

# Population and Housing Analysis

## Introduction and Purpose

The purpose of a Master Plan Population and Housing chapter is to serve as a flexible framework to guide the orderly changes of a community over a period of years. The interconnection between population growth and an adequate supply of housing is evident in the tables and charts within this chapter. Since population change is dependent upon many factors, this plan and its components should be regularly reviewed to determine their applicability. The population analysis will alert the town to the possible future demands on schools, housing, public facilities and other forms of land use.

The analysis within this chapter will include a subregional comparison on the changes in population that the Town of Dublin and the surrounding towns have experienced, as well as the population projections developed by the New Hampshire Office of Energy and Planning (NHOEP). Population change is attributed to two factors: natural increase/decrease (the number of births/deaths), and migration (movement of people in or out of the town). This chapter will provide information on these as well as the population density as it relates to the total land area.

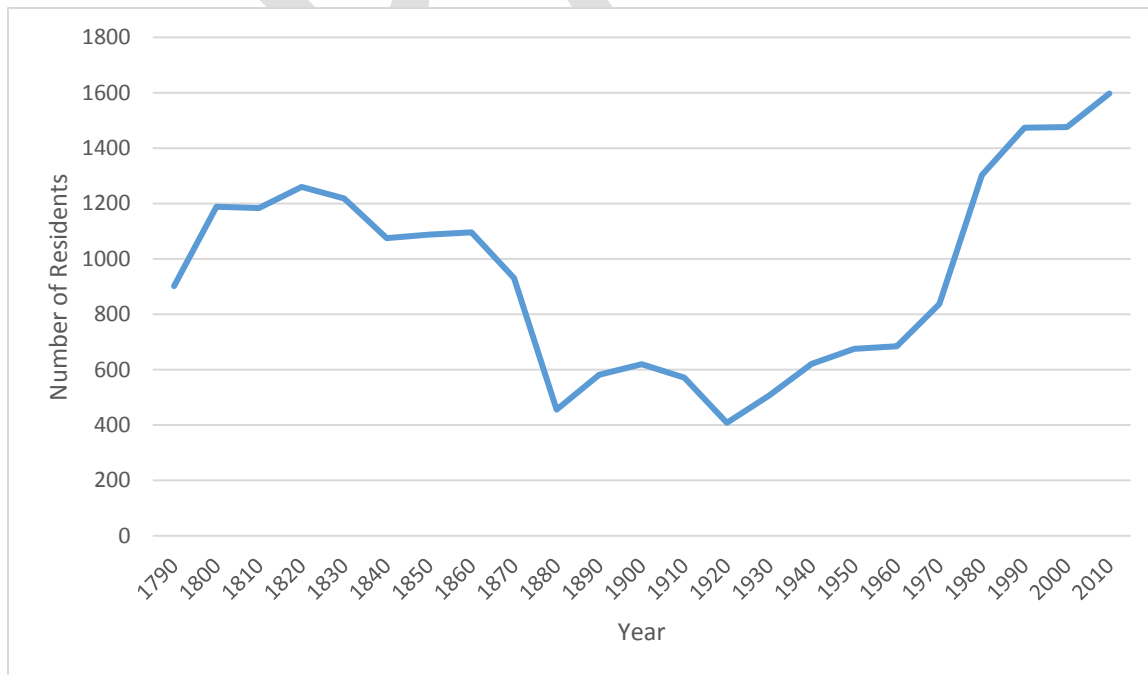
The second half of this chapter includes a housing analysis to provide information on the current affordability and future housing needs of Dublin. The data used to make this analysis uses the population trends and projections, as well as income information and housing trends.

## Population Analysis

### Historical

The table below show the historical population of Dublin since 1790. Dublin had a peak in population of 1,260 in 1820, then experienced a significant decline between 1860 and 1880. The early 1900's show a transition period with up and down fluctuations, followed by a steady rise in population to the present day. The most significant increase in Dublin's history occurred between 1970 to 1980.

**Population Trends from the years 1790-2010**



Source: Office of Energy and Planning, Historical Data

## Population Trends

Looking at population trends, both increases and declines, can provide insight to planning for the community needs such as town services, education, housing, employment, and recreation. This table shows the population trend in Dublin since 1970, including the percent change between decades. Dublin's largest increase was the boom during the 1970's with a population that more than doubled in a 10 year time period.

