



## Common Core Metrics Methodologies for Regional Comprehensive Plans

Granite State Future's Technical Advisory Subcommittees (TASCs), made up of transportation, housing, water, economic development, natural resources and other infrastructure professionals, used the NH Livability Principles as a framework to discuss and compile the many resources in NH; policies, recommendations, and questions that regional plans should consider; existing conditions and trends; and a variety of metrics for measuring progress. The resources and policies identified have been compiled in an effort to streamline the research process and can be found online in the [Regional Plan Framework](#). The full compilation of the TASCs research may be found in the [Regional Plan Framework Appendices](#). The many existing conditions and trends identified by the TASCs have been integrated into a separate Statewide Existing Conditions and Trends Assessment.

The following lists and details the data computation methodologies for various metrics of common benefit to local, regional and state master plans based upon the initial research of the TASCs. By establishing both a common set of core metrics and methodologies, data can be compared across plans, regions, and neighboring communities. New Hampshire's Regional Planning Commissions in conjunction with UNH Earth System Research Center will be compiling the raw data for each of the following metrics and making all data available online, some of which will be incorporated into the NH GRANIT System at UNH, the State's GIS Clearinghouse.

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**Variable: Population-historic [ID# 101]****Description:** Total 2000 and 2010 Population**Source\_Name:** U.S. Census, Population of NH Towns and Counties, 1960-2010**Source\_Date:** 2011**Source\_URL:** <http://www.nh.gov/oep/programs/DataCenter/2010Census/documents/NH-POP-60-10.xls>**Geography:** Municipality, Aggregated to RPC**Methodology:**

Totals and Growth

Present data by municipality, aggregated by RPC:

- 1) Download Excel file, add columns and enter county and RPC for each municipality.
- 2) Add column for 2000-2010 Annualized Growth Rate and compute for each municipality as follows:

$$R = (((P_{2010} / P_{2000})^{(1/n)}) - 1) * 100$$

Where:

*r* = annualized growth rateP<sub>2000</sub> is the 2000 total populationP<sub>2010</sub> is the 2010 total population*n* = number of years elapsed, here *n*=10

- 3) Sort by RPC and calculate the total population for each RPC for each year (1960-2010), the total numeric change 2000-2010 for the region (= P<sub>2010</sub> - P<sub>2000</sub>), regional Percent Change (=(P<sub>2010</sub>-P<sub>2000</sub>)/P<sub>2000</sub>)\*100) and Annualized Growth Rate (see above for formula).
- 4) Suggested to create line charts of each region's historic total population 1960-2010 for presentation in regional plans.

Additional Fields to be included in the table:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

**Documentation Author:** J. Czysz, NRPC; C. Tufts, CNHRPC

**Variable: Population by age** [ID# 102]**Description:**

Total Age Distribution, percent change and growth rate by 5 year age cohorts (varying increments) as shown in Census 2010 SF1 P12 data, and Census 2000 SF1 P12 data. School Age Population and Change in School age population are extracted/ calculated from the 2010 table and the 2000 table.

Senior population is extracted from 2010 table, and percent is calculated using 2010 total population.

**Source\_Name:** 2010 US Census Bureau, SF1 100% data, table P12

**Source\_Date:** 2010

**Source\_URL:** <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

**Source\_Name:** 2000 US Census Bureau, SF1 100% data, table P012

**Source\_Date:** 2000

**Source\_URL:** <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

**Geography:** Municipality, Aggregated to RPC

**Methodology:**

Total Age Distribution, percent change and growth rate by 5 year age cohorts: Download municipal data from the 2000 and 2010 census (save raw data for municipalities). Aggregate the data to derive the total regional population by age cohort for 2000 and 2010.

Additional Fields to be included in the table:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

Then, using the 2000 and 2010 total population by cohorts, calculate the numerical and percent change for the decade and the annualized growth rate as follows. Some cohorts will need to be combined to arrive at the 5-year increments:

RPC Summary Table	2000			2010			2000 to 2010 – Change in Total Population	
	Male	Female	Total	Male	Female	Total	# Change	% Change
Total Population:	X	Y	Z =X+Y	A	B	C=A+B	M =C-Z	=M/Z
Under 5 years								
5 to 9 years								
10 to 14 years								
15 to 17 years								
18 & 19 years								
20 years								
21 years								
22 to 24 years								
25 to 29 years								
30 to 34 years								
35 to 39 years								
40 to 44 years								
45 to 49 years								
50 to 54 years								
55 to 59 years								
60 & 61 years								
62 to 64 years								
65 & 66 years								
67 to 69 years								
70 to 74 years								
75 to 79 years								
80 to 84 years								
85 years and over								

Raw Data is separated by RPC on separate sheets, as Excel cannot accommodate enough columns for all municipalities to fit on one sheet. RPC Summary Tables and State Summary Table are on separate sheets.

School Age Population and Percent Change in School Age Population: Total School age population (ages 5-17) as reported by 2010 SF1 P12 data. Percentage created by subtracting 2000 population from 2010 population and dividing by the 2000 population. Must aggregate age groups 5 to 9, 10-14, and 15-17 for both male and female. This data is added to the bottom of the Population by Age table.

Senior Population and Percent Population over 65 Years Old: Population 65 and over as reported in Age Distribution table, 2010 Census SF1 table P12. Need to aggregate several age categories 65 and over, and also male and female. To calculate percent divide by total population. Total population is also available via 2010 Census SF1 table P1. This data is added to the bottom the Population by Age table.

**Documentation Author:** J. Czysz, NRPC; C. Tufts, CNHRPC

**Variable: Fertility** [ID# 103]

**Description:** Number of annual births per 1000 women of reproductive age (15-44)

**Source\_Name:** NH Department of Health and Human Services, NH Vital Records

**Source\_Date:** 2003-2007

**Source\_URL:** <http://nhvrinweb.sos.nh.gov/Default.aspx>

**Geography:** Municipality

**Methodology:**

1. Go to the Division of Vital Records Administration website: <http://nhvrinweb.sos.nh.gov/Default.aspx>. Users must first register to use the database, log in and accept the privacy policy before accessing data. A link to the registration page can be found at the bottom of the menu of options on the left.
2. Select data source from menu of options on left: Birth → Birth Rate
3. Then chose the following:

**1 Step 1: Select Output Measure**

**MEASURE**

Select Type of Rate: Fertility Rate - (births/total population - female/15-44)

The crude birth rate is the number of live births that occurred per unit of population in a selected unit of female population age 15-44 in a selected location and time period. Refer to our technical...

**2 Step 2: Select birth characteristics**

**TIME PERIOD OF BIRTH**

Year of Birth: 2003, 2004, 2005, 2006, 2007

Month of Birth: All, January, February

**LOCATION SPECIFIC INFORMATION**

Type of Birthplace: All, Hospital, Free-standing Birth Center

Country of Birth: United States, Afghanistan

State of Birth: Only Available for Country Of Birth = United States

Birth Location: Only Available for State Of Birth = New Hampshire

MOTHER

Residence By:  County  City / Town

Residence County:    
Albany, Town of  
Albany, Town of

**3 Step 3: Select row & column grouping(s)**

GROUPING OPTIONS (OPTIONAL)

Group Columns By: Year of Birth    
(1 - Main Group)

Group Rows By: Mother Residence City    
(2 - Main Group)

Group Rows By: (none)    
(3 - Sub-Group)

**4 Step 4: Select Output Options**

Population Multiplier: 1,000    
(Births per 1,000 population)

**5 Step 5: Submit query**

4. Export table into a csv comma delimited file, and import into Excel
5. Add a new column to compute the average over the 5 years

	2003	2004	2005	2006	2007	03-07
Mother Residence City	A Births Per 1,000	B Births Per 1,000	C Births Per 1,000	D Births Per 1,000	E Births Per 1,000	$((A-E)/5)$ Average Births

6. Additional Fields to be included in the table not shown above:
  - o Municipal FIPS code
  - o County Name
  - o County FIPS code
  - o RPC Name
  - o RPC Code #

**Documentation Author:** C. Tufts, CNHRPC; M. Monahan, CNHRPC

**Variable: School Enrollment [ID# 104]**

**Description:** Total school enrollment by district by year and by school level, 2002/03 academic year through the 2011-2012 academic year. Also change in enrolment over 10 year period.

**Source\_Name:** NH Department of Education, Enrollments in New Hampshire Public Schools

**Source\_Date:** April 1, 2002-February 8, 2012

**Source\_URL:** <http://www.education.nh.gov/data/attendance.htm>

**Geography:** NH School Districts and School Administrative Units

**Methodology:**

Tables of school enrollment by district are available for download in Excel or PDF format at the NH Department of Education website. Enrollment is available by year for the past 10 years and by age group. To download data, please follow:

1. Go to <http://www.education.nh.gov/data/attendance.htm> and look for the table titled "School Administrative Unit Enrollments". Download spreadsheets from 2002/03 academic year through the 2011-2012 academic years. Spreadsheets can be downloaded as Microsoft Excel Worksheets.
2. Combine spreadsheets as shown in the sample table. For simplicity, the sample only shows the 2010-2011 and 2011-2012 academic years. Note that there are districts in SAUs 14, 21, 27, 35, 38, 43, 51, 63 that are added or removed, and new SAUs are created over the reporting period. Also, additions and changes to charter schools are frequent.
3. Add columns for Numeric Change and Percent Change to the 2011-2012 academic year columns only, as shown in the sample.

RPC and FIPS codes are not included because SAU and district coverage areas do not necessarily align with municipal boundaries. A map of SAU boundaries can be found here: [http://www.education.nh.gov/data/documents/sau\\_map.pdf](http://www.education.nh.gov/data/documents/sau_map.pdf)



**Variable: Race** [ID# 105]

**Description:** Percent total population by Race

**Source\_Name:** 2010 U.S. Census, via NH Office of Energy and Planning

**Source\_Date:** 2010

**Source\_URL:**

[http://www.nh.gov/oep/programs/DataCenter/2010Census/documents/race\\_MCD-2010.xls](http://www.nh.gov/oep/programs/DataCenter/2010Census/documents/race_MCD-2010.xls)

**Geography:** Municipality

**Methodology:**

Totals and percent of total. All data is already tabulated by municipality, need to add RPC field to Excel file, resort, and aggregate by region. Data would be more meaningful to display as percent of total population.

Fields to be included in the table:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #
- Total Population
- White - Total and Percent of Total Population
- Black or African American - Total and Percent of Total Population
- American Indian and Alaska Native - Total and Percent of Total Population
- Asian Native Hawaiian and Other Pacific Islander - Total and Percent of Total Population
- Some Other Race - Total and Percent of Total Population
- Two or More Races - Total and Percent of Total Population
- Hispanic or Latino (of any race) - Total and Percent of Total Population

**Documentation Author:** J. Czysz, NRPC

**Variable: Net Migration [ID# 106]**

**Description:** Net # of persons moving into or out of each municipality and region.

**Source\_Name:** 2010 U.S. Census, SF1 100 % Data, Table P1

**Source\_Date:** 2010

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/P1/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/P1/0400000US33.06000)

**Source\_Name:** 2000 U.S. Census, SF1 100 % Data, Table P001

**Source\_Date:** 2000

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00\\_SF1/P001/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00_SF1/P001/0400000US33.06000)

**Source\_Name:** Births – Total # by municipality 2000-2009

**Source\_Date:** 2012

**Source\_URL:** <http://nhvrinweb.sos.nh.gov/Default.aspx> (registration and login required)

**Source\_Name:** Deaths – Total # by municipality 2000-2009

**Source\_Date:** 2012

**Source\_URL:** Data must be special requested from NH DHHS to obtain the total number NH Resident deaths by municipality. The state total annual deaths may be obtained from the same database as births.

**Geography:** Municipality, Aggregated to RPC

**Methodology:**

Download 2000 and 2010 total population by municipality

To Download all births from 2000 to 2010, go to the New Hampshire Vital Records Information Network Web Query site, select Births: General: Birth from the list of Queries on the left. Then in the step by step selection process - select Population: NH Residents; year of birth 2000-2009; month of birth: all; type of birthplace: all; Country of Birth: all; Mother Race and Ethnicity: any; Age: all; Education: all; Residence: city/town; residency county: all; Father Race and Ethnicity: any, age all, education all; Select All for Mother Married, Infant Weight and Sex, and Plurality. Grouping Options: Columns by Year of Birth, Rows by Mother Residence City. Then click Results. Export to Excel and Sum the total number of births from 200 to 2009 by municipality.

The 10 year total municipal net migration is calculated as the total 2010 population for the selected geography minus the 2000 population and natural population change, where the natural population change is the total number of births that occurred between the two censuses minus the total number of deaths for the time period. More simply, it is calculated as follows:

Community	A 2000 Population	B 2010 Population	C 2000-2009 Births	D 2000-2009 Deaths	E 2000-2009 Natural Population Change	Total Net Migration
Muni's	#	#	#	#	= C - D	= B - (A+E)
Region						

This process could be repeated using the annual population estimates along with annual birth and death data, however, given that the population between Censuses is only an estimate, the net migration rate would not be reliable for municipalities.

Additional Fields to be included in the table not shown above:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

**Documentation Author:** J. Czysz, NRPC

**Variable: Projected Population [ID# 107]****Description:** Total and growth rate**Source\_Name:** NH Population Projections, NH's RPCs (RLS Demographics, Inc.)**Source\_Date:** Under development – expected spring/summer 2013**Source\_URL:** **Source will be added once available****Geography:** NH, Counties and Municipalities**Methodology:**

Projections are currently under development and being coordinated by CNHRPC. The final projections will have total populations for the state, counties and municipalities. Projections will be tabulated using the cohort component method at the county level and aggregated to create the state total projection. To generate the municipal projections of total population, the consultant will distribute the county projected growth to municipalities using a yet to be finalized methodology. Likely, this process will begin by distributing to each municipality a share of the total growth based on its share of the county population or historic county population change and adjusting to reflect known conditions that may impact or change that rate of growth. Municipal projections will not be available by age cohort.

Once the projections are complete, the total projected population included in regional plans should be by municipality and aggregated to the RPC total. Totals will be from 2010-2040 and at five year increments. Percent Change (%) is calculated as:  $((P_{2040} - P_{2010}) / P_{2010}) * 100$ ; where  $P_{2040}$  is the Total Population in 2040 and  $P_{2010}$  is the Total Population in 2010. The 2010 Population is derived from the 100% count 2010 US Census and 2040 Population from the projections. Annualized Growth Rate is  $r\% = (((F/P)^{(1/n)} - 1) * 100$  Where:

r = annualized growth rate

F= Future or projected total, here  $F = P_{2040}$

P=Present, current population, here  $P = P_{2010}$

n = number of years between F and P, here  $n=30$

Additional Fields to be included in the data not indicated above:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

**Documentation Author:** J. Czysz, NRPC

**Variable: Housing Units Supply-historic [ID# 108]**

**Description:** Total and growth rate

**Source\_Name:** 2010 U.S. Census, SF1-100% Data, Table H1

**Source\_Date:** 2010

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/H1/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/H1/0400000US33.06000)

**Source\_Name:** 2000 U.S. Census, SF1-100% Data, Table H001

**Source\_Date:** 2000

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00\\_SF1/H001/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00_SF1/H001/0400000US33.06000)

**Geography:** Municipality, Aggregated to RPC

**Methodology:**

Totals and Growth

Present data by town:

Community	Total Dwelling Units		# Change 2000 - 2010	% Change 2000-2010
	2000	2010		
Muni's	H <sub>2000</sub>	H <sub>2010</sub>	= H <sub>2010</sub> - H <sub>2000</sub>	$\frac{(H_{2010} - H_{2000})}{H_{2000}} * 100$
Region Totals				

H<sub>2000</sub> is the total number of dwelling units downloaded from the 2000 U.S. Census, SF1-100% Data, Table H001, by municipality and aggregated by RPC.

H<sub>2010</sub> is the total number of dwelling units downloaded from the 2010 U.S. Census, SF1-100% Data, Table H1, by municipality and aggregated by RPC.

$$\% \text{ Change } 2000-2010 = \frac{(H_{2010} - H_{2000})}{H_{2000}} * 100$$

Additional Fields to be included in the table not shown above:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

**Documentation Author:** J. Czysz, NRPC

**Variable: Housing Units Supply-projected [ID# 109]****Description:** Total and Growth Rate**Source\_Name:** 1980 U.S. Census, SF1-100% Data**Source\_Date:** 2010**Source\_URL:** [ftp://ftp2.census.gov/census\\_1980/](ftp://ftp2.census.gov/census_1980/)**Source\_Name:** 2010 U.S. Census, SF1-100% Data, Table H1**Source\_Date:** 2010**Source\_URL:**[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/H1/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/H1/0400000US33.06000)**Geography:** Municipality, Aggregated to RPC**Methodology:****Step 1- Calculate the Change in Total Dwelling Units from 1980 to 2010**

See columns A-C in table below table below for details.

