









# Nashua

Inter-state Analysis

A Profile of the Nashua, NH-MA NECTA





















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### Nashua Interstate Analysis – OnTheMap

#### A profile of the Nashua, NH - MA NECTA Division



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**June 2018** 

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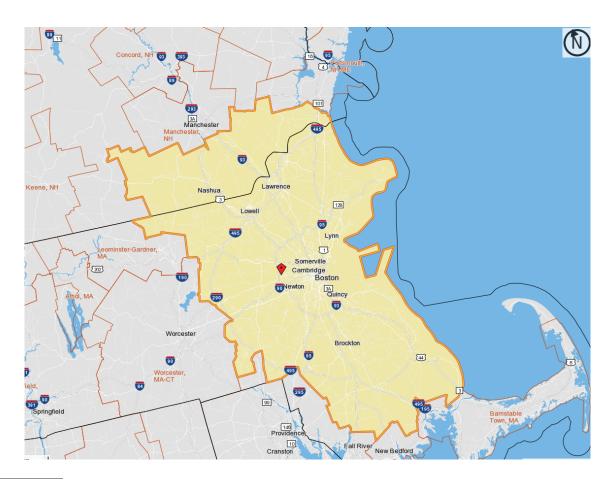
#### An OnTheMap Analysis of the Nashua, NH - MA NECTA Division

Situated on the southern edge of New Hampshire bordering Massachusetts, the Nashua, NH-MA NECTA division is a geographic region within which people generally both live and work. The Nashua region is one of the ten subdivisions within the Boston-Cambridge-Nashua, MA-NH Metropolitan NECTA.

A state border is a political boundary that defines where we belong as residents. But labor markets are more fluid than political boundaries, and people will seek job opportunities that are available to them within their concept of a reasonable commuting distance. Willingness to commute may vary from person to person, but unlike most national borders, a state border is not an obstacle to commuters. The availability of interstate highways, which were in part designed to support economic development, has encouraged this interchange of labor.

Two major interstate highways — Interstate 93 and Route 3, the F.E. Everett Turnpike — traverse through the Nashua area, each of which is a major commuting corridor, providing access to the greater Boston metropolitan area. The interconnectivity within the region is clustered along each of those two corridors.

OnTheMap<sup>1</sup> is an online mapping application that shows where people work and where workers live. This visual mode can help users understand the commuting patterns of workers and residents for a selected geographic area. Companion reports can be generated that provide information on workforce characteristics.



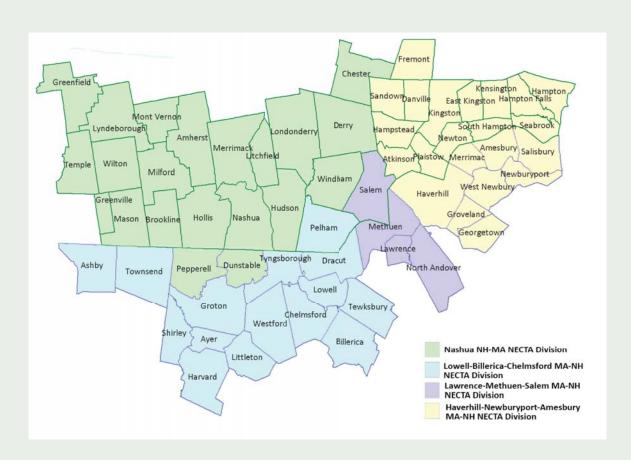
On The Map is an interactive product developed by the U.S. Census Bureau in partnership with Local Employment Dynamics (LED) states,

#### What is a Metropolitan NECTA Division?

The U.S. Office of Management and Budget (OMB) holds the responsibility for delineating Metropolitan Statistical Areas (MSA), Metropolitan Divisions, Micropolitan Statistical Areas, Combined Statistical Areas, and New England City and Town Areas for use in Federal statistical activities.

Statistical areas are generally defined as a region with at least one core urbanized area, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. Population in the core urbanized area determines the area type: Metropolitan areas have a core urban area of 50,000 or more population and Micropolitan areas have a core urban area population of at least 10,000 but less than 50,000. A Metropolitan area with a core urban area of 2.5 million or more population may be subdivided into Metropolitan Divisions. According to federal statistical definition, there are eleven Metropolitan Statistical Areas (MSAs) in the U.S. large enough to be subdivided into metropolitan divisions.

In New England, statistical area delineations are defined by county as in all other states, but additionally by cities and towns, in recognition of the importance of cities and towns in social and economic interactions. New England City and Town Areas (NECTA) use the same population criteria for defining Metropolitan and Micropolitan statistical areas.<sup>2</sup>



Office of Management and Budget, Executive Office of the President, OMB Bulletin No. 17-01. https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/bulletins/2017/b-17-01.pdf

The Boston-Cambridge-Nashua, MA-NH Metropolitan NECTA is a large metropolitan area with a population slightly short of five million. As Metropolitan areas with population of at least 2.5 million may be subdivided, this Metropolitan Area has been divided into ten subdivisions, four of which include portions of southern New Hampshire. These four areas are:

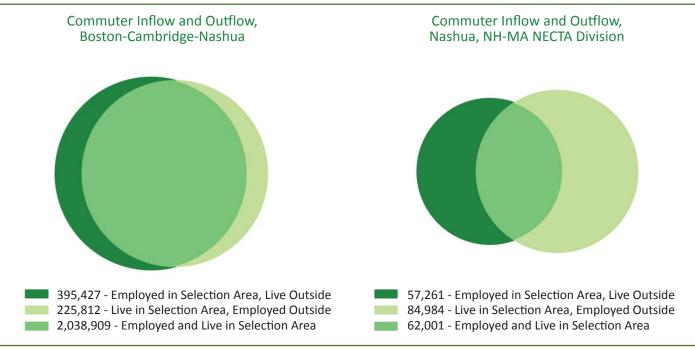
- the Haverhill-Newburyport-Amesbury, MA-NH NECTA Division;
- the Lawrence-Methuen-Salem, MA-NH NECTA Division;
- the Lowell-Billerica-Chelmsford, MA-NH NECTA Division; and
- the Nashua, NH-MA NECTA Division

NECTA divisions consists of a main city or town that represents an employment center, plus adjacent cities and towns associated with the main city or town through commuting ties. Each NECTA division must contain a total population of 100,000 or more. As of 2016, the population of the Nashua, NH-MA NECTA Division was 295,444.

