



City of Waterbury

Plan of Conservation and Development 2015-2025



Adopted November 5, 2015

WITH REVISIONS THROUGH SEPTEMBER 14, 2016

Waterbury City Plan Commission

with assistance from

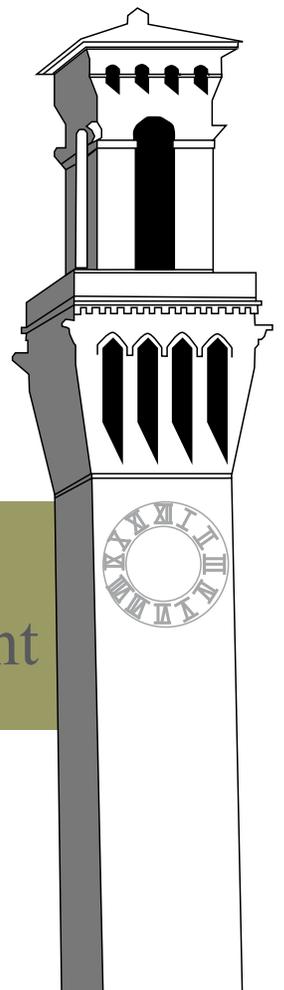


The 2015-2025 Waterbury Plan of Conservation and Development was adopted in its entirety on November 5, 2015.
Subsequent amendments are described below:

ID	DATE	AMENDMENT	PAGES
1	September 14, 2016	Incorporation of Sanitary Sewer Service Area Map adopted by the WPCA on March 22, 2016	Part 1: 20,22 Part 2: 205



2015



City of Waterbury

Plan of Conservation and Development

Part II. Community Assessment Reports

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Three Generations of the Albanian Community Walk in the South End © The Waterbury Observer

6. DEMOGRAPHICS AND HOUSING

The demographics and housing needs of Waterbury's population are closely linked. Unlike many other large cities in Connecticut, Waterbury's population has remained remarkably stable over the last several decades. However, the composition of Waterbury's population — the age structure, the number of people per household, and the types of families that populate Waterbury — have been changing. As these changes in population take place, they create incremental changes on housing demand and supply. Data sources such as the U.S. Census, school enrollments, and housing sales prices can provide insight on what changes have occurred in the decade since the last POCD, and what changes should be expected and planned for over the next ten years.



DEMOGRAPHICS

POPULATION

Compared to other New England cities, Waterbury's population has been remarkably stable for the last 100 years, gaining just over 20,000 people since 1920. Since 1970, cycles of national urban decline and resurgence are reflected in Waterbury's population, albeit at a smaller scale. Like many other urban areas, **Waterbury saw slow but steady population growth in the period between the 2000 and 2010 Censuses, gaining 3% or just over 3,000 residents.** The Connecticut Data Center projects that modest population growth will continue for the next ten years, with Waterbury reaching a total population of 117,149 by 2025.

Natural growth was responsible for most of the population growth between 2000 and 2010. Natural growth occurs when the number of births in a community outpaces the number of deaths. The Connecticut Department of Public Health birth and death statistics show that between 2000 and 2010, Waterbury had a net growth of approximately 200 people per year, cumulatively accounting for a growth of 2,264 people over the ten-year period. Compared with the overall population growth numbers from the U.S. Census, this would suggest that 73% of growth over the ten-year period came from natural growth, and 27% (831) from in-migration.

While the population of the City as a whole increased, the growth was not distributed evenly. The fastest population growth occurred in the City's outer neighborhoods such as Scott Road, East Mountain and Country Club. These areas have seen a majority of the new home construction in recent years. Other neighborhoods such as W.O.W., South End, and Brooklyn saw their populations decline between 2000 and 2010.

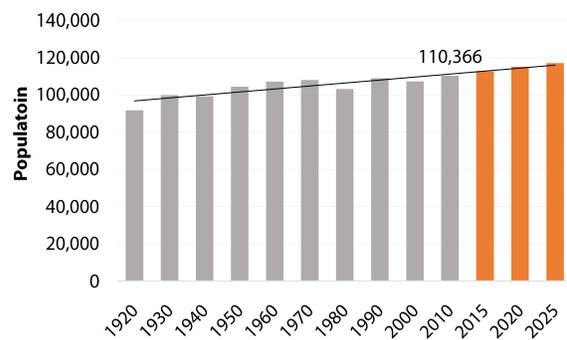
Population density varies greatly from neighborhood to neighborhood. The highest densities are found in the urban core neighborhoods surrounding Downtown. Generally, the eastern portion of the City has a higher population density than the northern or western portions. These densities are shown on the map titled Population Density.

The neighborhoods with the highest population densities are Hillside, Crownbrook, Walnut-Orange-Walsh (W.O.W), Willow Plaza, South End, and Brooklyn, which all have population densities in excess of 10,000 persons per square mile.

Conversely, other neighborhoods like Waterville, East Mountain, and Bucks Hill have population densities of less than 2,500 persons per square mile. Additionally, areas with large tracts of undeveloped land and certain areas commercial and industrial areas, such as those along the Naugatuck River, have very low population densities.

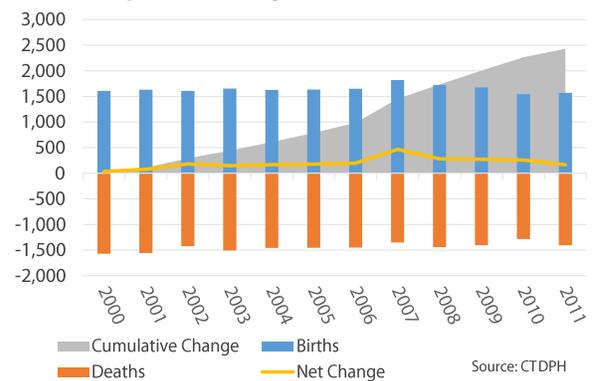
Waterbury's population growth mirrors the population growth of New Haven County as a whole. 15 of the 27 towns in New Haven County gained between 3 to 6 percent between 2000 and 2010. However, neighboring communities such as Middlebury, Wolcott, and Prospect, have experienced

Historic and Projected Population Trends

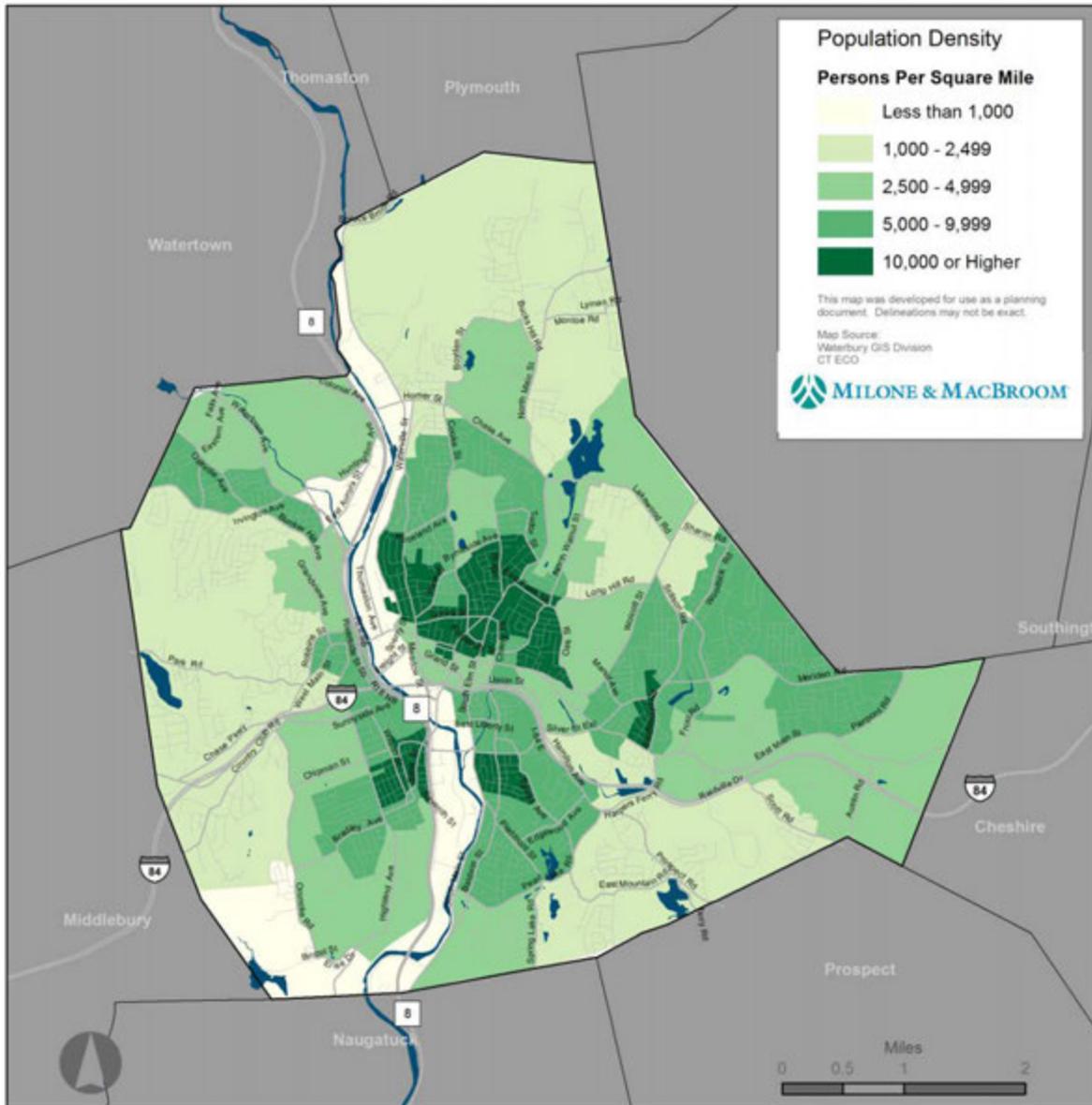


Source: US Census, CT Data Center Projections

Population Change: Births and Deaths



Source: CTDPH



some of the highest rates of population growth in the County and State. Although Waterbury experienced a lower growth rate than the surrounding suburban communities, it experienced a greater net growth in population. Waterbury experienced the fourth largest net population increase in New Haven County after New Haven, Hamden, and West Haven.

Waterbury is the fifth most populous city in the State of Connecticut, and many of its demographic changes mirror other large cities more than neighboring suburban and rural towns. Waterbury saw average population growth compared to other large cities in Connecticut. Waterbury's population growth rate was faster than all of the major cities in Hartford County, but lower than those in Fairfield or New Haven County.



HOUSEHOLDS

Waterbury had 42,761 households in 2010, 26,996 of which were family households. The average household size was 2.54 and the average family size was 3.18, which are very close to the state averages of 2.54 and 3.08, respectively.

Between 2000 and 2010, the number of households increased by 0.3%, representing only 139 additional households over the decade. Household growth grew at a much slower rate than population growth. As a result, the average household size increased from 2.46 in 2000 to 2.54 in 2010. The average family size also increased during the same period, suggesting that much of this household growth was from related family members living together.

This growth in family households is not necessarily restricted to traditional Husband-Wife families with children. The number of Husband-Wife families decreased by nearly 10% between 2000 and 2010, and the number of Husband-Wife families with children under 18 decreased by 5.7%. Conversely, family households headed by a woman with no husband present increased by 17.3%. Similarly the number of single-mother households with children under 18 increased by 30.4%.

Waterbury saw a decline in the number of 1-person households and 2-person households between 2000 and 2010. While they still represent nearly

60% of all households, they declined 2.1% and 4.0%, respectively, over the decade. At the other end of the spectrum, the largest households, (6-person households and 7 or more-person households) increased by 21.5% and 28.3%, respectively, over the same period, although they continue to account for only about 5% of total households.

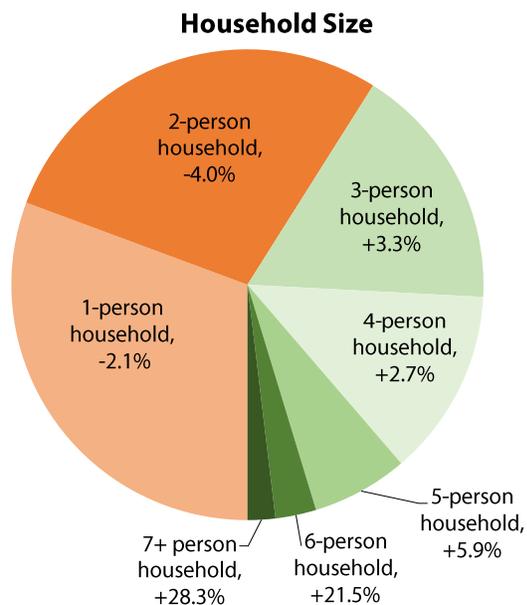
Households with children under age 18 increased by 2.1% while the number of households with individuals over 65 decreased by 7.9%

AGE

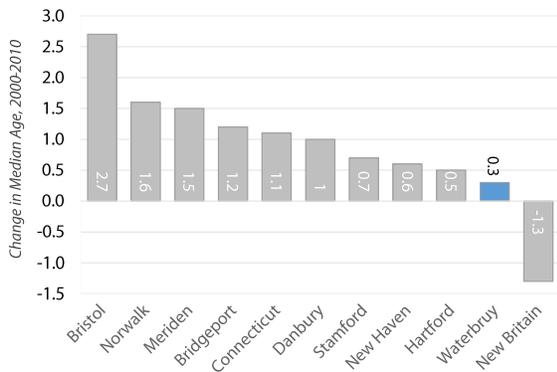
While the overall number of Waterbury residents has increased slightly, the age distribution has changed significantly. The cohort of residents between 10 and 29 years old, and those 45 to 69 years of age experienced the largest growth between 2000 and 2010. This corresponds to the two largest population cohorts: millennials (born between 1980 and 2000) and baby boomers (born between 1946 and 1964). Waterbury lost population in cohorts under 9 years of age, and between 30 and 44 years of age. The loss of those age 30 to 44 is notable because those age groups are the most likely to have young families, and therefore may have implications for future school enrollments.

On average, Waterbury residents are younger than the State as a whole. In 2010, the median age for Waterbury residents was 35.2 years old compared to 40.0 statewide. Contrary to prevailing state and national trends, Waterbury saw its elderly population (residents age 65 years old and over) decline by over 2,000 people from 2000 to 2010.

In almost all of the state’s largest cities, median age is rising, but this trend is less pronounced in Waterbury than in most cities. The median age in Waterbury increased by just 0.3%. With the exception of New Britain, which saw its median age decline, all other cities saw their median age grow by 0.5 years or more. Statewide, the median age of the population increased by just over 1 year, with suburban and rural communities experiencing the largest growth.

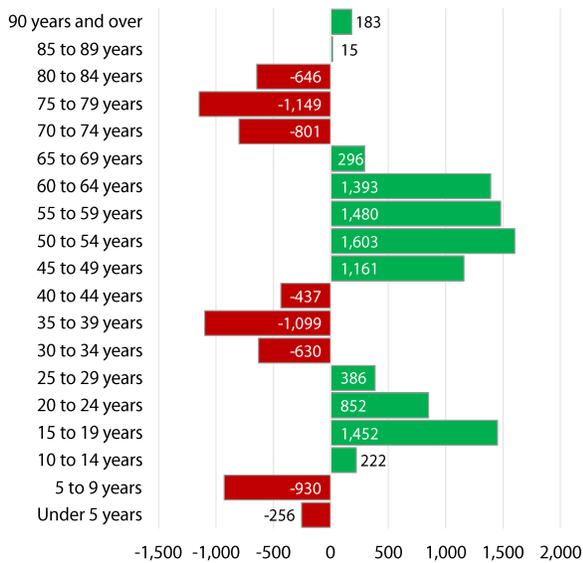


Change in Median Age: 2000 to 2010



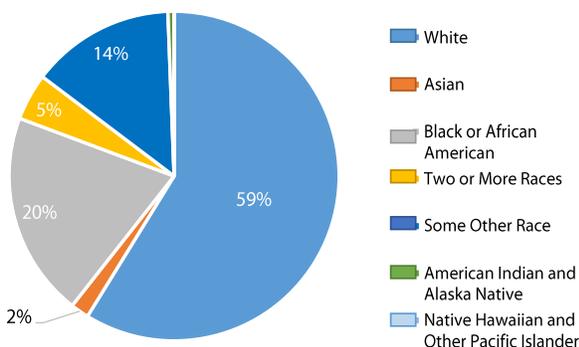
Source: U.S. Census

Change in Age Structure (2000 - 2010)



Source: USCensus

Waterbury Racial Composition (2010)



ETHNICITY AND RACE

Waterbury has a diverse population. As of 2010, 59% of the population identified as White, 20% identified as Black or African American, and 14% identified as "Some Other Race". "Some Other Race" is a category that contains persons who self-identify with a racial group that is not listed on the Census. Nationwide, the category of "Some Other Race" has seen significant growth, particularly among Hispanics who consider their Hispanic origin not just as their ethnicity but also their racial identity.

In addition to race, the Census Bureau also classifies individuals based on ethnicity. The Census considers Hispanic identity to be an ethnicity, but not a separate race, recognizing that many people who are Hispanic also identify with one or more of the established racial categories. As of 2010, 31% of City residents identify as Hispanic. Over 70% of the City's Hispanic population is of Puerto Rican descent.

Waterbury's population is more diverse than that of New Haven County or the State as a whole. Between the 2000 and the 2010 Censuses, the Hispanic population of Waterbury increased by 10.1%, the Black or African American population increased by 4.2%, the population identifying as "Some Other Race" increased by 3.5%, and the White population decreased by 6.5%.

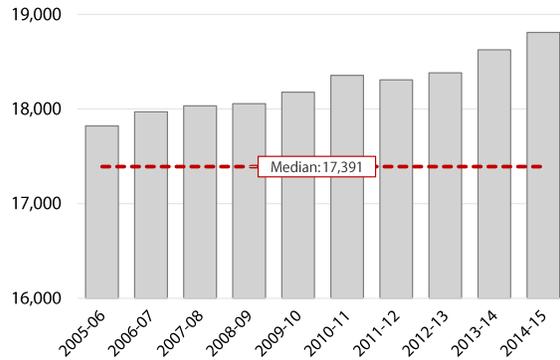
Throughout its history, Waterbury has been a City of immigrants. Foreign migration has accounted for a considerable amount of Waterbury's population growth since 1990. Of the estimated 28,000 Waterbury residents who were born outside of the United States, two thirds entered the country after 1990. The Census differentiates between Foreign-born abroad and native-born abroad, with the latter referring to anyone born abroad to a U.S. citizen parent, thus receiving U.S. citizenship at the time of their birth. Of the 28,000 Waterbury residents born outside of the U.S., 38% were native-born and 62% were foreign-born. The five largest foreign-born immigrant groups hail from the Dominican Republic, Jamaica, Albania, Italy, and Ecuador. Over 90% of native-born abroad residents are from Puerto Rico.



SCHOOL ENROLLMENTS

Waterbury Public Schools has experienced a significant increase in enrollment over the last decade. As of the 2014-15 school year, the district had 18,809 students in pre-kindergarten through 12th grade, well above the historic median of 17,391 students. From 2005-06 to 2010-11, enrollment gradually increased, adding an average of 120 students per year. Following a one-year decrease in the 2011-12 school year, enrollment increased rapidly. Since 2011-12, the district has grown by over 500 students. The surge in enrollment has been caused by many factors, including declining private and parochial school enrollments, an expanded number of pre-kindergarten seats, a growing number of out-of-town students attending inter-district magnet programs operated by the Waterbury Public School system, and unusually large kindergarten classes over the last three years. The large kindergarten classes correspond to abnormally high birth years between 2007 and 2009.

Waterbury Public School Enrollment Trends

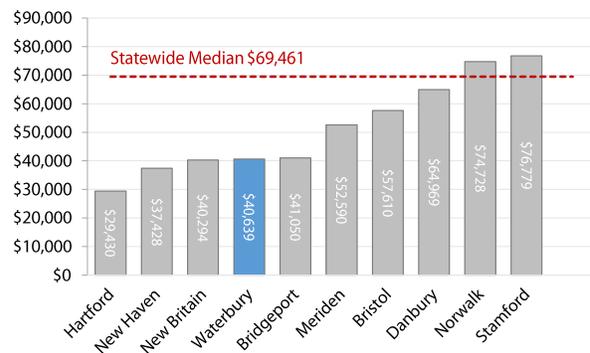


Source: Connecticut Department of Education

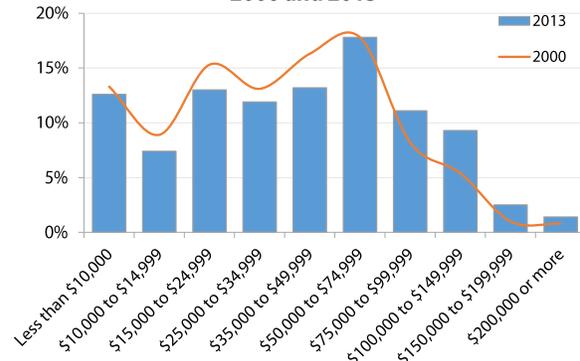
INCOME

Median household incomes in Waterbury increased by 18.5% between 2000 and 2013 from \$34,285 to \$40,639. However, during that same time period, the rate of inflation was 39.8%. Because household income grew at a rate lower than inflation, Waterbury households actually saw their inflation-adjusted household incomes decrease by over 15%. Median household income in Waterbury remains well below the State median of \$69,461 and is lower than all but three of its peer large cities in Connecticut as seen in the chart titled "Median Household Income in Connecticut's Largest Cities: 2013".

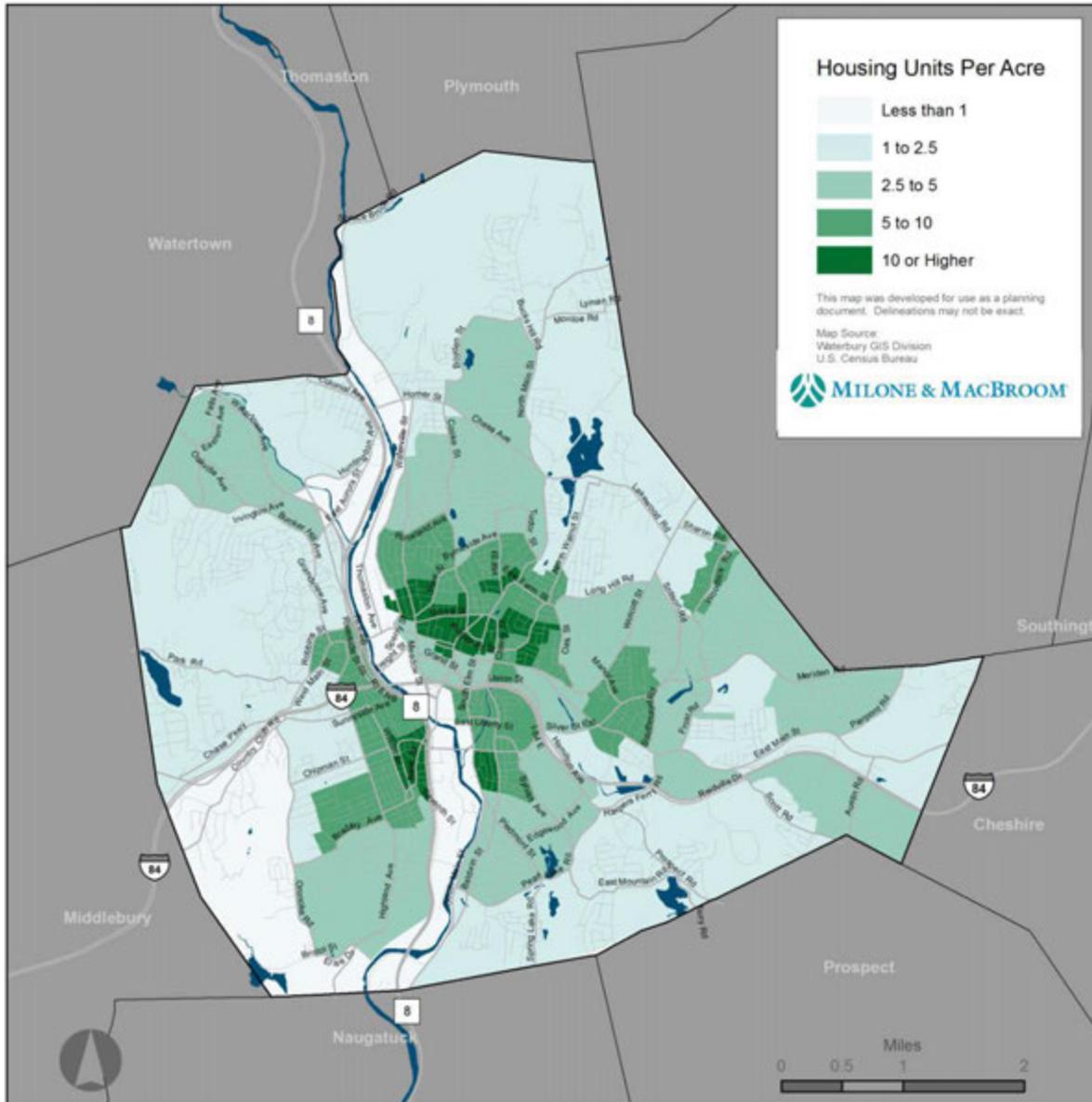
Median Household Income in Connecticut's Largest Cities: 2013



Household Income Distribution: 2000 and 2013



The distribution of household income also changed significantly between 2000 and 2013. The largest increase was in households making between \$100,000 and \$149,000 per year (increasing by 1,550 households). The largest decrease was in households making \$35,000 to \$49,999 per year (decreasing by 1,459 households), however these lower income households continue to make up the largest share of the households in Waterbury.



RESIDENTIAL DEVELOPMENT

A majority of land in Waterbury is devoted to residential uses. Housing and housing-related issues affect all residents. The form, layout, condition, location, and cost of available housing are crucial to the quality of life of residents within that community or neighborhood.

TOTAL HOUSING UNITS

As of 2010, there were 42,991 housing units in Waterbury. This was an increase of 1,164 units from

the 2000, or a growth of 2.5%. While the rate of housing unit growth was less than the overall population growth, it was greater than household growth.

Waterbury's housing growth lags behind the other largest cities in the State. The cities with the greatest increase in housing units were Danbury, which saw an increase of 2,600 units, representing 9% growth, and Stamford which increased by 3,200 units, an increase of 6.9%. Housing growth in Waterbury over this period was roughly comparable to Hartford, which experienced 2.3%



growth, and far outpaced New Britain which saw only a 0.2% increase in the number of housing units over the 10-year period.

HOUSING TYPE AND DENSITY

The density and diversity of Waterbury’s housing stock varies greatly by neighborhood. Generally, the densest housing is found in the Downtown and surrounding urban core neighborhoods while the lowest densities are in the outer neighborhoods. Housing densities by Census block group are depicted on the map titled Housing Units per Acre. These block groups roughly correspond to the City’s neighborhoods.

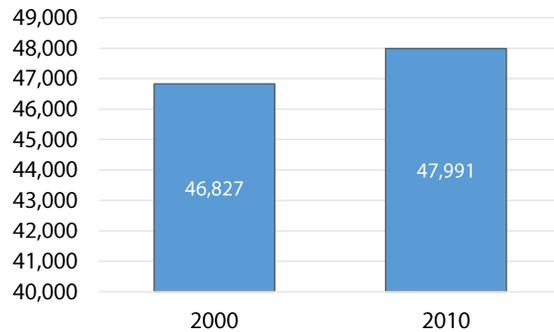
The most densely residential block groups in Waterbury correspond roughly to the neighborhoods of Hillside and Walnut-Orange-Walsh (W.O.W), Willow-Plaza, and the portion of Brooklyn that is west of Route 8. These neighborhoods have over 10 housing units per acre. Conversely, Country Club, Browns Meadows, Hop Brook, and Platts Mill have fewer than 1 dwelling unit per acre on average, making them the least dense neighborhoods. In addition to larger lot sizes and a greater incidence of single-family homes, these areas also contain large tracts of undeveloped land, protected open space, or land devoted to commercial or industrial uses.

According to the 2010 Census, the average housing unit in Waterbury is single-family detached home (40% of all housing), built prior to 1960 (53% of all housing structures), that has 2 or 3 bedrooms (72% of all housing units).

VACANCY

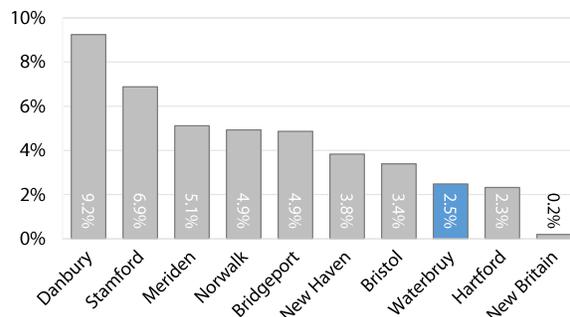
Waterbury has a residential vacancy rate of 10.9%, which is higher than the state rate of 7.9% in 2010. This rate includes properties that are for sale, for rent, for seasonal use, or otherwise not occupied. Waterbury’s vacancy rate increased by 1.9% from 2000. **During this time period, the number of housing units grew at a faster rate than the number of households**, suggesting that there is a growing mismatch between housing supply and demand. New Haven, often thought of as an extremely tight real estate market, had a 7.6% vacancy rate in 2010.

Total Housing Units (2000 - 2010)



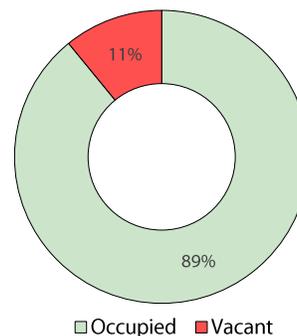
Source: U.S. Census Bureau

Housing Unit Change in Connecticut Cities: 2000-2010



Source: U.S. Census Bureau

Housing Vacancy Rate: 2010



TENURE

Housing tenure is relatively evenly split between owner and renter-occupied units. 47% of housing units are owner-occupied and 53% renter-occupied. The primary factor influencing tenure is the number of units in a structure. A vast majority (87%) of single family detached homes are owner-occupied. On the contrary, 81% of multi-family homes are renter-occupied. As a result, neighborhoods with a prevalence of multi-family housing are primarily renter-occupied, while neighborhoods consisting of mostly single family homes are primarily owner-occupied. Between 2000 and 2010, the number of rental units increased by 349 units, or about 1%.

REAL ESTATE MARKET TRENDS

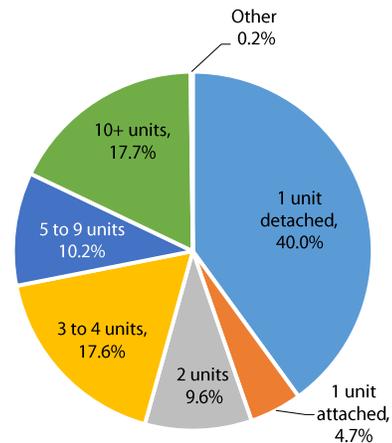
Similar to national trends, Waterbury's real estate market was greatly affected by the downturn in the housing market that began in 2006. Between 2006 and 2011, the median sale prices for single family homes dropped by 36%, with the sharpest drop occurring between 2007 and 2008. Condominium prices peaked two years later in 2008 before dropping by 50% by 2011. The decline of property values since 2006 was primarily due to the overvaluation of real estate in the early and mid 2000s. The rapid drop in property values resulted in a substantial drop in net grand list value during the last revaluation in 2013, leading to an increase in the mill rate.

For the last four years, the median price for single family homes in Waterbury has stayed close to \$100,000, making it one of the most affordable communities for buyers in the region. In fact, a single-family home in Waterbury costs less than the average condominium in New Haven County. Over the last 25 years, the gap between the average home prices in Waterbury and New Haven County as a whole has widened from 15% in 1990 to over 50% in 2014.

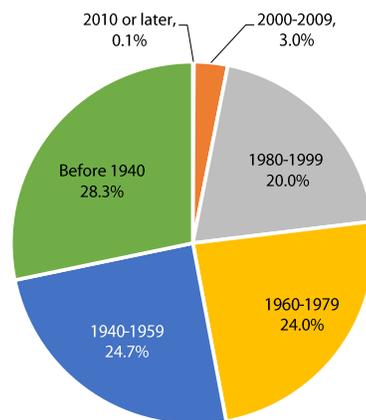
The drop in home sale prices coincided with a large decline in the number of residential sales in Waterbury. The number of home sales peaked in 2004 at over 2,200 sales. Since 2005, home sales declined by an average 12% per year, with the sharpest drops occurring between 2005 and 2008. The number home sales increased from 2013 to

2014 marking the first annual growth in over a decade.

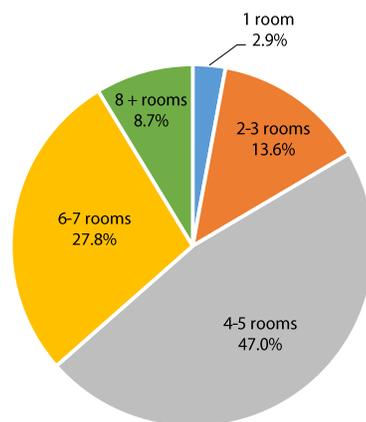
Housing Unit Size: 2010



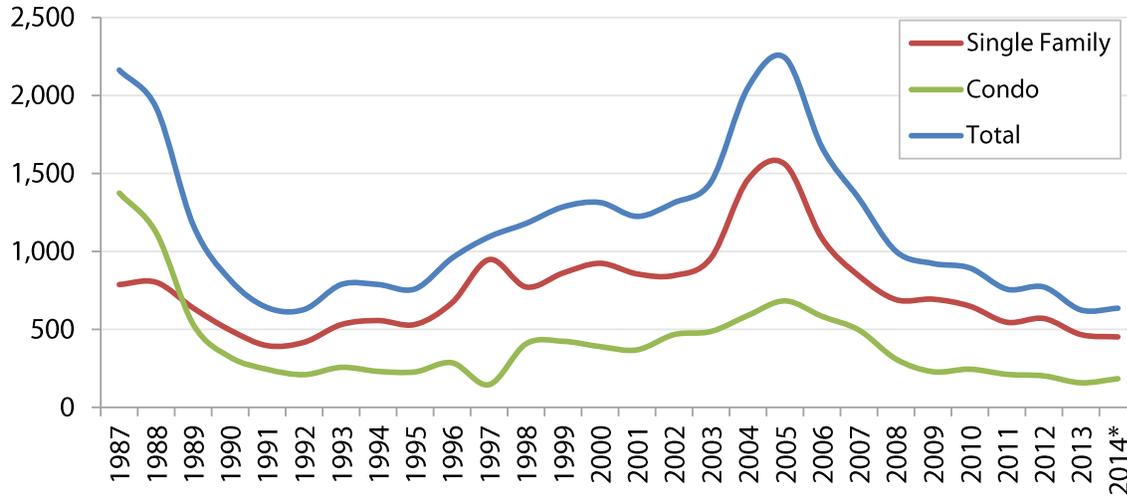
Housing Units, by Year Built: 2010



Housing Units, by Year Built: 2010

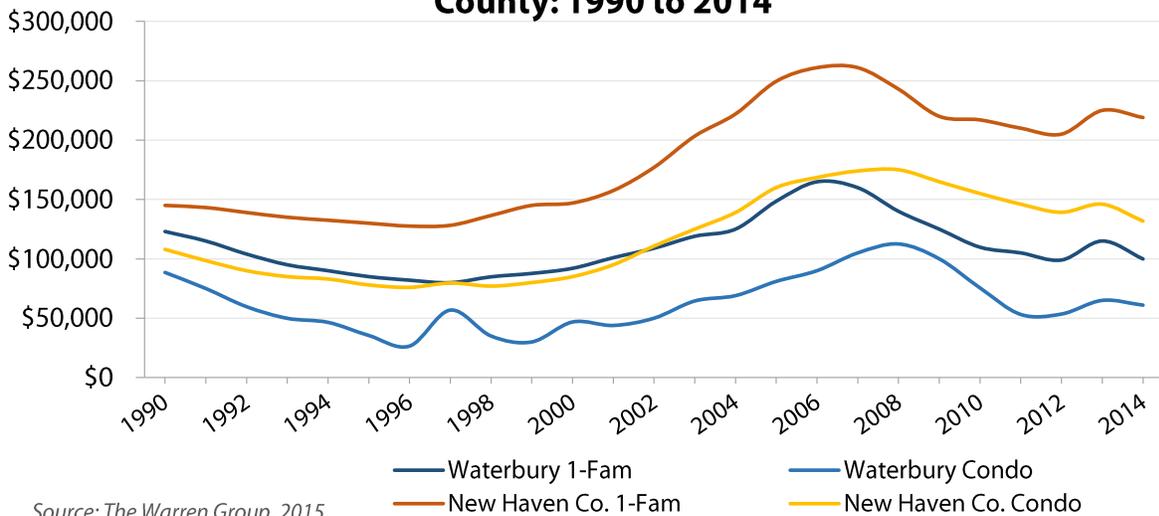


Annual Housing Sales in Waterbury: 1987-2014



*2014 Data is January- November. Source: The Warren Group

Median Housing Sales Prices, Waterbury and New Haven County: 1990 to 2014



Source: The Warren Group, 2015

AFFORDABILITY OF HOUSING

Waterbury's home values are among the lowest in the region making the city ideal for young people, families with modest incomes, and seniors on fixed incomes. However housing affordability remains an issue for many Waterbury residents.

According to the 2009-2013 American Community Survey 5-Year estimates, 40% of homeowners and 50% of renters in Waterbury pay more than 30% of their household income to cover housing costs (housing costs include mortgage or rent, utilities, taxes, and insurance). The government considers these households to be cost burdened. This number is slightly lower than the cost burden for the state of Connecticut as a whole which, nevertheless, suggests barriers for affordability.

In 2013, the median household income in Waterbury was \$40,639, and the median single-family house price was \$99,000 in 2014. Using median household income, a household in Waterbury spending 30% of their income on housing would spend roughly \$1,016 per month. A rough calculation of a monthly payment for a house bought for \$100,000, with 10% down and assuming a 30-year fixed-rate loan at 5%, would be \$947 per month. Increasing the down payment to 20% would reduce that payment to about \$894 per month. These calculations include taxes (mill rate of 58.22) and a placeholder percentage of 1.5% for insurance and utilities.

Property taxes comprise a large percentage of monthly housing costs. Paying taxes on a \$100,000 house at the current mill rate would cost \$340 per month, or about one-third of total monthly housing costs. This could be a considerable cost to income restricted households, especially seniors.

The U.S. Department of Housing and Urban Development (HUD) annually issues a schedule of fair market rents for counties and metropolitan areas across the United States. HUD's FY 2015 Final Fair Market Rents provide a better picture of actual rents in these areas at the present time. Fair market rents are based upon Census data that is supplemented with various rental housing survey tools. For 2014, the fair market rents for the Waterbury, Connecticut HUD Metro Fair Market Rents Area was \$594 for a studio/efficiency

apartment, \$803 for a one-bedroom apartment, \$979 for a two-bedroom apartment, \$1,219 for a three-bedroom apartment, and \$1,325 for a four-bedroom apartment.

These calculations suggest that under average market conditions, the average household could afford a home in Waterbury. However larger apartments (3 or 4 bedrooms) remain out of reach for a family making the median household income. This issue has been acute in many communities across the United States, as mortgages have become more difficult to obtain post-recession, and new rental housing units have not been constructed at a fast enough pace to absorb increases in rental demand, particularly for larger units.

The State legislature has established an Affordable Housing Appeals Procedure to provide assistance with development of affordable housing throughout the State. The procedure does not apply where at least 10% of the dwelling units in the municipality are:

- (i) governmentally assisted housing;
- (ii) units receiving either RAP or Section 8 rental assistance;
- (iii) currently financed by Connecticut Housing Finance Authority or Farmer's Home Administration mortgages; or
- (iv) subject to deeds containing covenants or restrictions that require sale or rental at affordable levels.

Affordable levels are defined as housing for which persons and families pay 30% or less of income, where such income is less than or equal to 80% of the area median income.

The most recent data from the Connecticut Department of Economic and Community Development (DECD) Affordable Housing Appeals Program puts the number of affordable housing units in Waterbury in 2013 at 11,189, or 23.3% of total housing units. This level exempts the City from the affordable housing appeals procedure.



Affordable housing is distributed as follows:

Type	# of Units
Governmentally Assited	4,901
Tenant Assisted	3,635
CHFA/FmHA Mortgages	2,327
Deed Restricted	326
Total	11,189

It should be noted that the 2013-2018 Waterbury Consolidated Plan repeatedly states that despite the large percentage of total housing as being affordable, there is nevertheless “not a sufficient amount of decent affordable units in Waterbury to meet housing needs” (p. 53), and there is a “severe shortage of decent affordable units,” and that “decent and affordable rental units are most needed. Units for large families as well as very low income single person households are a significant need.” (p. 51). This is corroborated by the aforementioned high cost of rental housing units over 2-bedrooms, and suggests that there is an insufficient supply of units for families.

Additionally, other reference communities in Connecticut have higher percentages of affordable housing than Waterbury. For example, Hartford has 37.8% affordable housing and New Haven has 29.6%. Reference communities in neighboring Fairfield County, however, have generally smaller percentage of affordable housing, with Bridgeport at 18.5%, Danbury at 10.9%, Norwalk at 11.6%, and Stamford at 16.0%.

Foreclosures are also a bellwether of affordability as foreclosed residential properties may suggest that a home was not affordable under the current market conditions. While down from the peak of the foreclosure crisis in 2009, Waterbury still has a substantial number of petitions to foreclose on single-family and condominium properties. Approximately 700 to 750 residential properties in each of the last two years were foreclosed on or in danger of foreclosure. This suggests that volatility still remains in the current housing market.

Petitions to Foreclose in Waterbury: 2007-2013

Year	1-Fam	Condo	Total
2007	470	105	575
2008	526	192	718
2009	663	282	945
2010	506	259	765
2011	301	194	495
2012	483	238	721
2013	535	209	744

HOUSING STOCK AND DIVERSIFICATION FOR FUTURE NEEDS

The City and various agencies and actors have been working to diversify housing choices in Waterbury to both address affordability and entice higher earners and younger people to return Downtown.

In the past several years, the City has used HUD funding sources to rehabilitate existing housing or create new housing. NSP III funds through the CDBG program were used to build 3 new homes. HOME funding was used to rehabilitate 22 owner-occupied housing units, and 5 more owner-occupied unites are currently under rehabilitation, along with the conversion of 71 units in three other HOME funded projects.

The Waterbury Housing Council is a six member group of community development corporations and housing agencies involved in large scale housing redevelopment in Waterbury. Their current and pending redevelopment plans represent the bulk of housing development that is being undertaken in the city. They are New Opportunities, Inc.; Loyola Development Corporation; NeighborWorks New Horizons; Neighborhood Housing Services of Waterbury; the Waterbury Housing Authority (WHA); and the Waterbury Development Corporation. Recent projects include:

Grove Street New Opportunities, Inc currently owns 4 lots on Grove Street and is working to develop 12 affordable units.

High/Cossett Revitalization is a phased redevelopment by New Opportunities, ultimately resulting in 18 housing units and neighborhood amenities, as a models to be replicated in other neighborhoods throughout the City.

Warner Gardens Conversion of 120 units by the end of 2015 to a mixed-income housing by a Omni Development. Phase I is using 15 WHA housing vouchers, and Phase II is expected to use an additional 16 vouchers.

Willow Grove/ West Grove Street Phased development of mixed-income mixed-use project in the area of West Grove Street south of Johnson Street, by the WHA. 4 Units will be completed in 2015.

Liberty Commons/ 619-29 South Main Loyola DC in conjunction with Carabetta Companies is developing 33 units of affordable rental housing in the South End Neighborhood along South Main Street using 20 WHA housing vouchers.

45 Bond Street Loyola DC is investigating the possibility of creating a South End Historic District in order to leverage federal preservation tax credits to redevelop the property and surrounding area for 8-12 housing units.

Gaffney Place Waterbury Community Investment Program and Webster Bank cooperated on this complete street revitalization of 10 for sale housing units in 5 homes in the historic Hillside Neighborhood. Phase II of the project will work in neighboring areas to target units for homeownership and investment.

855 North Main Street Neighborhood Housing Services has constructed 10 units.

Carroll Building/ 44 Willow Street Arcoin Consultants is redeveloping the historic Carroll Building into 35 units of housing using 8 WHA housing vouchers.

Frost Homestead/ 37 Enoch Street Rehabilitation of 63 townhouses by the Caleb Group using 8 WHA housing vouchers.

Additionally, **The Waterbury Housing Authority** has a 5-8 year plan for its existing properties, in order to rehabilitate its housing stock and create diversity for future needs. This plan generally includes the disposal of distressed properties, the

redevelopment of distressed properties for senior housing, and the creation of new mixed-income and mixed-use developments. The overall goal is to build or rehabilitate 50 units per year during this period to keep up with demand. All new development is expected to be built at LEED standards (although not necessarily LEED certified) with new developments taking advantage of geothermal heat loops, micro grids, or other such medium scale alternative energy systems.

The Housing Authority sees the strongest current need in housing for seniors whose tax burden has priced them out of their single family homes, and who have few options to move to surrounding towns. There is currently a wait list of approximately 10 years for senior subsidized housing. For family units, the wait list is cut off at 2,500 for each new housing development. The wait list for Section 8 vouchers is around 25,000.

In addition to work with other housing partners, the following Housing Authority projects are expected or underway:

Harry S. Truman Apartments Disposal of remaining 80 distressed units and redevelopment of the site with mixed-income units. Up to 25 low income units will be replaced on-site and the remaining 55 low income units will be replaced in Waterbury with Tenant Protection Vouchers.

Berkley Heights Continued maintenance of remaining ~300 units.

William V Begg Apartments Sale and conversion of 75 units to senior (55+) 1 bedroom units.



Truman Apartments on North Main St. will be redeveloped into a mixed-income complex, with 25 low-income units. © Google Maps





Source: Wikimedia Commons

7. EXISTING LAND USE

The built environment, including the type, location and intensity of existing land uses, defines the character of a community. Understanding how much land is presently devoted to commercial, industrial, residential, parks, and vacant land is a key component to developing a vision and plan for the future. Waterbury's current land use patterns are a reflection of its unique history, geography, economy, and transportation system. Initial settlements were located in the lowland areas bordering the Naugatuck River and its tributaries. As Waterbury's manufacturing economy grew, the City's population exploded, with dense, mixed use neighborhoods forming in the lowlands and hillsides within walking distance to factory jobs. In the twentieth century, transportation improvements and economic restructuring led to more decentralized and segregated land use patterns. Today, Waterbury's land use patterns are a product of its various eras of development, which is best exemplified in its many unique neighborhoods.



LAND USE PATTERNS

The City of Waterbury has a total land area of approximately 18,640 acres, or 29 square miles, and contains a wide variety of land uses including residential, commercial, industrial, institutional, and open space. Waterbury contains a mix of urban and suburban characteristics. The City's core and adjacent neighborhoods contain dense and diverse land uses. Developed prior to the automobile, typical urban core neighborhoods are compact and walkable, with residential, commercial, and institutional uses in close proximity to each other.

In the outer neighborhoods, land use follows more suburban patterns characterized by lower density development and separation of land uses. Commercial corridors are more auto-oriented, and residential development is primarily comprised of single-family homes.

Understanding the existing land use patterns of Waterbury is an important component to the Plan of Conservation and Development. These patterns are described in detail in this section.

LAND USE CHANGE

While land use has remained relatively unchanged over the last decade, a new emphasis has been placed on redevelopment, particularly in the City's downtown core and underutilized industrial areas. Major land use changes that have occurred over the last decade are shown on the map titled *Major Land Use Changes* and described below.

