

Appendix D

Regional and Town Plan Excerpts

Regional Plan for the Northeast Kingdom 2015-2023



Adoption Date: August 27, 2015
Amended (new Regional Energy Plan added):
April 26, 2018

NORTHEASTERN VERMONT DEVELOPMENT ASSOCIATION

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Volume I

REGIONAL GOALS & STRATEGIES

I. INTRODUCTION

The Northeastern Vermont Development Association (NVDA), the regional planning and development organization for the northeast region of Vermont, strives to assist and promote the interests of all municipalities in Caledonia, Essex, and Orleans Counties; and to support economic development initiatives that provide quality job opportunities in this region. The Association is enabled under the Vermont Municipal and Regional Planning and Development Act (24 V.S.A., 117, Section 4341). NVDA is the only combined Regional Planning Commission and Development Corporation in Vermont.

The mission of NVDA is to:

- Provide leadership and technical expertise to local communities, agencies, and organizations to facilitate cooperative planning within and among the Northeast Kingdom.
- Work to improve the quality of life for people in the Northeast Kingdom through planning and by promoting economic development while preserving the region's natural environment.

Purpose

The previous version of the *Regional Plan for the Northeast Kingdom* was adopted in 1995, and readopted in 2000. A new plan was adopted in 2006 and amended in 2013.

The purpose of the *Regional Plan for the Northeast Kingdom* is to provide a guide for managing change and an informational framework within which municipalities, businesses, individuals, and other organizations can make decisions regarding growth and development. In no particular order, there are three principal uses for this Plan:

1. Guidance in regional and local planning and decision making
2. General information
3. As a basis for state review processes

Organization

The Regional Plan is composed of three volumes. Foremost among the three is Volume I Regional Goals & Strategies, which presents the goals, policies, and objectives for the region. Volume I should be considered a quick reference to regional goals and policies. Volume II, the Regional Analysis, is a presentation of existing conditions and background information intended to give readers a picture of life in the Northeast Kingdom. Maps, tables, and photographs have been inserted throughout the second volume. The third volume is titled *Regional Transportation Plan for the Northeast Kingdom*.

This summary and the supporting narrative document are each divided into chapters addressing distinct elements such as housing, land use, energy, etc. The transportation plan focuses solely on transportation issues. All three volumes constitute the NVDA regional plan.

II. REGIONAL VISION

Vermont's rural traditions have been better preserved in the Northeast Kingdom than in other areas of the state. Respect for individual rights and a genuine neighborliness toward others are values that continue as part of the social fabric here. The physical landscape has essentially remained unchanged with compact village centers surrounded by working farms and productive forests. When one examines local town plans throughout the region, one quickly gets the sense that most people in this region prefer gradual change over rapid growth. Nevertheless, most Northeast Kingdom residents stand firmly behind development that promotes job creation and sustained economic development.

The natural beauty and wholesome quality of life experienced in the Kingdom are things no longer enjoyed exclusively by the region's residents. With the Northeast Kingdom within a day's drive of more than 70 million people, the region has become a recreational playground for many out-of-area visitors. Others are seeking to permanently escape the rigors of urban life elsewhere and relocate to the region. Such outside interest in the region presents both opportunities and problems. While towns appreciate the additional revenue associated with seasonal residents and visitors, a large influx of new, year-round residents can strain local infrastructures and services. New residents sometimes seem to have unreasonable expectations, but they often bring fresh perspectives and new ideas. With longtime and new residents alike, the communities of this region are encouraged to plan for their future, so that growth is expected and welcome rather than haphazard and problematic. Over time, the cumulative effects of unplanned or uncoordinated growth can be dramatic, and may negatively affect local economies and the quality of life Northeast Kingdom residents have come to enjoy.

In both regional and local planning processes, we need to retain and strengthen existing businesses while creating new economic and employment opportunities for residents from all walks of life. We must provide quality educational opportunities and skills training for all job seekers to make the region's workforce more attractive to employers. With an economy that is to a great extent linked to our natural resource base, the region and its municipalities should also embrace strategies to protect the environmental quality in the Northeast Kingdom.

The availability of quality, affordable housing is a regional goal also shared by every local community, and upgrading existing, substandard housing is a particularly urgent priority. Northeast Kingdom residents are also encouraged to work with their local, regional, and state agencies and officials to revitalize downtowns, village centers, and cultural institutions to preserve our cherished way of life.

Local communities and state agencies must continue to upgrade public infrastructure in a coordinated manner, in order to protect the health, safety, and welfare of local residents. As a region, we must strive to provide a reliable and safe transportation system with improved access to destinations within and outside the region for a greater number of people. Achieving these broad goals will ensure that the residents of the Northeast Kingdom will prosper and live satisfying lives in communities of their own making.

III. TOOLS FOR IMPLEMENTATION

A good plan provides a full range of options to its residents and citizens. Implementation – whether it is regulatory or otherwise – will ultimately depend on the political will of each member municipality of NVDA. NVDA can and should serve a vital role as facilitator for each endeavor by providing the knowledge, resources, expertise, and skills that will empower each municipality to make informed decisions and act decisively. Implementation options are organized in the following broader categories:

Implementation Option	NVDA's role	Examples
A. Non-Regulatory Planning	NVDA will continue to update the regional plan, municipal plans, and supporting planning products in accordance with its statutory duties.	Regional Plan Municipal Plan Housing Studies Capacity Studies Hazard Mitigation Plans Food System Plans Solid Waste Management Plans Wastewater Planning Studies

B. Non-Regulatory - Programs and Incentives	NVDA will continue to advise communities on such programs and incentives to direct public and private investment in a manner that meets state planning goals. It will also participate in public comment and review of policies and plans that guide these incentive plans. (See E. Other Regulatory Jurisdictions.)	Downtown and Village Center Designation Neighborhood Development Areas Growth Centers New Market Tax Credits Low Income Housing Tax Credits Vermont Employment Growth Incentive (VEGI) Use Value Appraisal Program (Current Use) Conservation Easements
C. Infrastructure Investments	NVDA will provide technical support, as appropriate to ensure municipalities invest in public infrastructure wisely.	Capital Budget and Planning Bridge and Culvert Inventories Bonds Revolving Loan Funds Tax Increment Finance Districts
D. Regulatory	NVDA will provide support, as appropriate to assist municipalities develop and enforce local regulations.	Zoning Subdivision Regulations Flood Hazard Regulations Junkyard Ordinances Freestanding ordinance (noise, outdoor wood boilers, etc.)
E. Other Regulatory Jurisdictions	While the Regional Plan does not have the same regulatory effect as municipal land use regulations, the policies and recommendations within this Plan guide decision making at the state, regional and local level. NVDA will review and provide testimony on proposed initiatives that impact our member municipalities.	Act 250 Review Section 248 proceedings Proposed legislation or policy
F. Grant Writing and Administration	NVDA provides ongoing grant writing and administration assistance to its member municipalities, which generally lack the in-house resources to obtain and administer grants. While grants serve other underlying purposes – such as planning,	Municipal Planning Grants Vermont Community Development Program Economic Development Administration USDA Rural Development Northern Border Regional Commission

	feasibility, studies, infrastructure upgrades, and economic development initiatives – grant writing and administration requires RPC staff time and resources and therefore is a significant implementation activity in its own right.	
G.Outreach and Education	Education of not only those entities which coordinate daily with the Regional Commission but the general public as to the Plan policies and its implementation is essential. Plan implementation without public input is destined to fail. A deliberate effort to involve the public in all aspects of the Plan implementation process is essential. Education of the public on the overall values of multiple town planning for an area will continue to be an on-going function of the Regional Commission as it seeks to implement this Plan with others.	Training and workshops Legislative Breakfasts Industry Visits Municipal Consultations

IV. TIMEFRAMES

Ongoing, routine and immediate:

This includes annual statutory duties carried out by NVDA, such as outreach and education, as well as sustained effort, such as maintenance of existing plans (such as municipal plans, Local Emergency Operations Plans, Solid Waste Plans), and ongoing participation in designation or incentive-based programs (such as Downtown and Village Center Designation).

Short-term implementation (1-5 years):

These include specific projects that can be carried out within five years, such as development of new supporting plans (agriculture/food systems, transportation plans, inventories and assessments, regional plan update, substantive updates to municipal plans and new municipal plans).

Long-term implementation:

These include initiatives that can be started, but cannot be completed within five years, including initiatives that currently lack funding or resources for full implementation. Includes major infrastructure upgrades and studies and future needs.

V. GOALS AND STRATEGIES

Forest Land Use Goals	Strategies	Ongoing	Short-term	Longer-Term
Sustainable forestry will remain an economically viable tool to preserve woodlands, open space for recreation, and local character.	Continue to provide planning assistance to communities seeking to conserve valuable forest land. Encourage landowners to enroll productive forestland in the “current use” program. In communities that have land use regulations, encourage the use of planned unit development coupled with low density zoning to preserve larger blocks of forestland while facilitating efficient residential and commercial development.	G	B	A, D, F
Mixed-use forests will allow for expanded economic benefits to forest owners while encouraging sound ecological practices and recreational access to the public.	Connect municipalities with appropriate agencies and resources providing management assistance with municipal forests.	G, E		
Value-added processing opportunities for wood resources in the region will increase.	Provide management, financial, and technical assistance to local forest product industries, including wood product manufacturers, sawmills, paper mills, and wood-powered electrical generators (cogeneration).	G	A	F, B
Residential and commercial development patterns will occur in such a way as to retain the productivity of the region’s accessible forests.	Support the development and marketing of distinctive wood products identifiable with Vermont and/or the Northeast Kingdom.	G	A	F
State and federally-controlled land is an important resource for passive recreation and will continue to be accessible to the public.	Support owners of forestland who implement sustainable forestry practices to market their wood and wood products.	G	A	F
Municipalities with land in municipal forests will have	Expand usage of existing rail infrastructure for shipping and interface with trucking. Explore the creation of forest-related industrial zones (i.e. rail sidings for sawmills)		A	A, D, F

the capacity to manage the land for its resource value and public recreational use. Maintain enough forest land to support wood-related industries, retain the region's natural beauty, protect fragile areas, encourage wildlife, promote recreational usage, and maintain a healthy, sustainable forest based economy.				
Agriculture Land Use Goals	Strategies	Ongoing	Short-term	Longer-Term
Farming and agriculture will remain an important and viable sector of the regional economy.	Continue to provide planning assistance to communities seeking to conserve productive agricultural land. Encourage the use of "planned unit development" coupled with low density zoning and other tools to preserve agricultural resources.	G		A, D, F
Contiguous tracts of agricultural soils will be preserved.	Provide technical assistance to towns seeking to encourage on-farm enterprises, through the use of land use regulations or incentives.	G		A, D, F
Development of residential and commercial uses will not significantly reduce the amount of open and productive farm land.	Provide support to farmers interested in diversification and/or product development. Assist with grants and low-interest loans for value-adding businesses and diversification.	G	A	F, B
	Identify funding sources for, and market existing and new food ventures in the region.		F	F B
	Support education efforts that teach sustainable agricultural practices, and the tax benefits of enrollment in the "current use" program.	G		
	Support succession planning and efforts to connect new and expanding farmers with affordable land.	A, B, G		
Recreation Land Use Goals	Strategies	Ongoing	Short-term	Longer-Term

Sufficient open space will be available for current and future outdoor recreational pursuits.	Assist towns to plan for future recreation needs, recognizing that privately-held land may not be available for passive recreational use in the future.	G	A, F	B
A variety of year-round and seasonal, indoor and outdoor recreation opportunities will be available for residents and visitors. Public access to water bodies will be protected.	Assist with financing to develop additional facilities such as sports fields, playgrounds, trail systems, ice rinks, skateboard parks, and recreation/bike paths, coordinating actions with the goals in the SCORP in order to access dedicated federal funds.		F	
	Identify and protect public access to water bodies.	G	A, F	
	Identify the recreation facilities and activities most needed by youths and seniors and help towns identify and secure funds for their development.		A	F
	Support local and regional recreation events (e.g. fairs, festivals, etc.).	G		
Future Land Use and Development Use Goals	Strategies	Ongoing	Short-term	Longer-Term
Established centers will be an economically vital mix of commercial and residential uses, and will offer a variety of housing types available at different price points to support long-term sustainability. Towns will be supported in identifying and implementing strategies that reverse the current trend of new residential development occurring primarily outside of centers. Traditional development patterns will be maintained and linear “strip”	Direct public investment and create financial incentives for the development of a balanced mix of low-income, work-force, and upper-income housing in and adjacent to village centers and downtowns, with the goal of allowing all communities to develop into high-opportunity areas.	G , B , E	B, A	E
	Direct public investment for new elderly and affordable housing to town and village centers in locations with access to public transportation routes. Aside from promoting traditional settlement patterns, this will put seniors closer to such amenities as shopping, and community facilities, and enable income-stressed residents to have cost-saving access to services, employment centers, and public transportation options to places of employment.	A, G	A, B, F	
	Work with housing developers and communities to assure that all residents have the opportunity for access to high-performing schools and economically-sustainable employment.	A, G	B, F	E
	Assist communities applying for designation under the Vermont Downtown, Village Center, and/or Neighborhood Development Programs where appropriate to encourage mixed-use development (residential, commercial and appropriate light-industrial) in centers.	G	B	

development will be avoided. New development will be compatible with existing land uses, and consistent with local plans. Historic structures, community facilities, and other buildings will be preserved and adapted for re-use. Brownfield sites will be reclaimed. Significant development proposals will consider the impact on adjacent regions.	Encourage adaptive reuse of historic structures through tax incentives, tax credits, grants, and loans, assistance in location of funding, etc.	G, B	B	
	Encourage desired town center development through investment, maintenance, and expansion of appropriate infrastructure (sidewalks, water and sewer, parking, public spaces, etc.).	G	B, A	F
	Support beautification efforts in town centers and downtowns.	B	F	
	Encourage towns to plan for community recreational and social needs.	G, B	A, C	F
	Avoid the development of agricultural lands with auto-dependent residential subdivisions by encouraging towns with land use regulations to lower the permitted residential density in agricultural zones, coupled with planned unit development or clustering provisions to ensure efficient and well-designed developments.	G	A	A, D, F
	Protect against the fragmentation of rural lands by the piecemeal development of residential lots by providing financial incentives for the development of attractive work-force and upper-income housing in and adjacent to village centers and downtowns.	G	B, A	G
	Support local conservation efforts.	G	A, F	B, F, D
	Encourage community open space plans and recreation infrastructure, recognizing that privately-held land will not be available unless protected through the purchase of conservation and access easements.	G	A, F	B, F, D
	Assist towns in identifying in their Town Plans appropriate areas for the development of industrial or manufacturing uses, based on the location of natural resources and existing transportation and utility infrastructure.		A, F	
	Assist towns in marketing potential locations for industry to the business community.	G	B	
	Assist towns with the assessment and remediation of Brownfields in order to revitalize and re-use existing industrial infrastructure where appropriate for future industrial uses.		A, F	F
Energy Goals	Energy Strategies	Ongoing	Short-Term	Longer-Term
	Promote a diversified energy portfolio for the region.	E	A, B	C

An adequate, reliable, diverse, and secure energy supply will benefit the region.	Support the upgrade of regional transmission systems to continue to reduce constraints.	E	A, B	C
	Support the maintenance and upgrade of existing energy generation facilities and related infrastructure.	E	A	C
	Encourage local responders to plan for emergency energy resources (VEM Emergency Generators Grant Program generators.)	G	F	
Affordable energy alternatives will be available for the region's users.	Assist in the development of businesses that support alternatives energy use.	B, G	A, D	C, F
	Work with Tier 3 energy service providers to promote the installation of cold climate heat pumps and geothermal systems by facilitating outreach and education on their benefits.	G		
	Partner with Efficiency Vermont and Tier 3 energy service providers to increase the use of efficient wood heat and biomass systems.	G		
	Support the development of small-scale renewable resources, such as wind and solar and the use of supplemental sources (wood) to stabilize energy costs.	G, E	F	C
	Promote and support rail infrastructure as a cost-effective transportation resource for the energy industry.	E.		C
	Encourage and support agricultural production of biofuels and oilseed crops, and explore ways to broaden access to processing infrastructure.	G	A, B, F	
	Identify potential users of district heating and wood heating systems and provide assistance to communities seeking to develop them.		A	
	Encourage the legislature to increase incentives and rebates for efficient wood heat systems.	E		
	Provide outreach and education among vendors, contractors, and the general public through venues such as tradeshow and workshops.	G		
	Provide communities with an analysis of potential areas that are suitable for ground source heat pumps.		A	
	Support upgrade and trade-out programs and incentives for older, higher emission wood-burning stoves and boilers.	G		

