

Chapter Six: Economic Development

Note: In 2011 NVDA commissioned Economic & Policy Resources, Inc. to complete a study of the region's economic performance over the most recent business cycle (2001-2009). The report, "NVDA-Strategic Industries in the Northeast Kingdom," focused on employment trends, regional industries of economic significance, as well as a detailed analysis of key strategic industries using a cluster analysis. This section of NVDA's Regional Plan cites heavily from this study and provides updated data whenever available. The complete report is available on NVDA's Web site.

http://www.nvda.net/files/NVDA-StrategicIndustries_Report_June_2011_WOR.pdf

I. OVERVIEW

Employment Characteristics

According to the Vermont Department of Labor, the three counties of the Northeast Kingdom had an estimated labor force of 33,750, which accounts for 9.6% of the state workforce. The region's covered employment, which includes all private and public ownerships but doesn't count all farm employment or self-employment, totals 22,164 and accounts for 7.4% of the statewide covered employment.¹

The Northeast Kingdom's labor market is undergoing fundamental changes. Although employment in the region increased by one-sixth between 1990 and 2010, employment growth was flat during the latter half of the 2000s. Employment in goods-producing sectors of agriculture, forestry, mining, construction, and manufacturing fell. Services, trade, transportation, and finance and insurance employed about three in every four workers in the region by the end of the period.²

Table 6.1: Employment Change in the Northeast Kingdom, 2001-2009

NAIC	Title	Northeast Kingdom				Vermont	US
		Employment					
		2001	2006	2009	% Change	% Change	
--	Total – all ownerships	22,900	23,330	22,136	-3.3%	-1.9%	-0.8%
--	Private ownership	18,771	18,757	17,499	-6.8%	-4.1%	-2.2%
--	Goods Producing	6,485	5,635	4,694	-27.6%	-24.7%	-21.4%
11	Agriculture, forestry, fish & hunt	400	321	424	6.0%	11.3%	-2.4%
111	Crop production	175	65	122	-30.3%	-6.0%	-5.8%
112	Animal production	151	179	202	33.8%	24.0%	11.6%
21	Mining	21	19	15	-28.6%	-30.3%	19.8%
23	Construction	1,316	1,447	1,253	-4.8%	-9.7%	-12.2%
31-33	Manufacturing	4,748	3,847	3,003	-36.8%	-31.4%	-27.9%
--	Durable Goods	3,636	2,986	2,380	-34.5%	-33.5%	-29.5%
321	Wood product mfg	520	418	307	-41.0%	-37.2%	-37.1%
327	Nonmetallic mineral	141	60	57	-59.6%	-23.9%	-28.2%
332	Fabricated metal	581	666	337	-42.0%	-25.9%	-36.2%
333	Machinery mfg	615	569	494	-19.7%	-30.6%	-21.7%
339	Misc. mfg	132	159	176	33.3%	8.6%	-40.4%

¹ Vermont Department of Labor: An Economic-Demographic Profile of Vermont 2014

<http://www.vtlmi.info/profile2014.pdf>

² Economic & Policy Resources, Inc. (EPR): NVDA-Strategic Industries in the Northeast Kingdom, June 2011.

--	Non-Durable Goods	1,112	861	623	-44.0%	-25.6%	-18.7%
311	Food mfg	132	211	177	34.1%	-3.8%	-25.3%
--	Service Providing	12,286	13,122	12,805	4.2%	2.9%	3.5%
42	Wholesale trade	455	586	481	5.7%	-3.8%	-2.9%
44-45	Retail trade	3,049	3,137	3,094	1.5%	-4.4%	-3.7%
48-49	Transportation & warehousing	599	616	554	-7.5%	-4.4%	-6.5%
22	Utilities	98	65	59	-39.8%	6.2%	-21.8%
51	Information	390	402	324	-16.9%	-17.8%	-1.2%
52-53	Financial Activities	669	768	703	5.1%	-6.1%	-0.4%
52	Finance and Insurance	571	600	547	-4.2%	-7.9%	-3.2%
53	Real Estate & rental/leasing	97	167	156	60.8%	-0.4%	1.0%
54-56	Professional & business services	680	904	1,036	52.4%	5.5%	23.4%
61-62	Education & Health Services	3,669	3,955	4,110	12.0%	26.1%	28.4%
62	Health care & social assist.	3,093	3,280	3,350	8.3%	30.9%	22.6%
71-72	Leisure and Hospitality	1,944	2,024	1,869	-3.9%	-3.8%	9.4%
71	Arts, entertain & recreation	130	300	309	137.7%	10.6%	7.7%
72	Accommodation & food	1,814	1,714	1,559	-14.1%	-5.5%	9.7%
81	Other services (ex. Public admin)	733	655	576	-21.4%	-16.3%	3.9%
--	Government, total	4,129	4,573	4,636	12.3%	9.5%	6.5%
	Federal government	368	447	493	34.0%	13.4%	2.7%
	State government	939	1,118	1,084	15.4%	6.5%	4.2%
	Local government	2,822	3,008	3,059	8.4%	10.3%	8.1%

Source: Vermont Department of Labor Prepared by Economic & Policy Resources, Inc.

While Vermont has seen a significant shift from a “goods-producing” to a “service-producing” economy, this trend is still not as pronounced in the Northeast Kingdom. (The goods-producing industries include natural resource sectors of agriculture, forestry, and mining, as well as construction and manufacturing. Services-producing sectors include transportation and warehousing, utilities and information; finance and insurance; real estate and rental; educational services; health care and social assistance; professional and technical services; management of companies, administrative and waste services; arts, entertainment, and recreation; accommodation and food services; wholesale and retail trade; and government.) Statewide, the ratio of services-producing jobs for each goods-producing job increased from 2.0 in 2001 to 4.0 in 2009. By contrast, the Northeast Kingdom ratio increased from 1.9 to 2.7 during the same period, so more people are still working in goods-producing jobs in this region.³

The state economy gained 6,444 jobs (2.2%) between 2010 and 2012. However, this gain was not evenly distributed among the counties. Caledonia County experienced a net job loss of 0.9%, and Essex County experienced a 13.5% loss – by far the steepest loss in the state. By contrast, Orleans County saw the greatest gain in the state (6.2%).⁴ The largest gains in covered employment in Orleans County came from accommodation and food services (26.9%) and it is possible that this growth could be attributed to the EB-5 investments in the region.

³ EPR

⁴ Vermont Dept. of Labor

Self-Employment

Self-employment in the Northeast Kingdom represents a significant share of total employment, compared to the rest of Vermont. In 2008, self-employed workers represented about 17.1 percent of the regional workforce, compared to 14.1 percent of the state workforce.⁵

The U.S. Census Bureau reports on *nonemployers* using tax return information from the Internal Revenue Service. These are largely self-employed individuals operating unincorporated businesses (known as sole proprietorships), which may or may not be the owner's principal source of income. The data consist of the number of businesses and total receipts by industry. More than half of these non-employers are engaged in construction; retail trade; professional and technical services; forestry, fishing, and agricultural support services; healthcare and social assistance, and other services.