As a result of its manufacturing history, the City is home to a large amount of underutilized industrial land. Many major land use changes have transformed older, industrial land uses into new uses that are more compatible with current economic and demographic conditions. Recent examples of brownfield redevelopment include the construction of the new PAL recreation complex in the North End, renovation of the Waterbury Industrial Commons in Waterville, and construction of a new senior center, medical office, and funeral home on a remediated factory site in the East End.



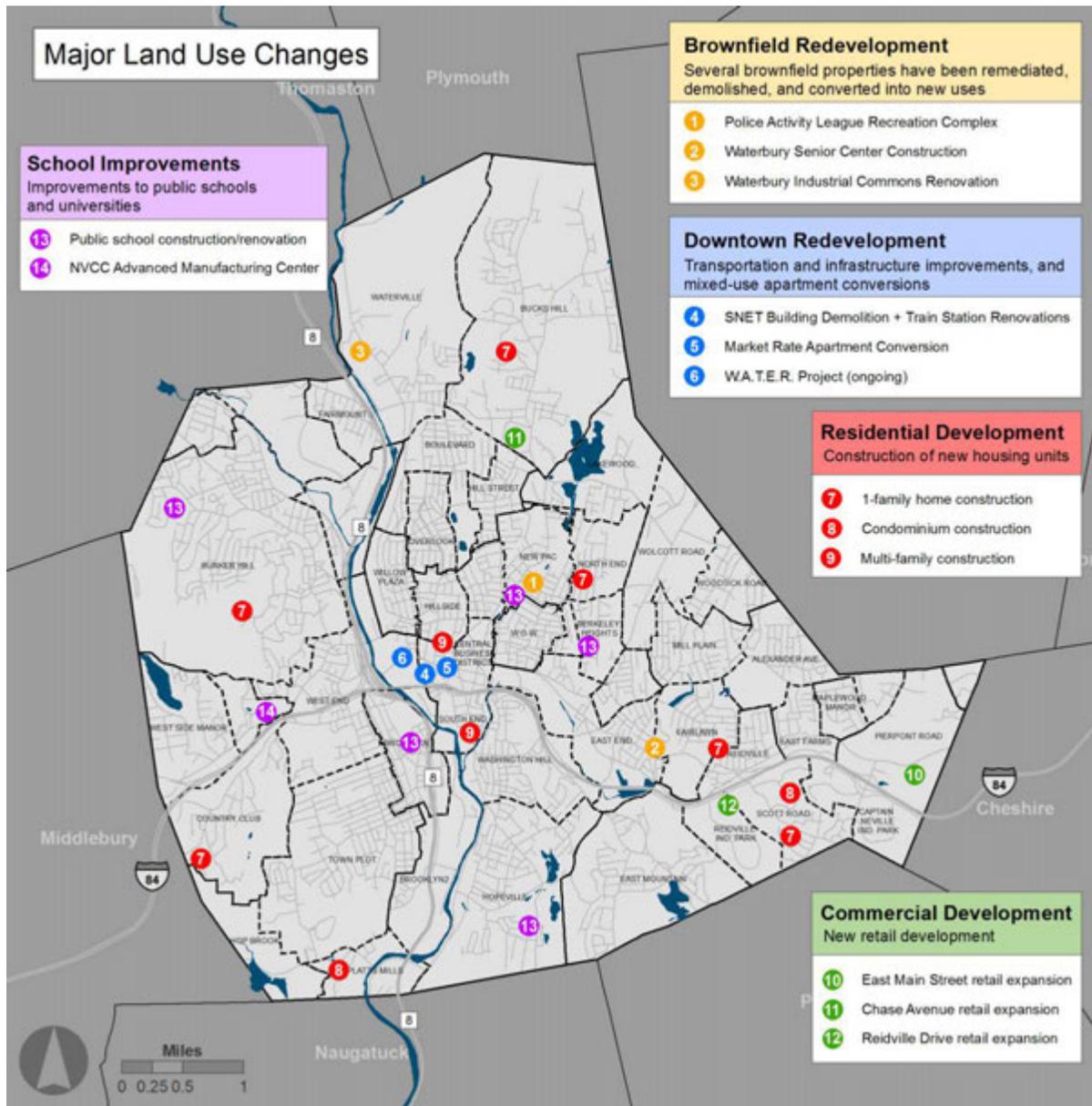
The new PAL recreation complex on Division Street is located on a remediated brownfield site. © Google Maps



In recent years, the upper floors of several downtown buildings, such as Apothecary Hall (left), have been converted into market rate apartments. © Google Maps



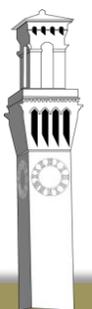
The Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.) project is funded by a \$14.4 million TIGER grant and seeks to redevelop the Freight Street corridor adjacent to downtown. Photo courtesy of RBA Group.



Similarly, there have been several major downtown projects over the last decade. In the early 2000s, several significant downtown projects were completed, including renovations to the Palace Theater, the construction of a new Arts Magnet School, and the relocation of UConn from the Hillside neighborhood.

The momentum has continued in recent years with the conversion of several buildings into market-rate apartments, improvements to the Waterbury

Train Station, and the ongoing Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.) project. The W.A.T.E.R. project is funded by a \$14.4 million TIGER grant and seeks to redevelop the Freight Street corridor by implementing complete streets, improving street connectivity, and enhancing pedestrian and bicycle connections between downtown, the train station, and riverfront.



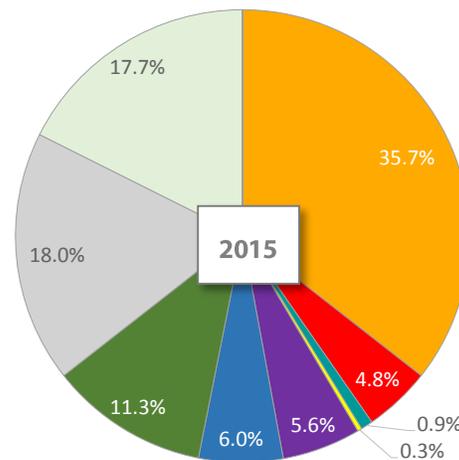
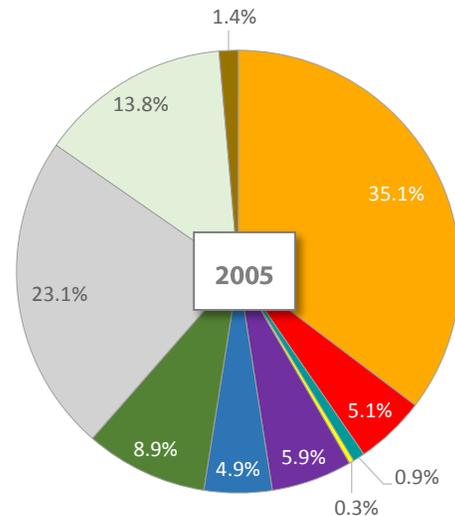
Other major projects include the construction and renovation of several public schools, a new Advanced Manufacturing Center at Naugatuck Valley Community College (NVCC), and commercial and residential development throughout the City.

LAND USE INVENTORY

An assessment of existing land use was conducted utilizing the City’s 2015 digital parcel data. Parcels were classified into one of nine land use categories: residential, commercial, office, mixed use, industrial, institutional, open space, vacant land, and public infrastructure. These categories were further broken down into 35 subcategories. To improve accuracy, parcels were spot-checked using aerial imagery and a recent land-use dataset created by the Naugatuck Valley Council of Governments.

A similar classification system to the 2005 Plan was used, although there are some differences in methodology and categorization of land uses. Despite these differences, it is still useful to compare the datasets to discern general land use trends. The following table and charts provide a summary of the current land use distribution in Waterbury and a comparison to 2005. It should be noted that because of their differing methodologies, the comparison between 2005 and 2015 data should serve as a generalized assessment of land use change and is a guide for planning purposes only.

Residential land, which comprises the greatest share of total land area, increased slightly from 2005 to 2015



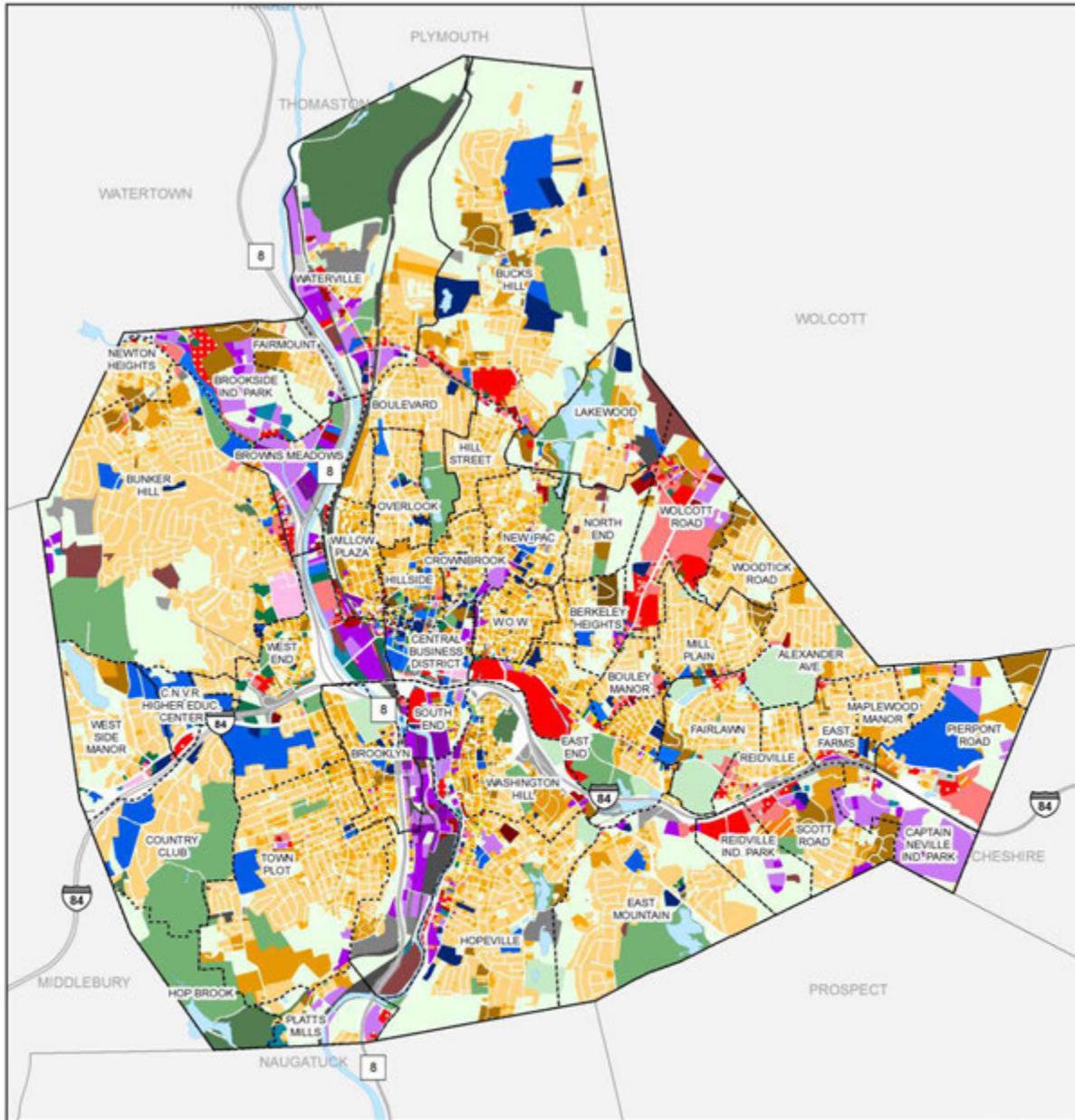
- Residential
- Commercial
- Office
- Mixed Use
- Industrial
- Institutional
- Open Space
- Vacant Land
- Infrastructure and ROW
- No Data

Note: 2005 land use data was normalized to improve its comparability with the 2015 data. However there are still differences in methodology, so comparisons are for planning purposes only.

Summary of Land Use: 2015

Land Use	Acres	Percent
Residential	6,622.1	35.7%
Commercial	888.8	4.8%
Office	159.0	0.9%
Mixed Use	58.0	0.3%
Industrial	1,041.9	5.6%
Institutional	1,115.2	6.0%
Open Space	2,104.4	11.3%
Vacant Land	3,360.5	18.0%
Infrastructure and ROW	3,290.4	17.3%
Total All Land	18,640.4	100.0%

Existing Land Use Map: 2015



This map was developed for use as a planning document. Delineations may not be exact.
Map Source: Waterbury GIS Division



Waterbury Existing Land Use

1-Family Home	Commercial - Convenience	Other Office	Quarry & Gravel Operations	Cemetery
2-4 Family Home	Commercial - Comparison/Specialty	Mixed Use - Residential and Retail	Government	Vacant Land
Condominium	Hotel	Mixed Use - Office and Retail	Schools	Surface Parking
Apartments - Low Rise	Commercial - Rec/Entertainment	Mixed Use - Other	Private Institutions	Transportation
Apartments - Mid Rise	Commercial - Automotive	Light Industrial	Hospitals	Public Infrastructure
Apartments - High Rise	Commercial - Other	Distribution	Public Parks & Recreation	Parking Structure
Residential Care Facility	Professional/Medical Office	Heavy Industrial	Preserved Open Space	Right-of-Way



Existing Land Use in Waterbury: 2015

	Land Area			Number of Parcels		
	Land Area (Acres)	Percent of Total	Percent of Group	Number of Parcels	Percent of Total	Percent of Group
Residential	6,622.1	35.5%	100.0%	24,502	82.9%	100.0%
Single family	4,486.9	24.1%	67.8%	17,884	60.5%	73.0%
2-4 family	1,016.8	5.5%	15.4%	5,414	18.3%	22.1%
Condominium	469.7	2.5%	7.1%	471	1.6%	1.9%
Low Density Apartment	542.6	2.9%	8.2%	683	2.3%	2.8%
Medium Density Apartment	27.9	0.1%	0.4%	16	0.1%	0.1%
High Density Apartment	5.5	0.0%	0.1%	7	0.0%	0.0%
Residential Healthcare	72.8	0.4%	1.1%	27	0.1%	0.1%
Commercial	888.8	4.8%	100.0%	662	2.2%	100.0%
Commercial - Convenience	342.6	1.8%	38.6%	328	1.1%	49.5%
Commercial - Comparison/Specialty	269.4	1.4%	30.3%	44	0.1%	6.6%
Hotel	25.3	0.1%	2.9%	10	0.0%	1.5%
Commercial - Rec/Entertainment	78.0	0.4%	8.8%	72	0.2%	10.9%
Commercial - Auto-related	160.1	0.9%	18.0%	192	0.6%	29.0%
Commercial - Other	13.4	0.1%	1.5%	16	0.1%	2.4%
Office	159.0	0.9%	100.0%	184	0.6%	100.0%
Professional/Medical Office	111.3	0.6%	70.0%	158	0.5%	85.9%
Other Office	47.7	0.3%	30.0%	26	0.1%	14.1%
Mixed-Use	58.0	0.3%	100.0%	319	1.1%	100.0%
Residential over Commercial	46.0	0.2%	79.3%	268	0.9%	84.0%
Office over Retail	3.8	0.0%	6.6%	22	0.1%	6.9%
Other Mixed Use	8.2	0.0%	14.1%	29	0.1%	9.1%
Industrial	1,041.9	5.6%	100.0%	419	1.4%	100.0%
Light Industry	583.6	3.1%	56.0%	212	0.7%	50.6%
Distribution	272.5	1.5%	26.2%	171	0.6%	40.8%
Heavy Industry	70.6	0.4%	6.8%	29	0.1%	6.9%
Quarry and Gravel Operations	115.2	0.6%	11.1%	7	0.0%	1.7%
Institutional	1,115.2	6.0%	100.0%	353	1.2%	100.0%
Government	92.4	0.5%	8.3%	47	0.2%	13.3%
Educational	686.4	3.7%	61.5%	79	0.3%	22.4%
Private Institutions	285.9	1.5%	25.6%	215	0.7%	60.9%
Hospitals	50.5	0.3%	4.5%	12	0.0%	3.4%
Open Space	2,104.4	11.3%	100.0%	115	0.4%	100.0%
Public Parks and Recreation	1,306.2	7.0%	62.1%	67	0.2%	58.3%
Preserved Open Space	479.4	2.6%	22.8%	21	0.1%	18.3%
Cemeteries	318.8	1.7%	15.1%	27	0.1%	23.5%
Vacant Land	3,360.5	18.0%	100.0%	2,742	9.3%	100.0%
Vacant Land	3,317.9	17.8%	98.7%	2,635	8.9%	96.1%
Surface Parking	42.6	0.2%	1.3%	107	0.4%	3.9%
Infrastructure	3,290.4	17.7%	100.0%	259	0.9%	100.0%
Transportation	249.0	1.3%	7.6%	64	0.2%	24.7%
Public Infrastructure	156.8	0.8%	4.8%	35	0.1%	13.5%
Parking Structure	10.1	0.1%	0.3%	12	0.0%	4.6%
ROW	2,874.5	15.4%	87.4%	148	0.5%	57.1%
Total	18,640.4	100.0%	100.0%	29,555	100.0%	100.0%

Source: Waterbury GIS Division: 2015 Parcels

RESIDENTIAL

Residential land accounts for 36 percent of the City's total area, with single family residences comprising 68 percent of all residential uses. **Single family homes** comprise almost all of the residential land in the Country Club, East Mountain, Bunker Hill, West Side Manor, Overlook, and Boulevard neighborhoods. Most single-family homes are owner occupied. Despite comprising a majority of residential land, single-family homes make up less than half of the City's housing units. This is due to the larger lot sizes (averaging 0.25 acres per dwelling unit) compared to other residential uses.

Two, three, and four unit homes are the second most common residential use and are concentrated in the urban core. Three family homes, also known as triple-deckers, are commonly found. Originally built to house factory workers in the late nineteenth and early twentieth century, many triple deckers have fallen into disrepair. In some neighborhoods, such as W.O.W., deteriorated triple deckers have been demolished and replaced with new single-family homes. **Condominiums** and **low-density apartments** (1-3 stories) make up most of the remaining residential uses. **Medium density apartments** (4-7 stories) and **high density apartments** (8+ stories) are most commonly found in the older neighborhoods that surround Downtown, although there are large apartment and condominium complexes scattered throughout the outer neighborhoods.



Triple Deckers, like these in Brooklyn, are commonly found in the urban core neighborhoods. © Google Maps



Newer residential areas, like this one in Bucks Hill are more suburban in character. © Google Maps

Residential healthcare, which includes nursing homes and assisted living facilities, are concentrated in Downtown Waterbury and are scattered throughout the rest of the City.

COMMERCIAL, OFFICE, AND MIXED USE

Commercial land comprises 5 percent of the City's total land area. Convenience and comparison /specialty commercial uses make up nearly 70 percent of Waterbury's commercial land. Office uses comprise 1 percent of land and mixed-uses make up just 0.3 percent of land.

Waterbury has been able to retain its status as a regional retail center. The Brass Mill Center Mall, a large indoor shopping mall, is located adjacent to the Central Business District on the site of the former Scovill Brass factory. Brass Mill Center replaced the old Naugatuck Valley Mall on Wolcott Street in 1997. The Naugatuck Valley mall site has since been redeveloped into a new shopping center which serves as the anchor of the Wolcott Street and Lakewood Road commercial corridor. In addition to big box stores, the corridor is also home to grocery stores, restaurants, banks, and a variety of small businesses. Chase Avenue, Reidville Drive, and East Main Street in the Pierpont Road neighborhood have seen new commercial development in recent years.

Downtown Waterbury contains a blend of high density commercial, office, and mixed uses. Most of the mixed-use buildings downtown are residential



over commercial. In recent years, the upper floors of several downtown buildings have been converted into market rate apartments. Commercial uses in downtown are a mix of small business retail, restaurants, and professional services.

Smaller mixed-use commercial areas are found along Meriden Road, East Main Street, Highland Avenue, West Main Street, Watertown Avenue, and Thomaston Avenue. Outside of downtown, the highest concentrations of office space are found along Chase Parkway near Interstate 84 and near Waterbury Hospital.



Brass Mill Center Mall. © Bing Maps



Class A office space on Chase Parkway. © Google Maps

INDUSTRIAL

Industrial land uses make up 6 percent of land area. More than half of industrial land is used for light industry. Light industrial uses are generally small, specialized, high-value added manufacturers that have less environmental impacts than heavy

industry. Light industry is concentrated in industrial parks near Interstate 84 and Route 8. Heavy industry, which refers to large-scale manufacturers that sell their products to other industries rather than consumers, makes up just 7 percent of industrial land. Due to the decline of heavy industry, many former manufacturing facilities have been converted into warehouses and distribution centers, which now constitute 25 percent of industrial land. Quarry and gravel operations make up the remaining industrial uses. These operations are concentrated in the alluvial flood plains surrounding the Naugatuck River and its tributaries, where large deposits of sand and gravel are located.

Older industrial areas are concentrated along the Naugatuck River and its tributaries in close proximity to rail lines. Many old factories have been repurposed for modern manufacturing, or converted to residential or commercial uses. Others remain vacant or underutilized. **The remediation and redevelopment of brownfields remains a priority for the City.**



Older industrial buildings, such as the old Waterbury Clock Company Factory have been converted to non-industrial uses. © Google Maps



Most manufacturers are now located in modern industrial parks near Interstate 84 and Route 8. © Google Maps



Naugatuck Valley Community College (NVCC) has an enrollment of over 7,000 students making it the largest college in the City. © Bing Maps

While manufacturing has declined significantly, it remains an important component to the local and regional economy. Over the last 50 years, the need for modern one-story factories and the shift from rail to truck transportation has led to industrial development in the City's outer neighborhoods. Waterbury is home to 5 modern industrial parks which are located in areas with large tracts of developable land and good access to Interstate 84 and Route 8.

INSTITUTIONAL

Institutional lands house the many organizations that provide political, cultural, social, and educational services to residents. Institutional uses include and government buildings, religious organizations, schools, non-profit groups, and hospitals. Institutional land makes up 6 percent of total land use. Institutional uses are concentrated in Downtown Waterbury, which is home to municipal government as well as religious, educational, medical, and non-profit organizations. Educational land uses are the most common institutional use, comprising 4 percent of the total land area. Major educational institutions include Waterbury Public Schools, the University of Connecticut, Post University, Naugatuck Valley Community College, and several private and parochial schools.

The City is also home to two major hospitals: Waterbury Hospital and St. Mary's Hospital. The two hospitals jointly operate the Harold Leever Cancer Center, located on Chase Parkway near the Middlebury town line.



St. Mary's Hospital is one of two major hospitals in the City along with Waterbury Hospital. © Google Maps

INFRASTRUCTURE AND ROW

Infrastructure and right-of-way (ROW) are the third most common land use, comprising 18 percent of total land area. About 15 percent of the Waterbury's total land area constitutes right-of-way (ROW), most of which is occupied by roads. Interstate 84 and Route 8 have large rights-of-way and bisect the City into four quadrants. Most of the remaining ROW is made up of local roads, telecommunications, parking garages, railroads, landfills, sewer and water infrastructure, and electrical substations, make up the remainder of public infrastructure category.



OPEN SPACE

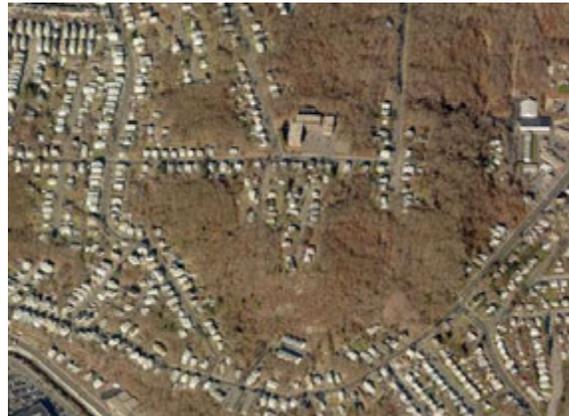
Open space includes public parks, preserved open space, recreational facilities, golf courses, and cemeteries. At 11 percent, the City is short of the State's open space goal of 21 percent for municipalities. The Department of Public Works operates and maintains 31 parks and recreation centers covering over 1,000 acres, including Fulton Park, Hamilton Park, Lakewood Park, Murray Park, Western Hills Golf Course, and East Mountain Golf Course. Most private open space is located the City's 27 cemeteries, which together comprise nearly 2 percent of total land area. State and Federally owned open space includes Mattatuck State Forest in Waterville, and the Army Corps of Engineer-owned Hop Brook Recreation Area. Hop Brook, which is partially located in Middlebury and Naugatuck, also serves as a flood control area for the lower Naugatuck Valley.



Hop Brook serves a dual role as a recreation area and flood control infrastructure. © US Army Corps of Engineers.

VACANT LAND

Vacant land is the second most common land use category, making up 18 percent of the total land area. Over 20 percent of all vacant land is located in the Bucks Hill neighborhood. Other neighborhoods with large tracts of vacant land are Waterville, East Mountain, and Hopeville. All of these neighborhoods are located on the outskirts of the City. Vacant land may be perceived as open space by residents, but could be developed in the future. However, many vacant lands have limited development potential due to the presence of environmental constraints such as steep slopes, shallow to bedrock soils, and wetlands. A build out analysis was conducted in Chapter 9, which examines the development potential of vacant and underutilized property.



Much of Waterbury's remaining undeveloped land contains one or more environmental constraint that makes development infeasible or expensive © Bing Maps.



The Naugatuck River and flood protection barrier in Waterville © Google Maps

8. NATURAL RESOURCES

Communities should inventory and protect their natural resources. Natural resources include waterways, wetlands, soils, forests, bedrock outcrops, and critical habitat areas for endangered species. It is also important to identify environmentally sensitive areas such as flood zones and steep slopes. Protecting natural resources sustains and enhances both the aesthetic appearance of the community and quality of life.



WATERWAYS

The Naugatuck River, the City’s largest and most important waterbody, runs approximately 40 miles from its headwaters in Litchfield County to its confluence with the Housatonic River in Derby. The City’s history is closely tied to the Naugatuck River and its tributaries. Water power fueled the development of the early mills. The flat land bordering the waterways became the right-of-way for railroads and later the highway system, connecting factories to markets across the country. As the population and economy grew, the river became severely polluted. Industrial and municipal waste was discharged into the river, and dams built to harness water for brass production limited the movement of anadromous fish to spawning grounds upriver. By the 1960s, little aquatic life existed in the river.

Following the Connecticut Clean Water Act of 1967 and the Federal Water Pollution Control Act of 1972 water quality on the Naugatuck River improved dramatically. Improvements include the removal of dams, construction of fish ladders, upgrades to municipal wastewater treatment plants, and reductions in point source pollution.

Grassroots organizations such as the Naugatuck River Watershed Association, Housatonic Valley Association, and Trout Unlimited continue to spearhead regional efforts to improve water quality and aquatic habitats. In addition, the Naugatuck River Greenway is a planned 44 mile multi-use trail extending the length of the river from Derby to Torrington. Final design for Phase I in Waterbury is



The Naugatuck River in Platts Mills. © Google Maps

underway. The 2.2 mile initial phase will extend from the Naugatuck town line to Eagle Street.

Waterbury contains numerous brooks, streams, and small rivers, notably the Mad River. The City is also home to two decommissioned reservoirs: Great Brook Reservoir and East Mountain Reservoir. Most of the remaining surface water is comprised of dammed mill ponds, a remnant of Waterbury’s industrial past.

Outside of the City limits, The Waterbury Bureau of Water owns and maintains over 7,000 acres of watershed land in the towns of Warren, Thomaston, Watertown, Plymouth, and Morris, making it the largest municipally-owned water system in Connecticut.

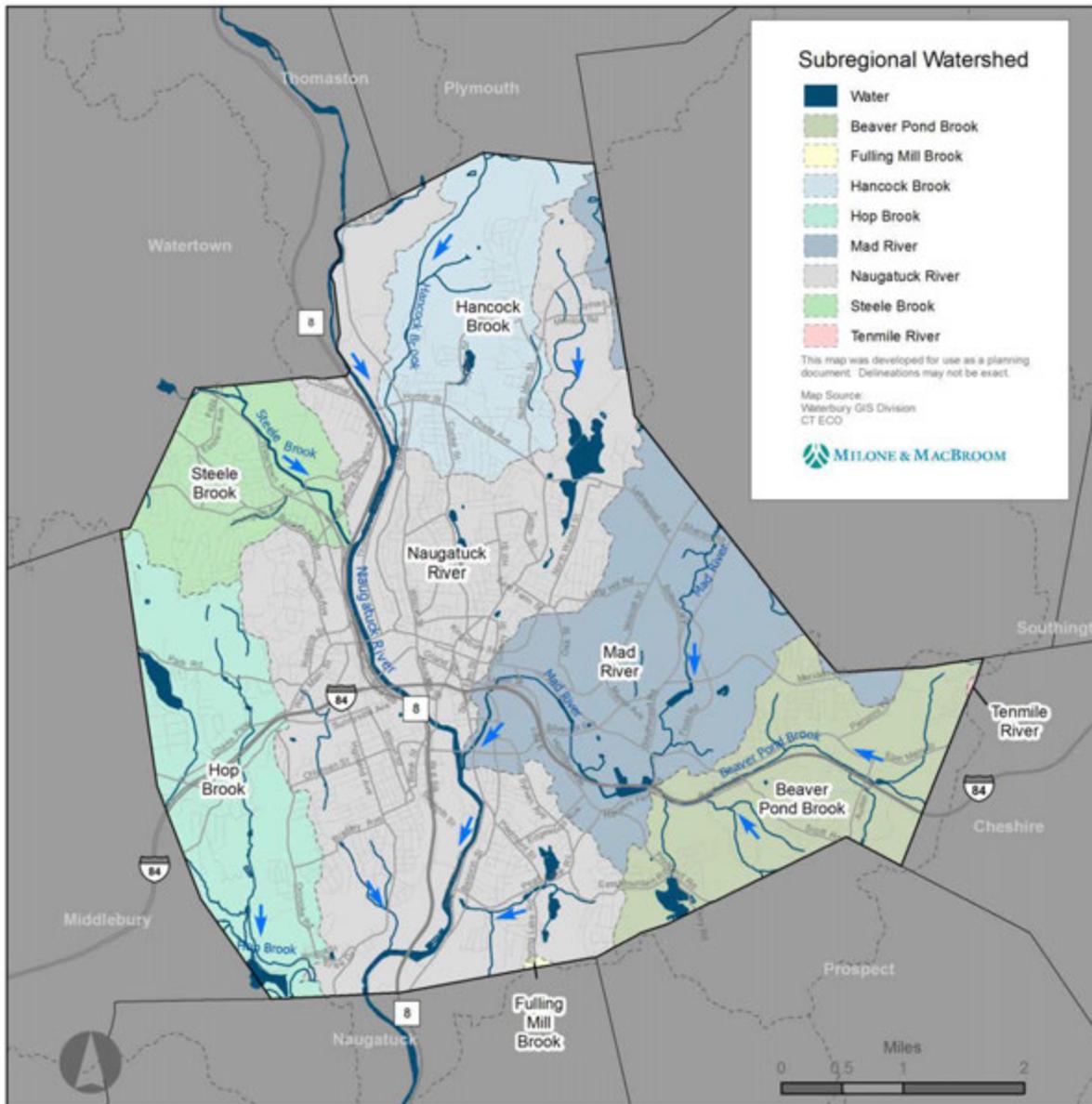
WATERSHEDS

A watershed is an area of land that drains, or sheds water into the same waterbody, such as a lake or a river. As rainwater or melted snow runs downhill into the receiving waterbody, it collects and transports sediments as well as pollutants. Watersheds are categorized using a hierarchical system. Major watersheds are the largest building block and are made up of large rivers that flow directly into the ocean. Next are regional and subregional watersheds, which flow into smaller rivers and their tributaries.

With the exception of a small three acre area near the Cheshire town in the Quinnipiac River watershed all of Waterbury is in the Housatonic



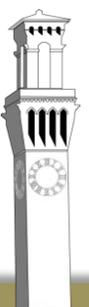
The Mad River in Fairlawn. © Bing Maps

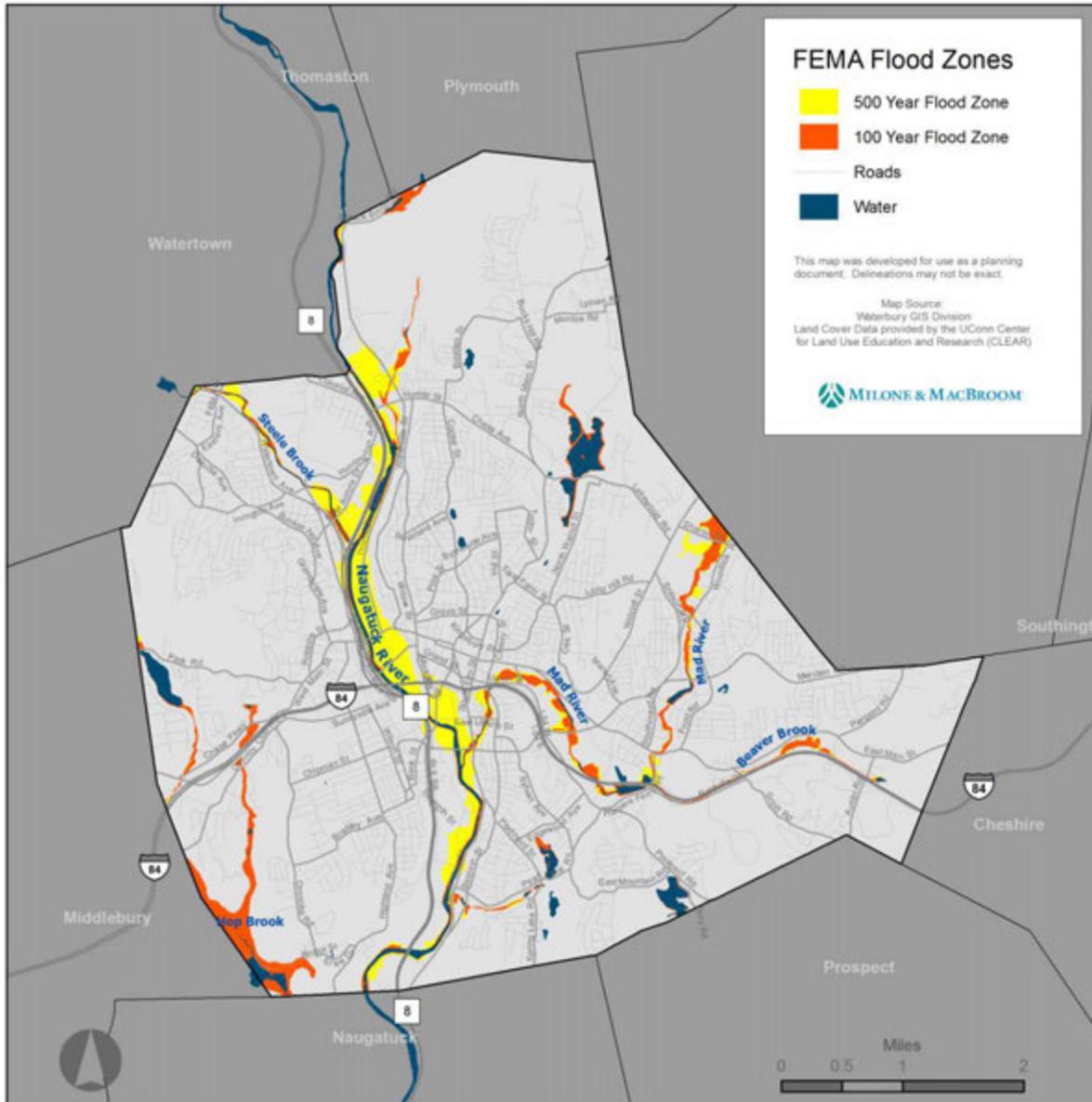


River watershed. The Housatonic River eventually flows into the Long Island Sound. The Naugatuck River regional watershed covers the entire portion of the City's Housatonic River watershed area. The Naugatuck River sub-regional watershed (areas that flow directly into the Naugatuck River and not a tributary) is the largest subregional watershed in the City, covering 7,582 acres, comprising 41 percent of total land area.

Hop Brook, Steele Brook, Hancock Brook, the Mad River, Beaver Pond Brook, and Fulling Mill Brook subregional watersheds make up the remaining area. All of these watersheds eventually flow into the Naugatuck River before entering the Housatonic River and Long Island Sound.

Because watersheds do not line up with municipal boundaries, watershed management strategies should involve both upstream and downstream municipalities.





FLOOD ZONES

A floodplain is a broad and relatively flat area of a river or stream valley on either side of the main watercourse. Floodplains are formed by a series of flood events, which spill over the riverbanks and work and rework the sediment. A 100-year flood has a one percent (1%) probability of occurring in a given year, or is likely to occur once every one hundred years. A 500-year flood has a 0.2% probability of occurring in a given year. The Federal Emergency Management Agency (FEMA) has

determined areas within floodplains that are susceptible to 100-year and 500-year floods, and has classified them as flood zones. Floodways are those areas within the flood zones that convey the floodwaters. The floodways are subject to water being carried at relatively high velocities and forces. The floodway fringes are those areas of the flood zones outside of the floodway which are subject to inundation but do not convey the floodwaters. FEMA flood zones are delineated on the map above.

The Flood of 1955 devastated Waterbury and other Naugatuck Valley communities. Hurricanes Diane and Connie struck southern New England within days of each other, inundating the Naugatuck River and its tributaries with twenty inches of rainwater. In Waterbury alone, thirty residents were killed, 1,875 homes were damaged or destroyed, and total property damage approached \$350 million in today's dollars.

In the years following the Flood of 1955 several flood control projects were built in the Naugatuck River watershed including Thomaston Dam ten miles upstream, and six smaller dams on tributaries within the watershed. Thomaston Dam alone can store up to 13.7 billion gallons of water for flood control purposes.

Eight percent of the city's total land area is located in a flood zone. 100-year flood zones comprise 779 acres (56 percent of flood zones) and the remaining 623 acres (44 percent) are part of the 500 year flood zone.

While the improvements upstream have minimized the area of 100-year flood zone along the Naugatuck River, it still has a large 500-year flood zone footprint. Most of the land in the Naugatuck River's 500-year flood zone is dedicated to industrial and commercial uses. Much of the industrial land along the Naugatuck River is unused or underused and is awaiting development. **Efforts to redevelop these areas should implement strategies to mitigate flood risks.**



Damage from the Flood of 1955 in Brooklyn.

© Charles B. Gunn collection. Dodd Research Center, University of Connecticut

Most of the 100-year flood zone area is located along Naugatuck River tributaries including the Mad River, Beaver Pond Brook, Welton Brook, and Steele Brook. There is also a large 100-year flood zone in the Hop Brook Dam flood storage area. It is recommended that important public infrastructure such as public safety complexes, hospitals, emergency shelters, and certain types of utilities be located outside of the 100-year flood zone.

WETLANDS

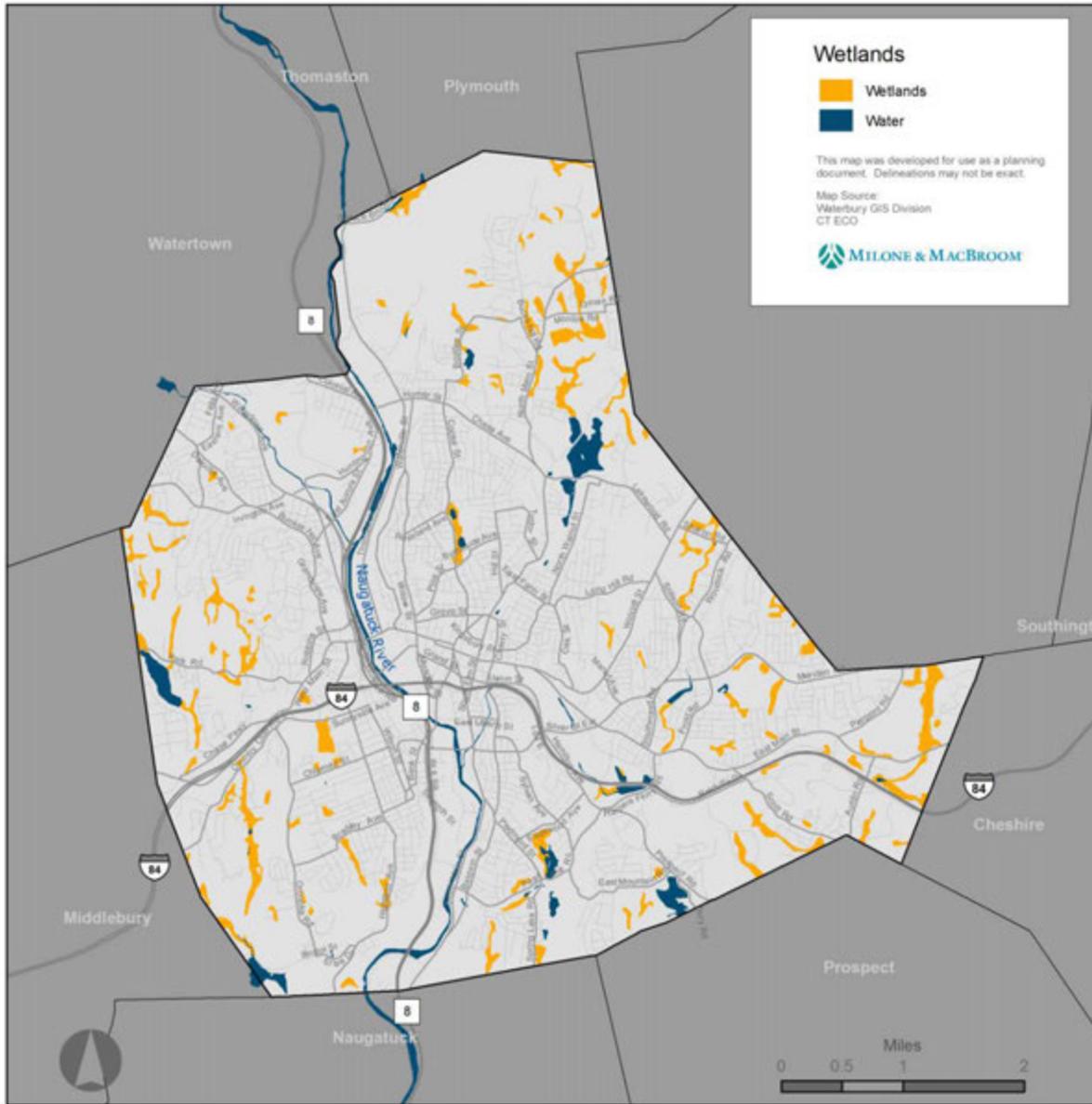
Wetlands are defined by many distinguishing features, the most notable being the presence of standing water for a period of time during the growing season; saturated soil conditions; and organisms, especially vegetation, that are adapted to or tolerant of saturated soils. Wetlands are not easily defined and definitions are variable between regulatory agencies. In Connecticut, wetlands are defined by soil type, specifically saturated or hydric soils, which are classified by the Natural Resources Conservation Service (NRCS) as Poorly Drained, Very Poorly Drained or Alluvial/Floodplain.

Any combination of these soil classifications are considered wetland soils and are protected under the City's inland wetland regulations. Waterbury has 823 acres of wetland soils, comprising just over 4 percent of the total land area. The City regulates development that impacts wetlands through its *Inland Wetlands and Watercourses Regulations*, which are overseen by the Inland Wetlands and Watercourses Commission (IWWC).



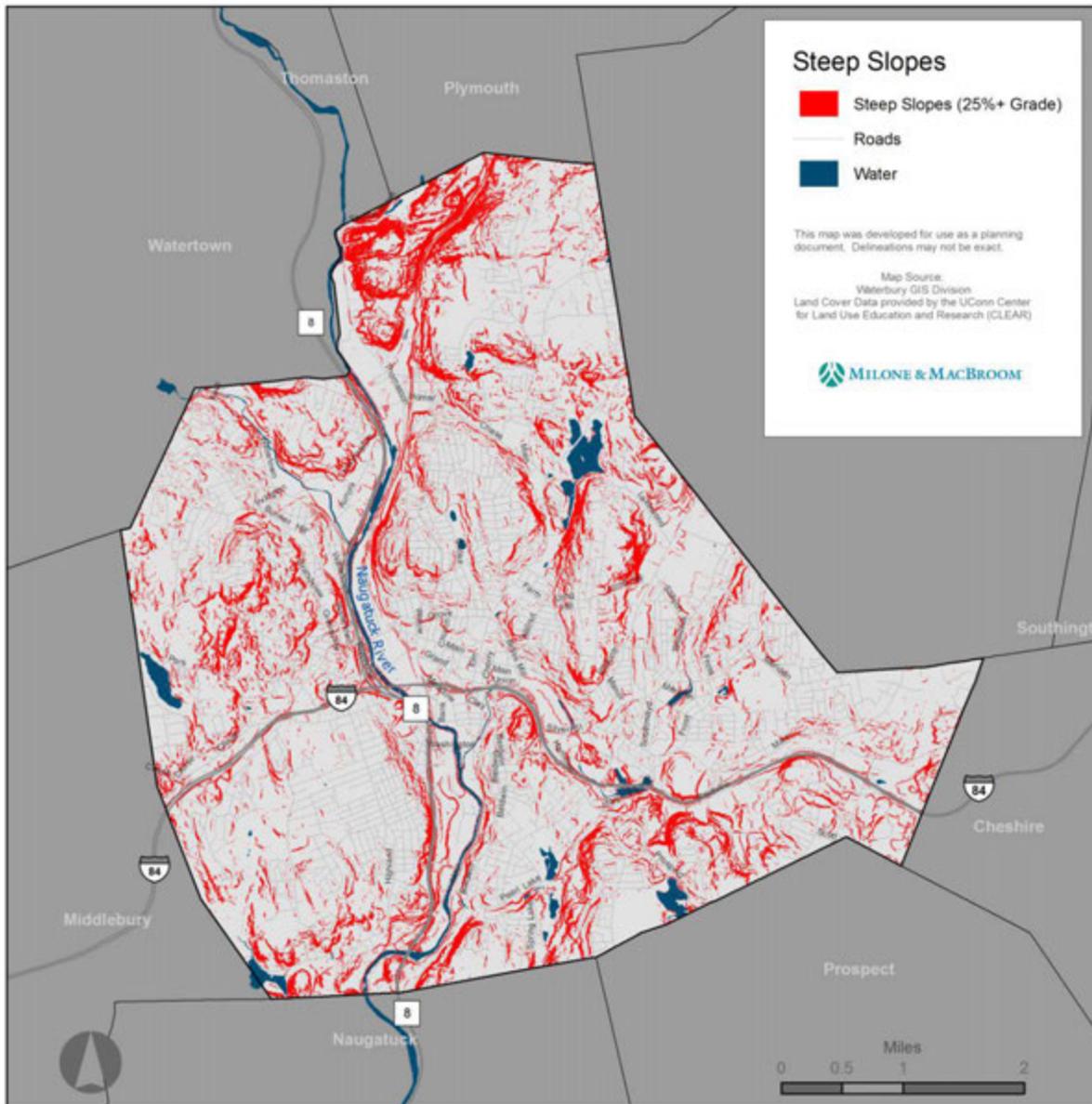
Wetlands along Spruce Brook in Waterville © Bing Maps





Wetlands are important for a variety of reasons, including:

- Wetlands are among the most biologically productive natural ecosystems in the world.
- Wetlands are home to a variety of plant and animal species, including threatened and endangered species.
- Wetlands mitigate flooding by storing water and slowly releasing it, thus reducing the likelihood of damage by controlling the rate and volume of runoff.
- Wetlands purify water by intercepting surface runoff and removing or retaining its nutrients, processing organic wastes and reducing sediment before it reaches open water.
- Wetlands provide outdoor recreational opportunities such as wildlife viewing and photography.