**Dublin Population Trend 1970-2010**

Year	Population	% Change
1970	837	----
1980	1,303	55.6%
1990	1,474	13.1%
2000	1,476	0.1%
2010	1,597	8.2%

Source: U.S. Census Bureau

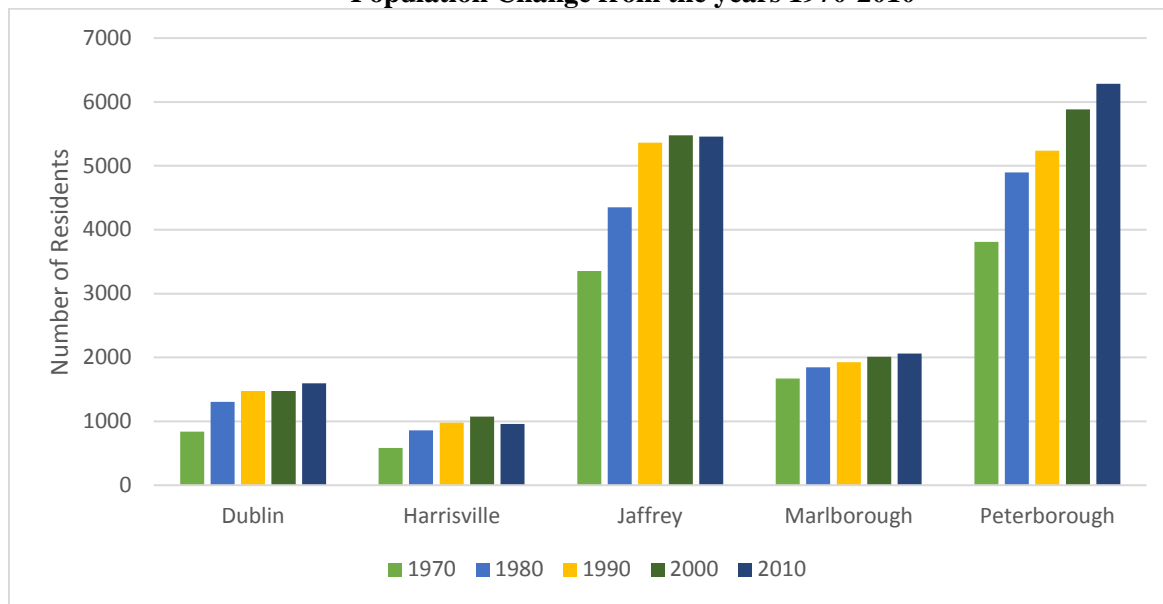
When planning for future town needs, an overall look at the surrounding towns, as well as county and state information, is useful since the need for adequate housing and employment opportunities can be influenced by the economy beyond the town line. The table and graph below provide the data and a visual representation of the population of the same time period as above, but also includes the surrounding towns and the percent change between decades. Dublin experienced a greater percent change during the 2000 to 2010 time period than did any of the surrounding towns. While Dublin had an 8.2% change, Harrisville and Jaffrey both experienced a decline in population with a -11.9 and -0.3 percent change. Dublin also exceeded the state and county change. This change, however, could be very different during the next decade since the table shows that fluctuations have varied greatly among these towns in previous decades.

**Subregional Population Trends 1970 to 2010**

	1970	1980	1990	2000	2010
<b>Dublin</b>	<b>837</b>	<b>1,303</b>	<b>1,474</b>	<b>1,476</b>	<b>1,597</b>
<b>Harrisville</b>	584	860	981	1,075	961
<b>Jaffrey</b>	3,353	4,349	5,361	5,476	5,457
<b>Marlborough</b>	1,671	1,846	1,927	2,009	2,063
<b>Peterborough</b>	3,807	4,895	5,239	5,883	6,284
Cheshire County	52,364	62,116	70,121	73,825	77,177
New Hampshire	737,681	920,610	1,109,252	1,235,786	1,316,470
<b>% CHANGE</b>	<b>1970-1980</b>	<b>1980-1990</b>	<b>1990-2000</b>	<b>2000-2010</b>	<b>1970-2010</b>
<b>Dublin</b>	<b>55.7%</b>	<b>13.1%</b>	<b>0.1%</b>	<b>8.2%</b>	<b>90.8%</b>
<b>Harrisville</b>	47.3%	14.1%	9.6%	-11.9%	64.6%
<b>Jaffrey</b>	29.7%	23.3%	2.1%	-0.3%	62.7%
<b>Marlborough</b>	10.5%	4.4%	4.3%	2.7%	23.5%
<b>Peterborough</b>	28.7%	7%	12.3%	6.8%	65.1%
Cheshire County	18.6%	12.9%	5.3%	4.5%	47.4%
New Hampshire	24.8%	20.5%	11.4%	6.5%	78.5%

Source: U.S. Census Bureau 2010

**Population Change from the years 1970-2010**



Source: U.S. Census Bureau 2010

Population Density

Looking at the population density gives a perspective of the amount of people per square mile. In the table below, Dublin’s population density is shown along with the subregional towns. The population density for Dublin is similar to that of Harrisville, both of which are well below the state and county density. From a land area perspective, Dublin is most similar to that of Marlborough, however, the density is much less.