Decrease the region's reliance on single-occupancy vehicle trips and gas/diesel powered vehicles.	Continue to advocate for better telecommunications infrastructure so employees can work from home.	E	F	C
	Encourage local employers to reduce VMTs through programs such as ride sharing and Go Vermont.	G		
	Support and expand access to liquid biofuels for use in commercial vehicles and heavy equipment.	E	F	C
	Support and expand the use of electric powered busses and vans among the public transportation providers serving the region.	E, G	F	C
	Work with cycling advocacy groups such as Local Motion by hosting safe on-road cycling workshops.	G		
	Provide training to local zoning and development review boards to consider infrastructure for alternative transportation in their review of site plans.	D, G	F	C
	Provide technical and grant writing assistance to local planning commissions who plan for multi-modal circulation and better connectivity with alternative transportation modes.	F, G		
	Promote the use of the region's cycling infrastructure, such as the Cross Vermont Trail and the Lamoille Valley Rail Trail and support the efforts of local groups who work to maintain them.	G		C
	Supports municipalities and local businesses to install EV charging stations at convenient locations, such as in front of restaurants, stores, businesses, or entertainment or recreational facilities, where users would want to park for periods of two to four hours. Explore and pursue incentives to defray the cost of installation and administration so that users pay only for electricity.	B, G		C
Net-metering capacity in the region will be maximized.	Encourage municipalities to become "clean energy districts" and participate in the PACE program (Property Assessed Clean Energy). This would provide consumers with options to more affordably implement grid-tied renewable energy systems.	G.)	B)	
	Support solar panel safety training programs for fire fighters and first responders.	G		
Energy efficiency and weatherization will be an	Assist municipalities in reducing their energy costs through conservation, efficiency, and weatherization programs.	G		

	loan and USDA Direct and Guaranteed Loan Programs, for single homes and multi-family homes.			
Energy generation that provides the best cost-benefit to the region will be promoted.	Promote wood-based energy generation to support the region's forest industry. Encourage the development of energy facilities and resources that help sustain local agriculture and forestry (i.e. grass/wood-pellets, small wind, solar, farm-methane, wood-chip, biodiesel).	B, G	A, E	G
Environmental and aesthetic impact of energy generation and usage will be considered. There will be broad public participation in the decision-making process.	Encourage the Vermont Legislature to develop policies that support the development of solar, small-wind, hydro-electric, farm methane and biomass generation facilities, while respecting current local land use and the culture of the region. Encourage the PUC to examine the long-term sustainability of proposed facilities	G, E		
Assessment of local needs and values on new energy development will be encouraged.	Encourage towns to address energy development in town planning and zoning. Provide assistance to businesses/municipalities to develop cogeneration and other alternative energy strategies.	G	A, G	

	Support efforts to aggregate and distribute gleaned agricultural products.	G	A, F	
	Support efforts to efficiently aggregate and distribute recovered food in a manner that minimizes spoilage and trucking miles.		A	C, F
	Support the expansion and viability of commercial composting operations.			C, G
	Help communities plan for and create municipal composting facilities, where feasible.		A, F	
	Explore and facilitate the sustainable use of food residuals and other waste byproducts.			
Historic, Cultural & Scenic Goals	Historic, Cultural & Scenic Strategies	Ongoing	Short-Term	Longer-Term
Future development should follow traditional development patterns, while providing for economic development opportunities and livable communities.	Promote local and regional tourism, since it an important part of our economic base.	B	A	
	Promote local traditions, skills, crafts, and the performing arts within the region.	B G		
	Assist communities to designate downtowns and village centers under the Vermont Downtown Program.	G, B	A,); B, F	
	Support local cultural resource initiatives to revitalize communities and downtowns.	G, B	A, B	F
Significant historic, cultural, and scenic resources within the region should be identified and preserved.	Assist communities to preserve and maintain historic downtowns, village centers, buildings, and rural and scenic landscapes.	G	A, B, D, F	C, F
	Rehabilitate and re-use significant cultural, architectural, and historic sites, and community facilities, whenever feasible.	G	A, B, D	C, F
	Utilize federal, state, and local programs for developing or preserving local cultural and historic assets.	G.	B, F	
	Disseminate information about historic tax credits to businesses and property owners.	G.		
	Assist municipalities with securing funding and technical assistance to conduct a comprehensive survey of local historic resources.		F, B	
Housing Goals	Housing Strategies	Ongoing	Short-Term	Longer-Term

Chapter One: Land Use

This chapter of the Regional Plan identifies important land resources, and describes land use trends and how they relate to the economic health and quality of life in the region. This section also describes how the use of land relates to the statewide planning goals.

Of the 55 towns in the 3 counties of the Northeastern Kingdom, 34 towns have adopted zoning regulations, which provide a framework for future land use in these communities. This Regional Plan seeks to support the land use goals of the towns in the region, while recognizing potential impacts that land use in individual towns may have on regional resources, infrastructure, and economic development.

I. LAND RESOURCES

FORESTLAND

According to the National Land Cover statistics, the Northeast Kingdom has more than one million acres of forestland, accounting for more than 80% of the region's land cover.

Local forests provide residents of the Northeast Kingdom with a variety of benefits. The region's forested lands have existed as sources of income since the earliest European settlements and continue to offer significant potential for providing wood for value-added products such as furniture, lumber, wood pulp, and chips and pellets for biomass. Water and air quality, and wildlife habitats are all dependent upon the vast forests. Residents enjoy a variety of recreational activities in the forests as well, and much of the tourism industry relies on a healthy forest to remain viable. Hunting, fishing, snowmobiling, cross-country skiing, mountain biking, and bird and wildlife viewing are all dependent on a healthy forest. Many of these activities coexist well with responsible timber harvesting. Various game and non-game species rely on a landscape that includes forest, meadow, mixed-age trees, and forest edge environments. Snowmobiling, hiking, cross country skiing, horseback riding, and mountain biking often benefit from primitive roads maintained for logging.

Table 1.1 shows estimates for accessible and managed forested acreages for the region and counties.

“Appropriate” forestland is defined by the Vermont Department of Forests, Parks and Recreation by subtracting from the National Land Cover dataset acreages with physical barriers to harvesting, or environmentally sensitivities that would render the forest cover inappropriate for harvesting. Estimates for “managed” forestland were developed using USDA Forest Service Forest Inventory and Analysis, as well as general assumptions about enrollment in Vermont's Use Value Appraisal Program (Current Use).

properties, and even the most experienced farmer may not be able to vie for access to farmland pricewise.

The Vermont Land Trust conserves prime farmland through donation or purchase of conservation easements. Currently, VLT, at times in partnership with the Vermont Housing Conservation Board and the Vermont Agency of Agriculture, Food and Markets, has conserved about 32,000 acres of farmland on 150 farms in the region. The majority of conserved properties are dairy farms.

While a conservation easement keeps the land *available* for the next generation of farmers, it does not, however, ensure that it will be *affordable*. To meet this challenge, VLT has added an affordability option to its conservation easements known as Option to Purchase at Agricultural Value (OPAV). The OPAV gives the holder of the conservation easement the ability to purchase the farm at its agricultural value if the farm would otherwise be sold to a non-farmer. All new conservation easements carry an OPAV, and the option is being added to existing easements. VLT's Farmland Access Program has been connecting beginning farmers with affordable land since 2004. At least three new farmers in the region have successfully accessed land through this program in recent years.

One of the region's most significant farmland access challenges is succession planning for the next generation of farmers. A 2016 study by American Farmland Trust found that farmers aged 55 and older operate 60% of all farms in the NEK. With roughly a third likely to exit farming in the next two decades, the future of NEK farms is particularly unclear: Of the 345 farms in the region with a principle operator aged 65 or older, only 19 had identified a potential successor. Technical services, outreach, and public policy must be better aligned to facilitate succession planning to qualified successors.

Only about 16% of land enrolled in Current Use is agricultural use (just over 89,000 acres). Twenty towns in the region each have more than 2,000 acres of agricultural lands enrolled, with the top three being the Orleans County towns of Irasburg, with 6,390 acres; Newport Town, with 5,669 acres; and Holland, with 4,290 acres.

Current Use eligibility requirements have been a hurdle for some of our region's producers. For example, producers who have to demonstrate that farming is more than 50% of their income may not be eligible, particularly if they are in the "very small" farm category and are likely to work more than 180 days off the farm to support their operation. Farmers who rent land also may face eligibility obstacles. This plan supports a re-examination of taxation policies that can help our land-based entrepreneurs keep their operations financially viable.

Local land use regulations may be an effective way to protect agricultural resources, and have the flexibility to be modified over time through a public process as a town's goals and needs change. Through the use of regulatory tools such as agricultural overlay districts, low density zoning coupled with "planned unit development" or density-based zoning, towns can assure that agricultural resources are preserved while property owners can develop their property in an efficient manner for other uses, including residential or commercial developments. In 2017, the Town of Sutton became the first town in the region to adopt a density-based working lands overlay, which includes forested tracts as well as farmlands.

Approaches towns can use to encourage commercial uses that are agriculturally-based, but which may fall outside those recognized by the Agency of Agriculture Food and Markets, are discussed in a 2012 publication entitled *Facilitating Innovative Agricultural Enterprises*. A copy of this publication can be accessed online at the NVDA website: <http://www.nvda.net/files/VT-Ag-Guide.pdf>.

RECREATION LANDS

Recreation opportunities enhance the quality of life for residents and tourists alike, provide the health benefits of exercise, and contribute significantly to the regional economy. Outdoor recreation activities, such as hunting, fishing, hiking, snowmobiling, horseback riding, cross country skiing, and mountain biking require relatively little maintenance of the open spaces where they take place. These activities often coexist easily with other land uses such as forestry and farming, and can take place on public and private lands. For example, a

portion of Darling State Park has been leased to the Burke Mountain Ski area for alpine and Nordic ski trails. In northern Essex County there are vast tracts of forest land containing networks of four-season trails that are also used for forestry operations.

Private land owners have been generous in allowing recreational use of their land. Educating users about respectful and safe use is important in maintaining access to private lands in the future. However, residential development and the subdivision of land over time can reduce the amount of private lands available for recreation. This increases the pressure on public lands and those private lands that are still accessible. State-wide, the number of acres of posted property registered with town clerks was relatively constant from 2000 through 2010.

Conserved Lands for Passive Recreation

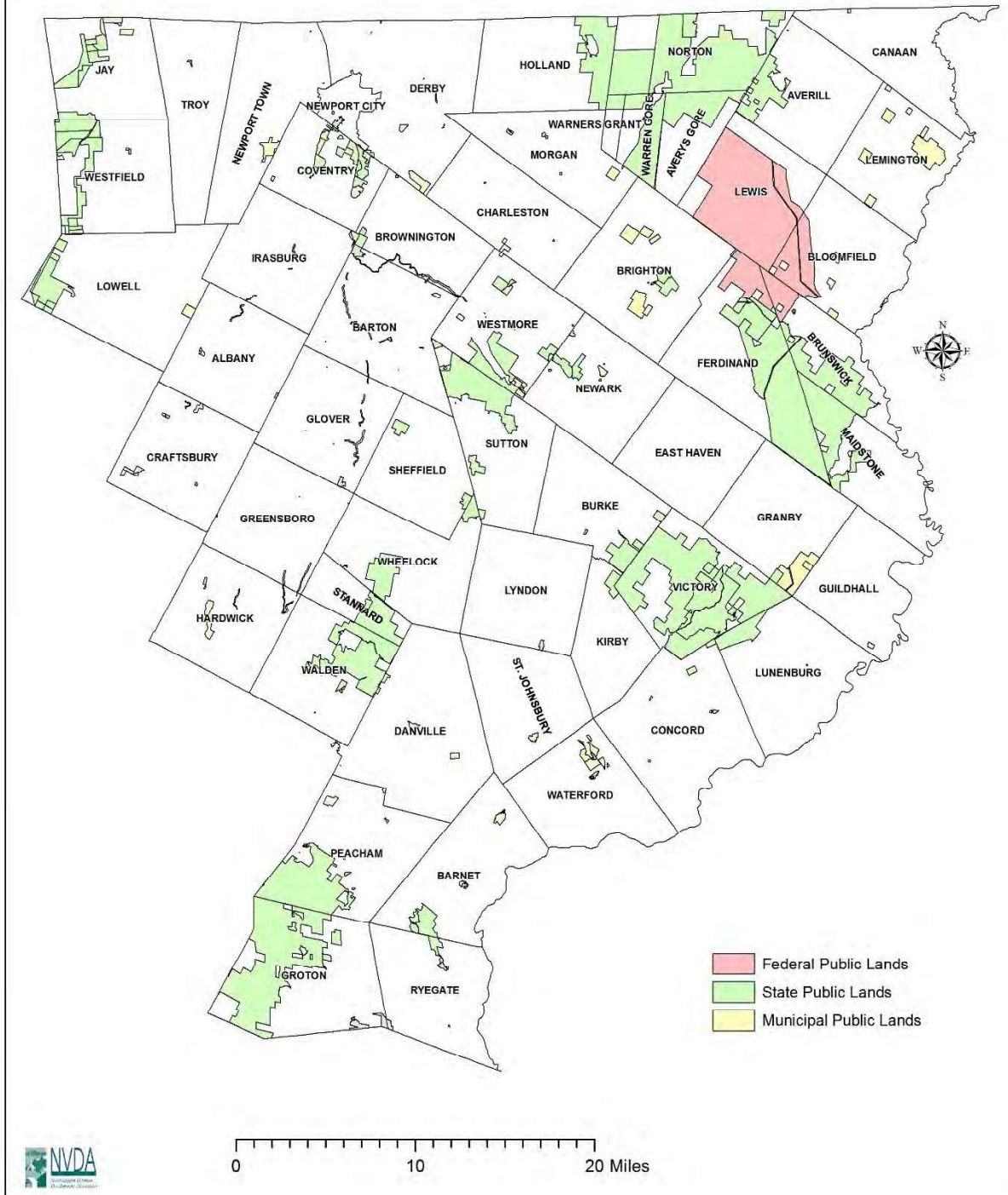
Federal, state, and municipally-controlled land, whether conserved by fee ownership or by an easement on privately-held land, allow for varying levels of public access and are an important passive recreational resource. Some trails and logging roads are actively maintained by the state or non-profit land conservation organizations. The Vermont Association of Snow Travelers (VAST) is one such organization that maintains trails on both private, unencumbered land and publicly held land.

Figure 1.2 “NVDA: Public Lands” shows the location of lands held or controlled by local, state and federal agencies.

NVDA Region: Public Lands

Figure 1.2

09/08/2017



Brownfields

Brownfields are defined by the Environmental Protection Agency (EPA) as "Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination". Though Northeastern Vermont is not typically associated with issues such as these, there are many sites throughout the region where past uses led to the contamination of soils. Questionable or contaminated sites in the region are commonly located in or near urban areas with existing industrial infrastructure. Often, the responsible parties are no longer owners of the property; others are businesses that are now defunct; and though local governments are often aware of such problems, they have no money for clean-up.

The remediation of contaminated properties faces several obstacles. The potential for hidden, open-ended costs associated with cleanup is often enough to keep developers away. Current liability issues and low prices of prime developable land ("greenfields") make the reuse of some sites unlikely without incentives. Unfortunately, what is left is frequently a vacant or abandoned eyesore and potential health hazard. Abandoned sites do not contribute significantly to the property tax base and contaminated sites lower the property values of surrounding lots.

Reasons to reuse or redevelop brownfield sites include bringing unused properties back onto the tax rolls, maintaining local property values, and alleviating the need to build new sewer, energy, and transportation infrastructure. Reuse also reinforces efforts to maintain traditional development patterns by encouraging compact development and reducing pressures on undeveloped land. Federal and state grants, revolving loan funds, tax increment financing (TIF), and liability insurance (Brownfields Reuse and Environmental Liability Limitation Act – BRELLA) are some of the tools commonly used to finance brownfield redevelopment. These are all financing methods that communities need to consider. NVDA provides assistance to Towns in securing funds to assess and remediate Brownfields.

Shoreline Development

The Northeast Kingdom possesses a majority of the state's lake and ponds, and also the majority of undeveloped shorelines. Recent increases in the development of second homes, camps, and primary residences have decreased the amount of undeveloped shoreline. Since the clearing and development of shorelines can negatively impact water quality, the State enacted the Vermont Shoreland Protection Act in 2014. The provisions of this Act require property owners to obtain a state permit for most development and clearing activities within 250 feet of the shores of lakes that are 10 acres or larger in size. In Caledonia County, all towns with the exception of Burke and St. Johnsbury have lakes that are large enough to be subject to the State Shoreland Act. In Essex County, all towns with the exception of Bloomfield, East Haven, Guildhall, Lemington, Victory and Warner's Grant have lakes subject to the State Shoreland Act; and in Orleans County all towns with the exception of Troy and Westfield have lakes subject to the provisions of the Act. Towns have the ability to seek delegation of review under the State Act, provided they have local regulations that are at least as stringent as the State's. Greensboro, in Orleans County, was the first and only town in the Northeast Kingdom region to seek delegation authority for review of permits under the State Shoreland Protection Act.

Designated Downtowns and Village Centers

The Division of Community Planning and Revitalization within Vermont's Department of Housing and Community Development oversees a State designation program that encourages communities to reinvest in their downtowns and village centers. With designation comes numerous benefits, including tax credits, loans, and grants from various state agencies. Two of the designation categories that communities in the region have applied for and received are "Village Center" designation and "Downtown" designation. Details of these programs and application requirements can be found on the website of the Agency of Commerce and Community Development at http://accd.vermont.gov/strong_communities/opportunities/revitalization.

12/07/2017



III. FUTURE LAND USE & DEVELOPMENT

Categories of Land Use

If we look at our current land use from a development standpoint, the region can basically be divided into five broad categories:

1. Regional Urban Centers
2. Service Centers
3. Village Centers
4. Rural Areas
5. Industrial/Business Areas

The Regional Urban Centers, Service Centers, Village Centers, and Industrial/Business areas are depicted on Figure 1.5, “NVDA: Future Land Use.” Other areas are Rural, which includes open agricultural fields and forested areas. The areas are categorized for growth based on the following development pattern descriptions. These descriptions are general in nature and can be used to guide growth in an appropriate manner, keeping in the character of the area.

The Future Land Use Map and accompanying text is intended to complement local plans and provide guidance to communities developing local plans. The identification of future land use categories in the regional plan is general in nature; locally-adopted plans are informed by locally-determined goals, and local knowledge.