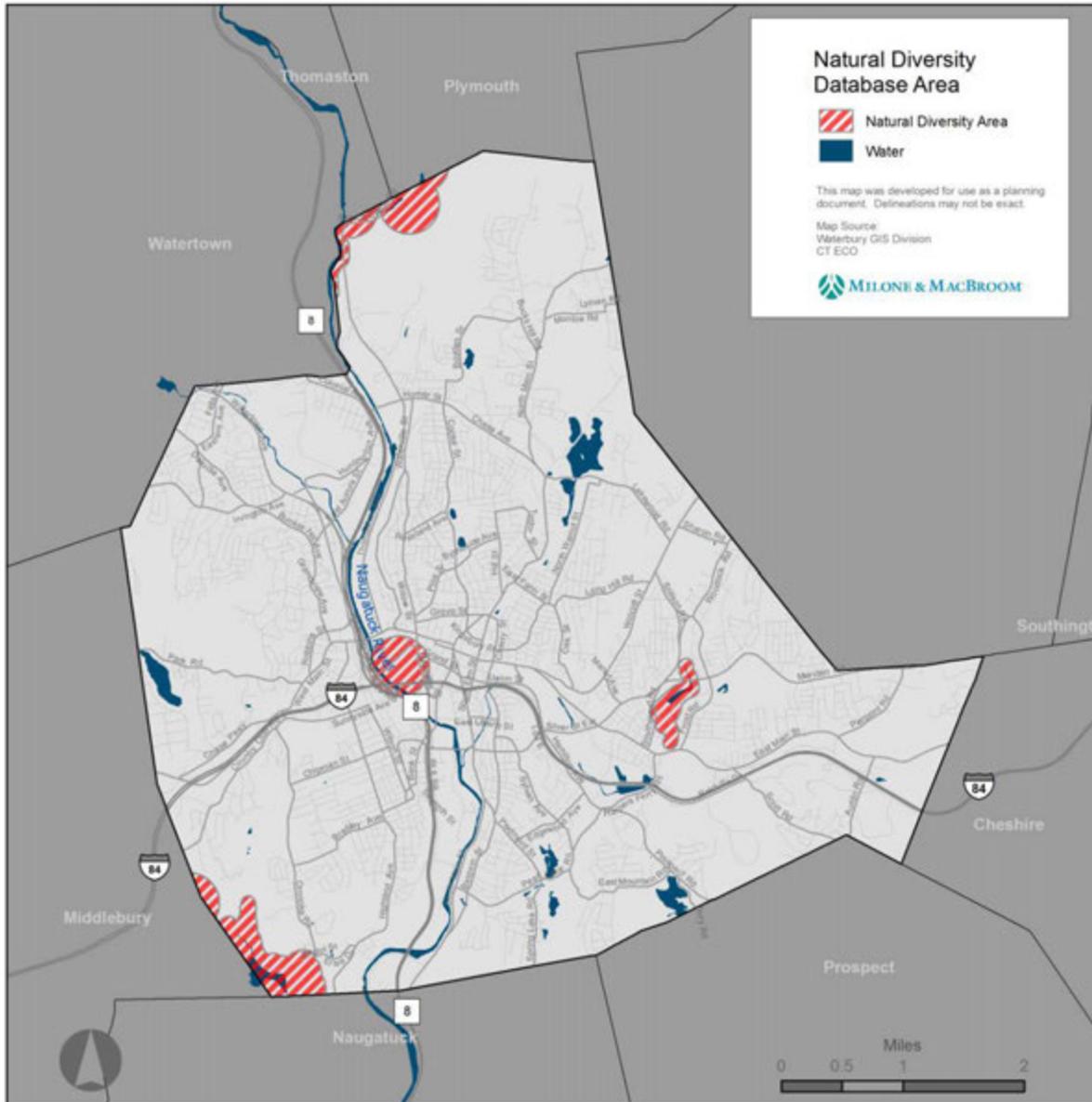


STEEP SLOPES

Steep slopes are areas with grades of 25 percent or higher (1 foot of vertical gain for every 4 feet of horizontal distance). If developed, steep slopes pose negative environmental implications such as increased erosion and surface runoff, sedimentation of watercourses, and greater localized flooding. Therefore, identifying areas of steep slopes is an important component of the natural resource inventory.

Waterbury has rugged terrain, with 1,870 acres located on slopes of 25 percent or higher. Steep slopes comprise 14 percent of the City's total land area. Development and vegetation clearing should be discouraged in these areas. Moderate slopes (grades of 15 to 24 percent) comprise an additional 18 percent of land.





NATURAL DIVERSITY HABITAT LISTED SPECIES

The Connecticut Department of Energy and Environmental Protection (DEEP) has inventoried habitats across the state that contain endangered, threatened and special concern species. These sites are included in a special survey called The Connecticut Natural Diversity Database, which is a centralized inventory of these unique habitat areas and represents the findings of many years' worth of

biological surveys.

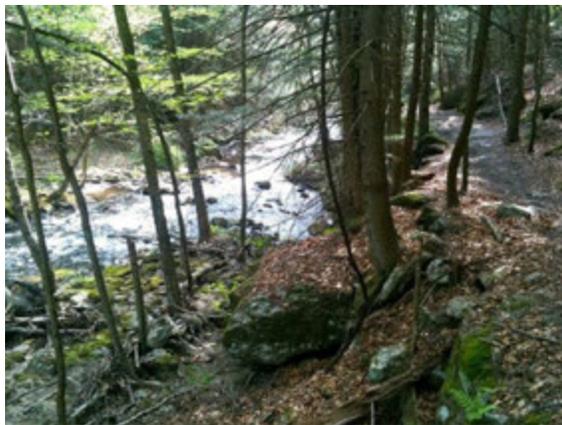
The Connecticut Natural Diversity Database breaks down the sites into the following taxonomic groups: mammals, birds, reptiles, amphibians, fish, invertebrates and plants. Within these groups, the species are further classified as being endangered, threatened, or special concern.

To protect sensitive locations, DEEP creates half-mile buffers around the approximate locations of significant natural communities or protected species. In addition to generalizing the exact

location of these sites, details about the types of species have been removed.

The locations of sites within the City identified by the Connecticut Natural Diversity Database are illustrated on the map on the previous page titled Natural Diversity Database Locations.

Waterbury contains four Natural Diversity Database locations. The two largest areas are located on preserved lands: Hop Brook Dam Recreation Area, and Mattatuck State Forest. Two smaller areas are located along the Naugatuck River and the Mad River.



Hancock Brook flowing through Mattatuck State Forest
© H. Morrow Long via Wikimedia Commons

FORESTS

According to 2010 land cover data from the Center for Land Use Education and Research (CLEAR) at the University of Connecticut, Waterbury contained 5,056 acres of deciduous forest and 152 acres of coniferous forest, making up 28 percent of total land area. From 1990 to 2010 Waterbury lost 632 acres of forest land, a decline of 11 percent. Most of the forest land was lost to development. During that same time period, population grew by just 1.3 percent, indicating that deforestation is occurring at a much faster rate than population growth. While Waterbury's overall population has remained relatively stable over the last decade, its development footprint has continued to expand, led by shrinking household sizes and decreasing population densities in the urban core neighborhoods. It is recommended that open

space acquisition efforts focus on preserving the City's remaining forested lands.

Most former agricultural land has been developed or reforested. However, Waterbury continues to lose forested land at a faster rate than population growth



These two aerial photos show the same location in Bucks Hill in the vicinity of North Main Street and Boyden Street. In 1934, when the top photo was taken, agriculture was still common in the outer neighborhoods. The bottom photo shows the same location in 2015, when most of the former farm land was either redeveloped or reforested.

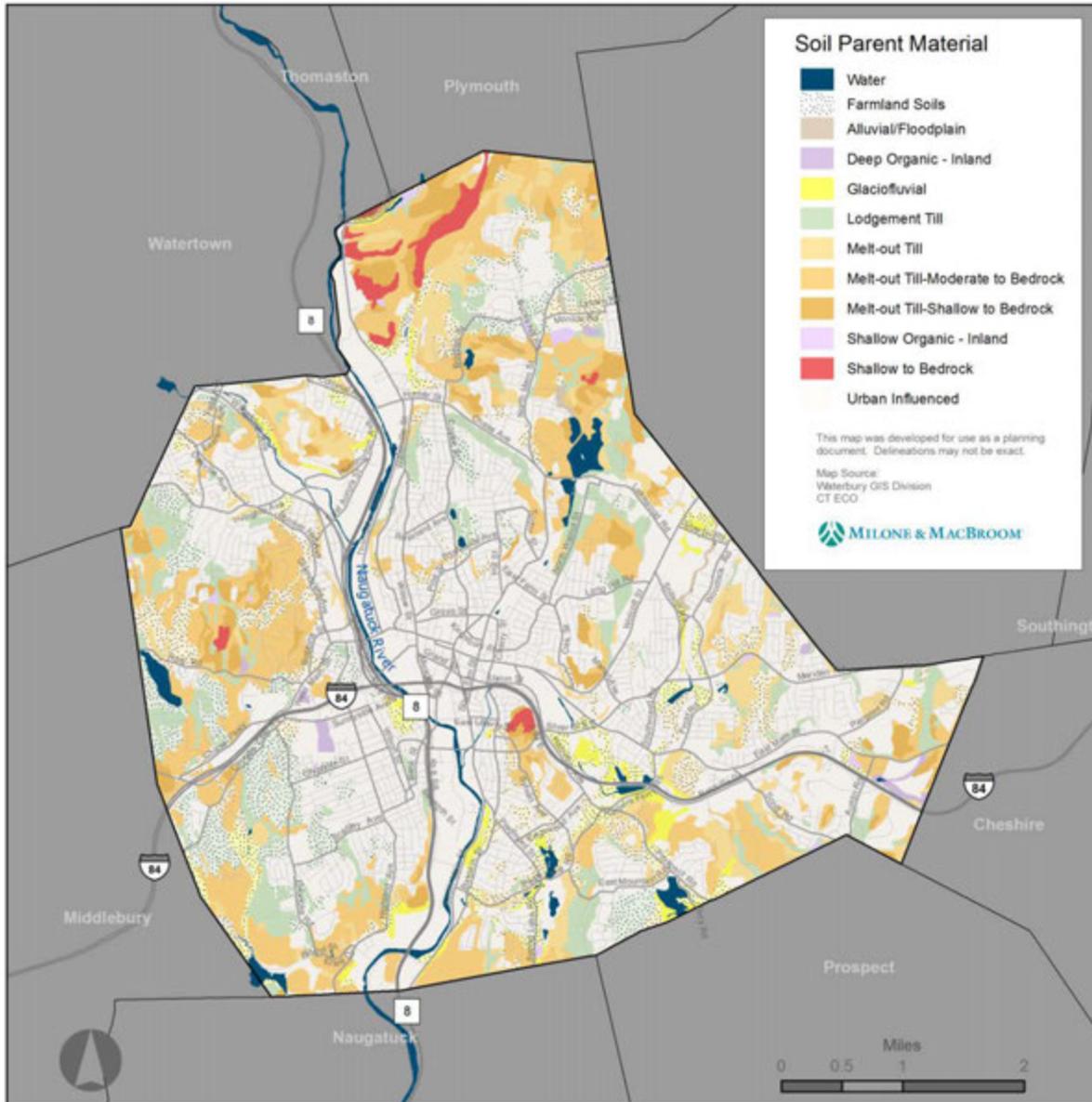
© UConn MAGIC, 1934 Aerial Photos (Top)

© CT ECO 2012 Statewide Orthophotography (Bottom)

Urban forests provide many benefits including:

- Providing habitat and food for a variety of fish, birds, mammals, insects and amphibians that live in cities. Large and connected areas of urban forest offer the most valuable wildlife habitat.





- Urban trees offer an important link for connecting urban populations with natural resources. Involving residents in urban forestry activities provides an opportunity to integrate environmental stewardship with social progress.
- Improving water quality through interception of rain, reduction in runoff, erosion stabilization, filtration of pollutants and reduction of water temperature through bank shading.
- Urban trees lower air temperatures by an average of 3 to 10°F and help mitigate the “urban heat island” effect.
- Urban trees and shrubs reduce air pollution of cities by removing pollutants from the air. Trees also sequester and reduce carbon dioxide while releasing oxygen as they photosynthesize.

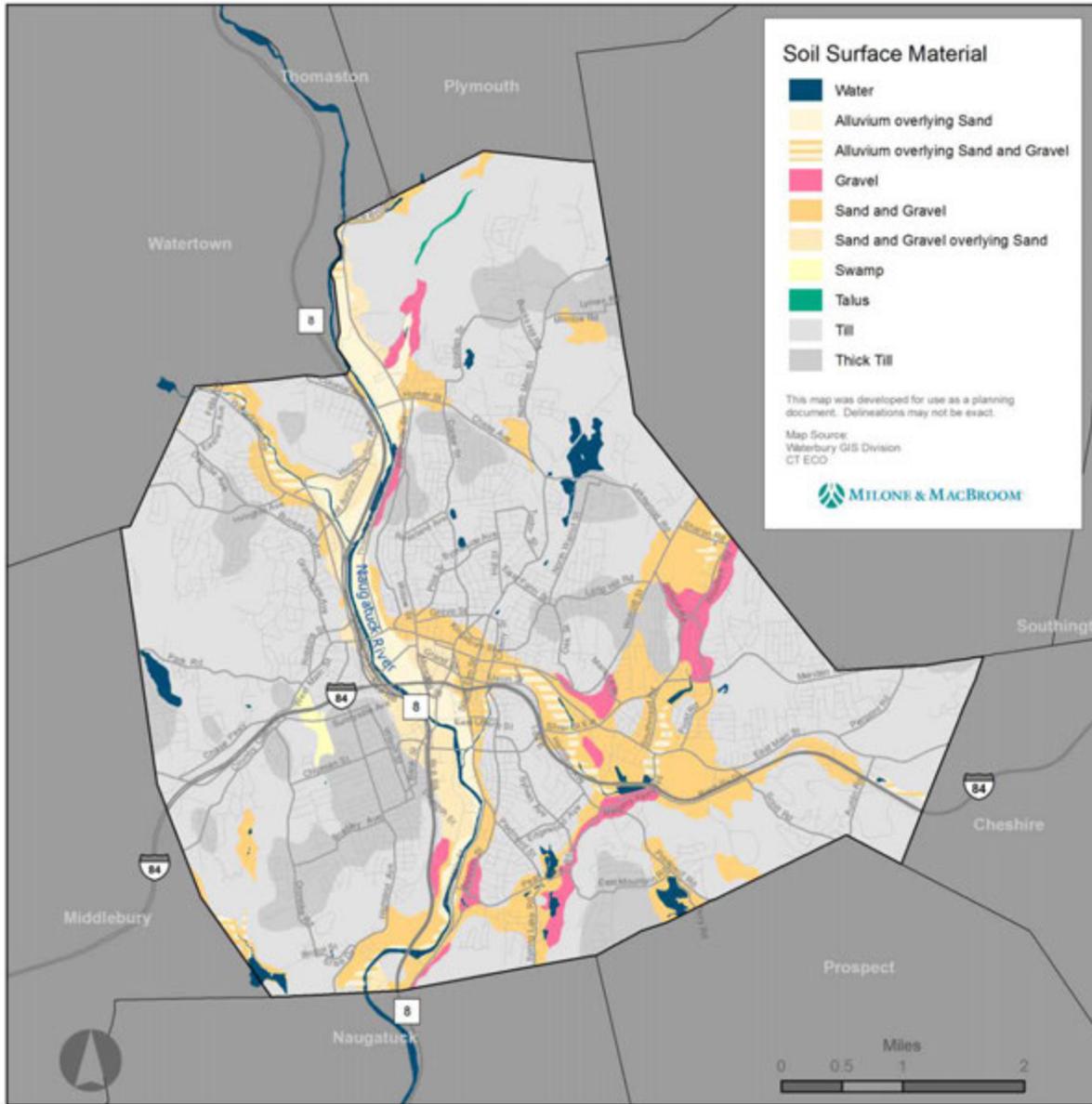
SOILS

Waterbury has a diverse array of soil types. According to the Natural Resources Conservation Service soil survey, about half of total land area is classified as urban-influenced soils. These soils are extremely variable due to the disturbance of development. The most common urban soil types are Udorthent, Paxton, and Charlton complex soils. Another 30 percent of soils are melt-out till, which was deposited by melting glaciers during the last ice age. Hollis complex rock outcrops are found

along steep slopes in Waterville, Washington Hill, and Bunker Hill.

Waterbury contains over 1,700 acres of soil that is classified as Prime Farmland Soil. These areas have the best combination of physical and chemical characteristics to produce crops. However, the decline of agriculture and population pressures have led to development or reforestation of most of Waterbury's former agricultural land.

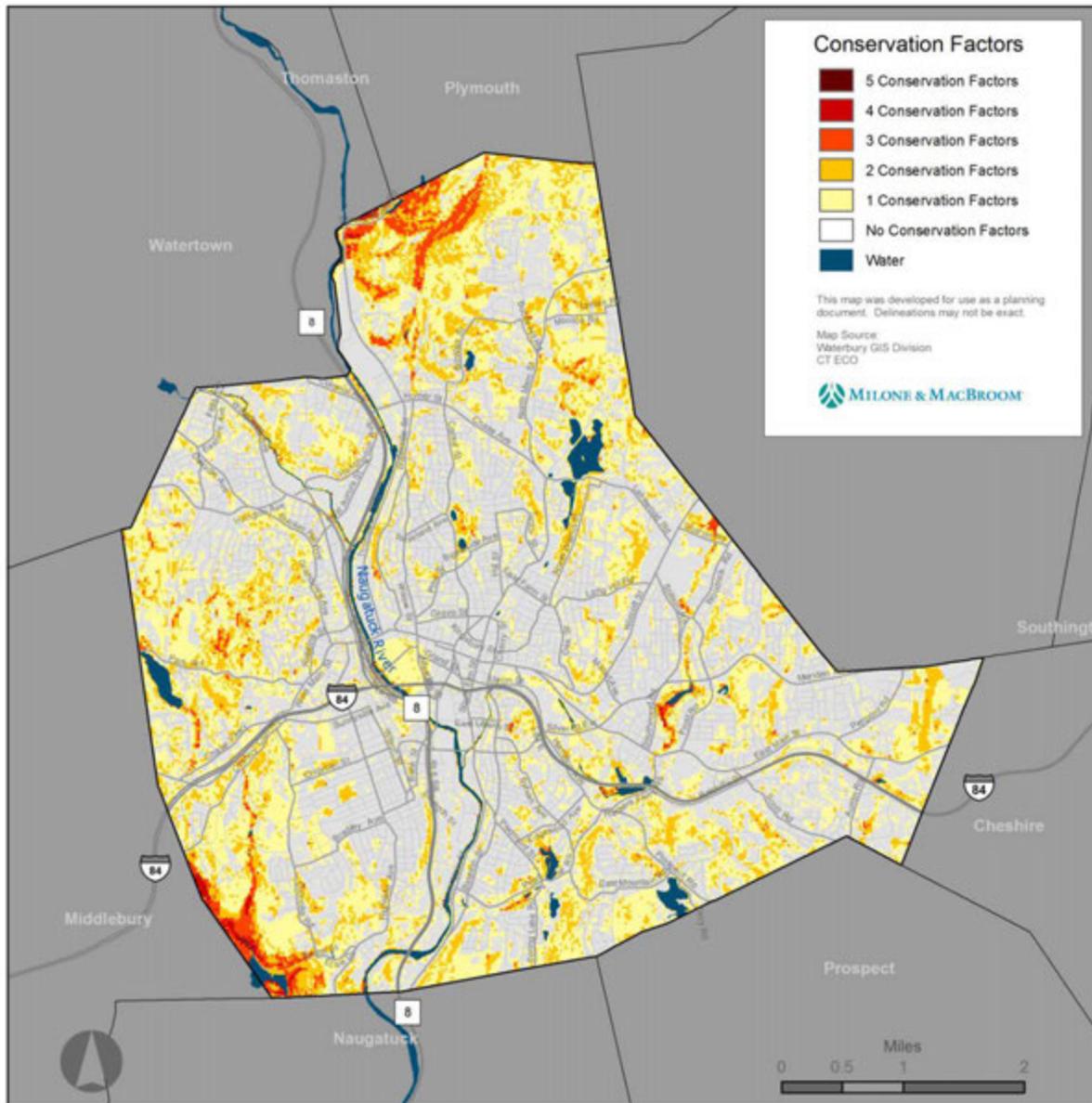




Surface materials vary by location. Sand and gravel, which was deposited by glacial meltwater, and alluvium, which were deposited by floodwaters, are found along the City's waterways and flood zones. Surface materials in these areas are useful as construction aggregate and are relatively easy to excavate. As a result, many quarries and natural resource extraction businesses locate here.

Most upland areas are covered by till, which is unsorted glacial sediment. There is a small area of Talus along Hancock Brook. Talus is a result of rock

fall and is generally found at the base of steep bedrock cliffs. Finally, there is a small swamp deposit in the West End adjacent to Sled Haul Brook. Swamp soils form in poorly drained areas and contain a mix of organic materials, sand, silt, and clay.



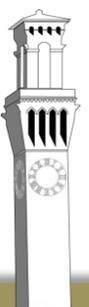
CONSERVATION FACTORS

The map above shows an overlay of the natural resources that were described earlier in this chapter: natural diversity database areas, wetlands, waterbodies, 100-year FEMA flood zones, slopes of 25 percent or more, forested land, shallow to bedrock soils, and prime farmland soils.

Each of the eight natural resources was given a conservation factor of one point. The overlaid

map above shows scores between zero and eight points based on how many conservation factors were present at a particular location. Nearly half of the City's land area had at least one conservation factor.

While no area had all eight conservation factors, approximately 470 acres of land (2.5 percent) had three or more factors. The two largest areas are located in the Hop Brook Recreation Area and in



Mattatuck State Forest in Waterville. Fortunately, these two areas are preserved as open space.

Most of the remaining areas with three or more conservation factors are located along waterways (such as the Mad River in the East End), and along undeveloped forested ridgelines in Bucks Hill and Bunker Hill. Efforts should be made to protect these areas and minimize the environmental impacts of development.

*Downtown Waterbury © Bing Maps*

9. ZONING AND BUILD OUT

Zoning is a tool used by municipalities to regulate land use practices and guide future growth. Zoning codes regulate the use, form, design, and compatibility of land uses by categorizing parcels into “zoning districts”. Each zoning district has a set of rules and regulations covering areas such as permitted uses, density, lot size, building height, setbacks, minimum parking requirements, and stormwater management. Zoning also influences future growth by controlling where development can occur. This chapter presents an overview of the City’s zoning regulations and an assessment of future development potential using build-out analyses. Build out analyses were conducted separately for vacant residential land and non-residential land. Redevelopment, particularly for the Central Business District and brownfields, remains an ongoing priority for Waterbury. Therefore, separate build-out scenarios were conducted to assess the redevelopment potential of remediated brownfield sites and underutilized properties in the Central Business District.



ZONING

RESIDENTIAL ZONES

Waterbury is divided into six residential districts that vary in density and housing stock. Three zones are primarily single-family residential zones: **Large Lot Single-Family (RS-12)**, **Single-Family (RS)**, and **Low Density Residential (RL)** zoning districts. Maximum densities vary from 4 dwelling units per acre in the RS-12 zone to 8 dwelling units per acre in the RL zone. These three zones comprise 83 percent of all residential land and 77 percent of residential parcels. Two family homes are only allowed if a special permit is obtained. These zoning districts are primarily found in Waterbury's outer neighborhoods such as Bucks Hill, Bunker Hill, East Mountain, Country Club, and Mill Plain.

The remaining three residential zones are primarily multi-family residential zones: **Moderate Density Residential (RM)**, **Residential Office (RO)**, and **High Density Residential (RH)**. Maximum densities are much higher than in the single family districts. The RH zone can support up to 42 dwelling units per acre. Some commercial uses are also permitted in these areas. The RH and RO zones are found exclusively in urban core neighborhoods such as Hillside, Willow/Plaza, Washington Hill, South End, and Brooklyn. RM zones are found in the urban core as well as in the outer neighborhoods where apartment and condominium complexes are located. These three zones comprise just 17 percent of residential land and 23 percent of residential parcels. However, due to their density they contain a much higher percentage of dwelling units and population.



Single Family Residential (RS) zone in Bunker Hill. © Bing Maps



Moderate Density Residential (RM) zone in Walnut-Orange-Walsh (WOW). © Bing Maps



High Density Residential (RH) zone in Willow-Plaza. © Bing Maps

COMMERCIAL ZONES

Commercial zones make up 12 percent of the City’s total land area. Commercial areas are categorized into five zones that, like residential zones, vary in density and character of use. The **Neighborhood Shopping District (CN)** is the smallest commercial zone at just 40 acres (less than 1 percent of all land). The CN zone has the lowest densities and is found along neighborhood arterials such as Highland Avenue, Meriden Road, Baldwin Street, and North Main Street. Most commercial uses in the CN zone are small businesses with minimal surface parking.

The **General Commercial (CG) and Commercial Office (CO)** districts have higher allowable densities. The CG and CO districts are made up primarily of small businesses, small to medium sized strip retail, and office buildings. The **Arterial Commercial (CA)** district is the largest commercial zone at 1,266 acres. Over 64 percent of all commercial land is located in the CA zone. Because of the prevalence of large big-box stores in this zone, much of the land is devoted to surface parking.

The **Central Business District (CBD)** is the most dense and diverse zone. It allows residential, commercial, and mixed uses. The CBD encompasses the areas surrounding the Green in Downtown Waterbury. Many of the buildings in the CBD are mixed-use, with ground floor retail and office or residential space on the upper floors.

The Freight Street district between the Metro North Rail line and the Naugatuck River is a recent addition to the CBD zoning district. The Freight Street District is made up primarily of vacant or underutilized industrial buildings and is awaiting redevelopment. While the CBD zoning status will permit a greater density and diversity of land uses than currently exist, it also has lax regulations guiding the form of buildings, which may not be the most appropriate designation for a major redevelopment. Zoning regulations in the Freight Street District should be reevaluated to ensure that new development occurs in a cohesive manner.



The Central Business District (CBD) zone contains a dense and diverse mix of uses, particularly around the Waterbury Green. © Bing Maps



Commercial Arterial (CA) zones, like the one above on Wolcott Street, contain many big box retailers and dedicate much of their land to surface parking. © Bing Maps



Neighborhood Shopping (CN) zones like the one above on Meriden Road, are made up mostly of small businesses. © Bing Maps



INDUSTRIAL ZONES

Industrial land uses in Waterbury are divided into three zones. The **General Industrial (IG)** zone comprises 507 acres making it the smallest of the three industrial zones. Most of the City's older industrial areas are in the IG zone and are in close proximity to the Naugatuck River and rail lines. While some manufacturing exists in the IG zone, many of the older industrial buildings have been converted to other uses such as warehousing, freight handling, and utilities.

The **Limited Industrial Zone (IL)** is the second largest industrial zone at 668 acres. Like the IG zone, most of the land in the IL zone is located along the Naugatuck River and rail lines. There are a handful of smaller IL zone areas along Harpers Ferry Road, Piedmont Street, Sharon Road, and Watertown Avenue.

The **Industrial Park (IP)** zone is the largest industrial zone at 670 acres. Buildings in the IP zones are comprised mostly of modern single-story production facilities. All have good access to the regional highway system. Unlike the other industrial zones, which are fairly contiguous, the IP zone is separated into five distinct areas: Captain Neville Industrial Park, Reidville Industrial Park, Brookside Industrial Park, Avenue of Industry, and Turnpike Drive.

Some former industrial areas have been rezoned to accommodate non-industrial development. For example, the Freight Street District was once in the General Industrial zone. However, due to limited potential for new industrial development, it was rezoned as part of the Central Business District.



General Industrial (IG) zone in Waterville. © Bing Maps

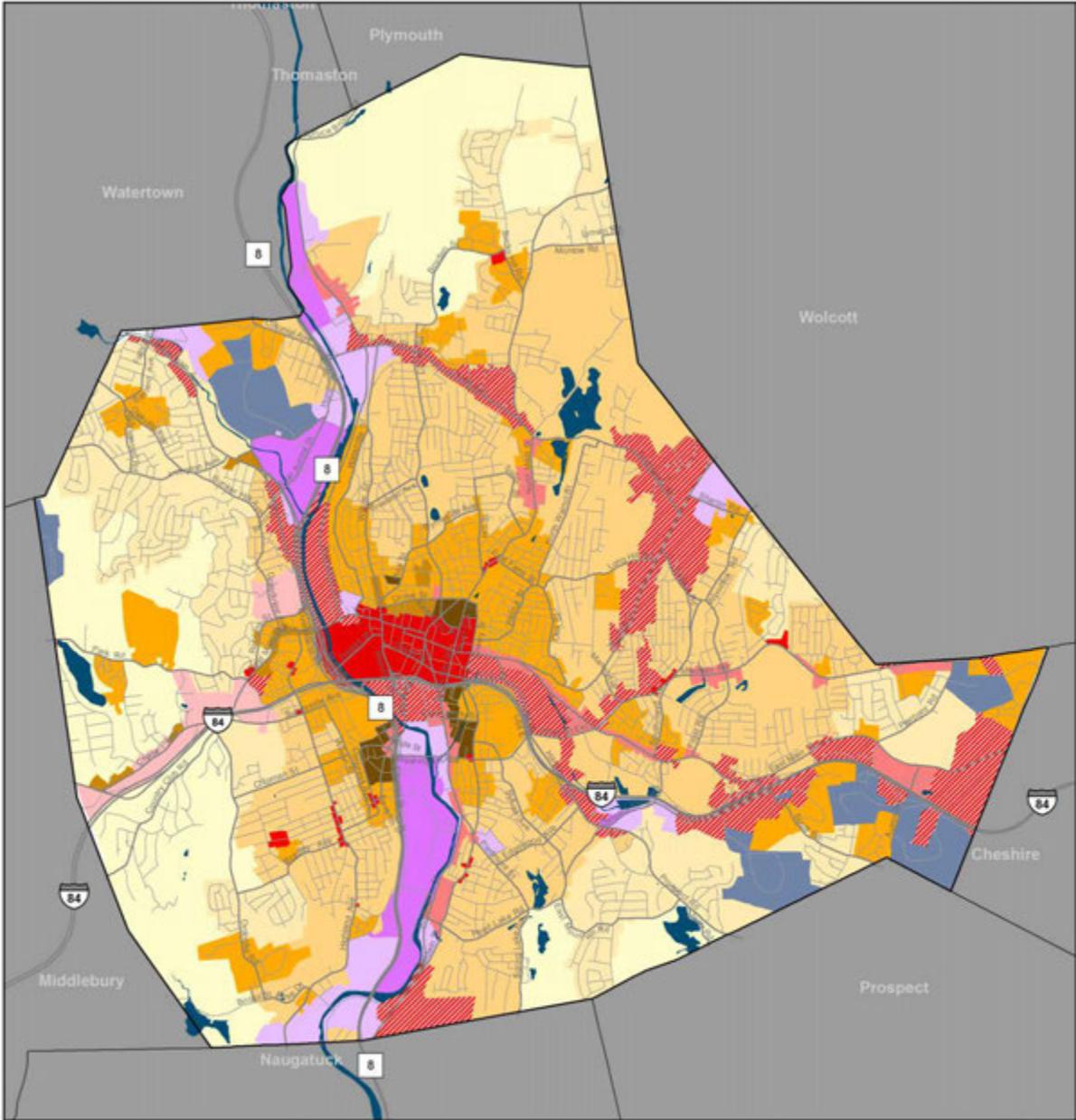


Limited Industrial (IL) zone in Hopeville. © Bing Maps



Captain Neville Industrial Park is in the Industrial Park (IP) zone. Industrial Park zones are found adjacent to Interstate 84 and Route 8. © Bing Maps

Waterbury Zoning Districts



This map was developed for use as a planning document. Delineations may not be exact.
Map Source: Waterbury GIS Division



Waterbury Zoning

- CBD - Central Business District
- CN - Neighborhood Shopping
- CG - General Commercial
- ▨ CA - Arterial Commercial
- CO - Commercial Office
- IG - General Industrial
- IP - Industrial Park
- IL - Limited Industrial
- RH - High Density Multi-Family Residential
- RO - Residential/Office
- RM - Medium Density Multi-Family Residential
- RL - Low Density Residential
- RS - Single Family Residential
- RS-12 - Large Lot Single Family Residential



BUILD-OUT ANALYSIS

A build-out analysis is a valuable tool for understanding where and how much development can be accommodated on vacant land based on existing regulations and physical constraints. Build-outs can also be used to analyze the redevelopment potential of vacant or underutilized properties such as brownfields or vacant commercial buildings.

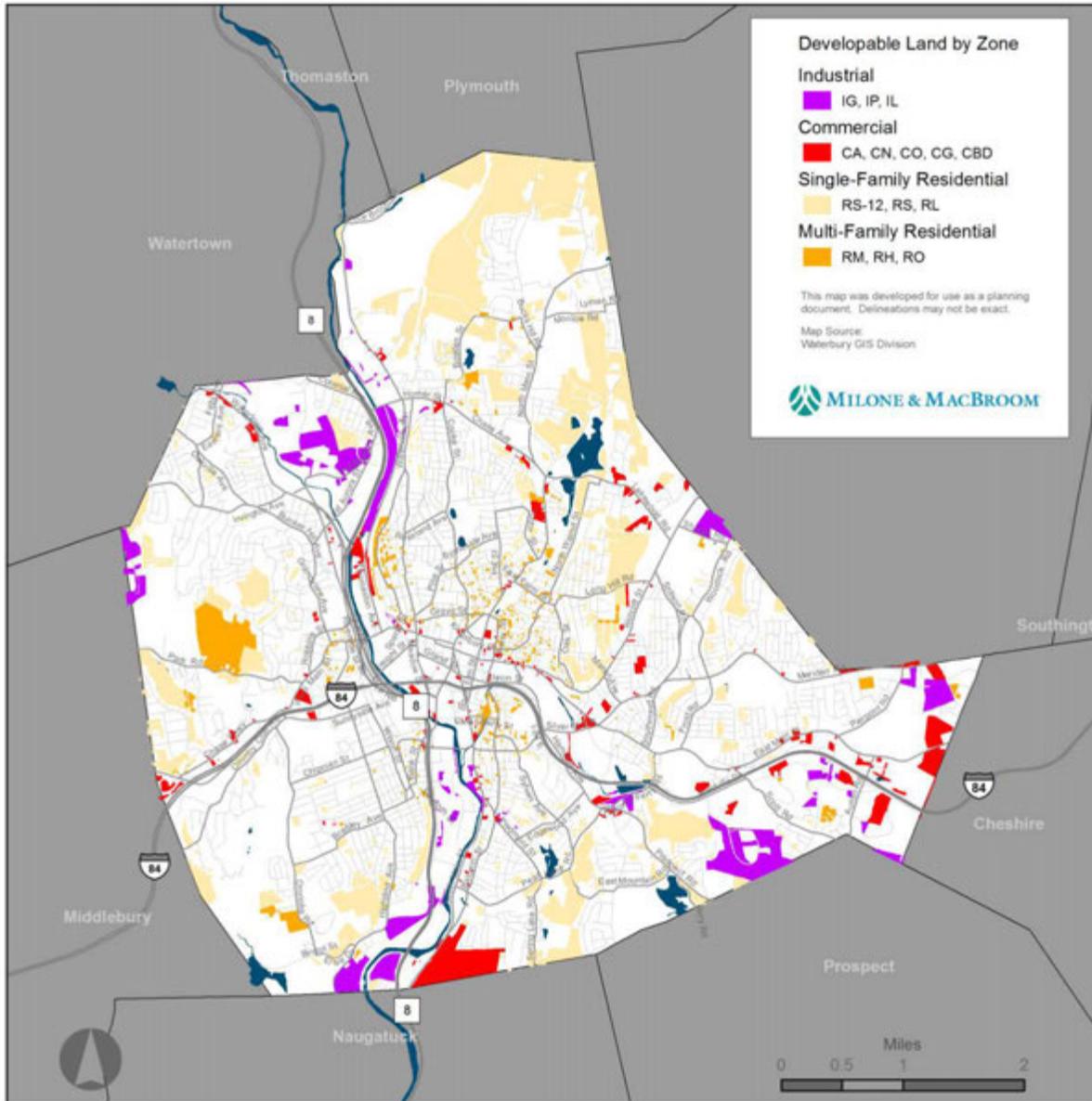
Build-outs are a useful first step in establishing a development plan for the future. Once this is accomplished, issues such as infrastructure limitations and natural resource protection can be considered and new growth can be properly planned. This analysis is based on the City's zoning code and subdivision regulations. The distribution of land area and vacant land by zone can be seen in the table titled Total Land Area and Vacant Land by Zone.

The analysis of development capacity is expressed differently for residential and non-residential land. The development potential of residential land is expressed as potential dwelling units in vacant lands zoned for residential uses. It assumes that development will occur at the maximum densities allowable in each zone. The development potential of non-residential land is measured in potential building area in square feet. This is calculated using floor-area-ratios (FAR) which is discussed in greater detail later in this chapter. Finally, two site specific build-out analyses were conducted for brownfields and the Central Business District.

Total Land Area and Vacant Land by Zone

	Zone	Total Land in Zone		Vacant Land in Zone		Percent Vacant	
		Area (acres)	Number of Parcels	Area (acres)	Number of Parcels	Percent of Area	Percent of Parcels
Residential	RS-12	3,371.3	1,336	950.7	235	28.2%	17.6%
	RS	2,935.9	6,277	289.1	245	9.8%	3.9%
	RL	5,329.1	13,084	891.1	1,028	16.7%	7.9%
	RM	2,297.0	5,572	288.0	568	12.5%	10.2%
	RH	118.0	404	8.8	50	7.5%	12.4%
	RO	91.9	200	4.6	25	5.0%	12.5%
	Total	14,143.1	26,873	2,432.3	2,151	17.2%	8.0%
Commercial	CA	1,558.5	762	306.1	127	19.6%	16.7%
	CG	320.0	656	44.1	119	13.8%	18.1%
	CN	51.4	133	3.4	15	6.6%	11.3%
	CBD	312.4	403	8.6	44	2.8%	10.9%
	CO	252.7	99	22.9	22	9.1%	22.2%
	Total	2,494.9	2,053	385.1	327	15.4%	15.9%
Industrial	IG	584.3	213	29.6	33	5.1%	15.5%
	IL	667.7	270	186.1	66	27.9%	24.4%
	IP	669.7	145	284.9	57	42.5%	39.3%
	Total	1,921.7	628	500.6	156	26.0%	24.8%
Not Classified ¹		80.7	-	-	-	-	-
Total All Zones		18,640.4	29,555	3,317.9	2,634	17.8%	8.9%

1. Due to differences in GIS layers, there was an 80.7 acre difference between the total land area in the zoning and land use databases. This is mostly due to the inclusion of "border" parcels in the land use database, which may not be entirely within City boundaries. The zoning database is based on City boundaries and does not include the area of parcels outside of City boundaries.

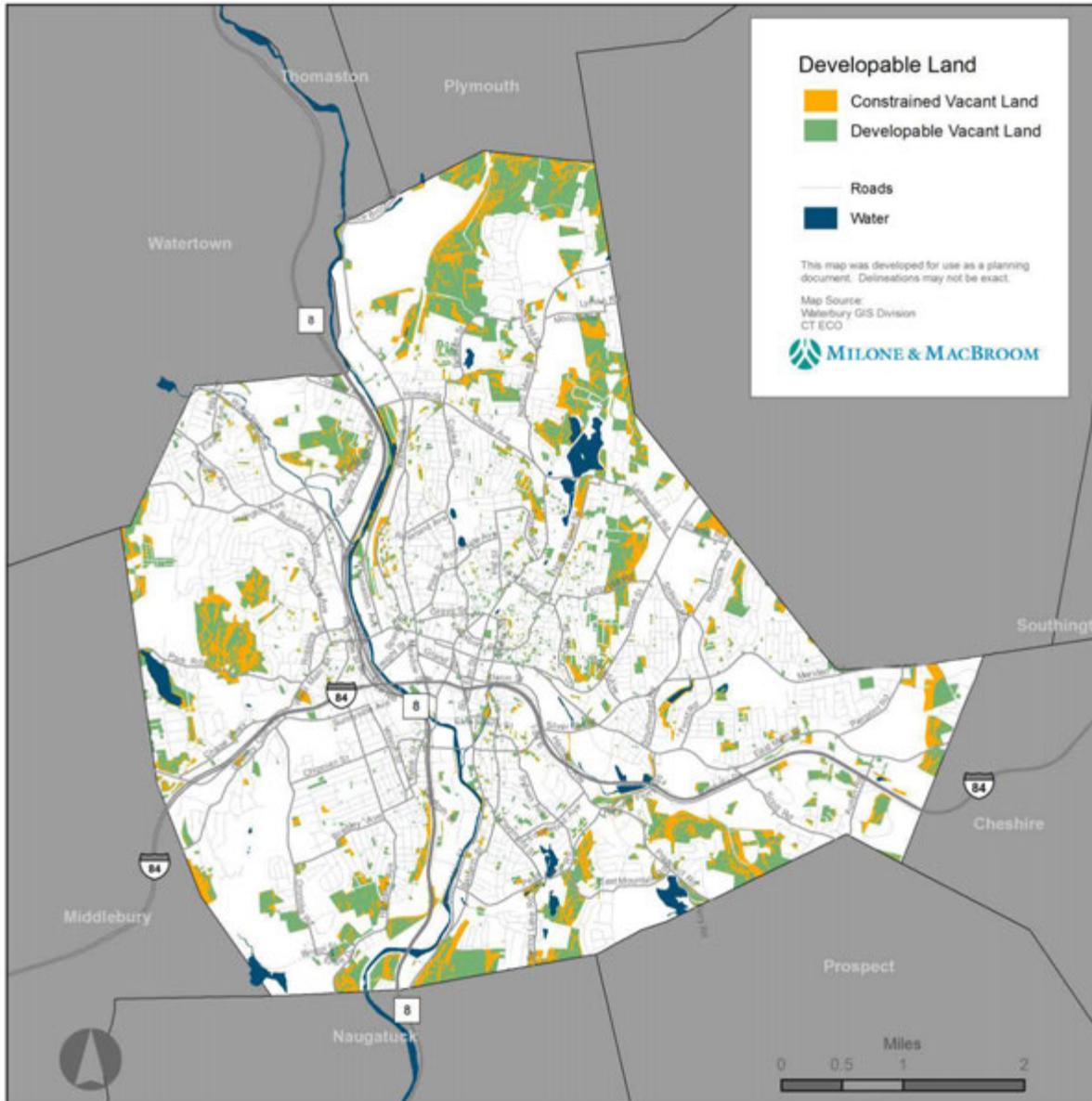


LAND ANALYSIS

As calculated in the Existing Land Use chapter, 3,318 acres of land (18 percent of total) is classified as vacant undeveloped land. The map above shows *where* future development on vacant land can be accommodated. The type of development that can occur is determined by a parcel’s underlying zoning regulations. Vacant land by zone can be seen on the map above and on the table titled *Total Land Area and Vacant Land by Zone* on the previous page.

Seventy-three (73) percent of vacant land is residentially zoned. A vast majority of residentially-zoned vacant land is designed for single-family development (RS-12, RS, and RL zones). The remaining land is split between industrial (15 percent) and commercial (12 percent) zones. Most of the vacant industrial and commercial vacant land is found in the outer neighborhoods such as Brookside Industrial Park, Reidville Industrial Park, Hopeville, Platts Mill, and Pierpont Road.





Not all vacant land can be developed due to the presence of natural constraints. For the purpose of this study, the following natural constraints were deducted from gross raw vacant land area:

- Steep slopes (greater than 25 percent)
- FEMA 100-Year Flood Zones
- Wetlands
- Waterbodies

Areas that contain natural constraints were deducted from the gross land area, resulting in the net buildable land area for each parcel. The map

above shows constrained vacant land (in orange) and developable vacant land (in green).

Once the buildable area was calculated for each parcel, the minimum lot size and residential densities were applied to yield an approximate number of residential dwelling units for each parcel. For example, a 3.5 acre lot with a minimum lot size of 1 acre would produce a yield of 3 dwelling units. The remaining 0.5 acres would not produce an additional dwelling unit. For non-residential zones, floor-area-ratios (FAR) were used.

RESIDENTIAL BUILD-OUT ON VACANT LAND

Population projection data provided by the Connecticut State Data Center, as explained in the Demographics Memorandum, projects that Waterbury’s population will grow by 6 percent between 2010 and 2025, a gain of 6,783 new residents. Based on an average household size of 2.54 from the 2010 Census, the City will need 2,670 new dwelling units to support projected population growth up to 2025.

Potential new dwelling units on vacant land were categorized as either **infill** or **subdivision** depending on their location and character. Infill lots are located in existing neighborhoods and are already subdivided. It was assumed that each infill lot could support one residential building and would not be subdivided further. On the other hand, subdivision lots are large tracts of land that can support many residential lots. According to the City’s subdivision regulations, land can be subdivided into a minimum of three lots. Because subdivisions require land dedicated to right of way and infrastructure, a 20 percent efficiency factor was subtracted from the total net developable land area.

It should be noted that two commercial zones, the General Commercial (CG) and Commercial Office (CO) districts permit residential dwellings and were also included in the analysis. It was assumed that 25 percent of developable land in these zones was used for residential purposes. The remainder was used for commercial purposes and was examined in the non-residential build-out section. The residential development potential of the Central Business District and brownfields are examined separately, later in this chapter.

Vacant residential land can support 9,395 new dwelling units based on existing zoning regulations. A vast majority of development potential is found on large tracts of undeveloped land, accounting for **7,489 potential subdivision dwelling units**. A majority of subdivision dwelling units are located in single-family zones. Most of the remaining subdivision dwelling units are multi-family units in the RM zone.