**Population Density**

	Land Area in square miles	1990		2000		2010	
		Population	Density	Population	Density	Population	Density
<b>Dublin</b>	<b>27.89</b>	<b>1,474</b>	<b>52.9</b>	<b>1,476</b>	<b>52.9</b>	<b>1,597</b>	<b>57.3</b>
Harrisville	18.71	981	52.4	1,075	57.5	961	51.4
Jaffrey	38.41	5,361	139.6	5,476	142.6	5,457	142.1
Marlborough	20.41	1,927	94.4	2,009	98.4	2,063	101.1
Peterborough	38.08	5,239	137.6	5,883	154.5	6,284	165.0
Cheshire County	717.2	70,121	97.8	73,825	102.9	77,177	107.6
New Hampshire	9,024.20	1,109,252	122.9	1,235,786	136.9	1,316,470	145.9

Sources: US Census

An important statistic for community planning is the age categories of the residents. The percentage of the total population for the age groups can provide valuable indicators for planning the needs of a community. This helps provide a “looking glass” of the potential services needed by the residents in the upcoming years.

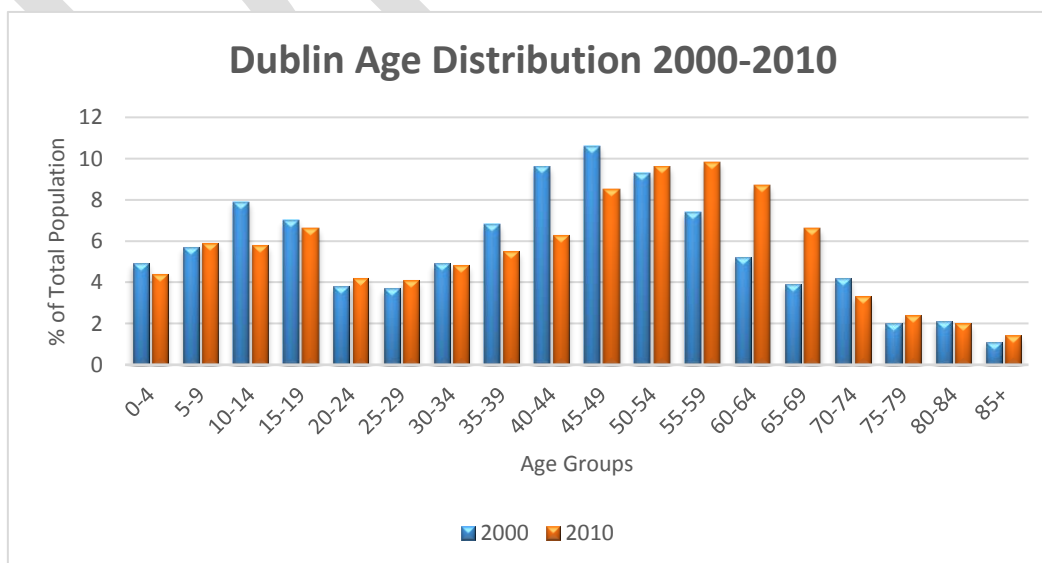
This table shows that the cluster of ages between 50 and 69 years of age has had some considerable increases in the total population of Dublin, especially in the 55 to 69 years of age. The most significant decreases of total population include the age groups between 40 to 49 years of age.

