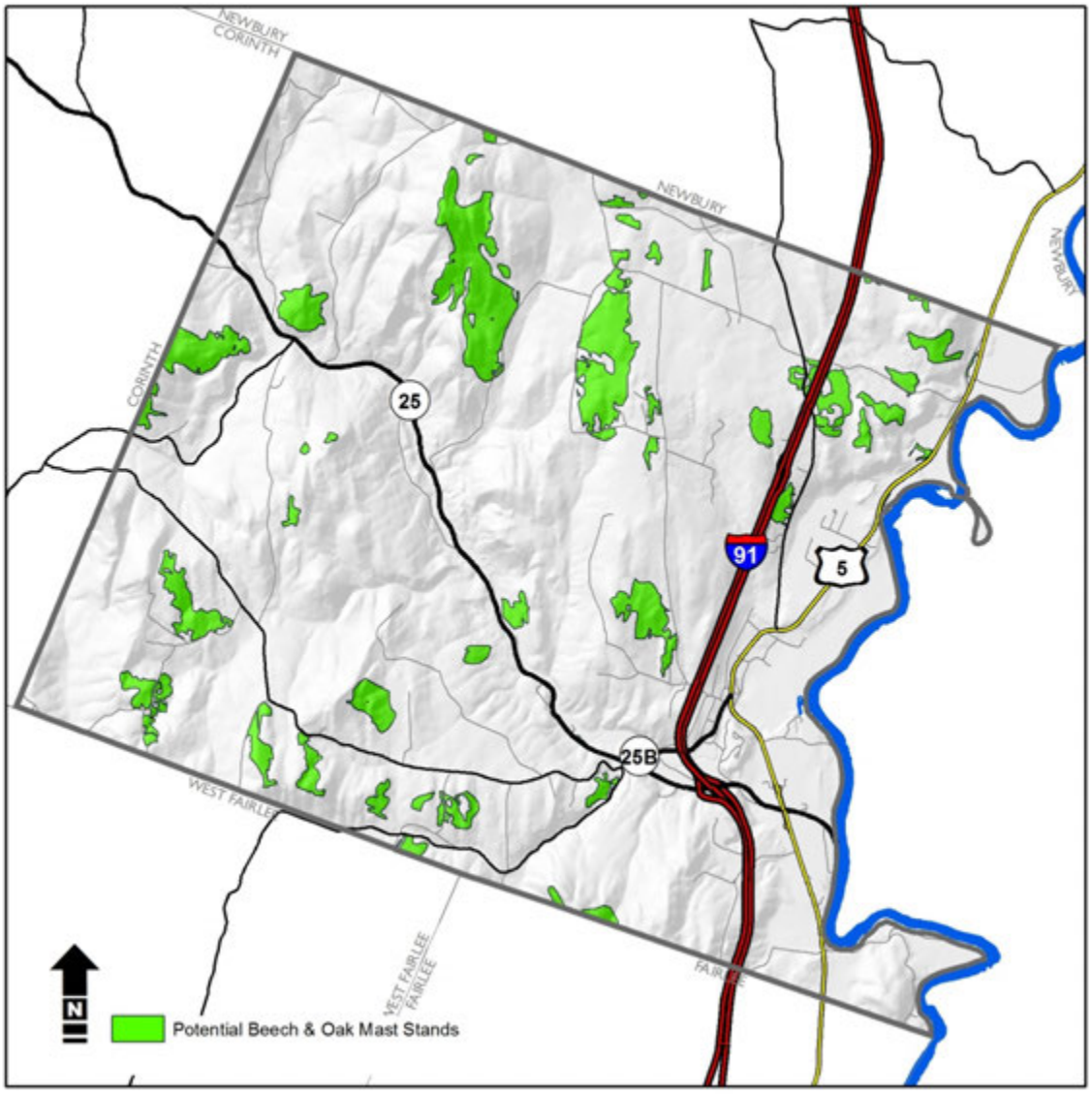

Figure 24: Hard Mast Stands Map

3.1.7 Deer Winter Habitat

In years where significant amounts of snow accumulate in the woods, white-tailed deer utilize evergreen forests for winter habitat. Evergreen trees intercept snow as it falls to the ground generally resulting in shallower snow depths. These habitats offer an overhead canopy of needles that shield deer from the cold. Deer congregate in these areas when snow depths exceed about 15 inches and often remain until the snow melts in spring. These winter habitats can be critical in limiting the energy expenditures of deer and supporting the overall survival of this species in the north.

Deep snow can occur anywhere within Bradford, but probably lasts longer into spring in the higher elevation areas within town. Years with significant snow cover mixed with cold temperatures tax the deer population. In these years, or over multiple years with several harsh snow winters, the cumulative drain on deer energy resources can take its toll. For this reason deer wintering habitats are seen as crucially important to the long-term maintenance of deer populations in the Bradford region.

Deer winter habitat that faces into the sun (either west or south) is often more valuable than east or north facing areas. Eastern hemlock, balsam fir, and Northern white-cedar stands provide the best cover and food value to deer, but pine and spruce will sometimes be utilized. These deer winter habitats are also home to bobcat, fisher, coyote, and scavenging bears that come looking for live deer to eat during the winter or carrion to scavenge in spring. Other animals such as conifer-nesting birds, porcupines and fox utilize these habitats during other seasons.

Figure 25: Deer Winter Habitat Map

For this study, potential deer winter habitat was divided into either "likely" or "potential" categories (see Figure 25 above). Likely deer winter habitats are comprised of evergreen dominated forests such as Hemlock Forests and Hemlock-Northern Hardwood forests that have a west, south, or southwest aspect. These natural communities often receive the heaviest deer use and the most consistent from year to year. These "likely" deer winter habitats are those generally sought out in the longest, coldest, and snowiest winters. The strong spring sun in these communities melts snow early and warms cold bodies.

Figure 26. Eastern hemlock deer winter habitat

Potential deer winter habitats may be less likely to be used by deer each year-particularly in the coldest and snowiest of years. Some of these communities may not offer the most protection from the cold resulting from a less complete evergreen canopy, the dominance of tree species that do not form a closed protective treed canopy, or even from having a cold northern aspect. Some of these deer winter habitats may be abandoned in early or mid-winter for other more protective overwinter habitats and some may function in varying capacity throughout the winter.

All winter deer habitats provide some thermal benefits and aid deer in fending off starvation, cold and a continually declining energy budget during the harsh winter and spring months. Energy loss during the winter and spring is cumulative, that is, whatever fat and energy are lost by deer during the early winter months are not available for deer metabolism during late winter and spring. For the most part, it is not until plants produce green leafy material or ripen buds in spring that deer climb out of their energetic downhill spiral.

3.1.8 Grassland Bird Habitats

There is a whole suite of bird species that do not utilize forested (or early successional forest) environments to fulfil their breeding requirements. In the Bradford area, grassland birds are the largest non-forest dwelling group, and perhaps the assemblage of species most at risk. Grassland bird species utilize open field grasslands, typically of at least 10 acres or larger for their breeding, nesting and feeding. Many of these species are historically more associated with mid-western prairie habitats, but have established a foothold in the open agricultural fields throughout the northeast. These species, such as bobolink, savannah sparrow and grassland sparrow are seeing drastic population declines attributed to a variety of factors. As agricultural practices become more and more mechanized and new genetic modification and nutrient application technologies allow far more frequent grass harvesting, many young fledglings are destroyed while still in the nest from contact with haying equipment. Add to

that the conversion of hayfields to row crops such as corn and soybeans and extensive deforestation of winter habitats in South and Central America, and these species are losing ground quickly.

Grassland habitats were mapped in this study based on remote review of cover conditions as apparent in aerial photographs. Since grass conditions are highly temporal and very dependent on current management practices, this is only a snapshot of potential grassland that may be providing habitat for this group of species.

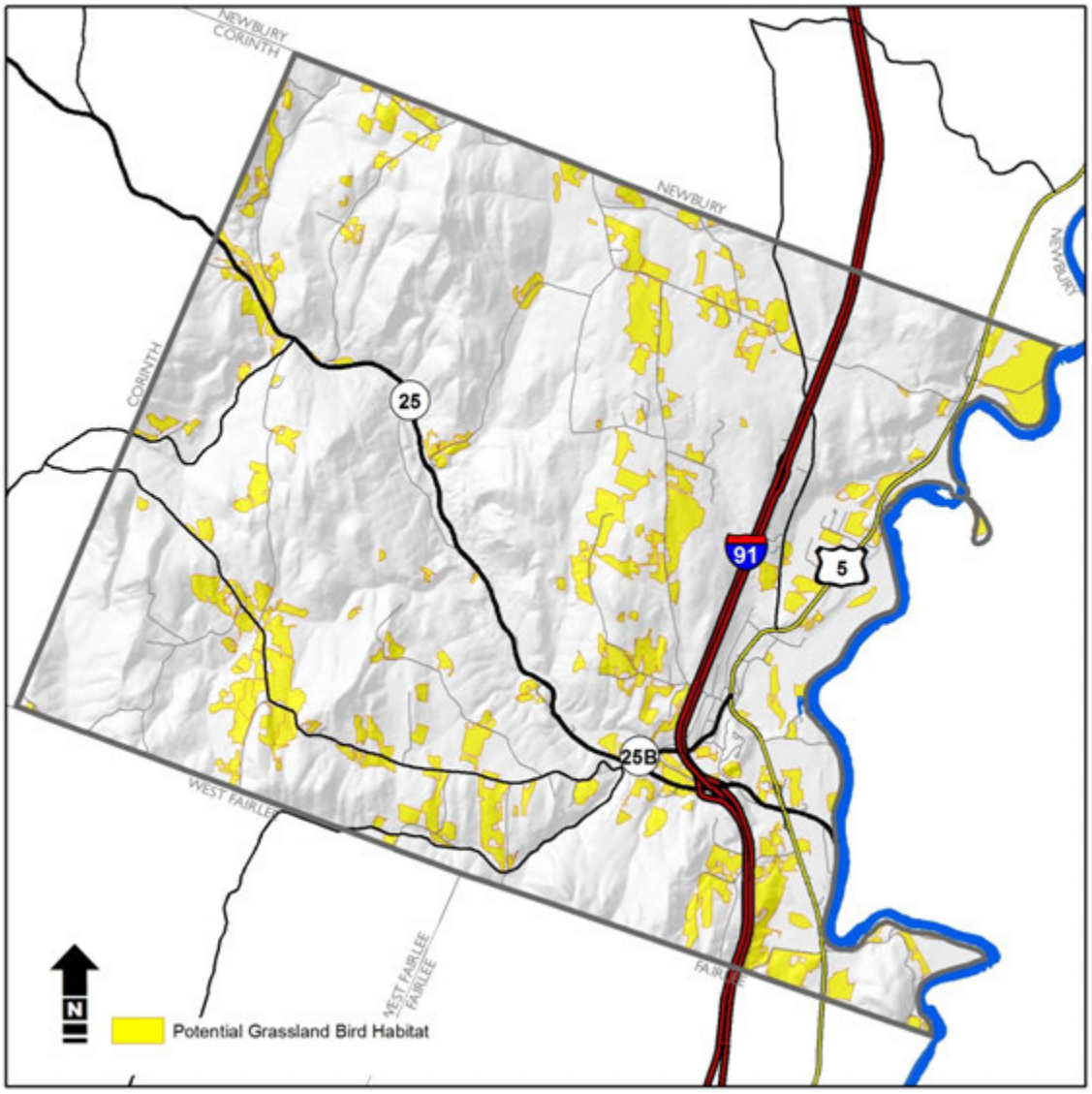

Figure 27: Grassland Habitats Map

There is a whole suite of bird species that do not utilize grassland environments to fulfil their breeding requirements. According to the current tally from the 2003-2007 breeding bird atlas there are over 200 bird species that breed in the State of Vermont. In fact, the northern New-England region is referred to as a "veritable breeding factory" by the Partners in Flight Land Bird Conservation Plan (Rich et al, 2004) for its abundance of breeding neo-tropical migrating bird species.

