



CITY OF DOVER, NEW HAMPSHIRE MASTER PLAN

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2015 Land Use Analysis Chapter

It's About Tomorrow

LAND USE ANALYSIS CHAPTER

# It's About Tomorrow

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<http://www.dover.nh.gov/government/city-operations/planning/index.html>

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**CITY OF DOVER**

# CERTIFICATE OF ADOPTION

**Agenda Item#: 4A**

Adopting: Land Use Analysis Chapter of the Master Plan

WHEREAS: The Planning Board and Planning Department, have written and completed the Land Use Analysis chapter of the Master Plan in accordance with RSA 674:3, and

WHEREAS: A concerted effort was undertaken to include participation by the general public through the use of public meetings and a citizen steering committee; and

WHEREAS: A formal public hearing on said Chapter, in accordance with RSA 675:6, was held before the Planning Board on February 24, 2015; and


WHEREAS: The Dover Planning Board voted on February 24, 2015 to adopt the Land Use Analysis Chapter;

NOW, THEREFORE, BE IT RESOLVED BY DOVER PLANNING BOARD THAT:

1. The Land Use Analysis Chapter of the Master Plan is adopted and certified in accordance with RSA 674:4;
2. The Planning Board Chairman is authorized to sign and label as "adopted" the final reproduced documents of said Chapter; and
3. The Planning Department is authorized to forward a certified copy of the adopted Chapter to the Office of Energy and Planning, as required by RSA 675:9.

## AUTHORIZATION

Approved as to Legal Form:

  
 Anthony Blenkinsop  
 City Attorney

  
 Dennis Ciotti  
 Planning Board Chair

Date of Adoption: 2/24/15

Members in Favor: 8

Members Opposed: 0



**CITY OF DOVER**

# CERTIFICATE OF ADOPTION

**Agenda Item#: 4A**

Adopting: Land Use Analysis Chapter of the Master Plan

## BACKGROUND MATERIAL:

According to New Hampshire Planning and Land Use Regulation 674:2, the Master Plan is intended to clearly and practically propose the best and most appropriate future development of the City under the jurisdiction of the Planning Board, to aid the Board in designing ordinances, and to guide the Board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning and wise resource protection.

The Master Plan is a set of statements about land use and development principles for the municipality with accompanying maps, diagrams, charts and descriptions to give legal standing to the implementation of ordinance and other measures of the Planning Board. A Master Plan should lay out a physical plan which takes into account social and economic values describing how, why, when and where the community should build, rebuild and preserve. This physical plan should be comprehensive in nature, and have a long range vision – 10 years is the average. The master plan shall include, at a minimum, the following required sections:

- A vision section
- A land use section

The master plan may also include the following sections:

• A transportation section	• A cultural and historic resources section
• A community facilities section	• A regional concern section
• An economic development section	• A neighborhood plan section
• A natural resources section	• A community design section
• A natural hazards section	• A housing section
• A recreation section	• An implementation section
• A utility and public service section	



Dover has completed Master Plans in 1963, 1978, 1988, 1998, 2000, 2007, 2009 and most recently in 2012. It is the intention of this plan to be revised again in 2020, which will continue the community on a proactive revision cycle. The Land Use Analysis Chapter will then be revised in 2025, 2035, etc.

The Master Plan process involves 8 steps:

- Collect data about the community
- Analyze the data
- Define a community vision
- Evaluate alternative development scenarios
- Select a preferred alternative
- Implement recommendations
- Monitor the plan
- Amend the plan

By updating the 2007 Master Plan, and 2011 Economic Development Addendum, this chapter effectively completes a full cycle of activity for the previous Master Plan and starts the cycle for the next plan.

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# Where we are now – 2015

*This section describes Dover in 2015 and provides a baseline to use as the community moves forward.*

Dover's heritage and character is important to its residents. This is a community that looks forward, with a mind for understanding the impacts past development has had. This is a community which strives to be first. It understands the Yankee ideal of conservation of resources, land and otherwise. The community's Master Plan transforms that ideal and the community's visions into a roadmap for a future; a future that looks towards the next 400 years. Land Use is an important component of that future, and this chapter is designed to provide recommendations about Dover's future land uses and land use decisions that will be made over the next decade.

## Introduction

Dover is a cohesive community with a distinctive urban center surrounded by diverse residential and commercial options which reflect different periods of its almost 400 year history. The downtown core is the heart of the city. It is the place where residents and members of surrounding communities come to transact daily commerce and to meet for social activities. Its vibrant, pedestrian-oriented core continued to be enhanced as a center for the region's commercial activity, a common area or center where the local community can meet. The neighborhood service centers north of downtown along Central Avenue transition from the density of downtown to the more suburban style medium-scale commercial and service activity closer to where Dover and Somersworth meet. The style of growth is smaller scale but transitions users from downtown to the suburban area and with some in-fill development, should continue to grow in like fashion.






1 A view of One Washington Center

Outside of downtown and the north Central Avenue service center, Dover should preserve its rural heritage, which is rooted in its open spaces, roads spawned by cow paths, and small-scale agricultural establishments. It should preserve the distinctive qualities of landscape and heritage.

New development should be compatible with the natural landscape, and with the context that surrounds it. Dover is economically linked to the tri-city region; however, the artistic, cultural and entrepreneurial spirit of its residents should be encouraged by providing opportunities for responsible, relevant and dynamic housing and economic growth.

The city's natural amenities should continue to be guided by good thoughtful planning, which takes into account the City's need to grow, and the Open Space and Preservation chapter of this Master Plan. Development should not be haphazardly imposed upon the landscape, but should be sensitive to its natural environs, recognizing the limited available land in Dover, based on the principle that the community's environmental resources are finite and must be maintained at a responsible level. Foremost, Dover should preserve the diversity of its housing and economic development. By

adopting this Land Use chapter as a guide to growth, the City should remain a resilient place where the business people, residents (long time and new) can all find a place to live and thrive.

I C O N   K E Y	
	Demographic information
	Vision Chapter
	Data Chapter

To increase the usability of this plan, the “icon key” at left was produced. The icons will appear throughout the chapter to help readers identify concepts and ideas that will be used and explained. The folder icon represents information obtained through demographic data gathering. The pencil icon represents information gathered during the visioning sessions. Finally, the book icon indicates that there is further information available in the data chapter maintained by the Planning Department.

## Changes Since 2007 Land Use Chapter

Looking back over the previous ten year period, the City of Dover has dramatically altered its land use course. Many of these changes have been an outgrowth of the 2007 Land Use Chapter, but others have been as a result of development and private/non-governmental activities. The following list covers some of the changes Dover has witnessed.

- Regulatory:
  - Elimination of density bonus allowances for Open Space Subdivisions, as they became mandatory and no longer optional in many residential districts.
  - Creation of the first Form Based Code in Northern New England for downtown.
  - Creation of a Transit Oriented Development sub-district of the Central Business District
  - Expanded residential Transfer of Development Rights opportunities to include a “land bank” as opposed to a market driven model.
  - Expanded industrial Transfer of Development Rights opportunities to include commercial zones.
  - Expanded area of the City where farming is an allowed use to pre-1979 levels.
  - Made pervious surfaces mandatory in projects where there is over 1.5 acres of paving.
  - Adopted a downtown Tax Increment Finance District.
  - Strengthened site and building design by revising the Architectural Design Guidelines and making them Standards.
  - Updated definitions for elderly care facilities.
  - Encouraged Mixed Use as an incentive to Commercial Development, if done in context to surrounding vicinity, ensuring higher quality developments.
  - Encouraged Mixed Use at appropriate locations along major corridors to encourage transit use and pedestrian activities.
  - Restricted allowed residential uses in non-residential zones to be limited to the second floor or above.
  - Adopted a special exception criteria to allow small non-residential uses to be located in existing residential neighborhoods.
  - Changed setbacks so retail buildings front directly on a sidewalk with no setback, and revised zoning so all buildings are at least two stories tall and of a mixed use in the CBD and CWD zones.
  - Revised allowances to construct on steep slopes and updated the Conservation District zoning regulations to be consistent with the Comprehensive Shoreland Protection Act.
  
- Development:
  - Liberty Mutual expanded its campus adding a second 200,000 square foot building.

- The Children’s Museum of New Hampshire moved to downtown Dover.
- Wentworth Douglas Hospital expanded its campus with a 150,000 square foot building, as well as 100,000 square foot outpatient building on Indian Brook Drive.
- Conceptual approval of 100 acre mixed use development between Dover Point Road and Middle Road.
- FW Webb expanded its presence from 34,000 to 100,000 square feet.
- Conversion of 120,000 square feet of office space to 120 residential units in Cochecho Millworks downtown.
- Conversion of 50,000 square feet of warehouse to 42 residential units in Woodbury Mill downtown.
- Redevelopment of 100,000 square foot former school into the McConnell Center Social Service Hub downtown.
- Redevelopment of 120,000 square foot Moore Business Forms building into an manufacturing incubator space.
- Redevelopment of 270,000 square foot Goss Manufacturing building into an office and manufacturing space.
- Redevelopment of First Street parking lot to mixed use building with 7,000 square feet of commercial and 32 units of residential.

## Dover’s Vision

Dover decided to make the most recent visioning effort a separate, stand-alone process for the new master plan. This approach allowed for more emphasis on community involvement and offered residents more time and opportunity to focus their attention on what they want the city to become in the future. The vision chapter, completed in 2012, is available on the city’s website with the other Master Plan chapters.

The five month process that was undertaken for this visioning effort intentionally placed no boundaries on what issues or ideas could be included in the discussion. The final result is a vision statement and vision elements that are far reaching and, in many cases, go beyond policies and actions that municipal government can accomplish. In that regard, this vision is truly a community vision and not just a city government vision. It establishes goals and objectives that can be embraced by the entire community to make the city an even more desirable place in coming decades.



2 Dover 2023 Vision discussion

The items below will be used in the design of specific implementation actions that will guide future land use changes towards Dover’s chosen vision.

The Dover 2023 Vision:

*When Dover celebrates its 400th anniversary in 2023 it will be a dynamic community with an outstanding quality of life because it has achieved the following interconnected characteristics:*

- *Residents celebrate safe, family friendly neighborhoods, a strong sense of community and an excellent school system.*
- *The historic downtown is alive with a wide variety of retail, dining, entertainment, cultural opportunities and a mix of housing choices that make it the vibrant focal point of the community.*
- *Municipal government and schools are run effectively and efficiently with full transparency, resulting in high quality services, well maintained buildings and infrastructure, a great recreation system and a competitive property tax burden.*



- *The community is fully served by public transportation and is very accessible for walking, bicycling and persons with disabilities.*
- *Vehicular traffic volumes and speeds are well managed.*
- *Dover attracts and retains stable, well-paying employers because it is business friendly and has a high quality of life.*
- *Rural character is preserved and well designed development is encouraged in and around the downtown core and waterfront.*
- *Enhanced environmental quality and sustainability are actively pursued and inherent in all the city's activities.*

Vision Implementation Actions related to the Land Use Chapter (from the Dover 2023 Vision):

Included in the 2012 Vision chapter was an implementation matrix suggesting how Vision elements should be reviewed by the community within the Land Use chapter of the Master Plan. This implementation matrix was used to frame the discussion of this chapter.