Regional Urban Centers Description

Regional Urban Centers are areas with concentrated development that provide the core support services for the less developed outlying areas. Higher capacity road infrastructure, municipal sewer and water, energy infrastructure, and emergency services are in place to support heavier development in these areas.

The Northeast Kingdom has two long-established regional urban centers, one centered on the Caledonia County seat and the other on the Orleans County seat. The regional urban center in the St. Johnsbury/Lyndon area serves the southern section of the region, and Newport City/Derby regional urban center serves the northern section. Transportation infrastructure plays an important role. St. Johnsbury/Lyndon is located at the intersections of Interstates 91 and 93, Route 5, and the main east-west connector Route 2. Newport City/Derby is also on Interstate 91 and Route 5, as well as Route 105. Rail yards operate in both St. Johnsbury and Newport City. Caledonia County Airport is located in Lyndon, and the Northeast Kingdom International Airport (previously the Newport State Airport), is in a growing, aviation-related industrial area just outside of the Newport City limits in Coventry.

The vast majority of covered employment in the Northeast Kingdom is located in the two urban centers. In 2012, the Northeast Kingdom had a combined 22,231 covered jobs; 9,718 of these were in the St. Johnsbury/Lyndon labor market area, and 10,566 were in the Newport City/Derby labor market area. Major sectors providing employment in the region include health care/social assistance, retail trade, manufacturing – precision metals and wood products, accommodation/food services, and construction. (VTLM 2017). Both urban centers have industrial parks, regional hospitals, various state offices, and dense commercial development. Northern Vermont University, Springfield College, Lyndon Institute, and St. Johnsbury Academy are located in St. Johnsbury/Lyndon, and the North Country Career Center is located in Newport/Derby. Branches of the Community College of Vermont, and University of Vermont Extension offices are located in both centers.

1 These regional centers are also home to significant cultural and recreational resources and performing arts
2 venues. In the St. Johnsbury/Lyndon regional hub, resources include the Fairbanks Museum and
3 Planetarium, the Athenaeum, Catamount Arts, performance venues at St. Johnsbury Academy, Lyndon
4 Institute and the Alexander Twilight Theater at Lyndon State College; and the Caledonia County Fairgrounds
5 in Lyndon. Resources in the Derby/Newport City hub include the historic Haskell Opera House in Derby
6 Line Village, the Goodrich Memorial Library in Newport, North Country Union High School, which hosts an
7 annual music festival for all high schools in the region, and attractions along the Lake Memphremagog
8 waterfront.

9 Housing density is greater in the regional urban centers than other towns in the region, with a mix of single
10 family homes and multi-unit housing serving a range of income levels. In downtowns, structures often have
11 commercial ground floors and residential upper floors. Combined, the two urban centers contain almost
12 one-third of the housing units in the entire region. According to the American Community Survey's 2016
13 estimates, St. Johnsbury/Lyndon had a total of 5,876 housing units, about one sixth of the entire Northeast
14 Kingdom's housing stock (which is 37,850). Newport City/Derby had a total of 4,615 housing units.

15 Other nearby major urban centers providing employment, services, and cultural opportunities to the region
16 are Montpelier, Littleton, NH,
17 West Lebanon, NH, and to a
18 lesser extent, Magoog and
19 Sherbrooke, Quebec.

20 The Town of Hardwick,
21 previously identified as a service
22 center, is an emerging regional
23 urban center. State highways 14
24 and 15 converge in the center of
25 the downtown area, and the
26 southern terminus of State
27 Route 16 intersects with Route
28 15 in the eastern part of Town.
29 Hardwick's Village Center
30 designation by the State has
31 been instrumental in
32 encouraging investment in
33 downtown. In addition, the
34 industrial park adjacent to the



35 downtown area has supported small industrial and commercial operations important to the local and regional
36 economy, primarily in the value-added agricultural sector. Downtown Hardwick has a variety of historically
37 significant civic buildings important to the vitality of the downtown, among which are the Jeudevine Library
38 and the Hardwick Town House. The Town House serves as a venue for community functions and
39 performances and provides gallery space. The building regularly hosts the Vermont Philharmonic, the
40 Craftsbury Chamber Players, and Vermont Vaudeville, among other groups. Due to the growth of its
41 commercial core and the importance of its cultural resources, Hardwick is a good candidate for Downtown
42 designation, and is considering an application.

43 **Service Centers**

44 Historically, a number of sub-regional service centers in the Northeast Kingdom met the everyday needs of
45 residents, farmers and loggers in the surrounding rural areas. While the function of these service centers has
46 changed somewhat over the years, these communities remain important centers for commerce, services,
47 employment and community life. Barton (with its incorporated villages of Barton and Orleans) in Orleans
48 County, and Hardwick in Caledonia County are two of the more significant service centers, providing 1,403

and 1,155 jobs in the region respectively. Other communities in this group include Orleans, Brighton-Island Pond, Canaan-Beecher Falls, North Troy, Jay, East Burke, and Danville.

The service centers are separated by distance from the two regional urban centers, and generally do not provide enough employment to be completely self-contained. As a result, many of the residents have to travel to the larger urban centers for employment. The growing availability of high speed internet in the Northeast Kingdom, residents now have more options to work from home, sometimes at great distances from their primary place of employment. In addition, many residents have found success in marketing products from their home-based business over the internet.

With some exceptions and individual variations, the service centers provide municipal water and sewer and employ municipal staffs. Other limited government functions may also be carried out in these communities. For example, Vermont Agency of Transportation has maintenance garages in Canaan, Barton and Brighton. All service centers are served by at least one state highway. Community health centers or medical clinics also exist in Barton and Island Pond and Danville.

Land use patterns in service centers have remained relatively stable over time. Change is very gradual. The cores of service centers continue to be characterized by relatively dense mixed land uses, containing civic, governmental, commercial, and mixed residential uses - not unlike times past. For the most part, the boundaries of the centers have remained unchanged over many decades.

Service centers typically have significant areas for industrial use and development. Large-scale resource-based industry in these communities was rooted in their early histories. This is exemplified by the Ethan Allen plants in Orleans and Beecher Falls. However, a reliance on a few large industries makes those communities very vulnerable to fluctuations in the national and regional economies. These service centers still have land set aside for future commercial and industrial development and would be happy to attract industry of any size. Orleans, North Troy and Hardwick all have industrial parks. Recent business development has occurred in both the Orleans and Hardwick industrial parks.

Jay and East Burke are special examples of service centers. These villages have maintained their role as service centers, primarily because they now serve the recreation needs of residents and visitors. Both have winter economies based on down-hill skiing, and to a lesser extent, cross-country skiing. Jay Peak, which recently went through a major expansion period, and along with Burke Mountain Resort with its new development projects, will both become four-season resorts. Expanded activities in recent years include mountain biking, vacation housing developments, hotel developments, and recreation facilities. Jay is the only town in the Northeast Kingdom that provides a higher number of jobs than their total population count. Based on 2015 data from the Vermont Department of Labor, there were 931 jobs in Jay, but the town's population was only 539.⁴

Island Pond, the "Snowmobile Capital of Vermont," is a traditional industrial service center that is becoming more reliant on its recreation resources. Brighton State Park and a sizeable private campground have for many years contributed to Island Pond's summer economy. Large blocks of conserved land that are managed, through fee-ownership or easements, by the State of Vermont and the US Fish and Wildlife Service, also helps to support the tourist industry. Miles of four-season trails are used by cross country skiers, snowmobilers, hikers, and equestrians. Opportunities for bird watching, in particular, present an important draw for tourism and are dependent on the boreal forest habitat.

Village Centers

The Northeast Kingdom has retained many of its small, traditional New England villages located in rural settings. These continue to provide convenient access to basic goods and amenities for the local rural population in the form of general stores, dining, and fuel. Villages also usually have some small-lot residential housing, and such community buildings as libraries, schools, town halls, clubs, and churches. Many villages

⁴ Data for 2016 covered employment in Jay is not available.

offer services for visitors from outside of the region, including inns, bed and breakfasts, dining, and access to recreational activities. Glover and Craftsbury are two examples of village centers.

Characteristics of Village Centers:

- Village/Town center with denser residential patterns than surrounding rural area.
- Appropriate businesses mainly serving the local population (small stores, dining, and some services) and visitors from outside of the region (inns, bed and breakfasts, and recreation).
- Emergency services
- Community buildings such as libraries, schools, town halls, churches, and clubs.

Rural Areas

Most of the region's land lies outside of the town and village centers. It consists mainly of the farms and forestlands of the traditional Vermont landscape. These land uses are supported by the regional urban centers, service centers, and rural villages, where most of the people and commerce are located. These rural areas should receive very little commercial or industrial development unless it occurs in an established industrial park, or in an area specifically designated in the local zoning bylaw or identified in the Town Plan as being well suited to such uses.

Industrial Parks

Some land uses, such as research and development facilities, certain manufacturing processes, warehouses, and trucking-related businesses may be more appropriately located outside of any of the above “center” areas because they 1) would be incompatible with nearby residential areas, 2) require immediate access to a major railroad or highway, or 3) need substantial amounts of land. Clustering these land uses in industrial parks can have the multiple benefits of efficient use of land and efficient provision of required infrastructure.

NVDA has helped develop four fully-serviced industrial parks along with incubator buildings in the towns of Hardwick, Lyndonville/St. Johnsbury, North Troy, and Orleans Village in the Town of Barton. In Newport City, near the border with Derby, there is an existing industrial park that was intended for use by AnC BIO but is now unoccupied. In Coventry, the site of the Newport State Airport, recently renamed the Northeast Kingdom International Airport, has been working on runway expansions since 2012 and has the capacity to function as an industrial park. .

Desired Future Development Patterns

Development Patterns in Centers (Village, Service and Regional Urban)

Municipalities that have been identified as Village Centers, Service Centers, and Regional Urban Centers on the Future Land Use Map can realize benefits, such as greater walkability, more efficient use of services, and stronger support for retail business uses, from denser residential development in the urban core. The appropriate residential density for a particular community will depend on existing development patterns, and accessibility to public water and sewer. Four units per acre is the typical density found in the highly walkable, pre-car-dependent residential neighborhoods adjacent to downtown business district in places like St. Johnsbury and Newport City. However, lower densities may be dictated by lack of public sewer and water infrastructure in other centers. Higher residential densities may be appropriate in areas supporting mixed uses (e.g., apartments over stores in the business district).

Ideally, development will occur within the core center area, and not expand into undeveloped areas outside the center via strip development. “Strip development” is defined by the State as “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 surrounding land uses except

by highway, lack of coordination with surrounding land uses, and limited accessibility for pedestrians.” With the addition of Criterion 9L to the Act 250 permitting process, it will be more difficult for commercial and large residential developments to get state permits for developments perceived to be linear in nature.

However, it is not recommended that local zoning confine commercial or dense residential development to the boundary of any State-designated center in the municipality. The State downtown and village center designation process looks at existing commercial uses, not potential uses, because it is essentially a rehabilitation and revitalization program for areas with aging building stock. Therefore, land that is appropriate for denser development but is not yet developed as such is consequently excluded from the delineation of a State-designated “center.”

The relatively newer “Neighborhood Development Area” is a complimentary state designation program for areas adjacent to existing designated centers. This designation is intended to encourage municipalities and developers to plan for new and infill housing in the area within walking distance of its designated downtown or village center. It is recognized that the improvement and development of housing in these areas will support the commercial establishments in the designated centers. Benefits of designation include the exemption of certain mixed – income projects from Act 250 regulations; a 50% discount on Act 250 fees for projects that are not exempt; a cap on the amount of State review fees for wastewater permits that will tie into an approved municipal system; and exemption from the land gains tax.

Promoting neighborhood development areas will be a useful approach to directing new housing development to existing centers, rather than undeveloped rural areas. In order for “neighborhood development areas” to effectively provide alternatives to car-dependent residential subdivisions and combat sprawl, it must be ensured that housing products for workforce (housing available to residents making up to 120% of the area median income) and upper-income households are included in the mix of new housing that is developed. As projected commercial development in the region is expected to bring middle and upper-wage earners to the area, it will be important to provide desirable housing options in or near existing centers to combat development pressure on rural lands. It will take considerable effort and long-range strategic planning to alter the trend of new residential development occurring primarily outside of centers.

Development Patterns in Rural Areas

Just as the state designation programs mentioned above can help direct commercial and residential development to existing centers, these programs also help retain the important agricultural, forestry and recreation use of rural areas that lie outside of the commercial and residential cores.

When residential development occurs in rural areas, it should not result in the fragmentation of forestland or agricultural land such that it impedes the economic feasibility of agricultural or forest-based enterprises. Development in rural areas should also preserve, to the extent practicable, connections that facilitate the passive recreational use of land (e.g., trails).

Promoting commercial development that is tied to the agricultural use of the land, though zoning measures and/or educational outreach to residents, is one way to preserve the working landscape. Another way to achieve this desired pattern of development is to keep overall residential densities low in agricultural areas (e.g., one residential unit per 25 acres), coupled with clustering or “planned unit development” with an established maximum building envelope size.

For rural areas that are on the fringes of downtown and village centers, permitting higher residential densities and some commercial uses coupled with clear standards for pedestrian connections to the centers, is a way to accommodate growth while encouraging sustainable design.

Agricultural soils in rural areas outside centers or industrial parks should be conserved to the maximum extent practicable.

As previously stated, the region’s rural areas should receive very little commercial or industrial development unless it occurs in an established industrial park or in an area specifically designated, either in a local zoning

1 bylaw or in a local municipal plan as being well suited to such a use. Nevertheless, rural lands containing one
2 or more of the following conservation attributes, shall be considered exceptionally sensitive and shall
3 therefore not be designated as appropriate for commercial or industrial development that is not directly
4 related to the region's lands-based economy (i.e. forestry, agriculture, and recreation):

- 5 • State natural areas and fragile areas: The region has two such areas, which are both designated as
6 National Natural Landmarks, the Willoughby Cliffs area and the Barton River Marsh.
- 7 • Lands managed by the Department of Forest Parks and Recreation
- 8 • Highest priority forest habitat blocks
- 9 • Forested coverage of Site Class 1, 2, and 3 soils of 25 acres or more
- 10 • Headwaters
- 11 • Upland areas of 2,000 or higher

12 Lands containing one or more of these attributes shall not be developed, as their best uses are a combination
13 of forest and conservation purposes. Appropriate uses include sustainable forestry and logging practices,
14 maple syrup production, wildlife habitat, and passive recreation. Maintaining forest and vegetation coverage
15 on upland areas is particularly important in that it provides natural floodwater attenuation and minimizes
16 contribution to flash flooding in downslope areas, as well as increased sediment loads to headwaters.
17 Ridgelines in these sensitive areas are a particular concern as developments can be seen from multiple
18 locations including neighboring communities. From our experience, distance is not an effective strategy to
19 mitigate impacts to such viewsheds. NVDA will not support proposed development or re-designation of
20 sensitive rural lands that include any of the following impacts:

- 21 • Loss of forest cover and introduction of impervious surface coverage
- 22 • Incursion of roads intended for uses other than resource-based activities (i.e. sustainable wood
23 harvesting and recreation) that result in the fragmentation of habitat
- 24 • Uses that introduce smoke or other emissions
- 25 • Uses that introduce light trespass or sustained noise

26 Any existing impacts in sensitive rural lands shall be considered non-conformities with this Regional Plan and
27 shall not be expanded.

28 **Development in Industrial/Business Parks**

29 Industrial/business parks should be sited in locations served by major federal or state highways, airports, or
30 railroads. Industrial/business parks are encouraged to be densely developed while allowing enough space for
31 business expansion. Infrastructure (water, sewer, and electric power) connections designed to serve industrial
32 parks should not contribute to strip development outside of the industrial parks.

33 Off-site mitigation of agricultural soils would be appropriate when new industrial/business parks are
34 developed. However, land in the region's existing industrial/business parks should not be required to mitigate
35 for agricultural soils when they are developed as they are all locally zoned for commercial and industrial use.

36 There are some projects in the works and on the horizon in the Northeast Kingdom that could spur
37 increased development in towns throughout the region. An expansion to the Northeast Kingdom
38 International Airport in Coventry is underway. Jay Peak has seen a number of expansion in recent years. The
39 construction of a new, 116-unit hotel and conference center was recently completed for Burke Mountain,
40 which will draw increased numbers of tourists. It is expected that this major expansion will spur increased
41 commercial development catering to tourists and workers, and will place increased demands on services and
42 facilities, including police/emergency services and child care facilities. However, although more school-aged

regional and municipal geopolitical boundaries, so activities affecting a waterway in one community have the potential to impact the water resource in another region.

As identified by the Vermont Department of Labor in 2015, the following Labor Market Areas (LMA) exists in the Northeast Kingdom. Only the Derby and St. Johnsbury LMAs contain only NEK communities:

- Derby LMA
- St. Johnsbury LMA
- Morristown-Waterbury LMA (partial) – Craftsbury, Greensboro, Hardwick
- Colebrook NH-VT (partial LMA) – Norton, Averill, Canaan, Lemington, Bloomfield
- Littleton NH-VT (partial LMA) – Brunswick, Maidstone, Guildhall, Lunenburg
- Newbury LMA (partial LMA) – Groton, Ryegate

From working with local communities we know that NH towns (Colebrook, Lancaster, Littleton, etc.) along the CT River attract VT residents for employment, tax-free goods, and services. We also know that communities in the outer reaches of our region find it easier to travel to communities in adjacent regions for the same things in communities like Morrisville and White River Junction. The cities of Montpelier and Burlington also draw significant numbers of travelers from the NEK to access employment, state government and agencies, larger cultural events, and expanded goods and services. Growth in any of these adjacent or nearby areas has the potential to impact the NEK.