Due to this extensive list of breeding bird species, discussion of breeding birds in the Bradford is focused primarily on a set of 40 "Responsibility Species" as developed by Audubon Vermont. This list covers a range of species that have a high proportion of their breeding population within our Atlantic Northern Forest region.

Figure 28 Scarlet tanager, an interior forest bird

Many of these species are experiencing global declines in population, sometimes severe. However many of these are fairly familiar to anyone who spends a bit of time in the forests and fields of central Vermont. Focus on these species, and their habitat requirements will help insure that these birds, ubiquitous to our region, remain common and that those experiencing sharp declines may be stabilized or restored before being lost for good.

Figure 29: Audubon Vermont- Responsibility Species

Birds of early-succession and old fields	**Birds of mature forests**
Chestnut-sided Warbler	Ovenbird
Mourning Warbler	Wood Thrush
White-throated Sparrow	Veery
Ruffed Grouse	Eastern Wood-Pewee
American Woodcock	Yellow-bellied Sapsucker
Nashville Warbler	Black-throated Blue Warbler
Canada Warbler	Blackburnian Warbler
Magnolia Warbler	Black-throated Green Warbler
Northern Flicker	Scarlet Tanager
Birds of high elevation and boreal forest	American Redstart
Spruce Grouse	Chimney Swift
Black-backed Woodpecker	Northern Parula
Olive-sided Flycatcher	Purple Finch
Yellow-bellied Flycatcher	Blue-headed Vireo
Gray Jay	
Cape May Warbler	
Tennessee Warbler	**Birds of wetlands and riparian areas**
Blackpoll Warbler	Swamp Sparrow
Bay-breasted Warbler	Lincoln's Sparrow
Palm Warbler	Rusty Blackbird
Boreal Chickadee	Alder Flycatcher
Bicknell's Thrush	Louisiana Waterthrush

3.2 Contiguous Habitat Units (CHUs) Analysis

Figure 30. Contiguous Habitat Units Map

A total of seventeen contiguous wildlife habitat units (CHUs) were identified in Bradford. The following table provides summary data for specific habitat components within the CHUs for the town. A summary data table is provided in Appendix 3 detailing the individual habitat elements within all the CHUs.

Table 3. CHU Summary Data		
Habitat Feature	**Total Amount in All CHUs in Bradford**	
Core Habitat	7109	Acres
Deer Winter Habitat	8223	Acres
Streams	50	Miles
Wetland	302	Acres
Early Succession	455	Acres
Forested Riparian	1596	Acres
Vernal Pools	25	Count
Conserved Land	948	Acres

For each CHU presented below a list of habitat features is provided. Features in black are present within the unit, and those in grey are absent.

Each CHU is also assigned a "Habitat Block" ranking. In 2012, the Vt. Dept. of Fish and Wildlife completed a project to map and quantify large blocks of wildlife habitat throughout the State of Vermont. The inputs used in the project were of a courser scale than applied in the development of Bradford's CHUs, but the habitat blocks identified by Vt. F&W cover the entire state and are ranked relative to habitat areas statewide. Each CHU in Bradford has been assigned the priority ranking value of the underlying Habitat Block. The Vt. Habitat Block scale runs from 0 to 10, with 0 being the lowest priority ranking and 10 the highest. The Bradford CHUs all participate in habitat blocks ranging from 3-7 on the statewide scale. For more information on the Vt. F&W Habitat Block project see: http://tinyurl.com/VtFWHabitatBlocks.

Accompanying the list of habitat features is a discussion of each of the CHUs. Included in that discussion is an assessment of horizontal diversity. Horizontal diversity is a measure of the change in vegetative types, ages, and conditions across an area of undeveloped land. These patterns or changes can result from differing bedrock and soil types, or past land use or management activities.

In general, the greater the change in vegetative diversity across an area, the greater the overall species diversity of animals within that area. This applies most directly to mammals, such as fox, coyote, deer, moose and black bear, but horizontal diversity is also applicable to bird species. Mammals and birds often need different vegetative structure and species composition to fulfill various habitat needs throughout a life cycle or season. For instance taller trees may be utilized for singing and the feeding activity of a bird while the nesting activities may be focused low in the canopy on smaller saplings or shrubs. Black bear may utilize mid to older American beech trees for fall feeding and then travel to beaver-complex wetlands for spring and summer feeding and utilize areas of dense cover for travel corridors. A wide variety of habitat types can translate into more prey opportunities for predators. In general, when prey populations are higher -- predators respond with greater reproduction and are more numerous as well. When species specific habitat features, and on-going human disturbances on the landscape are not otherwise limiting, an increase in horizontal diversity usually produces an increase in mammalian and bird species diversity. The site context, i.e. the surrounding land-uses, plays an important role in determining the influence of horizontal vegetative diversity on animal species richness (diversity of species) as well.

3.2.1 River Hill CHU

River Hill
171.3 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 1

River Hill CHU is located at a fairly low elevation site along the Connecticut River in the extreme southeastern corner of Bradford. This CHU is somewhat isolated and contained within a largely agricultural landscape. This relatively small 171 acre CHU consists of forested and wetland wildlife habitat. The forest is a mix of Eastern hemlock, northern hardwood species, white pine, and red oak and provides conifer cover and potential deer winter habitat. The unit's wetland marsh, may be used by Connecticut River aquatic species such as mink, river otter, and numerous bird species. The site may contain potential ledge habitat as well. The River Hill CHU exhibits low horizontal diversity.

3.2.2 Spaulding Hill CHU

Spaulding Hill
148.9 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 7

The Spaulding Hill area is a 149 acre CHU located between an elevation of 800-1285 feet along the southern edge of Bradford. It is small at 149 acres, however the Spaulding Hill forest is part of the northern edge of a much larger 10,000 acre contiguous forest block that is mainly in the Town of Fairlee. The area has over 50 acres of potential deer winter habitat as well as forested riparian wildlife habitat. Deer winter use was evident in both 2014 and 2015. The Spaulding Hill CHU has a high horizontal diversity containing many different vegetative types.

3.2.3 Rowell Brook CHU

Rowell Brook
891.3 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 7

Rowell Brook CHU is located at a mean elevation of 870 feet along Bradford's southern border. The Rowell Brook CHU consists of an 891 acre largely forested parcel that is part of the much larger forest block extending south into Fairlee, actually connecting to the Spaulding Hill CHU outside Bradford. This area contains over 620 acres of potential deer winter habitat and provides over 640 acres of deep woods core wildlife habitat in Bradford. Winter road tracking exercises revealed extensive deer winter use during both 2014 and 2015. This CHU has extensive forested riparian habitat, streams and a few wetlands. The Mill Pond and Rowell Brooks flow through the CHU. The site also contains mast trees, potential bear wetlands, ledge habitat, and small amounts of early succession shrubland wildlife habitat. Overall however, the Rowell Brook site is fairly uniform in vegetative types and exhibits a low horizontal diversity.

3.2.4 South Bradford CHU

South Bradford
309.9 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 4

The South Bradford CHU is a relatively high (mean elevation of 1212 feet) forested area along Bradford's southern boundary with West Fairlee. This 310 acre area is adjacent to a larger forest habitat block to the south in West Fairlee and bounded by roads and agricultural land uses to the north. The South Bradford CHU contains moderate amounts of deer winter habitat, stream and forested riparian habitat, and lesser amounts of wetland area. The site contains over 15 acres of early succession habitat and 2 vernal pools have been identified. This small CHU is quite diverse in vegetative types and has a high horizontal diversity.

3.2.5 West Fairlee CHU

West Fairlee

442.3 Acres

Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 7

This CHU is 442 acres with 256 acres of core wildlife habitat. The West Fairlee CHU is located high on the landscape along the town's southwestern edge. Much of the West Fairlee CHU forest is coniferous, with much hemlock potentially providing deer winter habitat. Over 3.5 miles of streams and forested riparian habitat provide aquatic wildlife and fish with a place to live. This relatively small unit has a low horizontal diversity.

3.2.6 Ira's Pinnacle CHU

Ira's Pinnacle

803.3 Acres

Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 7

Ira's Pinnacle is a relatively high CHU (mean elevation of 1114 feet) located in the southwestern corner of Bradford. Ira's Pinnacle forms the northern boundary in Bradford of a 13,000 acre forest block located in Corinth, West Fairlee and Vershire. Ira's Pinnacle is over 800 acres in size providing 529 acres of deep woods core wildlife habitat. With over 615 acres of potential deer winter habitat, much of it dominated by hemlock, deer in the region seek out this forest during cold, snowy winters. The CHU also provides mast trees, 39 acres of early succession habitat, and over 3 miles of stream and forested riparian wildlife habitat. Bear wetlands are located within the CHU, and 1 vernal pool has been identified. Over the entire unit however, this CHU exhibits a low horizontal diversity.

3.2.7 West Bradford CHU

West Bradford
309.9 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 4

The West Bradford CHU is a small 310 acre habitat on the town's western border adjacent to the Town of Corinth. The area is bordered by residential development and roads but provides 185 acres of core wildlife habitat. Potential deer winter habitats including some with hemlock forests are found here. Some deer winter use of these conifer forests was suggested by winter road tracking exercises. The West Bradford CHU exhibits a moderate horizontal diversity.

3.2.8 Waits River CHU

Waits River
2097.8 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
4% Conserved
ANR Block Priority: 5

The Waits River CHU is large wildlife habitat located in central Bradford across a broad range of elevations from under 500 feet to over 1400 feet. It is adjacent to the Bradford Center and Wright's Mountain CHUs which taken together make up the largest area of forestland in Bradford. This CHU is over 2000 acres in size and contains 1177 acres of core wildlife habitat.

This site contains 1638 acres of potential deer winter habitat, including extensive areas dominated by Eastern hemlock. In both 2014 and 2015, winter tracking exercises revealed winter deer use of these areas. Waits River CHU has over 7 miles of streams and rivers, including the Wait's River and extensive forested riparian habitat. This CHU contains 55 acres of swamp and marsh wetland wildlife habitat, 102 acres of early succession habitat, and potential bear wetlands. The site contains small areas of mast bearing forests and 4 vernal pools have been identified. Waits River provides extensive habitat for deep forest species such as bear, bobcat, fisher, songbirds, raptors and owls, as well as aquatic habitat for species such as shorebirds, mink, otter, and fish. This large CHU has a moderate horizontal diversity.

3.2.9 Low-St. John CHU

Low-St.John
717.6 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
7% Conserved
ANR Block Priority: 4

The Low-St. John CHU is 718 acres in size located along I-91 at a mean elevation of 924 feet and is bound to the east by a well-travelled paved road. Only 357 acres of this CHU is core wildlife habitat, but it does provide 576 acres of potential deer winter habitat including some areas dominated by Eastern hemlock. The Low-St. John contains 34 acres of wetlands, 42 acres of early succession habitat, and a potential bear wetland. Four vernal pools have been identified in the area and 2.5 miles of stream provide 88 acres of forested riparian wildlife habitat. The Low-St. John CHU has a moderate horizontal diversity.