**Dublin Age Distribution 2000 - 2010**

	Population		% of Total Population	
	2000	2010	2000	2010
0-4	72	71	4.9	4.4
5-9	84	95	5.7	5.9
10-14	114	93	7.9	5.8
15-19	103	106	7.0	6.6
20-24	56	67	3.8	4.2
25-29	54	66	3.7	4.1
30-34	73	76	4.9	4.8
35-39	101	88	6.8	5.5
40-44	141	101	9.6	6.3
45-49	157	135	10.6	8.5
50-54	137	153	9.3	9.6
55-59	109	156	7.4	9.8
60-64	77	139	5.2	8.7
65-69	57	106	3.9	6.6
70-74	62	52	4.2	3.3
75-79	29	39	2.0	2.4
80-84	31	32	2.1	2.0
85+	6	22	1.1	1.4
Denotes population increase in age group (of % total population)				

Source: US Census

The chart shows a visual representation of the age distribution table. This visual makes it easier to see the large change in the age groups mentioned above as well as the groups with minor change.



The US Census provides the age structure of communities according to categories, or sectors, which can be beneficial for planning for the housing needs and services of residents. For example, combining the four blocks showing the age categories between 0-4 through 15-19 in the table above will help plan for school enrollment needs. Another group with specific needs is the older population. Combining the blocks showing the age categories that are 65 and greater can help the community prepare for housing needs and services of that population. Observing the trends of the blocks showing the age categories of 55-59 and 60-64 is also beneficial for similar potential needs within the next 10 years. Following trends in this way can assist the town with planning and budgeting for projects that may be necessary to meet the growing demands of the public.

The table below uses this data by showing the trend that has occurred in Dublin since 1980. Grouping the population by sectors can be particularly useful for consideration of projects in the Capital Improvement Plan. It includes a school age (0-17), workforce (18-64), and senior (65 and over) sector. The declining trend in the *Birth to 17 Years* group and the increasing trend in the *65 Years and Over* group are consistent with trends seen throughout the state.

Age Structure of Dublin's Population								
	1980		1990		2000		2010	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Total Population	1,303	----	1,474	----	1,476	----	1,597	----
Birth to 17 Years	295	22.6%	393	26.7%	345	23.4%	330	20.7%
18 to 64 Years	859	65.9%	916	62.1%	936	63.4%	1,016	63.6%
65 and Over	149	11.4%	165	11.2%	195	13.2%	251	15.7%
<i>Source: US Census</i>								

### Income and Poverty Status

The next table shows the estimated median household income, median family income, and the per capita income base on the US Census Bureau ACS 5 year estimates for 2011-2015. These terms are often used for different purposes, therefore, all three are included in this chapter. *Median household income* figures include the income of the householder and all other individuals 15 years of age and over, whether they are related or not. *Median family income* includes the income of two or more people in the same household related by birth, marriage, or adoption. *Per capita income* includes the average income earned by all residents (regardless of household size or relation), divided by the total population.

Dublin's median household and family incomes are higher than those of Cheshire County, but slightly lower than the State. Many factors can influence these figures, such as household size and age distribution.

## Median Income

	Median Household Income	Median Family Income	Per Capita Income
<b>Dublin</b>	\$64,688	\$75,417	\$31,985
<b>Cheshire County</b>	57,782	71,354	32,298
<b>New Hampshire</b>	66,779	81,726	37,499

Source: United States Census Bureau American Community Survey (ACS) 5-Year Estimates 2011-2015

The poverty status in Dublin has seen some fairly significant changes during the time period between 2010 and 2015. In 2010, Dublin's poverty rate was well below the state and county rates, however, the gap has narrowed in recent years.

## Poverty Status

	2010	2015
Dublin	1.8%	6.9%
Cheshire County	10%	11.8%
New Hampshire	7.8%	8.9%

Source: US Census

## HOUSING ANALYSIS

This portion of the Master Plan discusses the present status and future needs of housing in Dublin. By reviewing the housing data, a projected housing need can be estimated. This will, however, change if population projections do not meet the estimates compiled by the New Hampshire Office of Energy and Planning, or if other variables such as past population trends change significantly. Since there is no single method that can be full proof, it will provide a basis to begin with for potential regulatory and zoning changes.

This section includes statistics on Dublin's current housing supply and type, people per room, affordability, and various other data related to housing in order to describe the status of the housing supply.

These are only a few of the assets which are presently lending themselves to the development of Dublin's character. In order to continue to provide services demanded by the townspeople, while allowing for continued responsible fiscal management, an effort is needed to maintain and perhaps enhance these assets. Consideration should be given to determining what Dublin has currently and what it will need.

## HOUSING PROFILE

### Existing Housing

A housing unit, as defined by the US Census, is a house, an apartment, a group of rooms or a single room intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have a direct access from the outside of the building or through a common hall.