Lastly, an analysis of the impacts of the many large developments occurring or proposed in the Northeast Kingdom is nearing completion. This was funded by a planning grant from the Vermont Agency of Commerce, along with supplemental funds from USDA Rural Development. Drawing on data provided from several sources, including local, State and federal agencies, NVDA is examining existing conditions and assessing the potential impacts on emergency services, childcare, schools, infrastructure investments, recreational resources and housing. The conclusions and recommendations of this impact study are incorporated by reference into this Regional Plan.

GOALS AND STRATEGIES FOR FUTURE LAND USE AND DEVELOPMENT

FUTURE LAND USE & DEVELOPMENT GOALS

- Established centers will be an economically vital mix of commercial and residential uses, and will offer a variety of housing types available at different price points to support long-term sustainability.
- Towns will be supported in identifying and implementing strategies that reverses the current trend of new residential development occurring primarily outside of centers.
- Traditional development patterns will be maintained and linear “strip” development will be avoided.
- New development will be compatible with existing land uses, and consistent with local plans.
- Historic structures, community facilities, and other buildings will be preserved and adapted for re-use.
- Brownfield sites will be reclaimed.
- Significant development proposals will consider the impact on adjacent regions.

Chapter Two: Energy

I. INTRODUCTION

Traditionally, Northeastern Vermont Development Association has approached energy planning from a strictly “supply-and-demand” perspective, and this has generally supported the traditional systems that have continued to meet our regional energy needs. The energy trends of the past decade, however, have presented NVDA with the challenge of addressing a much broader perspective, one that transcends current energy production and usage. During this time, several factors created a contentious climate for the future planning of our energy systems. The region has had to contemplate the effect of utility-scale wind development on our mountains; identify ways to ensure forest sustainability as wood-fuels grow in popularity; and seek means to secure long-term affordability of our energy resources for the general public and business communities. In response, NVDA expanded its approach to energy planning and its role in regional energy policy with the intent of seeking a stronger voice in formulating energy policy for NVDA and its member municipalities.

NVDA’s statutory role in energy planning is outlined in V.S.A. Title 24, Chp.117 §4348a (3), which stipulates that a regional plan include:

“... an analysis of energy resources, needs, scarcities, costs and problems within the region across all energy sectors, including electric, thermal, and transportation; a statement of policy on the conservation and efficient use of energy, and the development of renewable energy resources; a statement of policy on patterns and densities of land use likely to result in conservation of energy; and an identification of potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources.”

The approval process for siting energy generation projects is largely under the jurisdiction of Section 248 of Title 30. The Vermont Supreme Court has expressly exempted projects subject to Section 248 from local permitting. At this time municipalities have only the power to regulate “off-grid” renewables – and must do so in accordance with Vermont Statute.

In accordance with Section 248, energy developers must obtain a Certificate of Public Good (CPG) from the Public Utility Commission (PUC) before beginning site preparation or construction of electric transmission facilities, electric generation facilities, and certain gas pipelines within Vermont¹. Prior to issuance, the PUC takes into account the environmental, economic, and social impacts of a proposed facility. Municipalities and other groups are allowed to participate in the Section 248 review process, but many find doing so to be difficult and expensive. Moreover, the PUC is only obligated to give “due consideration” to the recommendations of the municipal and regional planning commission in determining if the project “will not unduly interfere with the orderly development of the region.”² The process has also been complicated by the fact that Vermont statute does not define “due consideration”, nor does it indicate whether the courts or the PUC should be the ultimate arbiter.

Previous versions of this plan have been prepared in anticipation of receiving “due consideration” in the Section 248 process. To support the PUC’s consideration, NVDA has defined what constitutes a ‘substantial regional impact’ with regards to development (24 V.S.A. Chp.117 §4345a (17)). This

¹ Vermont Public Service Board. “Citizens’ Guide to the Vermont Public Service Board’s Section 248 Process.

² City of S. Burlington, 133 Vt. at 447, 344 A.2d at 25

definition is provided within Land Use section of the *Proposed Regional Plan for the Northeast Kingdom 2018* (Chp.1, pg. 24).

[Act 174 of 2016](#) establishes a new set of municipal and regional energy planning standards. If these standards are met, regional and municipal plans may carry greater weight – “substantial deference” – in the Section 248 process. Unlike “due consideration,” “substantial deference” is codified in statute to mean:

“...that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure of policy.”

This regional plan has been revised to meet substantial deference under Act 174. It is important to note, however, that substantial deference does not carry the weight of zoning. Projects that fall under the jurisdiction of Section 248 are still exempt from local zoning and permitting. Nevertheless, this plan reflects our attempt to have a greater say in where energy projects should – and should not – be sited, and it is structured as a resource for municipalities who also wish to seek substantial deference for their local plans. Substantial deference is voluntary for municipalities. Duly adopted local plans that do not meet the enhanced energy planning standards of Act 174 but otherwise meet all the requirements of Chapter 117 will continue to receive due consideration from the PUC in the Section 248 review process. Whether or not a municipality chooses to pursue substantial deference, it is hoped that this regional plan will help our municipalities to think comprehensively about energy use, resulting in strategies that conserve existing resources and reduce our reliance on fossil fuels.

Strategy Outline

NVDA’s Energy Plan aims to guide the region’s energy development for the next eight years in support of [Vermont’s 2016 Comprehensive Energy Plan](#) (CEP), which contains the following goals:

- Reduce total energy consumption per capita by 15% by 2025, and by more than one third by 2050.
- Meet 25% of the remaining energy need from renewable sources by 2025, 40% by 2035, and 90% by 2050.
- Achieve three renewable end-use sector goals for 2025: 10% transportation, 30% buildings, and 67% electric power.

The basic components of the Energy Strategy are organized into five main sections:

State and Regional Overview

This section provides an estimate of local consumption across the transportation, thermal, and electrical energy sectors.

Generation and Distribution

This section analyzes the existing framework by which our utilities generate and distribute power, as well as legislation and incentives that will impact future generation.

Future Energy Use and 2050 Projections

This section analyzes the ambitious 2050 goals for Vermont’s CEP and how it may impact future energy use in the Northeast Kingdom. Efficiency and conservation are also addressed in support of meeting statewide energy goals.

Energy Resource Analysis and Recommendations

In this section resources are analyzed for their current and future potential as part of the overall energy portfolio in support of 2050 goals. This section includes a region-wide GIS-based analysis, which identifies potential areas for the development and siting of renewable energy resources, areas that are unsuitable for siting those resources or particular categories or sizes of those resources, and potential generation from siting areas.

Regional Goals & Strategies

This section identifies the primary regional challenges for meeting 2050 goals and identifies pathways for meeting them.

II. STATE AND REGIONAL OVERVIEW

Statewide Energy Use

Vermont's total energy consumption is the lowest in the nation and has traditionally ranked among the lowest per capita. As of 2014, Vermont ranks 43rd in per capita consumption (about 223 MM BTUs). However, the state ranks 13th in total energy expenditures per capita (at \$5,225). Throughout the U.S., energy prices are rising due to the stress on traditional resources and increasing consumption levels. To address rising energy costs, Vermonters are turning more and more towards supplemental fuels, renewables, co-generation facilities, and efficiency/conservation efforts.

Energy consumption has grown steadily since the 1960s. Historically, leaps in consumption are associated with major economic growth, low energy prices, population growth, and an overall increase in the number of vehicle miles driven. Vermont has limited generation capacity and has relied on Quebec to fulfill part of its energy needs since the early 1980s. With the permanent closure of the Vermont Yankee Nuclear Plant at the end of 2014, the state lost 55% of its generation capacity and now produces less than one-third of the energy it consumes. In addition to Canada, the state relies on the ISO-NE grid for power from neighboring states. Energy use is dominated by transportation and by heating in the frigid winters. About three-fifths of the energy consumed in Vermont are petroleum-based products, which are transported into the state by rail or truck from neighboring states and Canada. The state has limited access to natural gas. There is a natural gas pipeline in the Northeast Kingdom (which is shown on the regional energy maps), but we lack infrastructure to access it. Vermont is the second smallest natural gas consumer per capita, among the states. In 2015, nearly all of Vermont's in-state net electricity generation was produced by renewable energy, including hydroelectric, biomass, wind, and solar resources.³

Table 2.1 represents the total primary energy consumption in the state from 2009 to 2014. Petroleum products are by far the leading source of fuel in the state, most of which is used in the transportation and residential heating sectors.

Table 2.1: Primary Energy Consumption Estimates, 2009-2014 (Trillions of BTUs)						
	2009	2010	2011	2012	2013	2014

³ US Energy Information Administration: Vermont State Energy Profile and Estimates

What is a BTU?

BTU stands for **British Thermal Unit**, and it is defined by US Energy Information Administration as the measurement of the quantity of heat required to raise the temperature of one pound of liquid water by 1° F at the temperature that water has its greatest density (approximately 39 °F).

Fuels come in a variety of measurements – by cord, by gallon, by kilowatt – so this plan converts units of measurement into BTUs in order to compare their energy output consistently.

One BTU is a miniscule amount, so BTUs are often measured in the thousands, millions (MM BTUs), or even trillions.

popular with solar. This has been largely due to the “solar adder,” which increased the average price per kWh of solar net-metered generation.

Act 99, which became effective in January of 2017, raised the cap on Vermont’s utilities from 4% to 15%, meaning that the utilities have to take on net-metered systems on a first-come, first-served basis to all its customers until the cumulative generating capacity of all net-metered systems equal 15% of the utility’s peak demand. New net-metering customers will be compensated at a reduced rate, although the rate is still well above retail electric rates. Instead of applying a solar adder, the new net-metering rule applies a series of adjustments for siting solar on statewide **preferred** sites that have already been disturbed: rooftops, parking lot canopies, brownfields, and gravel pits. There is no site adjustment for installations of 150 kW or more, so the new net metering has the potential – at least in theory – to site small developments away from open fields and other undeveloped areas. To date, utilities serving the Northeast Kingdom have reported a sharp uptick in the number of net metering applications, and in some instances, at double the rate of previous years. In testimony to the Senate Natural Resources and Energy Committee, VEC has noted that since January of 2017 66% of the 2017 net metering capacity is for projects greater than 150kW. This service area (the SHEI) already has significant system constraints, so new net-metered generation will displace existing generation which is less expensive.¹³

The region currently generates nearly 13,000 MWh through net metering. (Table 2.13). There has also been growth in group net metering and community solar programs, which allow individual customers within one utility service territory to invest in a solar project and receive distributed net metering credits. This off-site option can be cost-effective for residents, particularly renters and home owners where solar installations are not possible. Currently, such net metering projects in the area generate 11,792 MWh annually. Utility customers are also able to “sponsor” solar panels in community solar projects outside of the region.

Renewable Energy Standard

Until 2015, Vermont had a renewable energy portfolio goal for its utilities to meet

growth in electricity demand by using energy efficiency and new renewable generation sources. When Act 56 was passed in 2015, this goal was replaced by a mandatory Renewable Energy Standard (RES) for the portfolios of Vermont’s electric utilities. The RES has three tiers:

Tier I: 55% starting in 2017, existing total renewables will rise 4% every three years to reach 75% in 2032. A utility can meet this requirement by owning renewable energy or renewable energy certificates (RECs) from any plant, as long as the plant’s energy can be delivered in New England.

Tier II: A subset of Tier I RECs, utilities now have a distributed generator requirement connected to Vermont’s electric grid. Starting in 2017, 1% of the utility’s portfolio must be *distributed renewable generation*, rising .6% each year to reach 10% in 2032. (Unlike energy produced in a large power plant, *distributed* energy is produced on-site or in a decentralized manner, such as district generation,

Table 2.13: Annual Output Net metering in the Northeast Kingdom (MWh)				
	Caledonia	Essex	Orleans	NEK
Solar Net-Metering	5,415	452	3015	8,882
Group Net Metered	836	275	209	1320
Community Solar Array	368	1032	184	1584
Small Wind	489	8	613	1,110
Total	7,108	1767	4021	12,896
Source: Vermont Renewable Energy Atlas				

¹³ Vermont Electric Cooperative: Testimony to the Senate Natural Resources and Energy Committee-March 23, 2017

Overall solar resources in Vermont are quite good, and solar energy can be harnessed effectively for primary and secondary energy needs. The two main types of solar energy systems are photovoltaic (PV), which generates electricity, and solar thermal, which generates hot air or hot water for water and/or space heating. For some

homeowners in our region, solar electricity systems have proven more cost effective than extending power lines to the home. A typical off-grid system consists of photovoltaic (PV) modules that convert solar energy to electricity, batteries that store the electricity (if off-grid), and an inverter that converts DC power to AC for use in conventional electric appliances. As a rough rule of thumb, a 1 kilowatt photovoltaic system can be expected to produce 3-3.5 kWh/day on average in Vermont.

Solar water heating systems typically utilize collectors to capture the sun's energy, a pump to circulate a solution through the collectors to extract heat energy, and a well-insulated storage tank to hold the heated water for use as needed (this can be integrated with an existing water-heating system). An appropriate size solar water-heating system can provide one-half to two-thirds of a household's annual hot water needs – typically 100% in summer, but as little as 25% in winter. In Vermont, these types of systems tend to pay themselves off in less than two decades.

Solar energy can also be harnessed through passive solar design (day-lighting and space heating) with Green Building Design. This includes orienting buildings close to true south, as well as using appropriate windows on the south wall, installing thermal mass (brick, concrete, or water) to store the sun's energy, and using appropriate levels of insulation. Through these designs, as much as 60% of a building's space heat can be derived from the sun. This type of heating is termed "passive solar" because no moving parts are needed, the collection and storage system is built into the structure. Green Building Design principles also attempt to maximize the amount of natural light a building receives, in order to reduce the energy costs associated with daytime lighting.

Active and passive solar systems are custom built based on the building site, building and purpose of the solar system. There are many factors that bear on siting solar systems. Many homes and businesses have good rooftop sites, or good sites nearby for ground mounted systems. Unfortunately, some do not, such as properties where there is limited southern exposure. One way to address this situation is through the development of "community-sized" PV projects or co-operative systems on the order of a few hundred kilowatts up to a few megawatts. There are a number of community solar sites in our region, which also allow renters and homeowners where rooftop solar will not work to take advantage of solar by "sponsoring" an off-site panel. Utility-scale PV developments are also becoming popular in other areas of the U.S. Often referred to as solar parks, farms, or ranches, these utility-scale PV installations are designed for the sale of merchant power (MWh) into the electric grid and can utilize several acres of land. Public concerns surrounding solar installations of this size usually focus on aesthetics and transmission line development.

	structures suitable for solar (more than 40,000 sq. ft.) to be just 3% of all commercial structures. The number of commercial structures was determined with NAICS classification counts used for determining commercial thermal energy use. (See Appendix B.)
Ground mounted assumptions:	Approximately eight acres of land are required to produce one MW of solar energy. In order to account for contingencies (property owners not interested in leasing their land, interconnection costs that may be too high, and unsuitability of specific sites) NVDA estimated only 1MW for every 60 prime solar acres. Acres with possible constraints were not included in the calculation.

Siting policies for solar:

- NVDA has determined that the following types of locations in the region should be prioritized for future solar generation. Even though these locations are not shown on the

regional solar maps due to a lack of GIS data, these sites should be considered “preferred locations” for siting solar:

- Rooftops of structures, residential and commercial. (Our conservative estimates show the region’s total potential output from rooftop solar alone could amount to 23.9 MW, or 6.3% of the high end of the LEAP model projections for solar for 2050 of 377.2 MW).
 - Brownfield sites not located in a designated downtown or village center
 - Earth extraction sites (e.g. gravel pits, quarries), active or abandoned
 - Parking lot canopies and surface parking lots
 - Farms, where more than 50% of the power generated is used by the farm
 - Industrial parks, where more than 50% of the power generated is used by the tenants of the industrial park
 - Undersized lots and otherwise undevelopable land in existing industrial parks
- The Northeast Kingdom has a robust agricultural economy, and NVDA discourages siting ground-mounted solar in a manner that fragments productive agricultural soils, effectively removing farmland from production for decades. To this end, NVDA encourages municipalities to explore and identify local constraints that minimize farmland fragmentation. These measures may include agricultural overlays (regulatory), as well as conservation easements (non-regulatory). A number of land exploration tools, such as land evaluation and site analyses (LESAs) can help municipalities prioritize agricultural lands for protection. NVDA will assist local planning commissions to identify local constraints as appropriate.
 - Notwithstanding the above concern, NVDA recognizes that successful integration of solar into active agricultural uses can help farms reduce expense, generate extra income, and remain viable. NVDA encourages on-farm solar that, to every extent feasible, uses existing farm structures, or is sited in a manner that supports grazing, the establishment of pollinator crops, or simply to create buffers between organic and non-organic production areas. NVDA will showcase best on-farm generation practices in the region and will cite “[Guide to Farming Friendly Solar](#),” produced by the Two Rivers Ottawaquchee Regional Planning Commission, as a vital resource.

Wind

Total output potential:	23,405.2 MWh
Assumptions:	In accordance with Act 174 guidelines published in March of 2017, regional plans are allowed to submit plans to the Department of Public Service that do not establish targets for utility scale wind. This is especially important for the Northeast Kingdom, which has no targets for wind generation due to the existing level of production. When accounting for NVDA’s regional constraint, the balance of prime wind acreages is just over 38,000. We estimate that new generation will be primarily farm- and residential-scaled. Even though no significant acreage is required for a farm- or residential scaled turbine, NVDA’s estimate

REGIONAL ENERGY GOALS & STRATEGIES

An adequate, reliable, diverse, and secure energy supply will benefit the region.