- Promoting and supporting the city's diversity of ages, incomes and origins.
  - The land use and quality of life sections of the master plan should document that ample opportunities are made available for all ages, incomes, ethnic origins to live and work in Dover
- Keeping Dover an affordable place to live.
  - Maintain an adequate supply of reasonably priced housing; keep tax rates low; ensure an ample supply of well paying jobs. Include evaluation of these issues in the land use/housing section of master plan.
- Maintaining Dover's state of the art medical facilities and its status as a regional medical center.
- Facilitating a balanced supply of safe and attractive housing for individuals and families of all incomes.
  - Evaluate the adequacy of zoning and land use opportunities for housing in the land use/housing section of the master plan. Provide code enforcement to ensure residential properties are safe and well maintained.
- Downtown – A vibrant and inviting family friendly, pet friendly, walkable focal point for the entire community.
  - Explore development regulations that encourage a mix of retail, office, employment and residential uses that encourage full utilization of existing downtown buildings and vacant parcels in the land use section of the master plan. Seek ways to promote quality, historically appropriate building design, landscaping and property maintenance in the land use and historic preservation sections of the master plan.
- Preserve natural resources: water, watershed, air, farmland (aquifer conservation and filtration), and a working waterfront.
- High quality, low impact growth and development that preserves the city's more rural areas and focuses commercial activity in and around the urban core
  - The city's new master plan will explore various options (urban growth boundary, conservation easement acquisitions, density transfer credits, etc.) for preserving remaining rural areas of the community and focusing the majority of future development in and near the downtown and existing built areas of the city.
- Mixed use development wherever appropriate.
  - As part of the land use section of the master plan a regulatory audit will be undertaken to fully examine the city's development regulations and identify where amendments are needed to promote a greater mix of land uses in appropriate areas of the city.

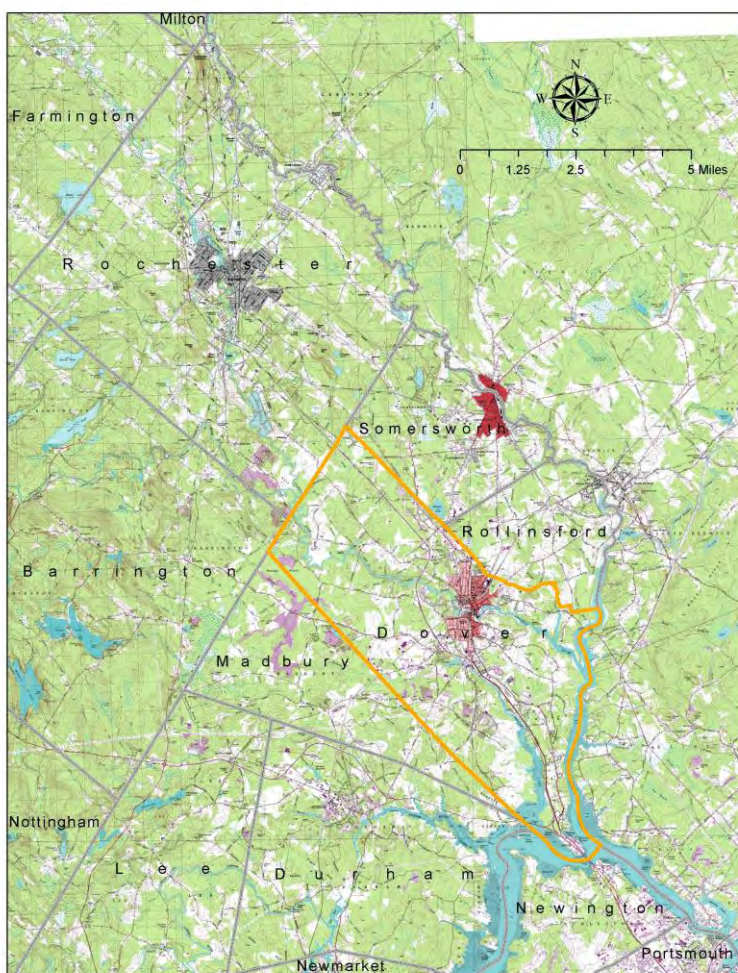
- Planning and development regulations include architectural standards that preserve and safeguard the historic and architectural quality of Dover’s historic buildings, downtown and neighborhoods.
  - The land use and historic preservation sections of the master plan should examine ways to promote quality, historically appropriate building design and landscaping and top quality property maintenance (in conjunction with 2.1)
- Underground utilities in new construction wherever it is feasible.
  - The land use section of the master plan should include an assessment of the city's development regulations and road standards to determine under what circumstances utility wires should be constructed underground.
- Growing the leading edge and innovative economic base and continuing to provide more and better paying jobs including opportunities in the science, high tech and “green industry” fields.
  - As part of the economic development section of the master plan explore ways to continue to work closely with existing and potential new employers who will provide, stable, quality jobs to Dover area residents.
- The development of new business parks consistent with the Dover 2023 vision.
  - As part of the economic development section of the master plan, investigate ways to grow the city's economic base utilizing existing and new office/industrial spaces that are appropriately located and consistent with the master plan vision for Dover.



3 Scenic view along Silver Street

## Existing Land Use

Dover's land use pattern is well established, with little remaining undeveloped land within its urban core. The downtown is surrounded by land zoned residential, commercial and industrial, and important natural resources. The City of Dover is the county seat for Strafford County, which lies in southeastern New Hampshire, bordering the state of Maine. Dover is bisected by the Spaulding Turnpike (NH Route 16) which connects northern New Hampshire and the Seacoast region. Additionally, NH and US Routes 4 travel through Dover, as do Routes 155, 108 and 9. Image 1 illustrates Dover's connections to other communities and service centers. It borders eight New Hampshire communities, and is easily accessible by three Maine communities.



*Image 1Dover Source: Strafford Regional Planning Commission*

The existing land uses in Dover have been listed by classification in the following table to illustrate the mix of land uses in the city, and their percent of the total area. The city generated land use classification data was obtained from the Assessor's files and includes the entire parcel. The Strafford Regional Planning Commission (SRPC) data was created from aerial photo interpretation, and only includes the extent of developed land by type of use. This table highlights the differences in area

calculations that resulted.

**Table 1 - Summary of Simplified Land Use Types in Dover (City Data v. SRPC Data)**

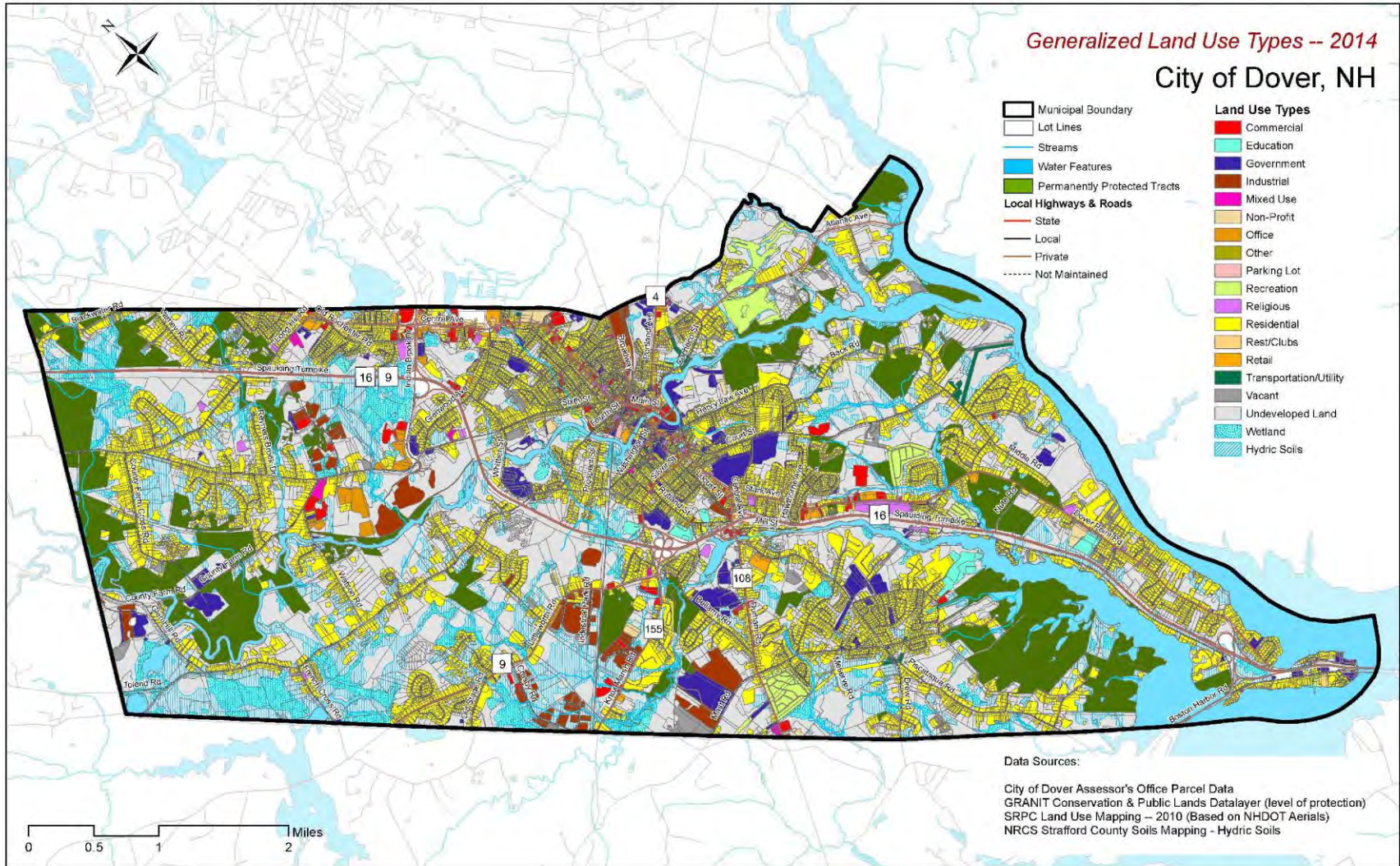
Land Use Classification	Dover Parcel Based LU Classification (Ac)	Percent of Total City Land Area	Acres of Wetland	Acres LU Type No Wetland	Percent LU Type No Wetland	SRPC Delineation of Developed Land (Ac)	Percent of All SRPC Developed Land	Acres Undeveloped
Residential	8,016	51.50%	1,727	6,289	78.50%	4,314	68.60%	1,975
Conservation	2,195	14.10%	723	NA	NA	NA	NA	NA
Vacant	1,726	11.10%	455	1,271	73.60%	257	4.10%	1,014
Government	1,433	9.20%	405	1,028	71.70%	495	7.90%	532
Industrial	688	4.40%	205	482	70.10%	338	5.40%	144
Commercial	356	2.30%	82	273	76.90%	178	2.80%	95
Recreation	312	2.00%	62	251	80.20%	210	3.30%	40
Office	187	1.20%	47	140	75.10%	97	1.50%	44
Transportation/Utility	138	0.90%	30	108	78.30%	39	0.60%	69
Education	117	0.80%	13	103	88.60%	76	1.20%	28
Religious	127	0.80%	13	114	89.90%	76	1.20%	39
Non-Profit	90	0.60%	20	71	78.40%	59	0.90%	12
Retail	92	0.60%	5	87	94.70%	80	1.30%	7
Mixed Use	39	0.30%	4	36	90.70%	29	0.50%	6
Rest/Clubs	24	0.20%	0	24	100.00%	23	0.40%	1
Parking Lot	16	0.10%	1	14	91.30%	13	0.20%	1
Other	3	0.00%	1	2	70.70%	0	0.00%	2
	<b>15,557</b>		<b>3,792</b>	<b>10,293</b>	<b>66.2%</b>	<b>6,284</b>		<b>4,010</b>

Source: City of Dover; Strafford Regional Planning Commission (SRPC)

The Existing Land Use Map included on the next page shows the lack of large tracts of vacant commercial land along the heavily traveled transportation routes. However, mixed use projects, downtown redevelopment and higher and better use opportunities are beginning to be seen in the city. The downtown is poised to continue as an economic and tax generating engine for the community.

