

Volume II

REGIONAL ANALYSIS

I. FORESTLAND

In 1997, over 80% of the land in the Northeast Kingdom was covered by forest (USDA FS, 1997). Unlike many states, Vermont's forestland acreage has been expanding since the early part of the Twentieth Century. As farmland is abandoned, trees grow over what had once been pasture and crop fields. Today, local forests provide residents of the Northeast Kingdom with a variety of benefits. The largest revenue producers in the region come from the harvesting, processing, and manufacturing of forest products. In Vermont, these have existed as sources of income since the earliest European settlements. Water and air quality, and wildlife habitats are all dependent upon the vast forests. Residents enjoy a wide 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.

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

Table 1.0 shows the total forested acreage for the region and counties. Also shown are the percentages of forestland that are northern hardwoods or spruce/fir, the two most prevalent forest types in the region. It should be noted that 113,125 acres, or about 9% of the region's total land, was considered as both forestland and agricultural land (USDA, 1997).

Table 1.0: Total Forest Acreage and Common Species

	Total Forest Acreage	Percent Northern Hardwood	Percent Spruce/ Fir
Caledonia	345,500	57%	31%
Essex	405,500	67%	21%
Orleans	332,200	52%	36%
Northeast Kingdom	1,083,200	59%	29%
(USDA FS, 1997)			

In 2002, over 35 % of the softwoods and 16 % of the hardwoods harvested in Vermont came from the Northeast Kingdom (www.vtlni.info/profile2004.pdf). Much, if not most, of the harvested softwoods are used for pulpwood. Paper manufacturers, however, are continuing to look overseas and to Canada for this commodity, where more favorable growing conditions, subsidies, or lower wage rates mean lower prices. Consequences resulting from this trend include the loss of revenues generated by landowners and the loss of employment in logging, pulp, paper, and related industries. However, there still exists a potential for a shift in forest management practices away from pulpwood toward saw-timber, and an opportunity for value-added businesses in the region. Table 1.1 shows a breakdown of the 2002 harvest by county.

Table 1.1: 2002 Vermont Forest Harvest

	Total	Hardwood Board Feet (thousands)	%	Softwoods Board Feet (thousands)	%
Vermont	222,386	102,990	100%	119,396	100%
Northeast Kingdom	59,203	17,036	16.60%	42,167	35.30%
Caledonia	15,060	6,031	5.90%	9,029	7.60%
Essex	18,993	2,496	2.40%	16,497	13.80%
Orleans	25,150	8,509	8.30%	16,641	13.90%

(VT Department of Forest, Parks & Recreation, 2004)

Forest Products Industry

Local forests are an important source of lumber for large variety of wood-products manufacturers in the region. Some of these businesses originally located in the area for the ample supplies of materials. In 1998, wood-products manufacturing, using mainly hardwoods, accounted for 32% of all manufacturing employment in Northern Vermont (the Northeast Kingdom, plus Franklin and Lamoille Counties). The paper and pulpwood industry however, which uses softwoods, is currently threatened by lower costs for similar resources grown elsewhere. (*Northern VT Wood Bus. Resource Center Feasibility Study*, Flynn, 1998)

Many elements of an effective industry support program are already in place in Vermont. These include the Vermont Wood Products Association, the Vermont Technical College, the Vermont Community College System, the University of Vermont's Forestry Department, and the Small Business Development Center Program. The Robert Byrd Hardwood Center is a top national technical support program that may be underutilized in this region.

Sustainable Forestry

Many forestland owners and loggers point out that they have been practicing "sustainable" management for years, as is evidenced by the health of their woodlands. The argument is made that keeping forests healthy simply makes economic sense, and therefore certification is an unneeded expense. Often, from an ecological standpoint, they are correct. Many Vermont landowners already practice what is considered "sustainable" management without being certified. However, for consumers wishing to promote good environmental stewardship, certification is the only way to distinguish between wood products from an ecologically-sound forestry operation and wood from a less ecologically sound operation. A growing number of consumers are willing to pay higher prices for certified wood from the former, and it may benefit landowners and manufacturers to be recognized for their responsible practices. Home Depot is one notably large retail company making certified wood available to consumers. At the moment however, producers of certified wood are not receiving premium prices.

There are a number of certification programs available to landowners and forest product manufacturers. The American Forest & Paper Association has created standards for sustainable practices, known as the Sustainable Forestry Initiative. This program does not currently allow for product labeling as sustainable, which is a potentially important aspect for marketing. At the time of this printing, the largest program in the United States that does allow for product labeling is the Forest Stewardship Council/ National Wildlife Federation's *SmartWood Program*. This program has two types of certification; a forest management

certification for forests, and a chain-of-custody certification for primary and secondary manufacturers and wholesalers. Because the cost of certification can be prohibitive for small operations, there is certification available for groups of landowners at lower costs. The Vermont Family Forests in Addison County has taken advantage of this option. Certification is also available to groups of manufacturers.

