

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).

	Starting Forestland	Acres of Appropriate Forestland)	Acres of Accessible, Appropriate, and Estimates as Managed Forestland
Caledonia	327,121	222,912	132,497
Essex	374,191	258,012	182,909
Orleans	317,602	253,647	156,740
Northeast Kingdom	1,018,914	734,571	472,146

(See the Economic Development chapter for a more comprehensive discussion of Silviculture and sustainable forestry practices.)

Loss of Forest Cover

Today's forest cover is largely the result of more than 100 years of reforestation, which occurred when trees grew over land once cleared for pasture and crops, and timber harvesting declined. For the first time in a century, however, Vermont is losing its overall forest cover. While the loss is hard to quantify, Vermont has lost about 1% of its forest cover over the past decade and continues to lose about 1,500 acres of forest cover each year.¹ While a very small portion of forest cover has been cleared for agricultural or commercial uses, primary cause of forestland can be attributed to large lot rural residential development, which has primarily occurred away from traditional centers of development. (See Figure 1.4: Residential Development from 2005 to 2014) Nearly all of this development has been scattered and incremental and has not risen to the threshold of Act 250 review.

Scattered rural residential development contributes to *fragmentation* of our forested lands, which occurs when contiguous areas of forest cover (also called *forest blocks*) are divided by land development other than recreational trails or uses exempt from regulation.² Over time, the cleared swaths and non-forested pockets of land multiply and expand, resulting in disconnected forested islands surrounded by uses that threaten the health, function, and value of those lands as wildlife habitat and as a source of recreation. Subdivision also affects forested lands – even when the land is not converted for development. Long-range *parcellization* trends are likely to affect overall sustainability of our forests because subdivisions often result in tracts too small to support viable forestry operations. Economically and environmentally sound forest management is far more difficult to sustain on parcels smaller than 50 acres. Twenty-five years ago, 19,000 family forest landowners in Vermont owned parcels 10 acres or smaller. By 2012, there were 43,000 family forest landowners.³

Although Vermont leads the New England states in support for land conservation, decisive action and a full complement of integrated planning initiatives will be required to stop the loss of forest cover. Vermont statute now emphasizes the need for plans to identify important forest blocks and habitat connectors and recommend policies and strategies that minimize fragmentation to promote the health, viability, and ecological function of forests. Forest blocks are composed of *core* and *edge* areas. “Core forest” is described as forest that is more than 100 meters from the non-forest boundary. The “forest edge” is the ring around the core. The “edge” has different characteristics and serves as habitat for a different suite of species than the forest “core.”

Given the complexity of the landscape and very different ecological conditions across the state, it is difficult to establish a minimum or maximum number of acres to define a functional forest block. However, forest blocks larger than 20 acres are mapped statewide and can be found in Biofinder (<http://biofinder.vt.gov>) and on the ANR Atlas (<https://anrmaps.vermont.gov/websites/anra5/>). High-value and statewide significant forest blocks are also mapped. (More information about the region's priority forest blocks and habitat connectors can be found in the Natural Resources chapter.)

Forestland Preservation Tools

Current Use: The Vermont Department of Taxes' Use Value Appraisal Program (also known as “Current Use”) is a tax program designed to support the state's agriculture and forest products economy. It relieves the burden of property taxes on foresters and farmers by assessing taxes based on the productive value of the land rather than on the land's potential for development for other uses. While enrollment in current use does

¹ Foster et al (2017). *Wildlands and Woodlands Farmland and Community: Broadening the Vision for New England*, Harvard Forest, Harvard University.

² 24 V.S.A. §4302(35)

³ Vermont Agency of Natural Resources

1 place a lien on the property which remains in place until the Land Use Change Tax is paid, it does not place a
2 permanent deed restriction on the property like a conservation easement would. The Land Use Change Tax is
3 due when property is developed or withdrawn from the Current Use program, which provides a significant
4 financial incentive to landowners to keep the land in productive forestry (or agricultural) use rather than
5 develop it for other residential or commercial uses. The land can be developed with structures associated with
6 the farming or forestry use of the property without penalty.

7 As of January 2016, a total of 3,104 parcels in the Northeast Kingdom region are enrolled in Current Use,
8 comprising a total of 564,556 acres. The vast majority – more than 475,000 acres -- is enrolled as managed
9 forestland.

10 **Conservation:** While most of the Northeast Kingdom's forestland is privately owned, state, federal, and local
11 governments own nearly 130,000 acres combined in the Northeast Kingdom (private land with conservation
12 easements is not counted in this figure). These 130,000 acres of publicly owned land are almost entirely
13 forested. Nearly all public lands are open for recreation, with much of the state and privately-owned timber
14 lands actively harvested. Approximately 48,000 acres of this land came into public ownership in 1999, when
15 the Champion International Corporation conveyed its Essex County properties to the Vermont Agency of
16 Natural Resources (nearly 23,000 acres) and the U.S. Fish & Wildlife Service (approximately 26,000 acres).

17 Vermont Land Trust (VLT) has conserved more than 570,000 acres statewide, and more than 200,000 acres
18 of those lands are in the Northeast Kingdom. More than 90% of VLT conserved lands in the NEK are
19 forested. Much of the land it has protected is privately owned and is conserved through the purchase or
20 donation of a *conservation easement* that permanently restricts future development.

21 VLT has also played an active role in the creation of town forests. The Vermont Municipal Forest Law –
22 authorized back in 1915 – allows municipalities to acquire lands for the purpose of growing timber or wood.
23 The benefits of town forests also include natural habitat protection and forest block connectivity, water
24 quality protection, and public access to recreation. Town forests can also serve as outdoor classrooms by
25 establishing models for sustainable forestry management. The Northeast Kingdom contains 39 town forests,
26 collectively containing more than 11,000 acres. The most recent addition to the region is the Canaan
27 Community Forest, established in 2012, when the Town of Canaan received 424 acres of forestland donated
28 by the Neil Tillotson Trust. The town has placed a conservation easement on 386 acres, which is designated
29 for sustainable timber management, recreation, education, and natural resource protection. The remaining 56
30 acres is available to the town for future economic development.