Since 2007 the city has made significant changes to the land use regulations in the downtown, and is working to improve the transportation and parking infrastructure there as well. The new regulatory tools adopted include a form based code to guide development in the Central Business District and some neighboring zoning districts as well as a Tax Increment Financing (TIF) District to encourage private investment through the implementation of public investment in infrastructure. Recently, a Downtown Pedestrian and Vehicular Access and Streetscape Study was also completed by the Cecil Group. These new tools will assist the city as it continues to enhance and rely on its downtown as a prosperous and functional downtown, while encouraging new and diverse uses. Infill development will continue to be encouraged and, where appropriate, public spaces should be contained within infill developments to encourage civic components. Outside of the downtown there is interest in commercial and industrial development, residential development, and land conservation efforts. All of these will be explored in greater detail in the remainder of this chapter.





## Demographic and Economic Trends

From a demographic and economic perspective, Dover is central to the Portsmouth-Dover-Somersworth-Rochester corridor, and is part of the larger Seacoast region of New Hampshire. Because Dover's social and economic realities will impact the development patterns in the city, the data and trends below have been used to inform the future land use plan.



4 Dover's Upper Square features a mix of uses, including residential units, which drive the city's economy.

### Population

Based on estimates provided by the US Census, Dover had a 2012 population of 30,220, representing an increase of 3,336 (12 percent) since 2000. This is higher than the 7.3 percent growth rate that Dover experienced between 1990 and 2000. Dover became the State's fifth most populated community in 2010, as well as the most populated in Strafford County.


 POPULATION	
2012:	30,220
2006:	29,068
2000:	26,884
1990:	25,042

Table 2 documents the change in population for the communities within the geographic region studied for this plan. Dover's population grew by 3,103, or 11.5 percent, between 2000 and 2010, significantly faster than Portsmouth (2.2 percent) and Rochester (3.9 percent). In 2010 Dover's population exceeded that of Rochester, making it the largest community in the region; accounting for 22 percent of the region's population. The three

cities combined account for over 60 percent of the population in the 11 community region (See Image 1), which totaled 134,427 in 2010. Population growth is anticipated to continue in Dover and other communities of similar size in the region. Some of the smaller communities in the region are expected to remain at existing population levels, or increase slightly over the coming decades.

Dover grew by 3,103 persons between 2000 and 2010 making it the fastest growing community in the region during that time, by absolute numbers.



Table 2 - Change in Population

Community	Population		Change 2000 to 2010	
	2000	2010	Number	Percent
<b>Dover</b>	<b>26,884</b>	<b>29,987</b>	<b>3,103</b>	<b>11.5%</b>
Barrington	7,475	8,576	1,101	14.7%
Durham	12,664	14,638	1,974	15.6%
Eliot, ME	5,954	6,204	250	4.2%
Madbury	1,509	1,771	262	17.4%
Newington	775	753	-22	-2.8%
Portsmouth	20,784	21,233	449	2.2%
Rochester	28,641	29,752	1,111	3.9%
Rollinsford	2,648	2,527	-121	-4.6%
Somersworth	11,477	11,766	289	2.5%
South Berwick, ME	6,671	7,220	549	8.2%
Geographic Region Total	125,482	134,427	8,945	7.1%
Strafford County	112,233	123,143	10,910	9.7%
New Hampshire	1,235,550	1,316,256	80,706	6.5%

Source: NH Office of Energy and Planning; Maine.gov, based upon US Census data

After the 2000 Census, the New Hampshire Office of Energy and Planning (NHOEP) projected that by 2010, Dover’s population would be 29,310. In 2010 the city’s population was recorded at 29,987 eclipsing the forecast by the State. Table 3 shows the projected population growth trends and projections for the region. Based on these projections Dover is expected to continue to have the largest population in the region, and to capture a larger percentage of new residents in the region.



5 An example of Dover's older housing stock along Central Avenue

**Table 3 – Population Projections**

	Population Projections					
	2015	2020	2025	2030	2035	2040
<b>Dover</b>	30,808	31,733	32,470	33,131	33,652	33,950
Barrington	8,930	9,319	9,536	9,730	9,883	9,970
Durham	15,295	16,015	16,387	16,720	16,983	17,134
Eliot, ME	6,215	6,217	6,203	6,161	N/A	N/A
Madbury	1,863	1,964	2,010	2,051	2,083	2,101
Newington	727	708	724	736	742	741
Portsmouth	21,074	21,146	21,611	21,986	22,177	22,135
Rochester	29,567	29,442	30,126	30,739	31,222	31,499
Rollinsford	2,382	2,237	2,289	2,336	2,372	2,393
Somersworth	11,569	11,390	11,655	11,892	12,079	12,186
South Berwick, ME	7,299	7,393	7,468	7,512	N/A	N/A
Geographic Region Total	135,729	137,564	140,479	142,994	131,193	132,109

*Source: Dover Data Chapter; NH Office of Energy and Planning; Maine.gov*

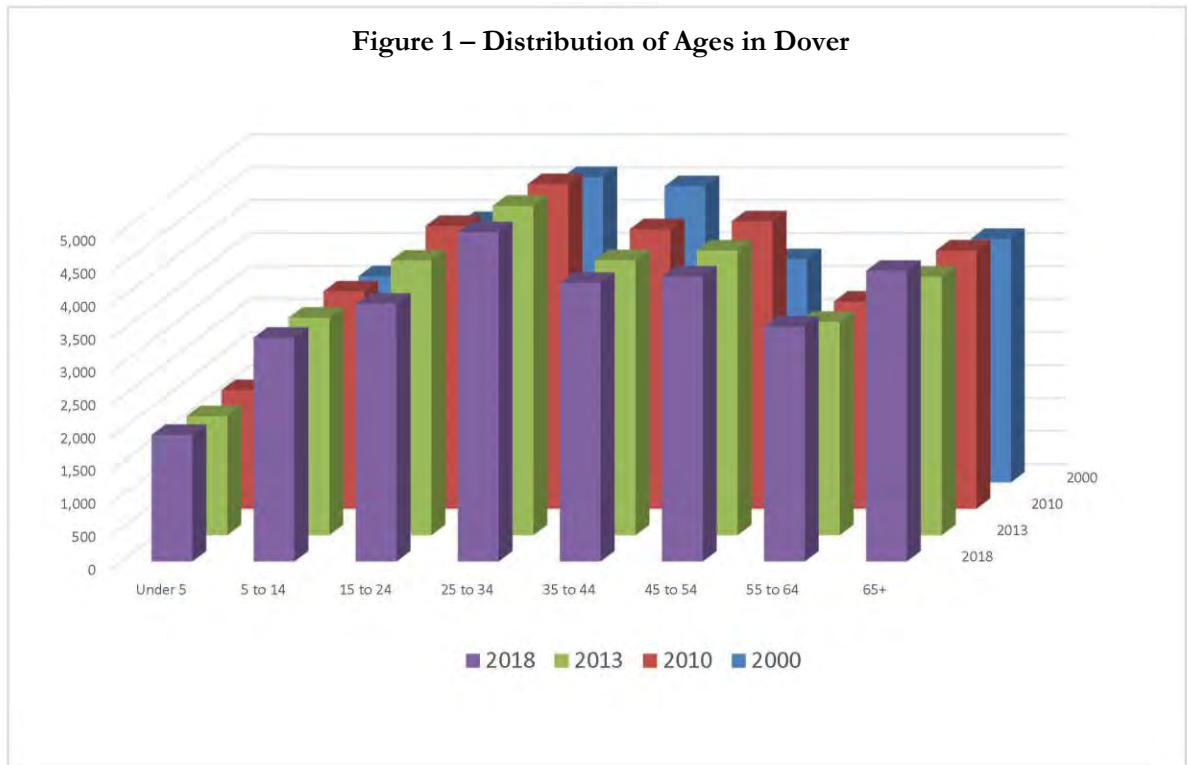
### **Age and Gender**

The median age of Dover residents in 2013 was 36.4, and it is predicted to increase in five years to 36.9 years. In 2013, the median age of a New Hampshire resident was 41. In 2013 the most prominent age group in Dover is 25-34 years. Based on the projections by DemographicsNow! this trend is predicted to continue out to 2018. Dover, like the rest of the region, state and country is aging as the baby boomer generation pushes through. Between 2000 and 2010 the number of people aged 45-64 increased by 2,044 or 37.4 percent, while those 18 to 44 years of age grew by 359, or 3 percent. The number of young people grew more slowly than the average, with those under 18 increasing by 474 persons or 8.5 percent, and those 18 to 24 increasing by 319 or 10.6 percent. The 25 to 44 year old cohort grew by only 40 people, or less than one percent.

This data supports the demand for smaller more easily maintained homes that are nearby to services and cultural amenities, i.e. close to downtown, as this middle-age “bulge” ages. Because of Dover’s diverse economic profile (income and wealth), this suggests the need for a diversity of housing choices for these transitioning households. While market economics require higher rents and prices (for new development to be economically viable) the demand for lower cost housing will also continue to grow, and Dover’s land use regulations need to continue to acknowledge this fact. Dover’s aging population is seeking a range of housing opportunities, and the community should consider the tools available to create the diverse types of housing desired.



**Figure 1 – Distribution of Ages in Dover**



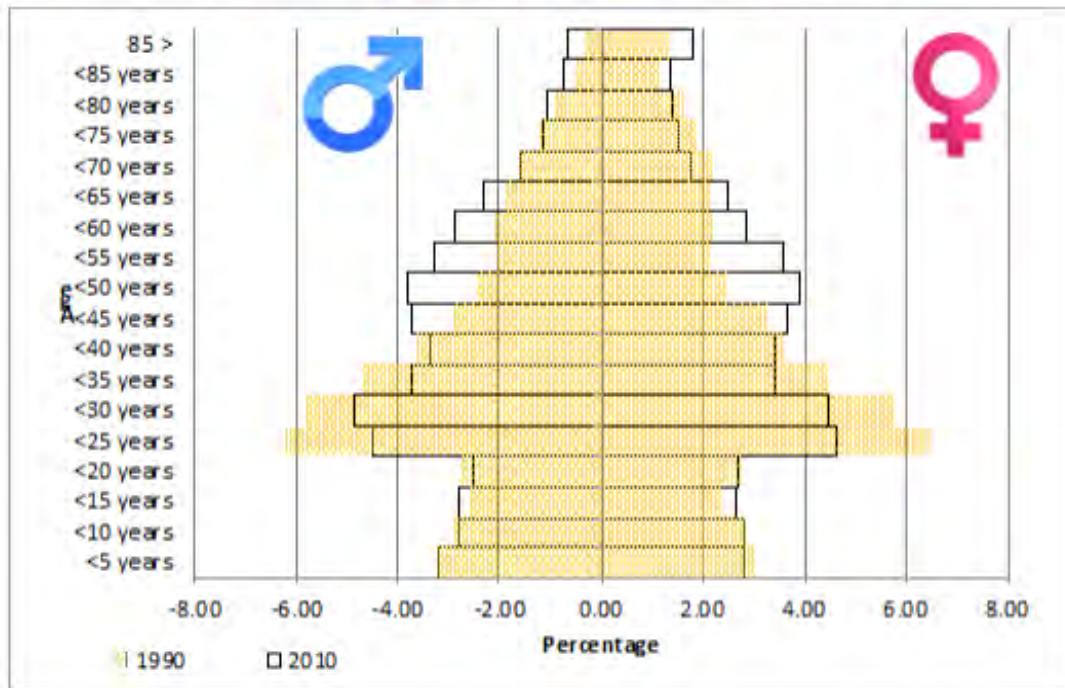
*Source: DemographicsNow!*

The median age in Strafford County in 2012 was 36.9. In 2013, the most prominent age group in the County is age 15 to 24 years due to the presence of the University of New Hampshire. The age group least represented in the County is also under 5 years. This trend is predicted to continue out to 2018 based on the projections available from DemographicsNow!