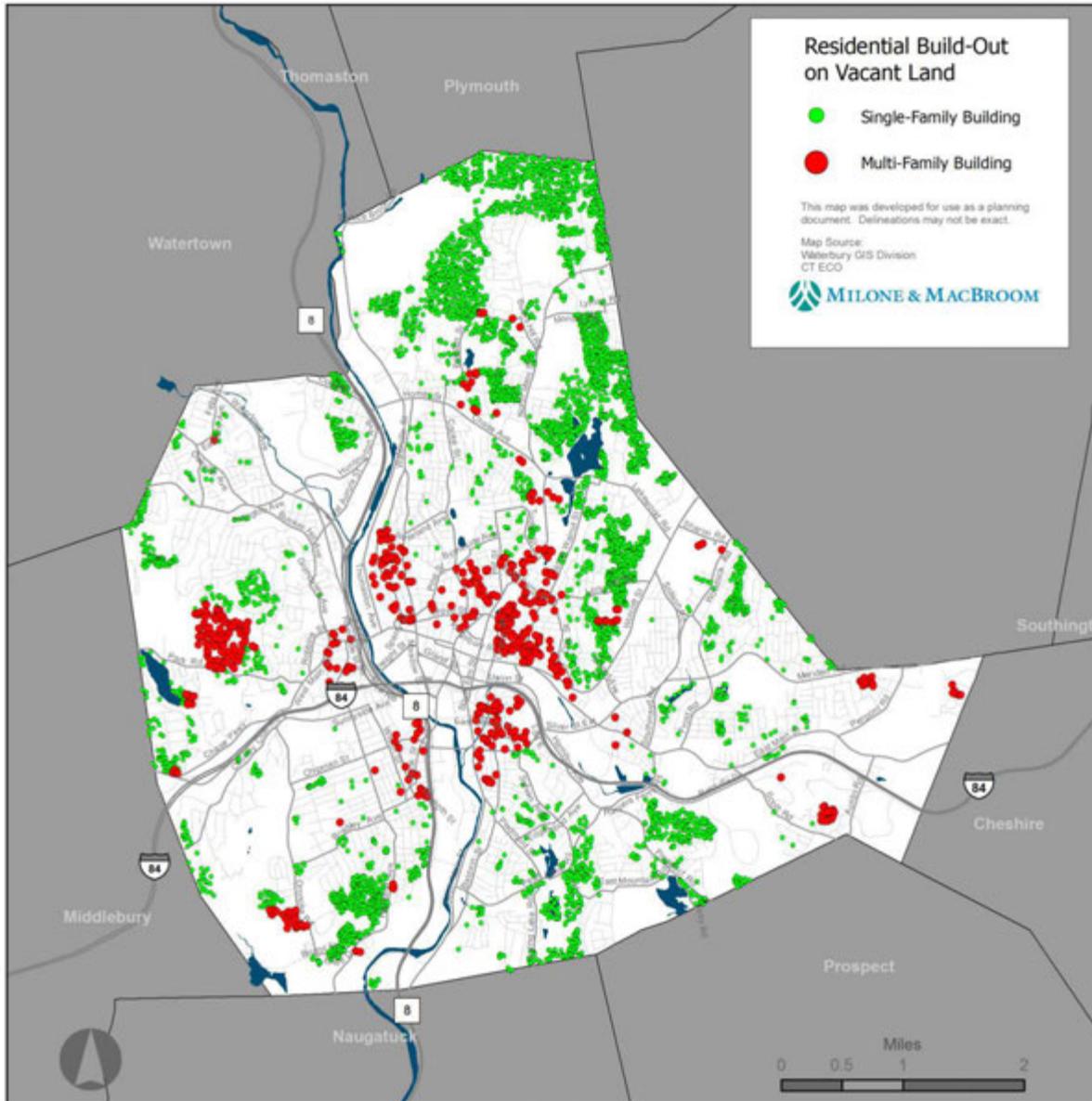
The City has the potential for **1,906 potential infill dwelling units** on vacant residential land. About 58 percent of infill dwelling units are located in multi-family residential zones.

Development Potential of Vacant Residential Land

Zone	Gross Vacant Land (Acres)	Constrained Land (Acres)	Total Net Buildable Area (Acres)	Dwelling Units from Infill Lots ¹	Dwelling Units from Subdivision Lots ²	Total Potential Dwelling Units
RS-12	950.7	337.1	613.5	101	1,751	1,852
RS	289.1	102.9	186.2	97	669	766
RL	891.1	320.6	570.5	478	2,504	2,982
Single-Family Zones (RS-12, RS, RL)			1,370.2	676	4,924	5,600
RM	288.0	97.7	190.3	999	2,384	3,383
RH	8.8	1.3	7.5	174	81	255
RO	4.6	1.4	3.3	12	2	14
Multi-Family Zones (RM, RH, RO)			201.0	1,185	2,467	3,652
All Residential Zones	2,432.3	861.0	1,571.2	1,861	7,391	9,252
CO ³	22.9	10.9	3.0	15	30	45
CG ³	44.1	13.5	7.6	30	68	98
All Commercial Zones	67.0	24.5	10.6	45	98	143
Total All Zones	2,499.3	885.5	1,581.9	1,906	7,489	9,395

1. Parcels that were categorized as infill and those that have already been subdivided, were assumed to support only 1 residential building. No efficiency factor was applied.
 2. Parcels that were greater than 3 times the minimum lot area can be subdivided as per the City of Waterbury Zoning Code. A 20% efficiency factor was subtracted from subdividable parcels to account for public ROW and utilities
 3. The CO and CG Zones permit both residential and commercial development. The residential build-out analysis assumed that 25% of Unconstrained Land Area would be dedicated to residential development.





At full build-out Waterbury could support **3,795 new multi-family dwelling units** on vacant land (shown in red on the map above). The Moderate Density Residential (RM) zone has the greatest maximum development potential of any zone with 3,383 new dwelling units. Urban core neighborhoods such as W.O.W., Willow-Plaza, Brooklyn, and South End have significant multi-family development potential on infill lots. There are also large tracts of undeveloped multi-family zoned parcels in Bunker Hill, Town Plot, and Scott Road that could yield many new dwelling units.

At full build-out Waterbury could support **5,600 new single-family dwelling units** on vacant land (shown in green on the map above). Most of the single-family development potential is found in the RS-12 and RL zones, which can support a combined 4,834 new dwelling units. Most new single-family development occurs on large subdivided parcels in Bucks Hill, Lakewood, Bunker Hill, North End, and Town Plot.

NON-RESIDENTIAL BUILD-OUT

Vacant commercial and industrially zoned properties were analyzed to yield a potential for future development. Land classified as surface parking was not included in the analysis. Brownfields and Central Business District redevelopment were analyzed separately later in this chapter.

The development potential of non-residential land was calculated using floor-area-ratios (FAR). **FAR is the total floor area of a building divided by the area of the parcel on which it sits.** FAR can be expressed as *FAR by Right* or *Effective FAR*. FAR by Right is calculated based on the maximum allowable densities as specified in the City’s zoning code using the following formula:

$$\frac{(\text{Min Lot Size} \times \text{Max Building Coverage}) \times \text{Number of Stories}}{\text{Min Lot Size}}$$

Effective FAR is a more conservative approach because it assumes that existing development patterns in each zone will indicate future development potential. It is calculated by dividing the building area by total parcel area (in square feet). This is done for all parcels in each non-residential district. The effective FAR is significantly lower than the FAR by right due to market forces and natural constraints. Parcels that are vacant were excluded from the effective FAR

calculations. As seen in the table titled Development Capacity for Vacant Non-Residential Land, the effective FAR varies from a high of 0.36 in the General Commercial (CG) zone to a low of 0.15 in the Industrial Park (IP) zone. A lower effective FAR indicates a less intense use of land, and as a result, a lower tax yield per acre than higher FAR zones.

Waterbury contains 385 acres of vacant commercially-zoned land and 501 acres of vacant industrially-zoned land. Like the residential build-out analysis, land with natural constraints was deducted from the gross raw vacant land area of each parcel to yield a net-buildable area. 527 acres (38 percent) of vacant non-residential land had natural constraints and was deducted from the analysis. The net buildable area was then multiplied by the FAR by right and effective FAR to yield the development capacity of each parcel.

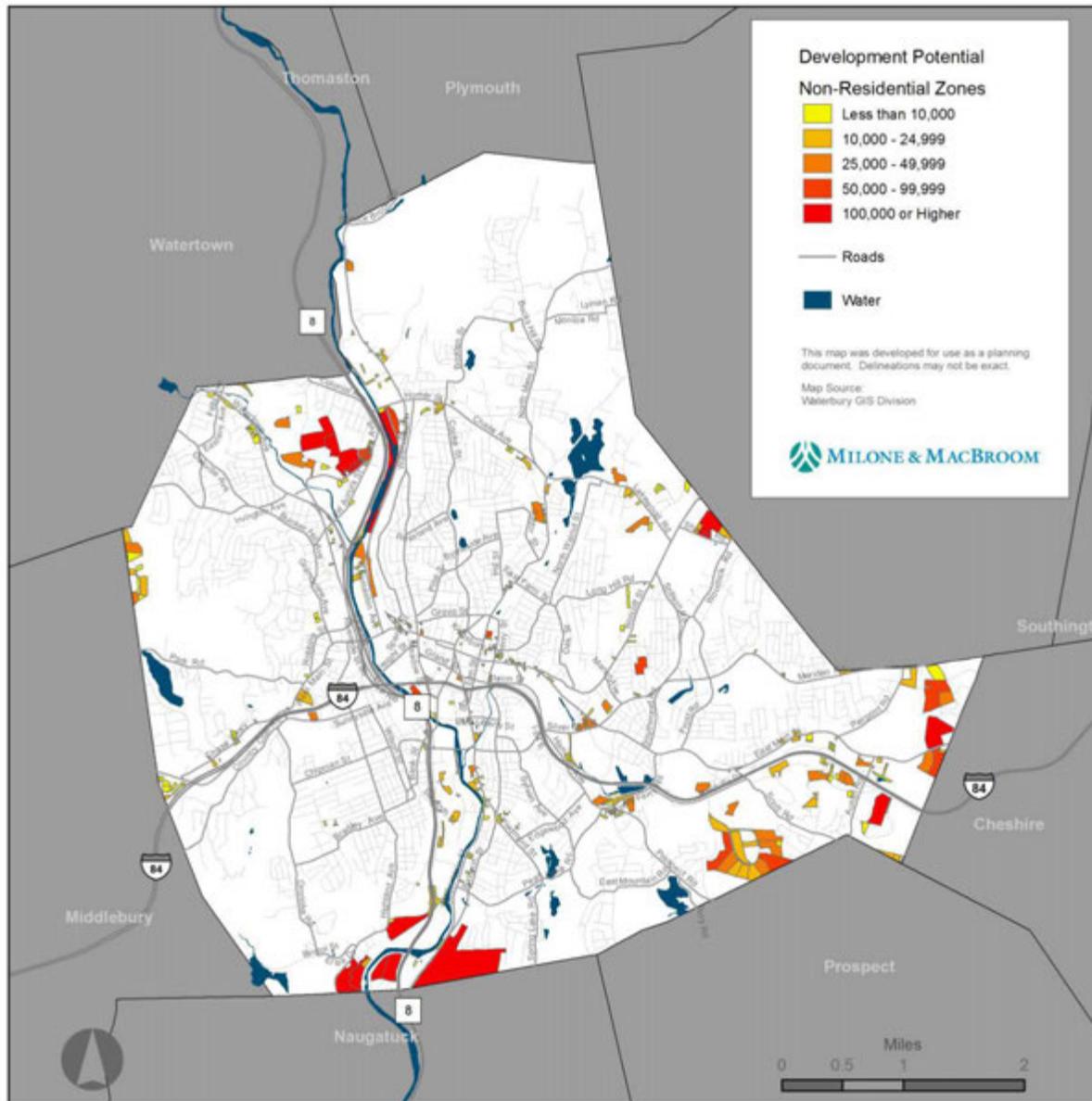
Based on effective FAR, **vacant commercially zoned land can support 2.4 million square feet of new development.** The Arterial Commercial (CA) zone has the greatest development potential, with 1.9 million square feet of potential new development. The two largest concentrations of developable commercial land are in Hopeville (713,000 square feet) and Pierpont Road (2,000 square feet). The General Commercial (CG) has the second highest commercial yield at 273,000 square feet.

Development Capacity for Vacant Non-Residential Land

Zone ¹	FAR by Right	Effective FAR ²	Gross Raw Vacant Land (Acres)	Constrained Land Area (Acres)	Net Buildable Area (Acres) ³	Potential Building Sq. Ft.	
						By Right	Effective FAR
CA	1.60	0.23	306.1	108.0	198.0	13,802,182	1,965,651
CG ³	2.50	0.36	44.1	13.5	17.2	1,872,627	272,870
CN	0.90	0.30	3.4	0.1	3.2	126,863	42,396
CO ³	2.00	0.27	22.9	10.9	9.0	783,354	104,561
All Commercial Zones			376.5	132.7	227.5	16,585,026	2,385,477
IG	2.00	0.21	29.6	9.9	19.7	1,714,889	180,157
IL	1.50	0.31	186.1	82.4	103.7	6,775,326	1,409,642
IP	1.20	0.15	284.9	104.6	180.3	9,423,706	1,190,357
All Industrial Zones			500.6	196.9	303.7	17,913,921	2,780,156
Total All Zones			1377.6	526.4	834.8	34,498,947	5,165,634

1. The Central Business District (CBD) is examined separately at the end of the chapter.
 2. Effective FAR only uses developed parcels. Vacant land was not used in the calculation.
 3. The CG and CO zones permit residential development. It was assumed that 75 percent of unconstrained land area was used for commercial development





Vacant industrially-zoned land can support 2.8 million square feet of new development based on effective FAR. Most vacant industrial land is in the Industrial Park (IP zone). There are three major concentrations of industrial development. The largest concentration is in Reidville Industrial Park, where fourteen vacant parcels can support an additional 433,000 square feet.

A second concentration is in the Brookside Industrial Park, which can yield additional 428,000 square feet of industrial space. The third concentration is in Platts Mill, which can support 456,000 square feet of Limited Industrial (IL) development.

BROWNFIELD REDEVELOPMENT

In the nineteenth and early twentieth centuries, Waterbury was a world leader in fabricated metal manufacturing, particularly of brass products such as buttons, machine parts, munitions, wire, clocks, and watches. By the mid twentieth century, many manufacturers shut down their Waterbury operations and moved to cheaper locations in the southern and western United States, and abroad. The local brass industry was further weakened by the rise of plastics, which replaced brass in many products. Faced with growing competition, most of the remaining manufacturers moved to modern production facilities in industrial parks near Interstate 84 and Route 8. As a result, many old factories remain vacant and require costly environmental remediation.

The City is home to several completed brownfield redevelopment projects. In the mid-1990s, the Scovill Brass Works was redeveloped into the Brass Mill Center Mall and Brass Mill Commons. Recent projects include the construction of a new Police Activity League recreation complex on Division Street, construction of a new Senior Center on Southmayd Road, and the renovation of Waterbury Industrial Commons. However many other brownfields await remediation and redevelopment. While the remaining brownfield sites have significant environmental challenges, most are in locations with good access to the transportation network, connections to public infrastructure, and are in close proximity to dense residential and commercial areas.

Brownfield sites should also be considered candidates for future residential, commercial, and industrial development. Therefore it is important to assess the *redevelopment* potential of these properties. A list of 23 brownfield sites was provided by the Waterbury Development Corporation. Eight out of the 23 sites have already been redeveloped, renovated, or reused. Two additional brownfields were located in the Central Business District and were analyzed separately later in this chapter. These sites were not included in the build-out analysis. The development potential of the remaining 13 sites was calculated separately for residential and non-residential properties as summarized in Table 4 and Table 5.

Many brownfields in Waterbury have been redeveloped, renovated or reused. However, many other sites await remediation and redevelopment.



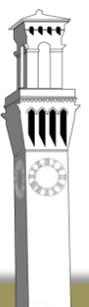
The Scovill Brass Works sat vacant for nearly two decades before it was redeveloped. The above photo was taken in 1990, a few years before it was demolished.

© UConn Map and Geographic Information Center



In the mid-1990s, the Scovill Brass Works site was demolished, remediated, and redeveloped into the Brass Mill Commons and Brass Mill Center Mall.

© Bing Maps



Ten brownfield sites covering over 40 acres are zoned for commercial or industrial uses. Based on effective FAR, **these sites could support an additional 70,000 square feet of commercial development and 452,000 square feet of industrial redevelopment.** The Anamet site at 698 South Main Street has the highest yield of any brownfield site at over 224,003 square feet of potential new development. The City has received \$3 million towards the demolition and remediation of the property. The future Naugatuck River Greenway will also pass through the site.

The remaining three brownfield sites cover 8 acres and are zoned for residential uses. Two parcels are in the High Density Residential (RH) zone, and the third is in the Moderate Density Residential (RM) zone. Because of the high permitted residential densities, redevelopment of these properties could support an additional 112 dwelling units, or 284 residents.

Development Capacity for Non-Residential Brownfield Sites in Waterbury

Brownfield Location	Zone	FAR		Gross Raw Vacant Land (Acres)	Constrained Land Area (Acres)	Net Buildable Area (Acres)	Potential Building Sq. Ft.	
		By Right	Effective				By Right	Effective
777 South Main St	CG	2.50	0.36	1.2	0.4	0.8	90,607	13,203
835 South Main St	CG	2.50	0.36	3.6	1.3	2.3	246,522	35,922
1875 Thomaston Ave	CG	2.50	0.36	0.4	0.0	0.4	41,606	6,063
1144 South Main St	CG	2.50	0.36	1.0	0.0	1.0	104,997	15,300
All Commercial Brownfield Sites				6.2	1.7	4.4	483,732	70,487
526 Huntingdon Ave	IG	2.00	0.21	7.6	0.0	7.6	657,962	69,122
698 South Main St	IL	1.50	0.31	22.2	5.7	16.5	1,076,797	224,033
1056 South Main St	IL	1.50	0.31	1.9	0.0	1.9	121,147	25,205
44 Chapel St	IL	1.50	0.31	1.7	0.0	1.7	113,215	23,555
2100 South Main St	IL	1.50	0.31	6.5	4.0	2.5	163,997	34,120
Bristol St	IL	1.50	0.31	6.4	0.8	5.6	363,067	75,538
All Industrial Brownfield Sites				46.2	10.5	35.7	2,496,186	451,574
Total All Brownfields				52.3	12.2	40.1	2,979,918	522,061

Brownfield locations provided by the Waterbury Development Corporation
For Planning Purposes Only

Development Capacity for Residential Brownfield Sites in Waterbury

Brownfield Location	Zone	Gross Raw Vacant Land (Acres)	Constrained Land Area (Acres)	Net Buildable Area (Acres)	Net Buildable Area Less 20% (Acres)	Potential New Dwelling Units
313 Mill St	RM	4.0	2.3	1.6	1.3	31
272 River St	RH	2.9	1.9	1.0	0.8	35
39 Cherry Ave, 177 & 215 Cherry St	RH	1.4	0.0	1.4	1.1	46
All Residential Brownfield Sites		8.3	4.2	4.1	3.2	112

Brownfield locations provided by the Waterbury Development Corporation
For Planning Purposes Only

CENTRAL BUSINESS DISTRICT

In recent years, the City has put a renewed emphasis on the redevelopment of the Central Business District (CBD). The CBD zone has the least restrictive regulations of any zoning district. There are no minimum parking requirements, no setbacks, and no limits on building coverage and height. Residential, commercial, and mixed-uses are all permitted.

The CBD is split between two neighborhoods: Downtown Waterbury, and the Freight Street District. Downtown Waterbury, which makes up 70 percent of the CBD, is the City’s historic urban core and is characterized by dense and diverse land uses. The Freight Street District is made up of low-intensity industrial uses and makes up the remaining 30 percent of the CBD. However, given its proximity to downtown and transportation infrastructure, and planned improvements as part of the *W.A.T.E.R.* project, Freight Street, is a prime candidate for redevelopment.

As of 2010, the CBD contains 1,885 residential dwelling units which are home to 2,732 residents. There are currently no housing units or residents in the Freight Street District. The average household size in the CBD is much smaller (1.45) than the City average of 2.54. Not including Freight Street, the effective residential density of Downtown Waterbury is 8.4 dwelling units per acre. Several blocks to the north and east of The Green have effective densities in excess of 20 dwelling units per acre. The CBD has an effective floor-area ratio (FAR) of 1.13, which is much higher than any other zone. The Freight Street District has a much lower FAR (0.33) compared to Downtown portion of the CBD (1.41).

A market analysis conducted in 2014 estimated that the CBD could capture between 1,205 and 4,818 new multi-family residential dwelling units by 2028. In order to capture these units, the City will need to use a mix of three redevelopment strategies:

- 1.) Develop all vacant land and surface parking
- 2.) Redevelop the Freight Street District
- 3.) Retrofit single-use buildings into mixed-use buildings.

Effective FAR and Residential Density in the Central Business District (CBD)

Zone	Effective FAR	Residential Density (DU/Acre)
Downtown Waterbury	1.41	8.39
Freight Street District	0.33	0.00
CBD Total	1.13	6.24

Only developed parcels were included in the Total Land Area and Effective FAR calculations
 Source: City of Waterbury Assessors Database, 2015

In order to evaluate the redevelopment potential of the CBD, the following assumptions were made:

- The Gross Land Area was multiplied by the current Floor Area Ratio (FAR), of the Downtown portion of the CBD, resulting in the Gross Building Area.
- A 20 percent efficiency factor was subtracted from the Gross Building Area to account for hallways, utilities, and common areas.
- 40 percent of the Gross Leasable Area was converted into residential uses.
- Each dwelling unit was assumed to be 934 square feet, which is the average apartment size for the Waterbury – Naugatuck submarket area.
- The remaining 60 percent of Gross Leasable Area was used for commercial or office space.

Using these assumptions, the Central Business District has significant untapped redevelopment potential. The table titled Redevelopment Capacity of Downtown Waterbury on following page shows the residential and commercial build-out potential of all three redevelopment strategies. **If all three redevelopment strategies were implemented to full build-out, the CBD could support an additional 2,036 dwelling units and nearly 3 million square feet of commercial and office space.** It should be noted that the downtown redevelopment scenarios presented in this chapter do not take into consideration market forces and are intended for general planning purposes only.



Redevelopment Capacity of Downtown Waterbury

Development Strategy	FAR	Land Area (Sq. Ft.)	Building Area (Sq. Ft.)	Building Area Less 20%	Potential Residential Building Area (Sq. Ft.) ⁴	Potential Residential Dwelling Units ³	Potential Commercial Building Area (Sq. Ft.) ⁴
Vacant Land Build-Out	1.41	808,282	1,139,677	911,742	364,697	390	547,045
<i>Vacant Land</i>	1.41	374,444	527,966	422,373	168,949	181	253,424
<i>Surface Parking</i> ¹	1.41	433,838	611,711	489,369	195,748	210	293,621
Freight Street Redevelopment	1.41	2,789,489	3,933,179	3,146,543	1,258,617	1,348	1,887,926
Mixed-Use Retrofits ²	-	-	-	872,435	348,974	298	523,461
Total All Strategies	-	-	5,072,856	4,930,720	1,972,288	2,036	2,958,432

1. *Surface Parking* only includes lots that are solely dedicated to surface parking. Lots that are a mix of surface parking and other uses were not included
2. *Mixed-Use Retrofits* are based on buildings in the CBD that are for sale or for lease as of April 2015.
Data obtained from the City of Waterbury, Main Street Waterbury, Drubner Real Estate, and Giglio Real Estate
3. Assumes an average apartment size of 934 square feet based on the average of the Waterbury-Naugatuck submarket area
4. Assumes Building Area Less 20% is split between residential (40%) and Commercial (60%) uses.

VACANT LAND BUILD-OUT

Since most land in the Central Business District has already been built out, there is limited potential for new “greenfield” development. The CBD contains just 8.6 acres of vacant land that can be developed, by far the smallest area of any zone. Most vacant land is located on the fringes of Downtown, **including a large concentration between West Main Street and West Grove Street. The CBD contains an additional 10 acres of land that is devoted to surface parking. While surface parking lots serve an important function for downtown, they do not constitute the highest and best use of land.** Surface parking spaces lost to infill development will need to be replaced with street parking or structured parking garages.

If vacant land and surface parking lots are developed at a similar FAR to the rest of Downtown, **the CBD could yield an additional 390 residential dwelling units and 547,000 square feet of new commercial or office space on vacant land.**



298 West Main Street is one of the few large vacant parcels in Downtown Waterbury © Google Maps



Surface parking lots, like this one on Kendrick Street, are also candidates for infill development © Google Maps

FREIGHT STREET DISTRICT

The Freight Street District is comprised of 16 parcels totaling 64 acres. Existing land use is currently a mix of light industrial, distribution, and commercial office space. In September 2014, Waterbury received a \$14.4 million TIGER grant for the *Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.)* project. The W.A.T.E.R. project will fund several improvements in the Freight Street District, including the construction of Jackson Street, complete streets retrofits on Freight Street and Meadow Street, and a new pedestrian and bicycle connection to Downtown and the Waterbury Train Station. Future improvements in the Freight Street District include the Naugatuck River Greenway, a new Jackson Street Park, and service improvements on the Waterbury Branch rail line.

If the Freight Street District is redeveloped at the same effective density as the rest of Downtown Waterbury (FAR of 1.41) it would yield 1,348 residential dwelling units and 1.9 million square feet of new commercial or office space.

MIXED-USE RETROFITS

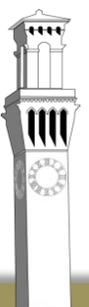
Due to the limited availability of vacant land, efforts to increase residential and commercial densities downtown will need to include the repurposing of existing buildings and infra-structure. The CBD has a large inventory of underutilized commercial buildings that are candidates for conversion into mixed-use buildings with residential uses on the upper floors. Fifty-seven CBD buildings with a combined Gross Leasable Area of 872,435 square feet were listed as for sale or for lease as of 2015.

Using the redevelopment assumptions described earlier, **the Central Business District could support an additional 298 residential dwelling units and 523,000 square feet of commercial and office space in retrofitted mixed-use buildings.**



A rendering of the Freight Street District at full build-out.

Photo courtesy of RBA Group



DOWNTOWN PLANS AND PROJECTS

Apothecary Hall – In 2012, old office space in the historic Apothecary Hall building was converted into **12 luxury apartments**. The ground floor is used for retail.

68-70 Bank Street – In 2009, the vacant upper three floors were converted into **18 market-rate apartments**.

The Rectory Building – The Rectory Building is located next to the Palace Theater and across from the UConn Waterbury campus on East Main Street. The building is undergoing an \$8.1 million renovation that will include new ground floor retail tenants and meeting and classroom space for UConn on the upper floors.

Waterbury Next – An ongoing \$12.2 million initiative which will redevelop the Howland Hughes Building, demolish an abandoned parking garage on Prospect Street, implement infrastructure and streetscape improvement, and fund two property acquisitions.

The State of Connecticut recently announced that it will provide up to \$5 million for the restoration of the Brown Building. The second and third floors of the building will be converted into **38 units** of mixed-income one and two bedroom apartments. The first floor will continue to be used as retail space.

Gaffney Place – Waterbury Community Investment Program and Webster Bank cooperated on this complete street revitalization of **10 owner-occupied housing units** in 5 homes in the historic Hillside Neighborhood. Phase II of the project will work in neighboring areas to target units for homeownership and investment.



The State of Connecticut recently pledged \$5 million to convert the top two floors of the Brown Building into 38 apartments.
© Google Maps



The recently completed Gaffney Place project added 10 new owner-occupied units to Downtown. © Trulia.com

CONCLUSION AND SUMMARY

Waterbury has significant residential development and redevelopment potential. Most of the City's residential development potential is on vacant land. Based on existing zoning regulations, vacant land could accommodate 9,395 new residential dwelling units. The redevelopment of underutilized downtown buildings and brownfields could also yield significant number new residential dwelling units. Residentially-zoned brownfield sites could yield an additional 112 dwelling units, while downtown could accommodate 2,036 dwelling units, most of which are in the Freight Street District. Waterbury's total residential build-out is summarized in the table below titled Total Residential Build-Out.

Total Residential Build-Out

Residential Build-Out Type	Potential Dwelling Units
Residential Build-Out on Vacant Land	9,395
<i>Infill Development</i>	1,906
<i>Subdivision Development</i>	7,489
Brownfield Redevelopment	112
Central Business District	2,036
<i>Vacant Land Built-Out</i>	390
<i>Freight Street Redevelopment</i>	1,348
<i>Mixed-Use Retrofits</i>	298
Total Residential Build-Out	11,431

Assuming that vacant land and redeveloped land were built-out to their maximum potential, **Waterbury could accommodate an additional 11,431 new residential dwelling units.** Assuming that average household size remains at 2.54, **Waterbury could house an additional 29,035 residents,** resulting in a population of approximately 140,000 at full build-out.

Waterbury also has considerable commercial and industrial build-out potential. Based on effective floor-area-ratios (FAR), **Waterbury could yield an additional 5.4 million square feet of new commercial building space.** More than half of City's commercial development potential is in the Central Business District. The Freight Street District alone contains 1.9 million square feet of commercial development potential. A majority of

the remaining commercial development potential is in the Arterial Commercial zone in the City's outer neighborhoods. Waterbury's total commercial build-out potential can be seen in in the table below titled Total Commercial Build-Out.

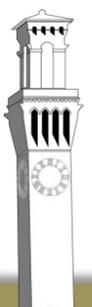
Total Commercial Build-Out

Commercial Build-Out Type	Potential Building Area	
	By Right	Effective FAR
Commercial Build-Out on Vacant Land	16,585,026	2,385,477
Brownfield Redevelopment	483,732	70,487
Central Business District	-	2,958,432
<i>Vacant Land Built-Out</i>	-	547,045
<i>Freight Street Redevelopment</i>	-	1,887,926
<i>Mixed-Use Retrofits</i>	-	523,461
Total Commercial Build-Out	17,068,758	5,414,396

Waterbury can yield over 3 million square feet of new industrial development based on effective FAR, most of which is on vacant industrially-zoned land. Most vacant industrial land is located in modern industrial parks in the City's outer neighborhoods. Brownfields constitute an additional 450,000 square feet of industrial development potential. Due to their locations in close proximity to residential and commercial areas, many these sites should also be reused for non-industrial purposes. The table below titled Total Industrial Build-Out summarizes Waterbury's total industrial build-out potential.

Total Industrial Build-Out

Industrial Build-Out Type	Potential Building Area	
	By Right	Effective FAR
Industrial Build-Out on Vacant Land	17,913,921	2,780,156
Brownfield Redevelopment	2,496,186	451,574
Total Residential Build-Out	20,410,107	3,231,730





I-84 near the Route 8 Interchange from Highland Avenue

10. TRANSPORTATION

A safe, efficient, flexible, and economically viable transportation system is crucial to the economic well-being and future growth of Waterbury. The current system is comprised of the surface transportation network, which includes highways, streets, mass transit, walkways, bikeways, and greenways. The system is intricately connected with land use, and dramatically influences the type and density of development that can occur. Tying development and conservation to the transportation network is a crucial component of the City's future land use plan.



TRAVEL PATTERNS

Waterbury’s transportation system is used by its residents, workers and visitors every single day of the year. Travel patterns vary according to the type of trip being taken, the time of day, the time of year (seasonal variations), the mode being used, and individual preferences. Travel patterns are also influenced by the availability of different transportation choices. For example, a person may live within walking distance to a store, but is forced to drive there due to the lack of sidewalks. Understanding the public’s purposes and preferences for travel helps to envision Waterbury’s future transportation system and its connections to the future land use plan.

JOURNEY TO WORK

According to the latest five-year estimates from the American Community Survey, **the average commute time for Waterbury residents is 23.5 minutes.** This is an increase of 1.6 minutes since 2000, when the average travel time was 21.9 minutes. One of the drivers of longer commutes is an increase in Waterbury residents working outside of the City. In 2000, 41 percent of residents worked in Waterbury. By 2010, this declined to just 31 percent. At the same time, there has been an increase in commuting to New York City, Hartford, Bridgeport, Danbury, and suburban job centers.

Over 90 percent of Waterbury residents commute to work in a car, the highest rate of any major city in Connecticut. A vast majority of residents who commute in cars drive alone to work. As jobs decentralize into surrounding towns, carpooling and transit become less practical commuting options for many workers.

While most residents drove alone, there was a large number of residents who car or van-pooled (11.7%). Waterbury contains four state-designated commuter parking lots. They are located on Hamilton Avenue (Route 69), Chase Parkway, South Main Street, and East Main Street. According to commuter parking counts conducted by the Naugatuck Valley Council of Governments in 2014, these four lots have a combined capacity of 353

parking spaces. On average, 45 percent of parking spaces were occupied.

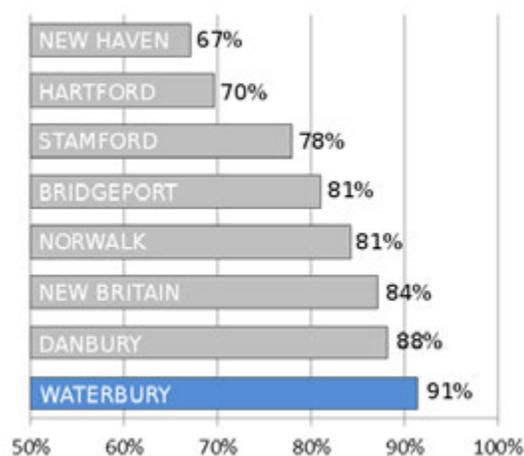
Waterbury has a much lower share of residents commuting by transit than other large cities in Connecticut. Bus is by far the most popular transit mode for commuters. Over 1,500 residents (3.4%) travel by bus to work compared to just 98 (0.2%) by rail. The lack of direct transit connections to nearby job centers such as Danbury, Torrington, and Meriden as well as surrounding suburban towns forces commuters to drive, and limits job opportunities for transit-dependent residents.

Travel Mode to Work for Waterbury Residents

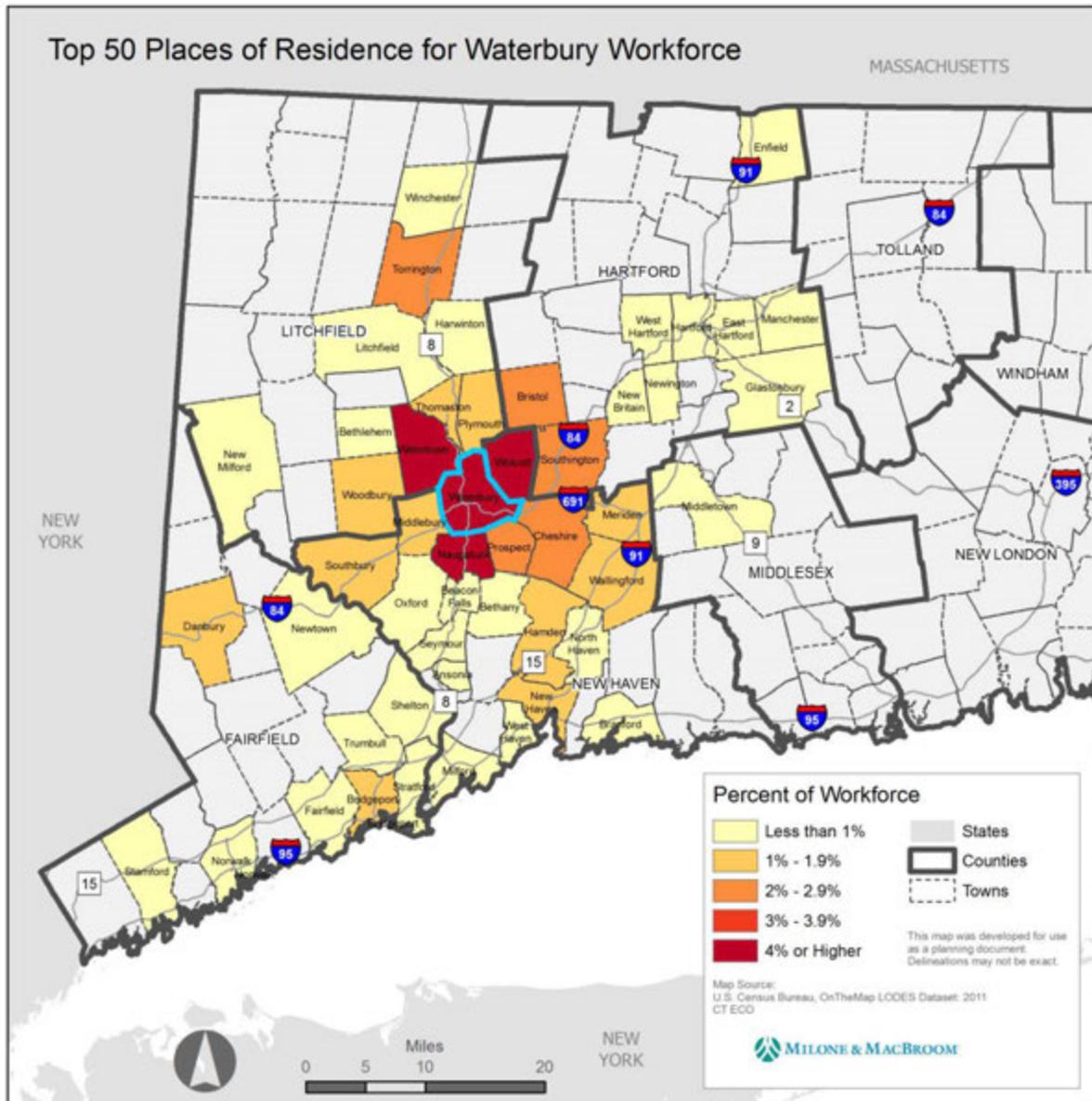
Travel Mode	Number	Percent
Drove Alone	35,434	79.6%
Car or Van Pool	5,216	11.7%
Bus	1,513	3.4%
Rail	98	0.2%
Walk or Bike	1,135	2.5%
Other	527	1.2%
Work from Home	589	1.3%
Total	44,512	100.0%

Source: U.S. Census Bureau, American Community Survey 2009-2013 5 Year Estimates, Table B08006

Percent of Residents Commuting by Car



Source: U.S. Census Bureau, American Community Survey 2009-2013 5 Year Estimates, Table B08006



Similarly, much of Waterbury’s workforce lives outside of the City. Waterbury residents make up 32 percent of the City’s workforce. The remaining 68 percent commute to Waterbury from surrounding cities and towns. Most workers commute from nearby towns such Watertown, Naugatuck, Wolcott, Bristol, and Southington. Due to the mismatch between jobs and the labor force, Waterbury is a net exporter of about 2,000 commuters each day (more residents commute out than commute in from other towns).

Top Places of Residence for Waterbury Workers

Rank	Town	Workers	% of Total
1	Waterbury	13,462	32.4%
2	Watertown	2,473	6.0%
3	Naugatuck	1,817	4.4%
4	Wolcott	1,789	4.3%
5	Bristol	953	2.3%
6	Southington	903	2.2%
7	Prospect	877	2.1%
8	Torrington	792	1.9%
9	Cheshire	791	1.9%
10	Meriden	788	1.9%
Total All Workers		41,510	100.0%

Source: U.S. Census Bureau, LODES Dataset 2011, OnTheMap

ROADWAYS

Cars remain the predominant form of travel in the City. Over 81 percent of households have access to at least one vehicle. Waterbury has a well-developed roadway network consisting of 387 centerline miles of road. A balanced roadway system provides ample opportunities for both accessibility and mobility.

Accessibility is the ability to interact with surrounding land uses and activities. A local road that has narrow lanes, slow traffic speeds, ample sidewalks, and good access to transit has good accessibility and facilitates interactions between transportation users and surrounding land use. Accessibility is especially important in Downtown and mixed-use neighborhoods.

On the contrary, **mobility is the ability for goods and people to move from one place to another quickly and easily.** Mobility is most commonly measured in terms of travel time. High speed arterial roadways have the highest levels of mobility due to their high speeds, but often lack connections to surrounding land uses due to their limited access and egress points. High-mobility roadways are necessary for long distance travel and commuting, but may be detrimental to a residential neighborhood.

TRAFFIC VOLUMES

Traffic volumes are influenced by many things including surrounding land uses, gasoline prices, roadway capacity, economic conditions, and personal preferences. Traffic volumes are measured in terms of Average Daily Traffic, or ADT. Roadways can handle a maximum of 2,000 vehicles per lane per hour at free-flow speed. Volumes above this threshold result in congestion.

Expressways have, by far, the highest ADT in Waterbury. I-84 has a maximum ADT of 131,500 vehicles per day (near Exit 21) while Route 8 has a maximum ADT of 79,400 vehicles per day (near Exit 35). The remaining arterial roadways have maximum ADTs under 30,000 vehicles per day as seen the table below. From 2007 to 2010, ADTs on arterial roads declined by 3 percent as a result of the Great Recession and high gasoline prices. As the economy improved from 2010 to 2013, volumes rebounded, nearly returning to their pre-recession levels. Traffic volume on I-84 have surpassed their pre-recession levels.

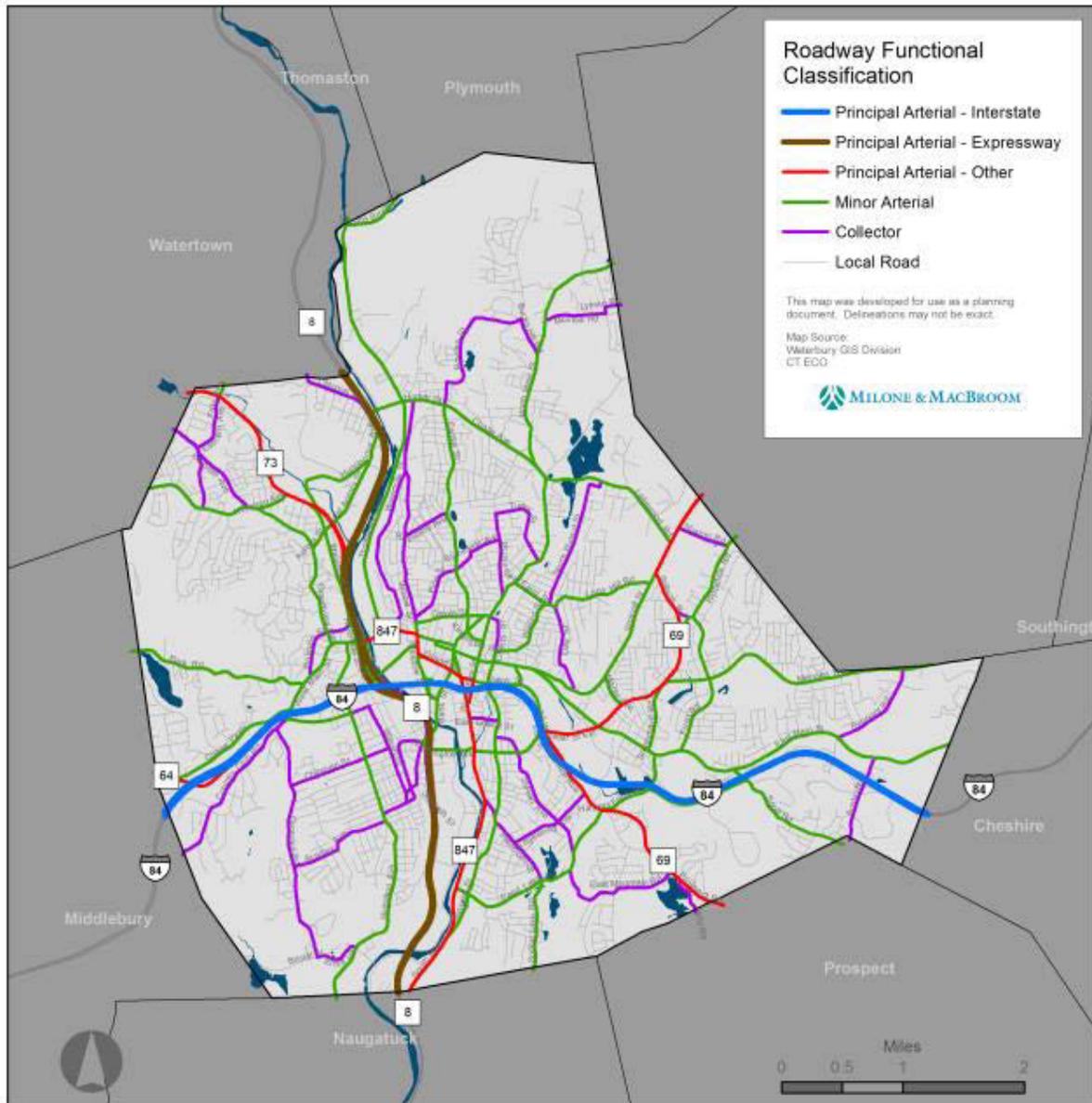
Several roadways in Downtown Waterbury in the vicinity of the Green are excessively wide relative to their traffic volumes, encouraging high vehicle speeds and deterring pedestrian movements. For example, West Main Street just to the west of the Green is seven lanes wide, despite having an ADT of just 16,200. **The City should examine whether excess road space can be converted into on-street parking, bicycle lanes, green space, or other public space.**

Maximum Average Daily Traffic on Arterial Roadways in Waterbury: 2004-2013

Roadway	Maximum Average Daily Traffic				Percent Change		
	2013	2010	2007	2004	2010-2013	2007-2010	2004-2007
Interstate 84	131,500	126,900	127,800	128,800	3.6%	-0.7%	-0.8%
Route 8	79,400	77,000	82,100	76,500	3.1%	-6.2%	7.3%
Route 64	20,000	21,000	21,300	22,500	-4.8%	-1.4%	-5.3%
Route 69	25,100	25,500	27,100	24,400	-1.6%	-5.9%	11.1%
Route 73	27,000	25,900	27,300	25,900	4.2%	-5.1%	5.4%
Route 847	24,000	23,000	22,800	24,400	4.3%	0.9%	-6.6%
Total All Arterial Roads	307,000	299,300	308,400	302,500	2.6%	-3.0%	2.0%

Source: Connecticut Department of Transportation, Traffic Log: 2004, 2007, 2010, 2013





FUNCTIONAL CLASSIFICATION

Functional classification is a system whereby roads are categorized based on traffic volumes, accessibility, and mobility. It also determines which roads are eligible for federal-aid funding programs, such as the Surface Transportation Program (STP). Only roadways classified as minor collectors or higher are eligible for STP funds. The Connecticut Department of Transportation uses a hierarchical system that categorizes roads into six categories:

Principal Arterial – Interstate is the highest functional roadway classification. Roads in this class have high mobility and low land access characteristics. They provide limited-access, multi-lane, high volume, high capacity facilities intended for high speed, long distance travel. Within Waterbury, Interstate 84 (I-84) is classified as a Principal Arterial – Interstate and connects the City with the Danbury area to the west, and Hartford area to the east. Traffic volumes on I-84 in Waterbury range from 63,300 vehicles per day at

the Middlebury town line to 131,500 vehicles per day near Exit 21.

Principal Arterial – Expressway is the second highest functional roadway classification. Roads in this class are very similar Interstate Arterials, but lack the federal Interstate designation. Route 8 is the only Principal Arterial – Expressway in Waterbury and connects to Torrington to the north and Bridgeport to the south. Traffic volumes on Route 8 in Waterbury range from 24,800 vehicles per day between the I-84 off and on ramps, to 79,400 vehicles per day at Route 73.

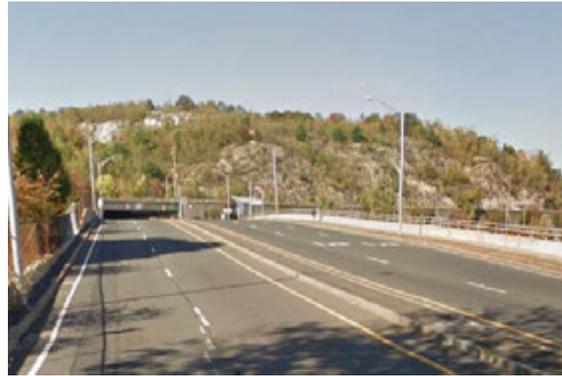
Principal Arterial – Other is the third highest functional roadway classification. Roads in this class connect interstates and expressways to activity and population centers. These roads are often multi-lane, medium speed, and contain traffic signals. Some roadways in this class such as Grand Street (SR 847) have good land access characteristics, while others such as Route 64 have poor connections to surrounding land uses. In Waterbury, the Principal Arterial – Other roadways are Route 64, Route 69, Route 73, and Route 847. Traffic volumes on these roads range from 10,000 to 25,000 vehicles per day.

Minor Arterial is the fourth highest functional roadway classification. Roads in this road are major thoroughfares that connect neighborhoods together. Minor arterials have lower mobility and higher land access than principal arterials. Examples of Minor Arterials in Waterbury include East Main Street, North Main Street, Wolcott Street, Baldwin Street, Bunker Hill Avenue, Chase Avenue, Meriden Road, Thomaston Avenue and Highland Avenue. Traffic volumes on these roads generally range from 10,000 to 25,000 vehicles per day.