NAICS	Description	2008		2013		% change Non-employers
		Non-employers	Receipts* (\$000)	Non-employers	Receipts (\$000)	
11	Agriculture, forestry, fish & hunt	628	\$34,266	540	\$25,282	-14.0%
21	Mining	12	\$456	n/a	n/a	n/a
22	Utilities	9	\$258	n/a	n/a	n/a
23	Construction	1,262	\$59,592	1,037	\$48,719	-17.8%
31-33	Manufacturing	208	\$4,898	259	\$6,753	24.5%
42	Wholesale Trade	92	\$5,973	97	\$10,226	5.4%
44-45	Retail Trade	546	\$23,089	536	\$20,810	-1.8%
48-49	Transportation & Warehousing	231	\$23,126	193	\$17,644	-16.5%
51	Information	59	\$821	49	\$1,714	-16.9%
52	Finance & Insurance	72	\$2,176	80	\$3,706	11.1%
53	Real estate & rental/leasing	359	\$16,849	383	\$22,437	6.7%
54	Professional, scientific & technical svc	563	\$17,466	547	\$15,810	-2.8%
56	Admin & Support and waste mgt.	469	\$9,200	484	\$9,096	3.2%
61	Educational services	130	\$1,343	135	\$1,867	3.8%
62	Healthcare and social assistance	607	\$12,448	523	\$12,683	-13.8%
71	Arts, entertainment & recreation	270	\$3,590	270	\$4,695	--
72	Accommodation & food services	115	\$3,230	118	\$5,005	2.6%
81	Other services (ex. Public admin)	759	\$23,980	767	\$13,472	1.1%
	TOTAL	6,391	\$242,761	6,045	\$231,263	-5.4%

Source: US Census Bureau
n/a is due to data suppression

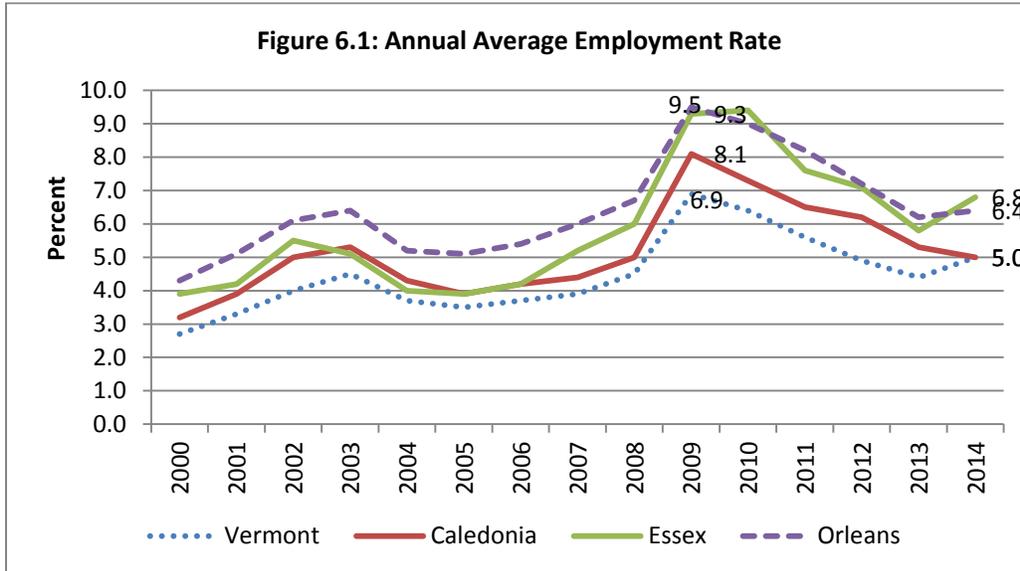
2008 data prepared by Economic & Policy Resources, Inc.
*2008 receipts are not adjusted for inflation

The Northeast Kingdom and Vermont saw a decrease in non-employers over the past five years (-5.4% and -1.7% respectively.) In the region, the biggest losses came from construction, transportation and warehousing, and information sectors. These losses were partially offset by significant gains in manufacturing. Much of this growth came from nondurable goods manufacturing, and specifically, food manufacturing. As of 2013 the region had 85 nonemployers in food manufacturing, representing \$1.65 million in receipts. Essex County data for 2008 is suppressed, but the number of nonemployer food manufacturers in Caledonia County and Orleans County more than doubled over that period.

⁵ EPR

Unemployment

Regional unemployment has dropped from the peak of the “Great Recession” in 2009, when the unemployment rates in Orleans and Essex Counties peaked at 9.5 and 9.3 respectively. Unemployment rates in the Northeast Kingdom have traditionally outpaced the Vermont rate, with Orleans and Essex counties leading the state. Caledonia County has fared somewhat better, and its current unemployment rate is equal to the state unemployment rate. The county averages conceal the fact that a few communities in the region have much higher concentrations of unemployment, such as Barton (9.6%) and Newport City (11.5%).



Source: Vermont Department of Labor

Leading Northeast Kingdom Employers

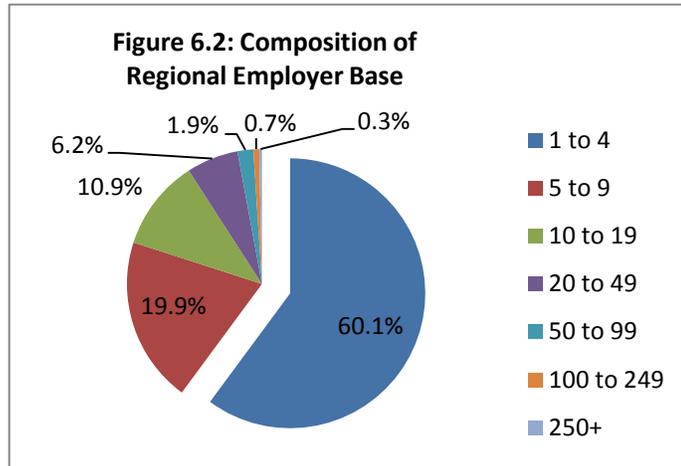
The U.S. Census Bureau County Business Patterns provides annual statistics for businesses with paid employees. The series excludes data on self-employed individuals (such the nonemployers in Table 6.2), employees of private households, railroad employees, agricultural production employees, and most government employees. In 2013, there were 768 establishments in Vermont with 50 or more paid employees – 299 (or 39%) were in Chittenden County. Only 54 of these were located in the Northeast Kingdom (26 in Caledonia County, 27 in Orleans County, and one in Essex County).