The Nashua, NH-MA NECTA Division is one of four NECTA divisions straddling the New Hampshire-Massachusetts border, but it is the only one where the principal city and majority of adjacent territory is located within the borders of New Hampshire. The fact that four of the NECTA divisions include portions of southern New Hampshire indicates that there is a high degree of social and economic integration between southern New Hampshire communities and the greater Boston labor market.

## Commuter Inflow and Outflow: Boston-Cambridge-Nashua MSA and the Nashua, NH-MA NECTA Division

Having strong work/home integration is in the definition of a large metropolitan area, and the Boston-Cambridge-Nashua MSA is no exception. Because of the large amount of territory included in a metropolitan area, the proportion of workers who both live and work in the region is usually high. In the Boston-Cambridge-Nashua MSA, 90 percent of people who live in the region also work in the region, and nearly 84 percent of people who work in the region also live there. When the subdivisions of metropolitan areas are assessed individually, however, they show less internal integration, due to a strong relationship with the larger encompassing area.



Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2015).

In New Hampshire, there are three Metropolitan NECTAs which are not encompassed by the Boston-Cambridge-Nashua MSA. The percentage of working residents employed within these metro areas varies. In the Manchester NH Metropolitan NECTA, the percentage of working residents employed within the area was 48.3 percent, compared to 42.2 percent of the working residents in the Nashua, NH-MA NECTA division. This share of residents both living and working within the area was even higher for the Portsmouth, NH-ME Metropolitan NECTA, at 49.5 percent. In the Dover-Durham Metropolitan NECTA, the percentage of working residents employed in the area was actually lower, at 41.5 percent. In this latter case, 25.8 percent of working residents in the Dover-Durham Metropolitan NECTA commute into the adjacent Portsmouth, NH-ME Metropolitan NECTA.<sup>3</sup>

Nashua, NH-MA NECTA division has lower in-region efficiency than Manchester and Portsmouth Metro NECTA's as the area is more highly integrated into its surrounding region.

In-Region Labor Force Efficiency Where Area Residents	Bosto Cambri Nashua, I Metro N	dge- MA-NH	Nashua, NECTA I				Manche Metro		Portsmo ME N	
Work (Primary Jobs)	Count	Share	Count	Share	Count	Share	Count	Share	Count	Share
Living in the Selection Area	2,264,721	100.0%	146,985	100.0%	63,084	100.0%	98,571	100.0%	56,838	100.0%
Living and Employed in the Selection Area	2,038,909	90.0%	62,001	42.2%	26,197	41.5%	47,638	48.3%	28,140	49.5%
Living in the Selection Area but Employed Outside	225,812	10.0%	84,984	57.8%	36,887	58.5%	50,933	51.7%	28,698	50.5%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2015). Data exclude the self-employed.

<sup>&</sup>lt;sup>3</sup> Limited supply and high costs of housing in the Portsmouth, NH-ME Metropolitan NECTA (New Hampshire Seacoast) combined with strong job growth contributes to the high level of commuting ties between the two areas. One in three workers commuting into the Portsmouth, NH-ME Metropolitan NECTA lives in the Dover-Durham Metropolitan NECTA.

#### Nashua, NH-MA NECTA Division Communities – Commonalities and Differences

The Nashua, NH-MA NECTA Division consists of 19 municipalities in New Hampshire and two in Massachusetts. The region is made up of many small communities; twelve of the 21 municipalities had a 2015 population of less than 10,000 inhabitants.

While an area's population determines the number of potential working residents, there are variations in the concentration of working residents in a region, depending on the demographic composition of the population. The share of working residents in relation to population is influenced by the number of children, as well as the number of retirees and other non-working residents in the community. Among communities within the Nashua, NH-MA NECTA Division, the share of working residents to population ranges from 40.7 percent in the town of Temple to 53.9 percent in the town of Chester.

#### Nashua NH-MA NECTA Division

				Working within	
			Working	Boston-	
		Median Age	residents	Cambridge-	
	Population in	(ACS 2011-	(exclude self-	Nashua Metro	Jobs located
	2015	2015)	employed)	NECTA*	in city/town
New Hampshire city and	towns:				
Nashua	87,690	38.2	43,078	34,697	49,205
Derry	33,239	39.7	17,541	11,922	7,928
Merrimack	25,600	42.6	13,529	9,045	16,352
Londonderry	25,126	41.0	13,330	8,767	14,589
Hudson	24,920	40.2	12,780	10,262	9,657
Milford	15,254	41.1	7,987	5,526	6,345
Windham	14,425	43.4	6,182	4,690	3,307
Amherst	11,241	44.5	5,208	3,455	3,157
Litchfield	8,431	41.2	4,239	3,165	793
Hollis	7,784	47.8	3,356	2,518	2,512
Chester	4,919	42.6	2,651	1,569	365
Brookline	5,200	41.7	2,408	1,779	539
Wilton	3,685	45.4	1,797	1,217	1,187
Mont Vernon	2,486	44.3	1,255	870	150
Greenville	2,078	41.7	911	516	179
Lyndeborough	1,698	49.0	904	598	92
Greenfield	1,829	48.1	852	417	938
Mason	1,406	45.7	675	450	195
Temple	1,388	48.7	565	252	179
Massachusetts towns:					
Dunstable	3,435	45.5	1,706	1,581	167
Pepperell	12,165	42.8	6,031	5,475	1,426

