

5. Healthy Social and Built Environment Appendix Data Tables

This chapter presents data on the following indicators related to the social and built environment:

5.1. Land Use

- % of land that is agricultural, green space, residential, commercial, industrial, recreation, transportation, urban, and water/wetlands (2005)

5.2. Form of Government

5.3. Voting

- Number of registered voters (2010)
- % Democrat, % Republican, % Other party (2010)
- Voting rate (2008, 2010)

5.4. Employment

- % Unemployed (1999-2001, 2008-2010)

5.5. Education

- Public School enrollment (2010-2011)
- Educational attainment (2005-2009)
- Massachusetts Comprehensive Assessment System (MCAS) - % of students scoring proficient or higher in 4th and 10th grade, English and Math (2003, 2011)

5.6. Childcare

- Number of licensed childcare slots (2000, 2010)

5.7. Quality of Life

- Quality of Life Index (including Amusement, Culture, Education, Medical, Mortality, Religion, and Restaurant Indices) (2010)

Presented for each indicator is an explanation of the indicator, the data, the source of the data, a Healthy People 2020 objective when available, and a comment on whether there are any statistically significant differences between each community in CHNA 18 and Massachusetts.

5.1 Land use

Agriculture: This category includes land used for **cropland** (generally tilled land used to grow row crops. Boundaries follow the shape of the fields and include associated buildings (e.g., barns). This category also includes turf farms that grow sod.); **orchards** (fruit farms and associated facilities); and **nurseries** (greenhouses and associated buildings as well as any surrounding maintained lawn. Christmas tree (small conifer) farms are also classified as Nurseries)

Green Space: This category includes land used for **pastures** (fields and associated facilities (barns and other outbuildings) used for animal grazing and for the growing of grasses for hay); **forests** (areas where tree canopy covers at least 50% of the land. Both coniferous and deciduous forests belong to this class); and **brush-land** (predominantly (> 25%) shrub cover, and some immature trees not large or dense enough to be classified as forest. It also includes areas that are more permanently shrubby, such as heath areas, wild blueberries or mountain laurel)

Recreation: This includes land used for **participation recreation** (facilities used by the public for active recreation, including ball fields, tennis courts, basketball courts, athletic tracks, ski areas, playgrounds, and bike paths plus associated parking lots. Primary and secondary school recreational facilities are in this category, but university stadiums and arenas are considered Spectator Recreation. Recreation facilities not open to the public such as those belonging to private residences are mostly labeled with the associated residential land use class not participation recreation. However, some private facilities may also be mapped); **spectator recreation** (University and professional stadiums designed for spectators as well as zoos, amusement parks, drive-in theaters, fairgrounds, race tracks and associated facilities and parking lots); **water-based recreation** (swimming pools, water parks, developed freshwater and saltwater sandy beach areas and associated parking lots. Also included are scenic areas overlooking lakes or other water bodies, which may or may not include access to the water (such as a boat launch). Water-based recreation facilities related to universities are in this class. Private pools owned by individual residences are usually included in the Residential category); and **golf courses** (includes the greenways, sand traps, water bodies within the course, associated buildings and parking lots. Large forest patches within the course greater than 1 acre are classified as Forest. Does not include driving ranges or miniature golf courses)

Residential: This includes land used for multi-family residential, and very low, low, medium, and high density residential

Commercial: This includes commercial land (Malls, shopping centers and larger strip commercial areas, plus neighborhood stores and medical offices (not hospitals). Lawn and garden centers that do not produce or grow the product are also considered commercial)

Industrial: This includes industrial lands (Light and heavy industry, including buildings, equipment and parking areas)

Transportation: This is defined as airports (including landing strips, hangars, parking areas and related facilities), railroads and rail stations, and divided highways (related facilities would include rest areas, highway maintenance areas, storage areas, and on/off ramps). Also includes docks, warehouses, and related land-based storage facilities, and terminal freight and storage facilities

Water/Wetlands: This includes **water**; **non-forested wetlands**; and **forested wetlands**

Urban: This is defined as lands comprising schools, churches, colleges, hospitals, museums, prisons, town halls or court houses, police and fire stations, including parking lots, dormitories, and university housing. Also may include public open green spaces like town commons.