Table 6.3: Northeast Kingdom Employers by Size

County	Total	Number of establishments by employment size class						
		1-4	5 - 9	10 -19	20 - 49	50 - 99	100 - 249	250+
Vermont	21,119	12,051	4,141	2,605	1,554	457	225	86
Caledonia	944	555	194	102	67	14	9	3
Essex	116	85	21	7	2	1	-	-
Orleans	793	474	153	93	46	20	4	3

Source: US Census Bureau, County Business Patterns 2013

Of the 1,853 establishments in the Northeast Kingdom, the smallest firms with four employees or fewer account for more than 60% of all establishments. (Figure 6.2)



II. REGIONAL ECONOMIC SECTORS

Manufacturing

The companies listed below provide a representation of the region’s traditional manufacturing and natural resource base. These are also some of the region’s largest employers.

- Ethan Allen, Essex and Orleans Counties
- EHV Weidman Industries, Caledonia County
- Columbia Forest Products, Orleans County
- NSA Industries, Caledonia County
- North East Precision, Caledonia County
- Fairbanks Scales, Caledonia County
- Tivoly USA, Orleans County
- Lyndon Woodworking, Caledonia County
- Vermont Aerospace, Caledonia County

Precision metal fabrication is deeply rooted in the region’s history. Fairbanks Scales, for example, has manufactured platform scales in St. Johnsbury since the mid-1800’s. There are numerous other precision metal industries in the Northeast Kingdom, among them NSA Industries in Lyndonville, Vermont Aerospace in St. Johnsbury, and Trivoly USA and North Country Engineering in Derby. EHV Weidmann, in St. Johnsbury, manufactures industrial insulators.

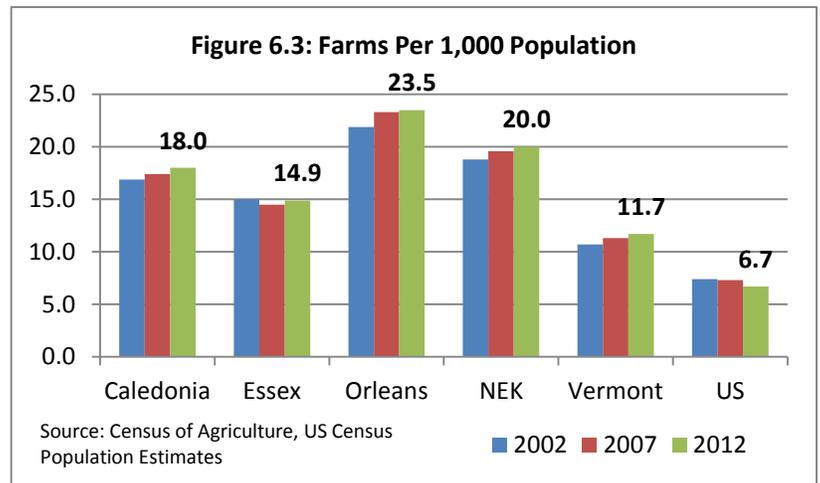
Recent manufacturing industry growth for the region includes:

- In North Troy, Appalachian Flooring continues to see business growth.
- Revision Military, a helmet and eyewear company with headquarters in Quebec and a facility in Burlington, continues to grow. With government contracts for military and police helmets, the company has plans to expand its workforce by another 50-60 persons.
- Kimtek Corporation, formerly located in Westmore, has moved into the Orleans Industrial Park where there is room for the company to grow. Vermont Custom Gage, a subsidiary of VT Precision Tool, has set up operations in a former NSA building in the St. Johnsbury – Lyndon Industrial Park.

Agriculture

According to the Vermont Department of Labor, the land-based economy – agriculture, forestry, fishing and hunting – accounted for only 1.7% of covered employment in the Northeast Kingdom in 2012. Nevertheless, the land-based economy is a critical part of the Northeast Kingdom’s traditional landscape that preserves open spaces and enhances the region’s scenic beauty.

Approximately 18% of Vermont’s farmland is located within the Northeast Kingdom. According to the 2012 Census of Agriculture, there are 1,291 farms in the Northeast Kingdom, which represents an 8.9% increase from 2002. The region has more farms per population than statewide. (Figure 6.3)



Agricultural Trends

The total market value of all Northeast Kingdom agricultural products (crops and livestock) grew to \$148,204,000 in 2012, an increase of 6.2% since 2007. While the value of livestock sales in the Northeast Kingdom dropped by 4.6% from 2007 to 2012, it still accounted for the majority (83%) of the value of all agricultural sales in the region. Livestock sales include all animals and their products (meat, eggs, milk, etc.). Dairy remains a top commodity in the Northeast Kingdom. The top two livestock products by value of sales in the region according to the 2012 census were “milk from cows,” and “cattle and calves,” which together accounted for about 98% of all livestock product sales. The third top livestock product in terms of sales varied among the three counties: the third-place holder in Caledonia County was “horses, ponies, mules, burros and donkeys” (bringing in \$968,000 in sales); “sheep, goats, mohair and milk” in Orleans County (accounting for \$816,000 in sales); and “poultry and eggs” in Essex County (bringing in \$29,000 in sales).

Table 6.4 Market Value of Agricultural Products Sold 2012, 2007*

	Vermont		Caledonia		Essex		Orleans		Northeast Kingdom	
	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007
Crops (\$1,000)	177,726	109,915	6,748	4,134	3,945	1,123	14,305	5,116	24,998	10,373
Livestock (\$1,000)	598,379	636,101	30,498	30,793	7,706	12,328	85,003	86,070	123,207	129,191
All Agricultural Sales (\$1,000)	776,105	746,016	37,245	34,927	11,651	13,451	99,308	91,186	148,204	139,564

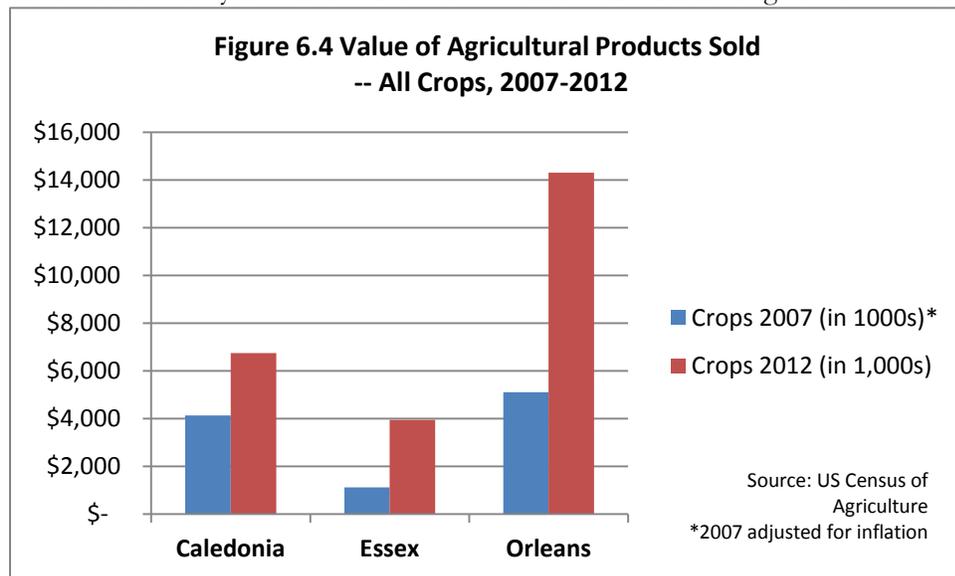
Source: 2012 Census of Agriculture, USDA