31 Research to date indicates that municipal forests are largely overlooked in long-range planning endeavors.
32 Roughly half do not have a forest management plan, and many are not even permanently protected from
33 conversion of natural land cover.

34 **Conservation Overlays:** A few communities in the Northeast Kingdom have taken regulatory measures to
35 protect forest blocks. The Town of Sutton, for example, has a special overlay that promotes low density
36 development, while allowing for smaller lot sizes so that housing lots, driveways, and private roads can be
37 sited in such a way to minimize fragmentation of forested areas. While a few other municipalities in the
38 region are considering similar overlays, most communities with zoning attempt to protect their forested lands
39 through a more traditional minimum lot size approach. This approach to forestland protection has some clear
40 limitations, since it often allows for lot sizes as small as five or ten acres.

41 **AGRICULTURAL LAND**

42 Farming has been an integral part of the region's economy from the time of the earliest settlements.
43 According to the US Department of Agriculture, in 2012 there were 1,291 farms in the region, and land in

1 farms accounted for 237,764 acres in the
 2 Northeast Kingdom, over 18% of the total land
 3 area. It is the second largest land use in the
 4 region, and has provided a livelihood for
 5 generations of residents. The future of farming
 6 in the region is evolving to respond to the
 7 challenges of low commodity prices and
 8 competition from within the U.S. and abroad.
 9 The state has lost over 10,000 farms in the past
 10 forty years. However, although there was a net
 11 loss of 1,222 acres of farmland in the Northeast
 12 Kingdom between 2007 and 2012, the region
 13 saw a gain of 31 farms during that same period
 14 (see Table 1.3). The region is seeing a shift
 15 toward smaller-sized farms. According to the
 16 2012 Census of Agriculture, “very small” farms
 17 (fewer than 50 acres) now account for 35% of all farms in the region, up from 31% in 2007 and 28% in 2002.



18 Table 1.2 shows the breakdown of agricultural land for the three counties and the state of Vermont in 2012,
 19 and the regional comparison to 2007. In 2012 Orleans County had the most farmland, comprising 55% of all
 20 the agricultural land in the Northeast Kingdom region, while Caledonia accounted for about 34% and Essex
 21 County, about 11%.

22

	Table 1.2: Land in Farms 2007 and 2012					
	Vermont 2012	Caledonia 2012	Essex 2012	Orleans 2012	Northeast Kingdom 2012	Northeast Kingdom 2007
	Acres	Acres	Acres	Acres	Acres	Acres
Cropland, including pasture	488,327	29,050	8,020	52,531	577,928	97,544
Woodland, including pastured	536,075	38,269	12,003	50,935	637,282	100,504
Permanent pasture and rangeland	139,976	9,874	923	16,942	167,715	26,421
Other Land in farms	87,335	4,635	4,545	10,037	106,552	14,517
Total Land in Farms	1,251,713	81,828	25,491	130,445	237,764	238,986
Number of Farms	7,338	560	93	638	1,291	1,260

23

24 The U.S. Natural Resources Conservation Service has mapped most of the region's primary and secondary
 25 agricultural soils. These maps are available at the NVDA office in St. Johnsbury.

26 (See the Economic Development chapter for a discussion of agricultural production trends.)

State and Regional Food System Planning

In 2009, in response to concerns that the food system in Vermont was too reliant on food grown and distributed from outside the New England region, the Farm to Plate Investment Program was initiated, and the Vermont Sustainable Jobs Fund (VSJF) developed a 10-year *Farm to Plate Strategic Plan*. The VSJF executive director is, by statute, a member of the Vermont Working Lands Enterprise Board, and the WLEB uses the *Farm to Plate Strategic Plan* to help evaluate areas of need to grow the food system and to make funding decisions. The *Farm to Plate Strategic Plan* is housed online on the “Vermont Food System Atlas” at <http://www.vtfoodatlas.com/atlas>. The “Atlas” serves as a clearinghouse of all Vermont farm and food sector resources.

A plan commissioned in 2010 by NVDA and prepared by the Center for an Agricultural Economy focused on developing a vibrant agricultural economy and food system in the entire Northeast Kingdom. *The Regional Food System Plan for Vermont’s Northeast Kingdom* was originally released in 2011 and substantially updated in 2016. As the state’s only comprehensive regional food system plan, [the 2016 NEK Plan](#) is based on a “soil to soil” model (see Figure 1.1) and is closely integrated with the Vermont Farm to Plate Strategic Plan. The NEK Plan contains 11 overarching goals ranging from production inputs, environmental stewardship, value-added production, distribution and demand, farmland accessibility, food access and justice, and workforce development. The goals identified in the 2016 NEK Plan, and the strategies and action items to achieve them, are incorporated by reference into this Regional Plan.

Farmland Access and Preservation Tools

Despite large amounts of undeveloped land in the region, maintaining contiguous tracts of farmland for future agricultural use continues to be an issue. Agricultural fields must generally be within close proximity to other fields used by a farmer. Preserving contiguous parcels that contain primary and secondary agricultural soils that can be used by a cluster of neighboring farms is more efficient than working scattered parcels of land.

The attributes that make land desirable for farming (well-drained and little slope) also make the land desirable for commercial development and large lot residential development. The region’s farmlands can be highly attractive to non-farmers with the financial means to establish rural residential 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.