Other: This includes **mining** (includes sand and gravel pits, mines and quarries); **transitional** (open areas in the process of being developed from one land use to another (if the future land use is at all uncertain)); **waste disposal** (landfills, dumps, and water and sewage treatment facilities such as pump houses, and associated parking lots. Capped landfills that have been converted to other uses are coded with their present land use); **power line/utility** (power line and other maintained public utility corridors and associated facilities, including power plants and their parking areas); **marinas** (include parking lots and associated facilities but not docks); **cemeteries** (includes the gravestones, monuments, parking lots, road networks and associated buildings); **junkyards** (includes the storage of car, metal, machinery and other debris as well as associated buildings as a business); and **open lands** (vacant land, idle agriculture, rock outcrops, and barren areas. Vacant land is not maintained for any evident purpose and it does not support large plant growth)

	% of total acres									
	Agriculture	Green Space	Recreation	Residential	Commercial	Industrial	Transportation	Water/Wetlands	Urban	Other
2005										
Brookline	1.07	13.95	10.71	57.10	4.73	0.19	1.28	2.25	6.43	2.31
Dedham	0.42	26.77	2.72	34.61	6.06	1.70	3.06	18.65	3.71	2.30
Dover	3.01	61.09	0.77	20.13	0.31	0.00	0.17	12.32	0.86	1.35
Needham	1.26	24.85	2.30	44.44	2.00	3.59	2.13	14.86	2.77	1.79
Newton	0.01	12.44	7.04	60.23	4.61	1.13	2.39	5.24	5.29	1.61
Waltham	0.52	22.23	2.12	35.93	9.14	6.37	2.00	11.28	8.29	2.13
Wellesley	0.21	25.19	4.16	46.11	3.70	0.03	1.25	8.31	9.91	1.15
Weston	1.19	49.84	3.86	25.98	0.51	0.27	2.05	12.28	2.13	1.90
Westwood	1.36	34.17	2.39	41.29	2.31	3.84	1.04	10.98	1.98	0.65
CHNA 18	1.03	31.57	3.75	39.63	3.52	1.90	1.74	10.86	4.33	1.67

Source: Metro Area Planning Council (MAPC Community Profiles)

5.2 Form of Government

Brookline	Board of Selectmen - Representative Town Meeting
Dedham	Board of Selectmen - Representative Town Meeting
Dover	Board of Selectmen - Open Town Meeting
Needham	Board of Selectmen - Representative Town Meeting
Newton	Mayor - Council
Waltham	Mayor - Council
Wellesley	Board of Selectmen - Representative Town Meeting
Weston	Board of Selectmen - Open Town Meeting
Westwood	Board of Selectmen - Open Town Meeting

Source: Metro Area Planning Council (MAPC Community Profiles)

5.3 Voting

Number of registered voters: This is the number of individuals who were registered to vote as of the November 2010 state election.

% Democrat/Republican/Other Party: This is the percent of registered voters who registered with a political party at the time of the November 2010 state election.

Voting rate: This is the percent of registered voters who submitted a ballot in the November 2008 presidential election, and the November 2010 state election

Registered voters

	2010			
	Number of registered voters	% Democrat	% Republican	% Other Party
Brookline	41,066	48.39%	7.67%	43.69%
Dedham	16,714	37.06%	9.87%	52.91%
Dover	3,955	19.17%	26.37%	54.39%
Needham	20,774	34.48%	13.14%	52.28%
Newton	55,915	46.20%	8.12%	45.49%
Waltham	35,100	35.77%	9.65%	54.28%
Wellesley	17,937	30.16%	18.98%	50.76%
Weston	7,885	24.83%	19.42%	55.57%
Westwood	10,242	27.29%	16.04%	56.61%
CHNA 18	209,588	39.38%	11.01%	49.41%
Massachusetts	4,190,907	36.48%	11.33%	52.19%
United States	137,263,000	NA	NA	NA

Source: Massachusetts Elections Division (MAPC Community Profiles); US Census

Voting Rate

	Voting rate (%)	
	2008	2010
Brookline	85.58	50.10
Dedham	77.80	62.25
Dover	88.87	73.4
Needham	81.47	NA
Newton	80.75	63.60
Waltham	68.04	NA
Wellesley	88.40	75.75
Weston	80.42	NA
Westwood	86.42	71.49
CHNA 18	78.98	NA
Massachusetts	74.04	55.36
United States	89.63	66.10