<sup>\*</sup> Including working within the town itself

The median age in these communities ranges from 38.2 in Nashua to 49.0 in Lyndeborough. In comparison, the median age in the Boston-Cambridge-Nashua, MA-NH Metropolitan NECTA was age 38.7 (ACS 2011-2015) and the median age statewide for New Hampshire was 42.2. Only eight of the 19 communities in the region had a median age below the statewide average, indicating that this region is facing an aging workforce similar to the statewide trend. Despite a high median age in the town of Lyndeborough, the ratio of working residents to population was second highest after the town of Chester. But on the other hand the median age in Temple was second highest at 48.7 and the ratio of working residents to population was the lowest among the communities in this region. Keep in mind when assessing the number of working residents in the OnTheMap application, the self-employed are excluded.

The number of jobs located in the area versus the number of working residents in that same location is another way of comparing the area communities. In the Nashua, MA-NH NECTA division, the majority of municipalities are exporters of jobholders, defined as having more working residents than number of jobs located in the community.<sup>4</sup> There are only four towns with more jobs actually located in the community than there are working residents. These four municipalities are Nashua, Merrimack, Londonderry and Greenfield. All the remaining communities have fewer jobs located in the community than there are working residents. Many of these communities can be considered bedroom communities, defined as "a small community that has no major industries and that is lived in by people who go to another town or city to work." <sup>5</sup>

The City of Nashua attracts more jobholders to the city for work than there are residents leaving the city for work. The towns of Merrimack and Londonderry both have a larger number of jobs located in the community than the number of working residents. These two towns, though smaller than Nashua, are the third and fourth largest towns by population in the region. Nashua, Merrimack, and Londonderry all have several large employers located within their borders. Greenfield has a much smaller and older population, which is usually not an indicator of an employment hub. However, Crotched Mountain, a nonprofit organization providing services to individuals with disabilities and their families, is located in Greenfield, and employs approximately 900 workers; over 90 percent of people working in Greenfield commute in from another town.<sup>6</sup>

In 2015, about 118,600 of New Hampshire's working residents in covered employment, 19 percent, left the state for work; 93,600 working residents, 15 percent, commuted to Massachusetts.

When comparing the number of persons leaving local communities for work, a majority of the Nashua region's communities see more than 90 percent of working residents leaving their home community for work. Only the city of Nashua had less than 80 percent of working residents leaving their home community for work. In the City of Nashua, 32 percent of working residents are employed in the city, the largest share of working residents employed in town among the municipalities in the Nashua, MA-NH NECTA, and 68 percent of working residents leave the city for employment, the lowest share among these municipalities. The fact that such a high share of working residents leave their resident community for work shows that the economic well-being of these communities are dependent on both the economic activity in neighboring communities and the economic well-being of the larger metropolitan area.

On The Map data are derived from covered employment statistics (QCEW); self-employment is not included. Population employed locally is higher when accounting for self-employment. Other statistics, such as the Current Population Survey and the American Community Survey include the self-employed, increasing the number of employed residents.

<sup>&</sup>lt;sup>5</sup> "Bedroom Community." Merriam-Webster.com. Merriam-Webster, n.d. Web. 19 Mar. 2018.

<sup>&</sup>lt;sup>6</sup> New Hampshire Community Profiles, Economic and Labor Market Information Bureau, New Hampshire Employment Security. Number of employees supplied by the Town of Greenfield. NH.

#### **Employed Outside the City/Town**

#### **New Hampshire City and Towns:**

Temple	97.5%
Mont Vernon	96.8%
Greenville	96.2%
Chester	95.5%
Lyndeborough	94.9%
Litchfield	94.2%
Mason	93.9%
Brookline	92.9%
Amherst	91.6%
Greenfield	91.1%
Windham	91.0%
Hollis	90.0%
Wilton	89.3%
Derry	89.2%
Hudson	87.9%
Londonderry	86.4%
Merrimack	83.0%
Milford	81.4%
Nashua	68.1%
Massachusetts towns:	
Dunstable	95.8%
Pepperell	92.2%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2015). ELMI calculation

#### **Percent commuting to Massachusetts**

Windham	37.1%
Hudson	33.6%
Mason	31.9%
Nashua	30.1%
Greenville	28.8%
Derry	27.2%
Litchfield	26.6%
Chester	24.8%
Londonderry	24.2%
Temple	24.1%
Hollis	23.5%
Brookline	22.0%
Amherst	16.3%
Lyndeborough	16.3%
Merrimack	16.2%
Mont Vernon	14.4%
Milford	14.0%
Greenfield	13.6%
Wilton	12.9%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2015). ELMI calculation

This region is highly integrated into the economy of the neighboring state of Massachusetts as well. However, such integration varies from community to community. Distance to the Massachusetts border and accessibility to interstate highways impact the share of employed residents leaving New Hampshire for work in Massachusetts. Close to four of ten residents from Windham commute to Massachusetts for work, whereas only a little more than one in ten commute from Wilton to Massachusetts. Even though the middle of each of these towns is roughly ten miles from the Massachusetts border, Windham encompasses nearly five miles of Interstate 93 and is situated about seven miles from more densely populated areas in Massachusetts, such as Lawrence and Methuen. Wilton, on the other hand, is located over 15 miles from the F.E. Everett Turnpike, the nearest highway, and about the same distance from Fitchburg, Massachusetts, the nearest large city in proximity to Wilton. Windham commuters have direct access to Interstate 93, while Wilton commuters have immediate access only to secondary roadways.