*Adjusted to 2012 dollars using Bureau of Labor CPI Inflation Calculator

Orleans leads in agricultural sales in the Northeast Kingdom, as shown on Table 6.4. Although there was no increase in the number of cattle and calves from 2007 to 2012, these animals still far outnumber other livestock in the Northeast Kingdom. However, sharp increases between 2007 and 2012 in the goat and sheep inventories in Orleans County, with a more modest rise in Caledonia County, indicates that livestock is beginning to diversify, and other animal products may account for a larger share of total livestock sales in future years.

The value of crop sales in the Northeast Kingdom saw a dramatic increase of 140% from 2007 to 2012. While crop sales only accounted for 7.4% of Northeast Kingdom total agricultural sales in 2007, it represented 17% in 2012. Crops include nursery and greenhouse crops. This may signal a trend in more local production of food.

Dairy farming is still the main agricultural driver in Orleans County. The county has more than 21,000 dairy cows – second only to Addison and Franklin Counties – accounting for 15.7% of all dairy cows statewide and



\$77.5 million in milk sales. The impact of dairy activity, however, goes well beyond milk sales. A conservative estimate on its direct and induced impacts statewide is about \$2.2 billion per year.⁶

Silviculture

The forest industry is an intricate part of the region's economic and social identity. Columbia Forest Products and Ethan

Allen are key manufacturers using the region's abundant forest resources.

Forest products industries are still very prominent in the regional manufacturing economy. Essex County's large percentage of goods-producing industries is largely due to the presence of the Ethan Allen Furniture processing plant in Beecher Falls. Ethan Allen has its primary production facility in the village of Orleans. The company has remained stable over recent years as it transitioned to special order manufacturing.

Lyndon Woodworking, Appalachian Flooring, and Newport Furniture Parts are other wood manufacturers located in the Northeast Kingdom. In addition, Columbia Forest Products manufactures plywood in the City of Newport. There has traditionally been little farming in Essex County due to poor agricultural soils and rugged terrain, but a large amount of the county's land area is covered by spruce-fir forest that is harvested commercially. While a significant amount of forested lands have been converted into conservation uses, some large parcels have been developed for increased maple production. The Sweet Tree 1 project includes a maple processing facility in Island Pond (in the former Ethan Allen plant), a large commercial sugar house in Avery's Gore, and thousands of acres of sugarbush in northern Essex County. The company presently employs 50 persons. Similarly, the Island Pond Maple Factory, a bulk maple processing company located in the former Island Pond Woodworkers facility has adaptively re-used an existing building and employs local residents. Logging, however, continues to be a locally important economic activity.

Statewide, approximately 6,636 workers are employed in forest-based jobs. These include jobs in logging and trucking, wood products and furniture manufacturing, paper manufacturing, wood energy, maple syrup and Christmas trees. When including jobs in forest-based recreation, and using a multiplier that takes into account the "rippling" effect the industry has on other sectors, the total estimated number of jobs is 20,605, with a

⁶ Vermont Dairy Promotion Council, Vermont Agency of Commerce and Community Development, Vermont Agency of Agriculture, Food and Markets: Milk Matters: The Role of Dairy in Vermont, December 2014

total economic output estimated at \$3.4 billion (Northeast State Foresters Association, The Economic Importance of Vermont's Forest-based Economy, 2013, Table 1).

In 2012, Act 142 created the Working Lands Enterprise Fund and the Working Lands Enterprise Board (WLEB). The WLEB is made up State agencies and private sector members in the supply chains of agriculture and forestry. The forestry subcommittee of the WLEB is currently developing an "asset map" that will include information on the location and scale of facilities and businesses within the primary and secondary forestry industry, and has chosen consultant Yellow Wood Associates to assist in a Forest Industry Systems analysis. This work will culminate in a State-wide summit in 2015 to review strategies to strengthen the forestry and wood products industry.

Other industry support groups and programs include the Vermont Wood Manufacturer's Association, Vermont Technical College, the Vermont Community College System, the University of Vermont's Forestry Department, and the Small Business Development Center Program.

Health Care & Education

The healthcare and education service industries have become significant employers for the region. The Northeastern Vermont Regional Hospital in St. Johnsbury and the North Country Hospital in Newport are among the largest employers the Northeast Kingdom. In 2009, healthcare and education services accounted for 4,110 of the region's jobs. In many of the region's towns, it is likely that the local school is one of the largest employers in the town (Note: some education professionals are employed within the government sector).

Retail

Retail trade remains a challenge for many Northeast Kingdom communities. Taking into account the region's low population densities, it has proven difficult to attract large retailers, although some have opened in neighboring New Hampshire where there is a smaller tax burden and a less stringent permitting process. There has been some retail growth through the 'dollar store' chains in a number of communities – Island Pond, North Troy, Hardwick, and Orleans. Other retail businesses that have located or remained in the region have often found the best strategy is to identify and concentrate on "niche" markets for specialty goods and services. These are areas where large retailers typically cannot compete efficiently or effectively. With a new Wal-Mart Supercenter coming to Derby, this strategy may make sense. Local merchants have been able to fill some retail needs in most communities, but some local officials continue to seek large retailers for area residents.

The Town of St. Johnsbury continues working to revitalize its Railroad Street retail district. Several long-time retailers remain in downtown St. Johnsbury, and may attract other businesses. Rather than compete with Littleton for the same retail customer base, St. Johnsbury looks to develop its own niche in the retail sector, with a collection of unique destination shops and restaurants. St. Johnsbury's many cultural and historic assets provide a good basis for current economic recovery efforts.

Newport City is revitalizing its downtown retail sector through a comprehensive community development strategy. The development of the downtown, lakefront, rehabilitation of community facilities, streetscape beautification, and the relocation of state and federal government offices to the downtown, have aided the transformation of Newport's downtown central business district into an economically viable commercial area and place of employment. The planned Renaissance Block project on Newport's Main Street will significantly alter the look, feel, and the retail offerings in the city.