- Promote a diversified energy portfolio for the region.
- Support the upgrade of regional transmission systems to continue to reduce constraints.
- Support the maintenance and upgrade of existing energy generation facilities and related infrastructure.
- Encourage local responders to plan for emergency energy resources (VEM Emergency Generator Grant Program generators).

Affordable energy alternatives will be available for the region's users that decrease the region's reliance on fossil fuel.

- Assist in the development of businesses that support alternative energy use.
- Work with Tier 3 energy service providers to promote the installation of cold climate heat pumps and geothermal systems by facilitating outreach and education on their benefits.
- Partner with Efficiency Vermont and Tier 3 energy service providers to increase the use of efficient wood heat and biomass systems.
- Support the development of small-scale renewable resources, such as wind and solar, and the use of supplemental sources (wood) to stabilize energy costs.
- Promote and support rail infrastructure as a cost-effective transportation resource for the energy industry.
- Encourage and support agricultural production of biofuels and oilseed crops and explore ways to broaden access to processing infrastructure.
- Identify potential users of district heating and wood heating systems and provide assistance to communities seeking to develop them.
- Encourage the legislature to increase incentives and rebates for efficient wood heat systems.
- Provide outreach and education among vendors, contractors, and the general public through venues such as tradeshow and workshops.
- Provide communities with an analysis of potential areas that are suitable for ground source heat pumps.
- Support upgrade and trade-out programs and incentives for older, higher emission wood burning stoves and boilers.

Decrease the region's reliance on single occupancy vehicle trips and gas/diesel powered vehicles.

- Continue to advocate for better telecommunications infrastructure so employees can work from home.
- Encourage local employers to reduce VMTs through programs such as ride sharing and Go Vermont.

- Support and expand access to liquid biofuels for use in commercial vehicles and heavy equipment.
- Support and expand the use of electric powered busses and vans among the public transportation providers serving the region.
- Work with cycling advocacy groups such as Local Motion by hosting safe on-road cycling workshops.
- Provide training to local zoning and development review boards to consider infrastructure for alternative transportation in their review of site plans.
- Provide technical and grant writing assistance to local planning commissions who plan for multi-modal circulation and better connectivity with alternative transportation modes.
- Promote the use of the region's cycling infrastructure such as the Cross Vermont Trail and the Lamoille Valley Rail Trail and support the efforts of local groups who work to maintain them.
- Support municipalities and local businesses to install EV charging stations at convenient locations, such as in front of restaurants, stores, businesses, or entertainment or recreational facilities, where users would want to park for periods of two to four hours. Explore and pursue incentives to defray the cost of installation and administration so that users pay only for electricity.

Net-metering capacity in the region will be maximized.

- Encourage municipalities to become “clean energy districts” and participate in the PACE program (Property Assessed Clean Energy). This would provide consumers with options to more affordably implement grid tied renewable energy systems.
- Support solar panel safety training programs for fire fighters and first responders.

Energy efficiency and weatherization will be an integral part of the energy portfolio.

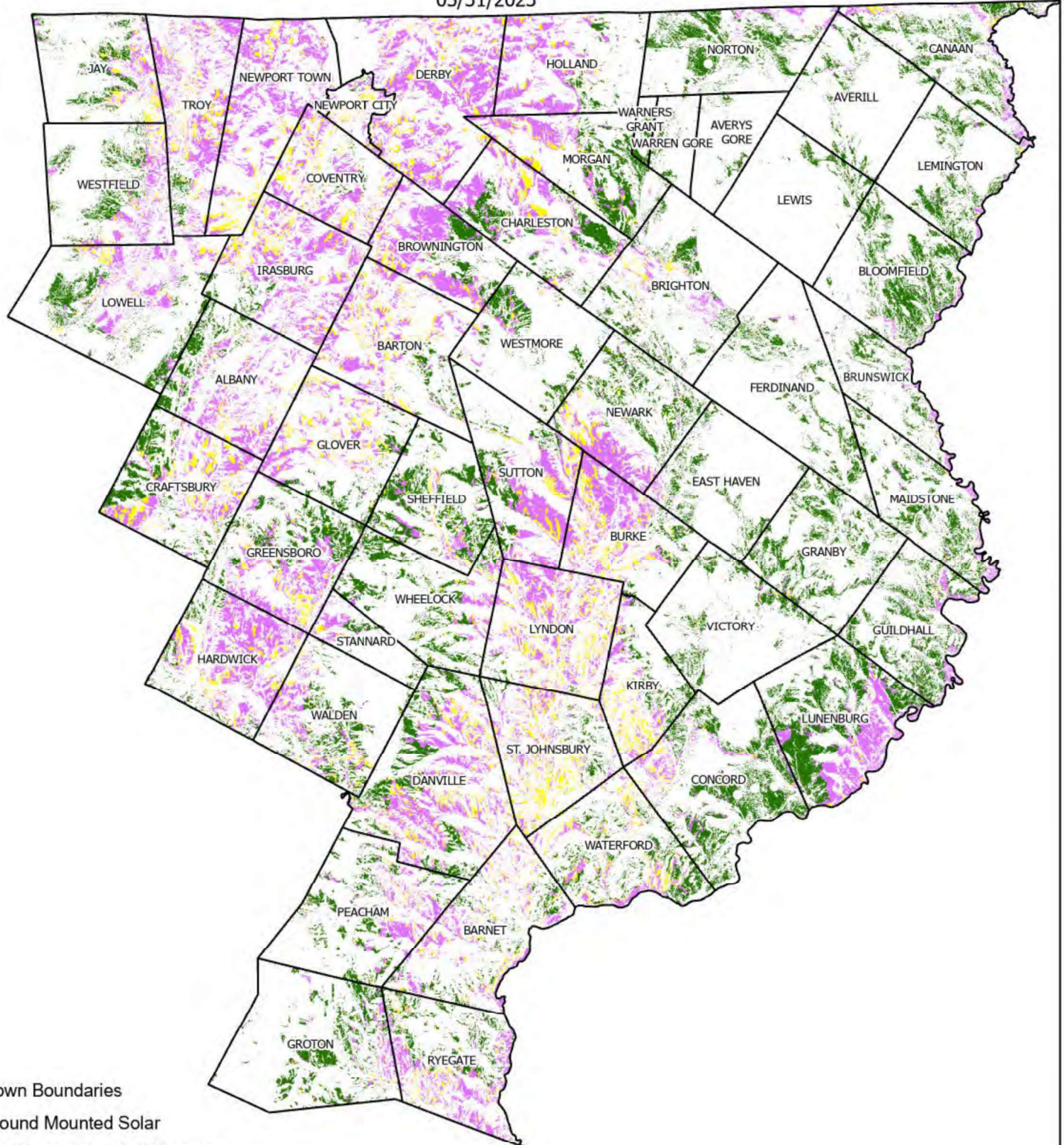
- Assist municipalities in reducing their energy costs through conservation, efficiency, and weatherization programs.
- Support and promote the Energy Action Network (EAN) energy dashboard and educate communities about its use and benefits. Support crowdsourcing on efficiency and weatherization efforts at the local level (e.g. Vermont Community Energy Dashboard).
- Support Local Energy Committee/Coordinator efforts to reduce energy consumption, improve efficiency and weatherization, and develop new generation resources.
- Encourage municipalities to conduct energy audits and weatherization programs.
- Encourage businesses to make energy efficiency investments and develop energy efficient production methods.
- Promote energy efficient building design and construction methods (e.g. Green Building Design, LEED certification, and Passive Design).
- Promote Energy Efficiency Utility program resources by making web links available on municipal/regional web sites.



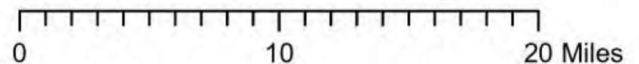
NVDA Energy Map

Prime Ground-Mounted Solar Energy Areas

05/31/2023



- Town Boundaries
- Prime Ground Mounted Solar**
- No Constraint - 33,378 acres
- Possible Constraint, Other - 141,483 acres
- Possible Constraint - Forest Blocks/Connectivity - 131,172 acres



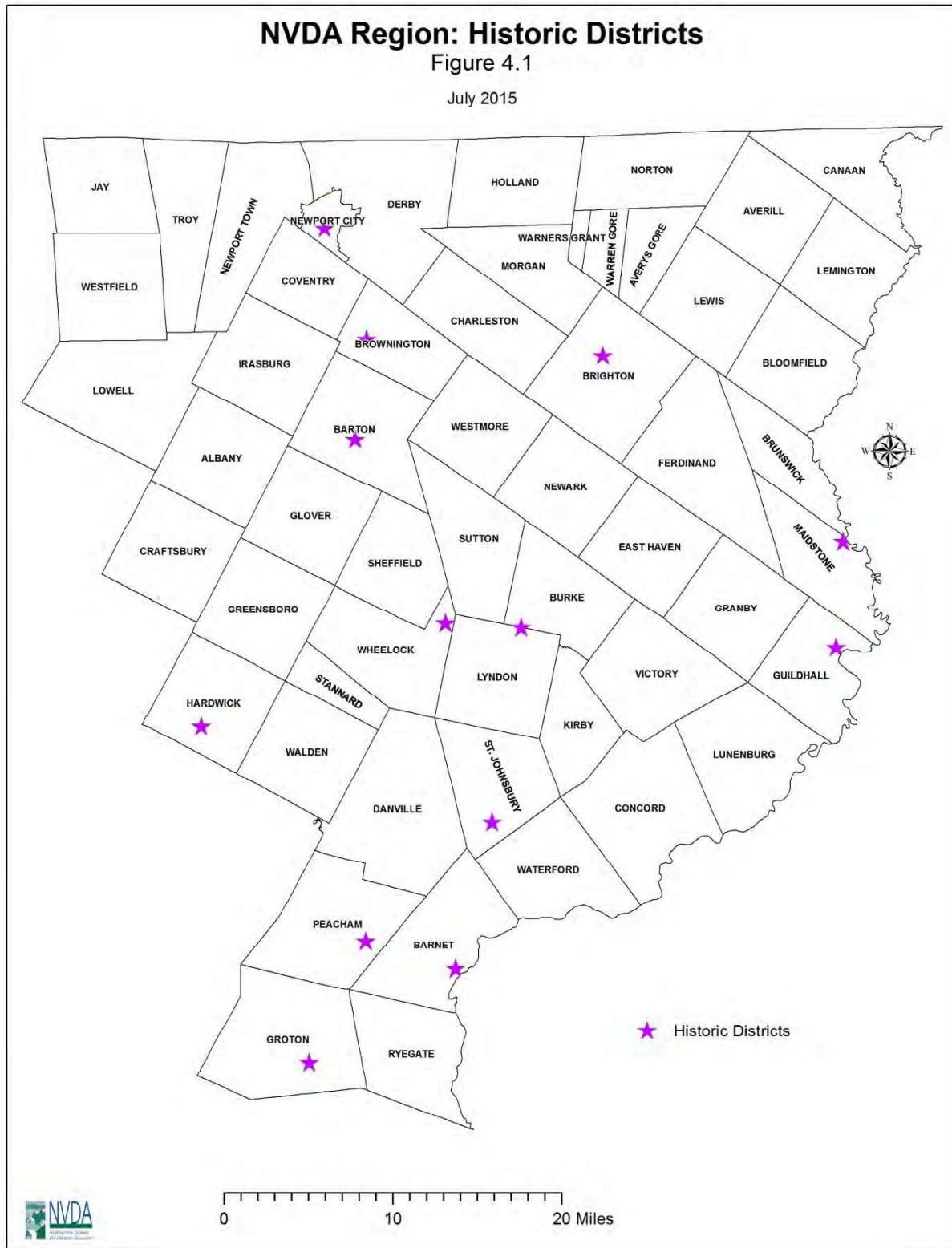
Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

Chapter Four: Historic, Cultural & Scenic Resources

I. HISTORIC & SCENIC RESOURCES

Preserving historic, archeological, and scenic resources enables communities to retain links to their past, maintain their traditions (including quality of life), and can bring economic benefits through increased property values and tourism. Indeed, there are federal and state programs to assist communities with preservation. Tourism has been increasingly beneficial for much of the New England region, and particularly for Vermont due to its abundance of scenic resources. The Northeast Kingdom is fortunate to have communities that have already identified some of their assets and protected a significant number of historic resources. These include historic districts, a large number of historic buildings, archeological sites, covered bridges, barns, and areas of natural or scenic beauty. Despite the work that has already been done, there are many historic, community buildings and meeting houses still in need of restoration and preservation. Table 4.1 gives some representation of the existing historic and cultural resources within the region. For more information on individual properties listed on the state and national registers, go to <http://orc.vermont.gov/Resource/Show-Resource-Table.aspx>

Table 4.1: Northeast Kingdom Historic Districts and State Parks Listed on the National Register of Historic Places	
Caledonia County:	Date
Barnet Center Historic District	07-12-1984
Darling Estate Historic District, Burke and Lyndon	08-23-2011
Downtown Hardwick Village Historic District	09-30-1982 Boundary increased 03-10-2004
Hardwick Street Historic District, Hardwick	06-22-1979
Maple St./Clarks Ave. Historic District, St. Johnsbury	04-05-1994
Peacham Corner Historic District, Peacham	12-18-2003
Railroad Avenue Historic District, St. Johnsbury	06-25-1974
Ricker Pond State Park, Groton	03-29-2002
St. Johnsbury Historic District (extension of Railroad Street district to include Eastern Avenue and connect with Main Street)	04-28-1980
St. Johnsbury Main Street Historic District (along Main Street, Eastern and Western Avenues, Park and Belvidere Streets, and Summer Street Common)	05-28-1975
Stillwater State Park, Groton	02-29-2002
Wheelock Common Historic District, Wheelock	08-30-2007
Essex County:	
Guildhall Village Historic District	09-27-1980
Maidstone State Park	11-29-2001
Island Pond Historic District, Brighton	01-31-1979
Orleans County:	
Brownington Village Historic District	05-09-1973
Crystal Lake Falls Historic District, Barton	07-07-1994
Crystal Lake State Park, Barton	08-30-2005
Newport Downtown Historic District, Newport City (Main, Coventry, Central, Second Summer, Third, School, Bayview, Eastern, Field, Seymour, Fyfe)	09-28-2006
Source: National Park Service	



Each historic district also contains a number of properties listed on, or eligible for the National Register.

Historic Preservation Programs and Assistance

Criterion 8 of Act 250 protects scenic and aesthetic resources, historic sites, and rare or irreplaceable natural areas. A historic site is defined as "any site, structure, district or archeological landmark which has been officially included in the National Register of Historic Places and/or the state register of historic places or which is established by the Vermont Advisory Council on Historic Preservation as being historically significant." [10 V.S.A Section 6001 (9)]. If a site has been nominated, then designated as historic, the state provides a number of programs for communities and groups to help achieve their preservation goals.

The State of Vermont Division for Historic Preservation has a number of resources on its Web page explaining the programs available for historic and cultural preservation efforts, information, and technical assistance. http://accd.vermont.gov/strong_communities/preservation These programs are available to communities, neighborhoods, individuals, and businesses and provide many benefits.

Other Regional Resources

Local area Chambers of Commerce can provide much of the information on business & industry, schools, housing, local attractions, and services available in or near a municipality. Table 4.2, below, is included as a resource for additional information.

Table 4.2: Local Chambers of Commerce

Barton Area Chamber of Commerce, Barton	http://centerofthekingdom.com/
Burke Area Chamber of Commerce, East Burke	www.burkevermont.com
Danville Chamber of Commerce, Danville	http://www.danvillevtchamber.org/
Hardwick Area Chamber of Commerce, Hardwick	http://www.heartofvt.com/
Island Pond Chamber of Commerce, Island Pond	http://islandpondchamber.org/
Jay Peak Area Association, Troy	http://topofvt.com/
Lyndon Area Chamber of Commerce, Lyndon	http://www.lyndonvermont.com/
Northeast Kingdom Chamber of Commerce, St. Johnsbury	http://nekchamber.com/
St. Johnsbury Chamber of Commerce, St. Johnsbury (also a Designated Downtown organization)	http://discoverstjohnsbury.com/
Vermont's North Country Chamber of Commerce, Newport	http://www.vtnorthcountry.org/

Northeast Kingdom Travel and Tourism Association (NEKTTA), the regional marketing organization for the Northeast Kingdom partners with NVDA in many efforts. NEKTTA is also involved in assisting individual businesses and the local chambers of commerce shown above with their marketing efforts. More about the NEKTTA organization can be found at their Web site <http://www.travelthekingdom.com/>.

II. CULTURAL RESOURCES

Public Libraries

The Northeast Kingdom is fortunate to have many library resources as centers of learning (many of which are architecturally significant) to complement the region's educational systems. It is important to keep all of these facilities updated to meet the informational and technological needs of area residents.