3.2.10 Bradford Center CHU

Bradford Center
1419.6 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
2% Conserved
ANR Block Priority: 6

The Bradford Center CHU is a 1420 acre area in the center of town and bordered to the south by the Wait's River at a mean elevation of 805 feet. This extensive CHU provides 907 acres of core wildlife habitat and contains over 1200 acres of potential deer winter habitat. The road tracking surveys of both 2014 and 2015 reveal extensive deer use of the area's winter habitat, much of which has an Eastern hemlock component. The Wait's River itself provides extensive fish habitat as well as shoreline habitat for birds, mink, river otter and other water-loving species. The Bradford Center CHU has over 7 miles of stream and rivers and over 240 acres of forested riparian habitat. This CHU also has smaller amounts of early succession, and wetland habitat and potential bear wetlands as well as 30 acres of conserved land. Overall, this large CHU exhibits a low horizontal diversity.

3.2.11 Chase Hollow CHU

Chase Hollow
228.4 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 3

Chase Hollow is located in northcentral Bradford at a mean elevation of 1130 feet. The 228 acre CHU provides 82 acres of core wildlife habitat and 217 acres of potential deer winter habitat. Some use of this winter habitat by deer was observed during road tracking exercises. Chase Hollow is close to the Bradford Center and Wright's Mountain CHU's and may benefit from its proximity to these wild areas. The site does have 1.8 miles of stream and small amounts of forested riparian, early succession habitat, and wetland wildlife habitat. Chase Hollow has a potential bear wetland. This fairly small CHU has a high horizontal diversity.

3.2.12 Taplin Hill CHU

Taplin Hill
546.7 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 5

Taplin Hill is located along the western edge of Bradford at a mean elevation of 942 feet and is part of a 1000 acre wildlife habitat mostly found in Corinth. The 547 acre CHU provides 355 acres of core wildlife habitat and 265 acres of potential deer winter habitat. Taplin Hill contains 1.6 stream miles and provides 71 acres of forested riparian wildlife habitat. The South Branch of the Wait's River crosses this CHU. The site also has 49 acres of early succession wildlife habitat. This relatively large CHU is quite diverse and has a high horizontal diversity.

3.2.13 Roaring Brook CHU

Roaring Brook CHU
813.6 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
25% Conserved
ANR Block Priority: 5

Roaring Brook CHU is located in the northeastern section of Bradford at a mean elevation of 697 feet. This CHU is 814 acres is size and contains 560 acres of core wildlife habitat. The site provides 532 acres of deer winter habitat some of which is dominated by Eastern hemlock cover. Roaring Brook CHU contains the Roaring Brook watercourse and 1.8 miles of total stream habitat and 56 acres of forested riparian wildlife habitat. Roaring Brook has over 28 acres of wetland, including a potential bear wetland, ledge and mast-bearing trees. The site contains 45 acres of early succession habitat and 2 vernal pools have been identified within the CHU. 203 acres of this CHU are conserved. Roaring Brook has a moderate horizontal diversity.

3.2.14 Newbury CHU

Newbury
223.4 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 4

The Newbury CHU is located at a mean elevation of 806 feet elevation along the town's northern border. I-91 borders this 223 acre CHU to the east. The Newbury CHU provides 147 acres of core habitat, and 149 acres of potential deer winter habitat. The results of the road tracking survey found use of this area by deer during one winter. The Newbury CHU has over 1.5 stream miles and 38 acres of forested riparian habitat.

3.2.15 Goshen CHU

Goshen

101.3 Acres

Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 4

The Goshen CHU is a 101 acre area surrounded by grasslands in northcentral Bradford. With a mean elevation of 993 feet, this site contains no core wildlife habitat, but does provide 71 acres of potential deer winter habitat at least some of which has an Eastern hemlock forest component. Associated with its 1.7 miles of stream are 27 acres of marsh and beaver-influenced wetlands and 47 acres of forested riparian wildlife habitat. The small Goshen CHU is quite diverse and exhibits a high horizontal diversity.

3.2.16 Wrights Mountain CHU

Wrights Mountain

1633.6 Acres

Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
36% Conserved
ANR Block Priority: 7

The Wrights Mountain CHU is a large 1634 acre forested area that provides 1280 acres of core wildlife habitat in the northwest section of Bradford at a mean elevation of 1141 feet. This wild forested area continues north into Newbury and comprises over 5000 acres of contiguous wildlife habitat. This CHU has 1041 acres of potential deer winter habitat which based on road tracking exercises was used by deer in both 2014 and 2015. Wrights Mountain contains 7.8 miles of stream and rivers, including the Wait's River and contains over 230 acres of forested riparian wildlife habitat. The Wait's River provides habitat for a cold-water fishery and habitat for water birds and aquatic mammals such as otter and mink. The forest contains ledge habitat as well as early succession habitat, and 35 acres of swamp and marsh wetland. The CHU has potential bear wetlands and extensive areas of mast trees which when combined with its remoteness provides suitable black bear habitat. Wrights Mountain contains 590 acres of conserved land and 10 vernal pools have been identified within this CHU. The Wrights Mountain CHU is not only large but also exhibits a high horizontal diversity.

3.2.17 Meadow Brook CHU

Meadow Brook
541.6 Acres
Core Forest
Deer Winter Habitat
Streams
Wetlands
Early Succession
Forested Riparian
Mast Stands
Ledge/Cliff/Talus
Bear Wetlands
Vernal Pools
Sig. Nat Comm
0% Conserved
ANR Block Priority: 4

The Meadow Brook CHU is located in the northwestern corner of Bradford at mean elevation of 917 feet. This 542 acre CHU provides 248 acres of core wildlife habitat. This site offers 418 acres of potential deer winter habitat and road tracking surveys found Meadow Brook to be used by over-wintering deer in 2014 and 2015. Eastern hemlock and spruce are common deer winter habitat species in this CHU. Meadow Brook CHU includes areas of the Wait's River and Meadow Brook, providing 4.5 miles of fisheries and aquatic mammal and bird habitat. There are 28 acres of wetlands, including potential bear wetlands, 107 acres of forested riparian habitat, and 27 acres of early succession wildlife habitat within the Meadow Brook CHU. The Meadow Brook CHU has a low horizontal diversity.

3.2.18 Travel Corridors

Travel corridors are places where landscape and land use characteristics combine to form an area where wildlife can move across roads to and from different habitat areas. Many species of wildlife utilize a diversity of different habitat and plant community types within their home ranges (or territories). Wildlife move across the landscape for a variety of reasons, most often in search of new territories, food resources, or potential mates.

A good example to illustrate seasonal wildlife movements is that of the black bear in Vermont. The black bear typically moves in spring from its high, remote denning areas to wetlands (often forested seeps) lower on the landscape. In summer, bear will seek berry patches (soft mast) in openings and along old logging roads within the forest. In fall, bears will move to beech stands, orchards, or corn fields depending on the availability of natural foods in the forest.

Many of the wide ranging wildlife corridors identified in Bradford are located within areas of limited development and contain large, significant habitat features in close proximity to the corridors. As would be expected, wide ranging mammals are likely to find these areas most preferential as movement zones due to the relative lack of human disturbance and the necessities of moving between critical

food, cover and/or other habitats. General wildlife corridors for wide ranging species are shown on Figure 31.

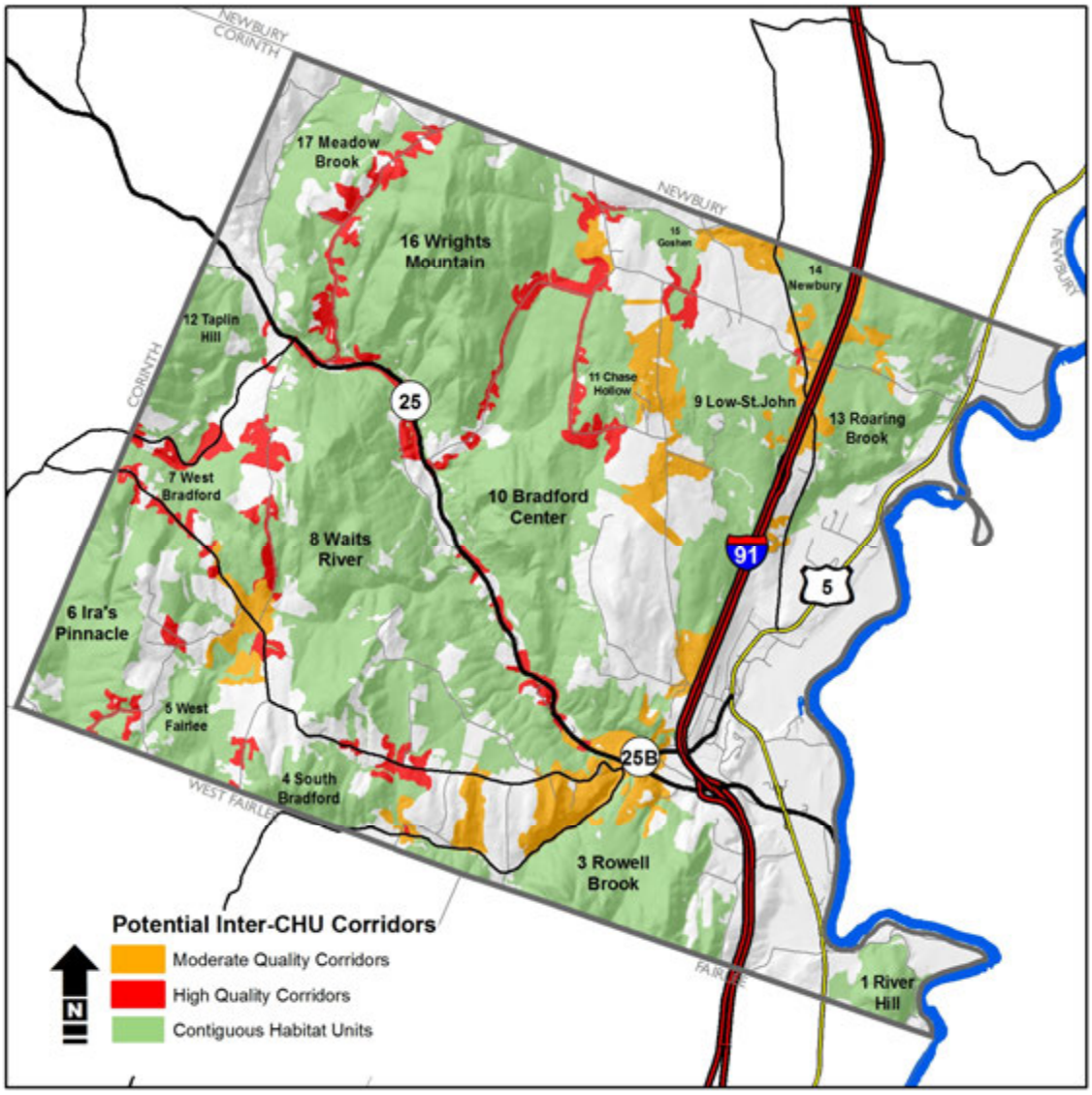

Figure 31: Potential Wildlife Corridors Map

Improvement and expansion of the vegetated buffer conditions of the Connecticut River and the tributaries feeding it would greatly assist in providing travel corridors throughout the Bradford area without putting undue burden on agricultural or development activities.