Recent commercial growth in the region has been greatest in the following three areas:

1. U.S. Route 5 corridor between Derby and Newport City.
2. U.S. Route 5 in Lyndonville between the Interstate 91 and the village center.

3. U.S. Route 5 in St. Johnsbury, near the Interstate 91 exit (Exit 22) north of the city.

Leisure & Hospitality

The leisure and hospitality services (e.g. hotel, restaurant, and tourism related businesses) industries account for about 1,869 jobs (NAICS data, 2009). Tourism has been an important factor in keeping the retail trade and leisure and hospitality industries strong in the Northeast Kingdom. A number of high-quality, commercial recreation facilities and tourist attractions have been the reason for much of the increased tourism. In FY2013, the region's taxable rooms and meals receipts totaled \$99,752,799. Retail and use taxes receipts were \$307,156,451 over the same period.

Among the leading leisure and hospitality industries in the area, the Jay Peak Resort continues its expansion with the addition of new facilities, equipment and new ski runs. From the continuing development of seasonal homes, hotels, condominiums, recreational facilities, an 18-hole golf course, Jay Peak Resort plans to expand to a four season vacation resort. To provide some perspective on Jay's contribution to the regional economy, rooms tax receipts in Jay (town wide) account for more than 83% of all room tax receipts in the Essex/Orleans area. Q Burke Mountain Resort has expansion plans underway, as well, including a 100+ unit hotel, and recreation facilities.

Tourism

The regional tourism industry also incorporates activities such as: biking, snowmobiling, hunting, cross-country skiing, and hiking to attract numerous visitors to the Northeast Kingdom. Along with the Jay Peak Resort and Q Burke Mountain Resort, the four-season destinations mentioned above, there are numerous cross-country ski and cycling centers in the region. Kingdom Trails, the Craftsbury Outdoor Center, the Northwoods Stewardship Center, Lyndon Outing Club, and Jay Peak include a thorough network of cross-country ski and cycling trails. The Vermont Association of Snow Travelers (VAST) has an extensive system of trails throughout the region for snowmobiles. As the Lamoille Valley Rail Trail continues to develop, this will bring additional visitors to the NEK region.

Fishing and boating are popular activities on the region's many lakes and streams. Recognized water trails located within the Northeast Kingdom include the Passumpsic Valley Riverway, a 20-mile water trail from East Burke to Barnet; the Northern Forest Canoe Trail, a 723-mile historic trail, follows a route used by native Americans to move from Lake Champlain to the Connecticut River Watershed; and the recently designated Connecticut River Water Trail are all popular canoeing waters. In the northwest part of the region, the Missisquoi River was recently designated as Wild & Scenic River by the federal government.

Fall foliage and scenic landscapes continue to be popular attractions. The Northeast Kingdom has developed a reputation as one of the best places to bicycle in the country. Many cyclists come during the foliage season or during the summer months, and most tour along the state highways. NVDA, with Agency of Transportation financing assistance, has identified a network of on and off road bicycle touring routes throughout the Northeast Kingdom, consisting of a 'loop and link' system, with courses ranging from 10 miles to 80 miles. Kingdom Trails, in East Burke, has an extensive all season trail network, which is nationally popular with mountain bike enthusiasts (60,000+ visitors annually) and cross-country skiers. Other bicycle path projects are still in the planning stages including paths in St. Johnsbury and Newport.

"Agri-tourism", which includes farm stays and tours, and direct marketing of local agricultural products is a growing trend within the region, as is "eco-tourism". Green Mountain Farm to School, in conjunction with USDA Rural Development and the Northeast Kingdom Travel and Tourism Association, recently released "Flavors of the Kingdom," a tour map of farms and food producers in the region.

Government

Government, or public-sector, employment includes local, state, and federal employment opportunities. Educational institutions are typically large employers within the state and local government sectors. In 2009,

approximately 4,636 persons were employed by local, state, or federal governments, representing a little more than one-fifth of all covered employment in the region.

III. INDUSTRY CLUSTERS

The 2011 Economic & Policy Resources study identified and analyzed key industry clusters for the Northeast Kingdom using an iterative analysis of sector data, including employment concentration, wage performance and stability, growth and change, and supply chain interrelationships. Clusters were ranked as *mature, challenge, opportunity, or star*.

Mature: Traditional mainstay companies having a large number of employees, a high level of concentration (as measured by employment specialization ratio), but in recent years their collective performance is one of stagnation or decline

Challenge: Lacking key industries or be dominated by a small number of firms. Collectively, this cluster has two characteristics that evoke the moniker of “challenging;” namely, a lower level of concentration and an eroding base of employment.

Opportunity: Potential or emerging, with strong growth in both firms and employment in a number of segments, but overall lack the critical mass or collective concentration. For instance, if a cluster is composed of about 10 interrelated industries, an opportunity or emerging cluster would show firms and employment in only about half to two-thirds of these industries.

Star: These clusters are identified as stars given both their high level of concentration and their solid recent performance. Given the recent “great recession” in the United States, there are few star clusters that have retained their economic luster in any particular geographic region.

Regional industry clusters were selected based on the analysis of various screening criteria of growth and expansion, competitiveness, linkage strength, and overall position (and subsequent label).

Agribusiness, food processing & technology: One of the “stars” of the Northeast Kingdom, this cluster is made up of twelve production, processing and distribution segments. With a 2009 critical mass of 75 establishments, employing 654 workers with average wages of \$33,270; this cluster has exhibited strong growth over the business cycle period of 2001-2009. Its measure of economic specialization (called location quotient) has increased over time; meaning its export orientation continues to strengthen. Overall, the Northeast Kingdom’s agribusiness cluster has outperformed its national counterpart over the study period. Finally, this regional cluster has not gone unnoticed—growth and developments in the Northeast Kingdom agribusiness cluster has been cited in national studies and the popular press.

Biomedical/biotechnical (life sciences): One of the “opportunity” clusters in the Northeast Kingdom, this cluster is made up of biomedical-oriented manufacturing sectors, equipment and supplies wholesalers, health and personal care stores, and ambulatory health care services. Overall, this cluster experienced modest employment growth with some erosion of export orientation. Although it includes the relatively recent (and potential) “stars” of biotech/biomedical manufacturers, there remain some questions about composition and related performance. In particular, there appear to be strong interconnections between the existing biomedical/biotechnical segments with area hospitals. Hospitals and other ambulatory health care services are directly tied to the significant and growing medical payment transfer receipts within the region.

Education and knowledge creation: Composed of education services (private), publishers and other information services, the education and knowledge creation cluster is in its incipient stage, with limited interconnections with other sectors in the region. This cluster showcases a number of nationally (and internationally renowned) educational institutions such as the St. Johnsbury Academy, Burke Mountain Academy, and Sterling College.