Source: http://www.sec.state.ma.us/ele/elepdf/st_county_town_enroll_breakdown_08.pdf;
http://www.boston.com/news/politics/2008/election_results/ma_president/; Town Clerk and Election Commission websites for each individual city and town; <http://elections.gmu.edu/>

5.4 Employment

Percent Unemployed: This is the percent of the workforce that is unemployed

A note on determining statistical significance:

The 95% confidence interval (95% CI) is a range of values that has a 95% chance of including the observed percentage. Observed rates are subject to statistical variation; even if the observed percentages are identical in two populations, the populations may differ because of random variation. The confidence interval describes the precision of the observed rate as an estimate of the underlying risk, with a wider interval indicating less certainty about this estimate. The width of the interval reflects the size of the population and the number of cases; smaller populations with fewer cases lead to wider confidence intervals.

The **statistical significance** of differences between rates can be estimated based on whether the confidence intervals overlap. For example, if the 95% confidence intervals for the birth rate for a community and state do not overlap, it is safe to conclude that the rates are statistically different (i.e., the difference is very unlikely to be due to sampling error).

	Percent Unemployed (95% CI)	
	1999-2001	2008-2010
Brookline	1.90 (1.81 - 1.98)	4.40 (4.27 - 4.53)
Dedham	2.81 (2.64 - 2.97)	6.72 (6.47 - 6.97)
Dover	1.63 (1.36 - 1.89)	4.39 (3.95 - 4.82)
Needham	2.09 (1.95 - 2.22)	5.19 (4.98 - 5.40)
Newton	2.07 (2.00 - 2.15)	4.95 (4.84 - 5.07)
Waltham	2.72 (2.62 - 2.82)	5.91 (5.76 - 6.05)
Wellesley	1.87 (1.74 - 2.00)	4.96 (4.75 - 5.18)
Weston	1.68 (1.48 - 1.87)	4.41 (4.09 - 4.72)
Westwood	2.35 (2.15 - 2.56)	5.31 (5.01 - 5.62)
CHNA 18	2.20 (2.16 - 2.24)	5.19 (5.13 - 5.25)
Massachusetts	3.24 (3.23 - 3.25)	7.35 (7.33 - 7.36)
United States	4.3	8.2

Source: Department of Employment and Training (MassCHIP Custom Report); Bureau of Labor Statistics

Comment:

Are there any statistically significant differences over time or between each community and the CHNA and Massachusetts?

- Each community had a higher unemployment rate from 2008-2010 compared to 1999-2001
- From 2008-2010, every community had a lower unemployment rate compared to Massachusetts as a whole
- From 2008-2010, Dedham and Waltham had higher, Needham, Wellesley, and Westwood had similar, and Brookline, Dover, Newton, and Westwood had lower unemployment rates when compared to the CHNA as a whole

5.5 Education

Public School Enrollment: This is the number of students enrolled in public school during the 2010-2011 school year

Educational Attainment: This is the highest level of education reached for individuals 25 years of age and older in the specified region. Given are the percent of individuals 25 years of age and older who have reached each level

% Students scoring proficient or higher: This is the percent of students who scored either proficient or advanced on the Massachusetts Comprehensive Assessment System (MCAS) in 4th and 10th grade in 2003 and 2011

	Public School Enrollment
	2010-2011
Brookline	6,627
Dedham	2,879
Dover	1,703
Needham	5,358
Newton	11,934
Waltham	4,796
Wellesley	4,892
Weston	2,365
Westwood	3,148
CHNA 18	43,702

Source: Massachusetts Department of Elementary and Secondary Education (MAPC Community Profiles)