**Step 2- Calculate the Average 5-year Net Increase of Housing Units:**

Divide the total # of new units added between 1980 and 2010 by 6 (there are 6- five year intervals between 1980 and 2010) to derive the average historical number of new housing units created within a five year interval. (Column D in the table below)

**Step 3- Calculate the 5-year Total Figures and Projections:**

Starting with the 2010 U.S. Census count of total dwelling units per municipality in the first column, the projected total is equal to the previous years' total plus the projected net increase for the previous 5-years. For example, the 2015 projected total number of dwelling units is equal to the 2010 total plus the 5-year Net Increase. Continue process through to 2040 – regions can then limit or select their projection horizon as appropriate. Aggregate regional projections to the RPC level and total the projections at the RPC level. To do so, it would first be easiest to include fields for RPC and County for each Municipality, then sort by RPC and aggregate.

Additional Fields to be included in the table not shown below:

- Municipal FIPS code
- County Name
- County FIPS code
- RPC Name
- RPC Code #

	A	B	C	D	E	F	G	Continue process through to 2040 – regions can then limit or select their projection horizon as appropriate.
Community	Total Housing Units 1980	Total Housing Units 2010	# Change 1980 - 2010	Average 5 year net increase	Projected Housing Units 2015	Projected Housing Units 2020	Projected Housing Units 2025	
Muni's	#	#	=B-A	=C/6	=B+D	=E+D	=F+D	
Region Totals	∑ rows above	∑ rows above	∑ rows above	∑ rows above	∑ rows above	∑ rows above	∑ rows above	

**A Word of Caution:** These are rough projections based on the assumption that the housing unit production will continue at the same rate as occurred over the past 30 years. For some parts of the state this may be optimistic, for others it may be pessimistic. The future need for housing units should also consider projected population and employment levels to best project *demand*.

**Documentation Author:** J. Czysz, NRPC

**Variable: Undeveloped Land Protected From Development [ID# 201]**

**Description:** Percent of municipality's land area conserved/protected as undeveloped.

**Source\_Name:** GRANIT Conservation and Protected Lands\*

**Source\_Date:** November 8, 2012

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=consnh>

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 14, 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Source\_Name:** New Hampshire Hydrography Dataset – NHDArea and NHDWaterbody

**Source\_Date:** January, 2006

**Source\_URL:** <http://www.granit.sr.unh.edu/cgi-bin/nhsearch?dset=nhhd/nh>

**Geography:** Municipality

**Methodology:**

\*Note – Regional Planning Commissions may add additional lands not in GRANIT.

In GIS, apply a definition query to NHDWaterbody to select only lakes/ponds and reservoirs greater than 10 acres in size (or 0.0404686 km<sup>2</sup>). Perform a clip operation on Political Boundaries using both NHDArea and NHDWaterbody – this will clip out public water areas in each municipality, leaving only the land area. Calculate the acreage of the land area in each municipality. Add a field to the original Political Boundaries and transfer the land area acreage from the clipped file field to the Political Boundaries field.

Perform a clip operation on Conservation and Public Lands using both NHDArea and NHDWaterbody – this will clip out public water areas in the Conservation and Public Lands data, leaving only the land area. Query the conservation lands data set on LEVEL = 1, 2, or 3 to extract features with appropriate protection levels. Intersect the Conserved & Public Lands data and the Political Boundaries shapefile. Calculate the acreage of conservation land using Calculate Geometry in the attribute table. Summarize the area of land conserved by town.

In Excel, calculate percentage of town land area conserved by dividing conserved acres into total town land area and multiplying by 100.

A	B	C	D	E	F
Municipality	FIPS_ID	RPC_ID	Cons. Land Acreage	Town Land Acreage	%Conserved
					= (D/E)*100

Documentation Author: R. Ruppel, UVLSRPC

**Variable: Land in Current Use [ID# 202]**

**Description:** Land enrolled in Current Use by Category, acreage summarized by municipality.

**Source\_Name:** Current Use Report

**Source\_Date:** 2000, 2010, 2011

**Source\_URL:** [http://www.revenue.nh.gov/munc\\_prop/current\\_use/reports.htm](http://www.revenue.nh.gov/munc_prop/current_use/reports.htm); 2000 data provided in Excel spreadsheet from NH Department of Revenue Administration

**Geography:** Municipality

**Methodology:**

Acreages are reported by municipality in five categories: farm land, forest land, forest land with documented stewardship, unproductive and wetland.

From the Current Use reports from 2000, 2010 and most recent year (2011), the relevant fields should be compiled into an Excel spreadsheet, as follows:

A	B	C	D	E	F
Municipality	FIPS_ID	RPC_ID	Total Land Acres (2000)	Acres in Current Use (2000)	# of Total Acres in CU (2000)

G	H	I	J	K	L
Farm Land (2000)	Forest Land (2000)	Forest Land with Documented Stewardship (2000)	Unproductive (2000)	Wetland (2000)	<Repeat for 2010, 2011>

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: Change in Land Cover, 2001-2006** [ID# 203]

**Description:** Change in Land Cover, 2001-2006, acreage summarized by municipality.

**Source\_Name:** National Land Cover Dataset 2006

**Source\_Date:** 2011

**Source\_URL:** [http://www.mrlc.gov/nlcd06\\_data.php](http://www.mrlc.gov/nlcd06_data.php)

**Source\_Name:** National Land Cover Dataset 2001

**Source\_Date:** 2011

**Source\_URL:** [http://www.mrlc.gov/nlcd01\\_data.php](http://www.mrlc.gov/nlcd01_data.php)

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 14, 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Regional Planning Commission

**Methodology:**

In GIS, use the Political Boundaries layer to create a new shapefile of RPC boundaries.

Run the below processes for each RPC in NH, once for the 2001 land cover data, and once for the 2006 data. Name the resulting raster datasets to include the year and RPC number, e.g. 01LC1 would be an appropriate title for the 2001 land cover dataset displaying only the area of North Country Council.

To create a land cover change raster for each RPC's region:

1. Add image (NLCD raster) to ArcMap.
2. Zoom into the area of interest (in this case, each RPC).
3. Export area of interest to GRID
  - Extent = Data Frame (Current)
  - Spatial Reference = Raster Data (Original)
  - Rename the file name and select a desired output file format (i.e. GRID)
  - Click Save. Ignore the "Failed to Save Raster Dataset" message. Click OK.
4. In ArcCatalog, go to ArcToolbox, Data Management Tools, Raster, Raster Properties, Build Raster Attribute Table.
  - Input grid file
  - Check "Overwrite"
  - Run
5. In ArcCatalog, go to ArcToolbox, Data Management Tools, Joins, Join Field.
  - Input dataset = grid file
  - Input join field = value
  - Join table = (Source NLCD image)
  - Output join field = value
  - Join fields

Check – Red, Green, Blue, Opacity, Land cover  
Run

When Steps 1-5 have been completed for the 2001 and 2006 National Land Cover Datasets, there will be 18 raster files, two for each RPC.

Open Map Algebra → Raster Calculator, and use the formula:

- $(01LC * 100) + 06LC$ .
- 01LC represents the 2001 NLCD for a specific RPC.
- 06LC represents the 2006 NLCD for that same RPC.
- The resulting dataset should include four digit values, where the first two digits are the NLCD value in 2001 and the second two digits are equal to the NLCD value in 2006.

Extract each 0106change raster data set by mask using the appropriate RPC.

Project resulting raster files to NAD\_1983\_StatePlane\_New\_Hampshire\_FIPS\_2800\_Feet

To calculate the change in acreage, use formula  $(COUNT * 30^2) * 0.00024711$

If generalized land cover change is necessary, reclassify values using Spatial Analyst Tools → Reclass → Reclassify.

Export table for use in Excel. Summarize by series (1\_, 2\_, 3\_, 4\_, 7\_, 8\_, 9\_), e.g. forest to developed, agriculture to forest, etc.

A	B	C	D	E
RPC_ID	Change from 1 to 2	Change from 1 to 3	Change from 1 to 4	etc.

11	Open Water
12	Perennial Ice/ Snow
21	Developed, Open Space
22	Developed, Low Intensity
23	Developed, Medium Intensity
24	Developed, High Intensity
31	Barren Land (Rock/Sand/Clay)
41	Deciduous Forest
42	Evergreen Forest
43	Mixed Forest
51	Dwarf Scrub*
52	Shrub/Scrub
71	Grassland/Herbaceous
72	Sedge/Herbaceous*
73	Lichens*
74	Moss*
81	Pasture/Hay
82	Cultivated Crops
90	Woody Wetlands
95	Emergent Herbaceous Wetlands

\* Alaska only

For more information on the land cover classifications used by the NLCD, refer to [http://www.mrlc.gov/nlcd06\\_leg.php](http://www.mrlc.gov/nlcd06_leg.php).

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: Key Destinations within ½ mile of Community Center Areas**

[ID# 204]

**Description:** Percentage of Key Destinations located within ½ mile of Community Center Areas, summarized by municipality. (Note - ½ mile represents a “walkable” distance, per NHDES recommendation.)

**Source\_Name:** Key Destinations

**Source\_Date:** 2006

**Source\_URL:**

<http://www.granit.unh.edu/data/search?sterm3=destinations&fieldname3=themekey>

**Source\_Name:** Community Anchor Institutions

**Source\_Date:** 2012

**Source\_URL:** via GRANIT staff from NH Broadband Mapping and Planning Program

**Source\_Name:** Community Center Areas

**Source\_Date:** 2006

**Source\_URL:**

<http://www.granit.unh.edu/data/search?dset=communitycenterareas&#47;nh>

**Geography:** Municipality

**Methodology:**

In GIS, update Key Destinations shapefile based on 2012 Community Anchor Institutions data for K-12 schools, higher education facilities, municipal offices, libraries, community facilities, athletic/recreation facilities, and hospitals.

In GIS, query by location to select key destinations located within ½-mile of Community Center Areas. Add a text field to the Key Destinations attribute table, name it “In\_CCA” and populate selected records with a “Y.”

In Excel, open both polygon and point Key Destinations attribute table and combine into one spreadsheet. Calculate % of Key Destinations located within Community Center Areas (i.e. Key Destinations with a “Y” in “In\_CCA” field) for each municipality.

A	B	C	D	E	F
Municipality	FIPS_ID	RPC_ID	% Key Destinations in ½ Mile of CCAs	# Key Destinations in ½ Mile of CCAs	Area (mi <sup>2</sup> ) of Community Center Areas + ½ Mile

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: Population Density [ID# 205]****Description:** Population Density by municipality, persons per square mile**Source\_Name:** U.S. Census, Population of NH Towns and Counties, 1960-2010**Source\_Date:** March 31, 2011**Source\_URL:** <http://www.nh.gov/oep/programs/DataCenter/2010Census/index.htm>**Source\_Name:** GRANIT New Hampshire Political Boundaries**Source\_Date:** April 14, 2009**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>**Source\_Name:** New Hampshire Hydrography Dataset – NHDArea and NHDWaterbody**Source\_Date:** January, 2006**Source\_URL:** <http://www.granit.sr.unh.edu/cgi-bin/nhsearch?dset=nhhd/nh>**Geography:** Municipality**Methodology:**

In GIS, apply a definition query to NHDWaterbody to select only lakes/ponds and reservoirs. Perform a clip operation on Political Boundaries using both NHDArea and NHDWaterbody – this will clip out water areas in each municipality, leaving only the land area. Calculate the acreage of the land area in each municipality. Add a field to the original Political Boundaries and transfer the land area acreage from the clipped file field to the Political Boundaries field.

In Excel, combine 2010 population counts with municipal land area. Calculate municipal land area in square miles and divide population by area to determine population density.

A	B	C	D	E	F
Municipality	FIPS_ID	RPC_ID	2010 Population	Town Land Area (mi <sup>2</sup> )	Population Density
					= D/E

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: % Population and % Housing Units within ½ Mile of CCA**

[ID# 206]

**Description:** Percentage of Population and Housing Units located within ½ mile of Community Center Areas, summarized by municipality. (Note - ½ mile represents a “walkable” distance, per NHDES recommendation.)

**Source\_Name:** U.S. Census, 2000 Population and Housing Unit by Census Block

**Source\_Date:** 2001

**Source\_URL:** <https://data2.nhgis.org/main>

**Source\_Name:** U.S. Census, 2010 Population and Housing Unit by Census Block

**Source\_Date:** 2011

**Source\_URL:** <http://www.census.gov/cgi-bin/geo/shapefiles2010/layers.cgi>

**Source\_Name:** Community Center Areas

**Source\_Date:** 2006

**Source\_URL:**

<http://www.granit.unh.edu/data/search?dset=communitycenterareas&#47;nh>

**Geography:** Regional Planning Commission

To download data from the National Historic GIS Database, use search parameters Geographic Level= block, and Years= 2000, selecting New Hampshire from the *GIS boundary files tab*. Select households and populations from Topics, and add the Total Population and Total Households datasets from *the source tables tab* to data cart. Downloaded tables can be joined to the GIS block boundaries in ArcGIS.

In GIS, calculate area of each census block, then perform a Clip operation on census blocks located within ½-mile of Community Center Areas. Add a new field and calculate the census block area inside the CCA+1/2-mile, then calculate the percentage of the census block inside the CCA+1/2-mile as a decimal. (If less than 10% of the census block is located within the CCA+1/2-mile, remove it from the analysis.)

Add two new fields and calculate an estimate of the population and housing units within the CCA+1/2-mile portion of each census block by multiplying total population and housing units by the percentage of the census block inside the CCA+1/2-mile.

In Excel, report out on the data as shown below.

A	B	C	D	E	F
RPC_ID	RPC_Name	2000 Population Total	2000 Population in CCA+1/2- mile	% 2000 Population in CCA+1/2- mile	Repeat for 2010 population and 2000/2010 housing units

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: High-hazard dams [ID# 207]**

**Description:** Number of high-hazard and significant-hazard dams in each municipality.

**Source\_Name:** New Hampshire Dam Bureau

**Source\_Date:** 2012

**Source\_URL:** provided by Nancy McGrath, NHDES Dam Bureau

**Geography:** Municipality

**Methodology:**

In GIS, query the NH dams data set on HAZCL = H to extract features with high hazard classification. Then query the NH dams data set on HAZCL = S to extract features with significant hazard classification.

OR

In Excel, filter the NH dams data set on HAZCL = H to extract features with high hazard classification. Then filter the NH dams data set on HAZCL = S to extract features with significant hazard classification.

Calculate number of high-hazard and significant-hazard dams within each municipality.

A	B	C	D	E
Municipality	FIPS_ID	RPC_ID	# of High-Hazard Dams in Municipality	# of Significant-Hazard Dams in Municipality

Also, list the ID number and name of high-hazard dams in each municipality.

A	B	C	D	E
Municipality	FIPS_ID	RPC_ID	Dam ID #	Dam Name

Also, list the ID number and name of significant-hazard dams in each municipality.

A	B	C	D	E
Municipality	FIPS_ID	RPC_ID	Dam ID #	Dam Name

This metric may be most useful as a map graphic, showing the location of high-hazard and significant-hazard dams – NHDES will recommend a sample map product with appropriate language.

**Documentation Author:** R. Ruppel, UVLSRPC

**Variable: Median Home Purchase Price [ID# 301]**

**Description:** Median purchase price of a home by Region in 2012. Information provided by the N.H. Department of Revenue, PA-34 Dataset.

**Source\_Name:** Median Home Purchase Price

**Source\_Date:** 2012

**Source\_URL:** [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm)

**Geography:** Region, Municipality optional if data is available. (Note: samples sizes of less than 50 are considered unreliable).

**Methodology:**

1. Go to the website: [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm) and select the "Housing Data" link. Select "Purchase Price Data" from the top row of tabs and then select "Purchase Price Data: Median Purchase Price" on the left hand side of the webpage. Select your geography using the drop down menus and select RPC for the region in interest. NOTE: As an optional metric, you may select by town if the information is available.
2. In the first table, you will find Median Purchase Price (shown below). Download the table in either Excel format or PDF format by right clicking the spreadsheet. Collect data from the "All Homes" category for the year 2012.
3. Create an Excel table for each region's Median Home Price for 2012 as shown in the Example below.