Table 4.3: Public Libraries in the Northeast Kingdom			
Municipality	Library and Address	Phone	Web site
Albany	Albany Public, 530 Main St.	(802) 755-6107	http://localpubliclibrary.com/AlbanyVermontpubliclibrary
Barnet	Barnet Public, 147 Church Street	(802) 633-4436	
Barnet	Macindoe Falls Academy, 37 Academy Lane	(802) 802-633-4472	
Barton	Barton Public, 100 Church Street	(802) 525-6524	http://barton-public-library.org/
Barton	Jones Memorial Library, 1 Water Street, Orleans Village	(802) 754-6660	http://centerofthekingdom.com/services/jones-memorial-library
Brighton	Island Pond Public Library, 49 Mill Street Ext	(802) 723-6134	https://islandpondpubliclibrary.wordpress.com/
Burke	East Burke Community Library,	(802) 626-9823	http://www.burkevermont.org/library-east-burke.php
	West Burke Public Library, 135 Main Street, West Burke	(802) 467-3717	http://www.burkevermont.org/library-west-burke.php
Canaan	Alice M. Ward Memorial, 27 Park Street	(802) 266-7135	http://www.aliceward.org/
Concord	Concord Public, 360 Main Street	(802) 695-2220	http://www.concordvt.us/
Craftsbury	Craftsbury Public, 12 Church Street, Craftsbury Common	802 586-9683	http://www.craftsburypubliclibrary.org/
	John W. Simpson Memorial Library, 1972 E Craftsbury Rd East Craftsbury	(802) 586-9692	
Danville	Pope Memorial Library, 121 Park Street	(802) 684-2256	http://popememoriallibrary.org/
	Brainerd Memorial Library, 4215 Bruce Badger Memorial Hwy, North Danville	(802) 424-1403	http://www.brainerdmemoriallibraryvt.org/
Derby	Dailey Memorial Library, 101 Junior High Drive	(802) 766-5063	http://daileymemoriallibrary.org/
Derby Line	Haskell Free Library and Opera House, 93 Caswell Avenue	(802) 873-3022	http://haskellopera.com/library/
Glover	Glover Public Library, 51 Bean Hill Road	(802) 525-4365	http://gloverlibrary.org/
Greensboro	Greensboro Free Library, 53 Wilson Street	(802) 533-2531	http://www.greensborofreelibrary.org/
Groton	Groton Free Public Library, 1304 Scott Hwy	(802) 584-3358	http://grotonlibraryvt.org/
Guildhall	Guildhall Public Library, 7218 Vt. Route 102	(802) 676-3054	
Hardwick	Jeudevine Memorial Library, 93 North Main Street	(802) 472-5948	http://www.jeudevinememoriallibrary.org/
Irasburg	Leach Public Library, 130 Park Avenue	(802) 754-2526	

Lowell	Lowell Community Library, 100 Ranch Road	(802) 744-2447	
Lunenburg	Gilman Public Library	(802) 892-5969	
	Alden Balch Memorial Library, 24 E. Main St.	(802) 892-5365	https://aldenbalchlibrary.wordpress.com/
Lyndon	Cobleigh Public Library, 14 Depot Street, Lyndonville	(802) 626-5475	http://cobleighlibrary.org/main/
Newport	Goodrich Memorial Library, 202 Main Street	(802) 334-7902	http://www.goodrichlibrary.org/
Peacham	Peacham Library, 656 Bayley Hazen Rd	(802) 592-3216	http://peachamlibrary.org/
Ryegate	South Ryegate Public Library, 140 Church Street, South Ryegate		
St. Johnsbury	St. Johnsbury Athenaeum, 1171 Main Street	(802) 748-8291	http://www.stjathenaeum.org/
Troy	William & Lucy Rand Memorial Library, 160 Railroad Street, North Troy	(802) 988-4741	http://randmemoriallibrary.my-free.website/
Walden	Walden Community Library, 135 Cahoon Farm Road, West Danville	(802) 563-3000	
Waterford	Davies Memorial Library, 532 Maple Street, Lower Waterford	(802) 748-4609	http://daviesmemoriallibrary.org
Westfield	Hitchcock Museum, 1252 Rte. 100	(802) 744-8258	http://hitchcocklibrary.blogspot.com/
Source: NVDA 2015			

In addition to public library resources in the region, Table 4.4 shows a number of alternative public and private learning institutions possessing cultural and informational resources worthy of mention. Internet addresses have been provided as well.

Table 4.4: Public and Private Learning Institutions		
School	Location	Website
Community College of VT	St. Johnsbury/Newport	www.ccv.vsc.edu
Lyndon Institute	Lyndon Center	www.lyndoninstitute.org
Springfield College	St. Johnsbury	www.spfldcol.edu
Sterling College	Craftsbury	www.sterlingcollege.edu
Lyndon State College	Lyndonville	www.lsc.vsc.edu
North Country Career Center	Newport	http://nc3.ncsuvt.org/
Burke Mountain Academy	East Burke	www.burkemtnacademy.org
Northwoods Stewardship Center	East Charleston	www.northwoodscenter.org
St. Johnsbury Academy	St. Johnsbury	www.stjohnsburyacademy.org
Source: NVDA 2015		

Museums

Museums are another excellent cultural and informational resource, as well as a link to the distant and recent past. There are many museums in the Northeast Kingdom worth visiting and popular ones include the Old Stone House Museum in Brownington; the offbeat Bread & Puppet Museum in Glover; and the Athenaeum,

Fairbanks, and Maple museums in St. Johnsbury. Each of these has a wide array of exhibits and programs for all ages. Table 4.5 lists the region's resources for historic information and museum collections.

Table 4.5: Historical and Museum Collections in the Northeast Kingdom

	Location
Barnet Historical Society – Goodwillie House	Barnet
Crystal Lake Falls Historical Society - Pierce House	Barton
Old Stone House Museum / Orleans County Historical Society	Brownington
Alice Ward Library	Canaan
Concord Historical Society (http://www.concordvthistorical.noconek.com/)	Concord
Craftsbury Public Library	Craftsbury
Derby Historical Society	Derby
Hardwick Historical Society (Memorial Bldg.)	Hardwick
Haskell Library and Opera House	Derby Line
White School Museum	East Burke
Bread and Puppet Museum	Glover
Greensboro Historical Society	Greensboro
Holland Historical Society	Holland
Island Pond Historical Society	Island Pond
Shores Memorial Museum	Lyndon Center
Goodrich Memorial Library	Newport
Missisquoi Valley Historical Society	North Troy
Peacham Historical Society	Peacham
Maple Grove Museum and Factory	St. Johnsbury
St. Johnsbury Athenaeum	St. Johnsbury
St. Johnsbury History & Heritage Center	St. Johnsbury
Fairbanks Museum and Planetarium	St. Johnsbury
Stannard Historical Society	Stannard
Hitchcock Memorial Library and Museum	Westfield
Source: NVDA 2015	

GOALS AND STRATEGIES FOR HISTORIC, CULTURAL & SCENIC RESOURCES

HISTORIC, CULTURAL & SCENIC RESOURCE GOALS

- Future development should follow traditional development patterns, while providing for economic development opportunities and livable communities.
- Significant historic, cultural, and scenic resources within the region should be identified and preserved.

HISTORIC, CULTURAL & SCENIC RESOURCE STRATEGIES

- Promote local and regional tourism, since it is an important part of our economic base.
- Assist communities to preserve and maintain historic downtowns, village centers, buildings, and rural and scenic landscapes.

Chapter Seven: Natural Resources

I. OVERVIEW

The Northeast Kingdom is recognized for its diverse wildlife, large undeveloped areas, and vast woodlands. The region's natural resources (depicted in Figure 7.1 on the following page) provide residents and others a variety of benefits. The largest source of revenue in the region is from outdoor recreation, and much of the tourism industry relies on the healthy and scenic environment to remain viable.

Therefore, the natural resources in the Northeast Kingdom have intrinsic scenic and economic values that require careful consideration when making planning decisions. The overarching goal for the region is to balance local economic needs with the protection of the resources that so many of region's residents enjoy and depend upon.

The Northeast Kingdom lies mostly within three physiographic regions:

- *The Northeast Highlands*, an extension of New Hampshire's White Mountains, make up most of Essex County and northern Caledonia County. On average, this area is cooler than the rest of the state. The growing season here averages less than 90 days and snowfall accumulation frequently exceeds 36 inches.
- In much of Orleans County and parts of Caledonian County the topography is primarily *rolling hills* interspersed with occasional plains of fertile agricultural soils. Both of these physiographic regions have extensive glacial deposits.
- The third region is the *Connecticut River Valley*, which extends the length of the region along its eastern border. Level topography and rich alluvial soils well suited for agriculture characterize this physiographic region.

The forests are mainly northern hardwoods with large stands of red spruce and balsam fir. Black spruce and succession species such as white pine and aspen fill recent clearings. The region contains some of the State's largest bog and wetlands complexes, with fabulous stands of red pine, black spruce, hemlock, northern white cedar and hardwoods dispersed throughout. Essex County has more wetlands than any other county in Vermont.

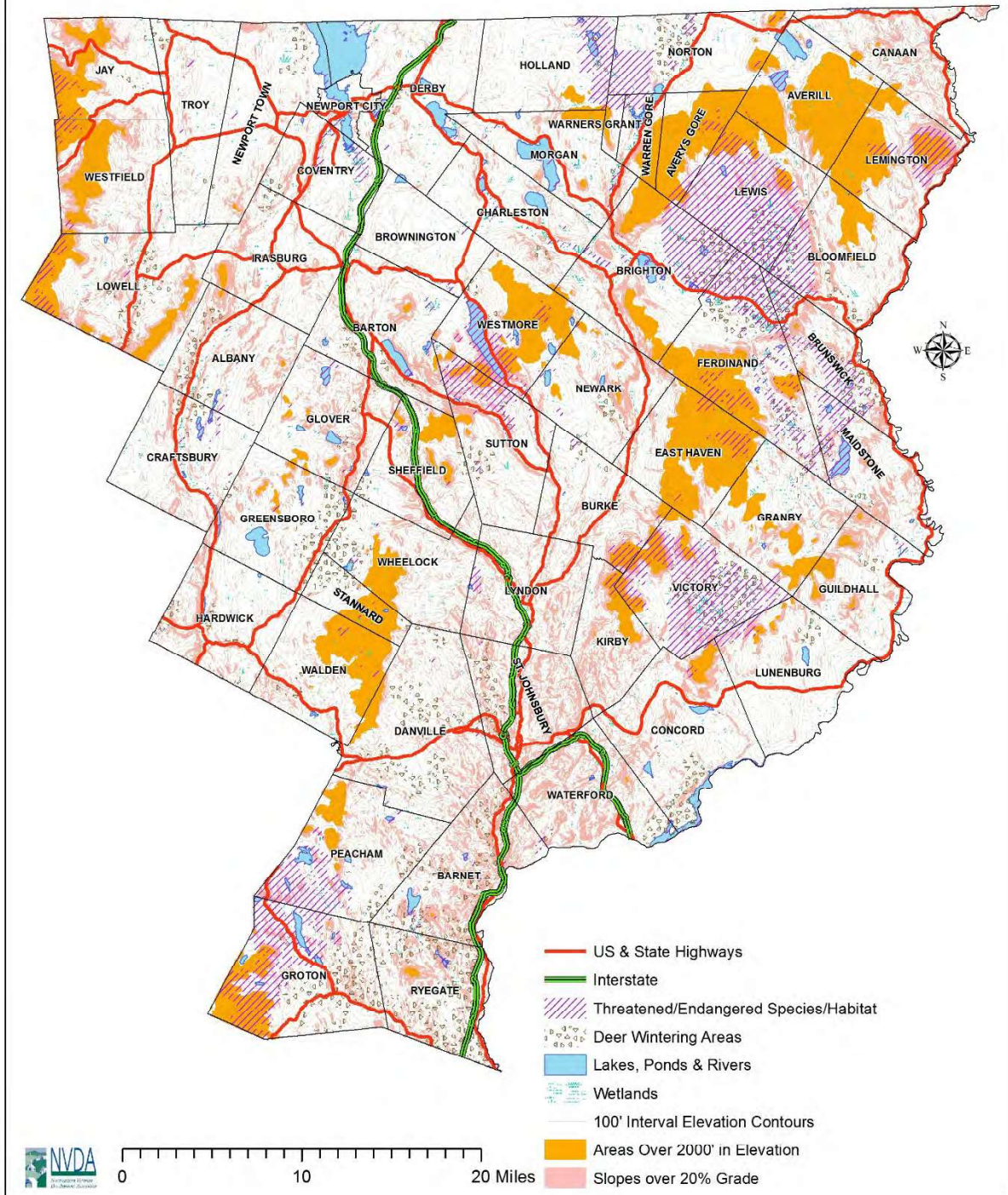
The majority of the region's water drains either north to Quebec as part of the St. Francois River watershed or east and south as part of the Connecticut River watershed. Much of the region's western edge drains north and west as part of the vast Lake Champlain basin. The region's lakes, ponds, streams and rivers are famous for the excellent and diverse fishing opportunities they offer. The more than 130 lakes and ponds found concentrated in the region represent a disproportionately high share of the State's total. This region is home to most of Vermont's larger, deeper lakes and the legendary 20-30 pound lake trout that have inhabited them since the last ice age.

This combination of forest and water resources creates prime habitat for many wildlife species, and draws many tourist and visitors to the Northeast Kingdom to enjoy them.

NVDA Region: Natural Resource Constraints

Figure 7.1

January 2018



Ground Water

Ground water is a critical resource for the rural areas of Vermont. Approximately 60 percent of Vermont's citizens depend upon ground water for drinking and general uses. According to the state Water Quality Division, in many rural communities nearly 100 percent of the public and private drinking water sources are from ground water. Ground water occurs in two general hydrogeologic settings, bedrock and unconsolidated aquifers. Igneous and metamorphic crystalline bedrock along with carbonate bedrock form the bedrock aquifers within the state. Unconsolidated deposits are comprised of glacial till, which is basically sand and gravel.

As ground water moves through these materials, the organic and mineral substances that are dissolved or picked up dictate the quality of water. These water sources often tend to be better quality than surface water because of the leaching process. However, toxic substances can stay with ground water for very long distances. Although groundwater quality is generally good, the resource is nonetheless fragile. Contaminated wells destroy property value. The cost of developing and installing new groundwater sources for public water supply is estimated between \$500,000 and \$1,000,000 (Water Quality Division, 2000). This cost is prohibitive for many towns in the Northeast Kingdom, making prevention and education critical management tools.

One way to avoid costly groundwater contamination cleanup is to begin a Well Head Protection Program (WHPP). This is addressed in the Water Supply section of the Utilities and Facilities chapter of this document.

Wetlands

Vermont's wetlands are defined as those areas of the state that are inundated by surface or ground water with a frequency sufficient to support plants and animals that depend on saturated or seasonally saturated soil conditions for growth and reproduction. These areas are commonly known as ponds, bogs, fens, marshes, wet meadows, shrub swamps, and wooded swamps. Wetlands often occur in association with lakes, ponds, rivers, and streams, creating transitional areas between dry land and open water. However, wetlands can also be isolated from any obvious connection to surface water. In order to be classified as a wetland under Vermont law, an area must have wetland soils and wetland plants, in addition to at least seasonal water.

Wetland soils are often anaerobic and the plants have adapted to growing in such waterlogged conditions.

Every town in the region contains wetlands that have been designated by the state as significant. The Vermont Wetland Rules classify all wetlands into one of three classes. Classes One and Two are considered "significant" and protected under the Vermont Wetland Rules. All three wetland types are protected by Vermont's Act 250. The online Vermont Natural Resources Atlas contains an atlas layer that depicts the three classes of wetlands designated by the State. The information is found on the Watershed Protection layer of the Atlas, under the sublayer "Outstanding Water Resources" and "Wetlands." The Vermont Natural Resources Atlas can be viewed here:

<http://anrmaps.vermont.gov/websites/anra/>

Wetlands provide important ecological functions, including flood and erosion control, and providing habitat for fish and wildlife. They aid in the maintenance of water supplies by trapping nutrients and sediments and recharging groundwater, and they provide recreational and educational opportunities.

Wetlands were once considered wastelands and were thought to be "improved" by draining and filling. As a result, nearly half of Vermont's original wetland resources have been lost, and hundreds of acres are lost annually. Human activities and development continue to encroach upon this finite resource. Agriculture and forestry activities as well as residential, commercial and industrial development all result in wetland alteration. Replacing new wetlands is costly and often impractical, so wetlands preservation is important.

unstable banks can create a situation during floods when the rivers jump their channels and cut a new ones into cropland.

Threatened and Endangered Species

The Endangered Species Listing by the U.S. Fish and Wildlife Service shows that there are six animal species and two plant species in our region whose survival is in question. Threatened species include the Bald Eagle, Canada Lynx, and Puritan Tiger Beetle. Endangered species include the Indiana Bat, Eastern Puma, Dwarf Wedge Mussel, Jesup's Milk-Vetch and the Northeastern Bulrush.

Often the preservation of these threatened and endangered species has more to do with habitat protection than any other factor. A species is considered endangered if it normally occurs in the state, and its continued existence appears to be in jeopardy. A species is threatened if its numbers are significantly declining due to loss of habitat or human disturbance. Habitat loss and degradation is the principle cause of the decline in biological diversity and is the number one factor relating to species endangerment. Human development is the primary cause of habitat loss and degradation.

Non-native Invasive Species

Many non-native species introduced to this region intentionally or otherwise are creating significant problems in both terrestrial and aquatic ecosystems. Because they have been imported here from outside the region, there are no natural predators to control the spread of these non-native species. They often take over an area by out-competing the existing flora or fauna, choking out native species.

Purple Loosestrife and Eurasian Water milfoil are two invasive aquatic plants that currently infest a number of lakes, ponds, and wetlands in our region. Purple Loosestrife is a wetland perennial that has infested thousands of acres in Vermont and can be found in almost every town in our region. It chokes out the native vegetation and can decrease the food and shelter for native wildlife species. Eurasian Water milfoil has also taken hold in several lakes of our region, including Brownington and Clyde Ponds and Lakes Elligo, Salem, Crystal, Willoughby, and Memphremagog. This freshwater seaweed creates a dense, impenetrable canopy of stems and leaves that consumes large quantities of oxygen, suffocating fish and other creatures. Preventing its expansion to other water bodies through education and controlling it within each lake's boundaries is currently the most effective way to manage it.