Fabricated metals and machinery manufacturing: A “mature” cluster, fabricated metals and machinery manufacturing is diversified. The combined industry is in the midst of a recovery after the debilitating Great Recession. Several fabricated metals segments were hollowed out by the recession. Given the significant

orientation toward national and international markets, many firms within this cluster are once again showing signs of life and beginning to hire-back laid off workers and expand production. Workforce training issues are paramount within this cluster.

Forest and wood products: Overall, a cluster composed of several “mature” sectors including wood products manufacturing, paper manufacturing, and furniture products manufacturing. Though showing significant signs of decline (employment base of 2,500 workers in 2001 to 1,450 workers in 2009), the churning has spawned a number of developments in niche markets. As in the agribusiness and food processing cluster, forest and wood products is part of the traditional economic base of the Northeast Kingdom and as such have many opportunities for convergence and intersection with other economic activities, including visitor and tourism.

Visitor and tourism: Another “star” cluster for the Northeast Kingdom with solid growth during the study period of 2001-2009. Significant investments will help make the region a year-round destination. Though these developments will continue to add jobs to its solid base of nearly 1,000 workers; wages remain relatively low within this industry, due largely to continued seasonality and part-time opportunities.

IV. EB-5 DEVELOPMENT AND POTENTIAL IMPACTS

In the fall of 2012 an infusion of funds from the federal EB-5 Visa programs created the potential for significant economic growth in the Northeast Kingdom. Current project include:

- AnC BIO Vermont: An 84,000 square foot biotech manufacturing facility located on a 40 acre research campus in Newport City is currently under construction. At full capacity, the employer is expected to about 500 people, of which 150 will earn salaries of \$75,000 and up.
- Expansion to the Newport State Airport in Coventry. Associated with the airport expansion are plans to construct warehousing facilities, as well as a 50,000 square-foot airplane assembly plant at the airport, which is expected to bring a number of skilled jobs to the region.
- Resort development in Jay and in Burke. A 116-unit hotel and conference center is planned for Burke Mountain, which will draw increased numbers of tourists. Similarly in Jay, new ski amenities, as well as a 100 new housing units and an 84-unit hotel, will draw more visitors to the region.
- Renaissance Block: An entire city block in Newport City was recently demolished. In its place will be a four-story mixed-use development with anchor businesses on the first two floors and short- and long-term residential suites on the upper two.

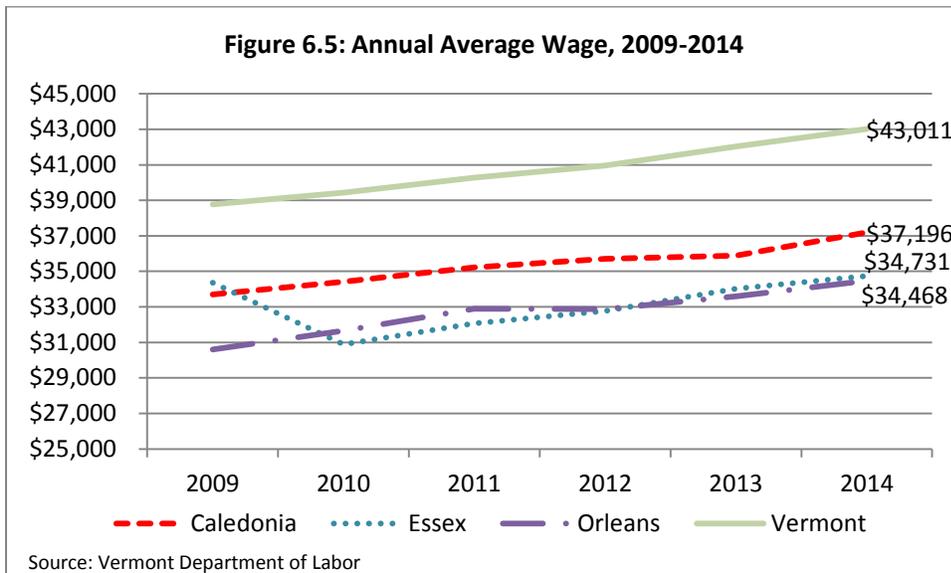
While these developments will invariably bring more people to the region, it is difficult to accurately predict the total expected in-migration and resulting demand on housing. Early estimates for total direct, indirect, and induced job creation indicated about 2,000 direct jobs, 3,000 total jobs (which includes indirect and induced jobs), and a net migration to the region as high as 4,500. A workforce development study released in July 2013 attributed about 1,100 new hospitality and tourism jobs related to ongoing resort development and the Renaissance block. The majority of these jobs would be hourly, pay less than \$20.00 an hour, and require minimal post-secondary education.

V. FOREIGN TRADE ZONE

In 2013, NVDA received a grant of designation from the U.S. Department of Commerce to operate a Foreign Trade Zone (FTZ) for the three-county region. Lamoille County was added to NVDA’s FTZ #286 in 2015. The FTZ program primarily provides benefits to companies that import foreign materials, components, or goods for their processing or distribution. A number of existing manufacturers in the four-county region have been provided information on the FTZ program and it is likely that a few will sign up for participation in the near future.

VI. WAGES

Wages in the Northeast Kingdom have only seen modest overall gains from 2009-2014, during the Great Recession. The region's wage earners substantially lagged behind the statewide averages for the same period (Figure 6.5). In 2014, Orleans County had the second lowest annual average wage in the state. (The lowest was Grand Isle at \$31,111.) Average annual wage is based on the geography of the job and not the residents in the area. It is also important to note that a high concentration of seasonal or part-time jobs significantly lowers the average wage.



VII. REAP ZONE AND COLLABORATIVE

Since 2000, the Northeast Kingdom region has been designated as a Rural Economic Area Partnership (REAP) Zone by USDA Rural Development. One of only four such areas in the U.S., the zone was established in part to help address longstanding issues of poverty, low incomes, and lack of opportunity. Special set-aside funds are made available for REAP areas by USDA Rural Development. Since its inception, the REAP Zone has attracted hundreds of millions of dollars in investments for housing, community facilities, public infrastructure, and business development.

The Northeast Kingdom Collaborative is the organization that maintains the Strategic Plan for the REAP Zone. The Collaborative is a body comprised of representatives from the many regional organizations that serve the three-county area. Projects that seek REAP set-aside funds should address specific priorities within the Strategic Plan. The Strategic Plan was last completed in the fall of 2011. The Collaborative is currently in the process of holding public forums around the region to gather input for an update of the Strategic Plan.

VIII. COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDs)

Another economic region of importance to the Northeast Kingdom and northern Vermont is the region's local Economic Development District (EDD) – a district approved by the federal Economic Development Administration (EDA). Currently being reorganized and governed by the regional planning and development organizations serving the same geographic area, the Economic Development District of Northern Vermont covers the six counties of Caledonia, Essex, Orleans, Lamoille, Franklin, and Grand Isle.