Beginning with the basic number of total housing units, the table below presents these numbers for the years 1970-2010. In 2010, there were 785 housing units, which is an increase of 14.4% units since the previous decade. This indicates that over the past decade, there was an average of 1 to 2 houses built in Dublin each year. The largest increase in housing units occurred between 1970 to 1980 yielding an increase of 209 units or approximately 21 houses built each year.

**Dublin Housing Units 1970 to 2010 (Percent Change)**

	1970	1980	% Change 1970-1980	1990	% Change 1980-1990	2000	% Change 1990-2000	2010	% Change 2000-2010	% Change 1970-2010
# of Units	282	491	74.1%	651	32.6%	686	5.4%	785	14.4%	178%

Source: U.S. Census Bureau

The table below shows a comparison of the total number of housing units for the subregion between 1970 and 2010. By looking at the subregion, we can get a better understanding of the housing activity in the surrounding area. This information is useful when looking at the housing needs for local employees and commuting as well as other local needs. In examining the most recent activity, Dublin experienced an increase of approximately 100 additional homes, or an average of 10 units per year between 2000 and 2010. In comparison to the neighboring towns; two had little or no new homes constructed and two had twenty or more units constructed.

**Subregional Total Housing Units 2000 and 2010**

Housing units	Year					%Change 2000-2010
	1970	1980	1990	2000	2010	
Dublin	282	491	651	686	785	14.4%
Harrisville	281	325	588	698	695	-0.4%
Jaffrey	1,223	1,770	2,426	2,352	2,547	8.3%
Marlborough	568	703	856	896	946	5.6%
Peterborough	374	1,952	2,242	2,509	2,956	17.8%
Cheshire County	17,241	23,274	30,350	31,876	34,773	9.1%
New Hampshire	235,529	347,758	503,541	547,024	614,754	12.4%

Source: U. S. Census Bureau

### Age of Housing Stock

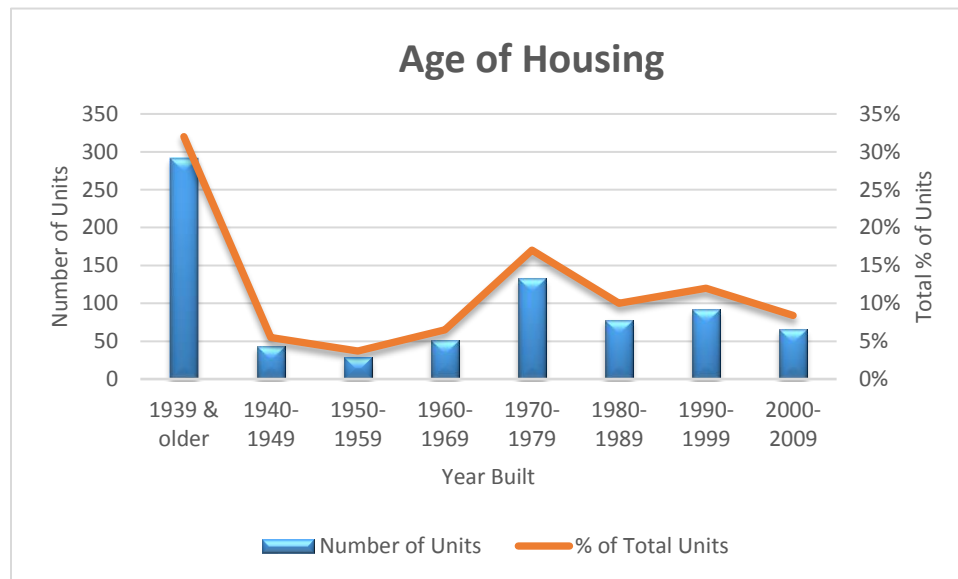
The age of the housing stock is useful in gauging its probable condition. There is a presumption that homes built prior to 1940 are less energy efficient and are more likely to have outdated heating, plumbing and electric systems. Nearly 1 in 3 homes in the Southwest region of New Hampshire are over 75 years old. Many of these homes add historical significance. Older homes are generally more expensive to own, especially with respect to wintertime heating costs, thereby adding to the monthly living expenses. In Dublin, approximately 45% of the homes fall into this age group.