Example:

<u>RPC Name</u>	<u>RPC Code</u>	<u>All Homes</u>	
		<u>Median Purchase Price</u>	<u>Sample Size</u>
<b>NCC</b>	<b>1</b>	\$ 130,000	633

NOTE: This data set provides an estimate of the median sale price of existing and new primary homes in New Hampshire. A primary home is defined as a single family home occupied by an owner household as their primary place of residence. Multi-family rental housing, seasonal or vacation homes and manufactured housing are not included in the analysis of this data. (New Hampshire Housing)

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Median Rental Cost [ID# 302]**

**Description:** Median gross rent by Region. Information is provided by the N.H. Department of Revenue, PA-34 Dataset.

**Source\_Name:** Median Gross Rental Cost

**Source\_Date:** 2012

**Source\_URL:** [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm)

**Geography:** Region, Municipality optional if data is available. (Note: samples sizes of less than 50 are considered unreliable).

**Methodology:**

1. Go to the website: [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm) and select the "Housing Data" link. Select "Rental Price Data" from the top row of tabs and then select "Rental Cost Data: Median Gross Rent" on the left hand side of the webpage. Select your geography using the drop down menus and select RPC for the region in interest. NOTE: As an optional metric, you may select by town if the information is available, however it is advised to avoid using data with sample sizes of 50 or smaller.
2. Download the "Median Rent" table by right clicking the spreadsheet. Collect 2012 data from the "All Units" Category for each Region.
3. Create an Excel table with the information shown in the Example below:

**EXAMPLE**

<u>RPC Name</u>	<u>RPC CODE</u>	<u>All Units</u>	
		<u>Median Gross Rental Cost</u>	<u>Sample Size</u>
<b>NCC</b>	<b>1</b>	\$ 716	784

NOTE: This data does not reflect the change in the Town of Windham's RPC affiliation from Rockingham Planning Commission to Southern NH Planning Commission. The 2013 data will reflect this change, however.

This data set provides a median gross rental cost for rental housing in the state of New Hampshire, broken down into Regional Planning Commission (RPC) boundaries. Gross rental cost is the rent charged by the landlord plus dollar allowances for each utility paid by the tenant. Units in public housing, units with tenant income restrictions and/or rent restrictions, and units in projects that received public funding or tax credits are not included in this survey. (New Hampshire Housing)

**Documentation Author:** S. Waleryszak, SWRPC

## Variable: Housing Affordability[ID# 303]

**Description:** Percentage of Renter Units and Owner Units affordable to households earning 80 percent of the Housing and Urban Development Area Median Family Income (HAMFI).

**Source\_Name:** Percentage of Renter and Owner-Occupied Housing Units Affordable to Households Earning 80% of the HAMFI.

**Source\_Date:** 2005-2009 American Community Survey (ACS) data

**Source\_URL:** <http://egis.hud.gov/cpdmaps/>

**Source\_Name:** Number of occupied housing units by tenure and household size

**Source\_Date:** 2005-2009 American Community Survey (ACS) data

**Source\_URL:** <http://egis.hud.gov/cpdmaps/>

**Geography:** Region wide by selecting each Municipality in the Regional Planning Commission boundaries.

### Methodology:

1. Go to <http://egis.hud.gov/cpdmaps/>
2. Close the "Guide Me" window that pops up on the screen.
3. Use the map tools to zoom to your region.
4. Chose the "Map Selection Button"  (you may have to expand it from the top left corner). Next, navigate to Boundaries then Grantee Boundaries and check "CoC and "UGLG" to view the boundaries of the towns and cities.
5. Click on the Reports icon on the toolbar on the top of the screen.
6. In the Target Jurisdiction drop-down menu, select Municipalities as your geography:
7. Use the drawing controls in the window to select the municipalities in your region.
8. Click the Next button in the lower-right corner of the Reports window.
9. On the next screen, you will be prompted to choose an optional set of reference data to include in the report. "None (default)" should be selected; ensure that it is and then click the Next button.
10. On the next screen, you will be prompted to choose the data that you want to include in the report. Click the Uncheck All button, and then click the check boxes next to Housing Supply, then click the Next Button.
11. On the next screen, you can enter a customized title for the report if you wish, and then click the Finish button in the lower right-hand corner of the Reports window. Your browser will download an Excel file of the report. (Note: if the download does not begin, you may need to turn of the pop-up blocker on your website.
12. Open the Excel file and locate the table showing the number of Owners and Renters that fall within the category of 80% HAMFI.
13. Locate the table: Total Number of occupied housing units by tenure and household size for Owner and Renter.

## Calculations

1. Divide the total number of rental housing units affordable to households earning 80% of the HAMFI by the total number of rental households to calculate the percentage.
2. Divide the number of owner-occupied housing units affordable to households earning 80% of the HAMFI by the total number of owner-occupied housing units to calculate the percentage.

### EXAMPLE:

#### Southwest Region Planning Commission

- Percentage of Owner-Occupied Housing Units affordable to household earning 80% of the HAMFI:  $4,552/29,495 \times 100 = 15.4\%$
- Percentage of Renter-Occupied Housing Units affordable to households earning 80% of the HAMFI:  $4,887/9,350 \times 100 = 52.3\%$

	<b>SWRPC</b>	<b>4</b>
Total Owner-Occupied Housing Units	<b>29,495</b>	
Total Renter-Occupied Housing Units	<b>9,350</b>	
Owner-Occupied Units Affordable to 80% OF HAMFI	<b>4,552</b>	
Renter-Occupied Units Affordable to 80% of HAMFI	<b>4,887</b>	
Percent of Owner-Occupied Housing Units Affordable to Households Earning 80% of HAMFI	<b>15.4%</b>	
Percent of Renter-Occupied Housing Units Affordable to Households Earning 80% of HAMFI	<b>52.3%</b>	

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Number of Assisted Housing Units**[ID# 304]

**Description:** Number of “assisted housing” units in a particular geographic area. Data provided by the New Hampshire Housing Finance Authority.

**Source\_Name:** Total Number of Assisted Housing Units

**Source\_Date:** December 4, 2012

**Source\_URL:** [http://www.nhhfa.org/rent\\_dah.cfm](http://www.nhhfa.org/rent_dah.cfm)

**Geography:** Municipality

**Methodology:**

1. Go to [http://www.nhhfa.org/rent\\_dah.cfm](http://www.nhhfa.org/rent_dah.cfm) and download the “Printable Directory of Assisted Housing (with Accessible Unit Listing)” Microsoft Word document.
2. Convert this Microsoft Word document into a spreadsheet using Microsoft Excel so that the fields are separated into columns. (Complete Excel file can be obtained by calling NH Housing).
3. Geocode the Housing Units based on the address data in the Excel table using GIS.
4. Using GIS, calculate the total number of Assisted Housing units per town.

**NOTE:** This does not include “Section 8” housing vouchers, as this information is not available.

Example: Allentown, NH

<u>Town Name</u>	<u>Town FIPS</u>	<u>County Name</u>	<u>County FIPS</u>	<u>RPC Name</u>	<u>RPC Code</u>	<u>Total Assisted Housing Units</u>
Allentown	00660	Merrimack	013	CNHRPC	5	105

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Housing Unit Vacancy Rates**[ID# 305]

**Description:** Percentage of non-seasonal vacant housing units out of the total number of housing units in a municipality.

**Source\_Name:** Vacancy Status: U.S. Census Bureau 2010 Census Summary File 1, Table QT-H1.

**Source\_Date:** April 1, 2010

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH1/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH1/0400000US33.06000).

**Geography:** Municipality

**Methodology:**

1. Copy and paste the link below into your browser:  
[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH1/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH1/0400000US33.06000).
2. "Vacancy Status" is the third heading from the top.
3. Calculate the percent vacant by following the Example below.

## EXAMPLE

Alton, NH

Total Vacant Housing Units: 2,136

Vacant Housing Units for Seasonal, Recreational, or Occasional Use: 1,928

Total Housing Units: 4,281

*Total non-seasonal housing units:  $4,281 - 1,928 = 2,353$*

$2,136 - 1,928 = 208$  Real Vacant housing units (not seasonal)

$208 / 2,353 = 0.088$

$.088 \times 100 = 8.8\%$  Real Vacancy Rate (adjusted for vacancy status due to seasonal use)

Final table will include the following fields:

- RPC Name
- RPC Code
- County Name
- County FIPS
- Municipality Name
- Town FIPS

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Housing Occupancy – Percent Year Round Owner-Occupied Housing Units [ID# 306]**

**Description:** The percent of year round owner occupied housing units out of the total of occupied housing units in a given geographic area.

**Source\_Name:** Owner Occupied Housing Units: US Census Bureau 2010 Census Summary File 1, Table QT-H3.

**Source\_Date:** April 1, 2010

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH3/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH3/0400000US33.06000).

**Geography:** Municipality

**Methodology:**

Copy and paste the link below into your browser:

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH3/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH3/0400000US33.06000).

"Owner-occupied housing units" is the third line down where you will find the whole number and the percent of the total number of occupied housing units in that particular geographic area.

**Documentation Author:** S. Waleryszak, SWRPC

## Variable: Housing Occupancy - Percent Renter-Occupied Housing Units [ID# 307]

**Source\_Name:** Renter Occupied Housing Units: US Census Bureau 2010 Census Summary File 1, Table QT-H3.

**Source\_Date:** April 1, 2010

**Source\_URL:**

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH3/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH3/0400000US33.06000).

### Methodology

Copy and paste the link below into your browser:

[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/QTH3/0400000US33.06000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_SF1/QTH3/0400000US33.06000).

Renter-occupied housing units" is the sixth line down where you will find the whole number and the percent of the total number of occupied housing units in that particular geographic area. Download data for each Municipality.

Final table will include the following fields:

- RPC Name
- RPC Code
- Municipality Name
- Town FIPS
- County Name
- County FIPS
- Number of Owner Occupied Housing Units
- Percent Owner of Total Housing Units
- Number of Renter Occupied Housing Units
- Percent Rental of Total Housing Units

**Documentation Author:** S. Waleryszak, SWRPC

**Variable:** **Total Number and Percent Change in Building Permits** [ID# 308]

**Description:** The total estimated number and percent change in building permits issued for a particular municipality. Data provided by NH Office of Energy and Planning (OEP).

**Source\_Name:** Residential Permits; Housing Units Authorized by Permit

**Source\_Date:** 2010

**Source\_URL:** <http://www.nh.gov/oep/programs/DataCenter/Housing/documents/2009housingreport.pdf>

**Source\_Name:** Building Permits Since 2000

**Source\_Date:** 2010

**Source\_URL:** [http://www.nhhfa.org/rl\\_5year.cfm](http://www.nhhfa.org/rl_5year.cfm)

**Geography:** Municipality

**Methodology:**

1. Go to the website:
2. <http://www.nh.gov/oep/programs/DataCenter/Housing/documents/2009housingreport.pdf> and [http://www.nhhfa.org/rl\\_5year.cfm](http://www.nhhfa.org/rl_5year.cfm) to view Building Permit data for 2000 – 2010. You can request a customized Excel sheet from NH Housing or Office of Energy and Planning for all of the municipalities in the state of New Hampshire.
3. Determine Annual Total and # of permits for first and second half of the decades (2000-2005; 2006-2010).
4. Use the following mathematical formula to determine percent change between the 2000-2005 period. and the 2005 -2010 period.

$$\text{Percent Change} = \frac{\text{New Value} - \text{Old Value}}{\text{Old Value}} \times 100$$

5. Present data by Municipality

Example Table:

<u>Town Name</u>	<u>Town FIPS</u>	<u>County Name</u>	<u>County FIPS</u>	<u>RPC Name</u>	<u>RPC Code</u>	<u>2010</u>
Acworth	00260	Sullivan	019	UVLSRPC	3	6

<u>Town Name</u>	<u>Town FIPS</u>	<u>County Name</u>	<u>County FIPS</u>	<u>RPC Name</u>	<u>RPC Code</u>	<u>2000-2005</u>	<u>2005-2010</u>	<u>PERCENT CHANGE</u>
Acworth	00260	Sullivan	019	UVLSRPC	3	46	34	-26.1%

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Percent Change in Median Home Price**[ID# 309]

**Description:** The percent change in Median Home Prices between 2005 and 2012.

**Source\_Name:** Median Home Purchase Price

**Source\_Date:** April 2012

**Source\_URL:** [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm)

**Geography:** Region, Municipality optional if data is available. (Note: samples sizes of less than 50 are considered unreliable).

**Methodology:**

1. Go to the website: [http://www.nhhfa.org/rl\\_demographic.cfm](http://www.nhhfa.org/rl_demographic.cfm) and select the "Housing Data" link. Select "Purchase Price Data" from the top row of tabs and then select "Purchase Price Data: Median Purchase Price" on the left hand side of the webpage. Select your geography using the drop down menus and select RPC for the region in interest. NOTE: As an optional metric, you may select by town if the information is available, however it is advised to avoid using data with sample sizes of 50 or smaller.
2. In the first table, you will find Median Purchase Price (shown below). Download the table in either Excel format or PDF format by right clicking the spreadsheet. Collect data from the "All Homes" category for the year 2012.
3. Calculate the percent change from 2005 – 2012. The reason for these two periods is 2005 was before the peak of the "housing bubble" and 2012 is the most current data.

**EXAMPLE**

Central Region Planning Commission

2012 = \$179,900 (New Value)

2005 = \$232,000 (Old Number)

$$\text{Percent Change} = \frac{\text{New Value} - \text{Old Value}}{\text{Old Value}} \times 100$$

Percent Change =  $((179,900 - 232,000) / 232,000) \times 100 = 22.5\%$  Decrease in Median Home Price between 2005 and 2012.

<b>RPC Name</b>	<b>RPC Code</b>	<b>2005*</b>	<b>2012</b>	<b>Percent Change</b>
<b>CNHRPC</b>	<b>5</b>	\$ 232,000	\$ 179,900	-22.5%

\*NOTE: This data may not reflect historical changes in town affiliations with Regional Planning Commissions. This data set provides an estimate of the median sale price of existing and new primary homes in New Hampshire. A primary home is defined as a single family home occupied by an owner household as their primary place of residence. Multi-family rental housing, seasonal or vacation homes and manufactured housing are not included in the analysis of this data. (New Hampshire Housing)

**Documentation Author:** S. Waleryszak, SWRPC

## Variable: Number of Assisted Housing Units Near Major Employers

[ID# 310]

**Description:** The number of assisted housing units near Major Employer Centers according to The U.S. Census Bureau's Local Employment Dynamics (LED) On The Map program. **NOTE:** Additional effort on the part of the RPC will be required to determine exactly what "Near Major Employers" means to your region based on the information provided. You will find additional instructions in the "ReadMe.txt" file in the RPC folders that will be uploaded as part of the data submission.

**Source\_Name:** Assisted Housing; Provided by the New Hampshire Housing Finance Authority

**Source\_Date:** December 4, 2012

**Source\_URL:** [http://www.nhhfa.org/rent\\_dah.cfm](http://www.nhhfa.org/rent_dah.cfm)

**Geography:** Municipality

**Source\_Name:** On The Map; U.S. Census Bureau

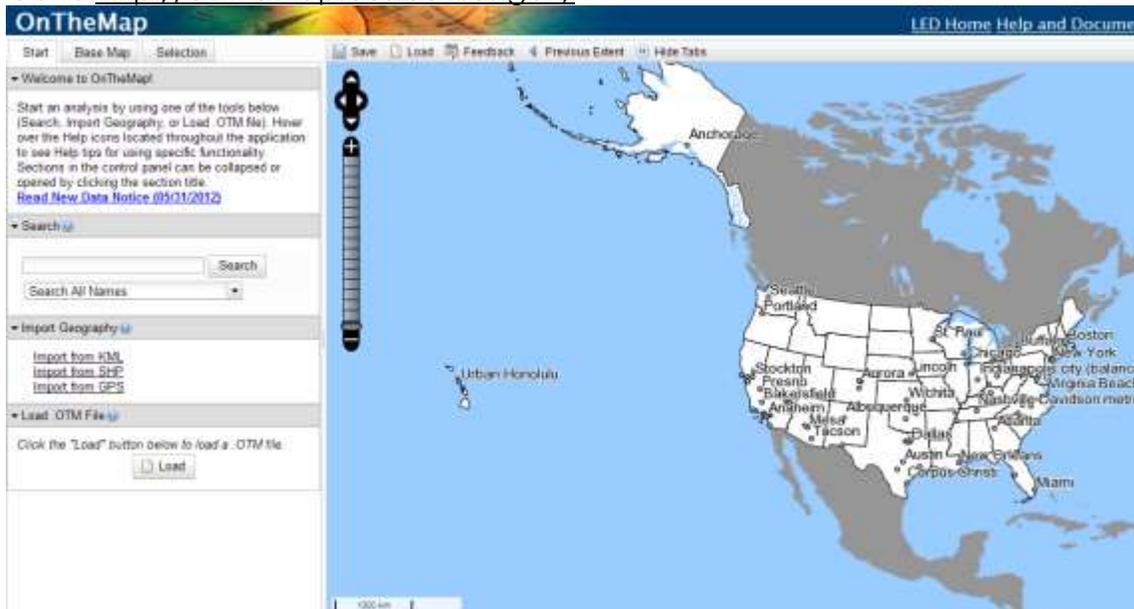
**Source\_Date:** 2012

**Source\_URL:** <http://onthemap.ces.census.gov/>

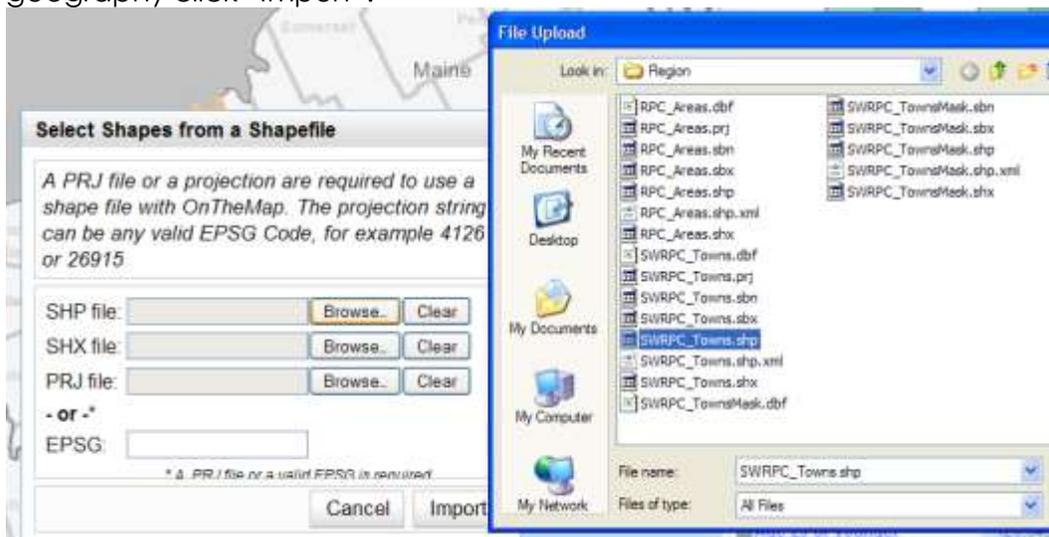
**Geography:** Region, you can choose municipality as an optional method.