I. FORESTLAND GOALS

- Sustainable forestry should remain an economically viable tool to preserve woodlands, open space for recreation, and local character.
- Mixed-use forests should allow for expanded economic benefits to forest owners while encouraging sound ecological practices and recreational access to the public.
- Value-added processing opportunities for wood resources in the region should increase.

STRATEGIES

- Provide management, financial, and technical assistance to local forest product industries, including wood product manufacturers, sawmills, paper mills, and wood-powered electrical generators (cogeneration).
 - 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.
 - Support the development and marketing of distinctive wood products identifiable with Vermont and/or the Northeast Kingdom.
 - Support owners of forestland who implement sustainable forestry practices to market their wood and wood products.
 - 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)
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II. AGRICULTURE

Farming has been an integral part of the region's economy from the time of the earliest settlements. According to the US Department of Agriculture, the region's 1,100 farms accounted for more than 264,000 acres in the Northeast Kingdom in 1997, or about 20% of the total land area. It is the second largest land use in the region, and has provided a livelihood for generations of residents. However, the future of traditional farming in the region is tenuous at best. Competition from within the U.S. and abroad and low commodity prices



have contributed to a long-term decline in agriculture in the state. The state has lost over 10,000 farms in the past forty years, but statistics seem to suggest a potential stabilization in farm acreage in this region. Between 1992 and 1997 the net loss of farmland in the Northeast Kingdom was only 11 acres, and the region actually saw a gain in the number of farms.

Table 1.2 shows the breakdown of agricultural land for the three counties and the state of Vermont in 1997. Orleans County contained over half of all the agricultural land in the region, while Essex County accounted for less than one-tenth.

Table 1.2: Agricultural Land Use (acres) 1997, 1992

	Vermont 1997	Caledonia 1997	Essex 1997	Orleans 1997	Northeast Kingdom 1997	Northeast Kingdom 1992
Cropland including Pastured	617,263	43,209	9,438	74,331	126,978	133,565
Woodland including Pastured	487,346	42,431	14,575	56,119	113,125	112,110
Other Land	157,546	8,615	1,484	13,704	23,803	18,242
Total Land in Farms	1,262,155	94,255	25,497	144,154	263,906	263,917

(Center for Rural Studies, Vermont Indicators Online, 2004)

It should be noted that the USDA counted 113,125 acres, or about 43% of the region's total agricultural land, as both forestland and agricultural land in 1997. Although only 52,546 acres in the Kingdom were classified in the 1997 Agricultural Census as pastureland, much of the cropland is used for growing feed for livestock (USDA, 1997). The U.S. Natural Resources Conservation Service has mapped most of the region's primary and secondary agricultural soils. These maps are available at the NVDA office in St. Johnsbury.

Agricultural Trends

The total market value of all Northeast Kingdom agricultural products sold grew 12% between 1992 and 1997, from \$85,324,000 to \$95,648,000 (not adjusted for inflation). Dairy products accounted for \$79,358,000, or 83% of the 1997 total market value of all agricultural products. Significant farm enterprises other than dairy include other livestock, poultry, vegetables, fruit, Christmas trees, and nursery and greenhouse crops.

Table 1.3: Selected Regional Agricultural Sales 1997, 1992

	Vermont 1997	Caledonia 1997	Essex 1997	Orleans 1997	Northeast Kingdom 1997	Northeast Kingdom 1992
All Agricultural Products (\$1,000)	476,343	29,357	6,769	59,522	95,648	85,324
Cattle and calves (\$1,000)	35,859	2,640	275	4,383	7,298	6,989
Dairy Products (\$1,000)	352,556	23,407	5,183	50,768	79,358	73,883
Hogs and pigs (\$1,000)	543	17	1	90	108	85
Horses and ponies (\$1,000)	2,537	89	-	219	308	NA
Milk goats and their milk (\$1,000)	450	withheld	-	143	at least 143	NA
Nursery and Greenhouse Crops (including Christmas trees and floriculture) (\$1,000)	18,588	1,417	withheld	743	at least 2,160	at least 1,404
Christmas trees (\$1,000)	2,782	540	withheld	259	at least 799	NA
Floriculture Crops (\$1,000)	11,614	664	withheld	374	at least 1,038	at least 1,117
Poultry (\$1,000)	5,699	28	4	20	52	at least 15
Sheep, lambs, and wool sold (\$1,000)	1,003	45	withheld	22	at least 67	at least 55
					(USDA, 1997)	

Current trends in the state have been toward larger but fewer dairy farms, and an increase in small and part-time non-dairy farms. This trend is likely to continue with the growth of the specialty and organic food industry, agro-tourism, and part-time farming. There was a small decrease in the number of milk cows in the region between 1992 and 1997, despite the increase in both dairy sales (not adjusted for inflation) and total cattle and cows.