Figure 1.1: NEK Food System Model



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

9 One of the region's most significant farmland access challenges is succession planning for the next generation
10 of farmers. A 2016 study by American Farmland Trust found that farmers aged 55 and older operate 60% of
11 all farms in the NEK. With roughly a third likely to exit farming in the next two decades, the future of NEK
12 farms is particularly unclear: Of the 345 farms in the region with a principle operator aged 65 or older, only
13 19 had identified a potential successor. Technical services, outreach, and public policy must be better aligned
14 to facilitate succession planning to qualified successors.

15 Only about 16% of land enrolled in Current Use is agricultural use (just over 89,000 acres). Twenty towns in
16 the region each have more than 2,000 acres of agricultural lands enrolled, with the top three being the
17 Orleans County towns of Irasburg, with 6,390 acres; Newport Town, with 5,669 acres; and Holland, with
18 4,290 acres.

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

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

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

36 RECREATION LANDS

37 Recreation opportunities enhance the quality of life for residents and tourists alike, provide the health
38 benefits of exercise, and contribute significantly to the regional economy. Outdoor recreation activities, such
39 as hunting, fishing, hiking, snowmobiling, horseback riding, cross country skiing, and mountain biking require
40 relatively little maintenance of the open spaces where they take place. These activities often coexist easily with
41 other land uses such as forestry and farming, and can take place on public and private lands. For example, a
42 portion of Darling State Park has been leased to the Burke Mountain Ski area for alpine and Nordic ski trails.
43 In northern Essex County there are vast tracts of forest land containing networks of four-season trails that
44 are also used for forestry operations.

45 Private land owners have been generous in allowing recreational use of their land. Educating users about
46 respectful and safe use is important in maintaining access to private lands in the future. However, residential
47 development and the subdivision of land over time can reduce the amount of private lands available for

1 recreation. This increases the pressure on public lands and those private lands that are still accessible. State-
2 wide, the number of acres of posted property registered with town clerks was relatively constant from 2000
3 through 2010.

4 **Conserved Lands for Passive Recreation**

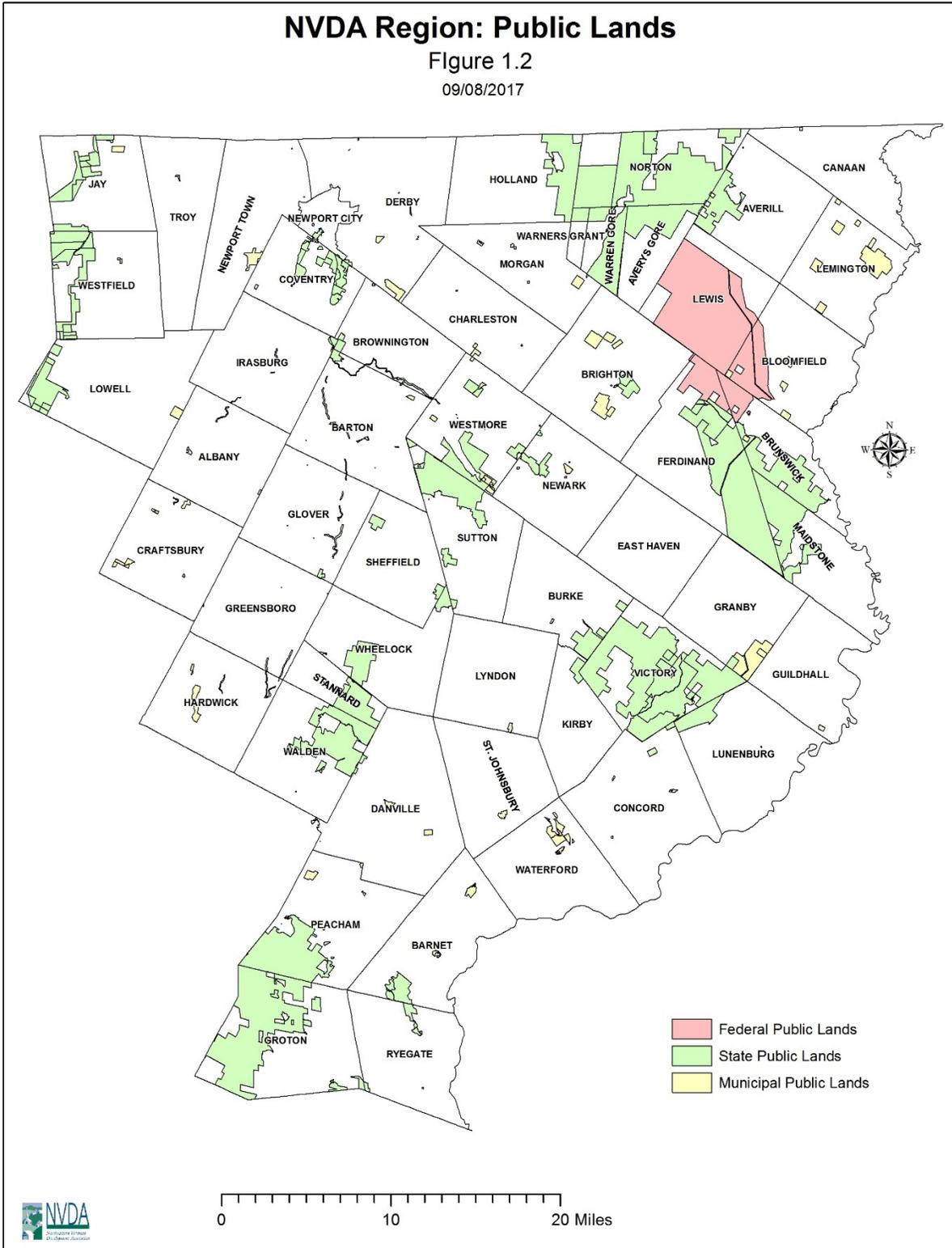
5 Federal, state, and municipally-controlled land, whether conserved by fee ownership or by an easement on
6 privately-held land, allow for varying levels of public access and are an important passive recreational
7 resource. Some trails and logging roads are actively maintained by the state or non-profit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

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

NVDA Region: Public Lands

Figure 1.2

09/08/2017



1 **Active Recreational Facilities**

2 Sports fields, playgrounds, parks, improved trails, and lake and river-access require more maintenance and
3 usually some form of public investment. A more detailed listing of these facilities is included in Utilities and
4 Facilities Section of this Plan.