### Age of Housing Stock

	1939 & older	1940- 1949	1950- 1959	1960- 1969	1970- 1979	1980- 1989	1990- 1999	2000- 2009
Number of Units	291	43	29	51	133	78	92	66
% of Total Units	32%	5.5%	3.7%	6.5%	17%	10%	12%	8.4%

Source: U.S. Census Bureau, ACS 2011-2015 Estimates



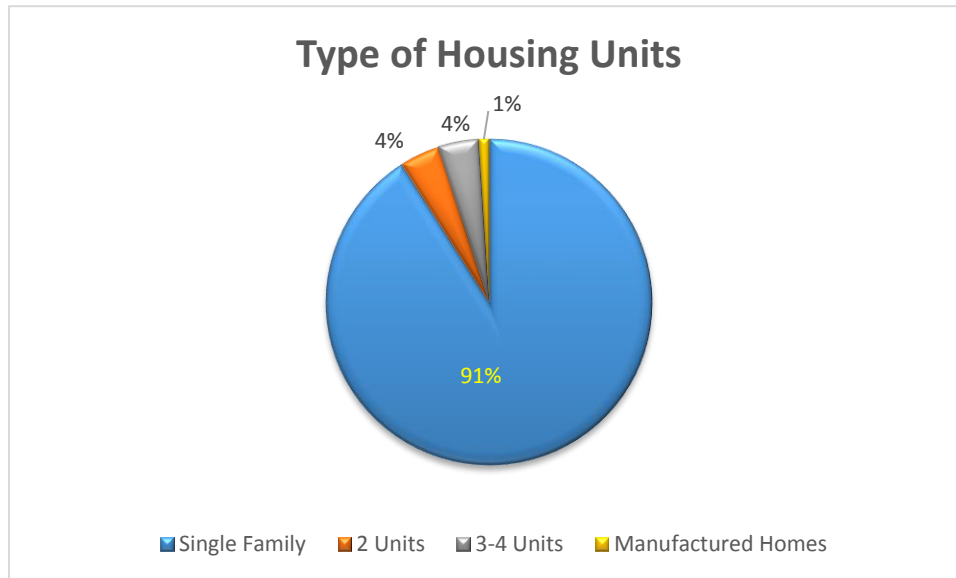
### Housing Supply

The primary use of this data is to show the distribution of housing types in the housing supply and to assist in determining where the needs are. A mix of housing choices is important to help ensure that there are housing opportunities for all ages and at all income levels. Data for Dublin can be found in the following table and chart.

#### Dublin: Housing Supply by Type 2015

	Single Family	2 Units	3-4 Units	5-9 Units	10-19 Units	20 or More Units	Manufactured Homes
Number of Structures	711*	28	34	0	0	0	10
% of Total Housing Units	91%	4%	4%	0%	0%	0%	1%

Source: U. S. Census Bureau 2011-2015 (ACS) 5-Year Estimates \*(includes listing of 1-unit attached and 1-unit detached)



The housing tenure table gives information on recent trends of occupancy (owner occupied or renter occupied) as well as the average number of people per unit in each category. The table shows that there have not been any significant changes in distribution of owner or renter occupancy and only slight changes in the number of people per unit. Most notable is the increase in number of people per unit in owner occupied units and the corresponding decrease in the number of people per unit in the renter occupied units in 2010. This is similar to the state and national data. It should be noted that the figures for 2015 are estimates based on the US American Community Survey and may not be as accurate as the other years shown.

### Housing Tenure

	Owner Occupied			Renter Occupied		
	2000	2010	2015 *	2000	2010	2015*
Total Occupied Units	454	446	493	106	115	123
Percent of Occupied Units	81.1%	79%	80%	18.9%	21%	20%
Average # of People per Unit	2.5	2.75	2.38	2.55	2.19	2.49

Source: U. S. Census Bureau 2011-2015 American Community Survey (ACS) 5-Year Estimates\*; Other data from US Census 2000 and 2010

### Occupants

It is useful to know the average number of occupants per room to help determine overcrowding, which is a factor of knowing if there is an adequate supply of housing in Dublin. Based on the census criteria for overcrowding, households ideally should have no more than one person per room. The next table makes a comparison of occupants per room for Dublin, Cheshire County, and the State of New Hampshire. In all three locations, the number of occupants per room meets the criteria, according to the US Census, for not being overcrowded.

### Number of Occupants Per Room

	Dublin Estimate	Cheshire County Estimate	New Hampshire Estimate
<b>1.00 or less occupants per room</b>	99.5%	98.7%	98.7%
<b>1.01 to 1.50 occupants per room</b>	0.5%	0.9%	0.9%
<b>1.51 or more occupants per room</b>	0%	0.5%	0.4%

Source: U.S. Census Bureau, ACS 2011-2015 Estimates

### Affordability

The information in this section is intended to determine how affordable and available housing is for Dublin residents. These tables present the relative cost of housing for home ownership and for rentals in Dublin, based on the 2015 estimates.