Open Space

The Northeast Kingdom is composed of rolling hills, farmlands, lakes and rivers, forests, country roads, and compact village centers. These areas combined create an open, picturesque landscape unlike any other. Open space provides not only scenic beauty and wildlife habitat, but is necessary for the numerous outdoor activities enjoyed by the region's residents and visitors, and is key to the agricultural and forestry traditions of the region. The region contains more than 1,300,000 acres of land. Almost 200,000 acres are either publicly owned or have public recreation/access easements. Many recreational activities rely on private landowners allowing access to their properties, so it is the responsibility of users to respect the landowner and their land. Vermont landowner liability law (12 V.S.A. 5793) maintains "an owner shall not be liable for property damage or personal injury sustained by a person who, without consideration, enters or goes upon the owner's land for a recreational use unless the damage or injury is the result of the willful or wanton misconduct of the owner." Still, according to the Vermont Department of Forests, Parks & Recreation, posting of private land in the state doubled in the last decade from approximately 100,000 acres in 1988 to approximately 250,000 acres in 1997.

Public Lands

The region contains many conserved public lands. Recently, more than 132,000 acres of remote forestland, primarily in Essex County, was conserved by Vermont's largest land conservation project. Of this, 84,000 acres was resold to Essex Timber Co. LLC, with easements to ensure that these lands are conserved as a working forest for the sustainable production of wood products as well as to maintain public access. In the same transaction, U.S. Fish and Wildlife Service formed the Silvio O. Conte National Wildlife Refuge in the towns of Lewis, Ferdinand, Bloomfield and Brunswick totaling nearly 28,000 acres. The 23,000 acre West Mountain Wildlife Management Area was created in this land transfer, as well. The goals of this purchase were to protect public access to the land; conserve and protect biological diversity, wildlife habitat and natural communities; and conduct sustainable management and utilization of forest products.

Table 7.3: Public Lands in the NEK

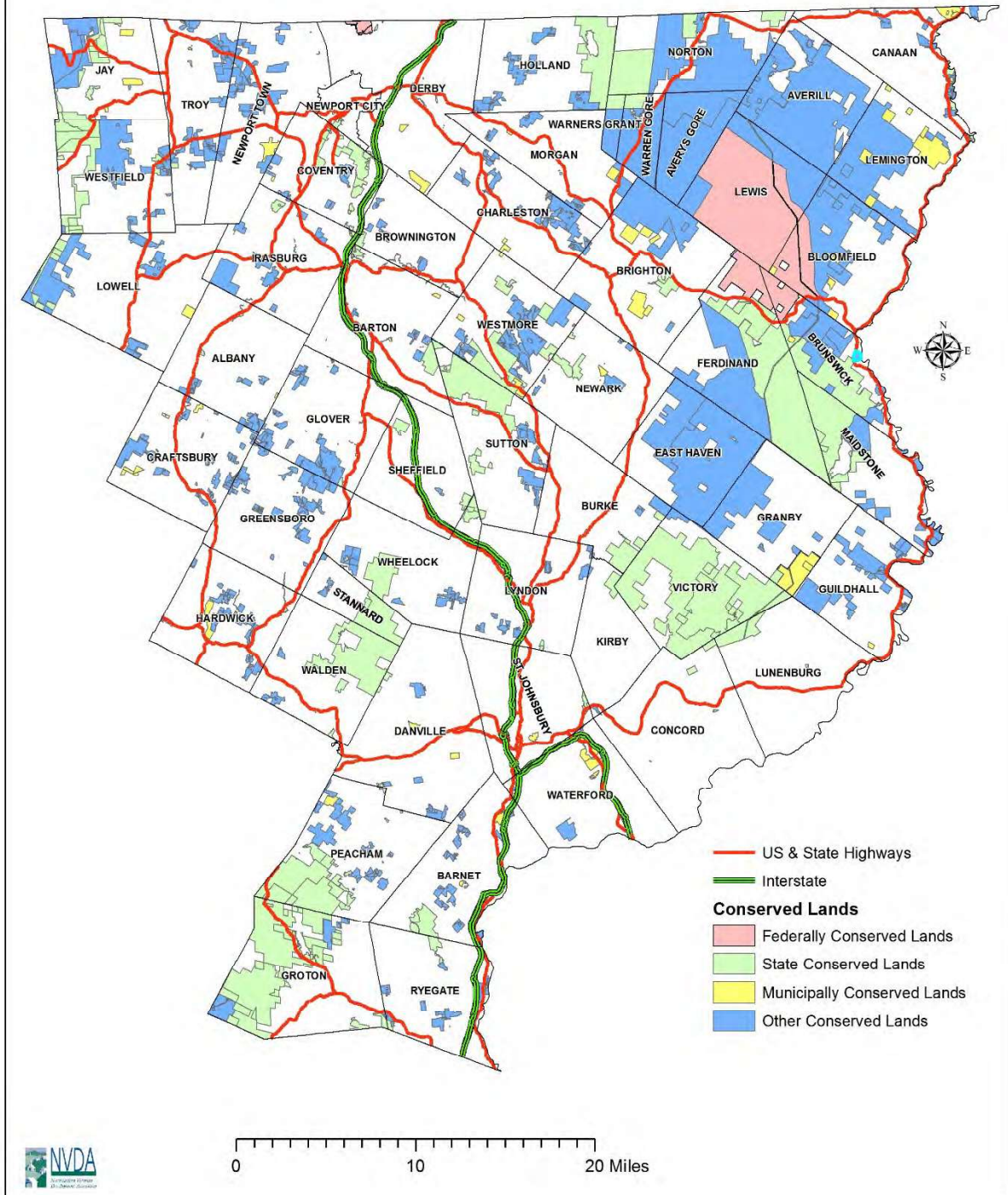
Town	Parcel Name	Acres
Averill	Averill Mountain WMA	510
Newark	Bald Hill Wildlife Management Area	932
Troy	Big Falls SP	16
Holland	Bill Sladvk WMA	9,496
Norton	Black Turn Brook SF	593
Brighton	Brighton SP	152
Sutton	Calendar Brook WMA	340
Barton	Crystal Lake SP	16
Burke	Darling State Park	1,997
Groton, Peacham	Groton SF	23,706
Burke	Hazens Notch SP	307
Sheffield	Holbrook SP	202
Jay	Jay SF	3,877
Peacham	Levi Pond WMA	260
Jay	Long Trail SF	2,774
Lyndon	Lyndon State Forest	72
Maidstone	Maidstone SF	475
Wheelock, Sheffield	Mathewson SF	795
Ryegate, Barnet	Roy Mountain WMA	1,590
Westmore	Sentinel Rock SP	330
Irasburg	South Bay WMA	1,515
Walden, Stannard, Wheelock	Steam Mill Brook	10,421
Victory	Victory Basin WMA	4,970
Victory, Lunenburg	Victory SF	15,997
Barton	Wenlock WMA	1,994
Brunswick, Ferdinand, Maidstone	West Mountain WMA	22,738
Barton	Willoughby Falls WMA	130
Westmore, Sutton	Willoughby SF	7,300

Source: NVDA, 2002

NVDA Region: Conserved Lands

Figure 7.3

January 2018



COMPREHENSIVE PLAN
TOWN OF NEWPORT



Amended and adopted by the Selectboard March 5, 2020

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INTRODUCTION

The Newport Town Plan includes a short history and general description of the Town, population trends, historical land use patterns, as well as economic and social trends that have and will continue to shape our lives and our Town. The plan is intended to be neither regulatory nor specific in nature, but rather a general outline for an orderly growth process for the Town based on historical and anticipated trends. This plan was developed with input from numerous sources, committee reports, as well as the old municipal development plan. Compatibility to adjacent towns was considered, as Newport Town is a part of a larger economic and social area with responsibilities to its surrounding neighbors.

The plan is divided into sections. Each section discusses a particular segment of the fabric of our town in summary form. At the end of each section there are two categories labeled **STATEMENTS/OBJECTIVES** and **RECOMMENDATIONS/STRATEGIES/GOALS**. **RECOMMENDATIONS/STRATEGIES/GOALS** can best be classified as suggested implementation of the statements and objectives.

No one can predict the future! This board realizes this fact and on the following pages has strived to be flexible and diverse in its recommendations and goals. While realizing the limitations of planning, the board also recognizes the need for planning in order to maintain the cultural, economic heritage and rural atmosphere we all enjoy. So while this document strives to plan for the future it also relies heavily on the past for its guidance and direction.

TOWN OF NEWPORT

The Town of Newport, consisting of 27,328 total acres, is located in the north-central portion of Orleans County. In 2010 it had a population of 1,540 with an estimated 300 persons in its unincorporated village of Newport Center.

It is bounded on the north by Canada, on the east by Lake Memphremagog, Newport City, Coventry and Irasburg; on the west by Troy and the south by Lowell and Irasburg. The elevations in the Town range from 600 to 2,183 feet above sea level. The majority of the town is in the drainage basin of Mud Creek that flows through the northerly corner of North Troy. This part of the town is in the Mississquoi River Watershed. The east side of the Town is in the Memphremagog watershed. Vermont Route 105 runs in an east-west direction through the Town while Route 100 enters the central-western portion of the Town from Troy and terminates at its intersection with Route 105 approximately two miles south of the Village at Coburn Hill. These two state highways are the major transportation spurs in the Town. In this same general area Route 14 terminates at its junction with Route 100. The railway passes through the Town from Newport to North Troy.

Land use in the Town of Newport has historically been agricultural. Since the 1990's, a number of farms have sold the development rights of considerable acreage to the Vermont Land Trust. The intent here, being the preservation of agriculture land. Employment is found locally in agriculture, forestry and related services. Other employment opportunities are found throughout the county in manufacturing, commerce and various service industries.

Public facilities in the Town include a volunteer fire department, post office, town hall, and elementary school, with an enrollment of approximately 90 students in grades K-6. Approximately 32 students, grades 7-8, are bussed to North Country Union Junior High School in Derby for a total of 112 students. The Town of Newport is a member of the North Country Supervisory Union.

Recreational activities in the Town vary, with considerable outdoor activities being pursued. In the decade between 2010 and 2019, the Town showed an increase in population. This growth has remained relatively consistent in the past 15 years. The growth is expected to increase in the future, as the county develops.

HISTORY OF THE TOWN OF NEWPORT

Newport Town is located in the County of Orleans in the section of Vermont informally known as the Northeast Kingdom. It was granted by the state as a township of 23,040 acres on October 26, 1781 though its charter was not issued until October 30, 1802. The charter was given to Nathan Fisk and George Duncan under the name Duncansboro.

On November 16, 1816, a small part of Coventry and of Salem was annexed to this territory and the name of the town changed from Duncansboro to Newport.

Newport Village Center was a thriving little post village and station on the southeastern railway located in the central part of the town. In 1883 it contained two churches (Free Will-Baptist and Methodist Episcopal), a hotel, five grocery stores, a steam sawmill, shingle mill, three blacksmith shops, three carriage shops, three cabinet shops, one harness shop, and about fifty dwellings. Situated in the midst of a beautiful valley, surrounded by excellent farming lands, the town was primarily a farming community.

Although the town was not chartered until 1802, settlement was commenced here as early as 1793. During that year, two brothers, Calendar and Deacon Martin Adams, started through the forest from St. Johnsbury, with their young wives, making their way by means of marked trees to Barton Landing (now Orleans). Here they constructed rafts or canoes and embarked with all their earthly possessions following the Barton River to the lake. Arriving at the bay, it is said they became impressed with the fact that the frost had not destroyed the vegetation there, while on the hills around everything had been destroyed by the cold. Here they disembarked their miniature fleet and commenced the first settlement in Newport. These brothers were soon followed by other settlers so that in 1800 there were eleven families in the town. These were the families of John Prouty, Nathaniel Daggett, Abel Parkhurst, Amos Sawyer, Luther Chapin, James C. Adams, Abraham Horton, Simon Carpenter, Enos Bartlett, Joseph Page, and Martin Adams. Sixty acres of land was cleared by six yoke of oxen in the town. The town was organized and the first town meeting was held on March 11, 1800. Alien Adams was the first recorded birth on December 19, 1794. A child, Orville Daggett was said to have been born previous to that date but his birth was not recorded. At some point H. and A. Adams and D. and S. Meacham constructed a dam and put up a sawmill.

The Town of Newport experienced numerous changes since its initial charter as Duncansboro. In addition to a name change, the boundaries substantially changed over the years. In 1880 the Town of Salem was dissolved and merged with the Towns of Newport and Derby. The portion of Newport that was formerly Salem lies in the eastern section near what is now known as the City Farm Road.

The Town of Coventry is also a contributor to the land area of Newport Town. The Coventry leg was a long narrow strip of land lying between the towns of Newport and Salem extending all the way to Lake Memphremagog. The Coventry leg was annexed to Newport Town in 1850.

Around 1900 Newport grew by about 2000 acres when Coventry Gore was annexed at the southerly end of town.

Newport Town's boundaries were finalized in 1917 when the City of Newport was chartered. Newport City is comprised of portions of the Town of Newport and Derby. The Newport Town land records dated prior to 1917 are presently stored in the vault at the Newport City Municipal building.

Interesting Historical Facts:

- At one time there were three post offices in Newport town: one on the Lake Rd., one in South Newport (Collins Mill Road), and one in the village in F. D. Taylor's General Store now the site of Glover's Family Market. After a fire burned the village Post Office in 1920 it was moved to the corner of Rt. 105 and Vance Hill. By 1939 all three buildings had been combined into one at Herbert Tute's home on Cross Road. In 1961 our present post office was built in the village on Rt. 105.
- The town has had just six town clerks since 1918: H.A. Bartlett 1918-1939, Ruth Bartlett 1939-1955, Marjorie H. Parker 1955-1981, Rachel Westover 1981-2000, Marjorie Buck 2000-2001, and Denise Daigle 2001-present.
- The first McIntosh apple tree ever in the United States was planted in Newport Town in 1868 on the farm of the late Gilbert C. Whipple. The 134 year old tree is still going strong and continues to produce fruit.
- Today's single school system replaces schools that were distributed throughout the town. At one time there were at least eight neighborhood schools scattered around town.
- In the mid-1900s there were approximately 110 dairy farms in Newport Town.
- Boston Bruins founder, Charles Adams, was born in Newport Town on October 19, 1876 to Frank and Elizabeth (Benoit) Adams.
- 2019 highest assessment for a single family home is \$2,041,200 for a 201 Tax Bill of \$40,772.97. About 74% of this goes to the education fund.
- The largest operating dairy farm is approximately 2,387 acres consisting of two big tracks of land owned by one farmer. One parcel is 1599 acres and the second is 788 acres.

STATEMENT OF PLANNING GOALS

1. Maintain the scale, the traditions and the rural character of Newport Town, as these qualities make Newport Town an attractive community in which to live, work, and raise a family.
2. Encourage residential, agricultural and business growth that preserves open space, scenic qualities, and the rural nature of the town.
3. Identify & promote growth on lands that are suitable for development while maintaining compatibility with existing land use.
4. Identify important historical and cultural landmarks for the benefit of future generations.
5. Encourage opportunities for recreational activities on public and private lands.
6. Encourage development of a variety of housing units for all income levels with an emphasis on renovation of existing structures.
7. Strive to provide the best possible public services and safety (roads, Village water, recycling, and solid waste disposal) while recognizing the limitations of the property tax system.
8. Continue to provide quality educational opportunities for all residents.
9. Encourage the protection of our natural resources such as ground water, lakes and streams, forest land, agricultural land and wildlife habitat.
10. Maintain compatible land use with adjacent towns and municipalities that reflect present and anticipated growth.
11. For future Village growth the “Village Vision”, a document created for the Town in 2004 at the request of the Planning Committee (available at the Town Clerk’s Office) could be used as a base to build a Village growth plan. Although not implemented at that time, the circumstances and conditions it covered still exist. There were too many obstacles to pursue the idea of the Village Center and Neighborhood Development Area Designation at the time of that report and up to this Town Plan revision. What the future holds remains to be seen.

The Town can be divided into four areas for more specific discussion of current land use:

1. South Newport (also known as Coventry Gore) – mostly uninhabited with its northern section being primarily residential and some agriculture.
2. Agriculture – located along Routes 100 and 105.
3. Village – Residential/Commercial center of Town using municipal water and sewer.
4. Vance Hill and lake area – (recreational/residential)

Statements/Objectives:

1. Newport Town has experienced a growth change from agricultural to a residential community. We would like to continue to provide opportunities for village growth.

Recommendations/Strategies/Goals:

1. Consider use of local and state road policies as they affect the amount and type of development in each part of Town.
2. Consider establishing zoning districts to reflect different character and uses in different parts of Town. May want to vary setbacks and minimum lot sizes.
3. Reference the Acceptable Management Practices for Forestry and Agriculture in the Town Plan and zoning ordinances.
4. Consider existing and historical land use patterns in adjacent towns when revisiting Zoning Bylaws.
5. Maintaining options for future village growth, re-visiting the 2004 Village Vision document determining what is still pertinent or what needs revision.

6. Preservation of land should not inhibit the future growth of the Town.
7. All development and structures should be designed to minimize flood damage.
8. It is important to review historical land use and neighborhood land uses in planning for economic growth in the Town.
9. To allow further growth in town, economically, changes are needed in zoning, infrastructure use and land use.