5 **Considerations**

6 Municipalities should consider their residents’ current and future needs for public spaces, water body access,
7 and recreation facilities. This can be done through the municipal plan or in a separate recreation plan or open
8 space plan. Municipalities should work in conjunction with their neighbors in the planning and development
9 of recreation spaces so as to complement each other’s investments.

10 As noted above, landowners in the region are often willing to allow their land to be used for passive
11 recreational use, particularly in the winter; however, if land is not protected through easements or regulated
12 through zoning, the recreational potential of these lands can disappear if the landowner decides to develop
13 the property or sell to a new owner with different interests. This can happen piecemeal over many years, as
14 house lots are carved out of large tracts of open space. Therefore, it is important that municipalities recognize
15 that lands held privately may not be available for recreational use in the future, and plan accordingly.

16 The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is a plan that identifies existing outdoor
17 recreation opportunities and issues, and sets goals and objectives for the coming years. To qualify for federal
18 Land and Water Conservation Funds, states must revise the State Comprehensive Outdoor Recreation Plan
19 (SCORP) every five years. These funds can be passed through to municipalities. Vermont’s latest Plan, for the
20 period 2014-2018, contains an action plan that is incorporated in this regional plan by reference. The SCORP
21 is available online at <http://www.vtfpr.org/reclwcf/SCORP%202014-2018.pdf>.



23 **GOALS AND STRATEGIES FOR THE PROTECTION OF LAND RESOURCES**

24 **FORESTLAND GOALS**

- 25 • Sustainable forestry will remain an economically viable tool to preserve woodlands, open space for
26 recreation, and local character.
- 27 • Mixed-use forests will allow for expanded economic benefits to forest owners while encouraging
28 sound ecological practices and recreational access to the public.
- 29 • Value-added processing opportunities for wood resources in the region will increase.
- 30 • Residential and commercial development patterns will occur in such a way as to retain the
31 productivity of the region’s accessible forests.
- 32 • State and federally-controlled land is an important resource for passive recreation and will continue
33 to be accessible to the public.
- 34 • Municipalities with land in municipal forests will have the capacity to manage the land for its
35 resource value and public recreational use.
- 36 • Maintain enough forest land to support wood-related industries, retain the region’s natural beauty,
37 protect fragile areas, encourage wildlife, promote recreational usage, and maintain a healthy,
38 sustainable forest based economy.

39 **FORESTLAND STRATEGIES**

- 40 • Continue to provide planning assistance to communities seeking to conserve valuable forest land.
41 Encourage landowners to enroll productive forestland in the “current use” program. In communities

1 that have land use regulations, encourage the use of planned unit development coupled with low
2 density zoning to preserve larger blocks of forestland while facilitating efficient residential and
3 commercial development.

- 4 • Connect municipalities with appropriate agencies and resources providing management assistance
5 with municipal forests.
- 6 • Provide management, financial, and technical assistance to local forest product industries, including
7 wood product manufacturers, sawmills, paper mills, and wood-powered electrical generators
8 (cogeneration).
- 9 • Support the development and marketing of distinctive wood products identifiable with Vermont
10 and/or the Northeast Kingdom.
- 11 • Support owners of forestland who implement sustainable forestry practices to market their wood and
12 wood products.
- 13 • Expand usage of existing rail infrastructure for shipping and interface with trucking. Explore the
14 creation of forest-related industrial zones (i.e. rail sidings for sawmills)

15 **AGRICULTURAL LAND USE GOALS**

- 16 • Farming and agriculture will remain an important and viable sector of the regional economy.
- 17 • Contiguous tracts of agricultural soils will be preserved.
- 18 • Development of residential and commercial uses will not significantly reduce the amount of open
19 and productive farm land.

20 **AGRICULTURAL LAND USE STRATEGIES**

- 21 • Continue to provide planning assistance to communities seeking to conserve productive agricultural
22 land. Encourage the use of “planned unit development” coupled with low density zoning and other
23 tools to preserve agricultural resources.
- 24 • Provide technical assistance to towns seeking to encourage on-farm enterprises, through the use of
25 land use regulations or incentives.
- 26 • Provide support to farmers interested in diversification and/or product development. Assist with
27 grants and low-interest loans for value-adding businesses and diversification.
- 28 • Identify funding sources for, and market existing and new food ventures in the region.
- 29 • Support education efforts that teach sustainable agricultural practices, and the tax benefits of
30 enrollment in the “current use” program.
- 31 • Support succession planning and efforts to connect new and expanding farmers with affordable
32 farmland.

33 **RECREATION LAND USE GOALS**

- 34 • Sufficient open space will be available for current and future outdoor recreational pursuits.
- 35 • A variety of year-round and seasonal, indoor and outdoor recreation opportunities will be available
36 for residents and visitors.
- 37 • Public access to water bodies will be protected.

1 **RECREATION LAND USE STRATEGIES**

- 2 • Assist towns to plan for future recreation needs, recognizing that privately-held land may not be
3 available for passive recreational use in the future.
- 4 • Assist with financing to develop additional facilities such as sports fields, playgrounds, trail systems,
5 ice rinks, skateboard parks, and recreation/bike paths, coordinating actions with the goals in the
6 SCORP in order to access dedicated federal funds.
- 7 • Identify and protect public access to water bodies.
- 8 • Identify the recreation facilities and activities most needed by youths and seniors and help towns
9 identify and secure funds for their development.
- 10 • Support local and regional recreation events (e.g. fairs, festivals, etc.).