Farm diversification could potentially result in a weakening of the larger dairy infrastructure, including a loss of dairy processors, truck and transportation services, and farm-supply retail. Potential upsides to having more diverse farms include an agricultural industry that is less subject to price spikes in particular commodity markets, and increased opportunities for direct retail sales within the region. Greater diversity in agriculture reduces the risk of crop-specific pest infestations and the need for heavy pesticide applications. Agri-tourism, specialty agriculture, and part-time farms can also help to preserve farmland for use in growing feed, grazing, or rental to more traditional dairy operations).

Anecdotal evidence suggests that many agricultural producers in Vermont have been relatively resistant toward working together in marketing and distribution. Larger food retailers often do not contract with smaller farms, preferring to buy in bulk. Working with large suppliers, they receive clean, labeled, packaged, bulk merchandise ready for the shelf. Many farms in the region do not have the time or resources to compete in this manner. It is likely that more marketing and distribution partnerships will develop over time if local producers are to compete successfully.

Table 1.4: Selected Vermont Agricultural Sales 1997, 1992

	Vermont 1992	Vermont 1997	% Change
All Agricultural Products	415,253	476,343	14.70%
Blueberries, tame (pounds)	312,888	170,637	-45.50%
Dairy Products	328,717	352,556	7.30%
Hogs and pigs (\$1,000)	641	543	-15.30%
Honey (\$1,000)	405	397	-2.00%
Horses and Ponies (\$1,000)	2,069	2,537	22.60%
Nursery and Greenhouse Crops (including Christmas trees and floriculture) (\$1,000)	9,461	18,588	96.50%
Christmas trees (\$1,000)	NA	2,782	NA
Floriculture Crops (\$1,000)	6,222	11,614	86.70%
Poultry (all) (\$1,000)	2,927	5,699	94.70%
Rasberries (pounds)	63,934	92,858	45.20%
Sheep, lambs, wool (\$1,000)	969	1,003	3.50%
Strawberries (pounds)	857,533	731,685	-14.70%
Trout, Farm-raised (\$1,000)	NA	580	NA
	(USDA, 1997)		

Beef

Although the most recent data on beef cattle is from the 1997 Census of Agriculture, a “window survey” of the region would suggest that the number of beef cattle in the region is growing, particularly Black Angus. Several Vermont beef producers believe that the industry has real potential for growth in the state. Vermont can sustain one of the nation’s highest rates of grazing animals per acre.

A move has begun to label beef as being from Vermont for consumer sales. Vermont has a reputation for clean, natural, quality foods which has helped other agricultural products.

Producers looking to market Vermont labeled beef have good reason to believe that it may bring a premium, particularly if consumer safety concerns grow relating to certain animal feed additives and unsanitary meat processing. Vermont beef producers could benefit if they maintain Vermont's image of healthy, quality foods.

The main barrier to expansion of the beef industry in the state has been the scarcity of slaughterhouses. Local slaughterhouses have difficulty keeping up with demand. Shipping cattle to feedlots and out of state slaughterhouses quickly becomes expensive. New slaughterhouses require a large investment, have fairly strict federal oversight, require good electric, water and sewer capacity, truck access, and must go through Act 250 hearings. Still, there is some interest in establishing local processing facilities, and Vermonters' have a long tradition of cattle-raising, expertise, farmland, and cattle-farming infrastructure.

Organic Agriculture

The organic foods industry is a growing market that easily fits many peoples image of Vermont. Consumers associate Vermont with clean, natural, quality foods, and the Vermont image has greatly benefited businesses in cheese and ice cream production. Many organic products can be sold for three or more times what can be charged for their non-organic counterparts. Organic certification and labeling is a logical step for many Vermont farms and food processors. The northeastern U.S. and eastern Canada serve as potential markets for a wide range of Vermont-grown organic products, as does the European Union, where markets are somewhat restricted for foods grown using certain conventional American farming practices.

Farmland Preservation

Despite large amounts of undeveloped land in the region, maintaining contiguous tracts of farmland for future agricultural use is becoming more of an issue. The same attributes which make land desirable for farming (well-drained and little slope) are the same for residential and commercial development. Agricultural fields must generally be within close proximity to other fields used by a farmer. Preserving contiguous parcels of primary and secondary agricultural soils that can used by a cluster of neighboring farms is more efficient than working scattered parcels of land.

The University of Vermont Agricultural Extension System has two regional offices (St. Johnsbury and Newport) to serve the local farming community. The University of Vermont Extension launched the Vermont Farm Labor Service, a cooperative with goals to recruit, train and match workers with farmers needing temporary help. Rural Vermont, a non-profit farm advocacy organization, has been organizing farmers in the northeast counties to explore opportunities for cooperative agricultural efforts. The Vermont Land Trust has been conserving prime farmland through the purchase of development rights.

II. AGRICULTURAL LAND USE GOALS

- Farming and agriculture should remain an important and viable sector of the regional economy.
- Contiguous tracts of prime agricultural soils should be preserved.