### Methodology:

1. Go to [http://www.nhhfa.org/rent\\_dah.cfm](http://www.nhhfa.org/rent_dah.cfm) and download the "Printable Directory of Assisted Housing (with Accessible Unit Listing)" Microsoft Word document.
2. Convert this Microsoft Word document into a spreadsheet using Microsoft Excel so that the fields are separated into columns. (Excel can be obtained by calling NH Housing).
3. Using GIS, geocode the Housing Units based on the address data in the Excel table using GIS. (GIS Shapefile can be obtained by contacting SWRPC).
4. Go to <http://onthemap.ces.census.gov/>



- In order to gather this information for your region, you must select an option under "Import Geography". You will have the option to import your RPC's towns in either a KML, SHP, or GPS format. When importing from a shapefile, you will need to choose the .shp; .shx; and .prj of the RPC shapefile. Once you have imported your proper geography click "Import".



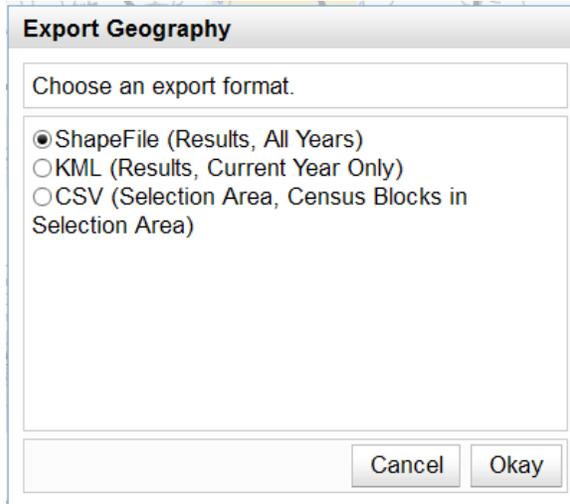
- Next, click "Select All Polygons" from the options on the left. The select "Continue with Selected Features". In the upper left hand corner select "Confirm Selection". A pop up will come up displaying information about your Selection Area. Click "Perform Analysis on Selection Area".
- Select "Work"; Select Area Profile; Choose 2010; and Primary Jobs from the categories shown below and click "Go!".

### Analysis Settings

#### Area Profile Analysis in 2010 by Primary Jobs

<p><b>Home/Work Area</b></p> <p>Determines whether the selection area is analyzed on where workers live ("Home") or where workers are employed ("Work").</p> <p><input type="radio"/> Home</p> <p><input checked="" type="radio"/> Work</p>	<p><b>Analysis Type</b></p> <p>Determines the type of results that will be generated for the selected area.</p> <p><input checked="" type="radio"/> <b>Area Profile</b></p> <p>Labor Market Segment: All Workers</p> <p><input type="radio"/> <b>Area Comparison</b></p> <p>Areas to Compare: Places (Cities, CDPs, etc.)</p> <p>Labor Market Segment: All Workers</p> <p><input type="radio"/> <b>Distance/Direction</b></p> <p><input type="radio"/> <b>Destination</b></p> <p>Destination Type: Places (Cities, CDPs, etc.)</p> <p><input type="radio"/> <b>Inflow/Outflow</b></p> <p>Note: Home/Work choice does not affect results</p>	<p><b>Year</b></p> <p>Determines the year(s) of data that will be processed in the analysis.</p> <p><input checked="" type="checkbox"/> 2010</p> <p><input type="checkbox"/> 2009</p> <p><input type="checkbox"/> 2008</p> <p><input type="checkbox"/> 2007</p> <p><input type="checkbox"/> 2006</p> <p><input type="checkbox"/> 2005</p> <p><input type="checkbox"/> 2004</p> <p><input type="checkbox"/> 2003</p> <p><input type="checkbox"/> 2002</p>	<p><b>Job Type</b></p> <p>Determines the scope of jobs that will be processed in the analysis.</p> <p><input type="radio"/> All Jobs</p> <p><input checked="" type="radio"/> Primary Jobs</p> <p><input type="radio"/> All Private Jobs</p> <p><input type="radio"/> Private Primary Jobs</p>
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8. On the left hand side of the webpage you will want to click "Zoom to Selection" if you have not already done so.
9. Use the options on the left side of the screen under "Report/Map Outputs", select "Export Geography". You will be given the option to export to either a Shapefile or KML.



10. Import the geocoded Assisted Housing data into ArcGIS and overlay the two datasets.
11. Each region will be responsible for determining which areas constitute as being "major employment centers" based on the jobs per square mile figures, which can be found in the "thermals\_2010\_legend.csv" file, or when you drag the "thermals\_2010\_gif.lyr" into GIS. Calculate the number of Assisted Housing units by performing an analysis of the number of units that fall within the determined area or distance of major employers.

The result will be two geographic data sets: Assisted Housing shapefile for the State (which you can query using the RPC Code); the OnTheMap exported geography containing the thematic data layer showing jobs per square mile as well as a point shapefile showing business location data mapped by Census Block. In the "Points\_2010" shapefile - Total Employees/Jobs are under the heading of c000 in the shapefile.

**Documentation Author:** S. Waleryszak, SWRPC

**Variable: Gasoline and Diesel Consumption**[ID# 401]

**Description:** % Change in gasoline and diesel consumption over time.

**Source\_Name:** US Department of Transportation; Office of Highway Policy Information; Highway Statistics Series

**Source\_Date:** Last Updated June 25, 2012

**Source\_URL:** [http://www.google.com/publicdata/explore?ds=gb66jodhlsaab\\_](http://www.google.com/publicdata/explore?ds=gb66jodhlsaab_)

**Geography:** Statewide dataset

**Methodology:**

Year and Gallons of Gasoline and Gallons of Diesel were gathered from the listed website and recorded in the attached spreadsheet.

% change in gasoline was calculated by 1 year, by 5 years, and by 10 years.

% change in Diesel was calculated by 1 year, by 5 years, and by 10 years.

$$\% \text{ Change over Time} = \left( \frac{\text{New Year Data} - \text{Old Year Data}}{\text{Old Year Data}} \right) \times 100$$

**Documentation Author:** Amy Kizak, SNHPC

Year	% Change of Gasoline over time				% Change of Diesel over time			
	Gallons of Gas	% Change By Year	% Change by 5 years	% Change by 10 years	Gallons of Diesel	% Change By Year	% Change by 5 years	% Change by 10 years
1950	128,140,000	3.74%			460,000			
1951	132,929,000	4.29%			582,000	26.5%		
1952	138,632,000	7.00%			608,000	4.5%		
1953	148,341,000	5.14%			624,000	2.6%		
1954	155,965,000	6.68%			618,000	-1.0%		
1955	166,387,000	5.91%	29.85%		1,257,000	103.4%	173.26%	
1956	176,213,000	5.07%			942,000	-25.1%		
1957	185,139,000	0.22%			1,236,000	31.2%		
1958	185,539,000	3.57%			1,473,000	19.2%		
1959	192,156,000	1.99%			1,889,000	28.2%		
1960	195,980,000	0.00%	17.79%	52.94%	2,333,000	23.5%	85.60%	407.17%
1961	195,980,000	4.52%			2,793,000	19.7%		
1962	204,833,000	5.16%			3,314,000	18.7%		
1963	215,404,000	5.62%			4,036,000	21.8%		
1964	227,518,000	4.68%			4,668,000	15.7%		
1965	238,163,000	6.87%	21.52%		5,541,000	18.7%	137.51%	
1966	254,524,000	5.43%			7,401,000	33.6%		
1967	268,352,000	9.40%			7,873,000	6.4%		
1968	293,581,000	6.93%			10,088,000	28.1%		
1969	313,931,000	7.72%			11,515,000	14.1%		
1970	338,173,000	6.59%	41.99%	72.55%	12,546,000	9.0%	126.42%	437.76%
1971	360,455,000	5.91%			15,028,000	19.8%		
1972	381,755,000	3.03%			16,373,000	8.9%		
1973	393,313,000	-3.40%			18,195,000	11.1%		
1974	379,948,000	2.53%			19,035,000	4.6%		
1975	389,555,000	6.55%	15.19%		17,937,000	-5.8%	42.97%	
1976	415,056,000	4.17%			20,467,000	14.1%		
1977	432,351,000	2.65%			21,019,000	2.7%		
1978	443,789,000	-5.69%			24,152,000	14.9%		
1979	418,547,000	-4.90%			26,386,000	9.2%		
1980	398,030,000	-2.47%	2.18%	17.70%	27,956,000	6.0%	55.86%	122.83%
1981	388,192,000	-1.59%			29,826,000	6.7%		
1982	382,003,000	3.15%			32,078,000	7.6%		
1983	394,044,000	7.78%			34,468,000	7.5%		
1984	424,697,000	2.61%			41,718,000	21.0%		
1985	435,779,000	7.60%	9.48%		43,101,000	3.3%	54.17%	
1986	468,902,000	5.84%			51,936,000	20.5%		
1987	496,305,000	3.02%			55,666,000	7.2%		
1988	511,270,000	0.61%			58,798,000	5.6%		
1989	514,367,000	-4.06%			60,266,000	2.5%		
1990	493,509,000	2.26%	13.25%	23.99%	51,759,000	-14.1%	20.09%	85.14%
1991	504,641,000	1.22%			48,895,000	-5.5%		

1992	510,788,000	1.95%			51,273,000	4.9%		
1993	520,732,000	2.65%			53,913,000	5.1%		
1994	534,520,000	3.95%			56,564,000	4.9%		
1995	555,636,000	5.03%	12.59%		63,584,000	12.4%	22.85%	
1996	583,610,000	5.28%			61,335,000	-3.5%		
1997	614,432,000	0.68%			116,402,000	89.8%		
1998	618,629,000	6.88%			103,848,000	-10.8%		
1999	661,203,000	1.27%			103,763,000	-0.1%		
2000	669,578,600	1.20%	20.51%	35.68%	99,492,000	-4.1%	56.47%	92.22%
2001	677,593,900	3.80%			100,115,000	0.6%		
2002	703,327,000	1.37%			105,418,000	5.3%		
2003	712,935,000	0.49%			102,119,000	-3.1%		
2004	716,396,000	-2.26%			112,131,000	9.8%		
2005	700,221,000	1.03%	4.58%		111,356,000	-0.7%	11.92%	
2006	707,403,000	2.07%			102,259,000	-8.2%		
2007	722,024,000	-1.80%			102,878,000	0.6%		
2008	709,052,000	-0.18%			98,975,000	-3.8%		
2009	707,791,000	0.09%			93,697,000	-5.3%		
2010	708,430,000		1.17%	5.80%	94,210,000	0.5%	-15.40%	-5.31%

**Variable: Greenhouse Gas (GHG) emissions attributed to transportation** [ID# 402]

**Description:** Percentage of GHG emissions attributed to transportation.

**Source\_Name:** EPA US GHG Inventory

**Source\_Date:** 2012

**Source\_URL:**

<http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2012-Main-Text.pdf>

**Geography:** National Statistic. No geographic component.

**Methodology:**

In the 2012 US EPA GHG Inventory report, a calculation (performed in 2010), reports the transportation sector contributed 1,834 teragrams (1 million metric tons) of GHG emissions accounting for 26.9 percent out of the major contributing sectors, Table 2-12.

Statistic reported annually.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Rail Lines Capable of 40 mph speed [ID# 403]**

**Description:** Miles of rail lines capable of 40 mph speeds.

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:** [http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs\\_performance\\_rail\\_lines\\_40mph.pdf](http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs_performance_rail_lines_40mph.pdf)

**Source\_Name:** GRANIT Railroads - Selection

**Source\_Date:** January 1, 1993

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=rr>

**Geography:** Statewide data layer – report at RPC level.

**Methodology:**

This category is classified as what is known as Class 3 Rail Line (operation of freight at 40 mph and passenger at 60 mph).

From NH DOT Scorecard Report 2011:

“In recent years, improvements in the condition of railroad lines have been attributable to upgrades in track funded by a variety of sources. For example, prior to initiation of the Downeaster Amtrak service in 2001, the Freight Main Line owned and operated by Guilford Rail System (now Pan Am Railways) was upgraded with new ties, ballast and continuous welded rail funded by the FRA. This line, with 35 miles in New Hampshire, has been primarily maintained at Class 3 since that time. The New England Central's Connecticut River line has been recently upgraded to Class 3 in part with a grant from the FRA, to allow the Amtrak Vermonter to travel at higher speeds and improve the performance of the line for freight as well. Portions of two other lines, the St. Lawrence & Atlantic and the New Hampshire Northcoast, have been upgraded to Class 3 with railroad funds and state and federal loan and grant funds.”

Download Railroads shapefile from GRANIT UNH.

Select out specific rail lines:

The New England Central Connecticut River Line: Starts at SW most point of NH and runs to White River Junction. Map reference:

[http://www.railamerica.com/Files/NECR/NECR\\_2012Feb26\\_NN.pdf](http://www.railamerica.com/Files/NECR/NECR_2012Feb26_NN.pdf)

Downeaster Amtrak: The most SE line running through Exeter and Dover, NH.

<http://www.amtrakdowneaster.com/>

Portions of St. Lawrence & Atlantic: Running through northern NH (Berlin).

[http://www.gwrr.com/operations/railroads/north\\_america/st\\_lawrence\\_atlantic\\_railroad.be](http://www.gwrr.com/operations/railroads/north_america/st_lawrence_atlantic_railroad.be)

Portions of New Hampshire Northcoast: Eastern rail line starting Somersworth & Rochester area.

<http://www.trainweb.org/nhrra/History/RR-Map.htm>

Note: the 2011 scorecard references 103 miles of rail line capable of 40 mph speed, Contact Fay Rubin for up to date data layer. ***Additional information from DOT as to what portions of the rail lines for the New Hampshire Northcoast and St. Lawrence & Atlantic lines is unavailable and the whole rail line was selected for packaging.***

[http://www.nh.gov/dot/org/commissioner/documents/2011bsc\\_executivesummarylr.pdf](http://www.nh.gov/dot/org/commissioner/documents/2011bsc_executivesummarylr.pdf)

Note: DOT has mentioned they will be working on a new database soon that will include rail line speeds as an attribute.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Red Listed Bridges [ID# 404]**

**Description:** # of Red Listed Bridges.

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/commissioner/documents/bsc\\_booklet\\_weblr.pdf](http://www.nh.gov/dot/org/commissioner/documents/bsc_booklet_weblr.pdf)

**Source\_Name:** NH DOT Ten Year Plan: NH Bridges

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/projectdevelopment/planning/typ/documents/03\\_Br\\_State\\_All\\_11-20.pdf](http://www.nh.gov/dot/org/projectdevelopment/planning/typ/documents/03_Br_State_All_11-20.pdf)

**Geography:** Municipality and Region

**Methodology:**

In 2011 NH DOT Scorecard reported 149 red listed bridges.