11

12 **II. EXISTING LAND USE & DEVELOPMENT TRENDS**

13 Development patterns in northeastern Vermont have historically followed the valleys and waterways of the
14 region. Early European settlers farmed the fertile soils of Orleans, Caledonia Counties and the Connecticut
15 River valley in Essex County, using the rivers for moving logs and powering mills. Through the years,
16 Caledonia and Orleans received the bulk of development, particularly around St. Johnsbury and Lyndon in
17 the south, and Newport and Derby in the north. Smaller population and commercial centers also dotted the
18 region. Development historically occurred in the form of compact village centers surrounded by a working
19 landscape of farms and forestland. Though much of the old farmland has returned to forest, this traditional
20 Vermont landscape has remained the dominant pattern of land use in the region. The map on the following
21 page, “NVDA: Current Land Use,” illustrates the region’s current development patterns.

22 Most communities in the U.S. today have had to deal with some form of suburbanization, sprawl, loss of
23 farmlands, and/or Brownfield issues influencing their development. To insure appropriate development for
24 the Northeast Kingdom it is necessary to observe the development factors affecting other communities in
25 order to direct future land uses appropriately.

26 **Suburbanization and Sprawl**

27 Population and transportation changes, expanded road systems, a loss of farms, and an increase in regional
28 tourism have all contributed to alter the patterns of settlement in Vermont. Visitors, second-home owners,
29 and increasingly mobile residents often desire homes and services in the region’s scenic rural settings.
30 Dispersed residential development can fragment wildlife habitats and productive forestland and agricultural
31 land, and can result in sprawling local road networks that are difficult and expensive to maintain.

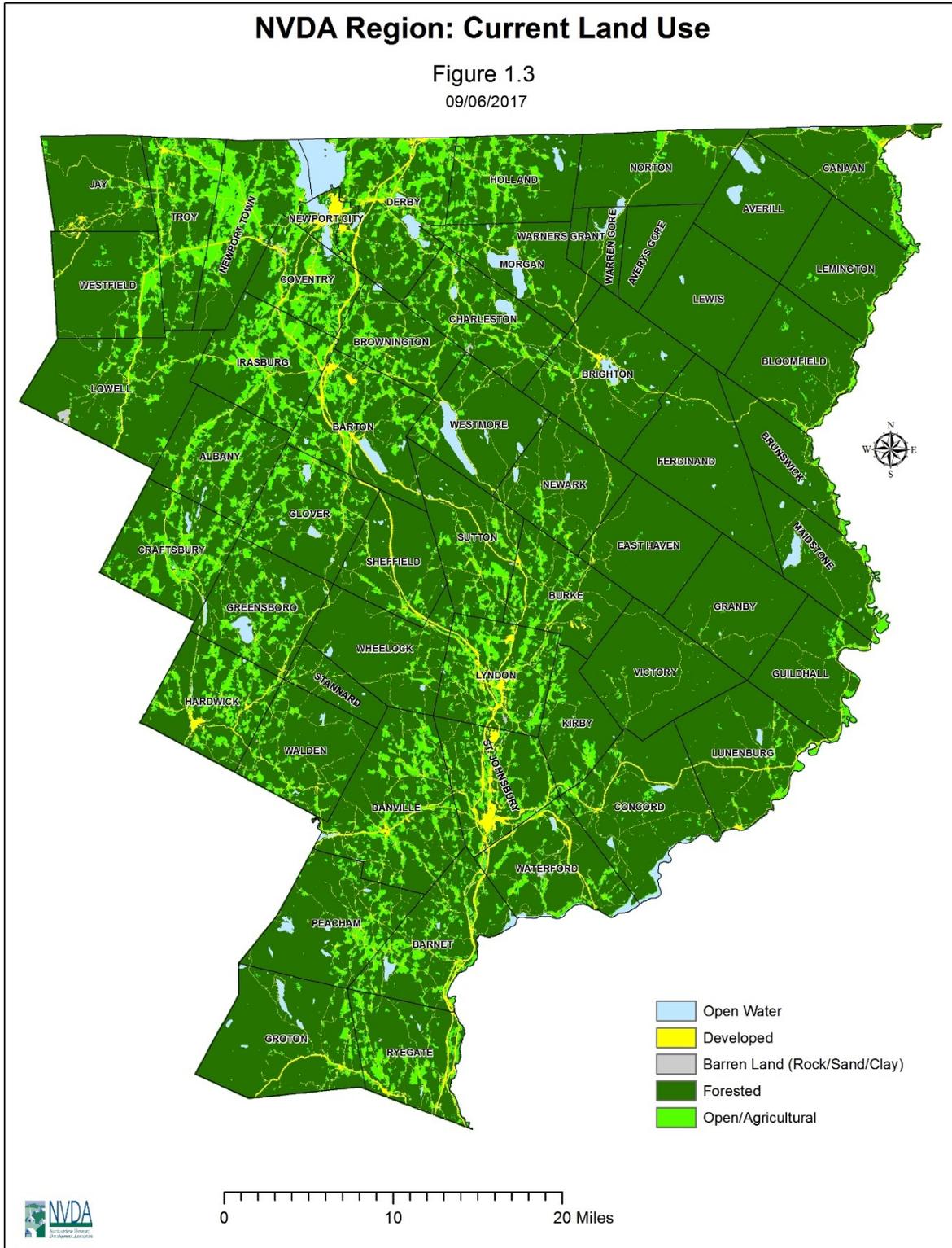
32 When residential development occurs in remote areas, driving becomes a requirement for most trips,
33 increasing traffic congestion and causing greater demands on road infrastructure. The cost of associated
34 improvement of roads, and increased demand for services including fire, ambulance and law enforcement, are
35 often not covered by the tax revenues generated by these developments. This is particularly true when
36 resulting disinvestment occurs in the existing town or village center, thus lowering property values and the
37 grand list. The economic decline of established centers and the depletion of agricultural and forested land
38 through residential subdivisions is a self-perpetuating problem that is hard to correct without intervention.
39 Intervention can come in the form of financial incentives, local land use regulations, and transportation and
40 housing policies that direct new development and public investment to Town centers. (See discussion of State
41 designation programs in Section III. Future Land Use & Development).