These probable corridors should be field verified and, if used by wildlife, should be considered as high conservation and protection priorities. Additional corridor areas may also be discovered in the course of additional field and more detailed, site-specific remote evaluation.

As part of the field assessment, winter road tracking was conducted with the goal of documenting road crossings and travel corridors currently being used by wildlife in Bradford. The Road Tracking Map, Figure 32 below, presents the summary of this data. Tracking data is discussed in greater detail for CHUs in the previous section.

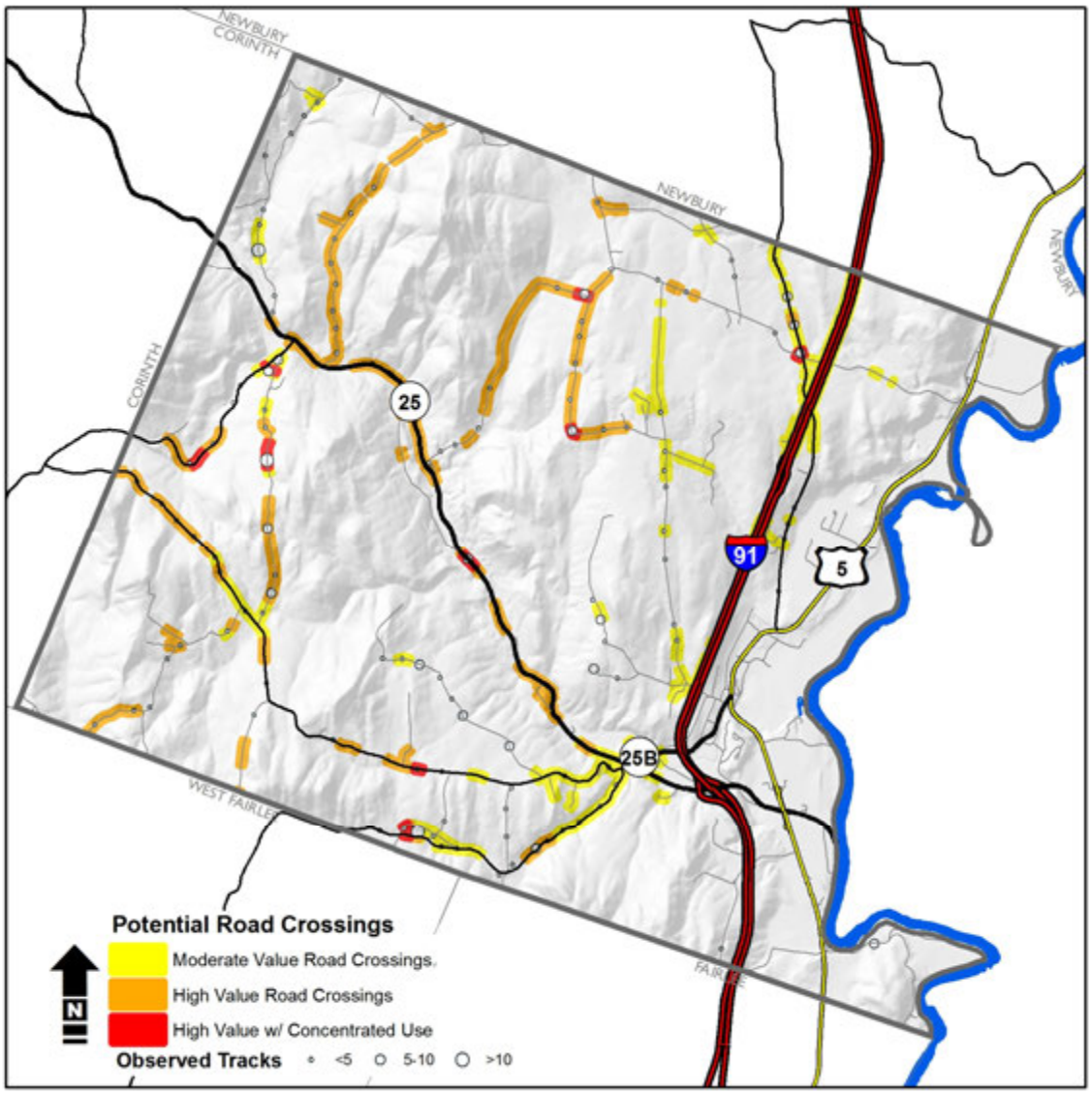

Figure 32. Road Tracking Map

3.3 Wildlife Habitat Overview for Bradford

Typical of much of hilly Vermont countryside, paved and non-paved roads sub-divide the town of Bradford into smaller and smaller functional wildlife habitat units. The South, Fairground, Wait's River, Goshen and Tarbox Roads act as partial barriers to wildlife and wildlife movements around Bradford. I-91 is a more complete barrier for most wildlife. Bradford's Contiguous Habitat Units (CHUs) vary in size from the large 2100 acre Waits River CHU down to the 100 acre Goshen CHU, and of course there are even smaller areas of wildlife habitat in Bradford--down to the individual trees in Bradford Village--that provide sustenance and nesting habitat for squirrels.

The largest un-fragmented wildlife habitats are the Bradford Center, Waits River, and Wright's Mountain CHUs. These three large CHU's combined provide over 5100 acres of un-fragmented, wild, largely undisturbed wildlife habitat. These CHUs provide extensive areas of core wildlife habitat largely free from edge habitat where predator and prey alike live far away from the artifacts of human existence. The Wright's Mountain area is also adjacent to large wild forests in Newberry north of Bradford and wildlife likely moves between the two areas.

Figure 33. Moose

These large CHUs provide extensive habitat for Bradford's deep forest species, many of which require large tracts of forestland with varied habitat features such as a mix of forest types, wetlands, ledge, mast-bearing trees, and early succession vegetative types. Dominant reproductively active females of species such as black bear, fisher, bobcat, and moose establish home ranges in the large CHUs incorporating the best of all their various habitat requirements. Moose inhabit the forests of Bradford and considerable moose sign was evident in the Wright's Mountain region. Many of these deep forest species also require access to varied and disparate habitat features, such as specific foods during defined times of the year, microhabitats such as ledge for breeding or relief from inclement weather, or access to the aquatic resources of streams, ponds, and wetlands. Different habitat features can be used

for breeding, rearing of young, refuge from weather, competitors, predators, as sources of food and/or water, or as refuge from humans, their pets, and their disturbances.

The core forests with less human disturbed forest edges provide excellent habitat for many species of birdlife. These large forests provide nesting habitat for species of hawk, owl, and songbirds such as the scarlet tanager and black-throated blue warbler that nest preferentially in Bradford's larger forest blocks. Core forests generally contain lesser amounts of edge habitat. For many songbirds, this is a bonus. Often with edge habitat comes an increase in nest predators, such as cats, snakes, and raccoons. In the northeast, the parasitic brown-headed cowbird lays its eggs in the nests of other unsuspecting songbirds-causing a decrease in the reproductive success of many of these host birds as the young cowbird grows rapidly and outcompetes the host birds own young.

It is these larger CHU's and their core forests that provide the greatest area and the greatest potential for the maintenance and expansion of many of Bradford's wildlife populations. These areas have the greatest number and density of breeding females of many of Bradford's more wary species, such as the black bear. Keeping these areas wild and un-fragmented is the most important and most effective means of maintaining Bradford's wildlife population and allowing its citizen's to continue to enjoy and coexist with wildlife.

Smaller, or less remote CHUs also provide important wildlife habitats in Bradford. The wildlife that the people of Bradford often see or otherwise interact with can be associated with these smaller wild or semi-wild areas where roads reach into the homes of wildlife. During the summer, people see white-tailed deer, raccoons, and fox in these more humanized landscapes. In addition, these smaller CHUs can function as stepping stones, facilitating travel between the larger forest blocks in the region. This facilitation of

Figure 34. Mallard Duck

wildlife movements can be crucial for some of the wider-ranging species and helps maintain continued genetic diversity so important in the maintenance of biological diversity.

Bradford's Connecticut River shoreline consists predominantly of cleared agricultural land, and the New Hampshire side of the river is similar in that forests rarely extend down to the river's edge. The broad reach of the Connecticut River provides extensive habitat for fisheries, both cold and warm water fisheries, i.e., trout, bass, and other panfish. The river otter, mink, and beaver live along the Connecticut's shorelines, oxbows, and wetlands. Herons, shorebirds, geese, and ducks utilize the banks and waters of the Connecticut to fish, nest, and raise their young. Osprey, belted kingfisher, and the occasional bald eagle fish along its shorelines.

Similar conclusions can be drawn concerning Bradford's other abundant waterways. The Wait's River is the largest of these, with the Wait's tributaries reaching deep into the majority of Bradford upland forests. In fact, because of the ubiquity of paved roads along the mainstem of the river, the Wait's River tributaries are more likely to flow through wild forests. However, even with paved roads following most of the Wait's River path it remains home to mink, river otter, cold water fish such as trout, and a host of bird life such as the belted kingfisher, ducks, geese, and shorebirds such as herons.

3.4 Management Recommendations for Wildlife Habitat

3.4.1 Large Contiguous Habitat Units

The large Contiguous Habitat Units described above are areas with large core size, substantial forest interior habitat and generally a wide-diversity of wildlife habitat elements. They provide important habitat for large, wide-ranging wildlife such as black bear, habitat for forest interior birds, as well as specific habitat features critical for a wide variety of other species.

Forest fragmentation in the larger CHUs should be discouraged. Roads, housing and most other human activities should be restricted to the periphery of these units.

Roads built to facilitate forest management activities should be allowed to revegetate when management activities are completed in an area.

Natural connections between the various wildlife habitats/elements within the units should be maintained.

To maintain deep forest habitat for many declining songbirds, forest clearing and land development should be managed to avoid the extension of edge conditions (a hard break between forested and unforested areas) into the interior of the core forest.

Forest management activities that support a diversity of forest types and early successional habitat are an appropriate use of these areas and consistent with all of the above recommendations.

3.4.2 Grassland Bird Habitat

As mentioned above, the presence of suitable habitat to support grassland bird species is in decline. The availability of this habitat is dependent upon proper land management. There are a number of resources available to assist landowners in developing management practices that not only provide for successful breeding by grassland species, but also allow continued agricultural use of the land.

Additional information about land management activities that can directly benefit grassland birds is available from Audubon Vermont at: http://vt.audubon.org. Communities should consider encouraging landowners to work with Audubon and other partners such as the USDA NRCS (Natural Resource Conservation Service) to provide and maintain grassland bird habitat. The Vermont Fish & Wildlife Department provides a number of management guidelines for grassland birds on the following webpage http://www.vtfishandwildlife.com/cwp_elem_spec_gbh.cfm.

3.4.3 Bear Habitat

Black bear require extensive remote areas to meet their yearly habitat requirements. Large areas without roads must be preserved to maintain sustainable populations within Bradford and the area. In addition, bears must continue to have access to mast stands and forested wetlands. Bear habitat management can focus on beech and oak stands that have documented bear use.