In 2013 females in Dover represented 50.8 percent of the population with a median age of 38.0, and males represented 49.2 percent of the population with a median age of 35.0 years. Figure 2 documents the distribution of age and gender in Dover, during the 20 year period between 1990 and 2010. Like much of New Hampshire, while population increased in Dover, an age disparity grew. Demographics indicate that there was a migration of residents out of Dover between the ages of 25 and 45. Furthermore, the aging and gender balance in Dover was equal in 1990 and 2010.

While Dover’s median age is 36.4, there has been considerable growth by baby boomers in the community. Comparing 1990 to 2010 shows that while Dover might be more effective attracting younger residents than much of New Hampshire, it also retains many residents as they age. Dover is a full service community and this retention might indicate that the quality of life offered to residents is broad and attractive to people at every stage of life. More specifically, in 1990 we see that the largest age groups in Dover were 20 to 40 years of age. While these groups are still a significant share of the overall population we see a growth in the 40 to 65 year old age groups as well. Figure 2 on the following page illustrates this change.

Figure 2 – Population Pyramid (1990 & 2010)



Source: DemographicsNow!

## Households

The number of households continues to increase in Dover, following the overall population increase. In the County as a whole, households have increased at a faster rate than population from 2000 to 2010 and that trend is predicted to continue. This is the result of smaller household sizes which is a trend that has been documented in the census data as well. This will continue to create a demand for more housing units as the population grows and residents continue to live in smaller numbers per household. In Dover currently the majority of households are one or two person households. This is consistent with national census trends. Household size and the types of housing in a community are linked. If a community has a larger amount of multi-family units, which typically have less bedrooms and space than single family units, this can lead to a higher demand for units.

The number of households, defined as the occupants of a housing unit, whether related or not, (as opposed to housing units, a place of residence) grew by 1,761, or 14.8 percent, reflecting national trends towards smaller household size. In 2000 the average household in Dover contained 2.25 persons while in 2010 it was down to 2.19, while the average size of new households in Dover over the decade was 1.76. The household count in 2013 was 12,901 and the household projection for 2018 is 13,510, a projected increase of 4.7 percent. Knowing that more housing units will be needed in the future, Dover must consider where these units are to be located, and what types of units should be encouraged. This is articulated in the recommendations and future land use map found in Section 2 of this chapter.

## Employment and Income

Employment in Dover increased by 2,421 jobs, or 16.5 percent, between 2000 and 2010. However, this includes the loss of 1,406 manufacturing jobs and 614 retail jobs, as well as smaller losses in government (federal, state, and local) and transportation-related sectors. Jobs in the finance, administration, education,

health care, social assistance, and hospitality sectors increased by nearly 4,100, or 72 percent, during this same time period, which offset losses in other sectors.

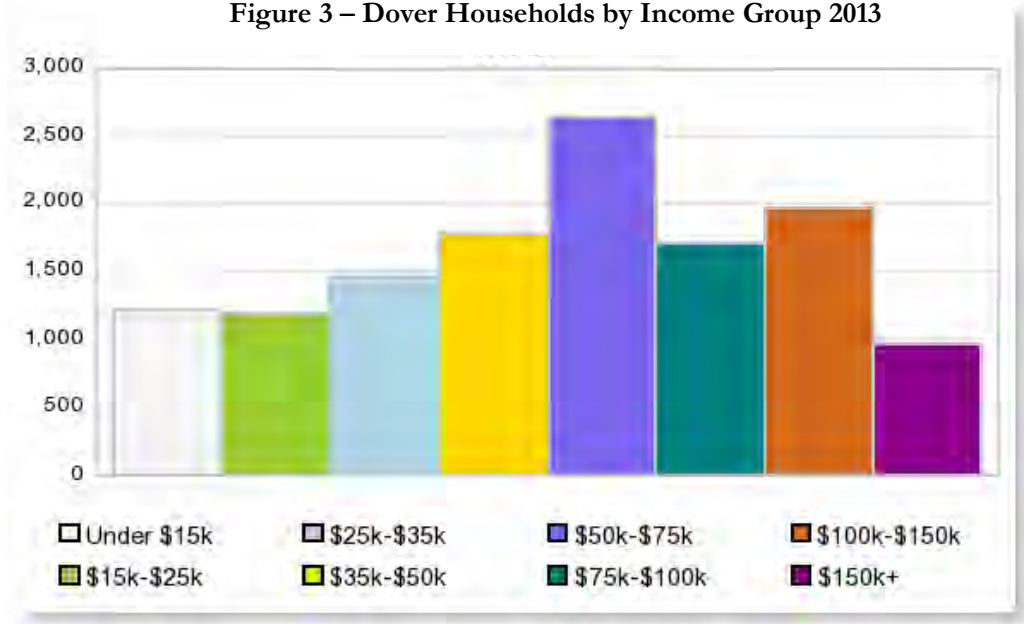
Employment in Dover increased by 2,421 jobs, or 16.5 percent, between 2000 and 2010.

Dover became much more “white collar” during the past decade, and will likely continue to do so. However, it is important to point out that many highly skilled and well-paying jobs today that are not classified as manufacturing, really are if one considers data as a raw material. Research and development (R&D) and advanced manufacturing firms are likely to have much of their workforce classified as administrative, yet are exactly the types of firms that are growing nationally and regionally, and which Dover can continue to attract.

The Census data lumps together in one category educational services, health care and social assistance, which rose by 2,091 jobs, or 82 percent, between 2000 and 2010. A close review of the data demonstrates that we see that the number of jobs in “Education” rose 119, or 44.6 percent, between 2000 and 2010 and “Health Care and Social Assistance” jobs increased by 229, or 21 percent, over the same time period. The largest reported job gain by the New Hampshire Employment Security was an increase of 2,834 jobs (1,138 percent) in “Finance and Insurance”. Interestingly, the Census data (for 2000-2010) shows only a 639 job gain (65.5 percent) in the category “Finance and insurance, and real estate and rental leasing”. This discrepancy might be explained by how jobs are classified. Many healthcare occupations are administrative in nature and may be classified so in the data, whereas the Census goes by industry title.

In 2013 the predominant household income category in Dover, was \$50K - \$75K, and in the County it was \$25K - \$50K. It is evident that Dover is a community that has both residents with higher earning potential, and an economic diversity which can attract those high earners, whether they work in Dover or the region.

**Figure 3 – Dover Households by Income Group 2013**



*Source: DemographicsNow!*

## Education

Dover continues to attract a more educated demographic compared to the state of New Hampshire and many area communities, and residents are pursuing higher degrees. According to the US Census, almost 38 percent of Dover residents that are aged 25 and over have a bachelor's or graduate degree. This is fourth highest in the 11 community region, behind only Durham, Madbury and Portsmouth. Educational attainment had a profound impact on the local economy, and the eligibility of residents for available jobs. According to the Bureau of Labor Statistics Occupational Outlook Handbook, occupations which require a bachelor's degree or above will average 23 percent growth, which is almost double the 12 percent growth expected for occupations that require less education and training. These Bureau of Labor Statistics forecasts are based on the economy operating at its full potential a decade from now. While this level of performance is difficult to guarantee, the city is looking to continue to attract jobs within the top job growth fields (health care or technology-related), which require high levels of education. This goal meshes nicely with the educated workforce available.

## Housing

### Existing Inventory

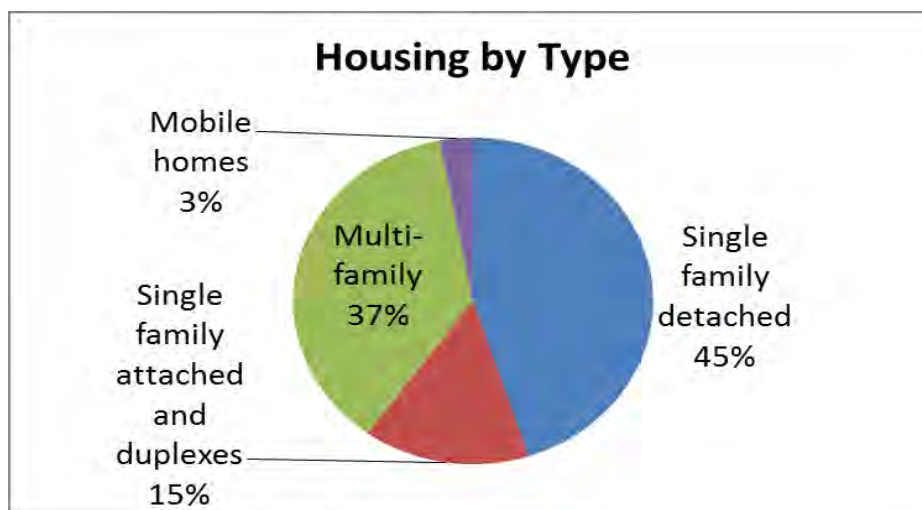
Residential development in Dover slowed dramatically after 2007 with as few as 59 permits per year (see Data Chapter). Most of the growth that did take place in the city was on the outskirts. This was primarily single family homes located in rural or suburban areas with more than half located in the northwest sector. Downtown Dover grew more slowly, gaining only 350 people between 2000 and 2010.



6 Examples of Dover's housing stock

The following chart shows the existing housing supply in Dover by type. These percentages are very similar to those found in Portsmouth and Rochester. Dover and Rochester have seen a steady supply of both single family and multi-family growth. Portsmouth has seen a decline in single family dwelling units, but continues to provide a mixture of housing types. These trends differ from some of the more rural towns in the region, which offer less housing diversity by restricting multi-family dwelling types.

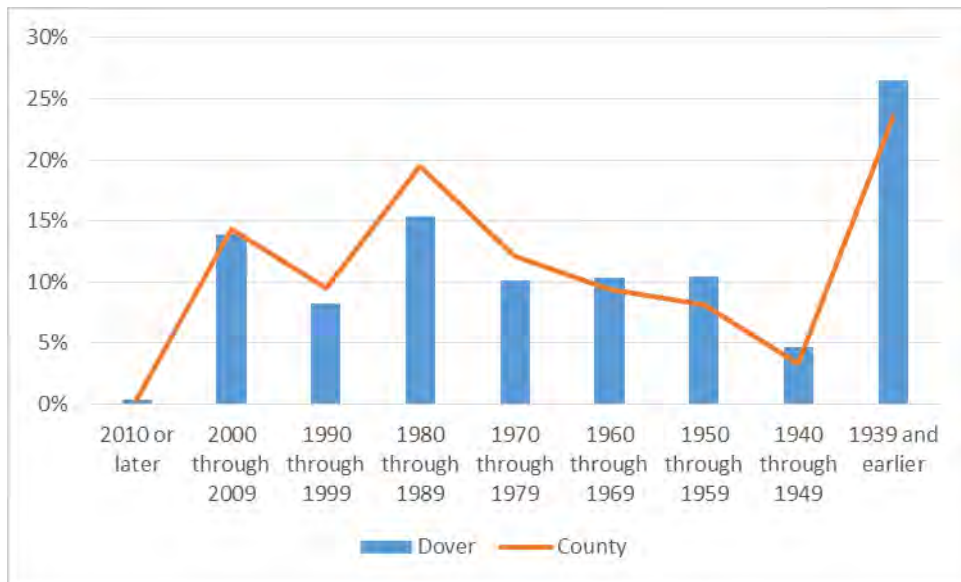
Figure 4 – Housing by Type



Source: US Census

According to the New Hampshire Housing Finance Authority, Dover’s housing stock is quite old, with nearly 46 percent built prior to 1960, and nearly 29 percent, or over 3,700 units, built prior to 1940. Comparatively, in Strafford County, 35 percent of housing predates 1960, and 23 percent predates 1940. Figure 5 documents the comparative ages of the housing in the County and Dover. As with many older communities, much of the housing units may be nearing the end of their functional lives and will likely begin to be replaced or redeveloped. This will continue to provide opportunities for the creation of additional housing units as larger homes are split into multiple units. This trend began in the 1980s in many in-town locations such as the Silver Street area, and has been evident as older single family homes on large lots are razed and replaced with multiple smaller and possibly more affordable units (in-fill development). This need is reinforced by the declining household size.