Collectors are the second lowest functional roadway classification. Collectors have a higher degree of access to surrounding land uses and often contain on-street parking. Examples of Collectors in Waterbury include Willow Street, Bradley Avenue, Piedmont Street, Oronoke Road, Congress Ave, Boyden Street, Colonial Avenue, Pierpont Road, and Austin Road. Traffic volumes on these roads generally range from 2,500 to 10,000 vehicles per day.

Local Roads are the lowest functional roadway classification. Local roads have the highest degree

of access to surrounding land uses. Local roads are single lane and low speed, resulting in the lowest mobility. Local roads have the lowest traffic volumes, at less than 2,500 vehicles per day.



Route 69 near Brass Mill Center Mall has good mobility, but poor accessibility to surrounding land uses. © Google Maps



Local roads such as Columbia Boulevard have good connections to surrounding land uses, but poor mobility due to low speeds and narrow lane widths. © Google Maps

PARKING

Parking is an important element of the City's transportation system. Many residents, workers and visitors rely on parking when shopping, going to work, or running errands. When not enough parking is supplied, or parking is expensive, those traveling by car may find it too inconvenient to travel to Waterbury to do business, shop, or visit. However, when supply is too high or inexpensive, it leads to an overreliance on cars, discourages street life, and increases stormwater runoff.



Cities require balanced parking strategies that meet the needs of drivers while also taking into consideration other modes of transportation, environmental impacts, and the character of surrounding land uses.

Downtown

Downtown Waterbury contains nearly 4,000 public parking spaces which are a mix of on-street parking, surface lots, and parking garages. Most parking spaces are found in public garages, which are located on Field Street, Scovill Street, and South Main Street. There are 474 metered on-street parking spaces scattered throughout downtown as well as a handful of surface lots.

The CBD is exempt from all parking requirements on the condition that no existing on-site parking is removed.

Neighborhoods

Waterbury's zoning regulations currently require that all residentially zoned land contain 1.5 parking spaces per dwelling unit. However, urban core neighborhoods, which were built before the prevalence of cars, rely on a mix of off-street and on-street parking.

ROADWAY PLANS AND PROJECTS

Interstate 84 Widening in Eastern Waterbury

Beginning in March 2015, the Connecticut Department of Transportation began the widening of I-84 in the East End of Waterbury from two lanes to three lanes in each direction. The project area extends from Washington Avenue to Pierpont Road. Other planned improvements include realignment of a dangerous "S" curve, drainage improvements, and the replacement of eight bridges. The project is expected to be completed in 2019.

Jackson Street Connector Road

A new connector street is being built as part of the *Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.)* project. Jackson Street will extend from West Main Street near Thomaston Avenue to Bank Street. Improved street connectivity and enhanced bike and pedestrian amenities are part of the City's strategy for the redevelopment of the Freight Street District.

Chase Avenue Widening Project

Chase Avenue is a growing commercial corridor in the northern part of Waterbury. Currently one lane in each direction, the project will widen Chase Avenue to two lanes in each direction with additional turning lanes at key intersections. Other improvements include the completion of sidewalks, traffic signal upgrades, and drainage improvements.

Downtown Traffic Signal Replacement

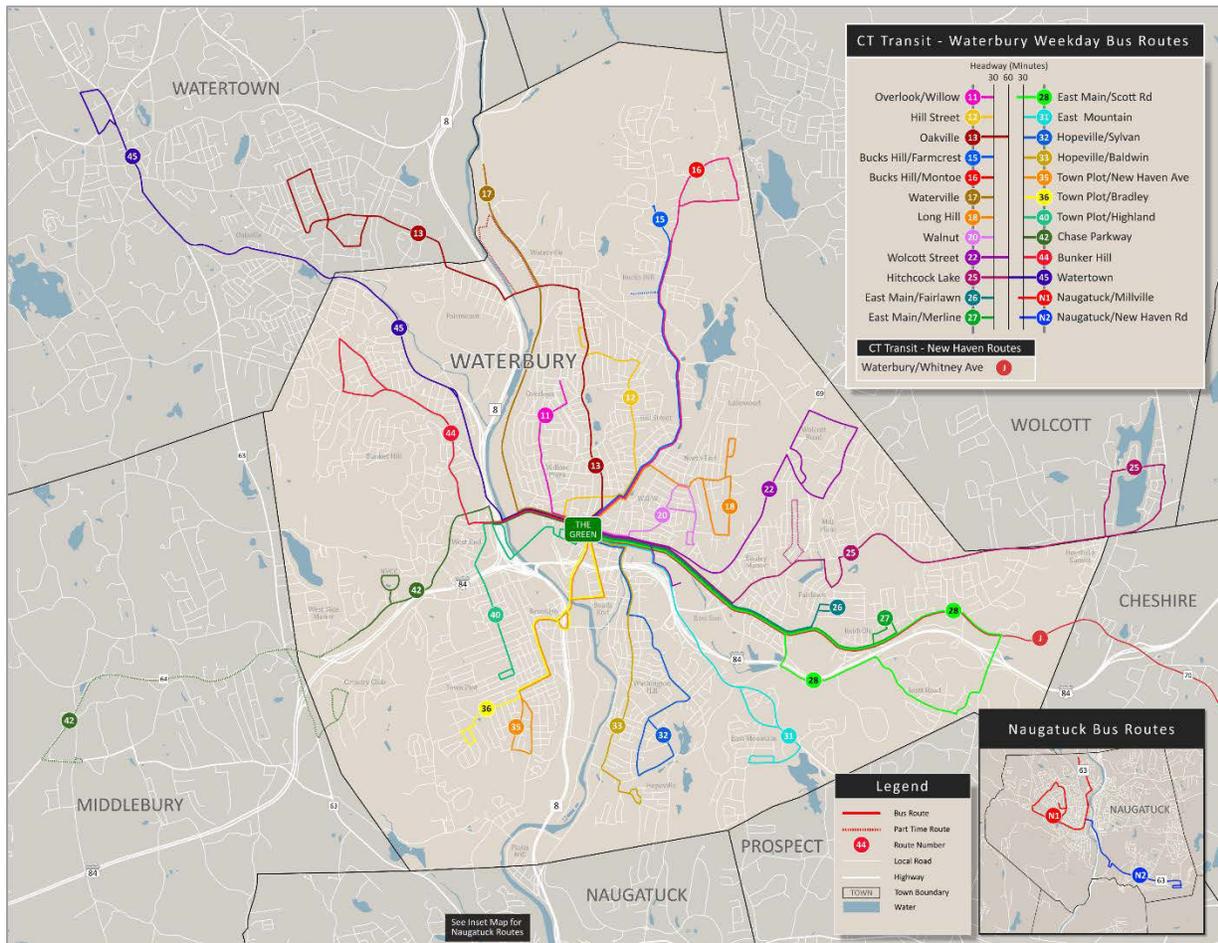
In 2012, the City of Waterbury received \$3 million in *Congestion Mitigation Air Quality* funds to upgrade traffic signals at 15 locations in Downtown Waterbury.

Mixmaster Interchange

The I-84 and Route 8 interchange, also known as the "Mixmaster" is nearing the end of its structural life. A Mixmaster needs and feasibility study was completed in 2010, which identified feasible alternatives for replacement and repair. Over the next five years, the State is planning to begin design work. Maintenance of the bridge deck and superstructure is ongoing.



The I-84 reconstruction and widening project will alleviate the chokepoints near Austin Road and Washington Avenue.



Source: Naugatuck Valley Council of Governments

BUS TRANSIT

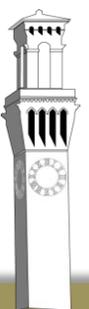
Bus transit offers the greatest coverage and most frequent service of any transit mode in Waterbury. Not surprisingly, it is also the most popular mode of transit. Local bus service operates primarily within the City limits with some service to surrounding towns. Express bus service operates limited-stop, long distance routes between Waterbury and other cities, including the newly established CTFastrak. Finally, paratransit bus service connects the City's elderly and disabled residents to jobs, services, and social activities.

FIXED-ROUTE BUS

Waterbury is served by the Waterbury division of Connecticut Transit (CTTransit), a state-owned bus

system operated by North East Transportation Company. The system consists of 24 fixed-routes and 6 tripper routes radiating from downtown Waterbury. One additional route (J), operated by CTTransit-New Haven, runs between Waterbury and New Haven. Overall, Waterbury has excellent fixed-route coverage, with most of the City within walking distance to a bus line. There are, however, a few major areas that lack transit service including Lakewood Road, Chase Avenue, and the northern part of Bucks Hill near Wilby High School.

From 2009 to 2013 weekday fixed-route ridership increased by 40 percent from 6,181 trips to 8,649 trips making it the fastest growing bus system in Connecticut during this time period. Ridership growth has been attributed to expanded service hours on evenings and Sundays, a





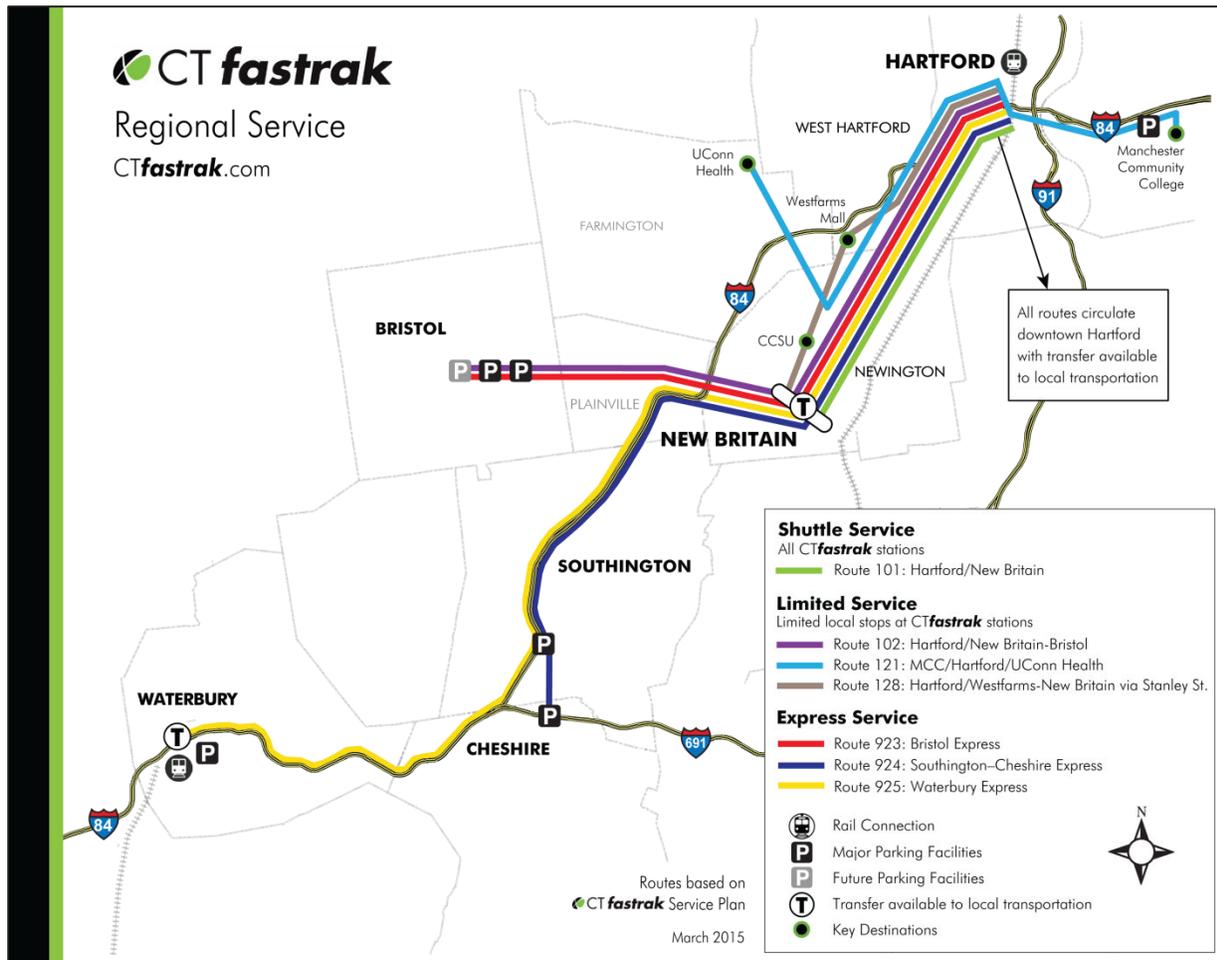
successful U-Pass partnership with Naugatuck Valley Community College, and the high cost of car ownership for many low-income residents. The busiest routes serve Wolcott Street and the Brass Mill Center Mall (Route 22), Baldwin Street (Route 33), and Fairmount (Route 16). The current fare is \$1.50 per trip.

Like many small-urban bus systems, CTTransit-Waterbury operates on a “pulse point” or timed transfer system. Buses converge in Downtown Waterbury every 30 or 60 minutes to allow passengers to transfer to other routes. The existing configuration of the pulse point has most buses stopping on the south side of the Green as seen in the map above. However, in recent years increasing ridership, coupled with the lack of adequate passenger waiting areas downtown has

strained the existing pulse point. Alternative downtown configurations are being examined as part of the ongoing *Waterbury Area Transit Study*.

Tripper bus routes connect Waterbury with industrial parks in surrounding towns including Cheshire, Naugatuck, Beacon Falls, and Watertown. Tripper routes operate during the morning and afternoon and correspond with workers’ shifts. As of 2013, average weekday ridership was 364 trips.

Evening bus service began in 2011 and has proven popular with an average of 985 trips on weekdays and 851 trips on Saturdays as of 2013. Evening service operates on ten routes between 6:30 p.m. and 12:30 a.m. on Monday through Saturday.



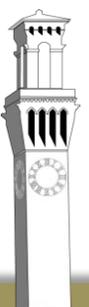
Source: CT Fastrak and Connecticut Department of Transportation

EXPRESS AND INTERCITY BUS

CTfastrak express bus service began in March 2015 and connects Waterbury with Cheshire, Southington, New Britain and Hartford. CTfastrak express buses stop at the Waterbury Train Station, the Waterbury Green, St. Mary’s Hospital, and the Hamilton Avenue park and ride lot. Buses then use Interstate 84 and Route 72 between Waterbury and New Britain and complete the final 9 miles to Hartford on the dedicated CTfastrak busway. Buses arrive and depart Waterbury every 30 minutes during peak hours and every 60 minutes during off-peak hours. The peak-hour travel time between Waterbury and Hartford is approximately one hour.



An express bus runs on the CTfastrak busway between Hartford and New Britain.



Peter Pan, Land/Jet, and Greyhound operate inter-city bus routes with service to destinations such as Danbury, Torrington, and New York. Intercity buses operate out of the Waterbury Travel Center on Bank Street.

PARATRANSIT

Special transportation services are available for Waterbury's elderly and disabled residents. ADA Paratransit service is available to any individual with a disability who is unable to ride on the fixed-route bus system. ADA Paratransit is provided by CTTransit and supports trips within three-quarters of a mile of a fixed-bus route. Trips that begin or end outside of the ADA service area are covered by Non-ADA paratransit service. Fares for ADA and Non-ADA Paratransit are twice the fixed-route bus fare, or \$3.00 per one-way trip.

The Greater Waterbury Transit District (GWTD) operates a Regional Dial-A-Ride that is open to the disabled and residents age 60 years old and over. Regional Dial-A-Ride service is free and covers trips within the nine-town GWTD service area.

Finally, the City operates the Waterbury Senior Shuttle. Service is open to residents age 60 years old and over. The shuttle makes daily stops at grocery stores and shopping centers and is also available for medical appointments and recreation.



CTTransit provides ADA and Non-ADA paratransit service for Waterbury residents. © Greater Waterbury Transit District

BUS TRANSIT PLANS AND PROJECTS

Waterbury Area Transit Study

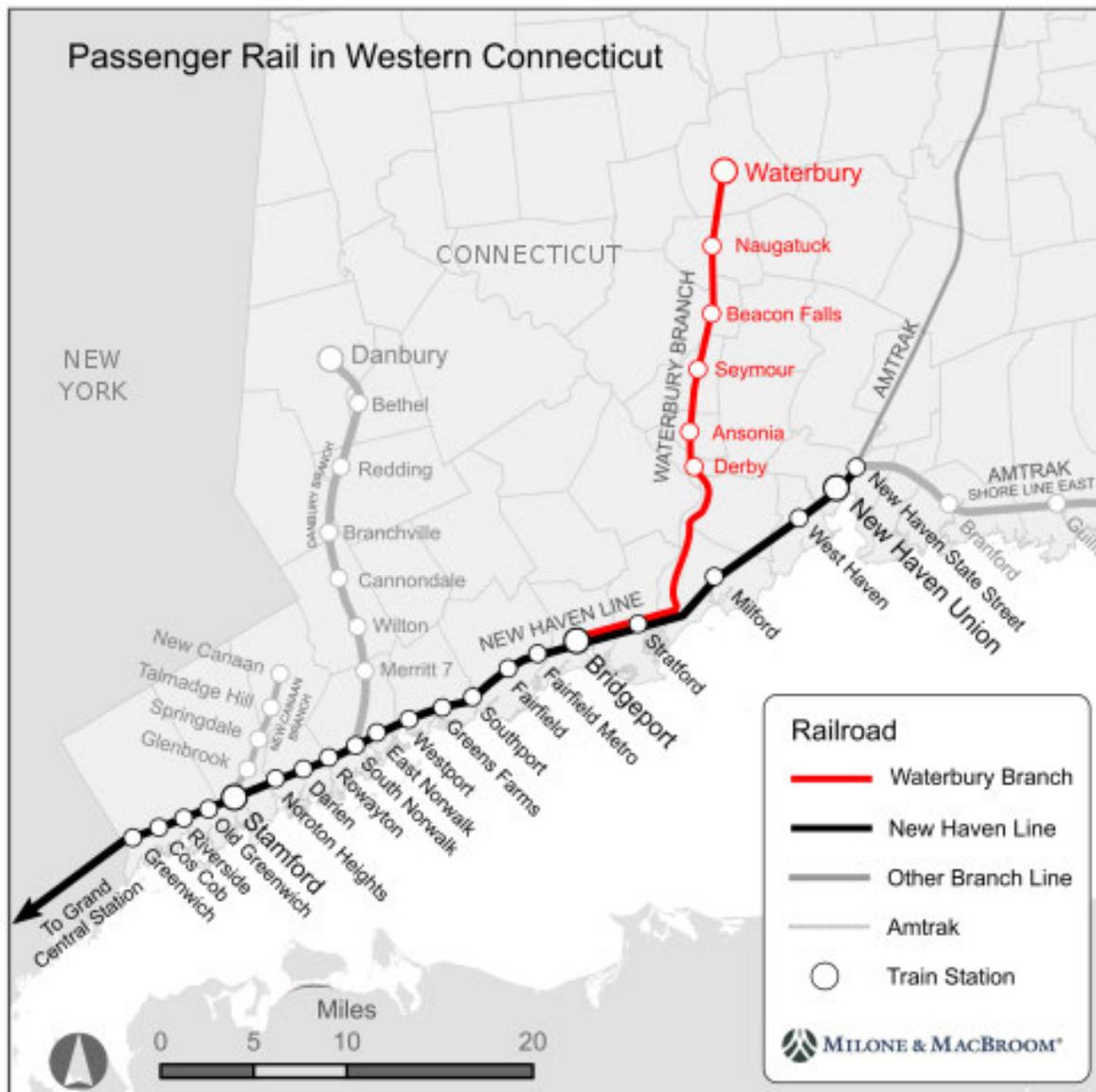
The Waterbury Area Transit Study (WATS) is an ongoing transit service assessment being undertaken by the Naugatuck Valley Council of Governments (NVCOG) in conjunction with the Connecticut Department of Transportation. The goals and objectives of the study include:

- Identify underserved or unserved locations, and times of day.
- Propose new or modified routes to serve these locations.
- Identify alternative feasible transfer point locations downtown besides The Green.
- Improve passenger experience and amenities downtown and at heavily used bus stops outside of downtown.
- Examine the feasibility of switching from a pulse point system to a schedule-based system, or a hybrid of the two.
- Improve connectivity with CTFAstrak, Metro North Railroad, inter-city buses, and neighboring towns.

The study is expected to be completed in the Fall of 2015.

CTTransit – Waterbury Bus Garage

The Connecticut Department of Transportation is building a new bus garage for the CTTransit-Waterbury division in Watertown. The new garage will replace North East Transportation's garage on Thomaston Avenue in Waterbury. The existing site is an old brass foundry and is currently over capacity. The new state-owned garage, which is scheduled to open in 2017, will be able to accommodate additional vehicles.



RAIL

Railroads played a crucial role in Waterbury's industrial development. Rail lines ran along the river valleys and connected Waterbury manufacturers to raw materials and markets for their products. Passenger rail connected residents to Fairfield County, New Haven, Hartford, Boston and New York City. At its peak, Waterbury was the located at the junction of the Naugatuck River Railroad (connecting to Milford and Winsted), the New York and New England Railroad (connecting

to Hartford and Danbury), the Meriden, Waterbury & Connecticut River Railroad (connecting to Meriden and Middletown), and the Watertown Spur. The decline of the City's manufacturing base and the construction of highways in the 1950s and 1960s led to a decline in passenger and freight rail service. Sections of double track on the Waterbury Branch were removed or abandoned in various increments between 1940 and 1982.



Today, passenger and freight rail service remain on the Waterbury Branch (formerly the Naugatuck Valley Railroad), but at a much lower level of service than in the past. The 28.5 mile rail line, which extends from Devon Junction in Milford to Waterbury, is a single track, has no passing sidings, and is unsignalized. As a result, only one train can operate on the corridor at a time. Planned service improvements on the Waterbury Branch provide an opportunity for the City to capitalize on one of its most underutilized assets.



The Waterbury Train Station. © Connecticut DOT

EXISTING PASSENGER RAIL SERVICE

The Waterbury Train Station is the northern terminus of Metro North Railroad's Waterbury Branch. The Waterbury Branch is served by 8 inbound and 7 outbound trains per weekday. With the exception of one early morning express train to Stamford, all trains operate as shuttles between Waterbury and Bridgeport. Buses are used when the line requires maintenance, or if there are issues with rolling stock.

The Waterbury Train Station is the only station on the Waterbury Branch with a high-level platform. Other amenities include covered waiting areas, and an electronic variable message sign indicating when the next train will arrive. The old Waterbury Union Station building now houses the Republican-American newspaper.

As of 2012, the Waterbury Train Station had 297 inbound boardings per weekday. Over two-thirds of weekday ridership occurs during off-peak hours.

Ridership is highest on weekends, with an average of 337 inbound passengers on Saturdays and 347 on Sundays. Despite poor levels of service, the Waterbury Branch has seen a 41 percent increase in ridership between 2007 and 2012.

RAIL PLANS AND PROJECTS

Waterbury Branch Line Improvements

In 2010, the Connecticut Department of Transportation completed the *Waterbury and New Canaan Branch Lines Needs and Feasibility Study* which outlines several investments that would improve service on the Waterbury Branch, including:

- Install passing sidings and a signal system/positive train control.
- Train station improvements such as high-level platforms and/or platform extensions.
- Construct a new transfer station at Devon Junction, where the Waterbury Branch Line meets the New Haven Main Line.
- Build a train storage area in Waterbury.
- Run supplemental express bus service.

In 2014, the State of Connecticut announced \$7.1 million in funding for the design of signals and passing sidings on the Waterbury Branch.

Waterbury Train Station Renovations

The Waterbury Development Corporation is overseeing renovations of the Waterbury Train Station. In 2014, the abandoned SNET building and parking garage were demolished, greatly enhancing visibility for the parking lot and platform. A renovated parking area, improved passenger and vehicle access, and CTFastrak bus stops are currently being designed. Bicycle and pedestrian enhancements on Meadow Street and a new connection with Library Park are being designed as part of the *Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.)* project.

There are also ongoing efforts to convert the old baggage room of the Waterbury Union Station into an indoor waiting area with restrooms.

AIRPORTS

The Waterbury-Oxford Airport (OXC) is a state-owned and operated general aviation airport located in the towns of Oxford and Middlebury about seven miles southwest of Waterbury. Connections to the airport can be made via Interstate 84 and Route 188. There are no existing public transportation connections. The airport offers commercial charters, freight, and recreational flights. In 2012, the airport averaged 131 flights per day.

Bradley Airport, located about 45 miles to the north east in Windsor Locks, is the closest international airport to Waterbury. Bradley Airport averages 280 flights per day and offers non-stop service to 29 cities across North America.

NON-MOTORIZED TRANSPORTATION

According to the 2009 National Household Travel Survey, 40 percent of trips are two miles or less. 90 percent of these trips are made by car. Improving the environment for bicyclists and pedestrians can help Waterbury reduce traffic congestion, minimize the need for surface parking, improve air quality, and encourage residents to lead healthy, active lifestyles. Walking and biking are also crucial to the success of the bus and rail transit system since passengers must walk to and from the transit stop on at least one end of their trip. Walking and biking distance, amenities such as bike racks, weather considerations, and perceived and actual safety all play a role in the quality of the pedestrian and bicycle experience.

PEDESTRIAN FACILITIES

The condition of Waterbury's pedestrian environment varies by neighborhood. The urban core has a well-developed sidewalk network and good connections between residential and non-residential land-uses. However, many of the sidewalks in the urban core are in need of repair. Pedestrian infrastructure such as sidewalks, crosswalks, and crossing signals are absent along

most of the City's commercial arterials including Chase Parkway, Reidville Drive, Meriden Road, and Wolcott Street. These corridors are also heavily used by transit riders, who must walk or bike to their final destinations. Many newer residential areas lack sidewalks and have a disconnected street grid, limiting the ability for pedestrians to move from place to place.

The City has no dedicated funding for sidewalk repairs and relies on state or federal funding programs such as the Local Capital Improvement Program (LOCIP), Community Development Block Grants (CDBG), and the Municipal Revenue Sharing Account grant (MRSA).

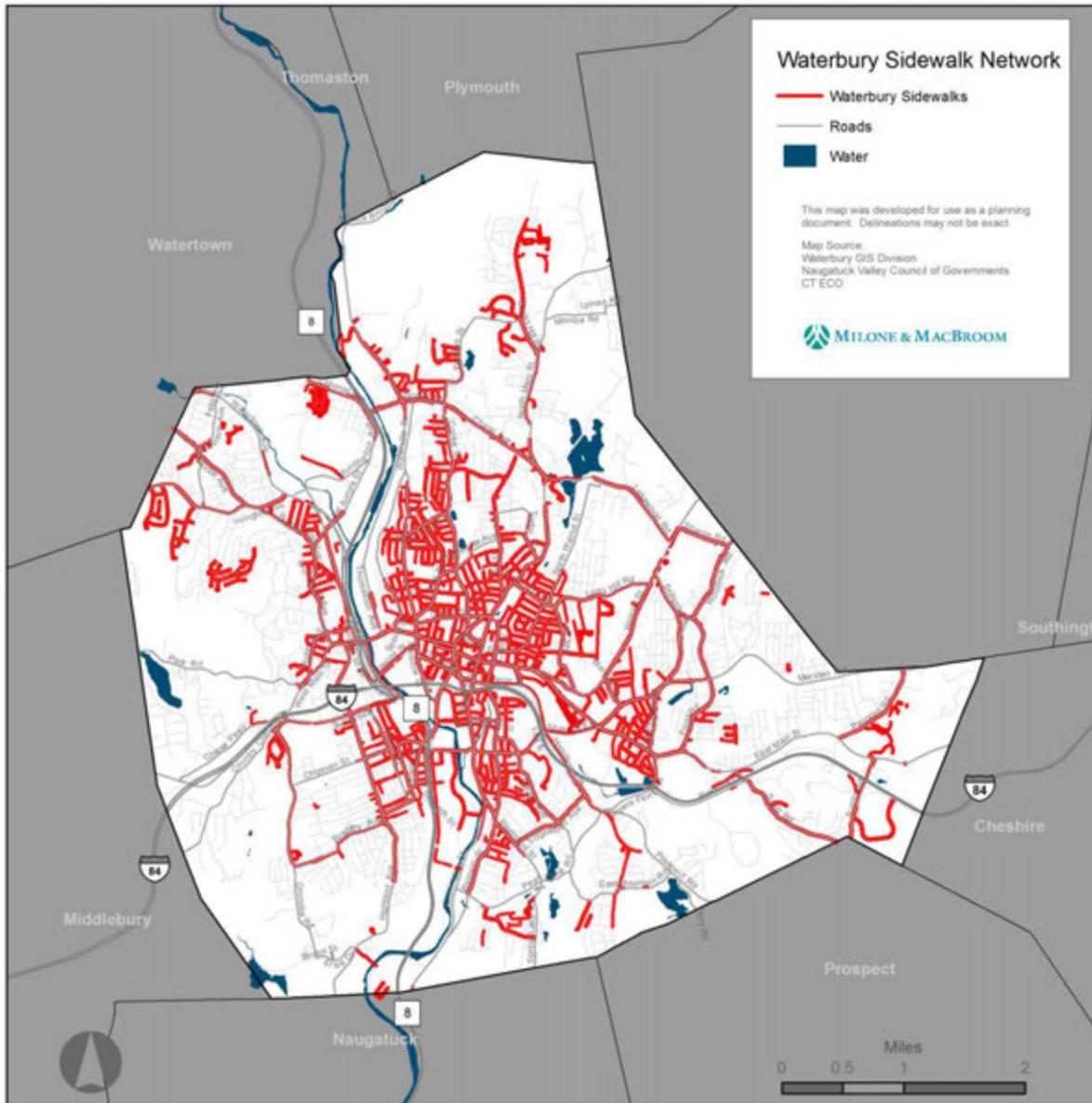


Streetscape along Bank Street in Downtown Waterbury



Most residential streets in the City's outer neighborhoods lack sidewalks and have a disjointed street pattern, leading to obstacles for pedestrian and bicycle mobility.





BICYCLE FACILITIES

While bicyclists can use the existing street network to get almost anywhere, the width of streets, traffic speeds, and the availability of bike racks at their final destination can influence a person’s decision on whether to bike or take some other mode of transportation. Waterbury’s rugged terrain also poses a challenge for bicyclists.

Waterbury currently has no dedicated bicycle lanes, although improvements are being planned.

Bicycle connections to the train station will be improved as part of the W.A.T.E.R. project, and the first phase of the Naugatuck River Greenway is currently being designed. A Regional Bikeway Plan conducted by COGCNV identified Route 69, Route 73, and Thomaston Avenue as potential hosts for bicycle lanes and East Main Street as a shared lane. In addition, bike racks are now standard on all CTTransit buses, allowing for transit/bike connections.



NAUGATUCK RIVER GREENWAY

The Naugatuck River Greenway is a planned 45 mile multi-use trail extending from Derby to Torrington, including a 7.5 mile stretch in Waterbury. Segments have been completed in Derby, Ansonia, Seymour, Beacon Falls, and Naugatuck.

In 2010, the Waterbury Development Corporation completed a *Greenway Routing and Feasibility Study*, which identified a preferred alignment

through the City. In 2011, the U.S. Department of Interior named the Naugatuck River Greenway as one of the best 100 outdoor projects in the nation.

The regional greenway effort is being overseen by a steering committee coordinated through the Naugatuck Valley Council of Governments. Committee members include representative from municipalities, the state and federal governments, and local non-profit groups.



NON-MOTORIZED PLANS AND PROJECTS

Naugatuck River Greenway Phase 1

Waterbury's first section of the Naugatuck River Greenway will run for 2.2 miles from the Naugatuck River Recreation Access on Platts Mill Road to Eagle Street. A road diet will be implemented on South Main Street, removing a traffic lane and replacing it with a two-way cycle track. Bicycle shoulders will be added to Platts Mill Road, and an off street path will run through a new park on the corner of South Main Street and Platts Mill Road (Platt Park). **Final design for Phase 1 is currently underway.**



Platts Mill Road (top) will have bicycle lanes added to the shoulder (bottom) as part of the Naugatuck River Greenway Phase 1

© Google Maps, City of Waterbury, RBA Group

Naugatuck River Greenway Phase 2

Phase 2 of the Naugatuck River Greenway extends 2.3 miles from Eagle Street (the terminus of Phase 1) to West Main Street and Thomaston Avenue. Phase 2 passes through the City's densest neighborhoods and a major brownfield site, making it the most challenging segment of greenway trail. Phase 2 will connect to Downtown Waterbury via Freight Street and the Library Park-Train Station-Jackson Street pedestrian bridge (see W.A.T.E.R. project section).

Preliminary engineering for phase 2 was included in the TIGER application for the W.A.T.E.R. project. However, due to its complexity and challenges completing the project within the tight TIGER project timelines, the project was ultimately not funded. The City is actively seeking an alternative funding source for Phase 2.

Naugatuck River Greenway Phase 3

Phase 3 of the Naugatuck River Greenway will cover the final 3 miles from West Main Street to the Thomaston town line. Routing and preliminary planning have been completed for Phase 3, however no funding source has been identified.

Gilmartin School Safe Routes to School

In 2012 Waterbury received \$500,000 through a *Safe Routes to School* grant to make pedestrian improvements in the vicinity of Gilmartin School. The project includes new sidewalks in the neighborhood, new crosswalks and signage, shoulder striping on roadways, and the purchase and installation of bike racks at the school.

ADA Curb-Ramp Installation

Waterbury received \$750,000 for the construction of new sidewalk curb ramps in downtown Waterbury along Grand Street, Meadow Street, and West Main Street. ADA-compliant curb ramps include tactile strips, and sloped ramps transitioning from street-level to sidewalk-level. Construction is anticipated to begin in 2015.

Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.) Project

The Waterbury Active Transportation and Economic Resurgence (W.A.T.E.R.) project is funded in part by a \$14.4 million TIGER grant that was awarded in September 2014. The four funded components of the W.A.T.E.R. project will greatly enhance non-motorized mobility and connections between neighborhoods and downtown. The four components are described below:

Meadow Street Complete Streets

Meadow Street is the western boundary of downtown and is home to the City’s train station. Today, the design of the street heavily favors cars at the expense of pedestrians and bicyclists. Improvements include sidewalk widening, roadway narrowing, improving pedestrian crossings, and adding bicycle lanes.

Library Park-Train-Station-Jackson Street Bicycle and Pedestrian Bridge

The rail line serves as a barrier for pedestrians trying to access the Freight Street District and the riverfront from downtown. The new pedestrian bridge will provide a new, traffic-free connection between Library Park, the train station, Jackson Street, and the future Naugatuck River Greenway and riverfront park.

Freight Street Complete Streets

Freight Street is an excessively wide roadway with light traffic, and no pedestrian and bicycle infrastructure. Freight Street is the artery of the planned mixed-use Freight Street District and will serve as the primary non-motorized connection between the future Naugatuck River Greenway and downtown Waterbury. Freight Street will be fully rebuilt with new curbs, sidewalks, roadway, and a bi-directional bicycle path.

Jackson Street Connector

Currently, there is no north-south connection through the Freight Street District, limiting bicycle and pedestrian movements, and forcing all traffic to drive through Downtown Waterbury. The new Jackson Street connector road will improve both motorized and non-motorized connectivity, alleviate congestion on parallel roadways such as Meadow Street.



The W.A.T.E.R. Project funds four bicycle and pedestrian enhancement projects.

1. Meadow Street complete streets retrofit
2. Library Park-Train Station-Jackson Street pedestrian bridge
3. Freight Street complete streets retrofit
4. New Jackson Street connector road

Source: City of Waterbury, RBA Group





Downtown Waterbury remains the city's employment hub

11. ECONOMIC DEVELOPMENT

Waterbury is the governmental, institutional, and cultural center for a metro area of approximately 200,000 people. Waterbury is also a major employment center, providing jobs to commuters from surrounding suburban and rural towns. The City was once the center of American brass manufacturing, at its peak producing one-fifth of all brass in the United States. Since the city's industrial base declined in the latter half of the twentieth century, it has become more reliant on service-sector jobs such as health care, retail, and education. In recent years, Waterbury, like the rest of the state and nation, has been negatively impacted by the Great Recession and the housing bubble collapse of the late 2000s. Since 2010, the City has experienced a gradual economic recovery. Economic development is one of the key components of this Plan, and is weaved through the document's many chapters. This chapter presents information on historic and current trends in Waterbury related to the local, regional, and state economies, and summarizes ongoing economic development initiatives.



HISTORIC OVERVIEW

AGRICULTURAL ROOTS

Waterbury's first European settlers were 34 families from nearby Farmington, Connecticut, who settled in Town Plot in 1674. For the first 150 years of its existence, Waterbury's economy was dominated by agriculture. Because of its rugged terrain and comparatively poor soils, Waterbury remained smaller than neighboring communities such as Woodbury, Litchfield, and Farmington, where agriculture was more viable. Shortly after its initial settlement, residents began to harness the City's fast moving streams in order to mill grain, timber, and cloth. However, prior to the Revolutionary War, American colonies were prohibited from producing finished goods for export, and had to extensively rely on imported British goods. Therefore, early mills could only produce finished goods in quantities that could be consumed locally.



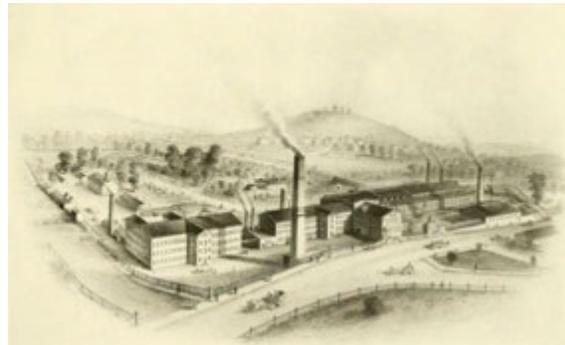
Waterbury's early economy was primarily agricultural
© Mattatuck Museum

INDUSTRIAL BEGINNINGS

The Naugatuck Valley was one of the cradles of the American Industrial Revolution. Limited prospects for agriculture, a growing population, and high tariffs on British goods following American Independence led to the development of Waterbury's first cottage industries in the late 18th and early 19th centuries, hand-producing items such as clocks, pewter buttons, pins, cloth, and tools. These early industries were located on the Naugatuck River's swiftly moving tributaries such as the Mad River and Great Brook. Finished products were sold by a network of "Yankee

Peddlers," who traveled throughout the eastern seaboard and Midwest selling Waterbury-made products.

Waterbury's first venture into brass was in 1772, when the Grilley brothers stamped buttons out of rolled sheet brass. Waterbury's first brass manufacturer, Abel Porter & Co (a joint venture with the Grilley brothers that later became Scovill Brass) was founded thirty years later in 1802. In 1806, Eli Terry of neighboring Plymouth introduced a system of interchangeable parts that allowed him to mass produce clocks and clock parts. These mass production techniques transformed the economy of the Naugatuck Valley from one of cottage industry to the center of American brass production.



By the mid-19th century, brass manufacturers (such as Scovill, above), began to dominate Waterbury's economy. © Library of Congress

THE BRASS CITY

As demand for brass and brass products increased, Waterbury began to specialize in all parts of the brass manufacturing process including casting, rolling, and the production of finished products such as tools, hardware, buttons, munitions, wire, clock parts, and watches. To compete with British manufacturers, Waterbury companies imported skilled tradesmen from English brass mills. By the 1830s, the Naugatuck Valley's workforce had developed the specialized skillset that allowed it to dominate American brass manufacturing for the next 150 years.

The Naugatuck Valley Railroad was completed in 1849 allowing for cheaper importation of copper

and zinc (the raw materials for brass) and easier shipment of finished products to markets. This led to an era of unprecedented economic and population growth in the second half of the 19th century. Waterbury's population increased from just over 5,000 residents in 1850 to over 90,000 by 1920, led by thousands of immigrants from Ireland, Italy, Quebec, Germany, and Lithuania.



The Waterbury Buckle Company (pictured here in the 1880s) still produces buckles at its South Main Street factory. © Library of Congress

By the early 20th century, consolidations amongst Waterbury's brass manufacturers resulted in an economy that was dominated by the "Big Three:" American, Chase, and Scovill. In 1909, Waterbury produced over one-fifth of all brass and bronze products in the United States. During peak production during World War I Scovill Brass alone employed over 15,000 workers. In 1930, over half of Waterbury's labor force worked in the metal industry. Following economic troubles during the Great Depression, production increased during World War II due to the need for munitions, shells, and machine components required for the war effort.

DECLINE OF INDUSTRY

After the wartime production heights of the 1940s, Waterbury's brass industry began to decline. In order to remain competitive, factories began to automate parts of the manufacturing process, steadily reducing the number of jobs, particularly those for unskilled laborers. Similarly, new and cheaper materials such as aluminum and plastic began to replace brass in many products. By the

1950s, the Big Three were all part of multi-national conglomerates, whose leadership did not have the same historic ties to the city as in the past. With aging equipment in their Waterbury facilities, they began to shift production to modern facilities in the western United States that were also closer to copper and zinc mines. Labor unrest and metal shortages during the 1950s and 1960s, and damage from the Flood of 1955 further hampered the City's manufacturing economy. From 1947 to 1977 the number of metal manufacturing workers in the Waterbury region decreased from 27,000 to 9,800.



Metal product manufacturers, such as The Platt Brothers and Company, remain a small but important part of Waterbury's economy. © Bing Maps

Despite its decline over the last 60 years, metal manufacturing remains a small, but important part of the City's economy. After the construction of Interstate 84 and Route 8, most remaining manufacturers have moved to modern industrial parks in Waterbury's outer neighborhoods, or to surrounding towns where large parcels of developable land were more readily available.

Today, Waterbury's manufacturing firms are small, agile enterprises that can quickly respond to changes in markets and the needs of their customers. Since most of the repetitive tasks in the manufacturing process have been automated, the remaining jobs are highly skilled and well paid. As the manufacturing workforce ages, training younger workers in the technological skills of precision manufacturing will continue to be an important part of Waterbury's future economic development strategy.



DIVERSIFICATION

Like cities across the United States, service sector jobs replaced many of the factory jobs that were lost in Waterbury. Today, Waterbury's largest employment sectors are Health Care and Social Assistance, Government (which includes public school employees), and Retail Trade, which together make up nearly 60% of all jobs.

LABOR FORCE AND EMPLOYMENT

Waterbury's labor force and employment trends are closely linked to state and regional economic conditions. The city is the regional center of the Waterbury Labor Market Area (LMA), which also contains Beacon Falls, Bethlehem, Middlebury, Naugatuck, Prospect, Watertown, Wolcott, and Woodbury.

Located less than 30 miles from other large employment centers such as Hartford, New Haven, Danbury, and Bridgeport, Waterbury's economy is

closely linked to those of its neighboring regions. A majority of Waterbury residents commute to jobs outside the city, and over 40% of the City's work force commutes in from surrounding towns. This section describes local, regional, and state economic trends, including labor force characteristics, employment, and unemployment.

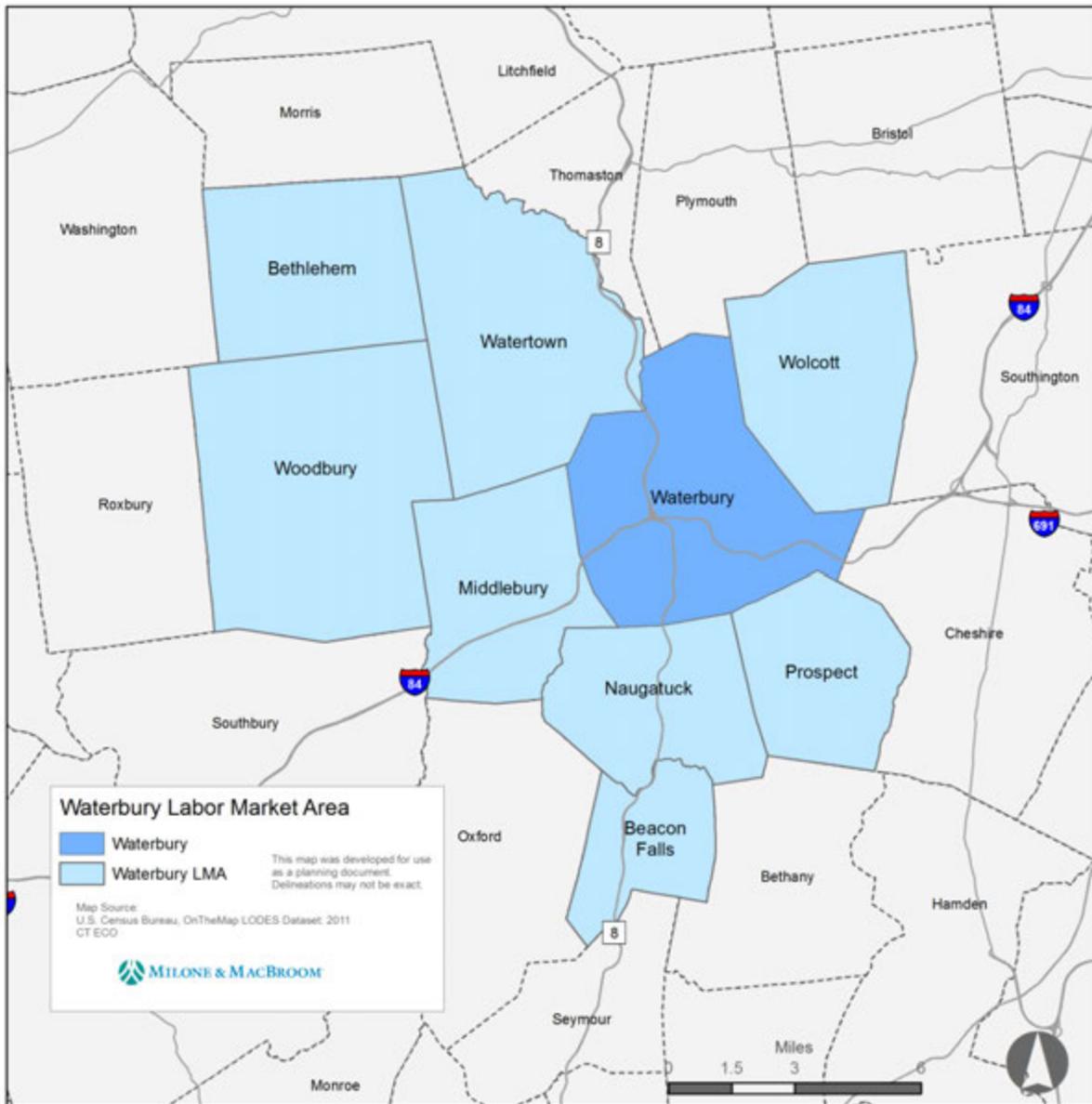
LABOR FORCE

Waterbury's labor force consists of residents, age 16 years old and older who are employed or are unemployed and looking for work. **As of 2014, Waterbury's labor force was 51,573 people.** From 2000 to 2010 the City saw its labor force grow by 10.1%, much faster than the population growth rate. Between 2000 and 2009, labor force growth exceeded employment growth in eight out of ten years, which led to a growth in unemployed residents.