Mapped beech and oak stands and forested wetlands utilized by bear should be protected from development activities with buffers ¼ mile in extent. A professional biologist should address potential impacts to bear and their populations in these cases.

Harvesting of beech or oak that shows current or historic use by bear should be discouraged. Beech trees with Beech Bark Disease will continue to produce beechnuts and be visited regularly by bear.

Forest management activities are generally consistent with black bear habitat, and, at times, can enhance it by producing soft mast crops such as black and raspberries. However, the removal of important mast species such as American beech trees can have negative effects upon bear. Logging roads entering bear habitat no longer in use should be de-commissioned to prevent easy entry by humans into remote areas that bear's depend upon.

3.4.4 Ledge, Talus, and Cliff Habitats

Ledge, talus and cliff habitats are utilized by nesting birds, resting wildlife, and in some cases denning bobcats and porcupine.

Human development activities should be discouraged on and near ledges, talus, and cliffs. A minimal 100' buffer should be maintained between these habitats and human development activities.

Forest management activities are generally consistent with ledge, talus and cliff habitat protection.

3.4.5 Deer Winter Habitat

These habitats are critical to the survival and maintenance of deer populations in the Bradford region. Without deer winter habitat preservation, deer populations within the region could decline.

Deer winter habitats identified in this study should be protected from human activities by 300' buffers.

A professional biologist should assess potential impacts from human development activities (except forest management activities) proposed within 300' of deer winter habitats.

Some guidance to the protection of these deeryards is contained in the Vermont Fish and Wildlife Department's 1999 *Guidelines for the Review & Mitigation of Impacts to White-tailed Deer Winter Habitat in Vermont; and, Management Guide for Deer Wintering Areas in Vermont* which includes forest management guidelines.

3.4.6 Forested Riparian Communities

Forested riparian habitats offer important wildlife habitat and provide cover for wildlife movements. Wherever possible, forested riparian communities should not be fragmented by human activities.

Forest management activities in forested riparian communities should utilize selective harvesting techniques only and maintain a continual forest cover.

3.4.7 Travel Corridors

Functioning travel corridors allow for the movement of wildlife across the landscape. Conservation of wildlife travel corridors is often a difficult undertaking in that much of the negative impact to these features happens slowly over time. The effect on a particular corridor from one residential development, for example, may be small. Over the years, however, as more small development occurs, the once functioning travel corridor may receive less use and eventually be abandoned. Concrete management recommendations for the travel corridor presented here are, therefore, difficult to develop. The following steps, however, will increase the knowledge about the specific corridors in the town and enable planners to draw more specific conservation guidelines.

Conduct field verification studies to identify and characterize the important travel corridors within the Bradford region and especially those presented in this study.

Prioritize the importance of these travel corridors for conservation action.

Take steps to conserve the most important travel corridors by creating isolation buffers around them to maintain wildlife movement patterns.

Limit development to the outside edge of corridors and encourage screening, natural color schemes and other actions to limit negative effects of development in or near corridors.

Improve vegetated buffer conditions along rivers and streams to provide protected movement opportunities for wildlife.

4: Conclusions

As part of this inventory, seven different upland natural community types were mapped. These range from small, 1½ acre Dry Oak-Pine Forests containing stunted oak trees to large, 900 acre Hemlock-Northern Hardwood Forests with stately hemlock trees towering over the forest floor. Eight of these sites have been determined to be state or locally significant sites, most of these in the Wright's Mountain and Roaring Brook areas. Another eight sites have been flagged as potentially significant pending further field work.

Seventeen distinct contiguous wildlife habitat units were mapped in Bradford, which constitutes approximately 60% of the town's area. Contained within these CHU habitats are wetlands, talus and ledge, early succession forests and shrublands, and forested riparian wildlife habitats. These habitat elements are sought out by wildlife for the food, water and cover they provide seasonally or on a year-round basis. This diverse landscape provides sustenance to a wide variety of wildlife including: moose, deer, bear, fisher, weasels, bobcat, raccoon, porcupine, coyote, red and grey fox, snowshoe hare, rodents, and a wide variety of birdlife. The town's ponds, streams, and rivers such as the Waits and Connecticut Rivers provide habitat for a variety of aquatic and semi-aquatic life such as fish, mink, otter, muskrat, beaver, as well as waterfowl and shorebirds.

The larger forest blocks within Bradford including the Wright's Mountain, Waits River, and Bradford Center areas provide remote wildlife habitats inhabited by moose, bear and bobcat. And while Bradford citizens may seldom directly observe these animals within these haunts -- these areas remain vitally important to the persistence of deep forest wildlife in Bradford. The towns smaller, more human influenced forested areas, harbor the red fox, turkey, deer and other wildlife that we enjoy observing on a regular basis.

Maintaining these functioning ecosystems, however, is only possible with proper management and planning. It is our hope that this inventory will provide the necessary information to landowners and town planners to manage these resources in a way that is beneficial to both the humans and wildlife that share the town of Bradford.

Bradford Natural Resources: Upland Natural Communities and Wildlife Habitat

Appendix 1:

METHODOLOGY

May 1, 2015

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Methodology

The Bradford Natural Resources Inventory project included the identification, inventory and assessment of upland natural communities and wildlife habitat in the town of Bradford, Vermont. Existing digital and paper databases were used remotely mapping resources and determining areas of potential significance to identify sites for field assessments. These natural areas were evaluated by specific ecological and landscape criteria to determine the significance and value that these areas have to the natural heritage of the town. The methodology and findings of the inventory are documented in this appendix.

The methodology section is organized into four sections, A. Public Sightings Map, B. Landcover Delineation, C. Upland Natural Communities, and D. Wildlife Habitat.

A. Public Sightings Map

Arrowwood Environmental, through the Bradford Conservation Commission sought public comments from members of the professional natural resource management community with experience in the Town. An on-line mapping application was created whereby professionals and amateur naturalists could document and map known locations of specific natural communities, wildlife habitat, wildlife crossing areas, or actual sightings of wildlife, or their sign. Access to the application was distributed by the Bradford Conservation Commission. Only a limited amount of data was collected with this tool, but the online application can stay active if the Bradford Conservation Commission wishes to continue to solicit sightings from the community.

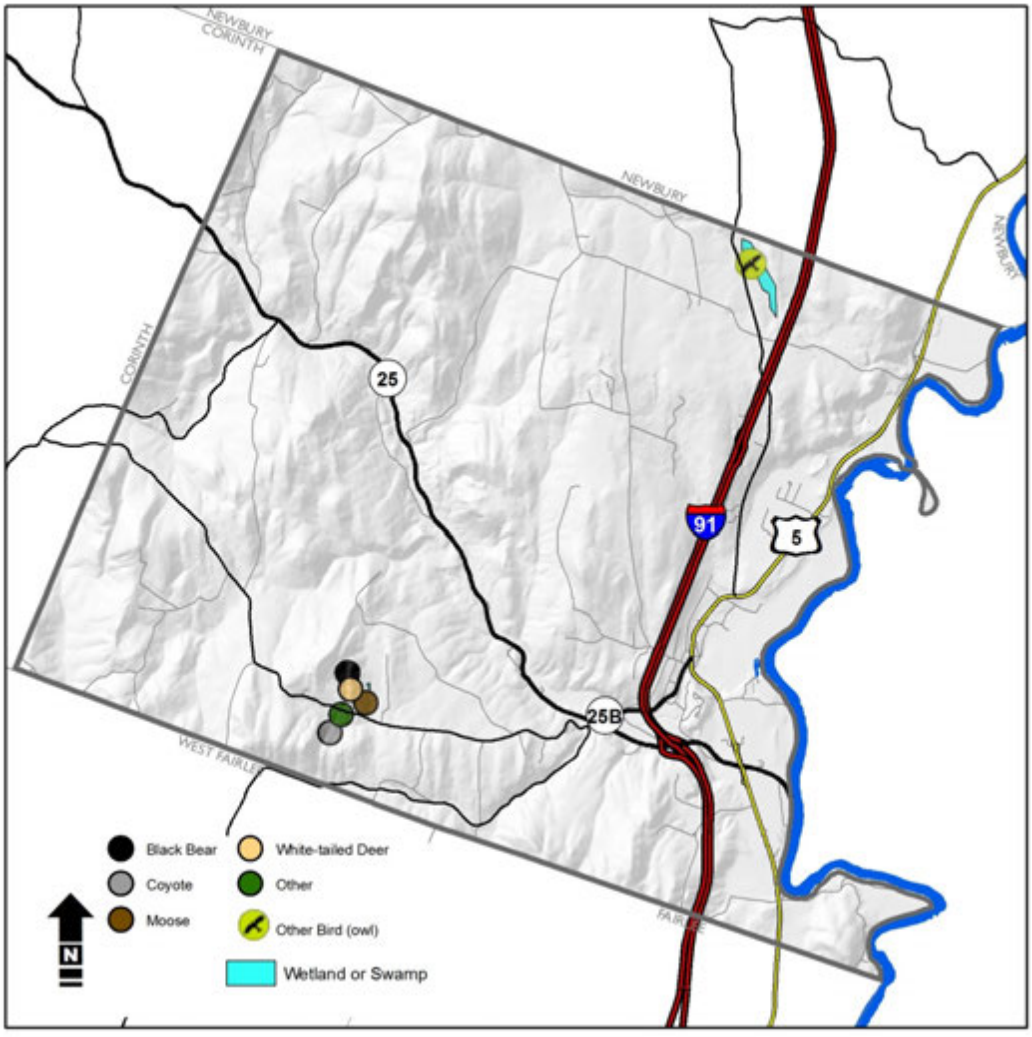

Figure 1. Local Habitat and Species Sightings Map

B. Landcover Delineation

Arrowwood Environmental (AE) built several of the GIS layers utilized in this project from a foundation of basic landcover analysis. This analysis was conducted by AE personnel, and is intended to replace the use of the statewide LCLU (landcover/landuse) dataset available from the Vermont Center for Geographic Information (VCGI). Although the VCGI LCLU data is available covering the entire state of Vermont, AE has found the level of detail too coarse (30 meter

resolution) to effectively assist on a town-scale analysis of natural heritage elements. For this inventory, AE conducted a combined automated and manual digitization of broad classifications of land cover types.

Development- Developed areas were delineated using a collection of publicly available statewide data sources obtained from VCGI. Features in these source datasets were buffered to approximate an average development disturbance as detailed in the table below.

Selected Data	Data Source	Source Data Type	VCGI Layer Name	Source Data Date	Buffer Generated
Driveways	E-911 Driveway Centerlines	Polyline shapefile	EmergencyE911_ DW	2013	12 feet both sides of line
Houses & Other Buildings	E-911 Site Location	Point shapefile	EmergencyE911_ ESITE	2013	100 feet around point
Major Roads-Class 1,2, State	Vtrans Road Centerlines	Polyline shapefile	Trans_RDS	2013	30 feet both sides of line
Major Roads-US Routes	Vtrans Road Centerlines	Polyline shapefile	Trans_RDS	2013	50 feet both sides of line
Minor Roads- AOT Class 3,4, trail & Forest Roads	Vtrans Road Centerlines	Polyline shapefile	Trans_RDS	2013	20 feet both sides of line
Railroads	Vtrans_RR	Polyline shapefile	Trans_RR_Line	2005	50 feet both sides of line

Further modifications were made to the developed areas during the hand delineation process described below.