<http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/documents.htm>

The website above is an index for all the bridge related materials NH DOT has available. Including corresponding pdfs as well as a continually revised Google Earth Mapping Application. Request shapefile from NHDOT, select out red listed bridges if required

Note: 140 listed bridges as of April 2012

[http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/documents/nhdot\\_redlist2012-04-23.pdf](http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/documents/nhdot_redlist2012-04-23.pdf)

Refer to documents.htm for the latest updates.

Received Red Listed Bridges Point shapefile from NHDOT. Queried Red List= State Redlist and clipped to region for packaging.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Pavement Condition [ID# 405]**

**Description:** Miles of road by pavement condition.

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/commissioner/documents/2011bsc\\_executivesummarylr.pdf](http://www.nh.gov/dot/org/commissioner/documents/2011bsc_executivesummarylr.pdf)

**Source\_Name:** NH DOT Report

**Source\_Date:** 2011

**Source\_URL:** [http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs\\_performance\\_pavecond.pdf](http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs_performance_pavecond.pdf)

**Source\_Name:** NH DOT 10 year report

**Source\_Date:** Map based on 2008 data

**Source\_URL:**

[http://www.nh.gov/dot/org/projectdevelopment/planning/typ/documents/02\\_PaveCond\\_All\\_11-20.pdf](http://www.nh.gov/dot/org/projectdevelopment/planning/typ/documents/02_PaveCond_All_11-20.pdf)

**Geography:** Region

**Methodology:**

2,695 miles of state maintained roads were reported in the 2011 scorecard as pavement that was in good or fair condition.

The second source tracks how NH DOT performed this calculation that is reported every 2 years. NHDOT's metric of Ride Comfort Index (RCI) establishes limits to categorize NHDOT maintained roads, where "Good" is the equivalent of a score greater than 5, "Fair" being between 3.5 and 2.5, and "Poor" defined as less than 2.5 in the effort to measure the "roughness" of a road traveled by a motorist.

NH DOT maintained road segments with the Ride Comfort Index (RCI) attribute were received from DOT and then queried for the "Good", "Fair", and "Poor" rating intervals and selected out for each region.

Received Road Condition Line shapfile from NHDOT. Created new attribute field "Condition" and calculated "Good" as > 3.5, "Fair" as <3.5 and >2.5, and "Poor" as <2.5. Clipped to region for packaging.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Tons of freight shipped via all modes [ID# 406]**

**Description:** Number in tons

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/commissioner/documents/bsc\\_booklet\\_weblr.pdf](http://www.nh.gov/dot/org/commissioner/documents/bsc_booklet_weblr.pdf)

**Source\_Name:** NH DOT 2011 Reporting

**Source\_Date:** 2011

**Source\_URL:** [http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs\\_performance\\_totalcargoshipped.pdf](http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs_performance_totalcargoshipped.pdf)

**Geography:** Statewide statistic based off of four different categories from a number of sources that include air, railway, waterway, and motor carrier transportation. Not available by region and lacks uniformity.

**Methodology:**

In the 2011 NH DOT Scorecard report, NH DOT states a number of tons freight shipped via all modes (including air, railway, waterway, and motor carrier) is 68,677,213. Note this number is only updated every 5 years and was calculated last in 2009, even though it is reported for the year 2011. The second source includes the number breakout for each mode as well as the number of sources DOT used to get to this calculation. In addition they report this indicator may not be a good current estimation given that the calculation was performed before the current recession.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Public Transit Utilization**[ID# 407]

**Description:** Annual # of public transit passengers, # of miles served by transit.

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/commissioner/documents/2011bsc\\_executivesummarylr.pdf](http://www.nh.gov/dot/org/commissioner/documents/2011bsc_executivesummarylr.pdf) and [http://www.nh.gov/dot/org/commissioner/documents/bsc\\_booklet\\_weblr.pdf](http://www.nh.gov/dot/org/commissioner/documents/bsc_booklet_weblr.pdf)  
Pages 29 & 30

**Source\_Name:** Regional Transit Shapefiles, if available.

**Source\_Date:**

**Source\_URL:**

**Geography:** Regional

**Methodology:**

**Part 1: Annual # of public transit passengers -**

NH DOT Scorecard reported transit ridership of 3,415,291 for the year 2011.

From DOT Scorecard report 2011, describing how the data was received:

"Ridership measures one-way trips, i.e. boardings on transit vehicles. Transit systems report ridership, among other measures, to the Federal Transit Administration through the National Transit Database."

Statistic reported annually.

**Part 2: # of miles served by transit -**

Calculation based on best estimation with existing or created shapefiles of local transit providers.

<http://www.nh.gov/dot/programs/rideshare/transit.htm> NHDOT list of local transit providers. RPC's may have access to shapefiles for the organizations within their particular region, calculate out the total miles.

Received local transit shapefiles from RPC's. Merged together if multiple files. Dissolved FID. Created new attribute field MilesServe and calculated for length in miles. Clipped to region for packaging.

**Documentation Author:** Derek Serach, SNHPC

**Variable: Travel Mode Share [ID# 408]**

**Description:** Total percentage of workers commuting via walking, biking, transit, and carpooling.

**Source\_Name:** American Community Survey: Table B08301. Means of Transportation to Work for Workers 16 and Over.

**Source\_Date:** 2010

**Source\_URL:**

<http://factfinder2.census.gov>

**Geography:** Regional.

**Methodology:** Taken from HUD OSHC Guidance on Performance Measurement/Flagship Sustainability Indicators:

**“Data Elements:** All required data elements can be sourced from a single table in the ACS (or Census). In the ACS, data are found in *Table B08301. Means of Transportation to Work for Workers 16 and Over*. Data elements required are:

- Number of workers commuting by carpool
- Number of workers commuting by public transportation (excluding taxicab)
- Number of workers commuting by bicycle
- Number of workers commuting by foot (walking)
- Total number of workers
- **Step-by-step Guidance on Obtaining Data:**
  1. Go to <http://factfinder2.census.gov>
  2. In the left-hand sidebar, click on “Topics.”
  3. Under “Select Topics to add to ‘Your Selections,’” click on the plus sign next to “People.”
  4. In the expanded list of topics that appears under “People,” click on the plus sign next to “Employment.”
  5. In the expanded list of topics that appears under “Employment,” click on “Commuting (Journey to Work)”
  6. In the left-hand sidebar, click on “Geographies.”
  7. Select a geographic type from the drop-down menu. The geographic type will depend upon the scope of grant projects. In general:

c. Community Challenge grantees working on corridor- or neighborhood-scale projects will need to identify the census tracts or block groups that make up the project area using the “Address” or “Map” tabs at the top of the “Select Geographies” box. **(Census Tract Level by Region)**

i. Census tract-level data can be downloaded by selecting “Census Tract” in the “Select a geographic type” menu, selecting a state and county from the drop-down menus, and then selecting a census tract from the resulting list in the box marked “Select one or more geographic areas and click Add to Your Selections.”

ii. Block group data can be downloaded from the ACS Summary File by following the instructions in Appendix A: *Working with Census Block Group Data*.

d. Note that you can select multiple geographies from the drop-down menus by holding down the control key and clicking on multiple states, metro areas, or census tracts.

8. Click the "Add to Your Selections" button.

9. Click on "Close" in the upper-right corner of the "Select Geographies" box.

10. Scroll through the search results until you see the *Table ID B08301: Means of Transportation to Work*, and click on the table title to view the table.

a. If there are a large number of search results, you can locate the table more quickly by entering "B08301" in the "Narrow your search" box at the top of the "Search results" window.

b. Multiple results from different years and different estimates (1-year, 3-year, or 5-year) may be available for the same table. Select data from the desired year using estimate that is collected over the shortest time span (i.e., 1-year estimates are more desirable than 3- or 5-year estimates; 3-year estimates are more desirable than 5-year estimates).

c. At the top of the table view, under "Actions," click on "Download" to download the file in Excel format in order to facilitate calculations. If the data estimates download formatted as text, click the "!" error to convert them to numbers in order to facilitate calculations.

### **Basic Calculation Steps:**

1. Sum number of workers commuting by carpool, public transportation, bicycling, and walking.

2. Divide by total number of workers and multiply by 100 to calculate the percentage of workers commuting by carpool, public transportation, bicycle, and foot.

3. If using multiple census geographies, create a weighted average by multiplying the percentage of workers commuting by carpool, public transportation, bicycle, and foot within each given geographical area by the percentage of total workers within the project area that are located within that area, and summing the results across all geographic areas. For in-depth instructions on calculating weighted averages, including sample calculations, refer to the separate *Weighted Averages Calculation Worksheet* "

**Documentation Author:** Amy Kizak, Derek Serach, SNHPC

**Variable: Population with access to multi-modal transportation [ID# 409]**

**Description:** Percentage of Population with access to Multi-modal transportation.

**Source\_Name:** NH DOT 2011 Scorecard

**Source\_Date:** 2011

**Source\_URL:**

[http://www.nh.gov/dot/org/commissioner/documents/2011bsc\\_executivesummarylr.pdf](http://www.nh.gov/dot/org/commissioner/documents/2011bsc_executivesummarylr.pdf)

**Source\_Name:** NH DOT Report

**Source\_Date:** 2011

**Source\_URL:** [http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs\\_performance\\_multimodaltrans.pdf](http://www.nh.gov/dot/org/commissioner/balanced-scorecard/department/documents/bs_performance_multimodaltrans.pdf)

**Source\_Name:** 2010 Census Data – Population & NHDOT Multimodal Terminals

**Source\_Date:**

**Source\_URL:**

**Geography:** Statewide statistic.

**Methodology:**

In the 2011 NH DOT Scorecard report, it is reported that 24 percent of the state's population has access to multi-modal transportation.

The second source describes the GIS calculation NH DOT conducted using 2010 Census data to calculate the population within a quarter (.25) mile of multimodal terminals.

Buffered .25 miles for local transit files clipped to region. Selected by location intersecting Census Tract Blocks 2010 and exported into a separate shapefile.

**Calculation:** exported tables into excel to calculate total population of region vs. population within Census Tract Blocks that intersected local transit for that particular region to arrive at a percentage. Total Population for Selected Local Transit Tract Blocks/Total Population for Region X 100. Total Population was estimated using selection and census tract block data.

**Documentation Author:** Derek Serach, SNHPC

## Variable: Public Sewer Systems, Private Septic Systems, Public Water Systems, and Private Well Systems [ID# 501]

**Description:** Total Users on Public Sewer Systems, Private Septic Systems, Public Water Systems, and Private Well Systems

**Source\_Name:** USGS New Hampshire Water Use Data

**Source\_Date:** 2005

**Source\_URL:** <http://nh.water.usgs.gov/projects/nhvtwateruse/data/NHTownSum2005.xlsx>

**Geography:** Municipality

### Methodology:

*Note: USGS Methodology Summary: USGS analysis uses a proportion of the total road length within the census tract that falls within the water/sewer service area to break out population (private vs. public water/sewer). For a more detailed review of the methodology used by USGS see page 11 at: <http://pubs.usgs.gov/of/2009/1168/pdf/ofr2009-1168.pdf>.*

Navigate to: <http://nh.water.usgs.gov/projects/nhvtwateruse/data/NHTownSum2005.xlsx>

### Public Sewer/Septic Systems:

**NHTownRefFlw** tab contains Total Population Data with On-Site Disposal Systems (Septic) and Wastewater Treatment Systems (Public Sewers)

Apply Filter to Town Name Field and query as needed

Example:

TOWN NAME	Population		
	Total	On-Site Disposal Systems	Wastewater Treatment Systems (Sewers)
Acworth	872	872	0
Albany	690	690	0
Alexandria	1,469	1,469	0
Allenstown	4,905	2,567	2,463
Alstead	1,993	1,993	0
Alton	4,990	4,990	0
Amherst	11,513	11,486	27
Andover	2,213	2,213	0

## Public Water/Well Systems:

**NHTownWith** tab contains Total Population Data on Household Well and Community (Public) Water Systems

Apply Filter to Town Name Field and query as needed

Example:

TOWN NAME	Population		
	Total	Household Wells	Community Water Systems
Acworth	872	872	0
Albany	690	483	207
Alexandria	1,469	1,461	8
Allenstown	4,905	1,252	3,653
Alstead	1,993	1,927	66
Alton	4,990	3,905	1,085
Amherst	11,513	9,245	2,268
Andover	2,213	1,898	315

**\*Disclaimer:** "The Water Distribution and Sewer Collection Areas data set has limited accuracy for the following reasons:

- The water distribution and sewer collection lines have been buffered to depict areas and, therefore, capture some parts of other roads within 200 feet that are not served;
- The data set shows the entire system, including conveyances that extend from the source of supply to the distribution system and may cross roads that are not actually served by the system;
- Water distribution or sewer collection lines may have been extended since the last revision of the data set; and
- The buffered lines were based on the NH DOT road data set rather than the census road data set, which may result in some minor discrepancies with the census blocks."

**Possible Second Iteration:** Census 2010 population data, updated road layer, updated service area layer (available April 2013) to estimate the desired metrics.

**Documentation Author:** Matt Sullivan, SRPC

## Variable: Communities with Aquifer or Well-Head Protection Ordinances [ID# 502]

**Description:** Number of Municipalities with Groundwater Protection Ordinances as statewide or regional statistic (Ordinance details also available)

**Source\_Name:** DES Groundwater Ordinances

**Source\_Date:** 2012

**Source\_URL:** Groundwater Ordinance Database requested from DES

**Geography:** Municipality, Statewide/Regional Statistic

### Methodology:

**Sheet 1** tab contains Town Name field and Name field necessary for analysis

1. Apply Filter to "Town Name" Field and query as needed
  - a. Type of Groundwater Ordinance indicated in "Name" field

Example:

TOWN_NAME	Town Id	TOWN	Date	Name
ALLENSTOWN	171	ALLENSTOWN	3/8/2011	Groundwater Protection Overlay District
ALTON	109	ALTON	3/9/2004	Aquifer Protection Overlay District
AMHERST	224	AMHERST	3/1/2003	Aquifer Cons. District-Zoning Ord.
ANTRIM	183	ANTRIM	3/11/2008	Aquifer and Wellhead Protection District
ASHLAND	93	ASHLAND	3/8/2005	
BARNSTEAD	135	BARNSTEAD		Aquifer Recharge District
BARRINGTON	151	BARRINGTON	1/6/2005	Groundwater Protection District

**\*Disclaimer:** Accuracy of data collected by DES is dependent on town reporting

**Possible Second Iteration:** Database update to be completed by April 2013

**Documentation Author:** Matt Sullivan, SRPC

**Variable: Potential Water Supply Lands in Conservation [ID# 601]**

**Description:** Acreage and percent of municipality's potential water supply land area conserved.

**Source\_Name:** DES Favorable Gravel Well Analysis

**Source\_Date:** July 2011

**Source\_URL:**

**Source\_Name:** GRANIT Conservation and Protected Lands\*

**Source\_Date:** November 2012

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=consnh>

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Municipality

**Methodology:**

\*Note – Regional Planning Commissions may add additional lands not in GRANIT.

Dataset is based on the attribute fgwa75. This attribute includes wells producing at least 75 gallons per minute (gpm), which includes a sanitary protective radius (SPR) of 300'.

In GIS, apply a definition query in conservation lands layer to LEVEL = 1. Perform INTERSECT on political boundaries layer, favorable gravel well analysis layer, and conservation lands layer. Next, perform DISSOLVE on intersected layer, set Dissolved Fields to NAME, RPA, and ACRES. Add new field (AC\_PWSL\_CN) to the dissolved layer attribute table to determine the acreage of potential water supply land in conservation. Calculate acreage for new field. Add another new field (PCT\_WAP\_CN) to dissolved layer attribute table to determine the percentage of potential water supply land in conservation.

Using the Field Calculator:  $PCT\_PWSL\_CN = [AC\_PWSL\_CN] / [ACRES] * 100$

Export attribute table to dbase format, open in Excel.