STRATEGIES

- Provide support to farmers interested in diversification and/or product development. Assist with grants and low-interest loans for value-adding businesses and diversification.
 - Identify funding sources for and market existing and new food ventures in the region.
 - Support education efforts that teach sustainable agricultural practices.
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III. EXISTING LAND USE & DEVELOPMENT TRENDS

Development patterns in northeastern Vermont have historically followed the valleys and waterways of the region. Early European settlers farmed the fertile soils of Orleans, Caledonia Counties and the Connecticut River valley in Essex County, using the rivers for moving logs and powering mills. Through the years, Caledonia and Orleans received the bulk of development, particularly around St. Johnsbury and Lyndon in the south, and Newport and Derby in the north. Smaller population and commercial centers also dotted the region. Development historically occurred in the form of compact village centers surrounded by a working landscape of farms and forestland. Though much of the old farmland has returned to forest, this traditional Vermont landscape has remained the dominant pattern of land use in the region. The NVDA Region: Land Use Map (Map 1), located on the following page, illustrates the region's current development patterns.

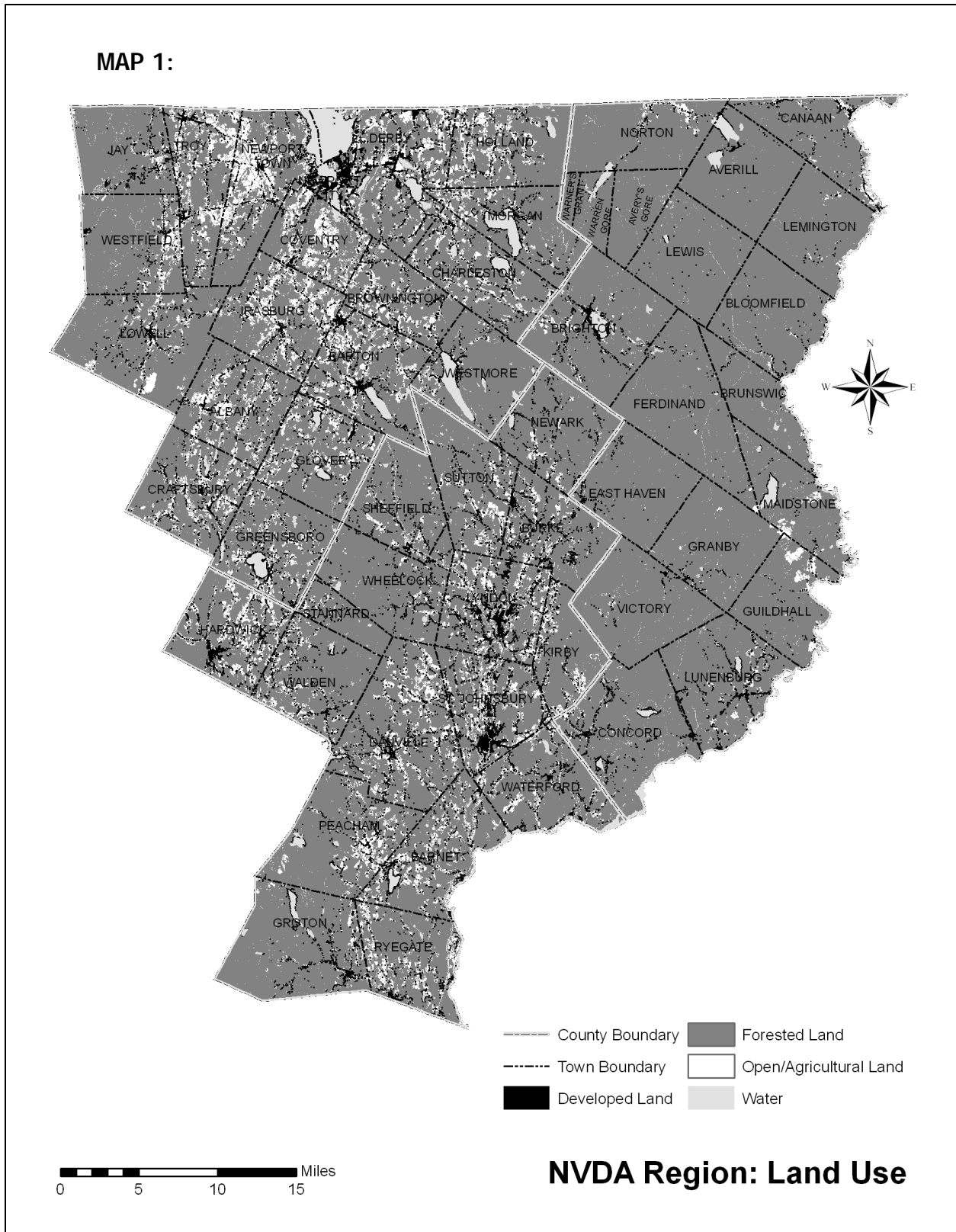
Most communities in the U.S. today have had to deal with some form of suburbanization, sprawl, loss of farmlands, and/or Brownfield issues influencing their development. To insure appropriate development for the Northeast Kingdom it is necessary to observe the development factors affecting other communities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

Suburbanization

Population and transportation changes, expanded road systems, a loss of farms, and an increase in regional tourism have all contributed to alter the patterns of settlement in Vermont. Due to improved roads and automobiles, residents can now live further from work than was possible in the past, and access for tourism from outside of the state has improved. Improvements in the highway system, coupled with increases in population densities in other parts of the northeast and Quebec, have sharply increased the number of people who are within a day's drive of the region. Visitors, second-home owners, and increasingly mobile residents often desire homes and services in the region's scenic rural settings. Combined with a loss of agriculture and pulpwood profitability, the region has become increasingly suburbanized. According to the Vermont Forum on Sprawl, between 1982 and 1997 the

amount of developed land grew in the state by 30.8%, while population grew by only 13.6%. The Northeast Kingdom was not immune to these changes.