**Trends in Population, Labor Force, Employment, and Unemployment
Connecticut, Waterbury Labor Market Area, and the City of Waterbury (By Place of Residence)**

Connecticut	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Population	3,510,297	3,510,787	3,502,309	3,501,252	3,518,288	3,575,498	3,580,709	3,591,765	3,596,080	-
Labor Force	1,806,997	1,826,817	1,846,194	1,868,874	1,886,800	1,911,712	1,913,447	1,887,861	1,869,069	1,885,126
Employed	1,718,608	1,745,993	1,761,588	1,763,911	1,730,053	1,737,449	1,744,929	1,730,415	1,724,489	1,760,421
Unemployed	88,389	80,824	84,606	104,963	156,747	174,263	168,518	157,446	144,580	124,705
% Unemployed	4.9%	4.4%	4.6%	5.6%	8.3%	9.1%	8.8%	8.3%	7.7%	6.6%
Waterbury LMA	<i>(Beacon Falls, Bethlehem, Middlebury, Naugatuck, Prospect, Waterbury, Watertown, Wolcott, & Woodbury)</i>									
Population	213,458	213,519	213,138	213,210	213,872	218,221	217,520	217,367	217,005	-
Labor Force	106,747	107,106	107,725	108,289	109,332	114,261	114,029	112,555	111,443	111,993
Employed	100,181	101,192	101,480	100,410	95,612	101,223	101,712	101,188	100,916	102,790
Unemployed	6,566	5,914	6,245	7,879	11,846	13,038	12,317	11,367	10,527	9,203
% Unemployed	6.2%	5.5%	5.8%	7.3%	10.8%	11.4%	10.8%	10.1%	9.4%	8.2%
Waterbury										
Population	107,902	107,455	107,174	107,037	107,143	110,429	110,189	109,915	109,676	-
Labor Force	49,397	49,210	49,476	49,738	50,611	52,949	52,784	52,035	51,549	51,573
Employed	45,513	45,723	45,796	45,191	43,790	45,404	45,580	45,338	45,242	46,051
Unemployed	3,884	3,487	3,680	4,547	6,821	7,545	7,204	6,697	6,307	5,522
% Unemployed	7.9%	7.1%	7.4%	9.1%	13.5%	14.2%	13.6%	12.9%	12.2%	10.7%

Source: Connecticut Department of Labor, Local Area Unemployment Statistics (LAUS): 2005-2014
Connecticut Department of Public Health, Annual Town Population for Connecticut as of July 1



Labor Force participation is a measure of how many residents age 16 years old and over are employed, or unemployed and looking for work. Labor force participation is impacted by several variables, including local economic conditions, educational attainment, and population characteristics, such as the number of retirees. As of 2013, Waterbury had a labor force participation rate of 62.3%, which is lower than both the state

(68.0%) and national (64.3%) averages. Waterbury's low labor force participation rate coupled with its comparatively young population indicates that there are spatial mismatches (residents can't get to jobs they are qualified for), and skills mismatches (residents don't have the necessary skills to fill job vacancies) that are impacting particular segments of the population.



EMPLOYMENT

Employment data is compiled by place of residence, with employment referring to employed Waterbury residents. People who work in Waterbury are described in greater detail by industry in the workforce section. **As of 2014, Waterbury had 46,051 employed residents, representing 89% of the labor force.** While the labor force grew between 2005 and 2010, employment remained flat, leading to a growing number of unemployed residents. The number of employed residents grew by over 800 between 2013 and 2014, and has now surpassed pre-recession levels. However, the number of jobs within the city limits has remained stagnant during the post-recession years and has resulted in an increasing number of residents commuting to jobs in other parts of the state.

10.7% but remains higher than the state and national averages. Over the last 10 years, Waterbury’s unemployment rate has consistently averaged about 60% higher than the state average and about 30% higher than the Waterbury Labor Market Area average, as indicated in the chart titled Unemployment in Waterbury, Waterbury LMA, and Connecticut: 2005-2014.

Unemployment rates vary for different segments of the labor force. Young people under age 25 have a much higher unemployment rate (29.2%) than older workers (55 to 64 years old), who have an unemployment rate of just 8.2%. Similarly, educational attainment is closely correlated to unemployment. Waterbury residents without a high school diploma have the highest unemployment rate at 21.6%, while residents with a Bachelor’s degree or higher have an unemployment rate of just 5.1%.

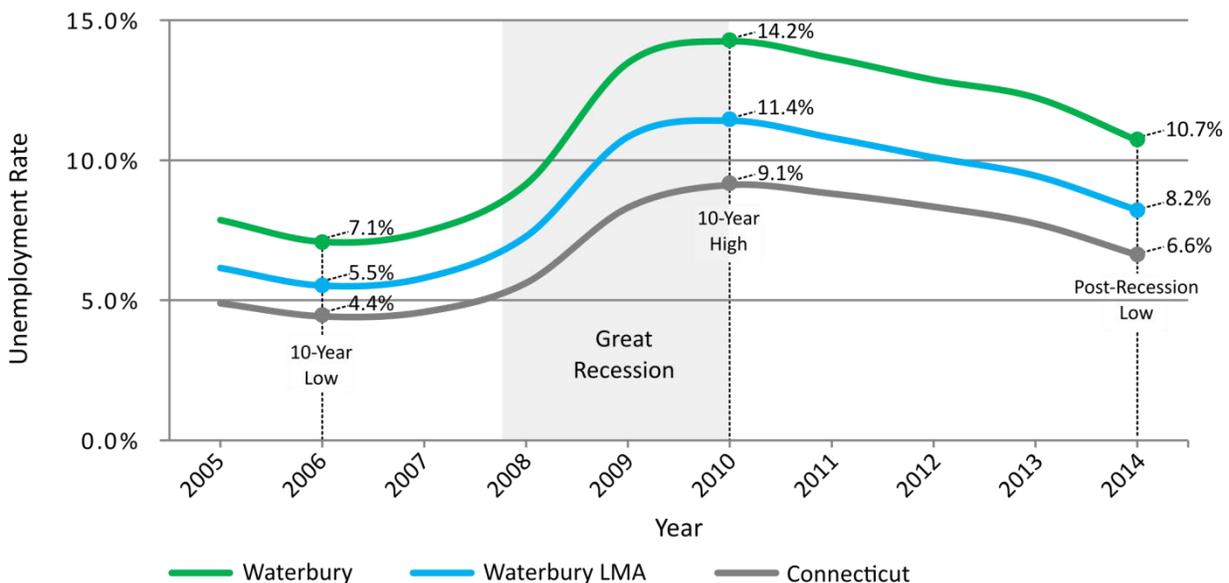
UNEMPLOYMENT

The Great Recession of 2007 to 2009 led to a spike in unemployment, peaking at over 7,500 residents (14.2% of the labor force) in 2010. Since 2010, unemployment has declined to

WORKFORCE

Waterbury’s workforce refers to people who work in the city. While the number of jobs within the city has declined over the last decade, Waterbury

Unemployment in Waterbury, Waterbury LMA, and Connecticut: 2005-2014



Source: Connecticut Department of Labor
Local Area Unemployment Statistics: 2005-2014

continues to be the largest employment center in the region. **As of 2013, Waterbury had a workforce of 38,890, which represents 60% of all jobs in the Waterbury Labor Market Area.**

WORKFORCE TRENDS

The Great Recession had negative impacts on nearly all sectors of the local economy. From 2004 to 2009 Waterbury lost 2,574 jobs with the greatest losses occurring in the Administrative and Support and Waste Management and Remediation Services sector (-1,228) and the Manufacturing sector (-1,085). The City lost jobs at a faster rate than the state as a whole, but slower than the region as a whole. Some sectors, such as Health Care and Social Assistance, added jobs during the

recession. The health care industry is traditionally “recession proof” since demand is governed by medical necessity as opposed to disposable income.

Since 2009, Waterbury's job market has been stable. Some sectors, such as Educational Services, and Accommodation and Food Services, have rebounded and surpassed their pre-recession employment levels. Other sectors, such as Construction, Finance and Insurance, and Information have continued to decline in the post-recession years.

City government is the largest employer in Waterbury. As of 2014, the City employed 3,776 people, out of which 60% work for the Waterbury Board of Education. The remaining jobs are split

Workforce Trends in Waterbury, Waterbury LMA, and Connecticut, by Sector: 2004-2013

Industry	Waterbury			Waterbury LMA			Connecticut		
	2004	2009	2013	2004	2009	2013	2004	2009	2013
Agriculture, Forestry, and Fishing	0	0	0	0	0	0	5,545	4,633	5,249
Mining	0	5	0	0	0	10	723	628	543
Utilities	231	233	238	260	297	305	8,659	6,643	6,035
Construction	1,221	845	660	2,911	2,240	2,338	65,717	54,527	53,620
Manufacturing	4,428	3,343	3,265	10,840	7,965	7,658	197,036	171,207	163,828
Wholesale Trade	1,065	958	894	2,103	2,045	2,126	65,635	65,003	63,156
Retail Trade	6,036	5,632	5,773	9,144	8,472	8,766	192,982	178,501	183,585
Transportation and Warehousing	638	374	404	2,024	1,520	1,402	38,895	39,189	41,069
Information	948	525	463	1,085	721	604	38,932	34,977	32,029
Finance and Insurance	1,490	1,017	854	2,130	1,672	1,504	120,487	118,355	110,718
Real Estate & Rental & Leasing	481	261	321	632	415	455	20,208	19,201	19,003
Professional, Scientific, & Tech.	911	998	748	1,498	1,565	1,343	87,717	87,111	90,358
Mngmt. of Companies	185	159	132	873	758	708	25,727	27,611	30,657
Admin & Support, Waste Mngmt.	2,907	1,679	1,844	3,477	2,367	2,694	84,180	75,690	85,023
Educational Services	765	687	1,012	1,259	1,294	1,608	45,075	51,888	55,890
Health Care & Social Assistance	10,244	10,761	10,354	12,764	13,937	14,623	217,454	243,208	257,705
Arts, Entertainment, & Rec	300	337	299	770	805	690	24,523	23,552	25,777
Accommodation & Food Services	2,338	2,725	3,162	3,922	4,368	4,871	102,951	110,123	121,453
Other Services	1,480	1,504	1,646	2,475	2,386	2,584	55,995	56,797	58,943
Federal Government	433	400	294	620	546	415	20,136	19,266	17,329
State Government	1,596	2,198	2,123	1,637	2,243	2,149	58,025	69,401	66,833
Local/Municipal Government	3,940	4,425	4,392	7,228	7,705	7,499	154,980	157,742	150,968
Total - All Industries	41,645	39,071	38,890	67,733	63,349	64,399	1,631,841	1,615,349	1,640,223

Source: Connecticut Department of Labor, Quarterly Census of Employment and Wages (QCEW)
Waterbury, Waterbury LMA, and Statewide: 2004-2013



between General Government (28%) and Grants & Food Service (11%).

The largest private employers in the City are Waterbury Hospital (1,973) and St. Mary's Hospital (1,525). From 2005 to 2014 the two hospitals added a combined 678 jobs. Other top employers include higher education institutions (Naugatuck Valley Community College and Post University), retailers (Stop & Shop, Wal-Mart, Home Depot, Costco), manufacturers (Clydel, Macdermid), community services (New Opportunities, Children and Family Services), and financial services (Webster Bank).



Waterbury Hospital is the City's largest private employer. © Google Maps

Top Employers in the City of Waterbury: 2014

Rank	Business Name	Nature of Business	Employees	Percent of Total City Employment
1	City of Waterbury	Government Services	3,776	8.33%
2	Waterbury Hospital	Medical & Mental Health Services	1,973	4.35%
3	St. Mary's Hospital	Medical Services	1,525	3.36%
4	Stop & Shop Companies	Grocery	500	1.10%
5	New Opportunities of Waterbury	Employment Services	450	0.99%
6	Post University	Higher Education	300	0.66%
7	Wal-Mart	Household Retail	299	0.66%
8	Naugatuck Valley Community College	Higher Education	276	0.61%
9	Village Green of Waterbury	Assisted Living	233	0.51%
10	Webster Bank	Financial Services	217	0.48%
11	Home Depot	Hardware - Retail	215	0.47%
12	COSTCO	Big-Box Retail	210	0.46%
13	Children and Families Services	Community Services	203	0.45%
14	Clydel Manufacturing Company	Manufacturing	198	0.44%
15	MacDermid Inc.	Manufacturing	164	0.36%

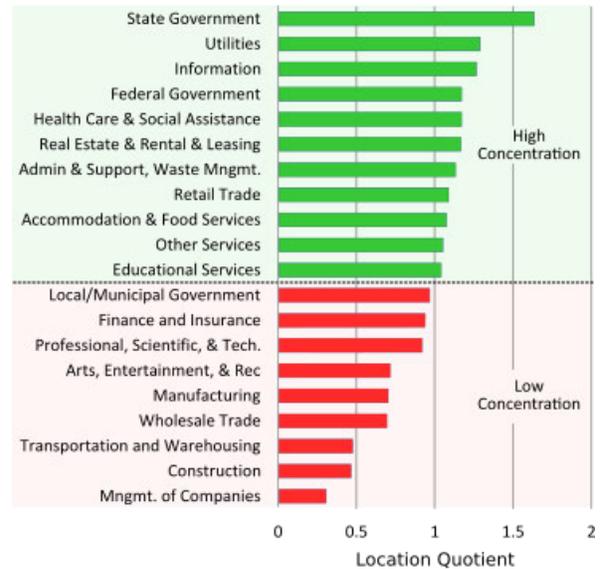
Source: City of Waterbury, Comprehensive Annual Financial Report 2014

LOCATION QUOTIENTS

Location quotients (LQs) are a measure of job concentration relative to the reference area. They are calculated by dividing the percentage of local jobs in a particular sector (in this case, Waterbury) by the percentage of regional, state, or national employment in that same sector. A location quotient over 1 indicates the City has a higher job concentration than the reference area, while a value between 0 and 1 indicates a lower concentration. Waterbury remains a job center for 11 out of the 20 sectors of the region’s economy, as indicated by a location quotient over 1. The sectors with the highest job concentrations relative to the Waterbury LMA were State Government (1.6), Utilities (1.3), and Information (1.3). **The manufacturing sector has a location quotient of 0.7, meaning that those jobs are now concentrated in the suburban towns surrounding Waterbury.**

Waterbury has a higher job concentration than the state as a whole in 7 out of 20 sectors. **The best performing sectors were Health Care and Social Assistance (1.7), Utilities (1.7), and Retail Trade (1.3).** Health Care and Social Assistance has the most jobs of any sector and is projected to be one of the fastest growing industries over the next 10 years. The lowest concentrated sectors are Management of Companies (0.2), Finance and Insurance (0.3), and Professional, Scientific, and Technical Services (0.3). Neighboring regions such as Greater Hartford and Fairfield County have much higher concentrations of these industries.

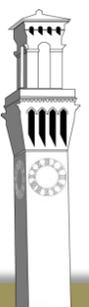
Job Concentration Relative to Waterbury LMA



Job Concentration Relative to Connecticut



Source: Connecticut Department of Labor
 Quarterly Census of Employment and Wages (QCEW)
 Waterbury, Waterbury LMA, and Connecticut: 2013



WAGES

As of 2013, the average annual wage for Waterbury workers is \$42,766, which is 31% lower than the statewide average of \$62,283 and 14% lower than the national average of \$49,808. Over the last ten years, the gap between average wages in Waterbury and the state as a whole has widened by 29%.

Most of the difference between average wages in Waterbury and the rest of the state can be explained by differences in cost of living. In Waterbury, median monthly housing costs are \$1,012 per month, compared to \$1,416 per month statewide. As housing costs continue to rise in the New York Metro Area (New York City, Fairfield County, Westchester County), Waterbury is well positioned to capture companies wishing to relocate to less expensive locations, while still having access to a skilled labor pool.

Average annual wages vary from sector to sector. The two highest wage sectors are Management of Companies and Enterprises and Utilities, which

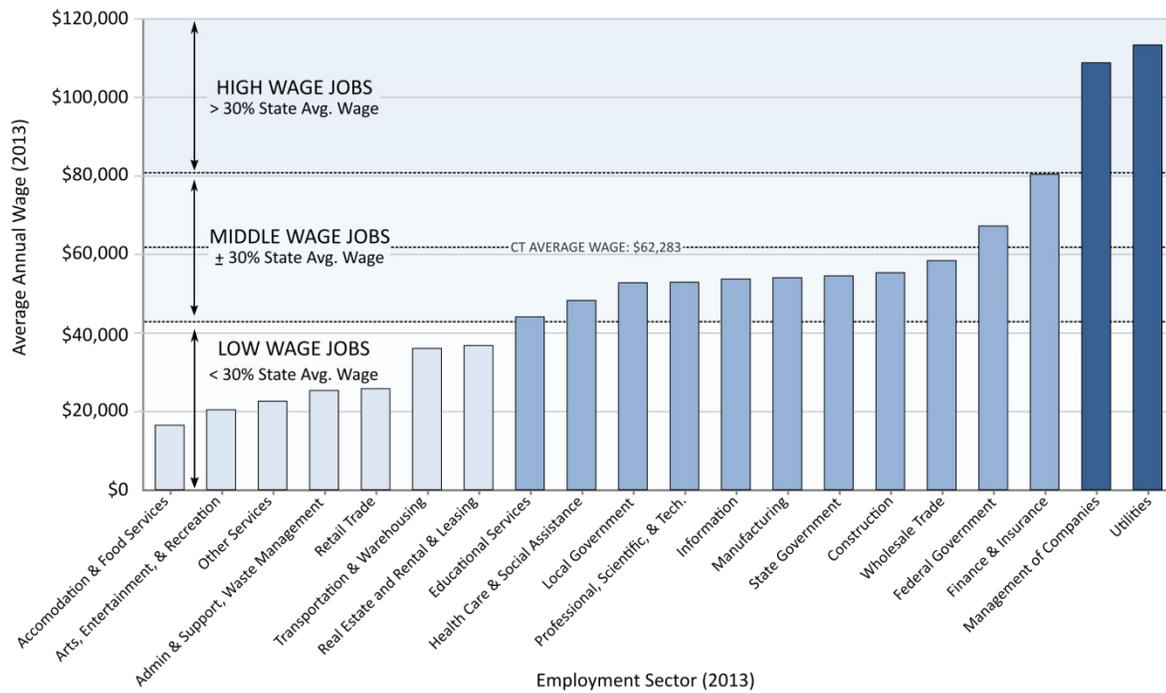
both have average annual wages in excess of \$100,000. A majority of sectors are “middle wage” and have average wages within 30% of the statewide average (between \$43,598 and \$80,967 per year). Middle wage jobs include most of the City’s largest sectors including Health Care and Social Assistance (\$48,085), Local Government (\$52,611), and Manufacturing (\$53,905).

Waterbury has seven low wage sectors that pay, on average, less than 30% below the statewide average (less than \$43,598 per year). These sectors include Accommodation and Food Services (\$16,425), Arts, Entertainment and Recreation (\$20,307), and Retail Trade (\$25,674).

LABOR FORCE-WORKFORCE MISMATCHES

Examining the differences between the City’s labor force (employed Waterbury residents) and workforce (employed Waterbury workers) provides valuable insight into the spatial mismatches that exist in the local, regional, and state economies. As of 2011, when the most recent

Average Annual Wage for Waterbury Workforce, by Sector: 2013



Source: Connecticut Department of Labor
Quarterly Census of Employment and Wages (QCEW)
City of Waterbury, 2013

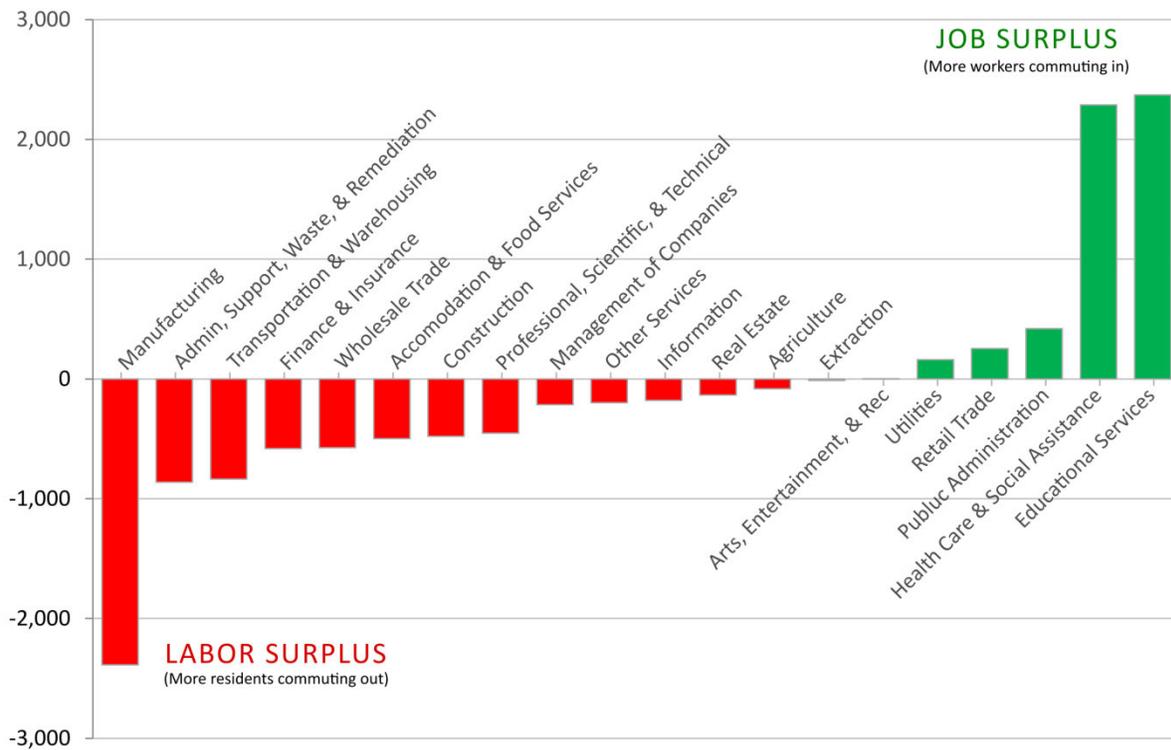
data was available, Waterbury had a labor surplus of about 2,000, meaning there are more employed residents than there are jobs in the City. However, spatial mismatches differ from sector to sector. Some sectors have labor surpluses, meaning there are not enough jobs for all residents employed in the sector. As a result, residents are forced to look for work in other parts of the state. Other sectors have job surpluses, meaning that there are more jobs than there are residents employed in that sector. These sectors rely on imported labor from surrounding towns and cities.

Waterbury has several sectors with large labor surpluses, meaning that residents are most likely to commute to jobs outside of Waterbury. Leading the way is the manufacturing sector, which has a labor surplus of 2,388. While the number of manufacturing jobs within the City limits has dropped, the manufacturing workforce has been able to find employment in surrounding towns. Residents in the Finance and Insurance sector are also likely to commute and are attracted to high

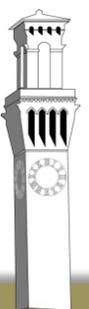
job concentrations in Greater Hartford.

Other sectors have a job surplus, and rely on commuters from nearby towns to fill the necessary positions. **Educational Services (which includes public school teachers) and Health Care and Social Assistance each have a job surplus of over 2,000.** Other sectors with a job surpluses include Public Administration, Retail Trade, and Utilities.

Waterbury Workforce and Labor Force Comparison: 2011



Source: U.S. Census Bureau, OnTheMap - LEHD Dataset
Waterbury Area Home & Work Profiles: 2011



EMPLOYMENT PROJECTIONS

Every two years, the Connecticut Department of Labor releases industry employment forecasts for Connecticut and its five workforce investment areas. Waterbury is in the Northwest Connecticut Workforce Investment Area (WIA) which covers the Waterbury and Danbury areas and Litchfield County. The most recent forecast (2012 to 2022), projects that employment in the Northwest Connecticut WIA will grow by 10% by 2022.

The table below assumes that Waterbury's economy will grow at the same rate as the WIA as a whole. Under this assumption, Waterbury would add 3,875 jobs between 2012 and 2022. **The Health Care and Social Assistance sector accounts for more than half of Waterbury's projected job growth.** This increase is being driven by the baby boomers, who are entering retirement age and are developing greater

Waterbury Employment Projections: 2012-2022

Industry	Employment		Estimated Change (2012-2022)	
	2012	2022 (proj) *	Count *	Percent *
Agriculture, Forestry, Fishing and Hunting	0	0	0	10.0%
Mining	0	-	-	-
Utilities	237	-	-	-
Construction	718	878	159	22.2%
Manufacturing	3,167	3,369	202	6.4%
Wholesale Trade	929	1,043	114	12.2%
Retail Trade	5,681	6,069	388	6.8%
Transportation and Warehousing	397	405	8	2.0%
Information	481	428	-53	-11.1%
Finance and Insurance	908	868	-40	-4.4%
Real Estate and Rental and Leasing	336	364	29	8.5%
Professional, Scientific, and Tech.	781	907	126	16.1%
Mgmt. of Companies	194	195	1	0.6%
Admin & Support, and Waste Management	1,334	1,544	210	15.7%
Educational Services	969	1,066	97	10.0%
Health Care and Social Assistance	10,620	12,607	1,987	18.7%
Arts, Entertainment, and Recreation	297	313	16	5.5%
Accommodation and Food Services	2,890	3,270	381	13.2%
Other Services	1,567	1,747	180	11.5%
Federal Government	318	262	-55	-17.4%
State Government	2,205	2,313	108	4.9%
Local/Municipal Government	4,322	4,307	-15	-0.4%
Total - All Industries	38,363	42,238	3,875	10.1%

* Waterbury employment change between 2012 and 2022 is estimated based on sector-based projections for the Northwest Connecticut Workforce Investment Area. It was assumed that Waterbury would have the same employment change rate as the region as a whole. This table is meant for general planning purposes only and may not reflect local conditions.

Percent Growth Rates for the Northwest Connecticut WIA were obtained from Connecticut Department of Labor, 2012-2022 State of Connecticut Occupational Projections. 2012 Employment was obtained from the Quarterly Census of Employment and Wages

medical needs. After years of decline, the manufacturing sector is projected to grow by 6.4%, which is the equivalent of 202 new manufacturing jobs in Waterbury. Fabricated metal manufacturing, and primary metal manufacturing, which are the two most important subsectors in Waterbury, are both projected to grow over this time period. Only two employment sectors, Information and the Federal Government, are projected to decline by 2022.

INDUSTRY CLUSTERS

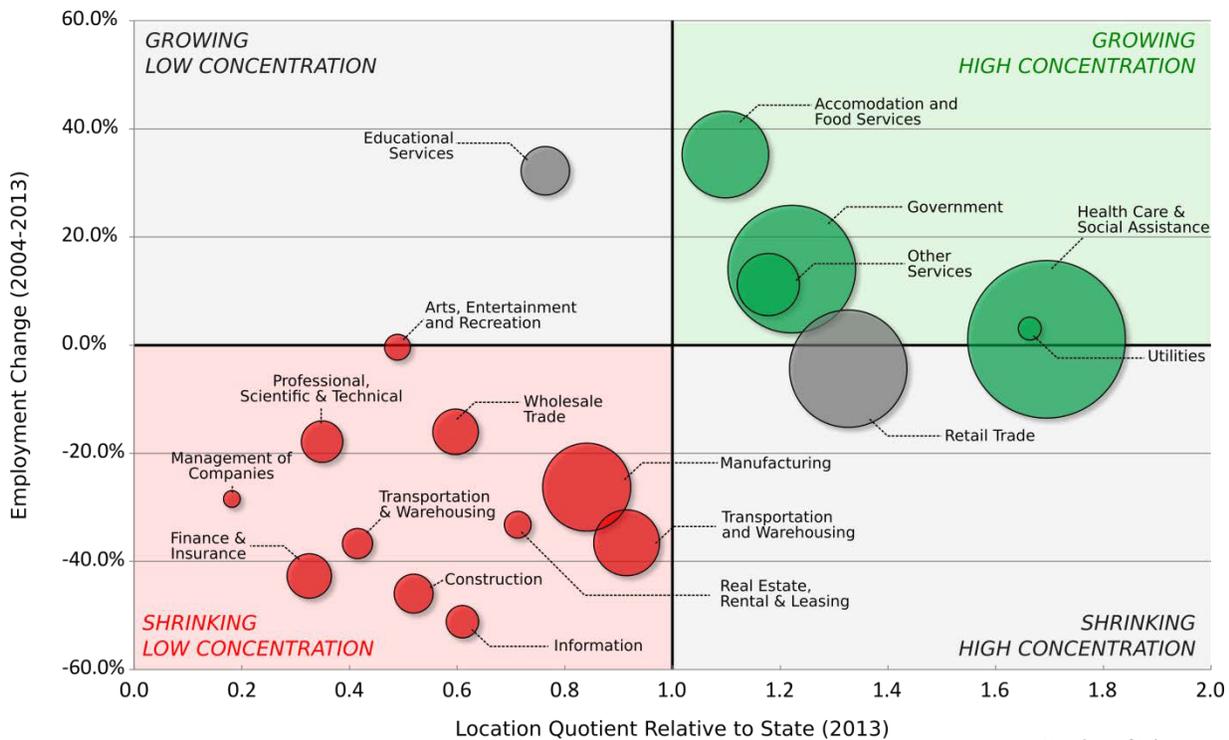
According to Michael Porter of the Harvard Business School, industry clusters are “geographic concentrations of interconnected companies and institutions in a particular field.” The theory behind cluster-based economic development is that

concentrations of similar industries can take advantage of economies of scale, share specialized suppliers and labor, and spur competition between different firms, leading to innovation. The Connecticut Department of Economic and Community Development (DECD) has developed growth strategies around six industry clusters:

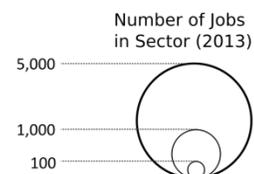
- Health Care and Life Sciences
- Financial Services and Insurance
- Advanced Manufacturing
- Digital Media
- Green Technology
- Tourism

Local clusters were identified using three economic indicators: number of jobs, employment change, and job concentration relative to the state as calculated using location quotients. Using these three measures, the top industry clusters in

Industry Clusters in Waterbury: 2004-2013



Source: Connecticut Department of Labor
 Quarterly Census of Employment and Wages (QCEW)
 Annual Averages by Town: 2004, 2013



Waterbury are:

- Health Care and Social Assistance
- Government (includes federal, state, and local employees)
- Accommodation and Food Services
- Other Services
- Utilities

Despite challenges during the last two decades, manufacturing remains an important sector of the local and regional economy. An analysis of manufacturing subsectors in the Waterbury LMA reveals that while manufacturing as a whole is declining, some sectors have performed well in the post-recession years. The best performing subsectors are in the region area:

- Primary Metal Manufacturing
- Fabricated Metal Product Manufacturing

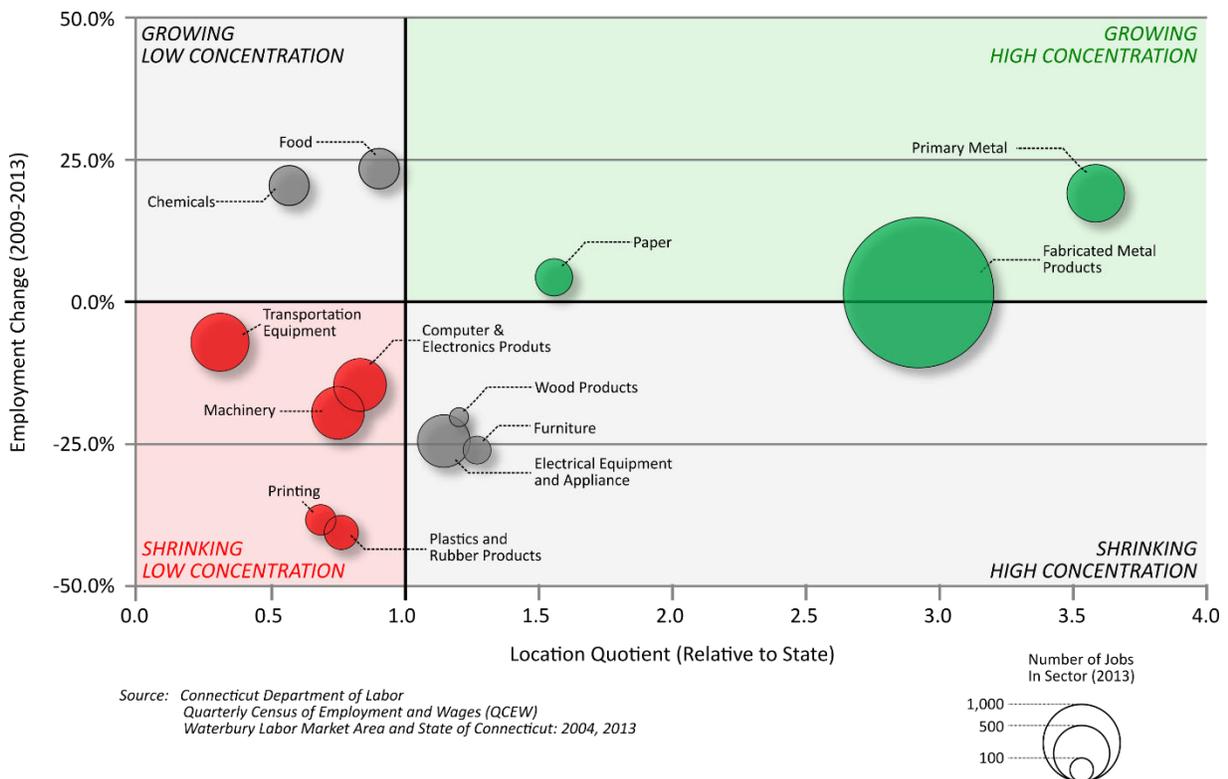
Both subsectors have more than three times the job concentration than the state as a whole

and have added jobs from 2009 to 2014.

Local economic development strategies should focus on maintaining high-performing industry clusters, particularly Health Care and Social Assistance, which is projected to grow by nearly 20% up to 2022.

Waterbury has a skilled manufacturing workforce in several high-performing subsectors. The City should continue to partner with higher education institutions (such as Naugatuck Valley Community College) to promote labor force development in emerging manufacturing technologies such as additive manufacturing (3D printing).

Manufacturing Clusters in the Waterbury Labor Market Area: 2009-2013



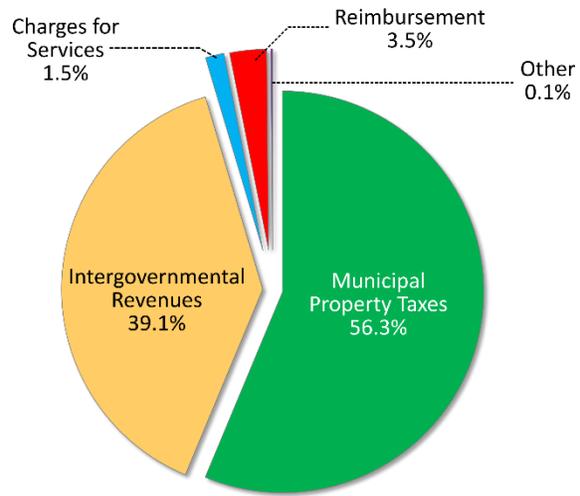
GRAND LIST TRENDS

Municipal property taxes are the primary source of revenue for the City of Waterbury, accounting for 56% of all revenues in Fiscal Year (FY) 14. Intergovernmental revenues such as state and federal grants and payments in lieu of taxes (PILOT), account for 39.1% of City revenues. The remaining funds are primarily from charges for services (1.5%) and reimbursement (3.5%)

Equalized mill grand lists and mill rates are normalized to account for differences in revaluation years and assessment ratios by applying an “equalization factor.” The equalization factor divides total assessed value by the total market value. The result is the equalized net grand list, which is the total market value of all property in in a municipality. Equalization allows for the comparison of fiscal indicators across Connecticut municipalities.

As of Fiscal Year 2013, Waterbury had the highest equalized mill rate (EMR) in Connecticut at 39.81. Waterbury’s high EMR is due primarily to its low equalized net grand list per capita, which was the fourth lowest in the state at \$50,257. Waterbury has an equalized tax burden of \$2,001 per capita, which is below the statewide median of \$2,507.

FY2014 Total Revenues by Funding Source



Total Revenue: \$4,101,620,000

Source: City of Waterbury, Comprehensive Annual Financial Report: 2014

Tax Base Comparison (Ranked by 2013 Population)

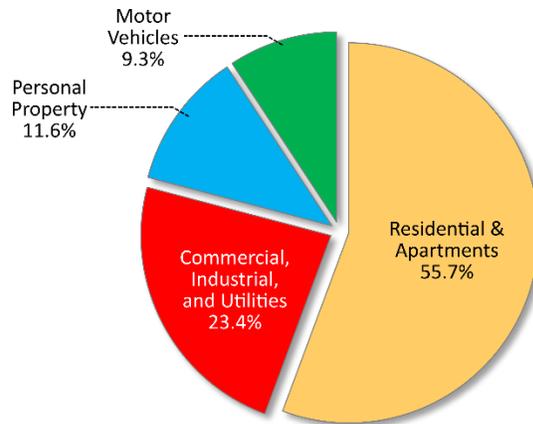
Rank by Population	Municipality	2013 Pop	2013 Equalized Net Grand List	2013 Equalized Net Grand List Per Capita	FY13 Equalized Mill Rate	Tax Burden Per Capita
1	Bridgeport	147,216	\$7,729,475,314	\$52,504	37.01	\$1,943
2	New Haven	130,660	\$8,567,371,656	\$65,570	27.25	\$1,787
3	Stamford	126,456	\$28,845,672,604	\$228,108	14.99	\$3,419
4	Hartford	125,017	\$6,526,348,965	\$52,204	37.93	\$1,980
5	Waterbury	109,676	\$5,511,932,369	\$50,257	39.81	\$2,001
6	Norwalk	87,776	\$16,560,812,571	\$188,671	16.34	\$3,083
7	Danbury	83,684	\$9,161,036,487	\$109,472	19.24	\$2,106
8	New Britain	72,939	\$3,549,594,737	\$48,665	30.61	\$1,490
9	West Hartford	63,371	\$8,400,921,331	\$132,567	25.01	\$3,316
10	Greenwich	62,396	\$42,269,356,545	\$677,437	7.53	\$5,101
State Average				\$141,443	18.61	\$2,632
State Median				\$130,321	19.24	\$2,507

Source: Connecticut Office of Policy and Management, Municipal Fiscal Indicators, Fiscal Years 2009-2013



As of Fiscal Year (FY) 2014, Waterbury's Net Grand List had a value of \$4,106,431,515. Gross real property (land and buildings) accounts for 79.1% of the City's grand list. Residential land uses account for 55.7% of the total while commercial, industrial, and utilities account for an additional 23.4%, a vast majority of which is commercial uses. Personal property (11.6%) and motor vehicles (9.3%) comprise the remainder of the total net grand list. When mill rates increase, the City becomes more reliant on tax revenues from motor vehicles and personal property, which do not fluctuate in value as much as real estate.

FY2014 Net Grand List by Property Type

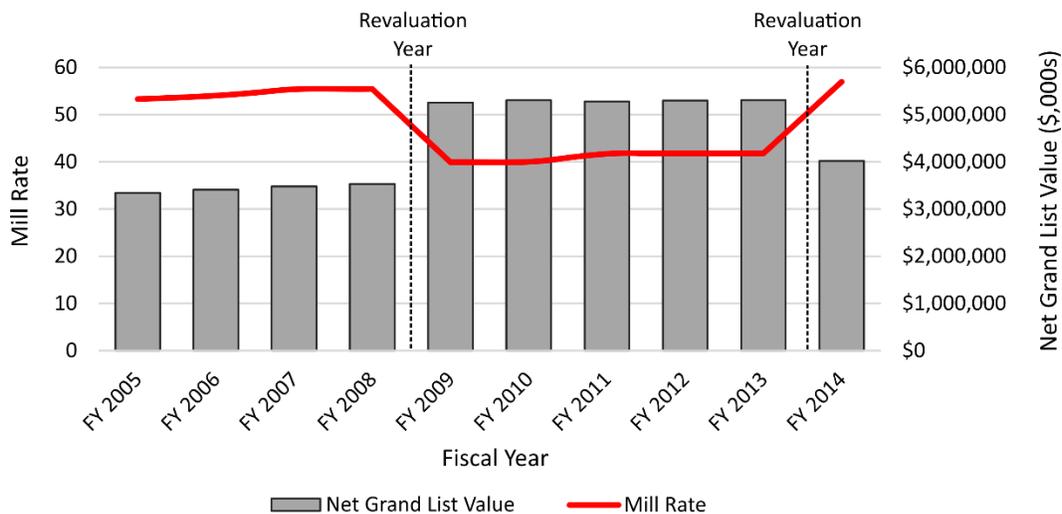


Total Net Grand List: \$4,016,431,515

Source: City of Waterbury, Comprehensive Annual Financial Report: 2014

Waterbury's mill rate for FY14 is 56.98 per \$1,000 of assessed value, which is the second highest in Connecticut. Property values are assessed at 70% of market value. The large mill rate increase between FY13 and FY14 is due to revaluation, which saw the net taxable grand list value decrease by 24%. Like many municipalities, Waterbury saw rapid property value appreciation in the years leading up to the late 2000s housing crash. The prior revaluation, which covered the period of FY2009 through FY2013, was based on inflated real estate values. As property values returned to their historic norms, municipalities across the state have been forced to raise mill rates, cut spending, or a combination of both.

Waterbury Grand List and Mill Rate Trends: FY 2005-FY 2014



Source: City of Waterbury, Comprehensive Annual Financial Report: 2014

Waterbury's ten largest taxpayers, which are seen in the table below, together comprise nearly 10% of the City's total property tax base. Five out of the top ten top taxpayers are retailers. Brass Mill Center is the City's largest taxpayer, comprising 2.2% of the City's total net grand list. Other large retail taxpayers include Naugatuck Valley Shopping Center, Shoprite Plaza (Waterbury VF), Waterbury Plaza (Centro GA), and Costco.

Utilities and power generation are also among the largest taxpayers in Waterbury. They include Yankee Gas, Connecticut Light and Power, and Waterbury Generation, which operates a natural gas power plant on Washington Street. Rounding out the top 10 is Post University, which is a for-profit university, and therefore not exempt from local property tax assessments.



Brass Mill Center Mall is the City's largest taxpayer

Principal Property Taxpayers in the City of Waterbury, October 1, 2012

Rank	Taxpayer	Nature of Business	Net Taxable Assessed Value (\$000s)	% of Total Net Taxable Assessed Value
1	GGP Brass Mill Inc.	Retail	\$89,496	2.23%
2	Yankee Gas Company	Utility	\$82,225	2.05%
3	Conn. Light & Power Co.	Utility	\$80,549	2.01%
4	Yankee Gas Services Company	Utility	\$40,698	1.01%
5	DDRTC Naugatuck Valley SC LLC	Retail	\$29,750	0.74%
6	Waterbury Generation, LLC	Power Generation	\$24,716	0.62%
7	Centro GA Waterbury LLC	Retail	\$13,402	0.33%
8	Post University, Inc.	High Education	\$13,274	0.33%
9	Waterbury VF LLC	Retail	\$13,241	0.33%
10	Costco Wholesale Corp.	Big Box Retail	\$11,405	0.28%
Top 10 Total			\$398,756	9.93%

City of Waterbury, Comprehensive Annual Financial Report: 2014



CEDS

Waterbury is part of the Naugatuck Valley Corridor, a state and federally recognized regional Economic Development District (EDD). The Naugatuck Valley Corridor EDD is a 20-town organization that is jointly operated by the Shelton Economic Development Corporation and the Waterbury Development Corporation. In order to receive funding from the U.S. Economic Development Administration, each EDD is required to complete a 5-year Comprehensive Economic Development Strategy (CEDS) with annual updates.

The 2015 CEDS document, which is still in draft form, recommends job growth and workforce development in key industry clusters, improvements to transportation, communications, and infrastructure, brownfield remediation, and the designation of the Naugatuck Valley as a National Heritage Area.

LOCAL INITIATIVES

In recent years, much of the City's economic development focus has been on Downtown Waterbury. Initiatives generally fall into one of three categories: physical improvements to building stock and infrastructure, development of new housing units, and expansion of institutional presence.

Waterbury Next is an ongoing \$12.2 million initiative which will fund building and infrastructure improvements throughout Downtown. The project will renovate and redevelop Howland Hughes Building, create 38 apartments on the upper floors of the Brown Building, demolish the abandoned Prospect Street Parking Garage, provide funding for the Rose Hill and Anamet property acquisitions, and will fund a variety of infrastructure and streetscape improvements in the vicinity of the Green.

Other Downtown projects include the renovation of the Rectory Building. The building will be renovated into a mixed-use building with ground floor retail and UConn classroom space on the upper floors.



The Rectory Building is being renovated and will contain retail on the ground floor and classroom and meeting space for UConn on the upper floors © Google Maps



The Green is undergoing \$4 million in infrastructure renovations, including new seating, lighting, trash receptacles, and landscaping.



The upper floors of the Brown Building will be converted into 38 units of market-rate housing as part of Waterbury Next. © Main Street Waterbury

These Downtown projects complement other recently completed projects such as Apothecary Hall and 68-70 Bank Street. Both buildings have been converted into apartments over the last decade. Expanding the presence of institutional anchors and growing the number of housing units Downtown have the ability to generate additional demand for ground floor retail space, restaurant space, and cultural activities.

Similarly, the W.A.T.E.R. (Waterbury Active Transportation and Economic Resurgence) project will enhance infrastructure and transportation in the western part of Downtown and along Freight Street. The W.A.T.E.R. project will enhance streetscapes on two of Downtown's most important gateways: Freight Street and Meadow Street. Other components include better bicycle and pedestrian connections to Downtown and the train station, and improved street connectivity.

Main Street Waterbury and Waterbury Development Corporation operate a Downtown Façade Improvement Program, and a Downtown Sign and Awning Program, which provides forgivable, no-interest loans to building owners for aesthetic improvements. Physical improvements done as part of the W.A.T.E.R. project, Waterbury Next, and Downtown assistance programs help create a more attractive physical environment for private investment in Downtown Waterbury.

The Waterbury Development Corporation (WDC) is the City of Waterbury's designated economic and community development agency. WDC partners with local and regional stakeholders to provide business assistance, brownfield remediation, and neighborhood reinvestment. One of WDC's recent successes was the demolition and remediation of the old Chase Brass Works site in the Waterbury Industrial Commons (WIC). WIC now supports a renovated 160,000 square foot manufacturing facility and a new 80,000 square foot manufacturing facility is under construction. WDC is undertaking similar brownfield remediation projects on thirteen other brownfield sites throughout the City.

WORKFORCE DEVELOPMENT

The Northwest Regional Workforce Investment Board (NRWIB) oversees job training services throughout northwest Connecticut. NRWIB runs job training programs for manufacturing, construction, health and life sciences. It also offers a specialized brownfield job training program funded by the U.S. EPA.

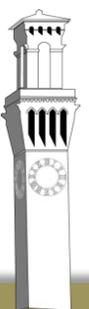
Local colleges and universities also play a crucial role in workforce development. In addition to traditional degree programs, Naugatuck Valley Community College offers specialized training in manufacturing machinery and computer-aided design through its Advanced Manufacturing Technology Center. UConn Waterbury and Post University offer degree programs in fast-growing fields such as business administration, information system, data analytics, nursing, and finance.