**Figure 5– Age of Housing Stock**



Source: NHHFA

Many of these older units are located in the downtown or surrounding neighborhoods. Innovative ways of creating more units have been encouraged in some areas through the adoption of Form Based Codes since 2009. This zoning change includes mechanisms for allowing for two or three units to replace a single family house, expanding where multi-family is allowed, and/or increasing height and lot coverage limits. Such innovations create housing opportunities/amenities for the resident as well as potential incentives for builders and developers.

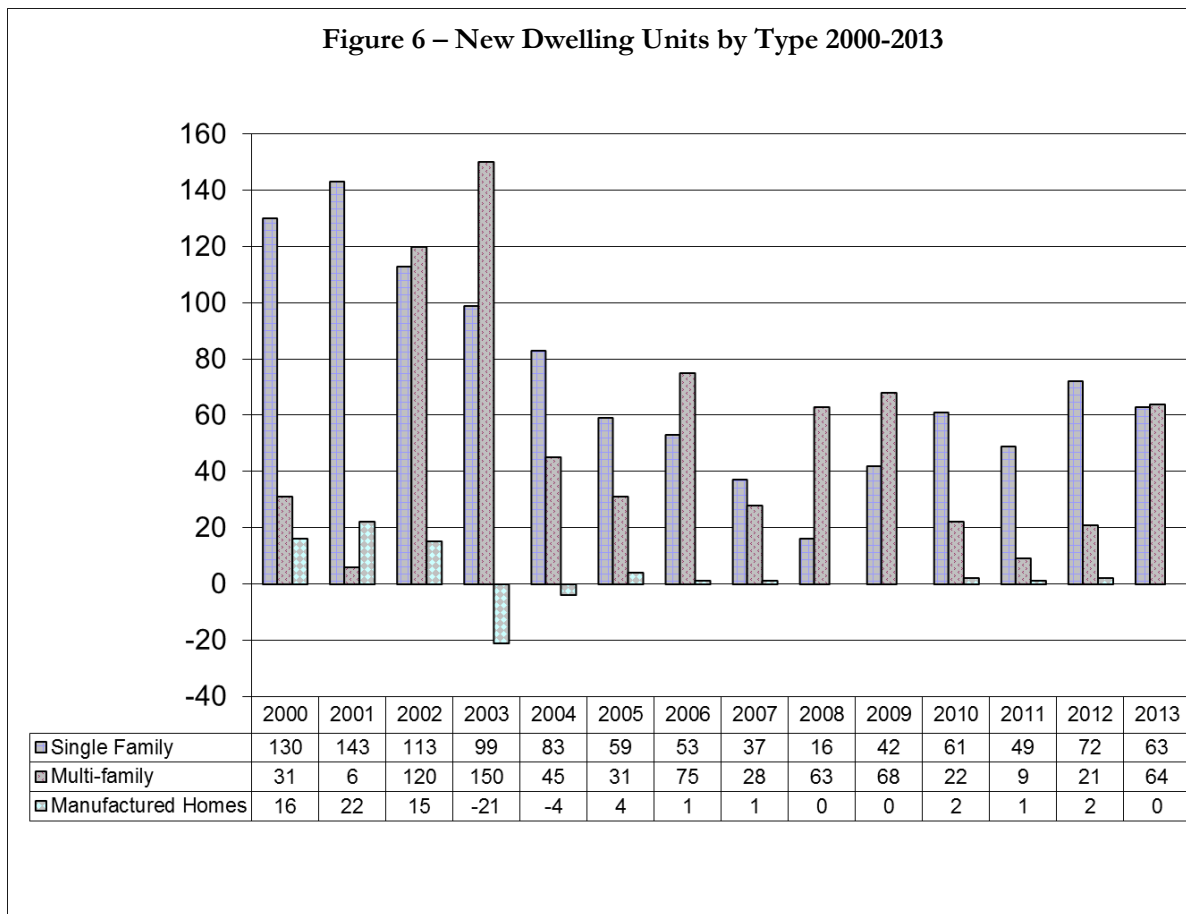
These changes were created to help support a healthy downtown. Residential growth in the urban core is necessary to generate a constant flow of foot traffic which will grow and support a vibrant downtown. Dover has had a mix of retail, office, and entertainment typical of a downtown, and the vision for this core has been to support and expand commercial options within it. By encouraging residents within walking distance of most daily activities, these activities will thrive. Living downtown is particularly attractive to many who work downtown, as well as younger and older populations, who do not require the amenities of suburban life. These units can be more affordable as well, considering infrastructure already in place will be taken advantage of, as opposed to installing new infrastructure which increases the cost of construction for developers. The goal of incorporating a higher density of residents in the downtown mix, was to increase the amount of activity. Moving forward the city would like to ensure that multi-family housing that is created is part of a mixed use development.



Dover has a smaller percentage of single family units and mobile homes than the County, and a higher percentage of multi-family units. This variety gives the city a greater diversity of housing.

In 2012, Dover represented about 25 percent of the County’s housing base. The following table demonstrates the types of housing units built in the City of Dover over the past 20 years. There has been a reduction in new home construction since it peaked in 2002/03. The average number of units constructed within the past 10 years is 122 a year; however this is significantly more than the 2010/11 numbers. In addition to the leveling off of the number of units constructed over the past five years, there has been a shift back towards single family units in 2010 and 2011. This may have changed again since 2011 as more mill space in downtown Dover has been converted to apartments.

**Figure 6 – New Dwelling Units by Type 2000-2013**



Source: Department Of Planning and Community Development; NH Housing Finance Authority

As of 2012 there were 51,885 housing units in Strafford County. Sixty percent of these units (31,210) are single family units. Multi-family units account for another 30 percent (15,767) of the units, and mobile homes account for the remaining 10 percent or 4,908 units. In Dover there were 13,298 housing units, of which 5,908 (44%) were single family units. Furthermore, Dover had 383 mobile home units (2.9%). Both unit types represent a smaller percentage of units than the County. Furthermore Dover had 7,007, or fifty three percent (53%) multi-family units. This affords residents a greater diversity of housing options.



7 A home located in Dover's urbanized residential core

### Cost of Housing

According to the New Hampshire Housing Finance Authority the 2013 median sale price for a housing unit in the County was \$200,000, and the median monthly gross rent for a two bedroom unit was \$1012.

a) *Median Sales Price:* The following are median sales prices for housing in Dover, as reported by the NH Housing Finance Authority ([www.nhhfa.org](http://www.nhhfa.org)) and then corrected using the US Department of Labor's Inflation Calculator.

	All	Existing Homes	New Homes	Single Family Detached	Condominiums
2013	\$248,450	\$226,250	\$369,000	\$262,500	\$156,000
2012	\$238,169	\$212,373	\$378,128	\$253,812	\$155,395
2006	\$283,157	\$277,258	\$377,542	\$342,030	\$194,907
2000	\$220,863	\$193,237	\$345,175	\$241,720	\$137,987
1995	\$144,365	\$134,221	\$252,054	\$152,169	\$92,082

b) *Median Rents:* The following are 2013 median rents, as reported by the NH Housing Finance Authority ([www.nhhfa.org](http://www.nhhfa.org)), and compared to inflation adjusted rent data using the US Department of Labor's Inflation Calculator.

	All	Studio	1-Bedroom	2-Bedroom	3-Bedroom
2013	\$953	\$740	\$887	\$989	\$1,432
2009	\$1020	\$741	\$914	\$1061	\$1447
2005	\$1051	\$742	\$956	\$1106	\$1415
2000	\$914	\$685	\$873	\$1014	\$1213
1995	\$824	N/A	\$774	\$879	N/A

c) *Rental Housing Vacancy Rate*: The following are rental vacancy rates for Dover, as reported by the NH Housing Finance Authority ([www.nhhfa.org](http://www.nhhfa.org)), compared to the County.

	Dover	County
2013	7.30%	4.7%
2012	4.10%	4.6%
2011	3.40%	3.3%
2010	6.20%	7.9%
2009	4.10%	4.8%

## **Housing Trends**

Dover accounted for nearly one third of the new housing units in the county added between 2000 and 2010. Combined Rochester’s 1,536 new units and Dover’s 1,761 units accounted for nearly 60 percent of the region’s growth. This trend will continue, although the other smaller communities that abut Dover (Rollinsford, Madbury, and Barrington) will also see continued growth pressure, particularly for single family homes.

Figure 6 illustrates how single family home construction has continued over the past four years in Dover. However, in-fill development and new housing projects in and around the downtown core are contributing to an increase in the city’s “urban” population. It is also increasing the density of residential development. As stated previously, the majority of Dover’s land area is zoned residential, and residential units compose the largest existing land use.

Dover continues to be a city with a diverse housing stock, varied in affordability and ownership. The city has made a conscious effort to analyze impediments to affordable housing, and make the necessary regulatory changes to encourage a mix of housing options for all income levels. The strong mix of renter and owner-occupied housing units promotes a healthy demographic and economic diversity. And yet Dover has become an increasingly attractive community to live in attracting new affluent residents that are drawn by the amenities. This attraction, obviously, has some impact on housing costs. Comparatively, Dover is more expensive to live in than the surrounding communities of Rochester and Somersworth, but less than Exeter or Portsmouth. The increase in housing costs does have implications for the lower and middle class; however, Dover has continued to provide opportunities for affordable housing through its multi-family and mixed use zones.

According to the *2014 Community Development Block Grant Action Plan* for Dover, produced by the Planning Department, forty-nine percent of the year round housing stock is rental property, while fifty-one percent is intended for owner occupancy. Ten years ago these values were the opposite; this statistic reflects the trend towards more single-family housing starts, as shown in Figure 6. According to the Plan, 12.7 percent of the rental housing stock and 1.2 percent of the owner housing stock is substandard as defined by overcrowding, a lack of adequate plumbing or kitchen facilities, or a cost burden of greater than 30 percent of total income. It is estimated that approximately 10 percent of the housing stock is in physical disrepair.

Slightly higher numbers of low-income residents are found in the urban core primarily due to the availability of multifamily rental units. The median household income for Dover (\$55,890 in 2012) is lower than the state (\$63,280 in 2012) and 21 percent of all households are designated very low income. An additional 20 percent of all households are designated low income as defined by Department of Housing and Urban Development criteria. This compares favorably with regard to the entire region (Portsmouth-Dover-Rochester) which tallies a 35.3 percent of all household being very low income.



Otherwise, the data shows that low-income residents remain rather evenly distributed throughout the city. This is important when considering Dover's need to comply with the New Hampshire workforce housing law RSA 674:59, and the city's desire to have mixed income neighborhoods. Dover complies with the requirements of the state law. This is documented as part of the regional housing needs assessment as prepared by the SRPC. The SRPC is currently updating this document and the city should review it once it becomes available to ensure that the housing strategies in Dover are still on target with the needs.

The challenge for Dover is to continue to provide housing opportunities for all residents, particularly residents that are above the threshold for subsidized housing. The Dover Housing Authority offers many opportunities for a diversity in housing options. The Housing Authority provides housing for approximately 1,000 persons in Dover in a range of unit sizes, and in elderly only facilities. To qualify for this public housing, a 3 person family would be earning between 30% (\$23,000) and 50% (\$39,000) of Dover's median income of \$84,000.

NH OEP forecasts that Dover will lead the region in population growth over the next two decades, adding 2,844 persons by 2035. If the average household size continues to shrink, as expected, this means an additional 1,700 to 2,000 dwelling units will be needed. If past trends continue, most of these will be single family homes in the more rural areas of the city, and some will continue to be created in the downtown. Household size continues to vary widely depending on location. The average new household size in the northwestern part of the city was 3.4 persons while in the downtown it averaged 2.00 persons in 2010, down slightly from 2.06 in 2000.