#### Nashua – New Hampshire's Gate City

"Nashua's and southern New Hampshire's cultural, economic, social, and political foundation has from the very beginning been directed through and connected to Boston; eternally on a north-south orientation, and eternally serving as the 'Gateway' or center point of travel and economic/cultural transmission between Boston and Concord, NH, along the majestic Merrimack River Valley."

History shows how the City of Nashua has ties to other industrial cities further down the Merrimack River and to Boston. Today, regional integration is dependent on access to the F.E. Everett Turnpike, bringing Nashua closer to Boston and its surrounding area.

The city of Nashua is the second largest city in New Hampshire and has a larger population than both Portland, Maine and Burlington, Vermont. The city is home to many large employers, such as BAE Systems North America, Southern NH Medical Center, Nashua School District, and St. Joseph Hospital and Trauma Center.<sup>8</sup>



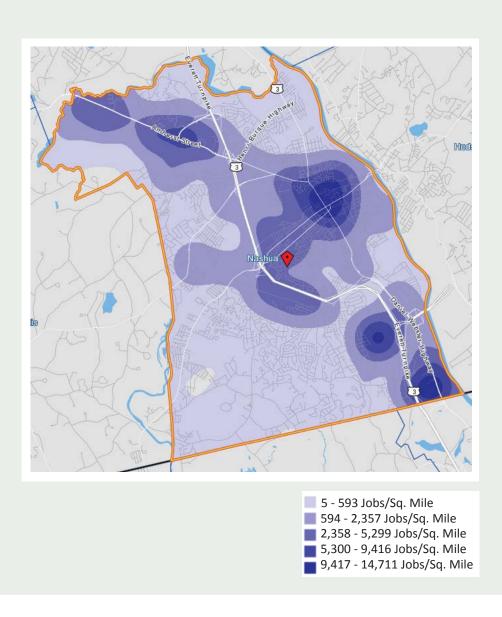
 $<sup>^{\</sup>rm 7}$  Accessed on November 14, 2017 at www.nashuanh.gov/677/History-of-Nashua .

<sup>8</sup> New Hampshire Community Profiles, Economic and Labor Market Information Bureau, New Hampshire Employment Security. Employer names supplied by the city of Nashua, NH.

Nashua attracts a large number of workers; there were 35,463 jobholders commuting into Nashua for work. At the same time, 29,336 Nashua residents left the city for work. There were 13,742 residents that commuted within the city, accounting for 31.9 percent of Nashua's working residents. Altogether, there were 49,205 primary jobs located in the City of Nashua.

The largest employing industry sectors in Nashua are *Retail trade*, followed by *Health care and social assistance*, and *Manufacturing*. *Retail trade* and *Health care and social assistance* are dependent on customers having easy access to their location. The *Manufacturing* sector is also dependent on accessibility, as raw materials must be delivered and final products must be shipped.

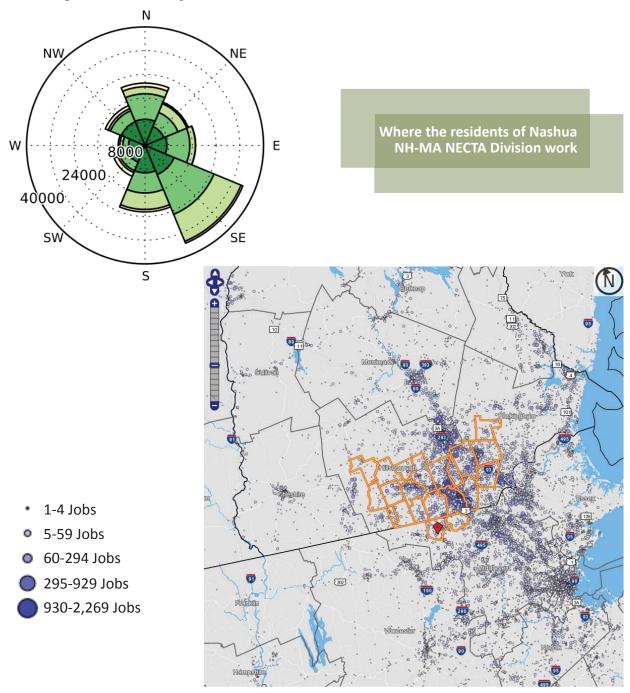
This depiction of job concentration in the City of Nashua shows a high intensity of job location along major roads, such as the Everett Turnpike, Amherst Street (NH Route 101A), and the Daniel Webster Highway (US Route 3). The largest concentration of jobs surrounds the intersection of East Hollis and West Hollis Streets with Main Street; the area includes Nashua City Hall.