MAP 1:



Sprawl

Strip commercial development and large, low-density residential subdivisions have been growing across the state. This "sprawling", consumptive land use pattern increases development pressures on undeveloped land (farms, forests, and wildlife habitats), and frequently leads to disinvestment and under-utilization of existing town centers. Driving becomes a requirement for most trips, increases traffic congestion and causes greater demands on road infrastructure. In our region we see this in places such as Lyndonville and between Newport and Derby. Associated improvement of roads and services, and extending infrastructure are costs that are often not covered by the tax revenues generated by these developments. This is particularly true when resulting disinvestment occurs in the existing town or village center, thus lowering property values and the grand list. Strip development itself is often unsightly and monotonous, detracting from the local character and the region's general appeal.

Residential Development of Farmland

A common development pattern in the region has been the piecemeal residential development of farms. This pattern is common in farm communities across the country, with some unintended consequences resulting. In addition to the issues associated with overall loss of farms and farmland raised earlier, this development pattern encourages many of the worst aspects of suburbanization and sprawl. The development of land closest to the road suburbanizes the landscape almost immediately. If the new homes become poorly maintained, the property value of the area can fall. In some areas, this development pattern combined with a lack of upkeep, serves as a sort of rural blight.

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 pay property taxes and lower 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 are some of the tools commonly used to finance brownfield redevelopment. These are all financing methods that communities need to consider.

Shoreline Development

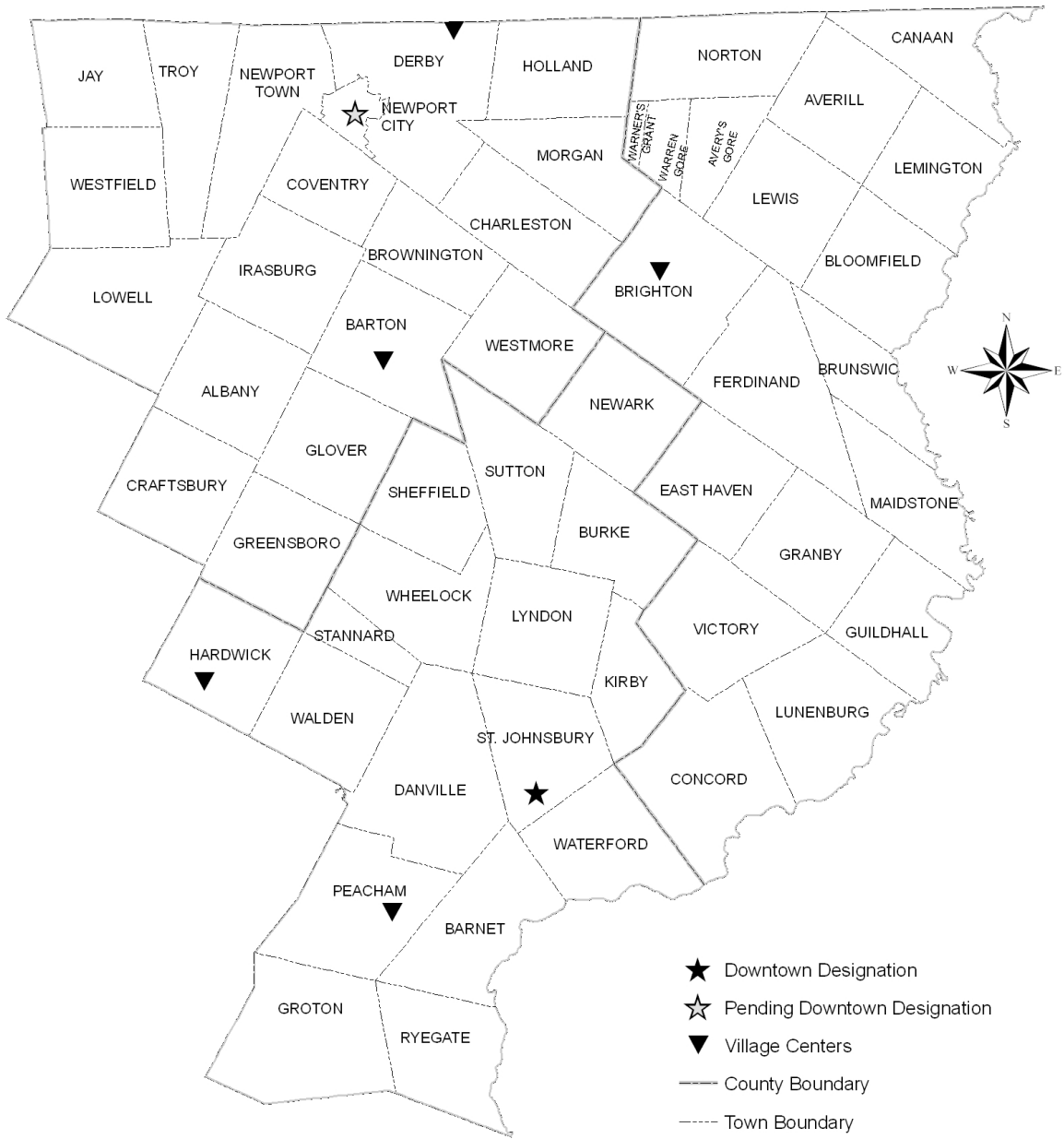
The Northeast Kingdom possesses a majority of the state's lake and ponds, and also the majority of undeveloped shorelines. Recent increases in the development of second homes, camps, and primary residences have decreased the amount of undeveloped shoreline.