MAPS

Various maps were developed as a part of this plan and are on file for public inspection at the Town Clerk's office. The maps are a part of and are incorporated by reference to the Town Plan. They include:

- The map on page 11A ANR Map of the Village
- The map on page 11B Newport Town Boundaries & Mileage Map
- The map on page 11C of the Vance Hill water facility
- The map on page 11D of the recreational land on Poginy Hill
- The map on page 11E of Conserved Land and current Use in Newport Town
- The map on page 11F of Lakeshore Property along Lake Memphremagog
- The map on page 11G Newport Town Public Facilities
- The map on page 11H Newport Town River Corridors
- The map on page 28 of the Source Protection Areas (water) from the VT Agency of Natural Resources

A series of maps from the VT Fish & Wildlife as mentioned in the **WILDLIFE HABITAT AND SIGNIFICANT NATURAL RESOURCES** section starting on page 13. They are on file at the Town Clerk's office and include:

- Map 1-Conserved Lands Water Resources
- Map 2- Land Cover
- Map 3- State and Regional Scale Biodiversity resource
- Map 4- Wildlife Resources
- Map 5- Fine Scale Wildlife Resources
- Map 6- (Town) Physical Features

- Map 7- Aerial Photo of Town (2013)

PUBLIC LANDS AND BUILDINGS

The following list comprises the extent of the Town of Newport Holdings:

Municipal Office				.24 acres
Town Garage (1)				4.28 acres
Recycling Center				.5 acres
Town Sewer Plant				6.9 acres
Town Water				6.0 acres
Ball Field				4.0 acres
Vance Hill (includes solar garden)				97.90 acres
School				6.0 acres
Fire Dept.				1.0 acre
Newport Center Cemetery on Rt. 100				9.0 acres
Lake Road Cemetery				3.4 acres

Collins Mill Cemetery	● ● ●	1.0 acre
Coventry gravel pit	● ● ●	52.50 acres
Fishing Access – Strawberry Acres (state owned)		1.45 acres
Fishing Access – Laurel Lane (north access state owned)		1.75 acres
Pogony Hill Conservation Park	●	400+ acres

Statements/Objectives:

1. The Town of Newport owns several parcels of land for our residents and will continue to provide opportunities regarding use of Town land.

Recommendations/Strategies/Goals:

1. Ownership of these parcels should be reviewed periodically to see if the need for the property can still be justified.
2. Maintain a committee to develop options, proposals and recommendations for current as well as future use of the Town owned lands.

WILDLIFE HABITAT AND SIGNIFICANT NATURAL RESOURCES

Newport Town contains many acres of wild and uncultivated land within its boundaries. The wooded area of South Newport and the high elevation of Bear Mountain located in the northwest corner of town provide relatively uninterrupted Habitat Blocks and travel corridors for upland wildlife. The Lake Road and Leadville Road also have large tracts of forest and are home to one of the largest whitetail deer yards in Vermont.

“Habitat Blocks” are areas of contiguous forest and other natural habitats that are un-fragmented by roads, development, or agriculture. Vermont’s habitat blocks are primarily forests, but also include wetlands, rivers and streams, lakes and ponds, cliffs, and rock outcrops. Forests included in habitat blocks may be young, early-successional stands, actively managed forests, or mature forests with little or no recent logging activity. The defining factor is that there is little or no permanent habitat fragmentation from roads, agricultural lands and other forms of development within a habitat block. Habitat blocks support the biological requirements of many native plants and animals. They support viable populations of wide-ranging animals, including bobcat, American Marten, and black bear, that require large areas to survive by allowing access to important feeding habitat, the ability to move and find mates for reproduction, and as a result ensure genetic integrity of populations.

Newport enjoys a mix of habitat blocks from large expanses of forest to comparatively small ones. This includes a portion of the 15,500 acre block of the Lowell range, a 6,000 acre block associated with Lake Memphremagog and several blocks in the 1,000 to 2,000 acre range. All of

these are significant for wildlife populations in the region and even the smaller blocks can play a role in the larger network of habitat connectivity.

“Habitat Connectivity” is important for large mammals like deer, moose, and bear to have these large uninterrupted areas away from humans to travel through and feed to get what they need. But “islands of habitat”, even very large “islands” like the 15,000 acre habitat block in southern Newport are not enough to sustain wildlife populations that have large home ranges to get what they need. Habitat Connectivity is a complex process that functions at different scales for different species. Generally speaking, connecting habitat is represented by land that links larger patches of habitat within a landscape, allowing the movement, migration, and dispersal of animals and plants. Riparian areas along streams and rivers, strips of forest cover between developed areas, and even hedgerows/ fencerows all represent potential connecting habitat for wildlife and other organisms.

Therefore local and regional connectivity are both vital to the long-term sustainability of wildlife populations and the ecological functions that they support. The conservation of large areas of undeveloped land with diverse habitat conditions will assist in supporting ecosystem functions and related public benefits.

“Wetlands” are vegetated ecosystems characterized by abundant water. Wetlands include the vegetated, shallow-water margins of lakes and ponds and the seasonally flooded borders of rivers and streams. They occur in an amazing diversity of topographic settings across the landscape, including basins, seepage slopes, and wet flats. All wetlands have three characteristics in common. First, all are inundated by or saturated with water during varying periods of the growing season. Second, they contain wetland or hydric soils, which develop in saturated conditions and include peat, muck, and mineral soil types. Finally, wetlands are dominated by plants that are adapted to life in saturated or inundated soils. Wetlands store large volumes of water and attenuate downstream flooding, a function that is likely to increase in importance in Vermont as climate change brings more frequent and larger storm events. Wetlands help maintain surface water quality by trapping sediments and removing nutrients and pollutants from surface waters before that water reaches streams or lakes.

A “rare species” is one that has only a few populations in the state and that faces threats to its continued existence in Vermont. Rare species face threats from development of their habitat, harassment, collection, and suppression of natural processes, such as fire. Rare species, especially populations occurring at the edge of the species’ geographic range, provide important genetic diversity which may be especially significant in allowing species to adapt and evolve to changes in the environment, such as climate change. Newport Town is home to several rare species:

- The Upland Sand Piper nests along the Number 12 Road
- There is a Great Blue Heron rookery located in Newport Town
- There is a rare species called the Silver Minnow found here
- There is a rare species of Water Milfoil found in the Lake, not to be confused with the abundance of Eurasian Milfoil found in Lake Memphremagog

Newport Town is also the home of two recognized “state significant grasslands” recognized by the Agency of Natural resources (ANR). There are only three such grasslands located outside of Champlain Valley and Newport Town has two of them. Grasslands are open lands dominated by grasses, sedges, and broadleaf herbs, with little or no woody vegetation. Most of Vermont’s grassland habitats occur in the Champlain Valley and, to a lesser extent, in the Connecticut River Valley and the area around Lake Memphremagog. Conversion of natural grasslands has led to the decline of grassland birds in their historic natural habitats. ANR has provided maps of these areas which are on file at the Town Clerk’s office.

Statements/Objectives:

Newport Town has many unique physical characteristics that can serve as attractions to many types of visitors, tourists, current or new residents, and outdoor enthusiasts. They include Lake Memphremagog, Bear Mountain, Coventry Gore, Poginy Hill and hiking, snowmobiling, and recreational vehicle trails. These areas plus the aforementioned habitat blocks, wetlands, and grasslands have to be safeguarded with a higher level of review before development occurs. If development occurs in these areas Newport Town needs to have a heightened level of review and some conditional use language in its Zoning By-laws. This will ensure that these habitat blocks, wetlands, and grasslands remain intact to a large degree allowing limited development. The Planning Board has met with Agency of Natural Resources representatives to see how to best address future development in these areas.

Recommendations/Strategies/Goals:

1. Instruct the conservation and recreation committee to maintain and develop recreational uses for the Poginy Hill Conservation Park property and to maintain active forest management.
2. Encourage the local school to utilize the Poginy Hill Conservation Park for science and a nature education resource.
3. Charge the conservation committee with developing a policy and having the responsibility of monitoring the quality of the local streams and lakes (utilizing the resources of the State of Vermont and local watershed associations).
4. Encourage a riparian network on streams and lakeshores.
5. Utilizing the Agency of Natural Resources as a source of information to help safeguard against damaging development.
6. Utilizing BioFinder Maps (BIOFINDER.Vermont.gov), the ANR Atlas, and referring to “Conserving Vermont’s Natural Heritage” as the Town’s Zoning By-laws are updated.
7. Explore the possibility of enacting form(s) of Density Based Zoning.
8. Explore the possibility of a town-wide inventory of land types.

ENERGY

Most of Newport Town homes and businesses heat with oil, wood, propane gas or a combination thereof. A considerable number cook with propane gas. Many have taken advantage of energy audits and weatherization programs offered by State agencies and utilities. Electricity is supplied to Newport Town by Vermont Electric Cooperative in Johnson.

In 1993, Citizens Utilities constructed a new transmission line from Newport to, and through, Newport Town. Citizens Utilities was ultimately sold to Vermont Electric Cooperative.

There is a crude oil underground pipeline crossing Newport Town, originating in Montreal, Quebec and terminating in Portland, Maine. There's been recent discussion, both for and against, using this pipeline to transport sand tar oils.

The majority of the public buildings in the Town use oil for fuel. The Town garage has a combination of wood and oil.

The greatest share of energy (gasoline and diesel) for both public and private use is for transportation (cars, trucks and tractors).

The Town has a new solar garden on Vance Hill on Town property. The Town also relies on outside sources to fulfill its energy needs. This is the case with most area towns.

Dispersed, auto-dependent development can result in sprawling local road networks that require greater use of energy for travel and maintenance. New development that is located in or adjacent to existing commercial centers maximizes energy efficiency. In addition, buildings can be sited so as to best utilize renewable energy sources, such as solar, wind or geothermal systems.

Statements/Objectives:

1. There are still funds available to do energy audits for public buildings. All Town buildings should be energy audited and updated if cost effective.
2. The Town should keep its equipment in good working order and, on a regular cycle, replace and improve it with the latest energy efficient equipment available, where cost effective.
3. The town shall continue to look into renewable energy resources with the addition of the solar garden. Act 92 (State law, February 2008) established goals for Vermont in renewable energy generation and efficiency measures.

Recommendations/Strategies/Goals:

1. Check into funding for energy audits for its buildings and apply the necessary weatherization, where cost effective.
2. Purchase the most energy efficient equipment possible, where cost effective.
3. Study access to use of renewable energy, such as solar, wind, and water.
4. Encourage greater use of renewable energy. Encourage development of local options for renewable energy production.
5. The select board should investigate the possibility of a clean energy district to meet these goals.

RECREATION

Newport Town residents have a variety of recreational opportunities for all ages. Area residents are able to participate in outdoor activities such as hunting, fishing, snowmobiling, skiing (downhill & X-Country), swimming, hiking, ATV trails, etc. The Town has a baseball and soccer field beside the town garage on Vance Hill Road. There is also a baseball field at the school. The Town also has a 400 acre recreational tract on Poginy Hill for residents to use for hiking, camping, picnicking, cross country skiing and snowshoeing. Organized sports activities available to the children in the Town are baseball, softball, soccer, basketball and football. Nature trails have been developed under the guidance of the Physical Education teacher of Newport Town School. These trails are located on the north side of the Village next to Mud Creek. The trails are used for hiking, snowshoeing and educational activities. The Vermont Association of Snowmobile Travelers (VAST) maintains approximately 25 miles of trails for winter recreation. The Vermont All-Terrain Vehicles Sportsman's Association, Inc. (VASA) is developing a trail system through Newport Town for ATVs.

Statements/Objectives:

1. Posting of private lands limits certain recreational opportunities.
2. No public beach is available in Town on Lake Memphremagog, although there is public access for launching watercraft.

Recommendations/Strategies/Goals:

1. Establish a recreation director or active recreation committee to promote existing opportunities and explore new possibilities.
2. Investigate the possibility of obtaining grants to fund recreation projects.
3. Reestablish indoor recreational facility at the school gym.



- LEGEND**
- Use Value Appraisal Parcels
 - Conserved Lands**
 - Housing and Conservation Board
 - Local Government
 - Private Organization
 - US Dept. of Defense
 - US Fish and Wildlife Service
 - US National Park Service

NOTES

Map created using ANR GIS mapping technology.

Map 11E

1: 94,439

June 19, 2015

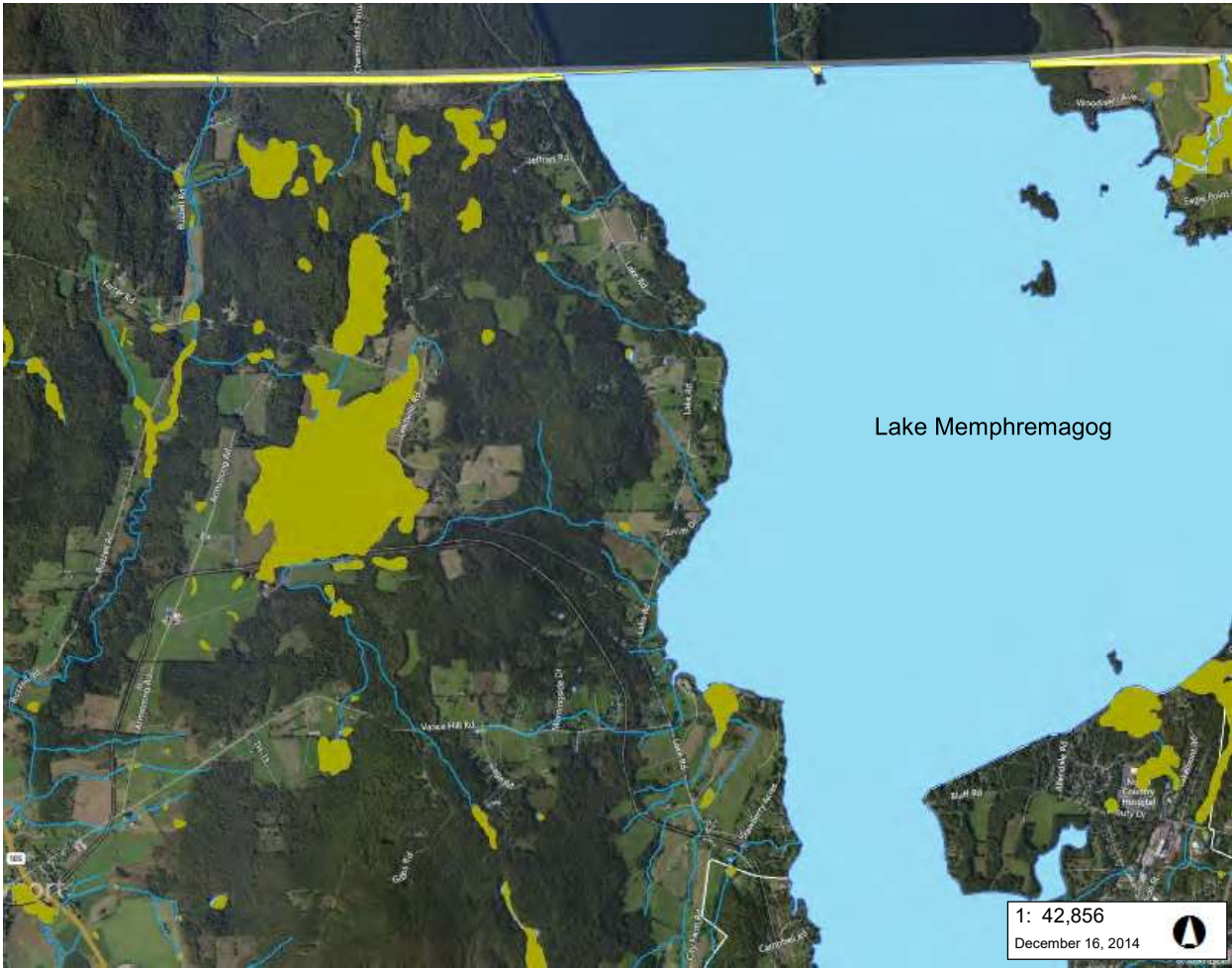


4,798.0 0 2,399.00 4,798.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere
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1" = 7870 Ft. 1cm = 944 Meters
THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



2,177.0 0 1,088.00 2,177.0 Meters
WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 3571 Ft. 1cm = 429 Meters
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LEGEND

- Wetlands - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
- Wetlands Advisory Layer
- Waterbody
- Stream
- Town Boundary
- County Boundary

Map 11F
Town of Newport
Lakeshore Map

NOTES

Map created using ANR's Natural Resources Atlas

Newport Town, VT Conservation Priorities Map 01/27/2020



- Building Locations
- US & State Highways
- Paved Town Road
- Unpaved Town Road
- ==== Class 4 Town Road
- Legal Trail
- Private Road

Wildlife Road Crossings Score (worst to best)

- 3
- 4
- Riparian Wildlife Connectivity
- Rare Species
- Uncommon Species
- Rare Natural Communities
- Uncommon Natural Communities
- Mast Stands
- Deer Wintering Areas

Conserved Lands

- State
- Town
- Private
- Lakes, Ponds, & Rivers
- Streams

Habitat Blocks Priority Rank

- 2
- 3
- 4
- 5
- 6
- 7

0 1 2 3 Miles

Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

Newport Town, VT Forest Block Map 01/27/2020



- Building Locations
- US & State Highways
- Paved Town Road
- Unpaved Town Road
- ==== Class 4 Town Road
- Legal Trail
- Private Road
- Streams
- Lakes, Ponds, & Rivers
- ▨ Highest Priority Connectivity Blocks
- ▧ Priority Connectivity Blocks
- Conserved Lands
 - ▭ State
 - ▭ Town
 - ▭ Private
- Highest Priority Interior Forest Blocks
- Priority Interior Forest Blocks

0 1 2 3 Miles

Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.