#### Nashua, NH-MA NECTA Division – Commuter Distance and Direction

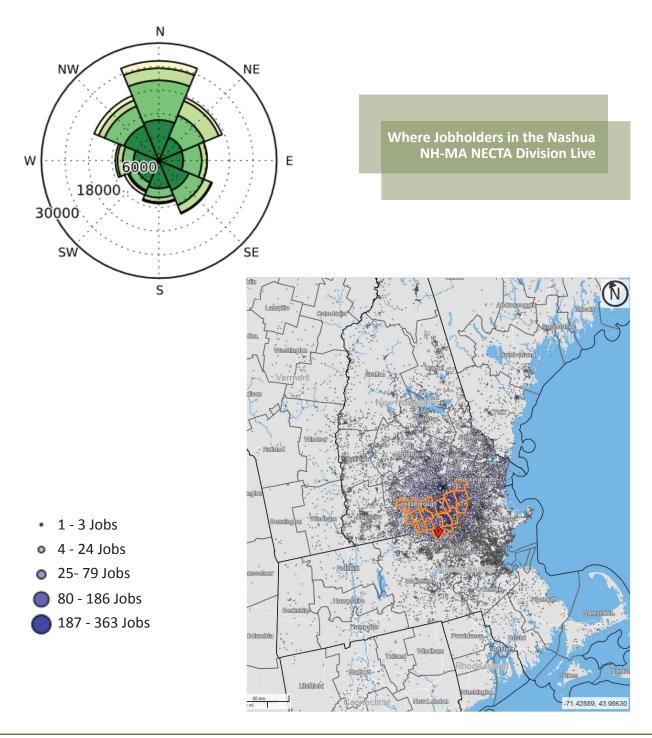
#### **Commuting Out**

There are 147,000 working residents in the Nashua NH-MA NECTA Division, and 85,000 of them leave the region for work. Where do they go? OnTheMap illustrates the work location for persons living in the selected area (outlined in orange below). The dot density map clearly shows that the largest numbers of jobs are along major road and highway corridors. Among workers who leave the region, the largest share heads south or southeast down I-93 or Route 3 towards I-495 in Massachusetts, while smaller numbers of workers commute north up I-93, or east towards New Hampshire seacoast region.



#### **Commuting In**

For those persons employed in the Nashua NH-MA NECTA Division who live outside the area, commute patterns are not nearly as clear as those of workers commuting out of the area. The heaviest concentration of jobholders resides in a rough circumference in and around the City of Nashua. A large number of jobholders reside north of the region, which includes Manchester. The area also draws workers from the northeast and northwest, which includes many towns with smaller populations. Jobholders residing southeast of the Nashua region come from towns such as Salem and Pelham, NH, as well as cities and towns in the Merrimack Valley region of Massachusetts.



Overall, there are close to 28,000 more residents leaving the region for work than there are jobholders staying within the region. Net outflow is the largest to the southeast and south, as well as due east and the southwest. The region has a net inflow from the north, northeast, west, and northwest, but these numbers are not large enough to offset the volume of commuters leaving the region for work.

	Net Inflow/Outflow
North	4,387
Northeast	1,592
East	-4,778
Southeast	-21,083
South	-11,506
Southwest	-1,771
West	2,059
Northwest	3,377

	Distance employed	Distance from where
	residents of the	workers in the
	Nashua NH-MA	Nashua NH-MA
	NECTA division	NECTA division
	commute	commute
Total Primary Jobs	146,985	119,262
Less than 10 miles	63,409	60,605
10 to 24 miles	51,884	37,677
25 to 50 miles	25,451	15,001
Greater than 50 miles	6,241	5,979

There is not much difference in the level of commuting between those living in the region and those working in the region for persons commuting less than ten miles and those commuting greater than 50 miles. There were roughly 14,000 more working residents than area jobholders that commuted between ten to 24 miles and there were about 10,500 more working residents than area jobholders that commuted 25 to 50 miles. This indicates that area residents are willing to drive further for work than those who commute into the region for work.

Workers in the Nashua region come in from all directions, with a larger draw from the north. As Nashua is located in the southern-most part of the region, workers both living and working within the region can increase the number of workers commuting in from the north, northeast, and northwest. While OnTheMap can estimate commuting distances, drive time is more of a factor in determining how far a commuter is willing to travel for work. Therefore, the commuting patterns of the working residents in the Nashua NH-MA NECTA division tend to follow highway corridors.

Nashua is 43 miles from Boston, Massachusetts, whereas the distance from Chester, NH is 49 miles and distance from Greenfield, NH is 71 miles. While Nashua and Chester are close to 20 miles apart and more than ½ hour drive time, the distances to Boston from each of these communities are not that different and estimated drive time is also only slightly different, from about 50 minutes from Nashua to about an hour from Chester.<sup>9</sup>

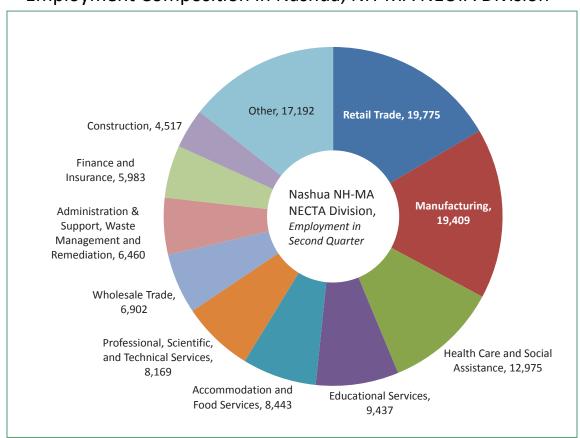
When towns are located further away from major transportation corridors, the drive time can easily be prolonged. In addition to the distance to a highway or major roadway, natural barriers, such as lakes and ponds or mountains, may further lengthen a commuter's drive time. The longer a commuter must travel to arrive first, at a highway corridor, and second, at the work destination, the less likely such a drive will constitute a daily commute.

<sup>&</sup>lt;sup>9</sup> Mapquest was used to illustrate variation in drive time.