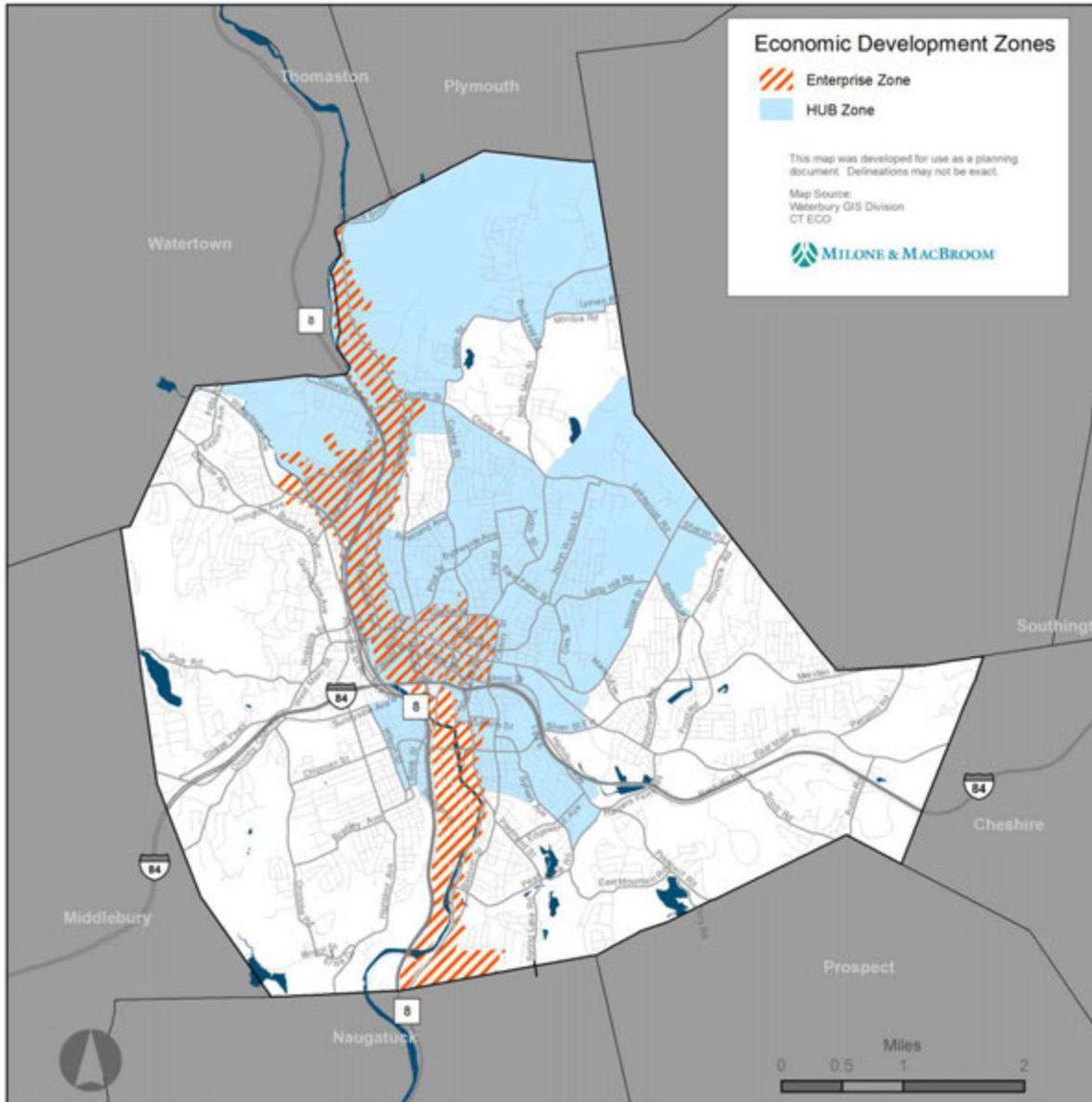


The Downtown Façade Improvement and Downtown Sign and Awning Programs help maintain the aesthetic qualities of the building stock. © City of Waterbury



The Northwest Regional Workforce Investment Board oversees regional job training programs, such as the Manufacturing Apprentice Program and Brownfields Job Training Program. © www.NRWIB.org





ECONOMIC DEVELOPMENT ZONES

ENTERPRISE ZONES

The Enterprise Zone Program is a program operated by the Connecticut DECD that offers real and personal property tax incentives and state corporate tax credits to applicants that undertake a project within the zone. Types of projects that are available for tax credits include substantial renovations of an existing facility, the construction of a new facility, or the acquisition of vacant facility by new owners.

The Waterbury Enterprise Zone is the second largest in the state, covering 1,600 properties and 2.4 square miles. The zone is located in the older industrial areas along the Naugatuck River and all of Downtown Waterbury. Manufacturers, warehouse distributors, and certain service-related businesses located outside of the Enterprise Zone boundaries are also eligible for similar funding through the Urban Jobs Program. From 2010 to 2012, twenty-five Waterbury businesses received assistance through the Enterprise Zone or Urban Jobs programs, adding a combined 231 new jobs.

HUB ZONES

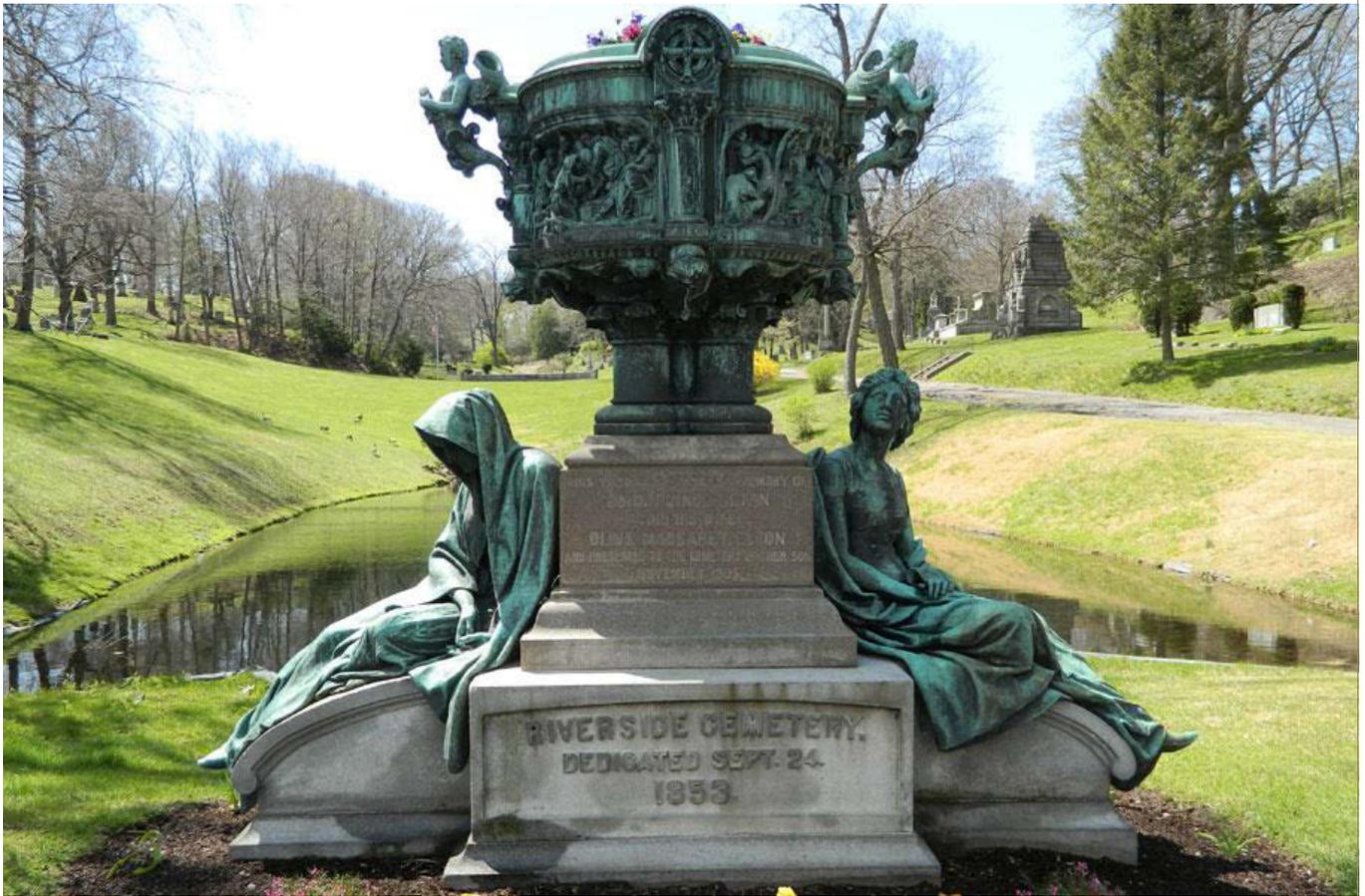
Historically Underutilized Business (HUB) Zones is a program administered by the U.S. Small Business Administration. Qualified small businesses in the HUB Zone are given price evaluation preferences and receive set-asides for federal contracts. Waterbury's HUB Zone is found primarily in the City's urban core and extends into northern neighborhoods such as Waterville, Fairmount, and Lakewood.

CONCLUSION

Like industrial areas across the country, Waterbury has undergone dramatic economic changes over the last 60 years. As the traditional manufacturing base declined, the City diversified its economy significantly. Today, it serves as a regional health care, retail, education, and government center. Manufacturing remains a small, but important part of the economy.

Waterbury's economy is closely tied to those of its neighbors. While job growth in Waterbury has been stagnant, residents have increasingly found work in surrounding towns and cities. The rise in "inter-city" commuting with neighboring cities such as Hartford, Danbury, New Haven and Bridgeport has allowed Waterbury to maintain its large and diverse labor force. As the cost of living increases in surrounding regions, Waterbury is well positioned to capture industries wishing to relocate to lower-cost locations while maintaining access to Connecticut's skilled labor force.





Photo, Riverside Cemetery Association

12. HISTORIC & CULTURAL RESOURCES

Waterbury's historic and cultural resources create the essence of the City. Culture derives from and helps shape our values and relationship with a place. A sense of place is defined by the community's interaction with the physical and built landscape of a place, over time, and along with the current sense of historic and cultural significance of places, people, and events. Culture is a process of incremental change and requires a strong understanding of the historic changes that have preceded us.

The utilization of the Plan of Conservation and Development to preserve and enhance desired aspects of Waterbury's history and culture should begin with a collective perception of the elements that contribute to the formation of the City's history. These protections can be through local ordinances and historic districts, which offer the most protection; State and Nation registers, which offer limited protections but a notion of more significance; and through education, which in and of itself offers no legal protection but aims to create individual stewards of history and culture throughout the community.



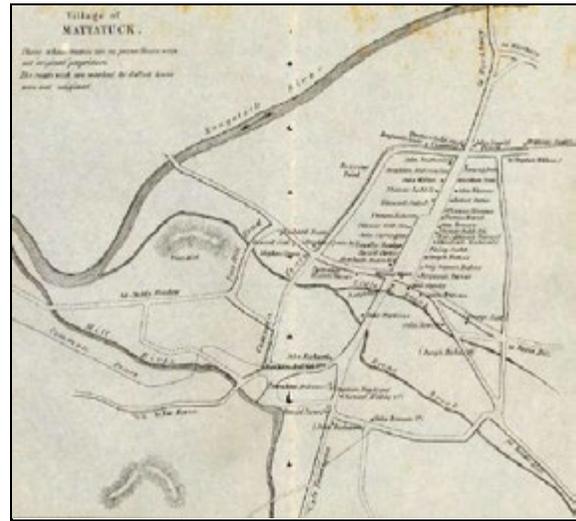
HISTORY OF WATERBURY

The City of Waterbury began as a settlement called the Mattatuck Plantation, a land grant given to settlers from Farmington, Connecticut. "Mattatuck" was an Algonquin word meaning "Place Without Trees". The plantation was initially planned and settled in 1674, located in what is now the Town Plot neighborhood, where Highland Avenue now stands. When the brutal conflict known as King Phillip's War began in 1675, however, all work on the settlement ceased and the settlers withdrew to Farmington for safety. Plans for continuing the new settlement were scuttled until 1676, when, in the aftermath of the war, the decision was made to abandon the settlement in the Town Plot area. Settlement of the east bank of the river was deemed to be preferable, where contact with and, if necessary, escape to Farmington, could be more easily achieved. Accordingly, the planned settlement was moved to the area around the current Waterbury Green.

In addition to the current City of Waterbury, the Mattatuck Plantation also included the surrounding towns of Naugatuck, Middlebury, Watertown, and Thomaston, and portions of Wolcott, Plymouth, Oxford, and Prospect. Initially, the area was settled by 40 families from Farmington. In 1686, the settlement was designated as the 28th town in the Connecticut Colony, and its name was changed from Mattatuck to Waterbury, after the many watercourses that ran through the area.

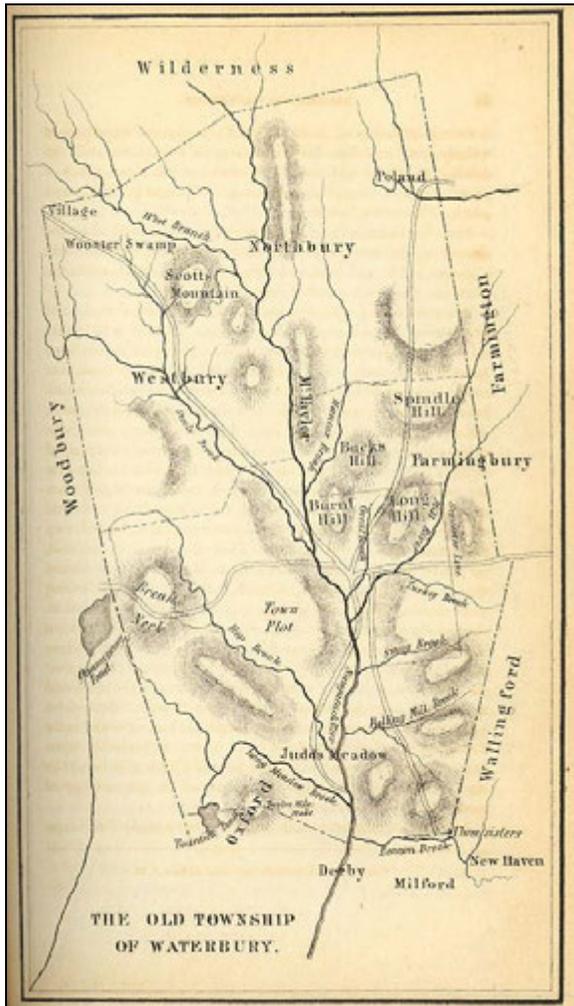
Waterbury's first church was built in 1691 on the Town Green, which was then called the "town swamp". The watery Green was eventually drained and fenced, and rows of elm trees were planted there.

Because the Town was ringed by hills and crossed by many streams and rivers, Waterbury's earliest streets developed from footpaths that were forged along the driest and most level ground available. These streets ran along East and West Main, down South Main towards New Haven, and up the shallow grade of North Main towards Farmington.



Map of the Village of Mattatuck, circa 1683 (Mattatuck Museum, <http://www.fortunestory.org>).

In these early years, the village remained an agricultural center, with most development taking place within a block of the present-day Waterbury Green. In addition to farming, residents made their living as carpenters, millers, and blacksmiths. Until the 1720s, Waterbury's population remained small, never rising above 200 people, because many would-be settlers departed rather than remaining in the town. After peace with the Native American population was established in 1712, life in the town grew safer and the population began to expand. In the mid-eighteenth century, the population grew rapidly, growing from 350 people in 1725 to 3,536 people in 1775. During this period, infrastructure expanded with the creation of new bridges and highways, and public building projects flourished with the construction of Meeting Houses, Sabbath-day houses and schools. Commerce also grew as the expanding population created markets for taverns and general stores. Small merchants engaged in trade that stretched throughout the American colonies. Several of these merchants went on to found the industries that expanded Waterbury's wealth and influence in the 19th century.



Waterbury in the 18th century, depicting the Town's original boundaries © Mattatuck Museum



1864 oil painting by Nelson Augustus Moore depicting Waterbury's rural past © Mattatuck Museum

The citizens of Waterbury were active participants during the Revolutionary War, with nearly 700 soldiers, including five African Americans, joining the ranks fighting against the British. Other citizens supported the Loyalist cause, joining the English Army or choosing to relocate to Canada after the war ended.

In the decades after the Revolution, several of Waterbury's outlying parishes broke away and became incorporated as separate towns, drastically reducing Waterbury's size and population. During this period much of Waterbury's physical development was still centered on the Green, where a new school was constructed in 1785, and where both the Congregational and Episcopal churches constructed new church buildings in 1795. Local merchants began to branch out into small scale manufacturing operations, including woolens and metal manufacturing such as nails, clocks, and pewter buttons. These businesses acted as the cradle for Waterbury's nascent brass manufacturing industry.

Much of Waterbury's architectural development came during the middle and late nineteenth century, and early twentieth century, as manufacturing growth brought increased wealth. Major shifts in the city's architectural fabric and layout occurred as a response to key events and movements in its history. These major periods of Waterbury's architectural development are:

INDUSTRIALIZATION

The rapid industrial development along Waterbury's rivers and railroad corridors led to considerable wealth and development through the second half of the nineteenth, and first years of the twentieth century. Large factory complexes sprang up around the city. The largest of which were Scovill Manufacturing, American Brass, and Chase Brass & Copper.

Scovill Manufacturing began operating around 1802, and was incorporated in 1850. The massive manufacturing complex was built and expanded over 175 years until much of the complex was demolished in 1996 to make way for the Brass Mill



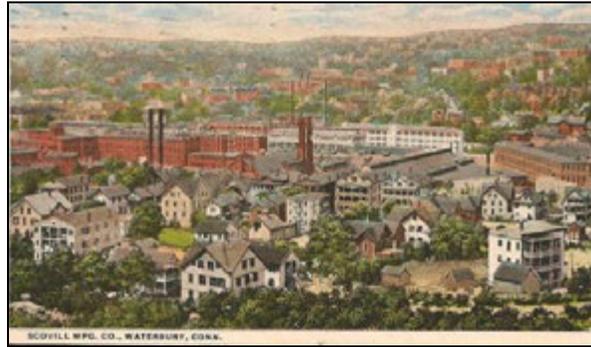
Center. Two buildings that were not demolished now house the Timexpo Museum.

American Brass Company was formed in 1899 as the consolidation of three smaller brass manufacturers, including Benedict and Burnham. As it grew and expanded, it took over many of the manufacturers in Waterbury producing brass and copper components, including for clocks. The company's headquarters, 1913, at 414–436 Meadow Street, are now part of the Waterbury Superior Court complex. The company continues as a part of the German copper company Aurubis AG, although no operations remain in Waterbury.

Benedict and Burnham, one of the original three brass companies, created in 1854 the Waterbury Clock Company. Today the company, Timex Group, USA continues to make watches, with headquarters in Middlebury. The former Waterbury Clock Company plant is the site of the most successful mill redevelopment/conversion projects in Waterbury, with rehabilitation of the main building complete, and plans for a larger aquaculture project to go into other parts of the complex.

The Chase Brass and Copper Company was incorporated in 1876. Its massive plant was nicknamed the "Mile Long Mill." The former plant is a superfund site, vacant since the company left the city in 1975. Its headquarters, however, designed by Cass Gilbert in 1916 and across from Gilbert's City Hall, now serve as municipal offices. The two municipal buildings, along with three other, make up the Cass Gilbert National Register District and are contributing properties to the Downtown Waterbury Historic District.

Housing all the workers for these factories required significant development. Areas around the factories were filled with developments of smaller single or two family housing sometimes attached, and by the twentieth century, the common triple-decker style with one or two families on each floor spread throughout the city. The houses today are apparent in nearly every Waterbury neighborhood and typify the vernacular Waterbury residential structure.



Scovill Manufacturing Co. (freewebs.com/waterbury-ct/big3.htm)



Former Waterbury Clock Company, 2012 © Google Maps



Anaconda (American Brass) Plant, Freight St. (freewebs.com/waterbury-ct/big3.htm)



34 First Avenue, 1875 © Historicbuildingsct.com

The new factories not only brought workers who needed housing, but brought considerable wealth and a new class of Waterbury residents who were interested in larger homes, often on larger lots, in park-like developments. These street-car neighborhoods, typified by Hillside and Overlook, feature large, mostly three story residences, mostly in Victorian styles, originally with large yards, and carriage houses on the back of the lots. Some of the largest and most elaborate of these homes are along Hillside Avenue, especially the Wallace Camp House (1888), the Nelson J. Welton House (1883), and Rose Hill (1852). The development of large houses continued into the twentieth century, although the styles began to change into classical and colonial revival styles and art and craft styles to reflect changing tastes and aesthetics. These houses include the George Schlegel House (1910) and the James H. Gross House (1902).

The proliferation of industrial development including the creation of new dense house developments, led to fears in the mid-nineteenth century of diseases from a lack of access to nature. Waterbury, like many cities, began to set aside land for large parks and cemeteries (then considered



Row Houses, Wood Street © Google Maps



Triple Deckers, 1957 © reewebs.com

recreation areas). Fulton Park, Hamilton Park, Riverside Cemetery, among others, were built during this period creating large parks in nearly every neighborhood of Waterbury today.

Commercial development, especially downtown, expanded to accommodate growing populations. The Howland-Hughes department store, opened in 1890, and along with many of its neighbors on Bank Street, are prime examples of Victorian commercial design. They feature a juxtaposition of smooth brick with elaborate terra-cotta, limestone, and iron decorations. The style is notable for its diversity, with Italianate, Gothic, Queen Anne, Eastlake, and Romanesque all adorning various facades. Also typical, especially along Bank Street, was a



celebration of the elevator and the new heights of buildings which this invention allowed. These tall buildings often employed the technique of banding design into at least three sections, with the ground floor of one distinct variation of the design, the top floor of a second, and the mass of the interspersed floors of a third variation of the design. Later buildings, such as the Apothecaries Hall Company building, 1894, and Bohl's Block, 1888, feature additional bands of design.

Institutional buildings followed similar styles especially the Duggan School, 1890, built for the growing population of Brooklyn, and Waterbury High School/ Crosby, 1851(d), 1873(d). Architecturally, this period is often considered to end with the devastating 1902 fire.

1902 FIRE

On the evening of February 2, 1902, a dry goods store on the west side of Bank Street, called Reid & Hughes, went up in flames. The fire quickly spread to several adjoining buildings, then jumped across Bank Street. A heavy snow storm with a driving wind began as the fire burned, spreading the flames more quickly. Newspapers at the time reported that the fire "burned rapidly through to South Main Street and jumped across that street, shriveling the buildings like paper." The fire spread to Grand Street and eventually consumed most of Waterbury's business district, leaving a wide swath of complete destruction in its wake.

The damage that Waterbury faced as a result of fire was unprecedented in the City's history up until that time. The period of reconstruction following the great fire resulted in a number of notable buildings being constructed in downtown Waterbury, many of which still stand today. While this is a period and not a style, the buildings typically reflect the change in styles between the late Victorian and Neo-Classical Beaux-Arts styles. Some, like the Weisman Building, are decorative, but many more are simple in design, probably reflecting the haste and thrift of rebuilding post-disaster. The fire also greatly reduced the inventory in wooden houses near downtown, making houses such as the Enoch Hibbard House (1864), The Elisha Leavenworth House (1845), and



George Schlegel House, 270 W Main St, 1910 (Historicbuildingsct.com)



Hamilton Park (Historicbuildingsct.com/outeast.htm)



The buildings on Grand Street across from the First Baptist Church and Post Office were destroyed in The Great Fire of 1902, but the facade of the Waterbury American newspaper building (center) survived. (freewebs.com/waterbury-ct/uptown.htm)

the George Grannis House (1864) more rare in Waterbury than in other Connecticut towns.

CITY BEAUTIFUL AND BEAUX-ARTS ERA

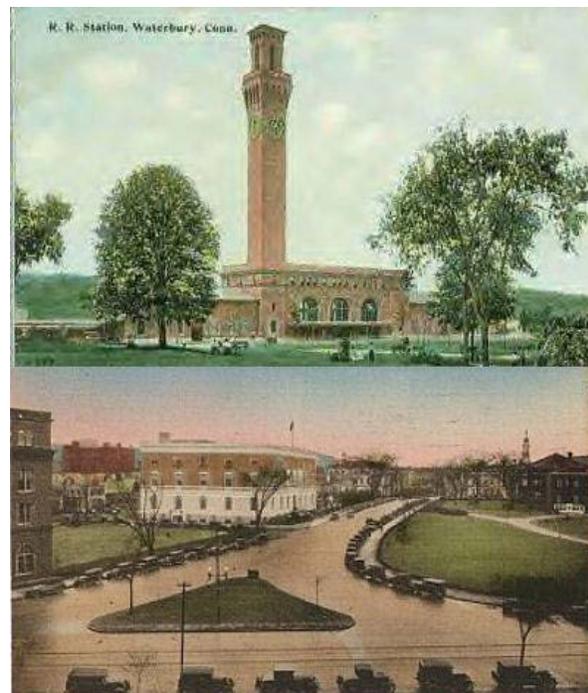
The 1902 fire in Waterbury's downtown core left a vacuum that called out for architecture and streetscapes that seemed suitable for this prominent city that was replete with manufacturing wealth. At that time, many highly esteemed architects on both sides of the Atlantic were educated at or inspired by Paris' École des Beaux-Arts (School of Fine Arts). Beaux-Arts architecture encompassed various styles but drew on an established set of aesthetic principles that emphasized symmetry, intimate knowledge of historic models, precision, grandiosity, and monumental scale.

The Beaux-Arts aesthetic was extensively employed at the World's Columbian Exposition (a World's Fair) that took place in Chicago in 1893, and extended the careful consideration of composition and proportion that Beaux-Arts architects employed in individual buildings to plazas, streetscapes, and entire model cities. The Exposition popularized the idea that groups of buildings and the spaces between them could be treated in the same way that individual design elements were treated within a single Beaux-Arts building.

The City Beautiful Movement drew heavily from these principles of architectural order, dignity, and harmony, and extrapolated these principles into the wider context of city planning. City Beautiful advocates believed that beauty, formality, and monumental grandeur in public spaces improved residents' quality of life, and engendered social order.

The Beaux-Arts school and City Beautiful Movement heavily influenced development in Waterbury during the early decades of the 20th century. An early urban renewal program cleared the surviving tenement buildings in the downtown to make way for the new Library Park, and to realign the roads to lead straight to the site of a new train station. Architect Cass Gilbert created a new municipal complex along the newly straightened Grand Street, including the expansion of Library Park, leading to McKim, Mead, & White's Italianate Union (or New Haven) Train Station. City Hall, the Chase Building,

and the Basilica of the Immaculate Conception are prime examples from this period, as are the commercial buildings of the Elton Hotel, Masonic Temple, the Telephone Building, the YMCA building, banks including Gilbert's Waterbury Savings Bank and Dime Savings Bank, and in 1921 the Palace Theater. Additionally, the construction of new campuses for Chase Collegiate School (then St. Margaret's), Sacred Heart High School (then Waterbury Catholic School), Bunker Hill School (the original Wilby High School building), and the expansion of the Webster School building ushered in new academic campuses for the growing city.



Train Station and the view towards the green.
freewebs.com/waterbury-ct/uptown.htm

MODERNISM AND URBAN RENEWAL

As the 20th century continued, Beaux-Arts monuments were increasingly viewed as stodgy and old-fashioned as modern architecture gained a foothold in the American imagination. Inspired by the machine age, Art Deco architecture included sleek decorative elements that crossed mediums and were utilized in formats as diverse as industrial design, jewelry, automobiles, and furniture. Although the Great Depression put a halt to much of Waterbury's large scale development, the Brown



Building, Johnson Building, and the current Post Office were constructed in the early 1930s in the Art Deco style.

In the middle and later 20th century, modern architecture grew more prominent in Waterbury. The city's examples of modern architecture encompass a variety of sub-genres, but in general they reject classical details and elaborate decorative motifs in favor of simple, minimally adorned facades that used modern structural principles and rely on 20th century materials such as concrete, glass, and steel.

Downtown, several large, modern office and bank buildings have been constructed. Of particular architectural interest is the Webster Bank headquarters at Grand and Bank Street, the Sovereign Bank headquarters, Cesar Pelli's addition to the Mattatuck Museum, the University of Connecticut's Waterbury Campus, the Waterbury Courthouse, and the Waterbury Superior Court building, renovated by JCJ Architects.

Modern architecture's embrace of utility and streamlined forms, and rejection of much of the history that preceded it was mirrored in some city planning ideas of the period. Outside of some beloved landmarks, surviving 19th and early 20th century buildings were frequently viewed as decrepit eyesores that were not in keeping with the modern innovations, amenities, and lifestyles that were taking hold, most notably, the widespread growth of private auto ownership.

Across the nation, city planners sought to eliminate facets of their old cities that they viewed as problematic through a process that was euphemistically called "urban renewal". The Federal Housing Act of 1950 provided funds to cities to acquire areas that were perceived to be slums, which could then be turned over to private development, and typically populated with simple (sometimes stark) modern buildings and structures. The expansion of the federal highway system during this same period accelerated this process, as older, poorer neighborhoods were torn down or cut into pieces to accommodate new and modern highways such as I-84.

In 1950, the City identified a 22-block area in the North End that containing 2,000 dwellings on 128 acres of land as a priority area for redevelopment.

The wholesale destruction that followed the flood that hit Waterbury and surrounding communities in 1955 exacerbated this sense that it was time to redevelop. The Mattatuck Museum writes that, "following racial and economic tensions in the area in the 1960s, the city implemented a federally-funded project to clear dwellings categorized as substandard. Many homes and businesses in the area were removed. At the same time, the urban renewal project relocated factories out of the area and other manufacturing plants ceased operations in a changing national and world economy."

Additionally, according to the 1983 National Register of Historic Places *Downtown Waterbury Historic District* nomination, "the Buckingham Block (McKim, Mead and White, c. 1900), which stood at the corner of Grand and Bank Streets; the Barlow (Wilfred E. Griggs, 1909) and the Democrat Building (Joseph T. Smith, 1916), which stood side-by-side on Grand Street [were] demolished by urban renewal in 1979; and Baubee's Corner, at West Main and Bank Streets, a brick building with end chimneys which represented urban-row architecture inspired by Federal-style building [was demolished]. Other buildings have been unsympathetically modernized, such as the Rietner Building (now the Chamber of Commerce) on North Main Street."

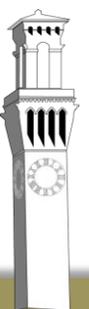


Mattatuck Museum (Historicbuildingsct.com)

EXCHANGE PLACE, 1885-2012



1885-1953 via www.freewebs.com/waterbury-ct/



HISTORY OF PLANNING IN WATERBURY

Formal public planning efforts in Connecticut began auspiciously, when in 1907, Hartford became the first city in America to maintain a permanent planning board, its Commission on the City Plan. Planning commissions were created around the state and nation in the decades that followed. Waterbury's City Plan Commission was in operation by 1945, when it authored its Six Year Plan of Public Improvements for the City of Waterbury, Connecticut.

In 1959, the Commission authored Waterbury, a General Plan for Development. Among its many focuses, this plan sought to limit the construction of new commercial and industrial buildings within the floodplain, and prohibited residential construction within the floodplain.

In 1971, the Commission on the City Plan adopted a new document, simply called the Comprehensive Plan, which was produced with the aid of planning consultants Raymond, Parish & Pine. This plan fits clearly into the mold of comprehensive planning documents as they would be recognized today, and many of the plan's recommendations remain relevant to Waterbury now. The 1971 plan focused on four core elements: Land Use, Schools, Recreation, and Circulation.

The Land Use element of the plan laid out the system of zoning regulations that currently govern land use and development patterns in the City. The plan proposed three residential zones: High Density, Medium Density, and Low Density. It recognized four major retail centers: the Central Business District (CBD), the Naugatuck Valley Mall, Waterbury Plaza on Chase Avenue, and Colonial Plaza. The plan also introduced two other commercial categories: Neighborhood Commercial, for small convenience retail in otherwise residential areas; and General Commercial, which could be applied to older commercial corridors radiating out from the CBD. The plan also introduced two industrial districts: General Industrial and Industrial Park.

The 1971 Plan's recreation element proposed park and open space expansions that would have more than doubled its inventory of developed parkland from 760 acres to nearly 1,600 acres. Much of this planned park expansion focused on the City's lakes

and waterways, and the land that immediately surrounded them. Just over 500 acres of land were targeted for acquisition, at an estimated cost of \$2 million in 1971 dollars (averaging at \$4,000 per acre). Among the areas to be acquired included Pritchard's Pond and Larchmont Lake; land around the Great Brook Reservoir; and a large extension of Murray Park (including lands now developed).

The Circulation element of the plan recommended roadway improvements for more than 20 roads. It also proposed new and connecting streets, including a completed Clough Road, a connector between Sheffield and Boyden, and the sections of Baldwin and Silver streets that span I-84. The plan also addressed the City's bus system, proposing service improvements and additional amenities for riders, such as bus shelters.

In 1999, Waterbury began the process of updating its 1971 Comprehensive Plan. The City retained consultant Buckhurst Fish & Jacquemart, Inc. to prepare an update that would consist of two phases, an initial report including background data and existing conditions, called a Community Assessment Report, and a second report that projected future land uses and gave recommendations. The Community Assessment Report was completed as planned, but financial constraints prevented the second report from ever coming to fruition. The completed 1999 Community Assessment Report contained background studies, and data, and analyzed the City's current land use, demography, and infrastructure.

By the year 2005, the City was financially ready to complete the comprehensive plan that it had begun in 1999. It retained consultants Phillips Preiss Shapiro Associates, Inc., and Wilbur Smith Associates, Inc., who updated the Community Assessment Report with more recent data and recently completed development projects. The new consultants designated the updated Community Assessment as Volume II of the Plan, and carried out the long-awaited planning activities that could provide guidance to the City's future development, designating this future-looking portion of the plan as Volume I. The bulk of this 2005 Plan presents recommendations on land use; redevelopment; circulation; economic development; parks, recreation, and open space; infrastructure; and schools. It concludes by examining other Plans of

Conservation and Development that relate to the City of Waterbury, and addressing additional issues that are statutorily required, such as affordable housing.

HISTORIC INVENTORY AND DESIGNATION

Waterbury has a long and diverse history and prides itself in its continued preservation of that history. Within the City of Waterbury there are four Historic Districts listed nationally and on the State Register. The National Register of Historic Places (NRHP) is the U.S. federal government's official list of districts, sites, buildings, structures, and objects deemed worthy of preservation. The State Register of Historic Places is Connecticut's official listing of structures and sites that characterize the historical development of the state. Areas on the State and National Registers are not necessarily protected from alteration or demolition, however the listing is honorific and does qualify properties for Historic Tax Credits for rehabilitation.

NHRP listing does provide some protections for historic properties. Section 106 of the National Historic Preservation Act guarantees that when federal, federally licensed, and federally assisted projects are undertaken, the impact of the project on listed properties will be considered, and negative impacts will be mitigated. NHRP listing also affords eligibility for certain tax provisions; and qualification for Federal grants for historic preservation. However, national or state designation does not offer protection from destruction or substantial alteration by private owners when no federal monies are involved. Preservation of historic properties is strongest when the property is owned by a preservation organization or historic society, or when it is the subject of a preservation easement. Similar to a conservation easement, the owner of a historic property can sell or donate the right to alter the property to a qualified organization, typically a non-profit. In many instances, the donation of a preservation easement is considered a charitable donation, and qualifies the property owner to a federal income tax deduction.

Another common method of protecting historic properties is local designation either as part of a

historic district or as a stand-alone historic property. Currently, Waterbury has no locally designated historic districts or properties.

In 2013, the State authorized municipalities to "Protect the historic or architectural character of properties or districts that are listed on or under consideration for, the National Register of Historic Places..." [PA 13-181] This allows municipalities to legally designate districts and sites already on the NRHP as locally protected, without the individual permission of the landowners. Waterbury has considerable historic assets that are on the NHRP and not locally protected, and should consider adding legal protection for the properties through local ordinances.

CONNECTICUT REGISTER OF HISTORIC PLACES

- *Catholic Charities, 56 Church Street, 1845, Green Revival*
- *Leavenworth House, 35 Park Place, Greek Revival*
- *Mattatuck Museum, 119 West Main Street, 1850, Italianate*
- *New Haven Rail Road Station (Union Station), 389 Meadow St, 1909, Richardsonian-Romanesque, McKim, Mead, & White*
- *Rose Hill, 63 Prospect Street, 1850*
- *Waterbury Business & Professional Women's Club, 269-300 West Main St, Italianate*
- *Residence, 1 Welton Place, 1860-75*
- *Residence, 33 Church St, 1860, Italianate*
- *Residence, 41 Church St, 1860-70, Victorian Gothic*
- *Chase Building, 236 Grand St, 1917, Neo-Classical Palazzo, Cass Gilbert*
- *City Hall, 1914, Neo-Classical Palazzo, Cass Gilbert*
- *Water Fountain/ Monument, North Main Street, 1888*
- *The Rectory Building (St. Patrick's Hall), 110-118 East Main Street, 1886.*

NATIONAL REGISTER OF HISTORIC PLACES, PROPERTIES

- *George S Abbott, Building, 235-247 N. Main St.*
- *Benedict-Miller House, 32 Hillside Ave.*



- Beth El, 359--375 Cooke St.
- Bishop School, 178 Bishop St.
- Elton Hotel, 16-30 W. Main St.
- Lewis Fulton, Memorial Park, bounded by Cook, Pine, Fern and Charlotte Sts.
- Hamilton Park, bounded by Silver St., E. Main St., Idylwood Ave., Plank Rd., the Mad River and I-84
- Enoch Hubbard House and George Grannis, 41 Church St. and 33 Church St.
- John Kendrick, 119 W. Main St.
- Matthews and Willard Factory, 16 Cherry Ave.
- Palace Theater, 86-110 E. Main St.
- Riverside Cemetery, Riverside St., from Sunnyside to Summit Sts.
- Sheffield Street Bridge, Sheffield St. over Hancock Brook
- Stapleton Building, 751 N. Main St.
- Washington Avenue Bridge, Washington Ave. over Mad River
- Waterbury Brass Mill, Idlewood Ave. in Hamilton Park
- Waterbury Clock Company, N. Elm, Cherry Sts. and Cherry Ave.
- Waterbury Municipal Center Complex, 235, 236 Grand St; 7, 35, 43 Field St.
- Waterbury Union Station, 389 Meadow St.
- Webster School, Easton Ave. at Aetna St.
- Wilby High School, 260 Grove St.

NATIONAL REGISTER OF HISTORIC PLACES, DISTRICTS

- Bank Street Historic District, 207-231 Bank Street
- Downtown Waterbury Historic District, bounded by Main, Meadow, and Elm Sts.
- Hillside Historic District, bounded by Woodlawn Terr., W. Main, and Willow

- Overlook Historic District, bounded by Hecla St., Farmington and Columbia Blvd., Cables Ave. and Clowes Terr., Lincoln and Fiske Sts.

RECENT/ ONGOING HISTORIC AND CULTURAL PROJECTS

Adaptive reuse of the long abandoned **Rectory** for use as an educational facility by the University of Connecticut and for commercial use at the building's ground floor.

Ongoing conversion of the **Waterbury Clock Company** factory on Cherry and North Elm Streets to offices and other uses.

Rehabilitation of **Apothecaries Hall** and other downtown buildings into market rate housing.

Waterbury Community Investment Program and Webster Bank cooperated on this complete street revitalization of 10 homes in the historic Hillside Neighborhood at **Gaffney Place**.

Redevelopment of the historic **Carroll Building** into 35 units of housing.

CULTURAL ORGANIZATIONS & SITES

Mattatuck Museum

Named after the original settlement, the museum was established in 1912 to celebrate Connecticut artists, sculptors, and to reflect the industrial history of the State. Originally located opposite its present location on the Town Green, the museum has a café, courtyard, and meeting space at its modern facility, which was completed in 1986. It is the only museum in the State with a sole Connecticut focus.

Holy Land, USA

Located high above the City on Pine Hill, this attraction is noted by the fifty-eight foot cross at the summit. Construction of the site took thirty years to complete. Miniature houses and scenes of Bethlehem and Jerusalem line walkways to the peak of the seventeen-acre site. Once a popular destination, disrepair has overtaken the site, and it is

unknown whether restoration of the attraction is feasible. The site is currently closed to the public

Palace Theater

Designed by notable theater and cinema architect Thomas Lamb, the Place is in the Renaissance Revival style, featuring an eclectic mix of Greek, Roman, Arabic and Federal motifs. The theater opened in 1922 and was renovated by the City in 2004 as part of the creation of the Waterbury Arts Magnet School. It is a now cultural and tourist attraction as well as a performing arts venue. The Palace was added to the National Register of Historic places in 1983.

Seven Angels Theater

Located in the Historic Hamilton Park Pavilion, the Seven Angels Theater presents musicals and dramatic performances by regional and touring companies and productions.

Arts & Cultural Collaborative Waterbury Region

The Arts & Culture Collaborative (ACC) was created to strengthen and support the arts in the Waterbury region as a central component of furthering economic and cultural development and to enhance the quality of life for area residents. Services provided by the ACC include marketing, advocacy, facilitating alliances and opportunities for its members and increasing awareness to the community.

Obey Theatre Group

The mission of Obey Theatre is to bring quality African-American theatrical productions to the local community and beyond.

Shakespeare Productions

This professional theater company reaches a Northeast audience of adults and students alike with outdoor and in-studio performances, Saturday and private acting classes, school & camp tours, and residencies.

Sounds of Afrika, Afrikan Drum and Dance

This drum and dance troupe promotes African and African-American culture in local communities and schools.

Unity Dance Ensemble

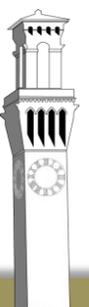
The ensemble is a performance arts organization that provides dance training to youth in the greater Waterbury area.

Waterbury Chorale

The Chorale brings outstanding choral music to the Greater Waterbury area, while providing an opportunity for amateur and semi-professional singers to enjoy the performance of great musical literature. Since 1967, the Chorale has performed a wide range of repertoire, from established masterworks to varied programs of contemporary music and music from other cultures.

Waterbury Symphony Orchestra

The Orchestra has spent the past several decades promoting the understanding, appreciation and enjoyment of symphonic and orchestral music. Originally incorporated as the Waterbury Civic Orchestra (1940), the Symphony and its mission have grown in both vision and artistic merit, expanding from a community orchestra to the Waterbury Symphony Orchestra (1956). For the past 20 seasons, the WSO has been led by Leif Bjaland.



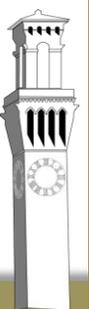


A view of the East End

13. NEIGHBORHOODS

The majority of Waterbury residents' daily life occurs in each of the city's more than 40 neighborhoods. These neighborhoods are where residents live, shop, go to school, and where they have the majority of their interaction with City services and policies. Each neighborhood has a distinctive character, shaped by its economic base, history, and geography. Waterbury's neighborhoods span the City's history. The urban core neighborhoods surrounding downtown were the first to develop in the 19th century given their proximity to water, transportation, and factories. Early suburban style neighborhoods, such as Overlook began to develop in the early 20th century as transportation improvements such as streetcars permitted longer commutes. Suburban style development accelerated in the post-World War II years as residents left the crowded urban core for lower density residential areas on the City's outskirts.

The Plan of Conservation and Development presents data and recommendations for the City of Waterbury as a whole, however each neighborhood has individual characteristics that make certain recommendations more or less critical for the next ten years. This section aims to establish some of the neighborhood nuances, in order to help guide policies to the areas where they will have the most impact.



JURISDICTIONS

The City of Waterbury maintains a list of 47 individual neighborhoods. Forty-two of these neighborhoods are traditional, mostly residential in nature with neighborhood scale commercial and institutional land-uses, with the exception of the Central Business District, whose institutional and commercial development has a city-wide or regional scale.

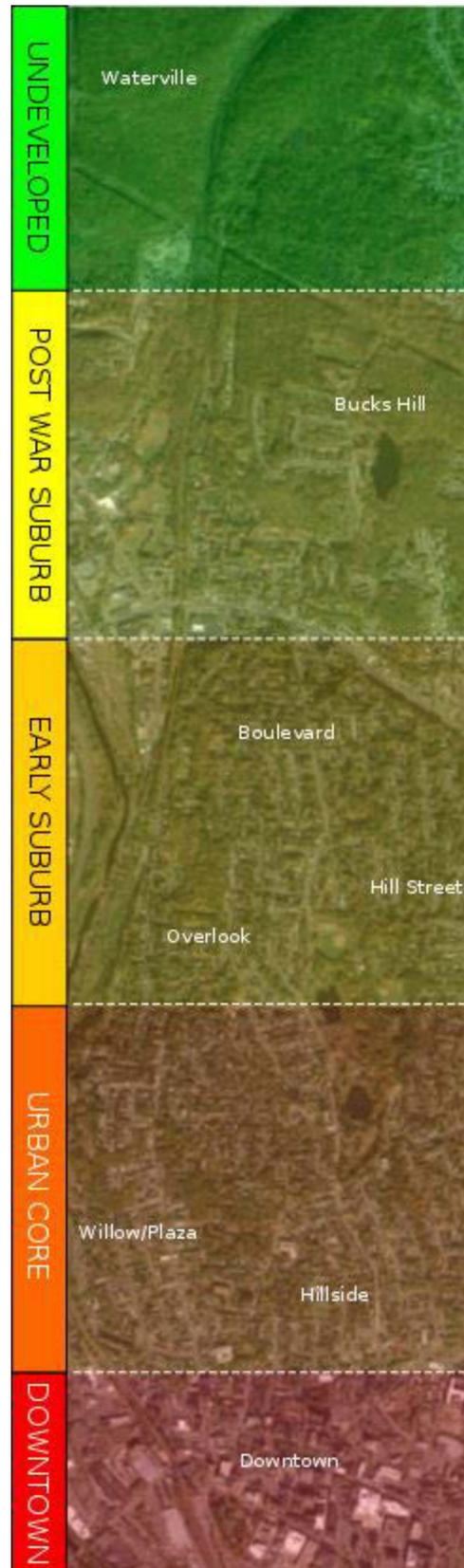
Waterbury is divided into four quadrants that are roughly separated by Interstate 84 and the Naugatuck River (parallel to Route 8). These highways and waterways act as physical barriers that shape neighborhood identities. Some neighborhoods (such as the West End) were developed before the highways were built, but now are separated into two or more distinct areas. The map on the following page shows the locations of Waterbury's neighborhoods and the quadrants that are used in this chapter.