42 Local land use regulations that establish low residential densities, (e.g., one residential unit per 25 acres) in
43 agricultural areas, coupled with mandatory clustering or “planned unit development” is an effective way for
44 Towns to protect valuable agricultural and forested land while promoting efficient, well-designed residential

1 development. Towns may also want to promote the high value of the land for a variety of agricultural
2 enterprises by zoning specifically to accommodate these uses, with residences permitted only as accessory
3 uses.

NVDA Region: Current Land Use

Figure 1.3
09/06/2017



1 **Brownfields**

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

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

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

24 **Shoreline Development**

25 The Northeast Kingdom possesses a majority of the state’s lake and ponds, and also the majority of
26 undeveloped shorelines. Recent increases in the development of second homes, camps, and primary
27 residences have decreased the amount of undeveloped shoreline. Since the clearing and development of
28 shorelines can negatively impact water quality, the State enacted the Vermont Shoreland Protection Act in
29 2014. The provisions of this Act require property owners to obtain a state permit for most development and
30 clearing activities within 250 feet of the shores of lakes that are 10 acres or larger in size. In Caledonia
31 County, all towns with the exception of Burke and St. Johnsbury have lakes that are large enough to be
32 subject to the State Shoreland Act. In Essex County, all towns with the exception of Bloomfield, East Haven,
33 Guildhall, Lemington, Victory and Warner’s Grant have lakes subject to the State Shoreland Act; and in
34 Orleans County all towns with the exception of Troy and Westfield have lakes subject to the provisions of
35 the Act. Towns have the ability to seek delegation of review under the State Act, provided they have local
36 regulations that are at least as stringent as the State’s. Greensboro, in Orleans County, was the first and only
37 town in the Northeast Kingdom region to seek delegation authority for review of permits under the State
38 Shoreland Protection Act.

39 **Designated Downtowns and Village Centers**

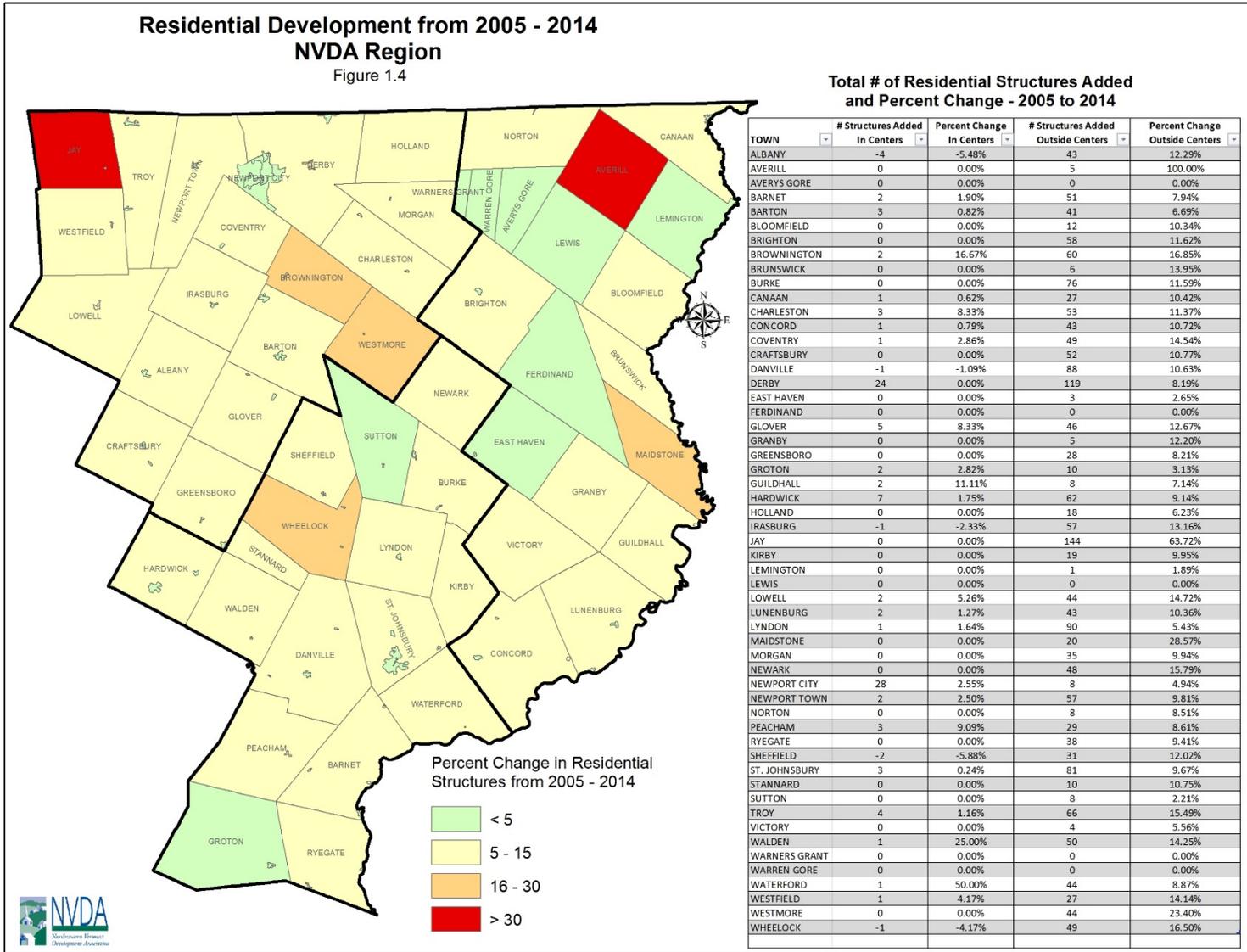
40 The Division of Community Planning and Revitalization within Vermont’s Department of Housing and
41 Community Development oversees a State designation program that encourages communities to reinvest in
42 their downtowns and village centers. With designation comes numerous benefits, including tax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