Open Land- open, non-forested land was delineated by hand from 2012 series Vermont Mapping Program 0.5 meter resolution black and white orthophotography. The orthophotography was visually analyzed at a scale of approximately 1:5000 or better on a computer monitor within a geographic information system (GIS) software platform. Non-forested agricultural, recreational, residential, commercial and industrial areas were digitized by hand in the GIS software.

Transitional areas were best fit by the assessor into "open land" or "developed land" categories.

Using GIS based geoprocessing tools, the buffered developed areas were erased from the hand digitized open areas. From these, wetland natural communities, as described in Section C of this report were also erased. At this point, anything not depicted as developed, open, or wetland was considered an upland natural community and mapped according to methodology explained in Section D. Boundaries were adjusted and classifications adjusted as appropriate through the remainder of the inventory and assessment project. A sample result of this process is shown in Figure 2.

While an effort was made to be relatively accurate at the working scale, the scope of this project did not include either the budget or time necessary to complete a highly accurate manual digitization of landcover classes. The intention of this exercise was to provide a more accurate depiction of landcover types within the towns than is currently available from remotely sensed sources in a rapid fashion. Other than visual review, no quality assurance was conducted, no tests of consistency were completed and no measure of expected accuracy was assessed.

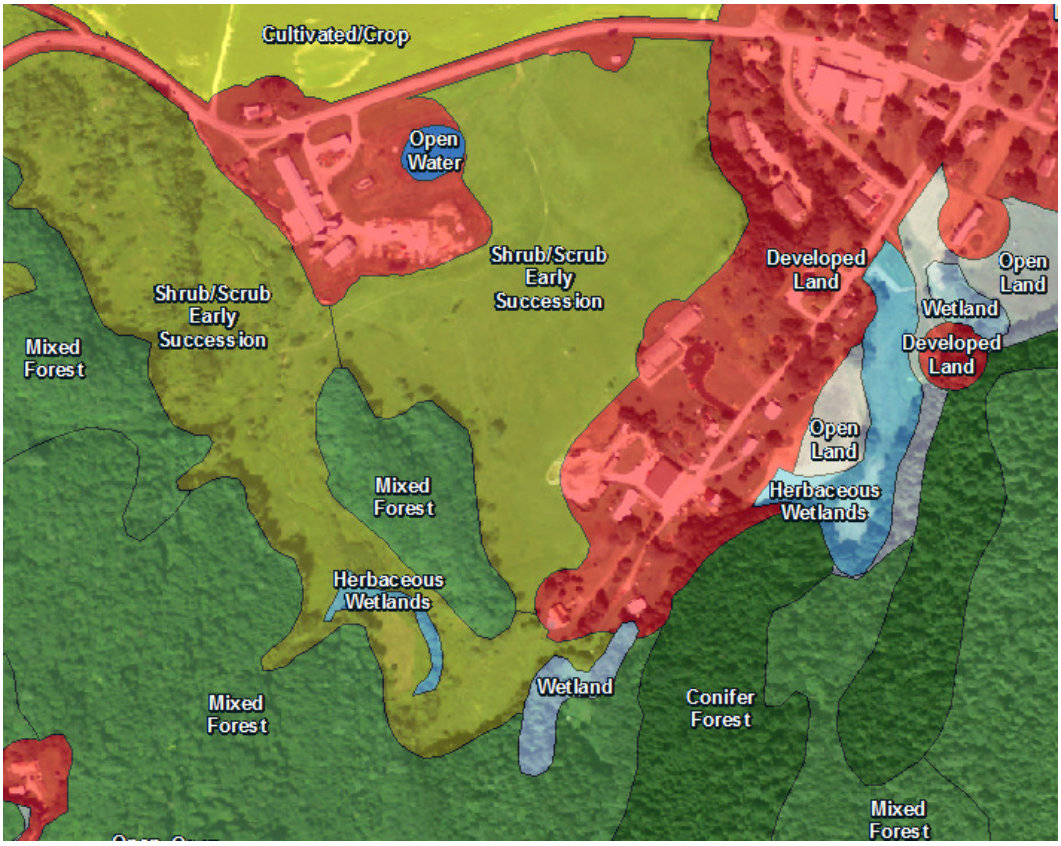

Figure 2. Sample Result of Land Cover Mapping

C. Upland Natural Community Mapping and Assessment

Upland natural communities were identified and mapped in Bradford during this inventory. The natural community assessment was conducted in two phases. The first phase was a remote landscape analysis of the study area and the second was field evaluations of selected sites. Results of each of the phases were brought together to create the final Natural Communities Inventory Map. The phases of the assessment are described in more detail below.

C.1. Remote Uplands Landscape Analysis

The remote landscape analysis consist of using existing remote data sources of natural resources in the town to develop a preliminary map of upland natural communities. Information sources that were reviewed during the landscape analysis process include: Natural Resources Conservation Service soil survey maps, Black and White Orthophotography, NAIP Color orthophotography, U.S. Geological Survey (USGS) topographic maps, and the Non-Game Natural Heritage Program (NNHP) database. The NNHP data base includes information on previously mapped and assessed significant natural communities in the town and area. These sites were incorporated into the natural community mapping and noted in the attribute data for each occurrence.

In addition to these sources, the Use Value Appraisal data was consulted. This publically available data includes forest management plans on lands enrolled in the Use Value program. This data aided in the remote mapping of forests by linking forest stand types to natural community names. In some cases, information on wildlife use was also obtained and incorporated into the map. Finally, forest community types in Bradford were discussed with county forester Dave Paganelli.

Preliminary boundaries of natural communities were drawn using various orthophotographs as a base map. Each site was given a preliminary natural community name based on Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont (Thompson and Sorenson, 2000) and the NNHP updated community classification (March 26, 2014).

C.2. Field Assessments

Field assessments of selected sites were conducted during the 2015 field season. Using the information from the remote analysis, the field inventory seeks to refine the base map and gain more in depth information not obtainable from remote sources. The field inventory focused on 1) classifying the natural communities mapped during the remote analysis and 2) assessing the current condition of those

natural communities. Landowner permission for conducting field visits was secured by the Bradford Conservation Commission before field visits were made. No parcels were visited without landowner permission.

For natural communities that received a site visit, an overall ecological inventory was conducted. This inventory included the identification of the dominant plant species by strata, information on soils, and an explanation of the development of the community, where appropriate. Notes on the current condition of the community were also taken. This brief assessment includes information on the degree of and time since major human disturbance and information on the presence or absence of non-native, invasive plant species.

C.3. Upland Natural Community Map Creation

Once fieldwork was concluded, field data was compiled and integrated into the Upland Natural Communities Inventory Map. This involved adding natural communities that were discovered during the field inventory, changing community boundaries on the map and removing sites that were determined not to be uplands. Due to the difficulty of mapping natural communities on a town-wide scale, some larger polygons contain small fields and areas of residential development. Some smaller forest patches (especially those surrounded by open land) did not get mapped. Data from the field visits were also incorporated into the attribute table which is linked to the map. Attribute information for the upland natural community map is presented in Appendix 3.

C.4. Natural Community Ranking and Significance Determination

Determining the local or state significance of natural features occurs after all of the field work is completed and the final maps are compiled. The local or state significance methodology is based on the system used by the Vermont NonGame and Natural Heritage Program. For natural communities this methodology takes into account the rarity, size and condition of the community as well as the quality of the landscape that the community exists in.

The state has a system of rarity rankings that are based on a numeric system of 1-5 (from rarest to most common). This rank is usually preceded by an "S" to indicate that the rank is on the state-wide scale. This ranking is assigned to each community type as a whole and does not refer to specific examples of the community. This rarity ranking is included in the database in the "State_Rank" field and is based on the following system:

- S1 Very Rare (1-5 occurrences)
- S2 Rare (6-20 occurrences)
- S3 Uncommon (> 20 occurrences)
- S4 Apparently Secure
- S5 Demonstrably Secure

Particular occurrences of communities are ranked based on the conditions present on the site. As mentioned above, the factors that determine the rank of a particular community include its condition, size and condition of the landscape. This alphabetic ranking (A-D) is included in the database in the "EO_Rank" (Element Occurrence) field. Sites that did not receive a field visit were not ranked.

For many natural communities, the ranking methodology allows for multiple communities to be grouped together and ranked as a single unit. Multiple communities of the same type which are separated by short distances on the landscape may be considered as one "element" when ranking. The grouping of some of these communities is shown in the "ElementGrp" field.

Once particular communities are ranked, the Element Occurrence ("EO_Rank" field) is compared to the State rarity rank ("State_Rank" field). A community would be considered state significant if the following criteria are met: S1 or S2 communities with an EO rank of A, B or C; S3 or S4 communities with an EO rank of A or B; S5 communities with an EO rank of A. These guidelines are considered in conjunction with professional judgment and knowledge about the site.

Local significance is determined following the methodology of determining state significance but puts the community in a local perspective. Local geology, biophysical region, size and condition of the community all play a role in determining local significance. All communities that were considered to be state significant are also considered locally significant. In addition, any community that doesn't meet the criteria for state significance but is considered to be significant on the town scale is also labeled as locally significant.

The reason for assigning significance to a community is listed in the "Justificat" (Justification) field of the attribute table.

D. Wildlife Habitat Mapping and Assessment

Wildlife habitat elements were identified within the Bradford study area utilizing Geographic Information Systems (GIS). All GIS data presented in this project should be considered approximate. The locations depicted are for planning and community level analysis purposes, and further field biological assessments should be considered a requirement for additional understanding of the function of the wildlife unit area on the landscape and its importance to any or all species that may utilize it. This section describes the derivation process for the individual habitat unit polygons, the attributes and assessment are discussed in the study report.

The following habitat elements were identified and mapped:

- Core forest units
- Deer winter habitat
- Mast stands
- Early succession areas
- Forested riparian corridors
- Wetlands
- Ledges, cliffs & talus

D.1. Core Forest

Core forest areas for the State of Vermont were originally developed by the UVM Spatial Analysis Lab (SAL) for inclusion in a region wide GAP analysis. AE utilized similar parameters as the original SAL project, but updated the inputs using landcover classifications from the land cover/natural community (NCLC) mapping efforts described above.

Developed and open land features from the NCLC were buffered by 100 meters and the remaining areas within the study area were considered Core Forest. For the purposes of this project, any Core Forest Units with an area of 20 acres or less were eliminated.

D.2. Deer Winter Habitat

Delineation of deer winter habitat, or deer wintering areas (DWA) began with review of the existing State of Vermont Deeryard data layer. Deer winter habitat was assessed remotely based on upland natural community descriptions discussed earlier in this report. Natural community polygons with an appropriate conifer component were assessed using GIS processing tools for their average aspect. Communities were then ranked using the following matrix where 1 is the highest value and 3 is the lowest and 0 denotes no value as a deer wintering area:

Natural Community	Deer Winter Rank
Dry Red Oak-Pine Forest	0
Hemlock Forest	1
Hemlock-Northern Hardwood Forest	2
Hemlock-Red Oak-White Pine Forest	2
Hemlock-Red Spruce Forest	1
Lowland Spruce-Fir Forest	1
Montane Spruce-Fir Forest	0
Montane Yellow Birch-Red Spruce Forest	3
Montane Yellow Birch-Sugar Maple-Red Spruce Forest	3
Plantation	3
Rich Northern Hardwood Forest	0
Mesic Red Oak-Northern Hardwood Forest	0
Red Pine Forest or Woodland	3
Red Spruce-Northern Hardwood Forest	3
Red Spruce-Heath Rocky Ridge Forest	2
Subalpine Krummholz	0
Temperate Hemlock Forest	1
White Pine-Northern Hardwood Forest	0
White Pine-Red Oak-Black Oak Forest	0
Spruce-Fir Tamarack Swamp	1

Average aspect was used to further refine the rankings as follows:

Rank	Aspect	Deer Winter Value
0	Any	None
1	Any	Likely
2	South or West	Likely
2	Other	Potential
3	Any	Potential

Following field evaluations, the polygons were modified to reflect conditions noted in the field, including current signs of use and habitat potential based on professional experience.