#### Industry Composition in the Nashua, NH-MA NECTA Division

More than half of the employment in Nashua, NH-MA NECTA Division was concentrated in four sectors: *Retail trade, Manufacturing, Health care and social assistance* and *Educational services*. <sup>10</sup>

#### Employment Composition in Nashua, NH-MA NECTA Division



When comparing the employment shares in *Retail trade* and *Manufacturing* in the Nashua NH-MA NECTA Division with New Hampshire (statewide), and Boston-Cambridge-Nashua Metro NECTA, it illustrates that the employment in these two sectors are more dominant in Nashua area than in the greater Boston metropolitan area. While employment in *Retail trade* accounts for one of the highest shares of industry employment in New Hampshire (14.7 percent), *Retail trade* employment in the Nashua NH-MA NECTA Division is even stronger, at 16.6 percent. The region's location on the border with Massachusetts and New Hampshire's sales tax-free market place have supported the development of retail outlets for a long period of time. The share of *Manufacturing* employment is also very strong in the Nashua NH-MA NECTA Division, at 16.3 percent, compared to a 7.9 percent *Manufacturing* employment share for the larger Boston-Cambridge-Nashua Metro NECTA.

<sup>&</sup>lt;sup>10</sup> In the OnTheMap application, employment in public education is included in Educational services.

The employment shares in *Health care and social assistance*, *Educational services* and *Professional, scientific, and technical services* are much higher in the whole Boston-Cambridge-Nashua Metro NECTA than in the Nashua NH-MA NECTA division. The Boston area is well-known for many colleges and universities, cuttingedge health care services, and high tech incubators, and the high shares of employment in these knowledge-based sectors corroborate that image.

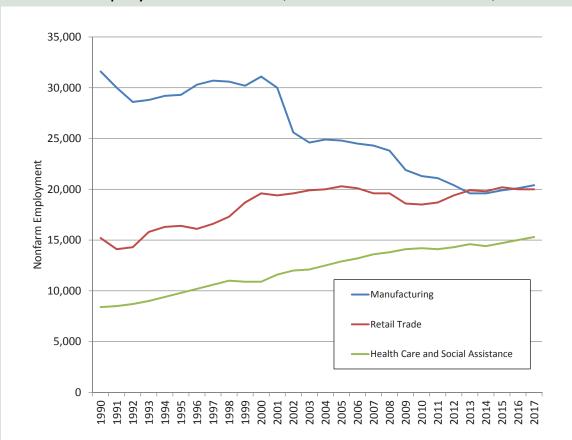
			Boston-
	Nashua		Cambridge-
Work Area Profile Report: 2015 Q2	NH-MA		Nashua
	NECTA	New	Metro
	Division	Hampshire	NECTA
Retail Trade	16.6%	14.7%	9.8%
Manufacturing	16.3%	11.4%	7.9%
Health Care and Social Assistance	10.9%	14.9%	15.7%
Educational Services	7.9%	10.5%	10.3%
Accommodation and Food Services	7.1%	7.9%	7.4%
Professional, Scientific, and Technical Services	6.8%	5.7%	10.8%
Wholesale Trade	5.8%	4.6%	4.1%
Administration & Support, Waste Management and Remediation	5.4%	5.3%	5.2%
Finance and Insurance	5.0%	4.6%	5.7%
Construction	3.8%	4.0%	4.3%
Other Services (excluding Public Administration)	3.3%	3.2%	3.3%
Public Administration	3.0%	4.4%	3.9%
Transportation and Warehousing	2.8%	2.2%	2.6%
Information	1.7%	2.1%	3.4%
Management of Companies and Enterprises	1.5%	1.5%	2.4%
Real Estate and Rental and Leasing	1.0%	1.1%	1.4%
Arts, Entertainment, and Recreation	0.9%	1.3%	1.3%
Agriculture, Forestry, Fishing and Hunting	0.1%	0.3%	0.1%
Utilities	0.1%	0.4%	0.4%
Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.1%	0.0%

#### Nonfarm Employment in the Nashua, NH-MA NECTA Division Over Time

The Nashua, NH-MA NECTA Division is one of the four metropolitan areas in New Hampshire for which monthly nonfarm data by industry is published.

Nonfarm data by industry for Nashua NH-MA NECTA Division show that employment in *Manufacturing* has declined since 2001, while employment increased in *Retail trade* and *Health care and social assistance*. However, despite losses and gains in employment over the last 28 years, the location quotients (LQ)<sup>11</sup> for each of these three sectors have remained approximately the same. In 2017 the LQ for *Manufacturing* was 1.5; *Retail trade* was 1.1 and *Health care and social assistance* was 0.8. This indicates that *Manufacturing* remains a stronghold for the region's employment base. The LQ of 1.1 for *Retail trade* indicates that the region has a slight edge over the state of New Hampshire as a whole, and employment in the *Health care and social assistance* sector is slightly underrepresented when compared to the state.

#### Nonfarm employment in Nashua, NH-MA NECTA Division, 1990 - 2017



<sup>&</sup>lt;sup>11</sup> Location quotients (LQ) compare the concentration of an industry within a specific area to the concentration of that industry for a larger geographic area. In this LQ calculation, employment in Nashua, NH-MA NECTA division was used as the numerator and New Hampshire employment was used as the base

#### Workforce Availability - Worker Inflow and Outflow by Industry

There are two ways to determine workforce availability – one is the number of workers living within a region; the other is the number of persons holding jobs within a region. Between these two measures, there is an overlap of those jobholders that both live and work in the region. In the Nashua NH-MA NECTA division, there were 62,001 persons that both lived and worked within the region. This excludes the self-employed.