The governing board has just started the process of updating the Comprehensive Economic Development Strategy (CEDS) for region. With an updated strategy document, communities and organizations within the district will be able to apply for EDA funds for infrastructure upgrades, community facilities, and business development.

The Economic Development District for Northern Vermont service area is geographically aligned with Vermont’s portion of the Northern Border Regional Commission – another entity that annually makes funds available for the same types of projects funded by the EDA.

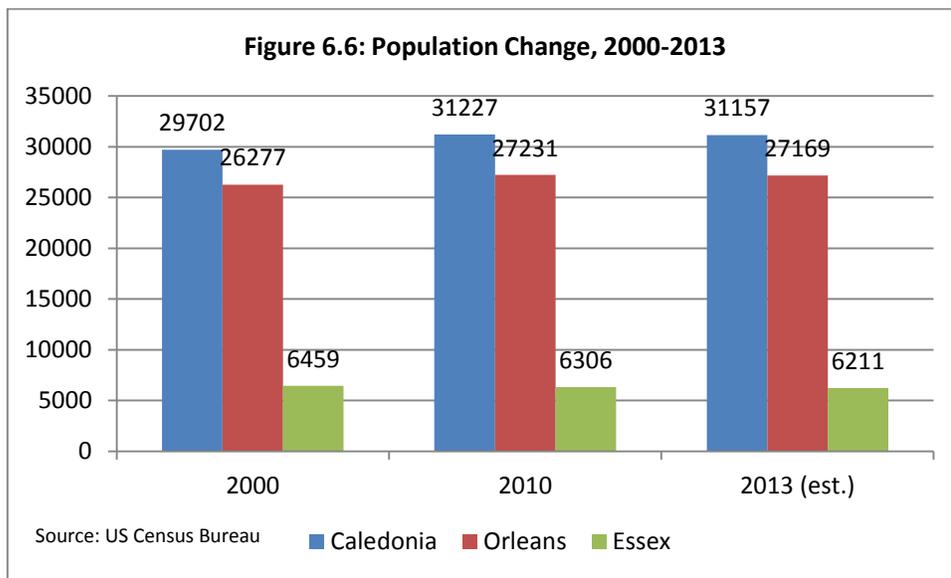
IX. OTHER ECONOMIC INDICATORS

Housing

The federal government typically uses new housing starts as an indicator of economic activity. These numbers are not presented in this report. Communities can track local building permits to estimate activity in their areas. Additional housing information can be found in Chapter 5 of this document.

Population

The Northeast Kingdom is the most sparsely populated region in Vermont. The most recent decade – one marked by economic turbulence – has reversed the growth trends of previous years. The region accounts for 21% of the land area in Vermont, with each county having roughly the same total land area. However the region contains only about 10% of the state's population. As Table 6.6 shows, the region has lost population since 2000, and most recent population estimates show further losses. A perceived lack of attractive employment opportunities likely contributes to the out-migration of younger workers from the area.

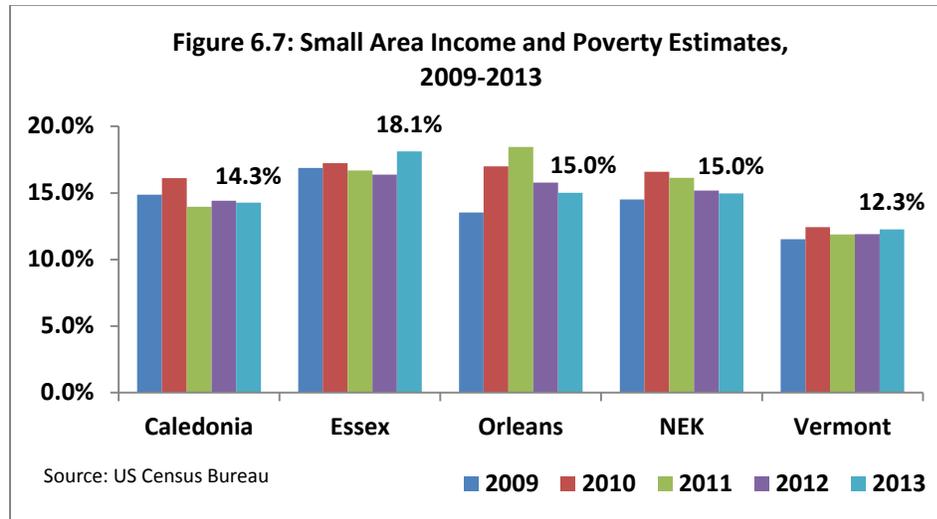


Rural Poverty

The lack of adequate personal income is a critical issue in the Region and was identified by 92% of the population in a 2001 survey of Northeast Kingdom residents conducted by the Northeast Kingdom Collaborative as part of the process for the Rural Economic Area Partnership (REAP). The Peace and Justice Center conducted a groundbreaking study on the livable wage issue in Vermont and Justice. The study’s findings include:

- The federal poverty measure severely underestimates the cost of meeting a family’s basic needs.
- Depending on family size, a livable wage is between 52% and 197% greater than the minimum wage.
- A significant percentage of working families do not earn enough to meet their basic needs.
- The inflation-adjusted median wage had not grown in ten years; while aggregate income has increased, the top 40 % of families experienced all of the growth.

Collectively, the counties of the Northeast Kingdom continue to outpace poverty levels in the state (Figure 6.7).



External Trends and Forces

People may be concerned about future growth in the Northeast Kingdom, fearing that it will lead to unattractive commercial development and loss of the traditional Vermont landscape. Business interests view this concern as a potential threat to economic development. Everyone agrees that efforts to revitalize downtowns can have economic and cultural benefits, but many people oppose limiting growth to existing growth centers and downtowns. Also, attempts to create a “livable wage” continue to raise concerns over retaining and attracting new businesses, but it is extremely difficult for someone earning minimum wage to improve their standard of living.

Adequate, affordable childcare remains a challenge for many in the workforce and for those moving from welfare to work. The need for affordable childcare was identified by 85 % of the respondents in the Northeast Kingdom survey conducted by the Rural Economic Area Partnership. A lack of public transportation is another limiting factor for many low-income workers in rural communities where local employment opportunities are limited or nonexistent.

Property tax reform continues to be an issue for too many residents and businesses in the region. Education in Vermont is primarily funded by property taxes which have steadily risen despite declining numbers of students in local schools.

Neighboring regions to the south and in New Hampshire seemingly put the Northeast Kingdom at competitive disadvantage in recruiting and retaining businesses. New Hampshire has no state sales or income tax and offers very low worker’s compensation rates. Other Vermont regions are nearer large population centers and have access to a wider variety of goods and services. In addition, the nearest commercial airports (Burlington VT, Montreal QC, and Manchester NH) are two or more hours away from most Northeast

Kingdom locations. However, expansions to the Northeast Kingdom International Airport will certainly boost economic activity in the region.