D.3. Mast Stands

Hard mast of importance to black bear within the study area is assumed to be American Beech and Red Oak tree species. Mast stands as identified for the purposes of this study originated from the following sources:

- Natural Communities mapped as a component of this project with a significant Oak component.
- Vermont Dept. of Fish and Wildlife bear points database (vector- point)
- Mast locations identified by the public on a project specific online mapping platform set up to collect local knowledge (none reported).
- Field visits by AE personnel
- Vermont Dept. of Forest Parks & Recreation, aerial forest health monitoring data- The VT Dept. FPR conducts annual aerial surveys throughout the State of Vermont in order to map forest health threats, insect attacks and tree disease. One disease identified and mapped by the aerial forestry team is Beech Bark Disease, a disease specific to American beech trees, and unfortunately quite prevalent in our region. AE utilized the FPR Beech Bark Disease data as provided in draft form by the VT Dept. FPR to identify areas where concentrations of American beech trees are likely to occur. As this data identifies areas of diseased beech trees, not necessarily those used by black bears, it was not utilized as a primary source for this project, but was referenced during secondary review.

Mast stands from all the above sources were confirmed or refined when visited in the field; however, no attempt was made to provide an accurate depiction of the extent or boundary of any American beech stand or concentration. Mast stands appearing in the data and maps accompanying this report are very general locations. Numerous possible mast areas were not evaluated in the field. This should NOT be construed as a complete accounting of all mast stand areas present within the project area. It is highly likely that unmapped mast stands exist in the town, and their identification should continue to be a conservation priority. Boundaries presented for this project are to be considered approximate, habitat quality and bear use were not methodically evaluated within the scope of this project.

D.4. Early Succession Habitat

Areas of early succession forest were delineated as a land cover component during the landcover analysis discussed above. Due to the limitation and resolution of the imagery, the areas defined as early succession were typically logging patch cuts, clear cuts or old fields. Small early succession patches in forested settings were not typically able to be seen, and therefore do not appear in the dataset. Wetlands identified as "old field" as well as beaver complexes and shrub community wetlands were added to the early succession habitat data, as many of these wetlands provide the vegetative structure and composition required by early succession obligate and facultative species. Any additional early succession areas discovered in the field were subsequently added to the dataset.

D.5. Forested Riparian Corridors

Identification of forested riparian corridors was completed through a remote GIS model with the following inputs:

- Vermont Hydrography Dataset stream layer (line)
- Vermont Hydrography Dataset waterbodies layer (polygon)
- AE Bradford Landcover analysis, described above

Streams were buffered at 50 meters, giving a 100 meter wide corridor. Areas within the corridor that were described in the AE landcover analysis as open, developed or misc, or were classified as agriculturally impacted wetlands in the natural community assessment were eliminated. Remaining forested areas within 50 meters of a stream, but separated from the stream by a road or not in contact with the stream centerline or waterbody edge were also eliminated using an automatic selection process.

All resulting corridor areas were merged to provide an approximation of intact riparian corridor areas.

D.6. Bear Wetlands

Wetlands more likely to be utilized by black bear for spring feeding activity were derived from the complete wetland inventory data described in the Wetland

Inventory study report (AE, 2005). The following wetland communities were included in this dataset:

Beaver wetlands, Seeps, Shallow Emergent Marsh, Cattail Marsh, Hemlock-Balsam Fir-Black Ash Seepage Swamp, Red Maple-Black Ash Seepage Swamp, Red/Silver Maple-Green Ash Swamp, Red Spruce Hardwood Swamp, Spruce-Fir-Tamarack Swamp, Alluvial Shrub Swamp, Northern White Cedar Swamp and Alder Swamp.

These wetland types were buffered by 500 feet and the composition of forested to non-forested area within each wetland buffer was derived based on the project land cover types. In addition, the perimeter of each wetland was evaluated for surrounding land cover types and the composition of the immediately surrounding landscape was determined. Because bears are more likely to visit and feed from wetlands in a landscape matrix that affords both thermal and visual cover, the following selection criteria were utilized to identify potential bear wetlands from the natural community group listed above:

Wetlands where: >50% of the surrounding landscape (500' buffer) is forested;

AND for forested wetland community types (ie. Hemlock-Balsam Fir-Black Ash Seepage Swamp, etc.) at least 50% of the wetland perimeter is adjacent to a forested area, OR, for non-forested wetland community types (ie. Shallow Emergent Marsh, etc.) where more than 60% of the wetland perimeter is adjacent to a forested area.

D.7. Ledges, Cliffs & Talus

Ledges, cliffs and talus areas were derived from the following sources:

- Slopes over 100% (45 degrees)- from an automated slope analysis conducted by AE using the VCGI 10 meter resolution "VT HYDRODEM" elevation data as input.
- Natural community units indicating ledge outcrops, cliffs or talus.
- Field identified ledges, cliffs or talus by AE ecologists.

D.8. Contiguous Habitat Units

Contiguous habitat units (CHUs) were derived from the above mentioned habitat elements. The contiguous units are patches of habitat that should be expected to provide a range of critical habitat function for a range of wildlife species including mammals, birds, reptiles and amphibians. CHUs were derived through combining the following previously described polygon layers:

- Core forest units
- Deer winter habitat
- Early succession areas
- Forested riparian corridors
- Wetlands
- Ledges, cliffs & talus

In many cases, there are forest zones adjacent to CHUs that likely function as secondary or possibly even primary habitat for some species but fall out of the definition used for development of the CHU layer.

Horizontal diversity was delineated within each CHU from 2006/2007 and 2011 orthophotography. Two separate axis were drawn (1) a north-south axis at the widest point of a core area, and (2) an east-west axis at the widest point of each CHU.

Along each transect a point was given for each natural community type, another point was given when a minor change in the community, such as a change in hardwood species dominance, or the additional of minor amounts of evergreen trees in an otherwise deciduous forest-- that was at least 100 meters, was encountered. A point was also recorded whenever a major physiognomic change was encountered along the transect and was at least 10 meters in extent. Major changes include a change in dominance from a deciduous to a conifer dominated forest, a change from forest to shrubland, or when a wetland was encountered.

All the changes along both transects were then totaled and divided by the length of the two lines (combined) to arrive at a measure of change per unit linear distance –

as a measure of overall horizontal diversity for the CHU. The number of changes divided by the total linear length of the axis yields a measure of the amount of vegetative change per unit length.

The more the vegetation changes along each axis-the greater the gross vegetative structural change within that CHU. By itself, and on a statewide basis, the amount of change per CHU is essentially meaningless (because we do not have this data over the range of the state). However, the high, medium, and low rankings provided in this study are a comparison of the relative diversity of the vegetative structure of CHU areas within the Bradford study area.

Each CHU was then described by a variety of statistics as presented in summary table format in Appendix 2 and listed below.

- Size of Contiguous Habitat (core habitat and overall)
- Horizontal Diversity of CHU
- Length of Streams
- Size of Deer Winter Habitat
- Area of Wetlands
- Presence (Count) of Vernal Pools
- Area of Early Succession Habitat
- Area of Riparian Corridor
- Presence of Mast Stands
- Presence of Ledge/Cliff/Talus
- Presence of Significant Natural Communities
- Elevation metrics
- Area of Conserved Land

D.9. Wildlife Travel Corridors

Travel corridors, also called connecting lands or connecting habitats are land areas that serve to link other patches of important wildlife habitats together. Some species of wildlife rely on a variety of habitat features that are often separated from each

other by roads, houses or other impediments to easy movement. Species in this category include many amphibians, bobcat, fisher, and river otter. Others species such as moose, deer and black bear require large tracts of similar landscape that are quite rare in the developed northeastern United States. In order to survive in this region, these wide ranging species must move between several habitat patches of similar makeup.

D.10. CHU Corridors and CHU Road Crossings

The process of identifying general wildlife travel corridors seeks to predict areas within a town or area that are most likely to provide safe and preferable passage to a wide range of non-specific wildlife from one large habitat patch (in this case: CHUs) to another. AE utilized three components in attempting to identify these locations. The components and their parameters all consider the landscape in somewhat general terms, at varying levels of resolution, with the intent of rapidly capturing a sense of potential habitat blocks and movement potential between them. The following steps were taken to identify potential wildlife travel corridors.

1. Road Track Value- road tracking points were counted based on a 150 meter square cell. Cells were assigned a ranking value based on the number of track points present:

# Track Pts	Rank
1-3	0
3+	1
0	NoData

2. CHU Corridor Rank- Corridor values were calculated and modeled in GIS as follows: Cost-Distance values were developed for each CHU within the study area. The result represented a combined distance and cost score for every 10 meter x 10 meter cell within the study area relative for each CHU. These maps used the combined Natural Community and landcover data to determine travel cost as

animals move across the landscape where lower cost represents a "safer" cover type for wildlife movement while numbers in the middle of the scale are considered "neutral" in the Land Cover/Cost table below:

Land Cover	Cost Score
Forested	1
Mixed Forest	1
Forested/Shrub Wetlands	1
Conifer Forest	2
Herbaceous Wetlands	2
Deciduous Forest	3
Open- Grassland	3
Agricultural	3
Pasture/Hay	3
Shrub/Scrub Early Succession	4
Unknown	5
Open Water	5
Barren- Rock/Sand/Clay	5
Wetland	5
Upland	5
Open Land	6
Developed- Open Space	7
Cultivated/Crop	7
Developed Land	10

The costs for each CHU and each of its adjacent CHUs in turn (1-3, 2-3, 2-3, 2-8 etc.) were then summed to provide a relative accumulated cost value for travel between each CHU and each of its neighbors.

The Cost Value between CHUs was reclassified and ranked based corridor potential using the following scale: (note corridor values are relative for the study area and are simply accumulative cost and distance measures, the breakout below was subjective based on professional judgment and local knowledge)

Corridor Value	Rank
1-500	High
500-1200	Low
>1200	None

If a CHU to CHU corridor had areas with values scoring 500 or below, those areas were ranked High. If however, a given CHU to CHU corridor score was higher than 500, the areas scoring less than 1200 were ranked Moderate. This procedure insures that in areas of high permeability between CHUs, only the best areas are flagged as potential corridors, while in areas of lower permeability, the threshold is lowered allowing for more compromised movement in these zones.

4. Potential Corridors: Potential corridors were hand placed using the Combined Corridor Value, public sighting input (from online map), CHU proximity to roads and professional judgment as a guides. The Bradford tracking points were used as a final check to cross reference corridor placement.

5. Combined Corridor Value and Road Tracking: The Corridor Rank and Road Track Value were added together and the results of this clipped to an area 200' on either side of roads. This results in the Road Crossings layer with high value corridor areas where concentrated tracks were found scoring highest as potential wildlife road crossing locations.