<b>Dublin: Cost of Housing 2015*</b>	
Dublin	2015*
Median Mortgage	
Median Gross Rent	\$1,031

Source: U.S. Census Bureau, ACS 2011-2015 Estimates.  
\*These figures are estimates.

The next table shows the percentage of rental units in each gross rent category. The size of the units or number of bedrooms per unit in each category, however, is not given in the data. A rental analysis would need to be done to get a more detailed representation of the rental market. There are approximately 99 occupied rental units in Dublin.

Gross Rent (monthly)	% of Total Rental Units
Total # of Occupied Rental Units	100%
Less than \$500	10.9%
\$500 - \$999	34.8%
\$1000 - \$1499	41.4%
\$1500 and more	10.1%
Median Monthly Rent	\$1,031

Source: U. S. Census Bureau ACS 2011-2015 Est.

This table refines the data in the previous table by illustrating not just what people pay for housing, but what percentage those costs are of their income. It has been recognized that people in lower income brackets generally pay more proportionally for housing than do people in higher income brackets. According to the figures found in the table, approximately 35% of owner occupied households (with a mortgage) paid 30% or more of their monthly incomes on housing in 2015. A greater percentage of renters in Dublin (approximately 55%) paid 30% or more of their monthly incomes in 2015. Only 22% of homeowners that did not have a mortgage paid more than 30% of their monthly income toward housing expenses. It should be noted that utilities are factored into the monthly household owner and renter costs. Using the same source of data, it is estimated that 72% of the occupied households use oil as the primary heat source. The full breakdown of primary heat sources includes: gas 10%, electric 1%, and other 17%.

**Selected Monthly Owner Costs as a Percentage of Household Income (SMOCAPI)  
and Gross Rent as a Percentage of Household Income (GRAPI) 2015**

Dublin Housing Costs	With a Mortgage		Without a Mortgage		Gross Rent as a Percentage of Household Income	
	# of Units	% of Units	# of Units	% of Units	# of Units	% of Units
<b>Less than 20.0 %</b>	90	27.7%	93	55.4%	30	30.3%
<b>20.0 to 24.9 %</b>	73	22.5%	21	12.5%	9	9.1%
<b>25.0 to 29.9 %</b>	50	15.4%	16	9.5%	6	6.1%
<b>30.0 to 34.9 %</b>	20	6.2%	3	1.8%	3	3.0%
<b>35.0 % or more</b>	92	28.3%	35	20.8%	51	51.5%
<b>Total Housing Units</b>	325	100%	168	100%	99	100%
<b>Not Computed</b>	0	0%	0	0%	24	0%

Source: U. S. Census Bureau 2011-2015 American Community Survey (ACS) 5-Year Estimates

Changes in the economy, housing market and lending policies continue to have a dramatic effect on the statistics of home ownership and housing costs, and will make it difficult to make accurate projections based on past figures and trends. In addition, the difference in the data source and methodology may result in inaccuracies. Therefore, these figures and trends should be used for generalized planning purposes only.

**Home Values in Dublin, 2015**

Home Values	# of Units	% of Occupied Units
Owner-occupied units	493	100%
Less than \$50,000	16	3.2%
\$50,000 to \$99,999	6	1.2%
\$100,000 to \$149,999	44	8.9%
\$150,000 to \$199,999	23	4.7%
\$200,000 to \$299,999	191	38.7%
\$300,000 to \$499,999	133	27%
\$500,000 to \$999,999	56	11.4%
\$1,000,000 or more	24	4.9%
Median	\$282,900	

Source: U. S. Census Bureau 2011-2015(ACS) 5-Year Estimates

According to the 2011-2015 ACS 5-Year Estimates, the median home value in Dublin is \$282,900 and the median household income is \$64,688. This table indicates that 38.7% of the homes are in the \$200,000 to \$299,999 price range. Based on the principle that no more than 30% of a household's income should be spent on housing to be considered affordable, the possibilities for home ownership in Dublin are examined below.

Under the three scenarios examined in this table, median income households could afford a home valued up to \$203,851. Those, however, earning 80% or 50% of the median household income could afford a home valued at \$164,502 and \$105,342 respectively. Comparing those levels to the *Home Values table* above indicate that the housing selection in these ranges are limited.