Using the OnTheMap application, the outflow of resident workers and the inflow of persons to jobs in the Nashua NH-MA NECTA division can be determined. The difference between the inflow and the outflow of workers in the Nashua NH-MA NECTA Division is a net outflow of 27,723 workers. Additionally, industry detail is available for the employed residents of the region and for those jobholders that are employed in the region.

	Jobs held by		Jobs located at		
	Residents of Nashua		Businesses in N		
	NH-MA NECTA Div		MA NECTA Div		Net Outflow
	Count	Share	Count	Share	
Total Primary Jobs	146,985	100.0%	119,262	100.0%	27,723
Total Outflow of Workers	84,984				1
Total Inflow of Workers			57,261		} 27,723
	Count	Share	Count	Share	Net Outflow by Industry
Health Care and Social Assistance	19,295	13.1%	12,975	10.9%	6,320
Professional, Scientific, and	10,200	10.170	12,070	10.070	0,320
Technical Services	12,428	8.5%	8,169	6.8%	4,259
Educational Services	12,693	8.6%	9,437	7.9%	3,256
Construction	6,825	4.6%	4,517	3.8%	2,308
Information	4,303	2.9%	2,015	1.7%	2,288
Administration & Support, Waste					·
Management and Remediation	8,011	5.5%	6,460	5.4%	1,551
Public Administration	5,070	3.4%	3,581	3.0%	1,489
Accommodation and Food Services	9,615	6.5%	8,443	7.1%	1,172
Management of Companies and					
Enterprises	2,752	1.9%	1,833	1.5%	919
Manufacturing	20,326	13.8%	19,409	16.3%	917
Wholesale Trade	7,752	5.3%	6,902	5.8%	850
Other Services (excluding Public Administration)	4.507	2.40/	2.020	2.20/	600
Finance and Insurance	4,537	3.1% 4.4%	3,928	3.3%	609
	6,513		5,983	5.0%	530
Transportation and Warehousing	3,804	2.6%	3,306	2.8%	498
Arts, Entertainment, and Recreation	1,472	1.0%	1,031	0.9%	441
Real Estate and Rental and Leasing	1,595	1.1%	1,248	1.0%	347
Utilities	371	0.3%	105	0.1%	266
Agriculture, Forestry, Fishing and Hunting	202	0.1%	114	0.1%	88
Mining, Quarrying, and Oil and Gas Extraction	87	0.1%	31	0.0%	56
Retail Trade	19,334	13.2%	19,775	16.6%	-441

Though OnTheMap cannot identify the number of those that are coming into the region versus those leaving the region at the industry sector level, the net difference between those two groups (employed residents versus area jobholders) represents an estimate of which sectors are net exporters and which are net importers of workers.

There was a net outflow or "export" of 27,723 workers from the Nashua NH-MA NECTA Division. A net outflow of workers was the case for all but one sector - *Retail trade*. This sector employs 19,775 workers in the Nashua area, which is 441 more jobholders than there are area residents working in *Retail trade*, resulting in a net import of workers for this sector. But in the remaining sectors, there were more residents working in each sector than the number of person holding jobs in the sector for the region. This means that there are more working residents commuting to jobs outside the region for each of these sectors. For example, in the Nashua NH-MA NECTA division, there were 19,295 working residents in *Health care and social assistance*, but there were only 12,975 *Health care and social assistance* jobs in the region, resulting in a net outflow of 6,320 residents holding a job in *Health care and social assistance*. A similar large net outflow of jobholders is apparent in *Professional*, *scientific and technical services* and *Educational services*. These three sectors have a much larger employment concentration in the Boston-Cambridge-Nashua Metropolitan NECTA than in the Nashua NH-MA NECTA division, indicating that highly concentrated sectors are drawing workers from the Nashua area.

#### Profile by Destination County of Working Residents of the Nashua, NH-MA NECTA **Division, New Hampshire Portion**

The majority of municipalities in the Nashua, NH-MA NECTA Division are located in Hillsborough County, New Hampshire, and almost half of workers living in the New Hampshire portion of the region<sup>12</sup> work in the county. Out of 139,250 working residents in the New Hampshire portion of the Nashua NH-MA NECTA Division, 36,100 New Hampshire residents commuted to Massachusetts in 2015. Among those commuting to Massachusetts, the majority, 87.0 percent, worked in one of three Massachusetts counties—Middlesex County (55.8 percent), Essex County (20.8 percent), and Suffolk County (10.4 percent), which includes the City of Boston.

The second largest number of workers commuting out of the New Hampshire portion of the Nashua, NH-MA NECTA Division worked in Rockingham County, New Hampshire. Middlesex County, Massachusetts was third in the number of Nashua area resident out-commuters. Essex County, MA, Merrimack County, NH, and Suffolk County, MA were the work destination for the next largest numbers of resident out-commuters from the Nashua, NH-MA NECTA Division.

#### Nashua, NH-MA NECTA Division, New Hampshire Portion, Residents Commuting by County



Primary J	obs	
	201	.5
	Count	Share
All Counties	139,248	100.0%
Hillsborough County, NH	68,267	49.0%
Rockingham County, NH	21,761	15.6%
Middlesex County, MA	20,146	14.5%
Essex County, MA	7,471	5.4%
Merrimack County, NH	5,887	4.2%
Suffolk County, MA	3,774	2.7%
Worcester County, MA	2,011	1.4%
Norfolk County, MA	1,432	1.0%
Strafford County, NH	1,365	1.0%
Cheshire County, NH	1,309	0.9%
All Other Locations	5,825	4.2%

21,761 Jobs 20,146 Jobs

7.471 Jobs 5,887 Jobs

3,774 Jobs

2,011 Jobs

<sup>1,432</sup> Jobs 1,365 Jobs 1,309 Jobs

<sup>12</sup> The New Hampshire portion excludes the Massachusetts towns of Dunstable and Pepperell; there were 146,985 working residents in the full Nashua, NH-MA NECTA Division.