Designated Downtowns and Village Centers

The State of Vermont's Downtown Program encourages communities to reinvest in their downtowns and village centers. Towns that receive Downtown Designation under this program can receive numerous benefits, including tax credits, loans, and grants from various state agencies. To qualify, a town must develop a comprehensive, long-term revitalization strategy for its downtown district. The Northeast Kingdom currently has only one designated downtown – St. Johnsbury – but Newport City is working hard to earn downtown designation.

In 2002, the Downtown Program created a second level of designation for Village Centers. These districts are generally smaller than the Downtowns but are still eligible for tax credits and priority consideration for grants from other state programs and agencies. The Designated Village Centers in the Northeast Kingdom are Hardwick, Barton, Island Pond, Derby Line, and Peacham Corners. These areas are depicted on the NVDA Region: Designated Downtowns & Village Centers Map (Map 2), located on the following page.

MAP 2:



**NVDA Region
Designated Downtowns &
Village Centers**

IV. FUTURE LAND USE & DEVELOPMENT

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. Rural Villages
4. Rural Areas
5. Industrial Parks

The Regional Urban Centers, Service Centers, Rural Villages, Rural Areas, and Industrial Parks (depicted in the NVDA Region: Future Land Use Map, Map 3) are categorized for growth based on the following development pattern descriptions. The development pattern descriptions are general in nature and can be used to guide growth in an appropriate manner, keeping in the character of the area.

1. Regional Urban Centers

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.

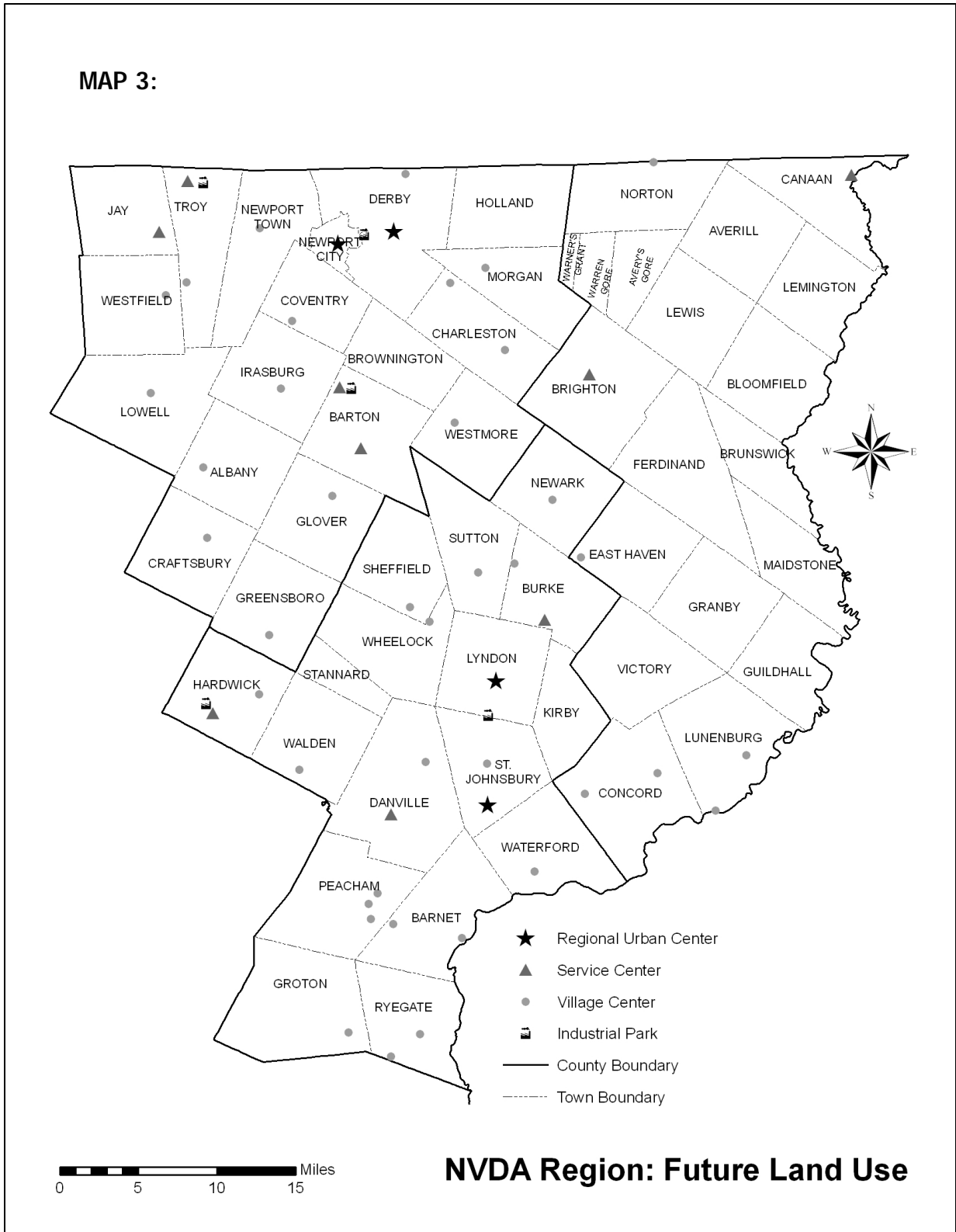
The Northeast Kingdom has two Regional Urban Centers. The St. Johnsbury/Lyndon area serves the southern section of the region, and Newport City/Derby serves the northern section. Transportation infrastructure plays an important role. St. Johnsbury/Lyndon is located at the intersections of Interstates 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 Newport State Airport is just outside of the Newport City limits in Coventry.