The CHU Corridor and CHU Road Crossing data are intended to represent LIKELY or POTENTIAL locations where wildlife move across the landscape and cross roads between contiguous habitat units. More field work and analysis would be required to develop an understanding of actual use and/or viability of these areas as effective and valuable corridors.

D.11. Road Tracking

Two road tracking assessments were conducted as part of the Bradford NRI. On March 25, 2014, and February 17, 2015 all of the public roads (with the exception of roads within the Village of Bradford) were driven and wildlife tracks that were observed within the road ROW were recorded.

Wildlife tracking assessments were timed to occur under the best available conditions, with no new snowfall within the previous 48 hours at a minimum. Snow and crust conditions varied between tracking dates. Snow depths in both years were above average and deep snow banks along roadsides made for challenging conditions. Because of this, it was often difficult to observe tracks from the road that were located within the ROW but behind the high snow banks.

All wildlife tracks which came into the ROW were recorded and the location mapped with a mapping grade GPS (assumed accuracy+/-30 feet). In general, tracks made by small animals such as rodents, squirrels and birds were not recorded, however larger birds that serve as significant prey species such as wild turkey were recorded when observed. An attempt was made to isolate tracks of animals that may have walked parallel to the road entering the ROW at more than one location. Tracking along the corridors was limited to the road ROW and because of this a positive identification of all wildlife tracks was not always possible. When a positive identification of a track to species was not possible, an educated guess was attempted wherever adequate features were available. If no educated guess could be made, an "unknown track" was recorded for that location.

Every attempt was made to distinguish between tracks that were comprised of singular or multiple individual animals leaving sign of their passing. Where a well-worn path was left as a result of multiple animal passings -- the location was recorded as a "multiple trail". This was common in areas where white-tailed deer utilized common trails to move on the landscape in the winters of 2014 and 2015 when deep snow cover was present.

Appendix 2
Wildlife Habitat Summary Data for Contiguous Habitat Units

CHU #	NAME	Size (acres)	Core Area (acres)	Deeryard Area (acres)	Stream Length (miles)	Wetland Area (acres)	Early Successional (acres)	Forested Riparian Corridor (acres)	Mast Present	Ledge Present	Bear Wetland Present	Vernal Pool Present (#of)	Significant Natural Community Present	Max Elevation (ft)	Min Elevation (ft)	Elevation (mean)	Elevation Range (ft)	CHU Horizontal Diversity Rank	Conserved Area	ANR Habitat Rank
1	River Hill	171.3	78	145	0.0	23.1	0	7		Y	Y	0		748	394	543	354	L	0	1
2	Spaulding Hill	148.9	116	57	0.3	0.0	1	10				0		1285	808	1015	477	H	0	7
3	Rowell Brook	891.3	644	622	2.6	9.2	14	68	Y	Y	Y	0	Potential	1326	510	877	816	L	0	7
4	South Bradford	309.9	188	183	1.5	8.0	15	46				2		1483	928	1212	555	H	0	4
5	West Fairlee	442.3	256	249	3.8	9.0	18	114	Y		Y	0		1491	967	1195	524	L	0	7
6	Ira's Pinnacle	803.3	529	617	3.0	5.3	39	104	Y		Y	1	Potential	1491	792	1114	699	L	0	7
7	West Bradford	309.9	185	242	1.7	7.7	17	67				2		1254	716	976	538	M	0	4
8	Waits River	2097.8	1177	1638	7.1	55.4	102	282	Y		Y	4	Yes	1473	495	915	978	M	74	5
9	Low-St.John	717.6	357	576	2.5	34.3	42	88			Y	4	Yes	1094	650	924	444	M	51	4
10	Bradford Center	1419.6	907	1201	7.1	13.9	48	244	Y	Y	Y	0	Potential	1112	471	805	641	L	30	6
11	Chase Hollow	228.4	82	217	1.8	6.2	5	15			Y	0		1187	1008	1130	179	H	0	3
12	Taplin Hill	546.7	355	265	1.6	0.7	49	71				0	Potential	1286	599	942	687	H	0	5
13	Roaring Brook	813.6	560	532	1.8	29.0	45	56	Y	Y	Y	2	Yes	890	400	697	490	M	203	5
14	Newbury	223.4	147	149	1.5	8.5	5	38			Y	0		909	719	806	190	H	0	4
15	Goshen	101.3	0	71	1.7	27.0	3	47			Y	0		1095	928	993	167	H	0	4
16	Wrights Mountain	1633.6	1280	1041	7.8	35.7	25	232	Y	Y	Y	10	Yes	1826	544	1141	1282	H	590	7
17	Meadow Brook	541.6	248	418	4.5	28.8	27	107			Y	0		1263	593	917	670	L	0	4

Table 1: Natural Community Attributes (Wetland and Upland Communities)

Field Name	Meaning	Responses	Description
FID	Feature Identification	Integer	Feature identification number, assigned by ArcGIS software
UniqueID	Unique Identification	Integer	Unique identification number
FieldID	Field Identification	Integer	Identification number that links to the field forms
Type	Type	Integer	Indicates upland or wetland community Upland, 2- Wetland or Open Water
NatCom	Natural Community	General Text	Lists the primary natural community present on the site
NatCom2	Natural Community 2	General Text	Lists an alternate or co-dominant natural community on site
Comments	Comments	General Text	Comments on the ecology, vegetation or mapping of the community
Source	Source	See Source table Above	Indicates who conducted the mapping of the site.
CONS_STATS	Conservation Status	Complete/Partial	Indicates whether the site exists on conserved land.
Acres	Acres	Integer	The size of the community in acres
Field_Visit	Field Visit	Y/N/WS: Yes/ No/ Windshield Survey (public access)	Indicates whether the site received a field visit. Drive-by denotes sites that were viewed from a public access site such as trails or roads. (STATE) denotes sites that were visited by state personnel.
State_Rank	State Rank	S1/S2/S3/S4/S5/NR S1 is rare, S5 is common. NR indicates sites that are not ranked	The state rarity rank of the natural community.
ElementGrp	Element Group	General Text	A grouping method used in determining local and state significance.
EO_Rank	Element Occurrence Rank	A/B/C/D/E A=Excellent, E=Poor	Rank of the particular natural community.
Local_Sig	Local significance	Y/N Yes/No	Indicates if the site is a locally significant site
State_Sig	State Significance	Y/N Yes/No	Indicates if the site is a state significant site
Justificat	Justification	General Text	Indicates the reason for assigning local or state significance
Landscape	Landscape Condition	A=surrounded by 1,000 acres of intact matrix of natural communities B=surrounded by forest or undisturbed communities but there may be developed land or clear cutting nearby C=surrounded by fragmented forest, agricultural land or rural development D=surrounding area intensely developed	Landscape quality of the natural community-
Condition	Site Condition	A=great-Pristine forest, areas of mature forest, no or minimal human disturbance B=Good-Some minor signs of human disturbance or exotic species C=Moderate-Significant logging, disturbance, or exotic species but site will recover D=Poor-Significant logging, disturbance, or exotic species; recovery unlikely	Current condition of the natural community
Size_Rank	Rank based on overall size of the natural community	A=larger…D=smaller	Ranking depends on community type, contact Vt. Fish and Wildlife Natural Heritage Program or Arrowwood Environmental for more information.
SiteName	Site Name	General Text	Name of site given for significant communities or wetlands. Some based on previously assigned NNHP site names. Other assigned based on location of site.

Table 1 (continued): Natural Community Attributes (Wetland and Upland Communities)

Field Name	Meaning	Responses	Description
Attributes present for wetland sites only			
Confidence	Confidence	L/M/H/C: Low/Moderate/High/Confirmed	Indicates the confidence that a wetland exists at the site based on the remote inventory. Sites that were field verified receive a "C"
VSWI	Vermont Significant Wetlands Inventory	Y/N Yes/No	Indicates if the site is on the VSWI map and is a Class II wetland.
Floodwater	Floodwater	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for floodwater retention
WQ	Water Quality	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for water quality
Fisheries	Fisheries	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for fisheries
Wildlife	Wildlife	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for wildlife habitat
Vegetation	Vegetation	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for significant vegetation
Recreation	Recreation	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for recreation
Open_Space	Open Space	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for open space
Erosion	Erosion	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for erosion control
Education	Education	L/M/H/N: Low/Moderate/High/No	Indicates if the site functions for education
FVSize	Complex Size	L/M/H/N: Low/Moderate/High/No	Size score for wetland and associated complex (defined as wetland natural communities within 100' of each other)
FXNVALSUM	Function and value summary	Integer	Summary weighted score of functions and values. Calculated as a sum of all Function/Value scores above using the following matrix: N=0, L=1, M=2, H=3. Provides comparative score for all wetland communities within the study area.

Table 2: Wildlife Contiguous Habitat Unit (CHU) Attributes

Field Name	Meaning	Responses	Description
Id	Arrowwood Environmental Identification	Integer	Unit identification number assigned by Arrowwood Environmental
Name	Name of unit	Text	Unit name designation, typ. based on nearby feature
ACRES	Acres	Integer	The size of the CHU
Core_acres	Core acres	Integer	The acres of core habitat within the CHU
Dryd_acres	Deeryard acres	Integer	The acres of deeryard within the CHU
Strm_mile	Stream miles	Integer	The length in miles of stream within the CHU
Wet_acres	Wetland acres	Integer	The area of wetlands within the CHU
ES_acres	Early Successional acres	Integer	The acres of early successional habitat within the CHU
FRC_acres	Forested riparian corridor acres	Integer	The acres of forested riparian corridor within the CHU
Mast_pres	Mast present	Yes/blank	Indicates if mast is present within the CHU
Ledge_pres	Ledge present	Yes/blank	Indicates if ledge is present within the CHU
BW_pres	Bear wetland present	Yes/blank	Indicates if bear wetland is present within the CHU
VP_count	Vernal Pool count	Integer	Indicates the number of vernal pools identified within the CHU
Sig_natcom	Significant natural community	State/local	Indicates the presence of locally or state significant natural communities within the CHU
Elev_min	Elevation minimum	Integer/Feet	Indicates the minimum elevation (in feet) within the CHU
Elev_max	Elevation maximum	Integer/Feet	Indicates the maximum elevation (in feet) within the CHU
Elev_range	Elevation range	Integer/Feet	Indicates the range of elevation (in feet) within the CHU
Elev_mean	Elevation mean	Integer/Feet	Indicates the mean elevation (in feet) within the CHU
C_hd_rank	CHU horizontal diversity rank	Low/moderate/high	Indicates the horizontal diversity rank measured and assigned by Arrowwood Environmental
Cons_acres	Conservation acres	Integer	Area of conserved land within the CHU

Table 3: NCLC Dataset Land Cover Classification Codes

Code	Land Cover Type
0	Unknown
11	Open Water
2	Developed Land
21	Developed- Open Space
22	Developed- Low Intensity
23	Developed- Medium Intensity
24	Developed- High Intensity
3	Upland-general
31	Barren- Rock/Sand/Clay
4	Forested
41	Deciduous Forest
42	Conifer Forest
43	Mixed Forest
52	Shrub/Scrub Early Succession
7	Open Land
71	Open- Grassland
8	Agricultural
81	Pasture/Hay
82	Cultivated/Crop
9	Wetland-general
90	Forested/Shrub Wetlands
95	Herbaceous Wetlands