COUNTY	COUNTYNAME	COUNTYFIPS	RFCNAME	RFCODE	TOTAL TOWN ACRES	WATER SUPPLY LAND ACRES	PERCENT WATER SUPPLY LAND CONSERVED	
1	Albany	00420	Carroll	003	NCC	48675.8	240.512	0.515%
2	Belmont	00080	Merrimack	013	CRHRC	13187.4	18.328	0.143%
3	Ston	01080	Sherburne	001	LRPC	13298.5	0.888	0.003%
4	Andover	01480	Merrimack	013	LRPC	20025.3	47.344	0.215%
5	Andover	01480	Merrimack	013	LRPC	26275.5	2.093	0.006%
6	Barrington	03480	Stratford	017	SRPE	11117.3	0.000	0.000%
7	Barrington	03480	Carroll	003	NCC	47982.3	61.417	0.009%

**Documentation Author:** M. Therrien, LRPC

**Variable: Conserved Wildlife Habitat [ID# 602]**

**Description:** Acreage and percent of municipality's important wildlife habitat area conserved.

**Source\_Name:** NH Wildlife Action Plan 2010: Wildlife Habitat Ranked by Ecological Condition

**Source\_Date:** March 2010

**Source\_URL:** [http://www.granit.unh.edu/data/search?dset=wap10\\_tiers](http://www.granit.unh.edu/data/search?dset=wap10_tiers)

**Source\_Name:** GRANIT Conservation and Protected Lands\*

**Source\_Date:** November 2012

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=consnh>

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Municipality

**Methodology:**

\*Note – Regional Planning Commissions may add additional lands not in GRANIT.

In GIS, apply a definition query in wildlife action plan layer to GRIDCODE = 1. Apply a definition query in conservation lands layer to LEVEL = 1. Perform INTERSECT on political boundaries layer, wildlife action plan layer, and conservation lands layer. Next, perform DISSOLVE on intersected layer, set Dissolved Fields to NAME, RPA, and ACRES. Add new field (AC\_WAP\_CN) to the dissolved layer attribute table to determine the acreage of important wildlife habitat in conservation. Calculate acreage for new field. Add another new field (PCT\_WAP\_CN) to dissolved layer attribute table to determine the percentage of important wildlife habitat in conservation.

Using the Field Calculator:  $PCT\_WAP\_CN = [AC\_WAP\_CN] / [ACRES] * 100$

Export attribute table to dbase format, open in Excel.

COUSUB	COUSUBTYPE	COUNTYNAME	COUNTYFIPS	RPCNAME	RPCCODE	TOTAL TOWN ACRES	WILDLIFE HABITAT ACRES	ACRES CONSERVED	PERCENT WILDLIFE HABITAT CONSERVED
6	00288	Bellevue	019	UNSRPC	3	2488.9	47.485	1.909%	
7	00428	Carroll	300	NCC	1	4447.8	8187.438	18.198%	
8	00568	Grafton	309	LRPC	2	2700.3	458.427	1.697%	
9	00668	Merriam	011	CHRPCC	5	1181.4	670.830	56.82%	
10	00828	Cheshire	305	SWRPC	4	2318.9	412.885	1.779%	
11	01068	Belknap	301	LRPC	2	5428.5	1303.827	2.401%	
12	01168	Whiteborough	011	NRPC	7	2200.3	1314.295	5.973%	
13	01468	Merriam	011	LRPC	2	3527.5	373.225	1.058%	
14	01708	Whiteborough	011	SWRPC	4	2387.8	166.775	0.699%	
15	02028	Grafton	309	LRPC	2	754.8	14.735	0.195%	
16	02428	Cass	307	NCC	1	1181.3	2.615	0.221%	
17	02628	Berkingham	015	SWRPC	6	1847.5	94.125	0.510%	
18	03228	Belknap	301	LRPC	2	3878.8	391.382	1.009%	
19	03448	Stratford	019	LRPC	6	1117.3	85.415	0.764%	
20	03758	Carroll	300	NCC	1	4783.3	3811.889	8.013%	
21	03948	Grafton	309	NCC	1	2488.1	41.958	0.170%	

**Documentation Author:** M. Therrien, LRPC

**Variable: Conserved Land with Productive Soils [ID# 603]**

**Description:** Acreage and percent of municipality's productive soils area conserved.

**Source\_Name:** Soil Survey Geographic (SSURGO) database for New Hampshire

**Source\_Date:** January 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=soils/nh>

**Source\_Name:** GRANIT Conservation and Protected Lands\*

**Source\_Date:** November 2012

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=consnh>

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Municipality

**Methodology:**

\*Note – Regional Planning Commissions may add additional lands not in GRANIT.

Disclaimer: There are edge match issues in soil layer between counties in some areas.

In GIS, apply a definition query in soils layer to FrmlndCls = All areas are prime farmland, Farmland of local importance, and Farmland of statewide importance. Apply a definition query in conservation lands layer to LEVEL = 1. Perform INTERSECT on political boundaries layer, soils layer, and conservation lands layer. Next, perform DISSOLVE on intersected layer, set Dissolved Fields to NAME, RPA, and ACRES. Add new field (AC\_SOILS\_CNS) to the dissolved layer attribute table to determine the acreage of productive soils in conservation. Calculate acreage for new field. Add another new field (PCT\_SOILS\_CNS) to dissolved layer attribute table to determine the percentage of productive soils in conservation.

Using the Field Calculator:  $PCT\_SOILS\_CNS = [AC\_SOILS\_CNS] / [ACRES] * 100$

Export attribute table to dbase format, open in Excel.

	A	B	C	D	E	F	G	H	I	J
1	Environment									
2	Conserved Land with Productive Soils (DBASE)									
3	Soil Survey Geographic (SSURGO) Database for New Hampshire, 2009; GRANIT Conservation and Protected Lands, 2012; GRANIT New Hampshire Political Boundaries, 2009									
4										
5	COGSHR	COUNTYFIPS	COUNTYNAME	COUNTYFIPS	RPCNAME	RPCCODE	TOTAL TOWN ACRES	PRODUCTIVE SOIL ACRES	CONSERVED	PERCENT PRODUCTIVE SOIL CONSERVED
6	Alcocks	00388	Sullivan	013	UVSPPC	3	2496.9	895.475		2.89%
7	Albany	00426	Carroll	009	NCC	1	48479.6	386.653		0.80%
8	Albansetta	00388	Grafton	009	LRPC	2	27921.2	341.793		1.23%
9	Albansettan	00662	Merrimack	011	CNRHPC	3	11057.4	4388.213		39.27%
10	Alstead	00622	Cheshire	005	SWRPC	4	25210.9	147.639		0.59%
11	Alton	01166	Belknap	005	LRPC	2	59290.5	2404.577		4.06%
12	Amherst	01100	Windsor	011	NRPC	7	23825.2	605.975		2.54%
13	Andover	01400	Merrimack	011	LRPC	2	26271.2	2751.890		10.47%
14	Andrus	01700	Hillsborough	011	SWRPC	4	21807.0	600.438		2.75%
15	Ashland	00328	Grafton	009	LRPC	2	7930.8	61.469		0.78%
16	Atholton	02148	Rockingham	015	RPC	8	7258.5	63.052		0.86%
17	Atholton & Elmanton	02422	Coe	007	NCC	1	12351.3	0.028		0.00%

**Documentation Author:** M. Therrien, LRPC

**Variable: Conserved Flood Storage Land [ID# 604]**

**Description:** Acreage and percent of municipality's flood storage land area conserved.

**Source\_Name:** Soil Survey Geographic (SSURGO) database for New Hampshire

**Source\_Date:** January 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=soils/nh>

**Source\_Name:** GRANIT Conservation and Protected Lands\*

**Source\_Date:** November 2012

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=consnh>

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Municipality

**Methodology:**

\*Note – Regional Planning Commissions may add additional lands not in GRANIT.

Disclaimer: There are edge match issues in soil layer between counties in some areas.

In GIS, apply a definition query in soils layer to HdrcRating = All Hydric. Apply a definition query in conservation lands layer to LEVEL = 1. Perform INTERSECT on political boundaries layer, soils layer, and conservation lands layer. Next, perform DISSOLVE on intersected layer, set Dissolved Fields to NAME, RPA, and ACRES. Add new field (AC\_FLD\_CNS) to the dissolved layer attribute table to determine the acreage of flood storage land in conservation. Calculate acreage for new field. Add another new field (PCT\_FLD\_CN) to dissolved layer to determine the percentage of flood storage land in conservation

Using the Field Calculator:  $PCT\_FLD\_CN = [AC\_FLD\_CNS] / [ACRES] * 100$

Export attribute table to dbase format, open in Excel.

COUNTY	COUNTYFIPS	COUNTYNAME	COUNTYFIPS	RPCNAME	RPCCODE	TOTAL TOWN ACRES	FLOOD STORAGE LAND ACRES	ACRES CONSERVED	PERCENT FLOOD STORAGE LAND CONSERVED
Acworth	0026	Isidore	013	LVLRPC	3	2486.9	47.544	1.91%	
Albany	0042	Carroll	003	NCE	1	46476.4	106.027	0.228%	
Alencaster	0050	Grafton	009	LRPC	1	3721.2	6.038	0.162%	
Atkinson	0060	Merrimack	013	CHRRPC	5	13347.4	497.352	3.733%	
Atkinson	0060	Cheshire	003	3RRPC	4	2010.3	61.755	3.072%	
Atton	0060	Belknap	001	LRPC	2	5130.5	752.489	1.467%	
Atwater	0100	Hillsborough	013	NRPC	7	2225.1	416.373	1.871%	
Atwater	0100	Merrimack	013	LRPC	2	3671.3	201.503	0.546%	
Auburn	0100	Hillsborough	011	3RRPC	4	23347.9	376.143	1.611%	
Aufland	0202	Grafton	009	LRPC	2	753.4	1.011	0.134%	
Atkinson	0204	Rockingham	013	RPC	8	7348.3	114.071	1.553%	
Auburn	0204	Rockingham	013	3RRPC	8	16477.9	222.225	1.348%	

**Documentation Author:** M. Therrien, LRPC

**Variable: Forest Lands [ID# 605]**

**Description:** Acres and percent of forested land in municipality.

**Source\_Name:** NH Wildlife Action Plan 2010: Wildlife Habitat Ranked by Ecological Condition

**Source\_Date:** March 2010

**Source\_URL:** [http://www.granit.unh.edu/data/search?dset=wap10\\_tiers](http://www.granit.unh.edu/data/search?dset=wap10_tiers)

**Source\_Name:** GRANIT New Hampshire Political Boundaries

**Source\_Date:** April 2009

**Source\_URL:** <http://www.granit.unh.edu/data/search?dset=pb>

**Geography:** Municipality

**Methodology:**

In GIS, apply a definition query in wildlife action plan layer to PRIORITY = Tier 1 Matrix Forest, Tier 2 Matrix Forest, Tier 3 Matrix Forest, and TNCFOBLOCK. Perform INTERSECT on political boundaries layer and wildlife action plan layer. Next, perform DISSOLVE on intersected layer, set Dissolved Fields to NAME, RPA, and ACRES. Add new field (AC\_FOREST) to the dissolved layer attribute table to determine the acreage of forested land in municipality. Calculate acreage for new field. Add another new field (PCT\_FOREST) to dissolved layer attribute table to determine the percentage of forested land in municipality

Using the Field Calculator: PCT\_FOREST = [AC\_FOREST]/ [ACRES] \* 100

Export attribute table to dbase format, open in Excel.

COUNTY	COUNTYFIPS	COUNTYNAME	COUNTYTPS	RFCNAME	RFCODE	TOTAL TOWN ACRES	FOREST ACRES CONSERVED	PERCENT FOREST CONSERVED
Acworth	50268	Sullivan	018	UV3RFP	3	2486.9	462.838	18.62%
Albany	50438	Carroll	003	NCC	3	48475.8	2997.406	61.86%
Alexandria	50588	Grafton	008	USPC	2	27821.2	17833.770	64.13%
Alton	50668	Warren	011	CHRP	5	11287.4	3531.881	31.38%
Amherst	50638	Cheshire	002	SWRFP	4	3210.9	647.891	20.18%
Alton	51088	Berlin	001	USPC	2	5320.5	1221.461	23.15%
Amherst	51388	Windsor	011	NRPC	7	3225.3	356.458	11.05%
Amherst	51488	Warren	011	USPC	2	26271.5	12789.826	48.68%
Andover	51788	Windsor	011	SWRFP	4	33877.9	5885.827	17.37%
Ashtabula	52038	Grafton	008	USPC	2	7822.8	53.838	0.69%
Attitash	52348	Rockingham	011	RPC	8	7382.3	1.913	0.03%
Attitash & Stratham	52438	Cook	007	RCC	3	12381.3	11870.413	96.10%
Auburn	52838	Rockingham	011	SWRFP	4	18477.9	2483.735	13.49%
Barrington	53238	Berlin	001	USPC	2	28768.8	3556.811	12.37%

**Documentation Author:** M. Therrien, LRPC

## Variable: Unemployment/Employment Rates [ID# 701]

**Description:** Current rate and change in rate of employment.

**Source\_Name:** NH Employment Security, Economic and Labor Market Information Bureau

**Source\_Date:** 2000 to 2012

**Source\_URL:** <http://www.nhes.nh.gov/elmi/statistics/candt-arch.htm>

**Geography:** Municipality

### Methodology:

(NOTE: Data set presents current rate by year, 2000 – 2012, and change in rate of employment for 2011 – 2012 only.)

Go to the New Hampshire Data & Statistics – Labor Force & Unemployment Data Archive webpage link: <http://www.nhes.nh.gov/elmi/statistics/candt-arch.htm>. Then go to NHnetwork and select a geographic area by type.

For City and Town data, download Benchmarked City & Town Data formatted MS Excel spreadsheets that contain the Monthly and Annual Average unemployment rates for all municipalities for the years of 2000 through 2012. NHnetwork has data for the State, Counties and NH Planning regions.

In Excel, create new file with columns for Town, Census Town FIPS, County, County FIPS, RPC Name, RPC code, Annual Average Unemployment Rate for each year, and Change in Rate. Populate the Annual Average Unemployment Rate column with the data from the column (ANN AVG) in the benchmarked tables.

Find the change in rate of employment by calculating the difference between the most recent year rate and the previous year rate for the time period desired.

$$\text{Change in rate of employment} = \text{most recent year rate} - \text{previous year rate}$$

TOWN	CENSUS TOWN FIPS	COUNTY	COUNTY FIPS	RPC NAME	RPC CODE	ANNUAL AVERAGE UNEMPLOYMENT RATE												Change in Rate 2011 - 2012		
						2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
1	ADWORTH 70250	Sullivan	719	UNLRPC	3	2.3%	3.0%	2.8%	4.2%	3.1%	2.7%	3.1%	3.2%	3.2%	5.4%	3.5%	4.0%	4.5%	0.5%	
2	ALBANY 70420	Carrig	703	RPC	1	3.1%	4.0%	4.5%	4.7%	4.2%	3.4%	3.8%	3.8%	3.9%	3.8%	3.8%	7.5%	7.1%	-0.4%	
3	ALEXANDRIA 70550	Grafton	709	LRPC	2	2.1%	2.4%	4.9%	3.8%	2.9%	3.1%	3.8%	3.8%	4.2%	8.7%	8.0%	4.7%	5.0%	0.3%	
4	ALLANSTOWN 70460	Merrimack	715	CRRPC	8	2.4%	3.6%	4.1%	4.6%	3.8%	4.8%	3.8%	4.9%	4.4%	7.3%	7.4%	8.5%	8.2%	-0.3%	
5	ALTON 70430	Cheshire	706	WRRPC	4	2.6%	2.7%	4.3%	4.2%	2.8%	3.4%	3.7%	3.2%	3.4%	4.7%	5.6%	4.8%	5.0%	0.2%	
6	ALTON 70430	Belmont	701	LRPC	2	2.6%	3.1%	4.2%	3.8%	3.8%	3.4%	3.2%	3.2%	3.4%	4.4%	3.0%	4.8%	4.8%	-0.2%	
7	AMHERST 70300	Hillsborough	711	LRPC	2	2.4%	3.2%	4.5%	4.2%	3.5%	3.1%	3.1%	3.0%	3.1%	5.1%	5.0%	4.9%	4.9%	0.1%	
8	ANDOVER 70490	Hammack	713	LRPC	2	2.4%	2.7%	3.4%	3.7%	3.2%	3.8%	3.0%	3.1%	3.7%	5.6%	5.5%	4.7%	5.0%	0.3%	
9	ANDOVER 70490	Hillsborough	711	WRRPC	4	2.1%	3.1%	3.7%	3.2%	3.2%	3.2%	3.1%	3.2%	4.2%	7.9%	5.9%	5.2%	5.8%	0.6%	
10	ANDOVER 70490	Grafton	709	LRPC	2	2.3%	2.8%	4.2%	3.7%	2.7%	2.8%	2.7%	3.1%	3.1%	6.4%	7.2%	5.9%	6.0%	0.1%	
11	ANDOVER 70490	Cochran	707	RPC	1	0.0%	100.0%	100.0%	100.0%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	0.0%
12	ANDOVER 70490	Rockingham	715	RPC	8	4.1%	5.6%	7.0%	8.3%	5.8%	8.9%	3.8%	4.4%	5.2%	7.2%	6.9%	6.2%	5.6%	-0.6%	
13	ANDOVER 70490	Rockingham	715	SRRPC	8	2.2%	2.8%	4.1%	4.2%	3.4%	3.2%	3.2%	3.8%	3.1%	5.5%	5.2%	4.8%	4.2%	-0.6%	
14	ANDOVER 70490	Belmont	701	LRPC	2	2.6%	2.7%	3.8%	3.0%	3.8%	3.5%	3.7%	3.6%	4.1%	8.9%	8.0%	5.5%	5.1%	-0.4%	
15	BARRINGTON 70450	Cheshire	706	WRRPC	4	2.4%	3.0%	4.2%	4.2%	3.7%	3.4%	3.1%	3.2%	3.2%	8.9%	5.7%	4.9%	4.9%	0.0%	
16	BARTLETT 70790	Carrig	703	RPC	1	2.3%	2.3%	2.7%	3.8%	2.8%	2.8%	2.8%	3.0%	2.9%	4.2%	5.1%	4.9%	4.9%	0.0%	
17	BARTLETT 70790	Grafton	709	RPC	1	2.4%	2.3%	3.4%	2.4%	3.1%	2.8%	2.8%	3.1%	3.0%	5.9%	4.8%	4.2%	5.0%	0.7%	
18	BARTLETT 70790	Rockingham	715	RPC	8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

**Documentation Author:** M. Therrien, J. Coogan, LRPC

**Variable: Median Household Income [ID# 702]**

**Description:** Median household income and per capita income.

**Source\_Name:** US Census Bureau – American Community Survey (ACS)

**Source\_Date:** 2007 - 2011

**Source\_URL:**

<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#none>

**Geography:** Municipality

**Methodology:**

Go to US Census Bureau American Fact Finder search page.