Over one-half of all employment in the Northeast Kingdom is located in one of the two urban centers. In 2002, the Northeast Kingdom had a combined 22,250 jobs, and 14,459 were in either St. Johnsbury/Lyndon or Newport City/Derby. Major industries include retail trade, manufacture of durable goods, education, and health services. (VT DET, 2002) Both urban centers have industrial parks, regional hospitals, various state offices, and dense commercial development. Lyndon State College, 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.

Housing density is greater in the urban centers than other towns in the region, with a mix of single family homes and multi-unit housing serving a range of income levels. In downtowns, structures often have commercial ground floors and residential upper floors. Combined, the two urban centers contain almost one-third of the housing units in the entire region. In 2000,

St. Johnsbury/Lyndon had a total of 5,672 housing units, about one sixth of the entire Northeast Kingdom's housing stock (which is 33,939). Newport City/Derby had a total of 4,600 housing units.

MAP 3:



Other nearby major urban centers providing employment, services, and cultural opportunities to the region are Montpelier, Littleton, NH, West Lebanon, NH, and to a lesser extent, Magog and Sherbrooke, Quebec.

2. Service Centers

Historically, a number of sub-regional service centers in the Northeast Kingdom met the everyday needs of residents, farmers and loggers in the surrounding rural areas. While the function of these service centers has changed somewhat over the years, these communities remain important centers for commerce, services, employment and community life. Barton, Orleans, Hardwick, Island Pond, Canaan-Beecher Falls, North Troy, Jay, East Burke, and Danville belong in this group.

Their status as service centers is due to the fact that they are separated by distance from the two regional urban centers. At the same time, they do not provide enough employment to be completely self-contained. As a result, they also partly serve as bedroom communities for the larger urban centers. Declines in the farming and logging industry have contributed to this situation.

With some exceptions and individual variations, the service centers provide municipal water and sewer and employ municipal staffs. Limited other government functions may also be carried out in these communities. For example, the State Attorney's office and the U.S. Fish and Wildlife Service office are located in Island Pond. Vermont Agency of Transportation has maintenance garages in Canaan and Barton. All service centers are served by at least one state highway.

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. These plants have been instrumental in maintaining the social and economic vitality of the northern reaches of the region. However, a reliance on a few large industries



makes those communities very vulnerable to fluctuations in the national and regional economies. However, these service centers still have land set aside for future industrial development and would be happy to attract industry of any size. Orleans, North Troy and Hardwick all have industrial parks. Recent industrial 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 is presently going through a major expansion period, and along with Burke Mountain Resort has a goal of becoming a four-season resort. Expanded activities include mountain biking in both areas and a new golf course and residential development in Jay.

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. Recent conservation purchases by the State of Vermont and the US Fish and Wildlife Service, consisting of large portions of the former Champion lands, should also help to support the commercial businesses in Island Pond village.

3. 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 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.

4. 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 receive very little commercial or industrial development unless it occurs in an established industrial park, in an area specifically

designated in the local zoning bylaw, or occurs in an appropriate scale for its rural surroundings.