Using the OnTheMap application, more detailed characteristics are available for each of these out-commuters from the New Hampshire portion of the Nashua, NH-MA NECTA Division.

Among workers commuting to Middlesex, Essex, or Suffolk Counties from the New Hampshire portion of the Nashua, NH-MA NECTA Division:

- Nearly six in ten commuting to these three Massachusetts counties are age 30 to 54, while half or fewer of those commuting to the New Hampshire counties are age 30 to 54.
- Roughly three-fourths of workers commuting to the Massachusetts counties earn more than \$3,333 per month, while half or fewer workers commuting to New Hampshire counties are in that earnings range.
- Middlesex and Essex Counties have the largest share of in-commuters working in Goods-producing industries, while Suffolk County has the largest share of in-commuters working in Services industries other than *Trade, transportation*, and utilities. This industry segment includes *Health care and social assistance*, *Educational services*, and *Professional, scientific, and technical services*.

#### Jobs Counts by Counties Where Workers are Employed - Primary Jobs

	Hillsborough County, NH	Rockingham County, NH	Middlesex County, MA	Essex County, MA	Merrimack County, NH	Suffolk County, MA	
Share of All Workers							
All Workers	68,267	21,761	20,146	7,471	5,887	3,774	
Jobs by Worker Age							
Age 29 or younger	22.5%	25.8%	15.8%	15.7%	21.5%	20.6%	
Age 30 to 54	52.3%	49.9%	59.7%	57.4%	51.9%	58.5%	
Age 55 or older	25.2%	24.3%	24.6%	26.9%	26.7%	20.9%	
Jobs by Earnings							
\$1,250 per month or less	19.0%	22.9%	7.8%	8.6%	17.5%	8.0%	
\$1,251 to \$3,333 per month	30.1%	32.5%	16.2%	18.3%	30.2%	16.1%	
More than \$3,333 per month	50.9%	44.7%	76.0%	73.0%	52.3%	75.9%	
Jobs by Industry Class							
Goods Producing Industries	18.4%	13.7%	26.3%	32.4%	8.7%	8.4%	
Trade, Transportation, and							
Utilities Industries	21.2%	29.8%	13.2%	12.0%	26.2%	15.0%	
All Other Services Industries	60.4%	56.5%	60.5%	55.6%	65.0%	76.6%	

### Commute flow between the Nashua, NH-MA NECTA Division, NH Portion, and Massachusetts

For every one person commuting from Massachusetts to the New Hampshire portion of the Nashua, NH-MA NECTA Division, close to three persons commute in the opposite direction. This strong outflow of workers to Massachusetts poses the question of what it would take to recruit residents back to jobs in New Hampshire. From a regional perspective, however, the current commute flow helps the region maintain a share of higher wage earners. The higher level wage earners are then able to spend more in their local communities, especially on homes, helping sustain the property value on which the community collects taxes. The relationship between job clusters and residential clusters is complex, but also can be symbiotic.

Net Outflow of Residents of the NH Portion of the Nashua, NH-MA NECTA Division to Massachusetts	Commute to jobs in Massachusetts from the Nashua NH-MA NECTA Division	Commute from Massachusetts to jobs in the Nashua NH-MA NECTA Division	Net Outflow of Nashua NH-MA NECTA Division working residents to jobs in Massachusetts				
All Workers	36,100	14,188	21,912				
Jobs by Worker Age							
Age 29 or younger	6,134	3,261	2,873				
Age 30 to 54	21,098	7,392	13,706				
Age 55 or older	8,868	3,535	5,333				
Jobs by Earnings							
\$1,250 per month or less	3,095	2,505	590				
\$1,251 to \$3,333 per month	6,247	3,422	2,825				
More than \$3,333 per month	26,758	8,261	18,497				
Jobs by Industry Class							
Goods Producing Industries	9,013	3,489	5,524				
Trade, Transportation, and			1,735				
Utilities Industries	5,157	3,422					
All Other Services Industries	21,930	7,277	14,653				

#### **Summary**

Historically, the city of Nashua has been an integrated part of the Greater Boston area through the interchange of goods -- raw material was brought up from Boston harbor and final products were being shipped back to markets in Massachusetts. Today, the interdependence between the Nashua area and the Greater Boston area is based on the exchange of labor. The Nashua, NH-MA NECTA division is a subdivision of the Boston-Cambridge-Nashua, MA-NH Metropolitan NECTA, and an integral part of the Greater Boston labor shed.

It could be argued that "jobs" in the Nashua, NH-MA NECTA division could be expanded as there are more jobholders residing in the region than there are jobholders working in the region. This means that the supply of workers in the region is greater than the area's current jobs count. The question is what would entice residents of the Nashua, NH-MA NECTA Division to change jobs in order to be closer to home?

This analysis illustrates the fact that labor markets do not recognize state borders. Distance and drive time to a job are more important to commuters.



The products and services of the NHES Economic and Labor Market Information Bureau result from the cooperation and teamwork of the entire ELMI Bureau staff: Michael Argiropolis, Christopher Bittle, Robert Cote, Gregory David, Bruce DeMay, Deborah Dunn, Katrina Evans, Eleanor Goodbread, Debra Jodoin, Anita Josten, Donald Kelley, David Mikelson, Annette Nielsen, Bruce Olinsky, Martin Page, Peter Sgrulloni, and James Smith.

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