1 In 2013, the State developed a methodology for mapping “community center” areas. The goal was to assess
2 progress towards the state’s primary land use goal of maintaining settlement patterns of compact village and
3 urban centers separated by rural countryside. The identification of community centers was to include all state-
4 designated centers, including new town centers, growth centers and neighborhood development areas.
5 Recreational facilities and parks adjacent to the centers were to be included, as well as neighboring residential
6 areas that are pedestrian-oriented or have density that is significantly greater than surrounding areas. Areas
7 that would be defined as “strip development” were to be excluded. A total of 63 centers were identified in
8 the region. E-911 points were used to determine how much residential development had occurred in centers,
9 as compared to outside of centers, from 2005 to 2014. Although this analysis doesn’t account for multi-unit
10 structures (each structure is counted as one, even if it has multiple residential units) this analysis shows that
11 the vast majority of new residential construction since 2004 has occurred outside of centers. The results of
12 this analysis are depicted on the map, “Residential Development from 2005-2014, NVDA Region.”

13 Benefits of Village Center designation include tax credits available to the owners of income-producing
14 properties for historic rehabilitations, façade improvements, and code improvements (including installation of
15 elevators and sprinkler systems). Benefits also include priority consideration for Municipal Planning Grants,
16 Dept. of Historic Preservation Grants, funding from Vermont’s Community Development Program, and
17 priority consideration by the State Building and General Services when leasing or constructing buildings.
18 Significant benefits of Downtown designation include all the benefits of Village Center designation, in
19 addition to a 50% technology tax credit for data and network improvements, and access to the Downtown
20 Transportation Fund which includes grants of up to \$100,000 for capital transportation and related capital
21 improvements. The “Downtown” designation requires the establishment of an ongoing non-profit
22 organization that works in partnership with public and private sectors to plan and implement a
23 comprehensive downtown revitalization strategy.

24 The Northeast Kingdom currently has only two designated Downtowns – St. Johnsbury and Newport City.
25 Towns with Village Center designation in the region currently include Brighton (Island Pond), Brownington,
26 Burke (East Burke Village and West Burke Village), Canaan (Canaan Village and Beecher Falls), Craftsbury
27 (Craftsbury Village and Craftsbury Common), Danville, Derby (Derby Line), Greensboro (Greensboro
28 Village and Greensboro Bend), Hardwick, Lyndon, and Wheelock. These areas are depicted on the “NVDA:
29 Future Land Use” map. The Town of Hardwick has considered pursuing the Downtown designation at times.
30 Designation is time-limited, and some towns have lost their village center designation when their respective
31 plans expired: Glover (Glover Village and West Glover), Barton (Barton Village), and Peacham. There is
32 interest in renewing these designations when new plans are adopted. Other villages with interest in
33 designation include East Craftsbury, East Hardwick, Groton Village, and Orleans Village in Barton. NVDA is
34 committed to support these efforts to pursue and maintain designation.

1 Assessment of Residential Growth



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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. (VTLMI 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

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

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

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

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

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

25 Jay and East Burke are special examples of service centers. These villages have maintained their role as service
26 centers, primarily because they now serve the recreation needs of residents and visitors. Both have winter
27 economies based on down-hill skiing, and to a lesser extent, cross-country skiing. Jay Peak, which recently
28 went through a major expansion period, and along with Burke Mountain Resort with its new development
29 projects, will both become four-season resorts. Expanded activities in recent years include mountain biking,
30 vacation housing developments, hotel developments, and recreation facilities. Jay is the only town in the
31 Northeast Kingdom that provides a higher number of jobs than their total population count. Based on 2015
32 data from the Vermont Department of Labor, there were 931 jobs in Jay, but the town's population was only
33 539.⁴

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

41 **Village Centers**

42 The Northeast Kingdom has retained many of its small, traditional New England villages located in rural
43 settings. These continue to provide convenient access to basic goods and amenities for the local rural
44 population in the form of general stores, dining, and fuel. Villages also usually have some small-lot residential
45 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.

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

3 Characteristics of Village Centers:

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

9 **Rural Areas**

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

16 **Industrial Parks**

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

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

28 **Desired Future Development Patterns**

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

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

39 Ideally, development will occur within the core center area, and not expand into undeveloped areas outside
40 the center via strip development. “Strip development” is defined by the State as “linear commercial
41 development along a public highway that includes three or more of the following characteristics: broad road
42 frontage, predominance of single-story buildings, limited reliance on shared highway access, lack of
43 connection to any existing settlement except by highway, lack of connection to surrounding land uses except

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

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

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

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

27 **Development Patterns in Rural Areas**

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

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

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

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

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

45 As previously stated, the region’s rural areas should receive very little commercial or industrial development
46 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

1 children would be expected with this growth, most schools in the region have been experiencing declining
2 enrollment so the growth is expected to support rather than overwhelm existing schools. Schools operating
3 close to capacity reach economic efficiencies not possible in schools with very low enrollment.