- 1) Select Geographies
  - a) Select from: most requested geographic types
  - b) Select a geographic type: County Subdivision – 060
  - c) Select a state: New Hampshire
  - d) Select a county: each county selected separately with county specific municipalities.  
Choose by county if downloading information to MS Excel. **OR-** skip to next step for single table with all municipalities included to view on-line (full table with all municipalities will not download because it exceeds limit of 230 selections allowed)
  - e) Select one or more geographic areas: All County Subdivisions within XXXX County
- 2) Choose Table ID: DP03 – Selected Economic Characteristics, Dataset: 2007 - 2011 ACS 5-year estimates
- 3) In Table View tab, under Actions:
  - a) Select Download: Presentation-ready formats, Microsoft Excel (.xls)

In Excel, create new file with columns for Town, Census Town FIPS, County, County FIPS, RPC Name, RPC code, Median Household Income (Estimate, Margin of Error), and Per Capita Income (Estimate, Margin of Error). Populate the Median Household Income column with the data from INCOME AND BENEFITS: Median household income (dollars) and Per Capita Income column with data from INCOME AND BENEFITS: Per capita income (dollars).

TOWN	CENSUS TOWN FIPS	COUNTY	COUNTY FIPS	RPC NAME	RPC CODE	Median Household Income	Per Capita Income
						Estimate	Margin of Error
ACWORTH	3000	Sullivan	018	VA/SRPFC	3	\$52,132 +/-4,779	\$20,099 +/-2,505
ALBANY	30420	Carr	065	MCC	1	\$52,841 +/-76,774	\$22,093 +/-4,989
ALEXANDRIA	30500	Grafton	068	LRPC	3	\$36,967 +/-6,604	\$22,136 +/-2,969
ALLENSTOWN	30800	Merrimack	013	CAHRPC	5	\$54,159 +/-9,075	\$25,057 +/-2,740
ALSTRAED	30800	Chester	065	SWRPC	4	\$54,808 +/-4,818	\$26,941 +/-4,275
ALTON	31000	Sherborn	061	LRPC	2	\$60,845 +/-7,242	\$29,030 +/-3,025
AMHERST	31300	Hillsborough	011	MRPC	7	\$114,591 +/-13,801	\$46,649 +/-5,998
ANDOVER	31400	Merrimack	013	LRPC	3	\$67,965 +/-7,335	\$29,510 +/-2,507
ANDRIM	31700	Hillsborough	011	SWRPC	4	\$59,798 +/-7,789	\$27,615 +/-2,742
ASHLAND	32000	Grafton	068	LRPC	2	\$38,621 +/-3,947	\$21,358 +/-3,425
ATKINS	32340	Rockingham	015	RPC	8	\$61,874 +/-15,302	\$41,143 +/-4,705
ATKINSON & DEWANTON	32420	Coxs	067	MCC	1	NA	NA
ALBURN	32620	Rockingham	015	DRRPC	6	\$62,838 +/-15,331	\$34,011 +/-2,707
BARNETHEAD	31200	Sullivan	018	LRPC	3	\$65,221 +/-13,793	\$26,367 +/-2,365

**Documentation Author:** M. Therrien, J. Coogan, LRPC

## Variable: Age Distribution of Workforce (Young Persons in the Workforce) [ID# 703]

**Description:** Percent of workforce in various age categories.

**Source\_Name:** 2009-2011 American Community Survey 3-Year Estimates

**Source\_Date:** 2009-2011

**Source\_URL:** <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

**Geography:** County; Municipality optional for larger communities with reasonable margin of error. Be sure to look at the margin of error.

### Methodology:

Search for "labor force", then "age" in appropriate county, choose table ID B23001 for 3 year estimate. Sum the totals and % in labor force for the categories shown in the sample below:

Age Distribution of Labor Force, Coos County 007

Age Category	Estimated Number in Labor Force	% in Total Force in Age Category
16-24	1791	11.0
25-34	2543	15.6
35-44	3231	19.9
45-54	4519	27.8
55-64	3260	20.1
65 and over	908	5.6
Total	16,252	

Source: 2009-2011 American Community Survey 3-Year Estimates, Table B23001

**Documentation Author:** Tara Bamford, North Country Council

**Variable: Educational Attainment [ID# 704]****Description:** Educational Attainment for various age categories**Source\_Name:** 2007-2011 American Community Survey 5-Year Estimates**Source\_Date:** 2007-2011**Source\_URL:** <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>**Geography:** County; Municipality optional for larger communities with reasonable margin of error. Be sure to look at the margin of error.**Methodology:**

Search for educational attainment in appropriate county, choose table ID S1501 for 5 year estimate. At a minimum, report for the categories shown in the sample below:

Educational Attainment By Age, Coos County

Age Category	% High School Graduate or Higher	% Bachelors Degree or Higher	Total Number in Age category
18-24	79.3	3.2%	2196
25-34	88.1	17.1%	3234
35-44	89.5	15.4%	4288
45-64	89.0	18.1%	10756

Source: 2007-2011 American Community Survey 5-Year Estimates, Table S1501

**Documentation Author:** Tara Bamford, North Country Council

**Variable: Employment by Sector [ID# 705]**

**Description:** Number of workers covered by unemployment insurance in region.

**Source\_Name:** NH Employment Security Economic and Labor Market Information Bureau, Covered Employment & Wages - Annual Averages

**Source\_Date:** 2011

**Source\_URL:** <http://www.nhes.nh.gov/elmi/statistics/qcew-data.htm>

**Geography:** All regions will include data for regional planning area. Optional tables include NH portion of Labor Market Areas.

**Methodology:**

Reduce tables provided to NAICS 2 digit codes as shown in the following example:

North Country Council Planning Region - 1

Annual Average Employment 2011

<b>Goods-Producing Industries</b>	<b>5116</b>	
Agriculture/Forestry/Fishing		348
Mining		31
Construction		1616
Manufacturing		3122
<b>Service-Providing Industries</b>	<b>29032</b>	
Utilities		190
Wholesale Trade		565
Retail Trade		7706
Transportation and Warehousing		779
Information		426
Finance and Insurance		722
Real Estate and Rental and Leasing		477
Professional and Technical Service		640
Management of Companies/Enterprises		427
Administrative and Waste Services		566
Educational Services		425
Health Care and Social Assistance		5904
Arts, Entertainment, and Recreation		1824
Accommodation and Food Services		7329
Other Services Except Public Admin		1051
<b>Total Government</b>	<b>7696</b>	
<b>TOTAL</b>	<b>41844</b>	

**Documentation Author:** Tara Bamford, North Country Council

**Variable: Employment Projections [ID# 706]****Description:** Projected employment by occupational group.**Source\_Name:** NH Employment Security Economic and Labor Market Information Bureau, Long-Term Occupational Projections 2010 – 2020**Source\_Date:** January 2013**Source\_URL:** <http://www.nhes.nh.gov/elmi/products/proj.htm>**Geography:** Regional Planning Commission area.**Methodology:**

Use the following table:

<http://www.nhes.nh.gov/elmi/products/documents/occ-projections-plan-reg.xls>

The rows and columns shown in the following example (a regional option would be to use the more detailed occupation categories/rows):

North Country Council Planning Region – 1

	2010	2020	Numeric	Percent
Occupational Group	Employment	Projected	Change	Change
Total Employment	46,410	47,591	1,181	2.5%
Management Occupations	2,982	2,918	-64	-2.1%
Business and Financial Operations Occupations	1,111	1,159	48	4.3%
Computer and Mathematical Occupations	320	351	31	9.7%
Architecture and Engineering Occupations	257	253	-4	-1.6%
Life, Physical, and Social Science Occupations	222	227	5	2.3%
Community and Social Services Occupations	1,028	1,193	165	16.1%
Legal Occupations	130	126	-4	-3.1%
Education, Training, and Library Occupations	3,062	3,233	171	5.6%
Arts, Design, Entertainment, Sports, and Media Occupations	495	489	-6	-1.2%
Healthcare Practitioners and Technical Occupations	2,522	2,865	343	13.6%
Healthcare Support Occupations	1,277	1,412	135	10.6%
Protective Service Occupations	846	859	13	1.5%
Food Preparation and Serving Related Occupations	5,421	5,574	153	2.8%
Building and Grounds Cleaning and Maintenance Occupations	2,833	2,952	119	4.2%
Personal Care and Service Occupations	2,112	2,351	239	11.3%
Sales and Related Occupations	5,955	5,759	-196	-3.3%
Office and Administrative Support Occupations	7,053	6,982	-71	-1.0%
Farming, Fishing, and Forestry Occupations	452	426	-26	-5.8%
Construction and Extraction Occupations	1,796	1,873	77	4.3%
Installation, Maintenance, and Repair Occupations	1,958	2,024	66	3.4%

Production Occupations	2,321	2,270	-51	-2.2%
Transportation and Material Moving Occupations	2,257	2,295	38	1.7%

**Documentation Author:** Tara Bamford, North Country Council

**Variable: Carbon Emissions [ID# 801]**

**Description:** Carbon dioxide (CO<sub>2</sub>), the main driver of climate change, has an atmospheric residence time ranging from decades to hundreds of years and will remain in the atmosphere for, on average, 100 years once released. Data tabulated in million metric tons of CO<sub>2</sub> equivalents (MMTCO<sub>2</sub>e).

**Source\_Name:** The New Hampshire Climate Action Plan

**Source\_Date:** March 2009

**Source\_URL:** [http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action\\_plan/documents/nhcap\\_final.pdf](http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/nhcap_final.pdf)

**Geography:** Statewide

**Methodology:**

**Table 1.2 – New Hampshire Projected Greenhouse Gas Emissions (Business as usual)**

	Emissions [MMTCO <sub>2</sub> e/yr]		
	2012	2025	2050
<b>Total Energy related Emissions</b>	<b>23.76</b>	<b>29.30</b>	<b>39.95</b>
Commercial	1.47	1.64	1.98
Industrial	1.53	1.81	2.34
Residential	3.38	3.92	4.96
Transportation	9.74	12.66	18.27
Electric Power	7.63	9.26	12.39
<b>Total Non-Combustion related Emissions</b>	<b>1.58</b>	<b>2.07</b>	<b>3.00</b>
CH <sub>4</sub> and N <sub>2</sub> O emissions	0.73	0.75	0.79
Industrial Emissions	0.84	1.31	2.21
PFC, HFC, and SF <sub>6</sub>			
<b>Total Emissions</b>	<b>25.34</b>	<b>31.36</b>	<b>42.95</b>

*Data was taken from the above table.*

Documentation Author: R. Pruyne, RPC

**Variable: Vehicle Miles Traveled – Total and Per Capita VMS [ID# 802]**

**Description:** Vehicle miles traveled (VMT) – the number of miles that vehicles (including light duty-vehicles [e.g., cars, small trucks], motorcycles, buses, and trucks) are driven – provide a valuable measure of the manner by which people and freight move around the state. In addition, VMT is a useful measure to evaluate the success of smart growth land use planning and integrated multi-modal transportation systems that are designed to reduce VMTs.

**Source\_Name:** Federal Highway Administration – Functional System Travel – 2011, Annual Vehicle Miles

**Source\_Date:** 2011 (compiled Nov. 2012)

**Source\_URL:** <http://www.fhwa.dot.gov/policyinformation/statistics/2011/vm2.cfm>

**Source\_Name:** ACS 2010 1 Year Estimate – DP05 – “Total Population”

**Source\_Date:** 2010

**Source\_URL:**

[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_10\\_1YR\\_DP05&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_DP05&prodType=table)

**Geography:** Statewide

**Methodology:**

*Divide VMT (millions of miles) by population (people) = X (VMT per capita)*

**Documentation Author:** R. Pruyne, RPC

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**Variable: Average Annual Household Energy Expenditures [ID# 803]**

**Description:** This indicator shows the Average Annual use of energy in dollars. This includes Coal, Natural Gas, Petroleum sources, Biomass (wood), and Retail Electricity.

**Source\_Name:** US Energy Information Administration Website – Table E10 – “Table E10. Residential Sector Energy Expenditure Estimates, 2010 (Million Dollars)

**Source\_Date:** 2010

**Source\_URL:**

[http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep\\_sum/html/sum\\_ex\\_res.html&sid=NH](http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/sum_ex_res.html&sid=NH)

**Source\_Name:** ACS 2010 1 Yr - Occupied housing units (Line 3 of Table DP04)

**Source\_Date:** 2010

**Source\_URL:** [http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10\\_1YR/DP04/0400000US33](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10_1YR/DP04/0400000US33)

**Geography:** State

**Methodology:**

*Obtain total Energy used for the state. Obtain household estimate (Occupied Housing Units) for corresponding year. Divide Energy used by number of households. Note: Households= Housing Units – Vacant Housing Units.*

**Documentation Author:** R. Pruyne, RPC

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## Variable: Energy Expenditure – Per Person Energy Expenditure for Transportation [ID# 804]

**Description:** Amount of energy used per person in NH for the purposes of transportation.

**Source\_Name:** US Energy Information Administration Website – Table CT7. Transportation Sector Energy Consumption Estimates, Selected Years, 1960-2010, New Hampshire

**Source\_Date:** 2010

**Source\_URL:** [http://www.eia.gov/state/seds/sep\\_use/notes/use\\_print.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_print.pdf)

**Source\_Name:** ACS 2010 1 Year Estimate – DP05 – “Total Population”

**Source\_Date:** 2010

**Source\_URL:**

[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_10\\_1YR\\_DP05&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_DP05&prodType=table)

**Geography:** Statewide

### Methodology:

*Use the net energy use consumption for the transportation sector (in trillion BTU) from the US Energy Info. Admin. Website. Use State of NH Total Population estimate from ACS 2010 1 Yr Est Table DP05. Divide Transportation Energy used (Trillion BTUs) by Population (persons) = X (Trillion  $[10^{12}]$  BTUs per capita. **Note: This is in BTUs and not cost. There are cost conversions, but they are highly variable over years and must consider the present-past-future value of money. I would not recommend tying this to money, BTUs are consistent across time, economy, outside economic conditions.***

**Important Definition:** Transportation Sector: An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. In this report, natural gas used in the operation of natural gas pipelines is included in the transportation sector.