The trend towards smaller household size, which reflects the aging population as well as delayed marriage and family formation among the so-called Millennial Generation, is also leading to smaller, denser housing options. The average size of new apartments and condominiums is significantly smaller than those built in the 1980s and 1990s, appealing to empty nester's who are downsizing and to the young professionals who are entering the housing market for the first time. This trend also reflects the increased cost of construction (including land acquisition) and the achievable rents and prices in Dover. This may present an opportunity to encourage cottage housing and other types of small units clustered together. Cottage housing is generally defined as a grouping of small, single family dwelling units clustered around a common area and developed with a coherent plan for the entire site. They have gained popularity in recent years as a type of infill development on small sites, within existing developed areas.

### **Future Housing Needs**

Dover continues to develop following a pattern which emphasizes single family homes as the primary land use. The majority of developable land that is vacant and available in Dover, 86 percent, is zoned primarily for single family homes. Looking ahead at the impact of housing on land use in Dover there will be increased demand for higher density suburban zoning (e.g. open space subdivisions,) and increased density as you get closer to downtown. A limited amount of land for this housing could also encourage both in-fill development and adaptive re-use projects.

Many boomers will "age in place" by continuing to live in their large suburban or smaller in-town homes. However, with fewer young families coming along, those who do leave will see less demand (and lower price appreciation) for these units. On the other hand, this provides an opportunity for the younger generations to acquire these properties and not be priced out of the market, which has happened in many other communities.

It is important to note that other housing projects have begun to move forward in Dover, in particular the conversion of three floors of the Dover Cocheco Millworks to apartments which have leased up very quickly. Plus the recent redevelopment of a former mill building on Dover Street just outside of the

downtown core added 42 units of workforce housing. While Dover doesn't define workforce housing in its code or regulations, the State of New Hampshire requires that all communities allow workforce housing in a majority of its residential zones.

In RSA 674:58, the State defines workforce housing as homes that are affordable at a 30% cost burden to ownership households of four people making up to 100% of the area median income, or renter households of three making up to 60% of the area median income. In laymen's terms, Dover's median area income is \$84,000 thus a family of 4 should be able to afford a \$284,000 home to purchase, or a family of three with an income of \$45,000 (60% of \$84,000) can pay \$1,100 in rent. According to the US Department of Housing and Urban Development, the fair market rent in Dover for a 2 bedroom unit is \$1,065.

Several in-fill developments have also been completed or are in process, adding several dozen additional rental units to the city's housing stock. These projects, along with the consistent growth of single family homes, provide a diversity of housing choices and price points, which will continue to attract young singles and families as well as "empty nesters" who wish to live and possibly work in Dover.

The development of new specialized student housing in Durham may start to reduce the demand for apartments in Dover, as many UNH students have traditionally chosen the city due to its more attractive rents and access to school via UNH's Wildcat transit system. On the other hand, the continuing transformation of downtown Dover to a true live-work-play community will keep many students, particularly non-traditional and older students, in the city.

## Economic Development

### Dover's Economy

Economically, Dover acts as a hub for surrounding towns in Maine and New Hampshire. This is a homogeneous area, with many people working and shopping for goods and services in communities other than the one in which they live. The region also attracts workers from other areas of New Hampshire, Maine and Massachusetts, and serves as home for many people who commute out of the area on a daily basis.



8 New mixed use development in the downtown

### Employment

Although Dover has a few large employers, most businesses in the city are quite small. In 2011 a total of 838 private firms employed 14,809 workers. The city's ten largest employers accounted for 47 percent of employment, or 7,797 jobs. Four organizations (Liberty Mutual, Wentworth-Douglass, the city itself and Measured Progress) represented nearly 90 percent of these (6,960 jobs) and 42 percent of total paid employment. In addition, 30 government agencies and educational institutions employed 1,777 workers. The remaining 700 or so businesses had less than 200 employees each. The average private (non-governmental) establishment in Dover employed 17 people. The city was also home to another 2,500 or so businesses without paid employees (self-employed).

**Table 8 – Major Employers in Dover**

	2008	2010	2012	2013	2014	Sector
Liberty Mutual	2722	2524	2753	2874	2841	Insurance
City of Dover	984	856	800	798	789	Government
Wentworth-Douglass Hospital	1650	781	N/A	N/A	769	Hospital
Strafford County	497	481	483	N/A	485	Government
Measured Progress	420	392	473	404	392	Education
Churchill Medical/Advanced Medical	230	230	151	111	107	Manufacturing

*Source:* NH Employment Security

### Economic Trends

The Dover region, as well as the state and nation, continues to recover from the so-called “great recession” that began in 2007 and was not officially declared over until 2009. By the Spring of 2014, total non-farm employment in New Hampshire had nearly returned to its previous peak at the end of 2007. While currently showing relatively robust growth, led by gains in business services and health care, the ability of the economy to continue to expand is of concern to many economists, most of whom predict slow growth across most sectors. Dover's recovery is reflected in lower vacancy rates in most commercial sectors; however, average rents in 2013 were lower than 10 years prior. Dover's employment base in 2012 was about 3% higher than in 2009, but almost 5% lower than in 2008. In Dover, the service sector has led employment growth over the past few years although moderate gains in manufacturing, business administration and health care have been noted.

**Table 9 – Office and Industrial Vacancy Rates in Dover**

	Value
Total Square Footage	1,775,598
Vacant Square Footage	276,598
Vacancy Percentage	15.6%
Average Asking Rent	\$9.00/sf

*Source:* NH Employment Security

Retail employment has declined over the past several years (at least through 2011) although revenues have increased, reflecting national trends in this sector. Recent activity in downtown Dover suggests that this trend is changing, with the opening of several new stores, restaurants, entertainment and service activities. While larger scale retail operations are becoming more productive (i.e. generating more sales with fewer employees) smaller commercial businesses continue to generate jobs and lease space throughout the city. Because Dover is surrounded by large retail destinations that serve a regional market (Portsmouth/Newington and Somersworth) its share of the market will remain stable with the existing base of larger retail businesses of this type that it has, most of which are located along upper Central Avenue.

Unemployment Rate: The following is a summary of the unemployment rate for Dover, Strafford County, the regional labor market (“MicroNECTA – NH only”), and State of NH for 2010 through 2014 (using February) ([www.nhes.nh.gov/elmi/statistics/laus-arch.htm](http://www.nhes.nh.gov/elmi/statistics/laus-arch.htm)). NECTA stands for New England City and Town Area.

**Table 10 – Unemployment Rates**

	Dover	MicroNECTA	Strafford County	New Hampshire
February 2014	4.0%	4.9%	4.9%	5.2%
February 2013	4.5%	5.7%	5.7%	5.9%
February 2012	4.7%	5.8%	5.8%	6.0%
February 2011	4.9%	5.9%	5.8%	6.1%
February 2010	6.0%	7.0%	7.2%	7.3%

*Source:* NH Employment Security

As Dover continues to grow, and generate more market demand for goods and services, there will be increased opportunities for small, specialty retailers to serve this growing population, with much of this focused on the downtown or at locations serving a localized population base or commuter traffic (convenience retail). The Central Business District zoning regulations were revised in 2009 to recognize that the downtown can and should serve as a regional retail and entertainment destination. These regulation changes streamlined the development process, and clarified that the height, massing and context of a structure, as well as the ability to be reused and be dynamic was more important than the specific use of a property. Dover’s urban core is now zoned to support/encourage related uses, especially when integrated with other uses such as residential and office in the downtown. Parking requirements and hours of operation are important elements that need to be analyzed, taking lessons learned from other communities with successful retail/entertainment venues (e.g. Portsmouth).

The decline in traditional manufacturing is reflected in land use patterns in Dover, where many of the city’s “new” industries have new built-to-suit facilities (e.g. Liberty Mutual) in modern business park settings (e.g. Enterprise Park), leaving the city’s older industrial parks (e.g. Crosby Road) populated with older, low valued and functionally obsolete buildings on large lots. The Dover Business and Industrial Development

Authority has indicated a need to develop more land for a new business park, which is needed to accommodate future business growth. In addition to this new park, there is a need to consider how Dover can redevelop its zoning around existing industrial parks to better serve the needs of these new industries.

The population growth that Dover and the rest of Strafford County has experienced also impacts employment patterns, since an increasing share of the Seacoast workforce will live north of the Little Bay Bridges in the future. As Dover continues to grow economically, and continue to offer a high quality of life to residents, there will be more and more firms looking to locate in Dover in order to be closer to their employees, particularly as drive-times and the cost of commuting increase. This will be influenced further by the State of New Hampshire's work to improve capacity on the Little Bay Bridges and improve efficiency of the Spaulding Turnpike.

### **Future Economic Initiatives**

A dilemma facing communities that are actively pursuing economic development strategies and trying to attract employment is whether or not to invest scarce resources now, for example by acquiring property and installing infrastructure in order to attract one or more larger employers, and having this investment potentially tied up for years, or whether to invest in activities that help existing businesses prosper and grow, thus incrementally adding new jobs and investment in the community. Dover is doing a good job on both fronts.

From a land use perspective, the first strategy (new business parks) may require a tradeoff with the market demand for new residential uses or for public demand for open space. The latter strategy (business retention and support) may or may not involve land use changes, other than the need to ensure that smaller businesses (and the developers that create space for them) continue to have opportunities to accommodate a wide range of business types and sizes (especially small and very small enterprises) within a reasonable and realistic price range. The demand for office, R&D and light industrial space in Portsmouth, compared to the available supply, has resulted in increasing lease and sale rates, especially in the downtown and Pease markets. This in turn will increase demand for quality space in Dover, especially when an increasing share of the employment base is originating from Strafford County.

Overall, Dover has come out of the recession in a position for taking advantage of growth opportunities that will present themselves over the next few years as the national and state economies continue their slow growth. Strong growth in Portsmouth, led in part by new investment in downtown and strong surge in housing prices over the past year, will bode well for Dover, which offers more competitively priced land and buildings for commercial development as well as more affordable housing opportunities. This trend will likely accelerate as Portsmouth reaches full build-out. In addition, there are limited development opportunities remaining at Pease International Tradeport and demand for office and high-tech space there remains strong, which will result in more and more companies looking to Dover for their expansion.

Dover's resurgence is seen most clearly in the downtown. The continued redevelopment of the mills, including a variety of new tenant businesses and residents paying lease rates substantially higher than a few years ago, along with new infill projects underway or in the active planning process, will continue to bring new spending to the city. This will bolster its growing reputation as a vibrant, livable, walkable community. This in turn has attracted both young families and near-retirees to the neighborhoods in and around downtown, resulting in new investment in properties and increased valuation for assessment purposes.

In 2014, the city adopted a Tax Increment Financing (TIF) district in the downtown to fund public infrastructure improvements, and is actively creating public private partnerships to develop city-owned properties into new mixed-use projects, public parking facilities, and new community facilities. Another exciting development opportunity is the waterfront area adjacent to the

downtown. There is tremendous potential for a major mixed-use development on what was the city's former public works site on the river. This development effort has the potential to compliment other efforts in the downtown while providing greater public access to the river, and meeting other goals articulated in Dover's Vision.

After analyzing the available economic data it is clear that all sources point towards Dover continuing to grow and prosper while continuing to capture an increasing share of the Seacoast region's economic activity.

After analyzing the available economic data, it is clear that all sources point towards Dover continuing to grow and prosper while continuing to capture an increasing share of the Seacoast region's economic activity. Dover continues to become a dominant municipality and economic entity in the region, particularly as Portsmouth reaches build-out and its population growth stabilizes. Although Portsmouth has greater employment, Dover has the physical capacity to continue adding residents at all income levels as well as supporting new employment and commercial activity.