4 ..

6 IV. DEVELOPMENTS OF SUBSTANTIAL REGIONAL IMPACT

7 For the purposes of this plan, Developments of Substantial Regional Impact are defined by the Northeastern
8 Vermont Development Association as:

- 9 1. Projects that would have substantial and ongoing impact on two or more municipalities, including
10 the host municipality.
- 11 2. Projects that would likely have substantial impact on a resource within the region that is widely used
12 by people outside of the municipality in which it is located.
- 13 3. Projects that may affect development patterns to the extent that the character or identity of
14 neighboring municipalities is significantly affected.

15 The projects described previously – major expansions at the Burke Mountain and Jay Peak resorts, the new
16 biotechnology facility in Newport, and the expansion of Northeast Kingdom International Airport – would
17 all qualify as Developments of Substantial Regional Impact. Also, qualifying as a Development of Substantial
18 Regional Impact is the Casella Waste USA Landfill located in Coventry VT. This landfill currently accepts
19 most of the solid waste generated in the State of Vermont. Trucks traveling to and from the facility from all
20 parts of Vermont are a common sight.

21 Other developments having a substantial regional impact are the industrial-scale wind facilities located in
22 Sheffield and Lowell. These facilities have impacted the view sheds in a number of adjoining communities.

24 V. ADJACENT REGIONS

25 The Northeast Kingdom does not exist or function independently from those regions that surround it.
26 Therefore, it is critically important that this plan take into account the planning for these neighboring areas to
27 insure a smooth transition between the regions. This will also reduce the adverse impacts that development in
28 one region might have on the adjoining region.

29 The Northeast Kingdom is surrounded by five different planning regions in Vermont and New Hampshire
30 and one Canadian Province. Four of these regions are located to the south and west of the Northeast
31 Kingdom in Vermont and include the Northwest Regional Planning Commission, the Lamoille County
32 Planning Commission, the Central Vermont Regional Planning Commission and the Two-Rivers-
33 Ottauquechee Regional Commission. New Hampshire's North Country Council abuts the Northeast
34 Kingdom to the east and, finally, the Canadian Province of Quebec is to the north.

35 It is expected that the projected job growth in the Northeast Kingdom region will draw workers from
36 adjacent communities, particularly those from the Northwest Regional Planning Commission and the
37 Lamoille Country Planning Commission regions. The expected job growth in Jay and the Newport area also
38 may spur new housing and/or commercial developments in communities from those regions – i.e.
39 Montgomery or Morrisville. The success of value-added agricultural enterprises in Hardwick over recent years
40 has had some effect on developments in Wolcott.

41 Other substantial developments in the Northeast Kingdom that have likely land use impacts on adjoining
42 regions include: The Waste USA Landfill in Coventry (transportation and solid waste impacts); The Lamoille
43 Valley Rail Trail (economic development and transportation impacts); And, the VAG Asbestos Mine
44 (hazardous site in the communities of Lowell and Eden). Watershed boundaries also do not correspond to

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

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

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

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

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

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27 GOALS AND STRATEGIES FOR FUTURE LAND USE AND DEVELOPMENT

28 FUTURE LAND USE & DEVELOPMENT GOALS

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

1 **STRATEGIES - CENTERS (Regional, Service and Village)**

- 2 • Direct public investment and create financial incentives for the development of a balanced mix of
3 low-income, work-force, and upper-income housing in and adjacent to village centers and
4 downtowns, with the goal of allowing all communities to develop into high-opportunity areas.
- 5 • Direct public investment for new elderly and affordable housing to town and village centers in
6 locations with access to public transportation routes. Aside from promoting traditional settlement
7 patterns, this will put seniors closer to such amenities as shopping, and community facilities, and
8 enable income-stressed residents to have cost-saving access to services, employment centers, and
9 public transportation options to places of employment.
- 10 • Work with housing developers and communities to assure that all residents have the opportunity for
11 access to high-performing schools and economically-sustainable employment.
- 12 • Assist communities applying for designation under the Vermont Downtown, Village Center, and/or
13 Neighborhood Development Programs where appropriate to encourage mixed-use development
14 (residential, commercial and appropriate light-industrial) in centers.
- 15 • Encourage adaptive reuse of historic structures through tax incentives, tax credits, grants, and loans,
16 assistance in location of funding, etc.
- 17 • Encourage desired town center development through investment, maintenance, and expansion of
18 appropriate infrastructure (sidewalks, water and sewer, parking, public spaces, etc.).
- 19 • Support beautification efforts in town centers and downtowns.
- 20 • Encourage towns to plan for community recreational and social needs.

21 **STRATEGIES RURAL AREAS**

- 22 • Avoid the development of agricultural lands with auto-dependent residential subdivisions by
23 encouraging towns with land use regulations to lower the permitted residential density in agricultural
24 zones, coupled with planned unit development or clustering provisions to ensure efficient and well-
25 designed developments.
- 26 • Protect against the fragmentation of rural lands by the piecemeal development of residential lots by
27 providing financial incentives for the development of attractive work-force and upper-income
28 housing in and adjacent to village centers and downtowns.
- 29 • Support local conservation efforts.
- 30 • Encourage community open space plans and recreation infrastructure, recognizing that privately-held
31 land will not be available unless protected through the purchase of conservation and access
32 easements.

33 **STRATEGIES INDUSTRIAL PARKS**

- 34 • Assist Towns in identifying in their Town Plans appropriate areas for the development of industrial
35 or manufacturing uses, based on the location of natural resources and existing transportation and
36 utility infrastructure.
- 37 • Assist Towns in marketing potential locations for industry to the business community.
- 38 • Assist Towns with the assessment and remediation of Brownfields in order to revitalize and re-use
39 existing industrial infrastructure where appropriate for future industrial uses.