**Documentation Author:** R. Pruyne, RPC

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## Appendix I. FIPS Codes

TOWN	CENSUS TOWN FIPS	COUNTY	COUNTY FIPS	RPC NAME	RPC CODE
Acworth	00260	Sullivan	019	UVLSRPC	3
Albany	00420	Carroll	003	NCC	1
Alexandria	00580	Grafton	009	LRPC	2
Allenstown	00660	Merrimack	013	CNHRPC	5
Alstead	00820	Cheshire	005	SWRPC	4
Alton	01060	Belknap	001	LRPC	2
Amherst	01300	Hillsborough	011	NRPC	7
Andover	01460	Merrimack	013	LRPC	2
Antrim	01700	Hillsborough	011	SWRPC	4
Ashland	02020	Grafton	009	LRPC	2
Atkinson	02340	Rockingham	015	RPC	8
Atkinson & Gilmanton	02420	Coos	007	NCC	1
Auburn	02820	Rockingham	015	SNHPC	6
Barnstead	03220	Belknap	001	LRPC	2
Barrington	03460	Strafford	017	SRPC	9
Bartlett	03700	Carroll	003	NCC	1
Bath	03940	Grafton	009	NCC	1
Beans Grant	04100	Coos	007	NCC	1
Beans Purchase	04260	Coos	007	NCC	1
Bedford	04500	Hillsborough	011	SNHPC	6
Belmont	04740	Belknap	001	LRPC	2
Bennington	04900	Hillsborough	011	SWRPC	4
Benton	05060	Grafton	009	NCC	1
Berlin	05140	Coos	007	NCC	1
Bethlehem	05460	Grafton	009	NCC	1
Boscawen	06260	Merrimack	013	CNHRPC	5
Bow	06500	Merrimack	013	CNHRPC	5
Bradford	06980	Merrimack	013	CNHRPC	5
Brentwood	07220	Rockingham	015	RPC	8
Bridgewater	07540	Grafton	009	LRPC	2
Bristol	07700	Grafton	009	LRPC	2
Brookfield	07940	Carroll	003	SRPC	9
Brookline	08100	Hillsborough	011	NRPC	7
Cambridge	08420	Coos	007	NCC	1
Campton	08660	Grafton	009	NCC	1
Canaan	08980	Grafton	009	UVLSRPC	3
Candia	09300	Rockingham	015	SNHPC	6
Canterbury	09860	Merrimack	013	CNHRPC	5
Carroll	10100	Coos	007	NCC	1
Center Harbor	10660	Belknap	001	LRPC	2
Chandlers Purchase	11220	Coos	007	NCC	1
Charlestown	11380	Sullivan	019	UVLSRPC	3
Chatham	11780	Carroll	003	NCC	1
Chester	12100	Rockingham	015	SNHPC	6

TOWN	CENSUS TOWN FIPS	COUNTY	COUNTY FIPS	RPC NAME	RPC CODE
Chesterfield	12260	Cheshire	005	SWRPC	4
Chichester	12420	Merrimack	013	CNHRPC	5
Claremont	12900	Sullivan	019	UVLSRPC	3
Clarksville	13220	Coos	007	NCC	1
Colebrook	13780	Coos	007	NCC	1
Columbia	13940	Coos	007	NCC	1
Concord	14200	Merrimack	013	CNHRPC	5
Conway	14660	Carroll	003	NCC	1
Cornish	15060	Sullivan	019	UVLSRPC	3
Crawfords Purchase	16100	Coos	007	NCC	1
Croydon	16340	Sullivan	019	UVLSRPC	3
Cutts Grant	16660	Coos	007	NCC	1
Dalton	16820	Coos	007	NCC	1
Danbury	16980	Merrimack	013	LRPC	2
Danville	17140	Rockingham	015	RPC	8
Deerfield	17460	Rockingham	015	SNHPC	6
Deering	17780	Hillsborough	011	CNHRPC	5
Derry	17940	Rockingham	015	SNHPC	6
Dixs Grant	18340	Coos	007	NCC	1
Dixville2	18420	Coos	007	NCC	1
Dorchester	18740	Grafton	009	UVLSRPC	3
Dover	18820	Strafford	017	SRPC	9
Dublin	19140	Cheshire	005	SWRPC	4
Dummer	19300	Coos	007	NCC	1
Dunbarton	19460	Merrimack	013	CNHRPC	5
Durham	19700	Strafford	017	SRPC	9
East Kingston	21380	Rockingham	015	RPC	8
Easton	22020	Grafton	009	NCC	1
Eaton	23380	Carroll	003	NCC	1
Effingham	23620	Carroll	003	LRPC	2
Ellsworth	23860	Grafton	009	NCC	1
Enfield	24340	Grafton	009	UVLSRPC	3
Epping	24660	Rockingham	015	RPC	8
Epsom	24900	Merrimack	013	CNHRPC	5
Errol	25140	Coos	007	NCC	1
Erving's Location	25180	Coos	007	NCC	1
Exeter	25380	Rockingham	015	RPC	8
<b>Farmington</b>	<b>26020</b>	<b>Strafford</b>	<b>017</b>	<b>SRPC</b>	<b>9</b>
Fitzwilliam	26500	Cheshire	005	SWRPC	4
Francestown	27140	Hillsborough	011	SWRPC	4
Franconia	27300	Grafton	009	NCC	1
Franklin	27380	Merrimack	013	LRPC	2
Freedom	27700	Carroll	003	LRPC	2
Fremont	27940	Rockingham	015	RPC	8
Gilford	28740	Belknap	001	LRPC	2
Gilmanton	28980	Belknap	001	LRPC	2
Gilsum	29220	Cheshire	005	SWRPC	4
Goffstown	29860	Hillsborough	011	SNHPC	6

<b>TOWN</b>	<b>CENSUS TOWN FIPS</b>	<b>COUNTY</b>	<b>COUNTY FIPS</b>	<b>RPC NAME</b>	<b>RPC CODE</b>
Gorham	30260	Coos	007	NCC	1
Goshen	30500	Sullivan	019	UVLSRPC	3
Grafton	30820	Grafton	009	UVLSRPC	3
Grantham	31220	Sullivan	019	UVLSRPC	3
Greenfield	31540	Hillsborough	011	SWRPC	4
Greenland	31700	Rockingham	015	RPC	8
Greens Grant	31780	Coos	007	NCC	1
Greenville	31940	Hillsborough	011	SWRPC	4
Groton	32180	Grafton	009	NCC	1
Hadleys Purchase	32420	Coos	007	NCC	1
Hales Location	32500	Carroll	003	NCC	1
Hampstead	32900	Rockingham	015	RPC	8
Hampton	33060	Rockingham	015	RPC	8
Hampton Falls	33460	Rockingham	015	RPC	8
Hancock	33700	Hillsborough	011	SWRPC	4
Hanover	33860	Grafton	009	UVLSRPC	3
Harrisville	34420	Cheshire	005	SWRPC	4
Hart's Location	34500	Carroll	003	NCC	1
Haverhill	34820	Grafton	009	NCC	1
Hebron	35220	Grafton	009	LRPC	2
Henniker	35540	Merrimack	013	CNHRPC	5
Hill	35860	Merrimack	013	LRPC	2
Hillsborough	36180	Hillsborough	011	CNHRPC	5
Hinsdale	36660	Cheshire	005	SWRPC	4
Holderness	36900	Grafton	009	LRPC	2
Hollis	37140	Hillsborough	011	NRPC	7
Hooksett	37300	Merrimack	013	SNHPC	6
Hopkinton	37540	Merrimack	013	CNHRPC	5
Hudson	37940	Hillsborough	011	NRPC	7
Jackson	38260	Carroll	003	NCC	1
Jaffrey	38500	Cheshire	005	SWRPC	4
Jefferson	38820	Coos	007	NCC	1
Keene	39300	Cheshire	005	SWRPC	4
Kensington	39780	Rockingham	015	RPC	8
Kilkenny	39940	Coos	007	NCC	1
Kingston	40100	Rockingham	015	RPC	8
Laconia	40180	Belknap	001	LRPC	2
Lancaster	40420	Coos	007	NCC	1
Landaff	40660	Grafton	009	NCC	1
Langdon	40900	Sullivan	019	SWRPC	4
Lebanon	41300	Grafton	009	UVLSRPC	3
Lee	41460	Strafford	017	SRPC	9
Lempster	41700	Sullivan	019	UVLSRPC	3
Lincoln	41860	Grafton	009	NCC	1
Lisbon	42020	Grafton	009	NCC	1
Litchfield	42260	Hillsborough	011	NRPC	7
Littleton	42580	Grafton	009	NCC	1
Livermore	42820	Grafton	009	NCC	1

<b>TOWN</b>	<b>CENSUS TOWN FIPS</b>	<b>COUNTY</b>	<b>COUNTY FIPS</b>	<b>RPC NAME</b>	<b>RPC CODE</b>
Londonderry	43220	Rockingham	015	SNHPC	6
Loudon	43380	Merrimack	013	CNHRPC	5
Low & Burbanks	43620	Coos	007	NCC	1
Lyman	44100	Grafton	009	NCC	1
Lyme	44260	Grafton	009	UVLSRPC	3
Lyndeborough	44580	Hillsborough	011	NRPC	7
Madbury	44820	Strafford	017	SRPC	9
Madison	45060	Carroll	003	NCC	1
Manchester	45140	Hillsborough	011	SNHPC	6
Marlborough	45460	Cheshire	005	SWRPC	4
Marlow	45700	Cheshire	005	SWRPC	4
Martins Location	46020	Coos	007	NCC	1
Mason	46260	Hillsborough	011	NRPC	7
Meredith	47140	Belknap	001	LRPC	2
Merrimack	47540	Hillsborough	011	NRPC	7
Middleton	47700	Strafford	017	SRPC	9
Milan	47860	Coos	007	NCC	1
Milford	48020	Hillsborough	011	NRPC	7
Millsfield	48260	Coos	007	NCC	1
Milton	48660	Strafford	017	SRPC	9
Monroe	48980	Grafton	009	NCC	1
Mont Vernon	49140	Hillsborough	011	NRPC	7
Moultonborough	49380	Carroll	003	LRPC	2
Nashua	50260	Hillsborough	011	NRPC	7
Nelson	50580	Cheshire	005	SWRPC	4
New Boston	50740	Hillsborough	011	SNHPC	6
New Castle	50980	Rockingham	015	RPC	8
New Durham	51220	Strafford	017	SRPC	9
New Hampton	51540	Belknap	001	LRPC	2
New Ipswich	51940	Hillsborough	011	SWRPC	4
New London	52100	Merrimack	013	UVLSRPC	3
Newbury	50900	Merrimack	013	UVLSRPC	3
Newfields	51380	Rockingham	015	RPC	8
Newington	51620	Rockingham	015	RPC	8
Newmarket	52340	Rockingham	015	SRPC	9
Newport	52580	Sullivan	019	UVLSRPC	3
Newton	52900	Rockingham	015	RPC	8
North Hampton	54580	Rockingham	015	RPC	8
Northfield	54260	Merrimack	013	LRPC	2
Northumberland	56100	Coos	007	NCC	1
Northwood	56820	Rockingham	015	SRPC	9
Nottingham	57460	Rockingham	015	SRPC	9
Odell	57860	Coos	007	NCC	1
Orange	58340	Grafton	009	UVLSRPC	3
Orford	58500	Grafton	009	UVLSRPC	3
Ossipee	58740	Carroll	003	LRPC	2
Pelham	59940	Hillsborough	011	NRPC	7
Pembroke	60020	Merrimack	013	CNHRPC	5
Peterborough	60580	Hillsborough	011	SWRPC	4

<b>TOWN</b>	<b>CENSUS TOWN FIPS</b>	<b>COUNTY</b>	<b>COUNTY FIPS</b>	<b>RPC NAME</b>	<b>RPC CODE</b>
Piermont	61060	Grafton	009	UVLSRPC	3
Pinkham's Grant	61620	Coos	007	NCC	1
Pittsburg	61780	Coos	007	NCC	1
Pittsfield	61940	Merrimack	013	CNHRPC	5
Plainfield	62340	Sullivan	019	UVLSRPC	3
Plastow	62500	Rockingham	015	RPC	8
Plymouth	62660	Grafton	009	NCC	1
Portsmouth	62900	Rockingham	015	RPC	8
Randolph	63860	Coos	007	NCC	1
Raymond	64020	Rockingham	015	SNHPC	6
Richmond	64420	Cheshire	005	SWRPC	4
Rindge	64580	Cheshire	005	SWRPC	4
Rochester	65140	Strafford	017	SRPC	9
Rollinsford	65540	Strafford	017	SRPC	9
Roxbury	65700	Cheshire	005	SWRPC	4
Rumney	65940	Grafton	009	NCC	1
Rye	66180	Rockingham	015	RPC	8
Salem	66660	Rockingham	015	RPC	8
Salisbury	66980	Merrimack	013	CNHRPC	5
Sanbornton	67300	Belknap	001	LRPC	2
Sandown	67620	Rockingham	015	RPC	8
Sandwich	67780	Carroll	003	LRPC	2
Sargents Purchase	67860	Coos	007	NCC	1
Seabrook	68260	Rockingham	015	RPC	8
Second College Grant	68500	Coos	007	NCC	1
Sharon	68820	Hillsborough	011	SWRPC	4
Shelburne	68980	Coos	007	NCC	1
Somersworth	69940	Strafford	017	SRPC	9
South Hampton	71140	Rockingham	015	RPC	8
Springfield	72740	Sullivan	019	UVLSRPC	3
Stark	73060	Coos	007	NCC	1
Stewartstown	73380	Coos	007	NCC	1
Stoddard	73700	Cheshire	005	SWRPC	4
Strafford	73860	Strafford	017	SRPC	9
Stratford	74180	Coos	007	NCC	1
Stratham	74340	Rockingham	015	RPC	8
Success	74500	Coos	007	NCC	1
Sugar Hill	74740	Grafton	009	NCC	1
Sullivan	74900	Cheshire	005	SWRPC	4
Sunapee	75060	Sullivan	019	UVLSRPC	3
Surry	75300	Cheshire	005	SWRPC	4
Sutton	75460	Merrimack	013	CNHRPC	5
Swanzey	75700	Cheshire	005	SWRPC	4
Tamworth	76100	Carroll	003	LRPC	2
Temple	76260	Hillsborough	011	SWRPC	4
Thompson & Meserve	76580	Coos	007	NCC	1
Thornton	76740	Grafton	009	NCC	1

<b>TOWN</b>	<b>CENSUS TOWN FIPS</b>	<b>COUNTY</b>	<b>COUNTY FIPS</b>	<b>RPC NAME</b>	<b>RPC CODE</b>
Tilton	77060	Belknap	001	LRPC	2
Troy	77380	Cheshire	005	SWRPC	4
Tuftonboro	77620	Carroll	003	LRPC	2
Unity	77940	Sullivan	019	UVLSRPC	3
Wakefield	78180	Carroll	003	SRPC	9
Walpole	78420	Cheshire	005	SWRPC	4
Warner	78580	Merrimack	013	CNHRPC	5
Warren	78740	Grafton	009	NCC	1
Washington	78980	Sullivan	019	UVLSRPC	3
Waterville Valley	79380	Grafton	009	NCC	1
Weare	79780	Hillsborough	011	SNHPC	6
Webster	80020	Merrimack	013	CNHRPC	5
Wentworth	80500	Grafton	009	NCC	1
Wentworths Location	80740	Coos	007	NCC	1
Westmoreland	82660	Cheshire	005	SWRPC	4
Whitefield	84420	Coos	007	NCC	1
Wilmot	84900	Merrimack	013	UVLSRPC	3
Wilton	85220	Hillsborough	011	NRPC	7
Winchester	85540	Cheshire	005	SWRPC	4
Windham	85780	Rockingham	015	SNHPC	6
Windsor	85940	Hillsborough	011	SWRPC	4
Wolfeboro	86420	Carroll	003	LRPC	2
Woodstock	87060	Grafton	009	NCC	1

## Appendix II. Regional Planning Commissions

### Region 1: North Country Council

Bethlehem, NH

Jeff Hayes, Executive Director

[www.nccouncil.org](http://www.nccouncil.org)

### Region 2: Lakes Region Planning Commission

Meredith, NH

Kimon Koulet, Executive Director

[www.lakesrpc.org](http://www.lakesrpc.org)

### Region 3: Upper Valley Lake Sunapee Regional Planning Commission

Lebanon, NH

Christine Walker, Executive Director

[www.uvlsrpc.org](http://www.uvlsrpc.org)

### Region 4: Southwest Region Planning Comm.

Keene, NH

Tim Murphy, Executive Director

[www.swrpc.org](http://www.swrpc.org)

### Region 5a: Central NH Regional Planning Commission

Concord, NH

Michael Tardiff, Executive Director

[www.cnhrpc.org](http://www.cnhrpc.org)

### Region 5b: Southern NH Planning Commission

Manchester, NH

David Preece, Executive Director

[www.snhpc.org](http://www.snhpc.org)

### Region 5c: Nashua Regional Planning Commission

Merrimack, NH

Kerrie Diers, Executive Director

[www.nashuarpc.org](http://www.nashuarpc.org)

### Region 6: Rockingham Planning Commission

Exeter, NH

Cliff Sinnott, Executive Director

[www.rpc-nh.org](http://www.rpc-nh.org)

### Region 7: Strafford Regional Planning Commission

Rochester, NH

Cynthia Copeland, Executive Director

[www.strafford.org](http://www.strafford.org)