Due to the rural character of the Northeast Kingdom, telecommunications companies have been slow developing high-speed telecommunications systems throughout much of the region, thereby frustrating the growth of e-commerce and those wishing to "telecommute" from home. Slow systems development can be attributed in part to a widely scattered population (customer) base and less to environmental sensitivities regarding the location of new of telecommunication facilities.

BUSINESS ASSISTANCE & FINANCING

There are many opportunities for business and financial assistance in the region. Several organizations provide a variety of services to help expand businesses and employment within the region. These organizations include:

- Northeastern Vermont Development Association (NVDA), with offices in St. Johnsbury and Newport, is a primary contact for Northeast Kingdom businesses. NVDA contacts and prospects for in-state and out-of-state clients that will fit the region, including participating in recruitment efforts in the province of Quebec. NVDA provides technical assistance for reviewing business plans, and connects with the appropriate state agencies for marketing assistance, workforce training funds, and growth incentive funds. NVDA submits grant proposals for community and economic development projects to a number of funding agencies. NVDA has a Rural Development Intermediary Re-lending Program, which provides loans up to \$100,000, and also maintains a Non-profit Community Development loan fund, which is being recapitalized with loan repayments from Vermont Community Development Program grants. These loan funds are used to provide financial assistance for business start-ups, expansions, or relocations to the region.
- Northern Community Investment Corporation (NCIC) offers Small Business Administration (SBA) loans, lines of credit, direct loans up to \$100,000; loan guarantees; an equipment-leasing program; equity investments; arranges bank loans, and SBA 504 Fixed Asset Financing.
- Small Business Development Center (SBDC), a program of the U.S. Small Business Administration, maintains offices in St. Johnsbury and Newport, providing assistance to for-profit businesses to develop business plans for internal use or for loan proposals. The SBDC also offers management, marketing, financial, and production support to fledgling businesses.
- Northeast Kingdom Community Action (NEKCA) Micro-Business Development Program provides information on how to start a business, creating marketing and financial plans, as well as general trouble shooting for micro-businesses.
- Vermont Economic Development Authority (VEDA) serves the entire state and offers a variety of business incentive programs.

Local Revolving Loan Funds

The towns of St. Johnsbury, Lyndon, Barton, Hardwick, Brighton, Newport, Albany, Jay, and Canaan all have revolving loan funds capitalized in a variety of ways. Some of these are used solely for business development; others are broader in scope and are used for various community development projects.

Workforce Education and Training

Workforce development continues to be one of the keys to economic development in the region. The need for more vocational/technical education programs and a need for more adult literacy programs were identified by 85 % of the respondents in a Northeast Kingdom survey. A need for training at both the entry level and management level is a need commonly expressed by businesses.

Importantly, the Regional Technical Centers in Newport, Lyndonville, and St. Johnsbury, the Northeast Kingdom Collaborative, and area businesses agree that a lack of employees with specific skills is the greatest barrier to attracting new businesses and expanding existing businesses. Fifty-six percent of Northeast Kingdom businesses, responding to a survey, said that an available, trained workforce was the biggest challenge facing their business.

X. CONCLUSION

Workforce training for new and existing workers will be one of the region's priorities in order to meet the needs of area businesses and increase workers' salaries. New and innovative infrastructure improvements must occur for information technology to grow and thrive. Quality employment opportunities will be identified and promoted to allow residents, especially young adults, to find jobs closer to home. Business and industry clusters can be developed to increase productivity, broaden the access to markets, and reduce the waste of time and resources. The growth in the small business sectors, e.g. telecommuting, specialty foods, value-added businesses, arts and crafts and e-commerce, will flourish. It is expected that manufacturing will strengthen, become more flexible, and make important gains, particularly in the forest products and industrial machinery sectors. It is hoped there will be increased research and start-up funds to aid value-added processing and to diversify the economy, especially for the region's farmers. Tourism will continue to grow in the Northeast Kingdom. Eco-based businesses will become a part of the region's landscape, and steps will be taken to mitigate the negative effects that some older businesses have had on the environment.

GOALS AND STRATEGIES FOR ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT GOALS

- The region's unemployment rate should be reduced.
- The training/skills of the workforce should be improved.
- Higher-wage jobs should be created.
- Coordinate economic development functions in the Northeast Kingdom.
- Towns should receive assistance in their economic development efforts.
- The region's agricultural output should increase and diversify. Value should be added to local staple products and raw materials.
- The economic infrastructure capacity in the Northeast Kingdom should be improved to meet current and future needs.
- The region's telecommunications infrastructure should modernize and expand.
- Downtowns and village centers in the Northeast Kingdom should be maintained and revitalized.
- Quality, affordable child care should be available to workers with children in the Northeast Kingdom.

ECONOMIC DEVELOPMENT STRATEGIES

- Provide technical assistance for new and expanding businesses, and recruit new businesses.
- Market the resources of NVDA.

- Assist existing manufacturing companies to grow by identifying new markets, products, and technology.
- Assess opportunities for coordination of economic development organizations.
- Provide greater access to revolving loan funds.
- Develop an annual forum for regional partners to participate in the economic development strategy for the Northeast Kingdom.
- Develop and implement a comprehensive workforce development strategy for the region.
- Develop and implement strategies to revitalize distressed areas and specific employment sectors within the Northeast Kingdom.
- When possible, provide grant and technical assistance and project management to towns, organizations, and businesses throughout the Northeast Kingdom.
- Assist local planning commissions and development organizations in the Northeast Kingdom with economic development planning.
- Host economic development planning seminars in cooperation with SBDC and USDA Rural Development and other partners.
- Host business financing panels or workshops so that businesses are aware of capital resources available.
- Support and promote the specialty food industry.
- Index and promote the traditional foods products of Vermont's small family farmers.
- Plan for and support the development and maintenance of local physical infrastructure projects such as water, sewer, industrial sites, and transportation projects.
- Consider administering public works grants for towns in the region that lack professional capacity.
- Encourage entrepreneurialism and engage new startups with proven business strategies and tools.
- Identify, prioritize and implement Brownfield mitigation projects within the region.
- Develop a region-wide plan for water and sewer facilities.
- Support telecommunications infrastructure and knowledge capabilities by creating effective partnerships, and by advocating for increased infrastructure.
- Promote and advocate for economic development projects in downtown areas.
- Support Micro-enterprise programs for new business identification.
- Work through regional and community partnerships to expand training assistance and other support for childcare providers, and develop additional site-based child care centers.
- Work with local businesses, schools, and community partnerships to assess childcare needs throughout the region.