**Home Ownership Affordability in Dublin, 2015\***

	<b>2015* Median Household Income</b>	<b>80% of 2015* Median Household Income</b>	<b>50% of 2015* Median Household Income</b>
<b>Annual Income</b>	\$64,688	\$51,750	\$32,344
<b>30% of income</b>	\$19,406	\$15,525	\$9,703
<b>Purchase price affordable at 4.5% for 30 years**</b>	\$203,851	\$164,502	\$105,342

Source: New Hampshire Housing Finance Authority Mortgage Qualifier Calculator

\* U. S. Census Bureau 2011-2015 (ACS) 5-Year Estimates Table DP03

\*\*includes 2016 property tax rate of 2.7%, home insurance rate of 0.5%, \$10,000 cash on-hand, and 1% loan origination fee

**Future Housing Need**

In order to estimate what the potential need for housing will be in the future, the available data on housing characteristics and population trends must be reviewed along with estimates for growth in population, and therefore housing need. The NH Office of Energy and Planning (NH OEP) population projections can be used to estimate future housing need, based on a person per unit estimate. The projections for Dublin and surrounding towns are presented below in five-year intervals up to the year 2040, beginning with the US Census count from the year 2010. The table shows the most recent projections for the subregional towns, Cheshire County, and New Hampshire. If the population projections are accurate, Dublin's population should hold steady during the next twenty years. The projections for the subregion, however, show some relatively significant increases (Peterborough with an 11.5% increase) and decreases (Harrisville with a 10% decrease) during the same time period.

**Population Projections 2010-2040**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>% Change 2010-2040</b>
Dublin	1,597	1,568	1,571	1,575	1,582	1,586	1,589	-0.5%
Harrisville	961	952	909	866	870	872	874	-10%
Jaffrey	5,457	5,393	5,308	5,225	5,246	5,262	5,272	-3.5%
Marlborough	2,063	2,110	2,130	2,151	2,160	2,166	2,170	5.2%
Peterborough	6,284	6,445	6,604	6,795	6,926	7,008	7,008	11.5%
Cheshire County	77,117	77,345	77,653	78,002	78,315	78,543	78,695	2.0%
New Hampshire	1,316,470	1,330,501	1,349,908	1,374,702	1,402,878	1,422,530	1,432,730	8.8%

Source: NH Office of Energy and Planning (OEP) 2016

Dublin's future housing need is estimated based on the projected population by dividing population by housing units to reach a person per unit figure. A person per unit figure can be calculated for the past decades: 2.7 in 1980, 2.3 in 1990, 2.2 in 2000, and 2.0 in 2010. In order to calculate future housing need, a reasonable person per unit figure for the future must be assumed; in this case, since the figure fluctuated up and then down, a simple average will be used, which is 2.3. The following calculations will use two possible scenarios: one using the known past population increase between 1980 and 2010 and the other using the OEP projected population increase over the next twenty five years.

Methodology Used	2010 Housing Units	Average Population Change Between 1980-2010 (Census)	2040 Projected Population	Persons Per Unit (average of 1990-2010)	Total Housing Units Needed by 2040	Additional Housing Units Needed by 2040
Past Trend Method	785	9.8	1,891	2.3	822	37
Projection Based Method	785	N/A	1,589	2.3	691	0

Thus, if Dublin were to experience the same level of population growth between now and the year 2040 (using the Past Trend Method) as it did between 1980 and 2010, the total number of housing units needed by 2040, at the current average household size of 2.3 persons per household, is 822 units. To meet this, there would need to be an additional 37 units built, or approximately 4 units per year. If, on the other hand, the Projection-Based Method was used, the number of housing units needed to meet the 2040 population would be 691. Using this method, the current number of housing units adequately meets the number of units needed to meet the future demands.

It is critical for a town to have a housing stock that meets the needs of all residents to maintain a healthy diversity. Having the necessary regulations that enable a range of housing options will help to ensure that there are no regulatory barriers for residential development. Nevertheless, there are other housing issues to be considered that are not addressed by the current zoning provisions; in particular, the availability of housing for the elderly. Based on updated national census information, the country can expect to see a continued increase in the number of elderly residents (those aged 65 and over). In Dublin, the age categories with the most residents in 2010 are the five consecutive groups between the ages of 40 – 64 accounting for 40% of the total population. In 20 years, this group will be between the ages of 60-84 years old.

However, as important as anticipating the housing needs of the senior population, is the potential for the smaller group of middle-age residents of Dublin needing to provide care for aging parents in the form of on-site housing accommodations, through options such as accessory dwelling units.