## Energy

In 2007, Dover created an Energy Committee and is working to assess the efficiency of municipal buildings, and the possibilities for future energy conservation and production initiatives. More specifically the city aims to:

- Secure, safe, and reasonably priced energy supplies and services to Dover's commercial, industrial, transportation, and residential customers, reduce dependence on traditional fossil fuels within municipal operations, decrease electricity and natural gas consumption, use efficient and renewable resources to supplement the city's energy needs, proactively plan for a reduction in the demand for energy.



9 Solar panels

- **Promote economic growth and development.** Dover should encourage and maintain economic growth prospects by recognizing and fostering the multiple functions of energy in the economy as an integral part of producing and transporting goods and services, and as a potential driver of new areas of economic activity.
- **Protect the environment.** Dover should seek to promote the achievement of federal and state environmental requirements and objectives effectively and at reasonable cost, considering environmental and public health costs and, where appropriate, possibly provide market-based incentives to achieve those goals.

For the purpose of this chapter of the Master Plan, it is important to recognize the role that land use and transportation policies have on energy use, and how regulations can create additional barriers or costs that may slow energy conservation or renewable energy projects. The development pattern and the intersecting transportation system in Dover have the potential to encourage lower energy transportation options such as mass transit, walking, and bicycling. This should be protected and expanded, and Dover's Complete



Streets Policy reinforces this vision. The State of New Hampshire is about to undertake an analysis of local regulatory barriers impacting the installation of renewable energy systems. The findings from this effort should be used to review the process in Dover in order to ensure that the city is supporting investments in energy and conservation measures.

## Natural Resources and Ecological Services

Currently, 16 percent of the land area in Dover (3,111 acres) is permanently protected. The remainder of the land in the city includes a mix of development, and a network of critical natural resources that contribute to the city's beauty, ecological services, and overall resilience. Natural resources such as steep slopes, soils, vegetation, wildlife and water resources which add to Dover's character also contribute to the quality of life for Dover residents. Beyond the call for continued strategic conservation initiatives, the Open Space and Conservation Chapter calls for encouraging all new developments to protect and where possible enhance valuable natural and open space resources. Dover has a history of protecting important natural resources over the last 25 years through a combination of land use regulations and outright purchase (both fee simple and protective easement), and this should continue.



10 View of Cochecho River in the downtown

These natural resources provide both opportunities and constraints for growth, and provide valuable ecological services that should be considered city-wide. An ecological service is any positive benefit that a natural resource provides the larger ecosystem and to people. This is also an important distinction when considering how Dover's land use regulations guide the design of new developments on individual parcels, and their corresponding open space, landscaping, and storm water infrastructure.

As identified in the Natural and Historical Resources chapter, drafted in 2000, the encroachment of development on agricultural soils, or lands that are currently in agricultural use, is an issue of concern for the long-term use of land in Dover. Once converted to more intensive uses, these lands are usually irretrievably lost for agricultural purposes. Dover is in a unique position as a city in the Seacoast with valuable agricultural resources at a time when the local food movement and general awareness of sustainability is at an all-time high. These resources should be retained if at all possible because of their contribution to Dover's character, the local economy, the commitment to resource and energy conservation, and the community's resilience.

Dover's Natural and Historical Resources Chapter, incorporated by reference, the city's "Storm Water Management Plan" that was required by the USEPA to be developed, approved, and implemented to meet the requirements of the federal "Phase II Storm Water" regulations. Since the adoption of the 2000 chapter, the USEPA has added new requirements for storm water management that apply to Dover, while these changes are not reflected in existing zoning code, they are contained within the City's Site Plan regulations. The city has participated in the Southeast Watershed Alliance, which has developed a model stormwater ordinance. The city is working to incorporate these new standards into the local regulations. It is important to have consistent enforcement of these environmental protections, by local adoption of regulations.

A study by the NH Estuaries Project indicates that the amount of impervious surfaces in Dover increased from 11 percent in 1990 to 18.6 percent in 2005. Ten percent impervious surface is generally regarded as

the threshold for water quality impairment. More significant, the per capita amount of impervious surface has increased from 0.075 acres per person to 0.110 acres per person, which is an indicator of sprawling development. While, the city cannot adopt limitations on the amount of impervious surface without severe economic consequences, it does require that parking lots over three quarters of an acre consider installation of porous materials, and it requires the use of such materials when a parking lot exceeds an acre and a half. In addition, the site review regulations require best management practices for more effective treatment of runoff from impervious surfaces. This technology could be utilized along with other low impact development strategies to decrease run-off while increasing opportunities for both wildlife habitat and food production. This approach has the ability to restore ecological services and improve the quality of Dover's natural resources while contributing to the overall resilience of the community.

### **Climate Adaptation**

The concept of climate change adaptation has become a topic of municipal concern in Dover. In 2014 alone, two reports were completed that help explain the need for concern. The first is an effort by the New England Climate Adaptation Project. This report, completed in March of 2014, identifies impacts from flooding, heat waves, decreased water supply, and changes to the ecosystems that are specific to Dover. The second report is a broader effort of the New Hampshire Coastal Risks and Hazards Commission, and is titled "Sea-level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire."

An increasing number of local leaders, staff, and citizens are aware of the pressing need to begin adaptation efforts. It is hoped that these reports can introduce everyone to the importance of climate change adaptation and stimulate greater interest in incorporating climate change risk into everyday planning and decision making in Dover.

### **Constraints to Development**

The map on the following page illustrates the extensive network of natural resources in Dover that are typically viewed as constraints to future development. The reason for this is that these resources have been protected by regulations or identified as critical resources by the community, and must be avoided during the land development process. Buffers to surface waters and wetlands, regulating land uses over aquifers, and retention of critical agricultural soils should all be viewed as important to the ecological and economic health of Dover. Utilization of regenerative storm water facilities, such as gravel wetlands and infiltration beds, natural resource protection, and other ecological approaches, (i.e. vegetative swales used to cleanse storm water) would be a positive move towards promoting sustainable development in Dover. This can be further enhanced by the construction of certified high performance green buildings. If we shift our view of the city from one of limits to one of abundance we can fulfill the vision residents have created for Dover.

### **Land Conservation**

Since the 2000, Dover has made great strides to permanently protect open spaces throughout the city, as demonstrated in the Open Space and Conservation Chapter. The Conservation Commission and Open Lands Committee work to identify lands that should be protected and utilize funds set aside from the Current Use penalty, which landowners pay when they remove their land from Current Use, as well as monies bonded through the Capital Improvements Program. As of 2012, 3,111 acres have been (cumulatively) protected through purchase, easement, donation or set aside as part of an open space subdivision. No target has been set for the percent of Dover that should be permanently protected, but a general commitment has been made to continue protecting critical resources. Moving forward, the city should pursue improving the protection level of Bouchard and Hughes wellhead tracts by either the granting of easements, or establishment of deed restrictions. Otherwise, Dover should continue to protect and enhance environmentally sensitive natural resource areas in order to maintain their ecological integrity and to promote public health and safety.





# Where we are going - Future Land Use

## Section

# 2

**D**over first adopted a Master Plan in 1963, and since that time has evolved from a community centered on manufacturing to a city boasting a reemerging downtown and varied housing opportunities. The residents of Dover have created a vision for a dynamic community with an outstanding quality of life that is dependent on the actions taken in regards to land use.

This section of the Land Use Chapter is charged with translating the 20 year vision for guiding land use change in Dover into actionable steps. The map on the following page illustrates the Future Land Use Plan for Dover. This shows how we expect regulatory and non-regulatory policies and programs to guide future land use change in Dover. For this to take shape there will need to be many public discussions and the land use regulations will need to be amended. More specifically this vision calls for the following themed areas in the city:

### **Downtown:**

- The majority of future development should be located in or near downtown.
- Continue to encourage in-fill and mixed -use development with in a ½ mile or so of the downtown core.

### **Waterfront Area:**

- Potential for a major mixed -use development on the city's former public works site on the river.
- This development effort has the potential to compliment other redevelopment efforts in the downtown while providing greater public access to the river.

### **Advanced Manufacturing Cluster:**

- Encourage higher densities in the existing industrial and business parks.
- Promote a wider range of uses that mix office, retail, distribution and fabrication activities

### **Low Density Residential:**

- Continue to promote lower density residential zoning (e .g. conservation subdivisions) and promote agricultural uses along with land conservation measures.
- Continue to identify and purchase conservation easements on properties with critical natural resources.

### **Medium Density Residential:**

- Encourage residential development at a moderate density on smaller lots served by municipal water and sewer. Many of these areas already have established neighborhoods.
- Continue to identify and purchase conservation easements on properties with critical natural resources.
- Review Open Space Subdivision requirements to promote usage of that development technique.

**High Density Residential:**

- Continue to promote higher density suburban development for a mix of residential types. Some commercial and office uses may be allowed in the areas closer to downtown.
- Review Open Space Subdivision requirements to ensure context sensitivity.

**Mixed Use:**

- Encourage a mix of residential and commercial uses that are compatible with each other in areas outside of the downtown area.

**Retail Corridor:**

- Continue to promote retail and commercial development along highway corridors and encourage redevelopment with more attractive buildings and parking areas that contain green drainage infrastructure and attractive landscaping.





## Future Land Use Map City of Dover, NH

- Downtown:**
- The majority of future development should be located in or near downtown.
  - Continue to encourage in-fill and mixed-use development within a 1/2 mile or so of the downtown core.
- Waterfront Area:**
- Potential for a major mixed-use development on the city's former public works site on the river.
  - The development effort has the potential to complement other redevelopment efforts in the downtown while providing greater access to the river.
- Advanced Manufacturing Cluster:**
- Encourage higher densities in the existing industrial and business parks.
  - Promote a wide range of uses that mix office, retail, distribution and fabrication activities.
- Low Density Residential:**
- Continue to promote lower density residential zoning (e.g. conservation subdivisions) and promote agricultural uses along with land conservation measures.
  - Continue to identify and purchase conservation easements on properties with critical natural resources.