5. Industrial Parks

Some land uses, such as certain manufacturing processes, warehouses, or trucking-related businesses may be more appropriately located outside of any of the above 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. Industrial/business parks are encouraged to be densely developed while allowing enough space for business expansion. Infrastructure connections that serve industrial parks should not contribute to scattered development outside of the industrial parks.

Developments of Substantial Regional Impact

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

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

Adjacent Regions

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

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

The Vermont planning regions abutting the Kingdom have a rural nature about them and they are very similar to the Northeast Kingdom. The regional plans that have been prepared for these regions are very similar to this plan for the Kingdom in wanting to maintain the rural nature of their areas.

IV. FUTURE LAND USE & DEVELOPMENT GOALS

- Traditional development patterns should be maintained and new development should be encouraged to follow these patterns.
- New development should be compatible with existing land uses, and agree with local plans.
- Historic structures, community facilities, and other buildings should be preserved and adapted for re-use.
- Brownfield sites should be reclaimed.
- Significant development proposals should consider the impact on adjacent regions.

STRATEGIES

TOWN CENTERS

- Encourage desired town center development through investment, maintenance, and expansion of appropriate infrastructure (sidewalks, water and sewer, parking, public spaces, etc.).
- Support beautification efforts in town centers and downtowns.
- Encourage adaptive reuse of historic structures through tax incentives, tax credits, grants, and loans, assistance in location of funding, etc.
- Assist communities applying for designation under the Vermont Downtown or Village Center Programs.
- Encourage mixed-use development (residential, commercial and appropriate light-industrial) in town centers.
- Direct public investment for new elderly and affordable housing towards town centers. Aside from promoting traditional settlement patterns, this will put seniors and low-moderate income residents closer to such amenities as transportation, shopping, and community activities.
- Encourage towns to plan for community recreational and social needs.
- Make reasonable accommodations for housing in town centers.

STRATEGIES

RURAL AREAS

- Support local conservation efforts.
- Encourage community open space plans and recreation infrastructure.

V. RECREATION LANDS

Recreation opportunities enhance the quality of life for residents and tourists alike, 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 take place on public and private lands. 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. Residential development and the subdivision of land over time have reduced the amount of private lands available for recreation. This increases the pressure on public lands and those private lands that are still accessible. According to the Vermont Department of Forests, Parks and Recreation, the posting of private land in the state more than doubled between 1988 and 1997 from about 100,000 acres to about 250,000 acres.

Other recreational land uses, such as sports fields, playgrounds, parks, and lake and river-access require more maintenance and usually some form of public investment. Municipalities should consider their residents' current and future needs for public spaces, water body access, and recreation facilities. This can be done in through the municipal plan or in a separate recreation plan or open space plan. Municipalities should work in conjunction with their neighbors in planning and development of recreation spaces so as to compliment each other's investments.

In 2003, NVDA assisted the Vermont Department of Forests, Parks, and Recreation with gathering information for the Statewide Comprehensive Outdoor Recreation Plan (SCORP). The SCORP is a ten year plan that identifies existing outdoor recreation opportunities and issues, and sets goals and objectives for the coming ten years. NVDA conducted a recreation issues survey of the region's towns to help the department in its efforts.

Issues that were identified as important by residents in the 1993 SCORP remain important for the region a decade later. These issues include: degraded water quality and an increase in aquatic nuisances, overdevelopment of shorelines around lakes and ponds, destruction of fish and wildlife habitat, loss of scenic resources and rural character, increasingly limited access to private lands (posting), and a lack of respect for private lands. All of these land use issues affect recreation.

Additionally, survey results indicated that there are an inadequate number of recreation facilities to meet public needs, as well as inadequate funding for public recreation. It still appears there is a lack of public education regarding recreation and a lack of information on recreation opportunities in the region. Lastly, respondents felt there is a need for greater numbers of trails, paths, and greenways in the region.

A number of new regional issues appeared in this recent survey. Hazardous and solid waste disposal, declining forest health, pollution (air, noise, and water), non-compliance with environmental laws, and loss of biodiversity were all identified as pressing issues for the region, and each is important for a high-quality environment.

Relating to the quantity of and access to natural and land resources in the region, issues that were identified as important include: the need to protect natural resources and ecosystems, the loss of wetlands, loss of agricultural land, need to preserve forest lands, loss of historic resources, loss of open space through inappropriate development, landowner liability concerns, and traditional land uses are no longer economically viable. Other new issues for the region are vandalism and littering in recreation areas, threats to existing trail resources, and the need to coordinate the development and maintenance of recreation areas and facilities.

V. RECREATION LAND USE GOALS

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

STRATEGIES

- Assist towns to plan for future recreation needs.
 - Assist with financing to develop additional facilities such as sports fields, playgrounds, trail systems, ice rinks, skateboard parks, and recreation/bike paths.
 - Identify and protect public access to water bodies.
 - Special attention should be given to providing recreation activities for youths and seniors.
 - Support local and regional recreation events (e.g. fairs, festivals, etc.).
 - Improve public information about existing recreational opportunities.
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