Educational Attainment

2005-2009						
	Less than high school	High school diploma	Some college	Associates degree	Bachelors degree	Master's degree or higher
Brookline	3.0%	7.4%	7.4%	3.4%	30.6%	48.0%
Dedham	8.2%	25.6%	16.6%	8.9%	24.5%	15.9%
Dover	0.8%	5.7%	10.2%	5.1%	36.7%	41.1%
Needham	3.1%	9.6%	8.5%	6.3%	33.5%	38.5%
Newton	3.9%	12.2%	7.3%	4.1%	28.5%	43.8%
Waltham	11.9%	26.6%	13.2%	5.7%	24.3%	18.0%
Wellesley	2.6%	6.7%	8.6%	3.4%	32.4%	46.0%
Weston	2.9%	7.4%	6.0%	4.1%	29.5%	49.7%
Westwood	2.2%	16.0%	12.5%	6.8%	31.2%	31.1%
CHNA 18	NA	NA	NA	NA	NA	NA
Massachusetts	11.6%	27.1%	15.8%	7.5%	21.6%	16.0%
United States*	15.35%	29.24%	20.56%	7.5%	17.52%	9.84%

*US data from 2010

Source: American Community Survey (MAPC Community Profiles), CLR Search

Massachusetts Comprehensive Assessment System (MCAS)

% Students scoring proficient or higher					
		4 th Grade		10 th Grade	
		2003	2011	2003	2011
Brookline					
English		69	67	80	93
Math		55	70	74	90
Dedham					
English		61	57	75	84
Math		51	54	70	88
Dover					
English		88	78	93*	98*
Math		60	74	90*	96*
Needham					
English		81	70	90	96
Math		60	64	81	93
Newton					
English		77	74	86	93
Math		69	74	80	92
Waltham					
English		57	47	65	88
Math		30	40	56	78
Wellesley					
English		81	82	90	97
Math		67	66	83	95
Weston					
English		81	79	91	96
Math		67	75	82	94
Westwood					
English		88	85	92	96
Math		65	78	83	93
CHNA 18					
English		75	71	84	93
Math		59	67	77	91
Massachusetts					
English		55	53	61	84
Math		40	47	51	77

*Data from the Dover-Sherborn School District

Source: Massachusetts Department of Elementary and Secondary Education District Reports

5.6 Childcare

Number of licensed child care slots: This is information on the number of day care slots licensed by the Department of Early Education and Care. Data include child care slots in licensed group day care, family day care, and school-age center child care sites. Data represent a “snapshot” count taken in May of the specified year

	Number of Licensed Child Care Slots	
	2000	2010
Brookline	1,859	1,952
Dedham	731	807
Dover	110	72
Needham	1,036	1,722
Newton	4,387	5,115
Waltham	1,462	1,369
Wellesley	1,076	1,339
Weston	789	680
Westwood	789	808
CHNA 18	12,239	13,864
Massachusetts	213,852	227,480
United States	NA	NA

Source: Department of Early Education and Care (MassCHIP custom report)

5.7 Quality of Life

Quality of Life Index: : Based on the results of a study group, this index is calculated based on what variables affect individuals as they search for a new home, how much they would enjoy living in a place and the impact of each selected variable. For example, the crime index affects the total quality of life index negatively and the amusement index affects it positively

Positive Variables Weighted for Quality of Life Index: Amusement, Culture, Education, Medical, Religion, Restaurants and Weather

Negative Variables Weighted for Quality of Life Index: Crime, Earthquake and Mortality

Index score for an area is compared to the national average of 100. A score of 200 indicates twice the national average, while 50 indicates half the national average

Indices								
2010	Quality of Life	Amusement	Culture	Education	Medical	Mortality	Religion	Restaurant
Brookline	NA	NA	NA	NA	NA	NA	NA	NA
Dedham	NA	NA	NA	NA	NA	NA	NA	NA
Dover	78	97	88	131	84	65	75	71
Needham	NA	NA	NA	NA	NA	NA	NA	NA
Newton	127	116	191	196	176	146	151	153
Waltham	123	115	191	188	155	107	86	169
Wellesley	NA	NA	NA	NA	NA	NA	NA	NA
Weston	114	119	136	171	120	165	196	98
Westwood	87	130	88	137	126	180	85	113
Norfolk County*	104	180	137	186	152	112	117	146
Massachusetts	95	115	154	185	150	154	46	119
United States	100	100	100	100	100	100	100	100

*Norfolk County includes Brookline, Dedham, Dover, Needham, Wellesley, and Westwood
Source: Community, Luxury, and Residential (CLR) Search