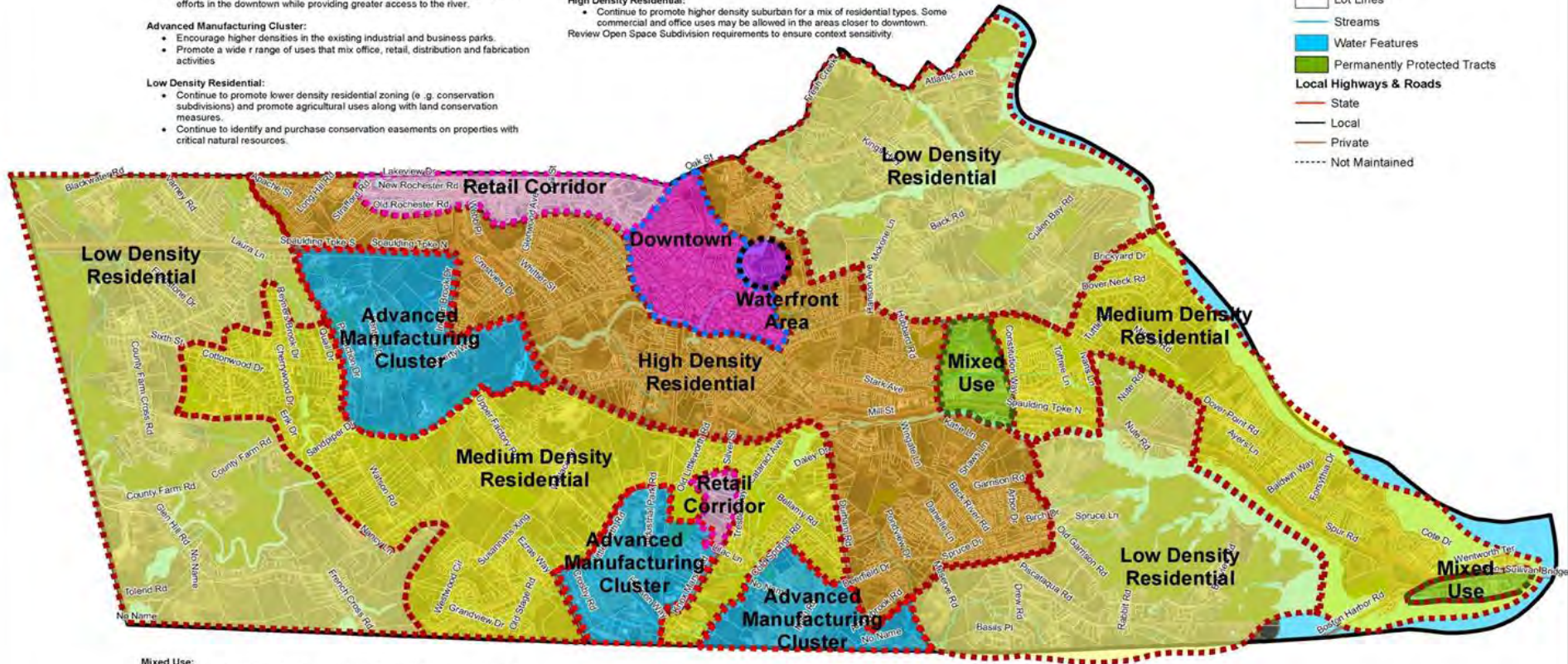
- Medium Density Residential:**
- Encourage residential development at a moderate density on smaller lots served by municipal water and sewer. Many of these areas already have established neighborhoods.
  - Continue to identify and purchase conservation easements on properties with critical natural resources.
  - Review Open Space Subdivision requirements to promote usage of that development technique.
- High Density Residential:**
- Continue to promote higher density suburban for a mix of residential types. Some commercial and office uses may be allowed in the areas closer to downtown.
  - Review Open Space Subdivision requirements to ensure context sensitivity.

**Legend**

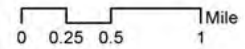
- Municipal Boundary
- Lot Lines
- Streams
- Water Features
- Permanently Protected Tracts

**Local Highways & Roads**

- State
- Local
- Private
- Not Maintained



- Mixed Use:**
- Encourage a mix of residential and commercial uses that are compatible with each other in areas outside of the downtown area.
- Retail Corridor:**
- Continue to promote retail and commercial development along highway corridors and encourage redevelopment with more attractive buildings and parking areas that contain green drainage infrastructure and landscaping.



Data Sources:  
 City of Dover Assessor's Office Parcel Data  
 GRANIT Conservation & Public Lands Datalayer (level of protection)  
 NHDOT Aerial Photography -- 2010

# Recommendations— Implementing the Vision

*This section provides a direction for guiding land use change and community development efforts.*

The following implementation program is intended to bring about our Vision for Dover, which is based on the Vision Section of this chapter and is summarized below.

*Dover will be a dynamic and sustainable community—a desirable place to live and work with family friendly neighborhoods, a vibrant historic downtown, a variety of housing opportunities, excellent schools and municipal services, an economic base with stable, well-paying employers and a place served by a variety of transportation types and systems. We will also preserve its rural character through preservation of its natural resources as well as its cultural and architectural heritage for current and future generations. We envision a diverse community that promotes social, cultural, and recreational opportunities for all age groups.*

This vision captures the attitudes and desires of Dover’s citizens for growth that both respects our natural environment, our cultural heritage and our wishes to develop a sustainable community. Striving for a future as a sustainable, resilient community will ensure that Dover can meet more of its needs locally, strengthen the local economy, adapt to a changing climate, bounce back from natural disasters and maintain a competitive advantage in the Seacoast and beyond.

Much of Dover’s current growth involves redevelopment of our downtown and much of our existing historic building inventory in addition to development in the remaining open areas of the City. This trend toward redevelopment should continue to respect our current building fabric while enhancing the community’s built environment in a manner that recognizes the desire of our citizens for a walkable vibrant community environment. Complementing this redevelopment trend should be recognition that new development will provide a neighborhood-friendly environment that preserves our rural character.

In addition to responding to Dover’s development trends, the recommendations contained in the implementation program continue Dover’s policy that development should occur in the context of its surroundings—both built and natural.

These recommendations are organized by type of activity and identify the local department and entities that will be most responsible for carrying out the actions. The program also identifies a time period for implementation. The following are the time periods for implementation:

Ongoing	Actions which are continuous or are already being carried out
Immediate	Actions which should be undertaken in 1-2 years
Short	Actions which should be undertaken within 3-5 years
Long	Actions which will take more than 5 years to be initiated or completed.

## Land Use

	Goal/Action	Priority	Responsibility	Chapter Reference
<b>Land Use Goal</b>	<i>Build a sustainable community that allows for modest growth of residential, commercial and industrial development compatible with Dover's historic urban and rural character.</i>			
<b>Objective LU 1</b>	Make Dover's downtown a vibrant and livable focal point for the city and region that is alive with a wide variety of retail, dining, entertainment, cultural opportunities and a mix of housing choices.			<i>Vision Bullet #2, page 3</i>
LU 1.1	Redevelop the city-owned Cochecho waterfront parcel through a public-private partnership with a mix of uses that is consistent with the goals and elements of the 2005 Waterfront Charrette.	Short	Cochecho Waterfront Development Advisory Committee, DHA, City Council	Pages 24 & 29
LU 1.2	Actively encourage development and redevelopment of the urban core through regulatory and non-regulatory means. Such development should provide opportunities for a mix of retail, office, service and residential uses.	Immediate and ongoing	Planning Department	Vision Action Bullet #5, page 4
LU 1.3	Forge public-private partnerships to redevelop vacant or underutilized city owned parcels	Immediate and ongoing	Planning Department	Vision Action Bullet #5, page 4
LU 1.4	Adopt regulations including architectural and landscape design standards to ensure quality, historically appropriate building design.	Short	Planning Board	Vision Action Bullet #9, page 5
<b>Objective LU 2</b>	Enhance the quality of Dover's natural environment by ensuring long-term protection, conservation and resiliency of its ecological and water resources, shorelines, open space, and wildlife.			Vision Action Bullet #5, page 4
LU 2.1	Explore various options (urban growth boundary, conservation easement acquisitions, density transfer credits, etc.) for preserving the remaining rural areas of the community.	Short	Planning Board, Conservation Commission	Vision Action Bullet #7, page 4
LU 2.2	Revise regulations to ensure that low impact storm water facilities, natural resource protection, and other ecological approaches to land use change are required through development review.	Short	Planning Board, Conservation Commission	Page 26
LU 2.3	Revise regulations to add incentives to use certified high performance green buildings.	Short	Planning Board	Page 27

Goal/Action		Priority	Responsibility	Chapter Reference
<b>LU 2.4</b>	Review subdivision regulations and revise tools to guide land use change in rural areas to continue clustering of new development at higher densities.	Short and ongoing	Planning Board, Conservation Commission	Vision Action Bullet #7, page 4
<b>LU 2.5</b>	Create a provision in the subdivision regulations that requires a minimum of a pedestrian connection between developments to improve transportation options and reduce vehicle trips.	Short and ongoing	Planning Board	Page 25
<b>LU 2.6</b>	Continue the identification and purchase of conservation easements and fee title on properties with critical natural resources.	Ongoing	Conservation Commission and Open Lands Committee	Pages 27 & 29
<b>LU 2.7</b>	Review the recommendations related to climate change adaptation from the New England Climate Adaptation Project reports and any subsequent efforts and incorporate, where appropriate, action items.	Ongoing and short	Planning Board, City Council, Community Services	Page 27
<b>Objective LU 3</b>	Encourage multi-modal transportation options that are integrated with Dover's land use program and policies			Vision Action Bullets #4 & 5, page 5
<b>LU 3.1</b>	Implement the recommendations from the Downtown Pedestrian and Vehicular Access and Streetscape Study for transportation infrastructure and streetscape improvements in the downtown	Short, intermediate, and long	City Council	Page 7
<b>LU 3.2</b>	Implement the new complete streets/green streets policy in the Dover to encourage multi-modal designs and low impact development stormwater solutions.	Short and intermediate	Planning Department and Community Services	Pages 25 & 26

## Economic Development

Goal/Action		Priority	Responsibility	Chapter Reference
<b>Economic Development Goal</b>	<b>Dover attracts and retains stable, well-paying employers because it is business friendly and has a high quality of life.</b>			
<b>Objective ED 1</b>	Grow an innovative economic base that attracts and retains stable employers that contribute to a high quality of life.			<b><i>Vision Bullet #6, page 3</i></b>
<b>ED 1.1</b>	Continue to work closely with existing and potential new employers who will provide stable, quality jobs to Dover area residents.	Ongoing	DBIDA	Vision Action Bullet #11, page 5
<b>ED 1.2</b>	Investigate ways to grow the City's economic base utilizing existing and new office/industrial spaces that are appropriately located and consistent with the master plan vision for Dover.	Ongoing	DBIDA	Vision Action Bullet #12, page 5
<b>ED 1.3</b>	Investigate redevelopment options for the existing industrial park areas. This would include the Pre-1990s parks Crosby Road, Industrial Park Drive, Sumner Drive, and Progress Drive.	Intermediate	DBIDA	Pages 23, 24, & 29
<b>ED 1.4</b>	Identify sites and construct new business/industrial parks as market demand dictates.	Ongoing	DBIDA	Vision Action Bullet #12, page 5



## Housing

Goal/Action		Priority	Responsibility	Chapter Reference
<b>Housing Goal</b>	<b>Provide opportunities for a balanced supply of safe, affordable and attractive housing for individuals and families of all ages and incomes.</b>			
<b>H 1.1</b>	Work with the Dover Housing Authority and others to track housing inventory to be sure there are enough units to continue to meet Dover's housing needs.	Ongoing	Dover Housing Authority and Planning Department	Vision Action Bullet #2, page 4
<b>H 1.2</b>	Establish partnerships with developers to provide creative regional solutions which promote a diversity of housing development that keeps pace with changes in population and job growth.	Short	Planning Department	Vision Action Bullet #2, page 4
<b>H 1.3</b>	Develop educational material for advocacy about regional housing issues.	Short	Planning Department	Vision Action Bullet #2, page 4
<b>H 1.4</b>	Encourage in-fill development and adaptive re-use projects that incorporate a residential component.	Ongoing	Planning Board and DBIDA	Pages 19, 20 & 29
<b>H 1.5</b>	Consider density bonuses for small homes (below 1,000 square feet) and other innovative tools.	Short	Planning Board	Pages 19 & 20

## Energy

Goal/Action		Priority	Responsibility	Chapter Reference
<b>Energy Goal</b>	<b>Build a sustainable community for current and future generations of Dover residents.</b>			
<b>EN 1.1</b>	Consider providing incentives for developments that propose energy conservation measures.	Short	Planning Department	Page 25
<b>EN 1.2</b>	Promote sustainable development through the city's use of recycled materials, Energy Star rated products, and sustainable building materials.	Short	City Purchasing	Page 25
<b>EN 1.3</b>	Encourage the use of local suppliers to minimize fuel costs and pollution and promote local job creation.	Intermediate	City Purchasing	Page 25
<b>EN 1.4</b>	Encourage federal, state and regional efforts to increase infrastructure capacity for energy supply, including pipelines for natural gas.	Intermediate	City Council	Page 25
<b>EN 1.5</b>	Develop an alternative energy ordinance to encourage use of alternate sources of energy, such as solar power.	Intermediate	Energy Commission and Planning Department	Page 25