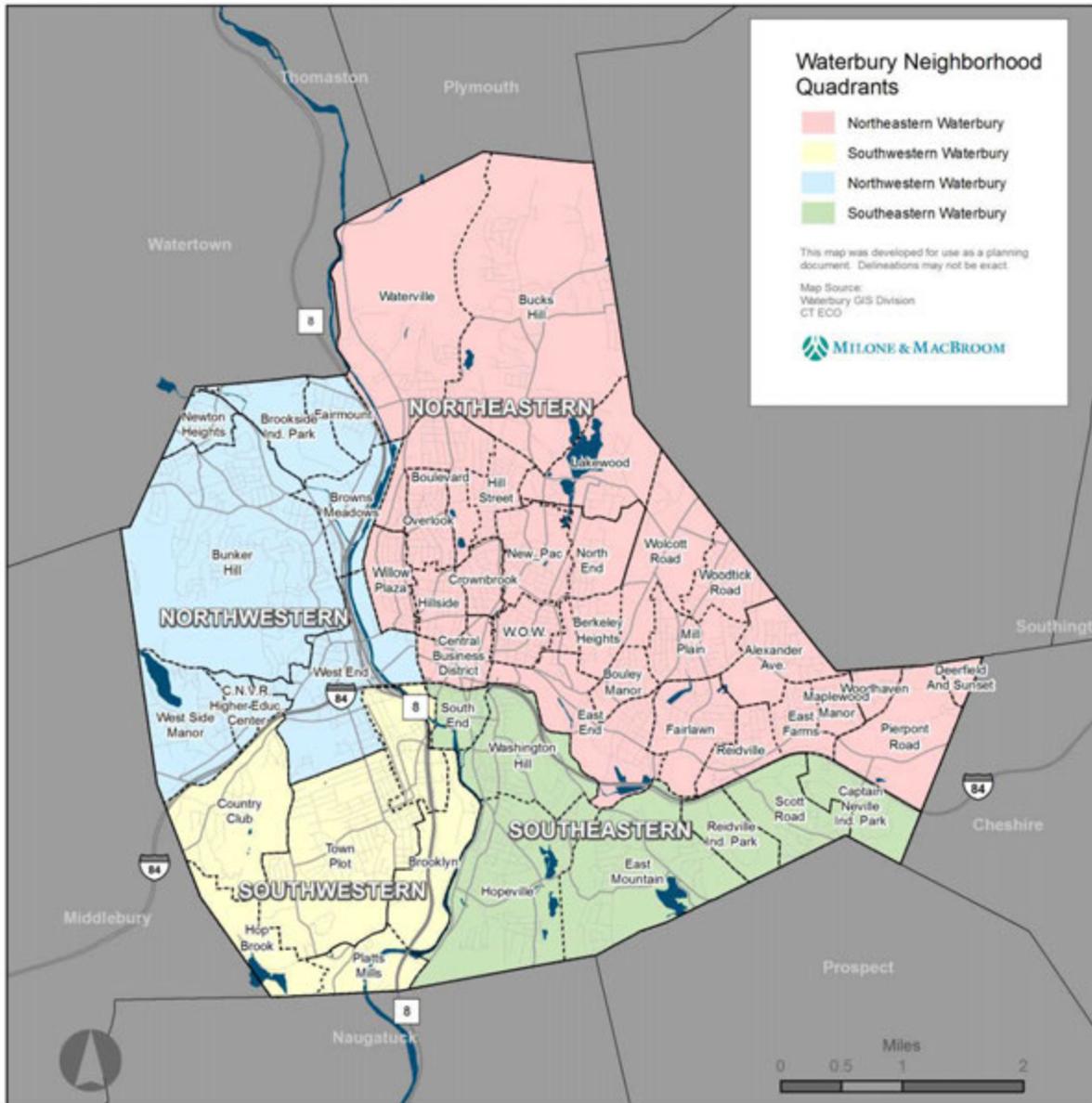
NEIGHBORHOOD REVITALIZATION ZONES (NRZs)

The State of Connecticut enacted a law in 1995 in order to establish a process for the development of Neighborhood Revitalization Zones (NRZs). According to the Office of Policy and Management, "the objective of the NRZ process is to revitalize neighborhoods through the collaborative involvement of residents, businesses and government to determine the vision and priorities of the individual neighborhoods. The NRZ process provides a mechanism for local stakeholders, along with local municipal officials, to develop a strategic plan to revitalize their neighborhood."

In Waterbury, the following NRZs are active:

- Brooklyn Neighborhood Association NRZ
- St. Margaret/Willow Plaza NRZ
- Walnut Orange Walsh NRZ

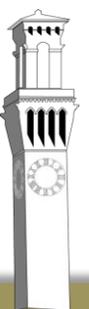


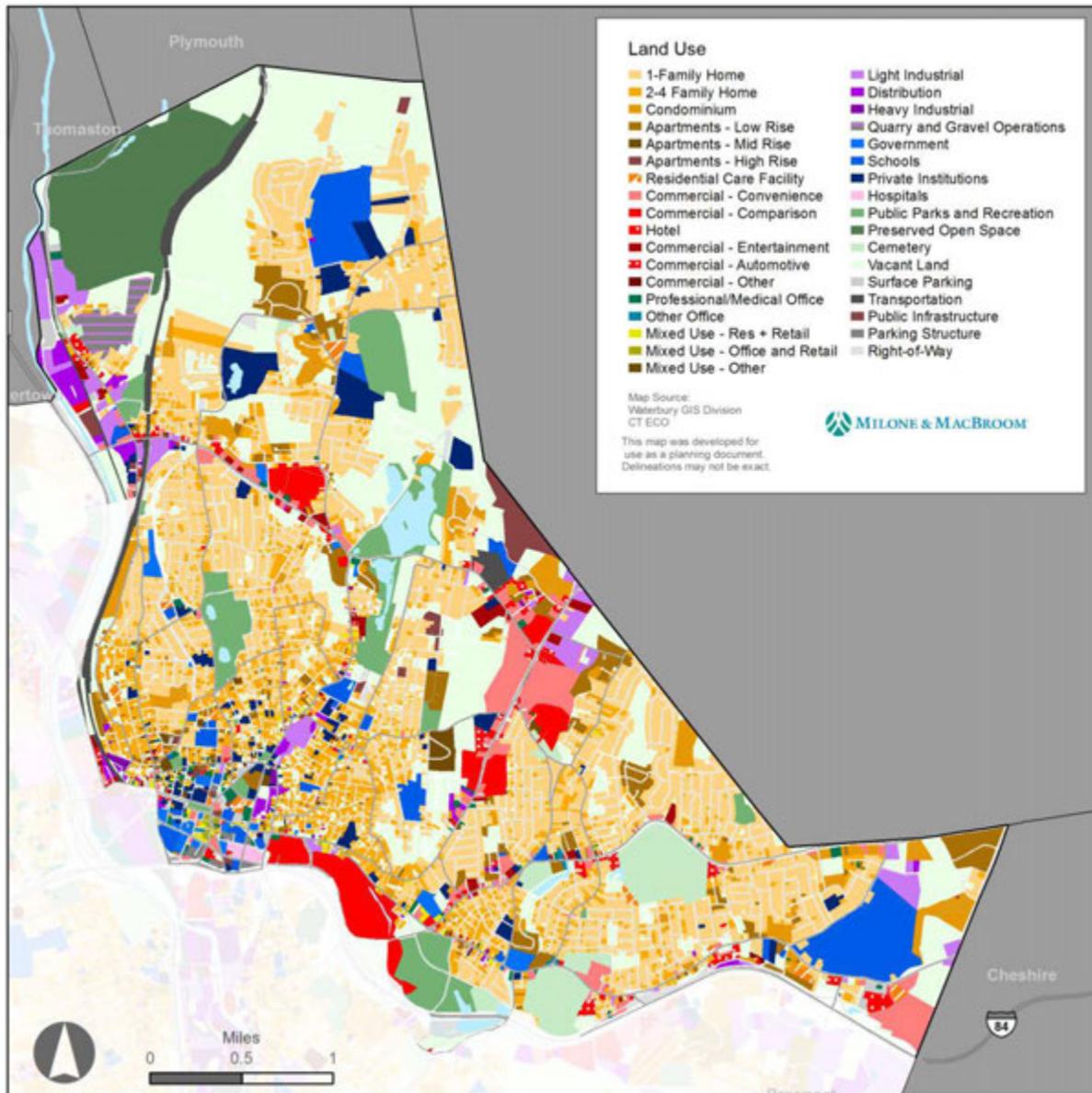


NEIGHBORHOOD ORGANIZATIONS

In addition to the three active NRZs, there are twenty-one active neighborhood groups in Waterbury. These groups encourage citizen involvement in neighborhood and city issues and sponsor community events. Sixteen of these neighborhood groups, including the three NRZs, comprise the Waterbury Neighborhood Council.

In addition to formal groups, Waterbury's neighborhoods contain a myriad of informal and institutional groups including churches, schools, sports and social clubs, and non-profit organizations that help shape and maintain strong neighborhood identities.





NORTHEASTERN WATERBURY

The northeastern quadrant of Waterbury is located on the east side of the Naugatuck River and north of Interstate 84. It covers nearly half of the City's land area and is home to 27 neighborhoods that vary from dense, urban core areas to low density suburban areas. It contains Waterbury's major commercial centers including Wolcott Street, Brass Mill Center Mall, Chase Avenue, and East Main Street.

The area is home to Downtown Waterbury, which contains many of the City's major institutions such as

government offices, churches, higher education, social services, and cultural sites. Outside of downtown and commercial areas, northeastern Waterbury is primarily residential in character. Higher density residential uses are generally concentrated in the urban core neighborhoods surrounding downtown. Outer neighborhoods such as Waterville and Bucks Hill have large tracts of vacant land which may be developed in the future as the City's population grows.

NEIGHBORHOOD ORGANIZATIONS

Northeastern Waterbury is represented by thirteen neighborhood organizations. Organizations that are members of the Waterbury Neighborhood Council are indicated with an asterisk (*).

- Bouley Manor Neighborhood Association
- Bucks Hill Community Club
- Crownbrook Neighborhood Association *
- East End Community Club
- Hillside Historic District Neighborhood Association *
- Historic Overlook Community Club
- Lakewood Neighborhood Association *
- Main Street Waterbury
- NEWPAC Neighborhood Association *
- St. Margaret/Willow Plaza Neighborhood Revitalization Zone *
- Upper Fulton Park Neighborhood Association *
- Waterville Community Club *
- Walnut Orange Walsh Neighborhood Revitalization Zone *



The Waterbury Green looking towards the Mattatuck Museum



An American Foursquare style home in the Overlook neighborhood

LAND USE AND DEMOGRAPHICS

Demographics

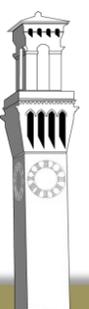
Population (2010):	60,468
Land Area (Acres):	8,811
Population Density:	4,392 per sq. mi.

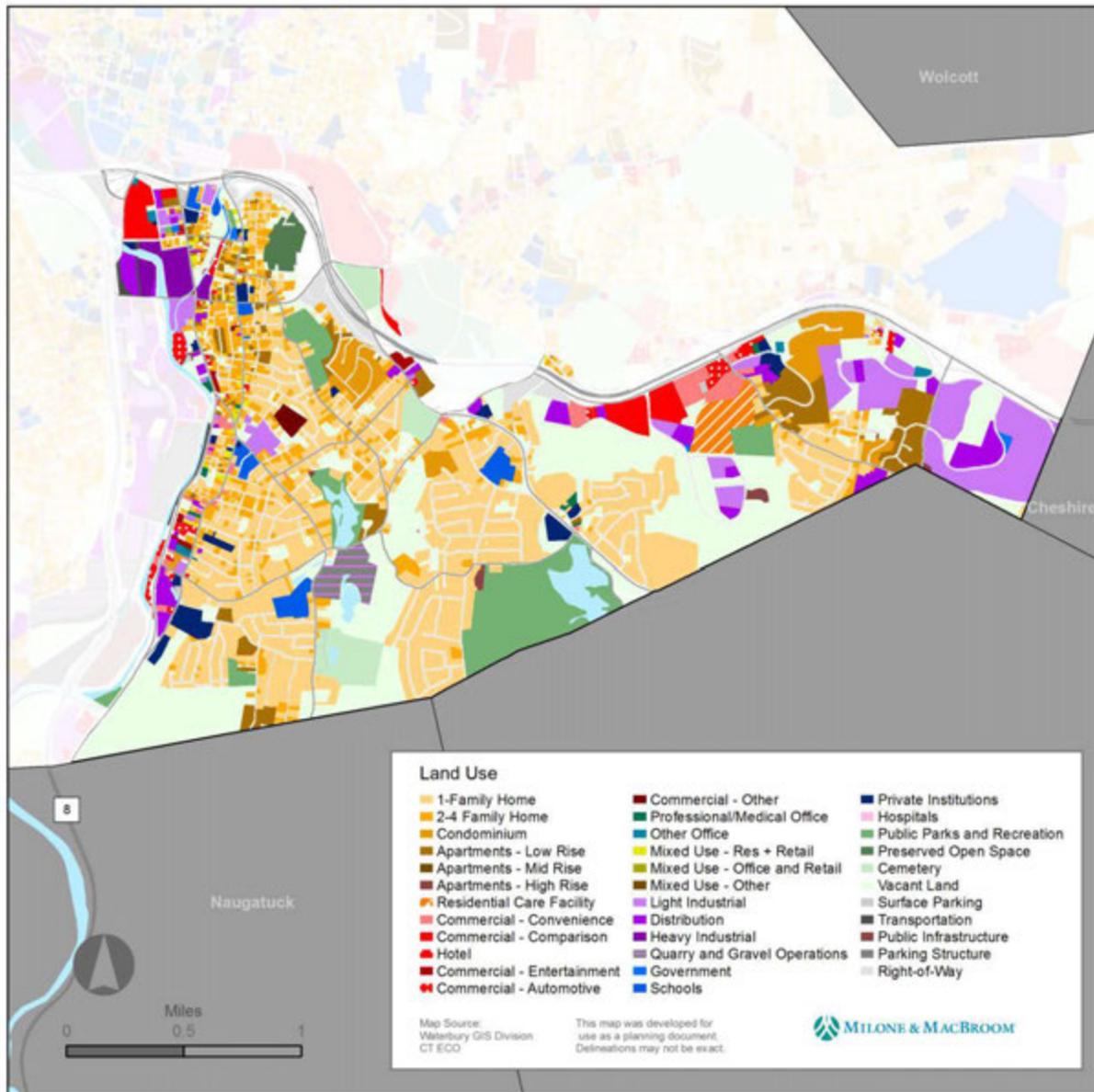
Top 5 Land Use Classes

- Residential (34%)
- Vacant Land (20%)
- Transportation (15%)
- Open Space (11%)
- Institutional (7%)



Mixed-use development along East Main Street. © Bing Maps





SOUTHEASTERN WATERBURY

Southeastern Waterbury is located on the east side of the Naugatuck River and south of Interstate 84. Development patterns in the southeastern quadrant are heavily influenced by the area's geography and access to transportation. The flat land along the Naugatuck River (South End, Washington Hill, and western Hopeville) was developed in the 19th century as factories sprung up along the Naugatuck River and its tributaries.

The construction of Interstate 84 in the early 1960s led to residential development in the 'upland' neighborhoods such as East Mountain and Scott Road. As residents moved away from the riverfront, so did industry. Today many of Waterbury's manufacturers are located in modern industrial parks such as Captain Neville and Reidville Industrial Parks that are located close to the highway system.

NEIGHBORHOOD ORGANIZATIONS

Southeastern Waterbury is represented by six neighborhood organizations. Organizations that are members of the Waterbury Neighborhood Council are indicated with an asterisk (*).

- East Mountain Neighborhood Association
- Gilmartin Community Club *
- Hopeville Neighborhood Association *
- Mohawk Park Civic Club
- South End Neighborhood Association
- Washington Park Neighborhood Association *



St. Francis Xavier Church (left) and Washington Hill School (right) are two of the institutional anchors in the neighborhood © Bing Maps.

LAND USE AND DEMOGRAPHICS

Demographics

Population (2010): 18,310
 Land Area (Acres): 3,102
 Population Density: 3,778 per sq. mi.

Top 5 Land Use Classes

- Residential (36%)
- Vacant Land (20%)
- Transportation (15%)
- Industrial (10%)
- Open Space (10%)

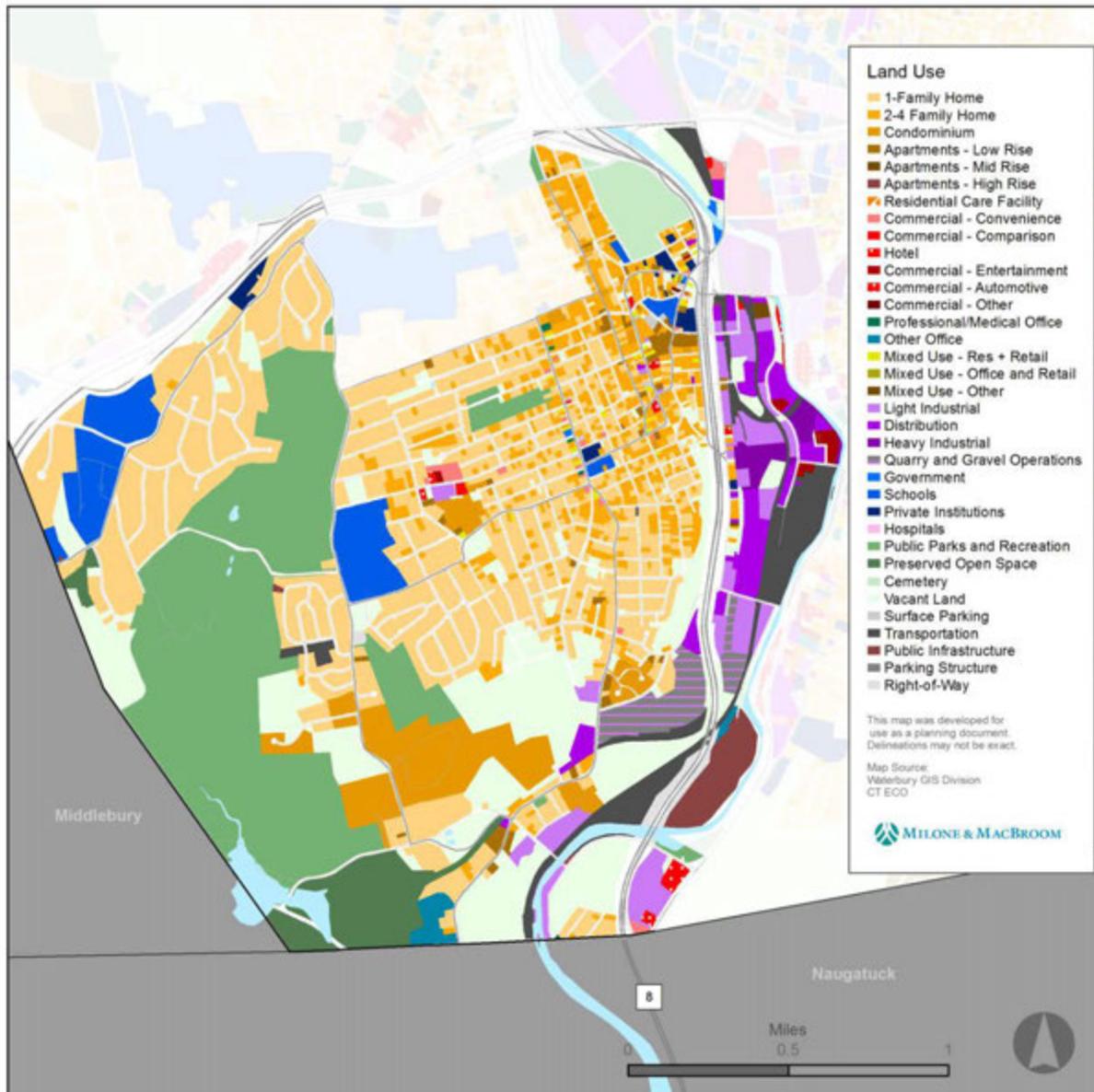


A rendering of the new Liberty Commons apartment building on South Main Street © The Carabetta Companies



Reidville Drive is one of the City's major retail corridors © Bing Maps.





SOUTHWESTERN WATERBURY

Southwestern Waterbury, the City's smallest quadrant, is located on the western side of the Naugatuck River and south of Interstate 84. Similar to the southeastern quadrant, its development is closely tied to its location in the steep Naugatuck River Valley. The industrial area along the Naugatuck's western bank was once the heart of Waterbury's brass industry. The area was an attractive location for factories due to its proximity to the railroad and waterways. Older residential

areas such as Brooklyn and eastern Town Plot were developed in the late 19th century to house factory workers.

As the City's population grew throughout the early 20th century, outer areas such as Country Club were developed with low density, single-family homes. The southwest is home Post University and Hop Brook Recreation Area, which doubles as a flood protection area.

NEIGHBORHOOD ORGANIZATIONS

Southwestern Waterbury is represented by three neighborhood organizations. Organizations that are members of the Waterbury Neighborhood Council are indicated with an asterisk (*).

- Brooklyn Neighborhood Association NRZ *
- Country Club Neighborhood Association *
- Town Plot Neighborhood Association *

LAND USE AND DEMOGRAPHICS

Demographics

Population (2010): 14,675
 Land Area (Acres): 2,725
 Population Density: 3,447 per sq. mi.

Top 5 Land Use Classes

- Residential (34%)
- Open Space (21%)
- Transportation (14%)
- Vacant (12%)
- Industrial (7%)



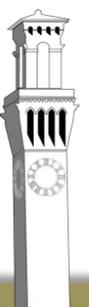
The recently renovated Duggan School on Bank Street ©Google Maps

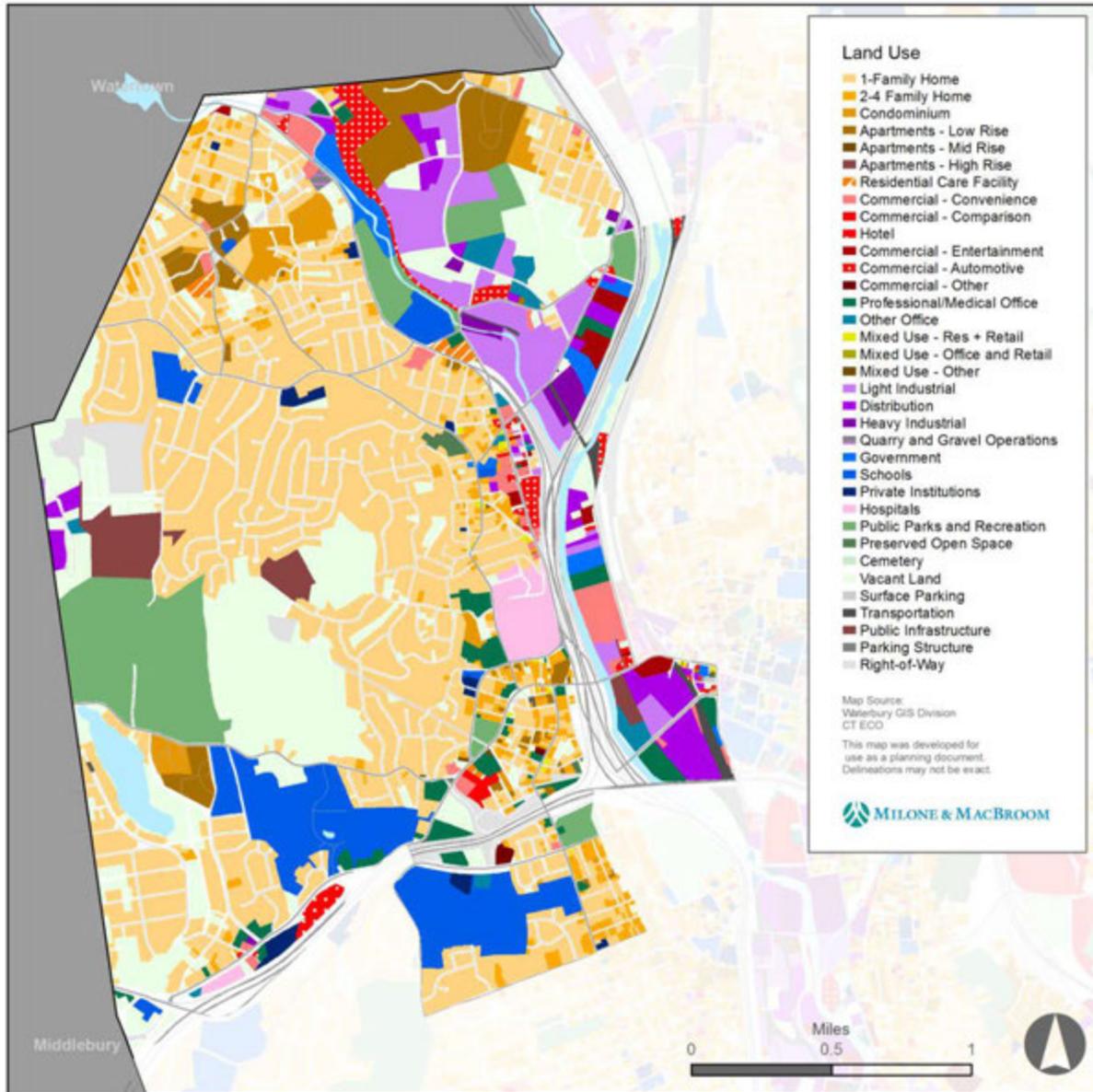


Highland Avenue, Town Plot's main road, contains a mix of residential, commercial, and institutional uses © Bing Maps



Condominiums on Highland Avenue © Google Maps





NORTHWESTERN WATERBURY

Northwestern Waterbury is the City's second largest quadrant and is located north of Interstate 84 and west of the Naugatuck River (with the exception of parts of the West End neighborhood). Like the other quadrants, the northwest contains a mix of urban and suburban areas. Urban areas are located in close proximity to Downtown and industrial areas along the Naugatuck River and Steele Brook.

Suburban-style development is commonly found in the outer neighborhoods such as West Side Manor, and the western portion of Bunker Hill. Northwestern Waterbury is home to Naugatuck Valley Community College, Waterbury Hospital, and several public schools.

NEIGHBORHOOD ORGANIZATIONS

Northwestern Waterbury is represented by two neighborhood organizations. Organizations that are members of the Waterbury Neighborhood Council are indicated with an asterisk (*).

- Bunker Hill Neighborhood Association *
- Western Hills Neighborhood Association *

LAND USE AND DEMOGRAPHICS

Demographics

Population (2010): 16,913
 Land Area (Acres): 3,913
 Population Density: 2,766 per sq. mi.

Top 5 Land Use Classes

- Residential (37%)
- Vacant Land (16%)
- Transportation (14%)
- Institutional (10%)
- Industrial (7%)



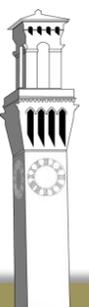
In recent years several new commercial and office buildings were built on West Main Street © Bing Maps



Residential development along Coniston Avenue © Google Maps



Waterbury Hospital is the largest hospital and largest private employer in the City © Bing Maps





Waterbury City Hall

14. COMMUNITY FACILITIES AND INFRASTRUCTURE

An important component to the Plan of Conservation and Development is reviewing the distribution, availability, condition and capacity of the city's community facilities and municipal infrastructure to meet the current and projected needs of stakeholders. For the purposes of the Plan, community facilities are defined as public buildings, including schools, police and fire stations, libraries, senior citizen centers, and general government facilities that serve the general or specific needs of the public and are the responsibility of the city to maintain. Municipal infrastructure includes sanitary and storm sewers and flood control structures/dams, public water supply, and solid waste disposal. Parks and recreation facilities as well as transportation infrastructure are addressed in other memoranda. The following presents an overview of the current inventory of community facilities and municipal infrastructure, and an initial attempt to identify proposed facility and infrastructure improvements necessary to resolve existing problems and/or accommodate forecasted growth and change in development patterns. Refer to the maps in this chapter for the location of city facilities.



PUBLIC SAFETY

POLICE PROTECTION

The Waterbury Police Department when staffed at full capacity consists of 285 sworn officers and 90 civilian employees. Police headquarters is located at 255 East Main Street (see Public Safety Facilities Map) and consists of a 34,200 square foot facility housing administrative, uniformed and investigative services. The Police Department has a presence at the Buckingham Garage on Bank Street and the Brass Mill Center Mall.

The Police Department utilizes a fleet of approximately 100 vehicles, 60 of which are marked police cruisers. Off-site facilities include Animal Control, Traffic Division; Parking Authority; Training Division; Community Relations Division and a Police Academy. Specialized units include K-9, Emergency Response Team, Bicycle Patrol, Polygraph Services, Traffic Engineering, Victim Services, Hostage Negotiation Team, Crisis Intervention Team, School Resource Officers, and a full-service Forensic Laboratory capable of ballistics analysis/comparison and DNA collection.

The Department is an active participant of the city's Blight Task Force that addresses quality of life situations in the neighborhoods of the city. Using the QAlert Citizen Reporting System, the Blight Task Force processes approximately 7,500 service requests from residents annually. Members of the Department manage a very active Police Activity League (PAL) for city youth from several properties owned by the organization.



Waterbury Police Department Headquarters on East Main Street

FIRE PROTECTION

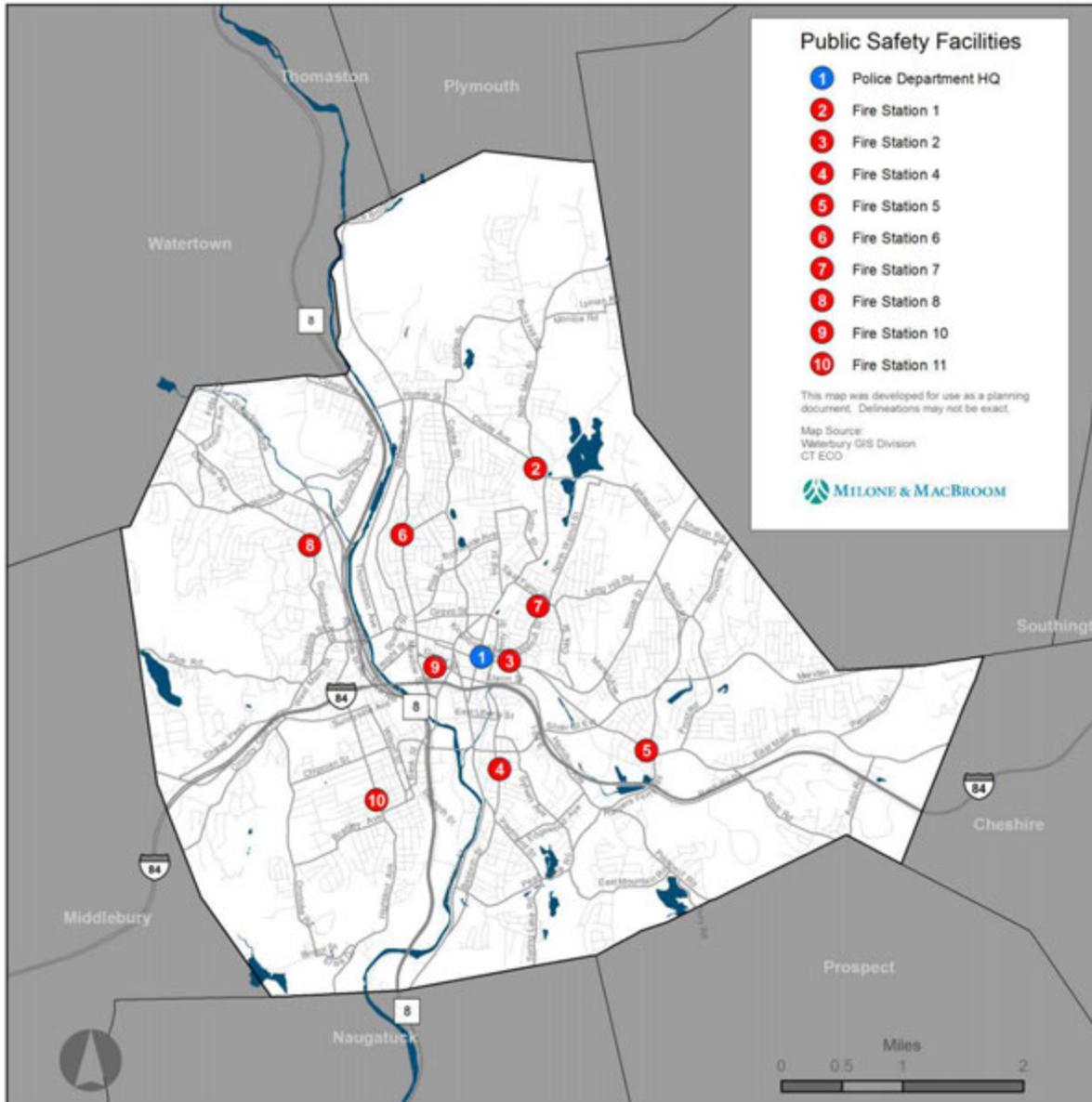
Fire protection and fire marshal services are provided by a professional fire department consisting of 237 firefighters and 6 civilian employees. Emergency services, including fire suppression, hazardous material mitigation, technical rescue and emergency medical dispatch, are provided by seven engine companies; one rescue/hazmat company; three ladder companies, and three chief officers operating from nine fire stations. Emergency medical services are also provided by the Fire Department from its nine locations. The Department also provides non-emergency services including fire education, Connecticut Fire Code and Licensing, building inspection, and plan review. Refer to the Public Safety Facilities Map for the locations of facilities.

The Fire Department responds to approximately 18,000 incidents annually. It has a response rate of less than 4 minutes 74% of the time which is better than the national rate.

Most of Waterbury's fire stations date from the early 20th century. With the exception of Fire Station 1 (1970) and Fire Station 11 (1980), all of Waterbury's Fire Stations were built before 1935. Many of the older facilities can only fit one or two firefighting apparatuses. The locations of Waterbury's public safety facilities can be found on the map titled Public Safety Facilities Map on the following page.



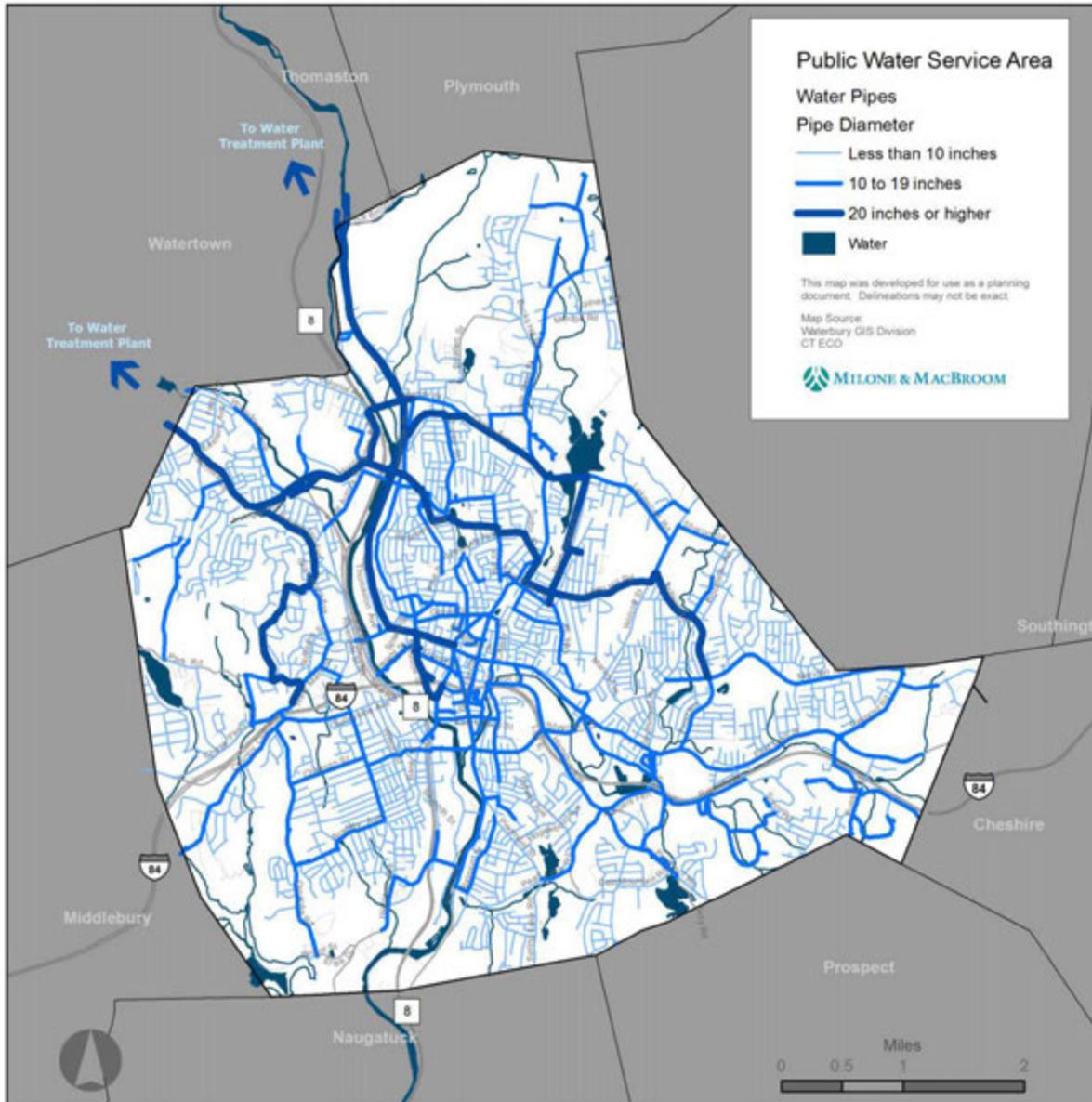
Waterbury Fire Station 6 in the Willow-Plaza neighborhood



Name	Location	Size	Year Built
Police Department HQ	255 East Main Street	34,200 sf	1978
Fire Station 1	1979 North Main Street	12,000 sf	1970
Fire Station 2	519 East Main Street	2,000 sf	1919
Fire Station 4	823 Baldwin Street	2,000 sf	1907
Fire Station 5	1956 East Main Street	1,000 sf	1931
Fire Station 6	431 Willow Street	1,000 sf	1905
Fire Station 7	315 Walnut Street	1,000 sf	1919
Fire Station 8	197 Bunker Hill Avenue	2,000 sf	1919
Fire Station 10	26 Field Street	3,000 sf	1915
Fire Station 11	740 Highland Avenue	2,000 sf	1980

Source: City of Waterbury





PUBLIC WORKS

Waterbury's public infrastructure is operated and maintained by the Water department, Public Works Department, and Water Pollution Control Department. Public Works is further divided into seven bureaus: Parks and Golf Courses, Public Buildings, Recreation, Central Vehicle Maintenance, Refuse, Streets, and Engineering. The Bureau of Parks and Golf Courses, and the Bureau of Recreation are described in greater detail in Chapter 15.

PUBLIC WATER SUPPLY

The City of Waterbury Bureau of Water is responsible for all water service within the city. It reaches 99 percent of all properties in the city and is financed from usage fees.

The water system is the largest municipally-owned water system in Connecticut. It encompasses 7,000 acres of City-owned watershed and has sufficient capacity to service 200,000 people. The Bureau of Water relies on five reservoirs located in two separate watersheds with a combined

capacity of 7.4 billion gallons to supply its system. The Shepaug Reservoir and the Cairns Reservoir are located in the Shepaug Watershed while the Wigwam, Morris and Pitch Reservoirs are located in the West Branch Watershed. The System also has two inactive reservoirs.

The Harry P. Danaher Water Treatment Plant, located in Thomaston, CT was completed in 1987, and treats an average of 14.9 million gallons per day and delivers water to customers in Waterbury, Watertown, Wolcott, Thomaston and Middlebury. It has the capacity to treat 38 million gallons per day (MGD). The water system currently has an average daily demand of 14.9 MGD. Therefore there are no supply concerns associated with existing or future development potential. The plant is operated By American Water Services, Inc. under contract with the City. Major capital investments to the water supply system include cleaning, lining and rehabilitation of water mains city-wide, replacement of sludge removal equipment and repairs at the Shepaug and Wigwam Dams. Refer to the map titled *Public Water Service Area* for Waterbury's existing public water system.

SANITARY SEWER SYSTEM

The Water Pollution Control Department (WPCD) is responsible for the operation and maintenance of the Waterbury sanitary sewer system which consists of approximately 320 miles of sewer line and 20 pump stations that are connected to a secondary treatment facility. WPCD employees are responsible for the repair and maintenance of all collection, treatment, and instrumentation systems. The system serves over 28,000 accounts throughout the City.

The Waste Water Treatment Plant was put into operation in 2000 under a consent order with the Connecticut Department of Energy and Environmental Protection (CT DEEP). The plant has a design average capacity to treat 27 MGD. Average daily flow to the treatment plant in Fiscal Year 2014 was 20.5 MGD or 76% of the plant's capacity. Ample capacity exists at the Treatment Plant for the foreseeable future. Refer to the Public Sewer Service Area Map, for locations within City with sanitary sewer service available.



Waterbury's water system begins in its five reservoirs, such as Wigwam Reservoir in Watertown (above). © Bing Maps

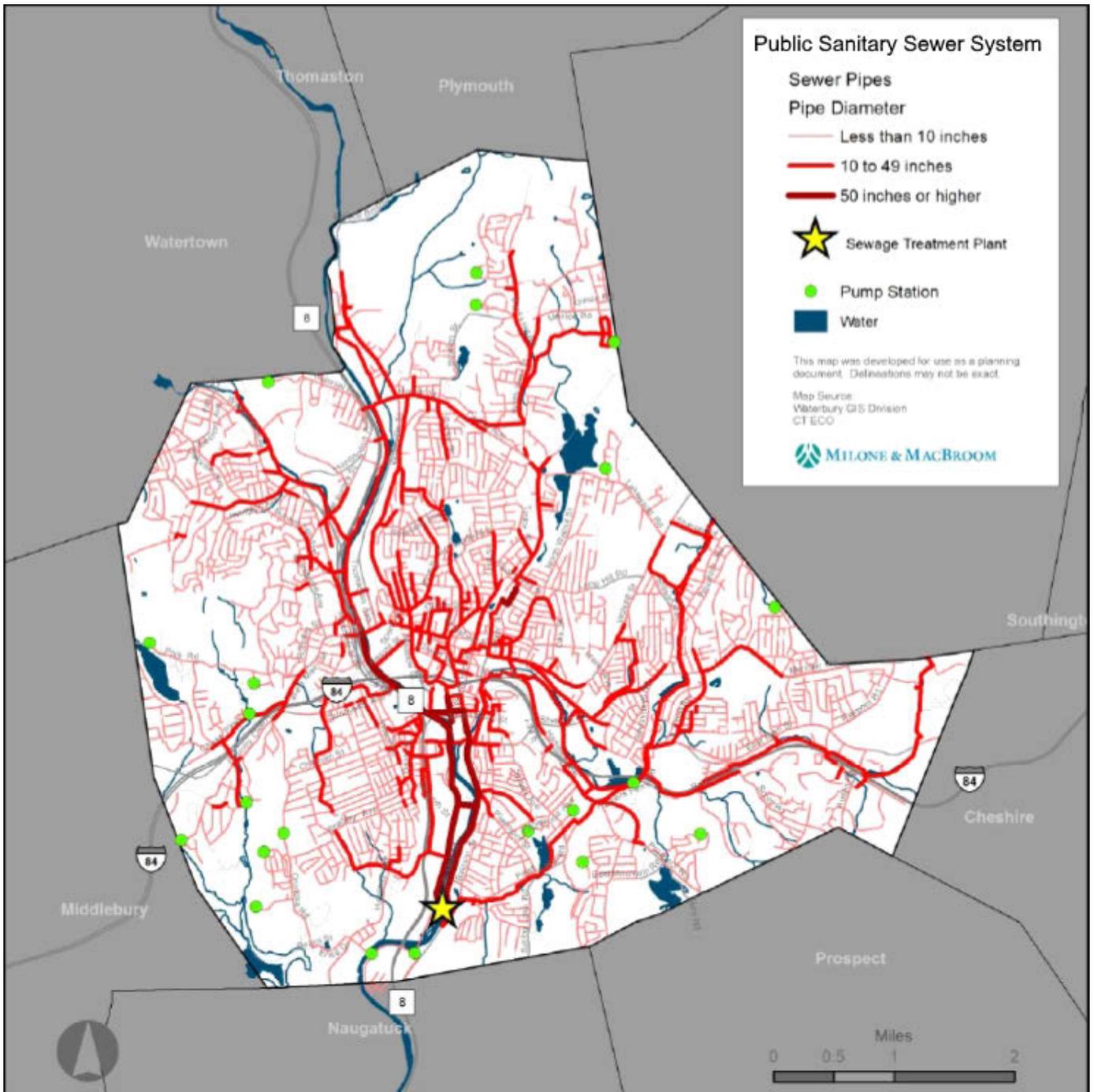


Next, water is purified at the Harry P. Danaher Water Treatment Plant in Thomaston. © Bing Maps



Finally, water is stored in water tanks throughout the city before flowing to residences and businesses © Bing Maps





The sanitary sewer system is completely funded through user fees, including municipal cost sharing with Watertown, Wolcott, Cheshire, and Prospect. While the collection system is in relatively good condition, planned improvements include systematically identifying sections of the system in need of repair or replacement and performing the work. The 20 pump stations require constant monitoring and upgrading on a continual basis.

The major capital investments proposed in the capital budget are upgrading the treatment plant for phosphorous removal and maintaining and upgrading the pump stations. In general, the sanitary sewer system is well-maintained and operated. With continued investments, the system will continue to provide ample treatment capacity for the city.



The water pollution control facility on Municipal Road handles 27 million gallons of wastewater per day © Bing Maps

STORM WATER MANAGEMENT

The Bureau of Streets within the Department of Public Works maintains the City's storm water system, which consists of approximately 2,469 miles of storm sewers with over 6,091 catch basins throughout City. The Naugatuck River and its tributaries receive the storm water from the collection system. Throughout much of the city, storm water is managed through the use of swales, low marshy landforms that spread runoff horizontally and aid in water retention.

The city's major storm water management issue is the need to adequately manage localized flooding from severe storm events. Another necessary aspect of stormwater management is addressing the quantity and quality of storm water runoff before it reaches the piped systems. Best practices in land development design call for using a site's natural topography, vegetation, and pervious surfaces to reduce runoff and provide natural mechanisms to remove pollutants. For the city to develop on a more sustainable basis, these principles should be incorporated into development and redevelopment activities and processes.

Waterbury is one of six municipalities in Connecticut with combined sewer overflows (CSOs). Combined sewers were built over a century ago to handle both raw sewage and storm water in a single pipe. While combined sewers usually adequately handle sewer flows, they may become overloaded during heavy rainstorms.

CSOs relieve these overloads by discharging water into nearby water bodies. In 2000, Waterbury expanded its wastewater treatment facility in order to treat combined wastewater. Efforts to eliminate Waterbury's remaining CSOs are ongoing.

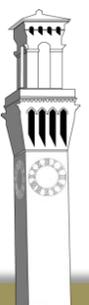
SOLID WASTE

The Bureau of Refuse within the Department of Public Works is responsible for the curbside collection and disposal of approximately 57,000 tons of solid waste generated in Waterbury annually. The City operates a residential transfer station at Mark Lane and a solid waste collection program. The transfer station accepted and transferred over 19,000 tons of bulky waste, construction and demolition (C&D) waste, scrap metal, tires, leaves, brush, oil, antifreeze, and electronic waste in fiscal year 2014.

Waterbury contracts with Covanta Energy Corporation for waste disposal. Municipal solid waste and recyclables are taken to Covanta's waste to energy facility in Bristol, Connecticut, where they are separated, sorted, properly disposed of (either converted to energy or recycled). The city participates in a regional Household Hazardous Waste disposal program through the Naugatuck Valley Council of Governments.



The Municipal Transfer Station on Mark Lane handles bulky waste, electronics recycling, appliances, and yard waste. The old Waterbury Landfill is no longer used. © Bing Maps.



PUBLIC WORKS FACILITIES

Waterbury does not have a centralized public works facility. Rather, the different bureaus within the department operate and maintain separate facilities. The locations of existing public works and infrastructure facilities can be seen on the Public Works Facilities Map. The primary public works facilities in the city are:

Streets Department Garage

The 19,000 square foot Streets Department Garage is located at 51 East Aurora Street. The garage, constructed in 1941, houses materials and equipment needed for road maintenance and re-surfacing, sidewalk construction, storm water system maintenance, and snow removal. The facility supplies fuel for the City's vehicle fleet, and includes a salt barn and other supplies.

Central Vehicle Maintenance Garage

The Central Vehicle Maintenance Garage, which is rented by the Public Works Department, is located at 500 Captain Neville Drive in the eastern part of the City. The City's vehicle fleet is maintained at the garage. The building was built in 1974 and contains over 53,000 square feet of space. The Bureau of Refuse also maintains their offices at the facility.

Jefferson Square

Jefferson Square, located at 185 South Main Street, houses the remaining Public Works Bureaus (Engineering, Parks and Golf Courses, Recreation, and Public Buildings). The Jefferson Square facility contains 46,000 square feet of office space and was built in 1969.

Unified Public Works Facility

To consolidate many of the operations of the Department of Public Works into one location, the City has acquired a parcel on Huntingdon Avenue and East Aurora Street, totaling 8 acres, for the future location of a Unified Public Works Facility. The City is seeking industrial development on the adjacent parcel, tearing down 110,000 square feet of old buildings on the site, renovating 59,000 square feet of building space, and constructing 39,500 square feet of new space. Design of the project is currently underway.



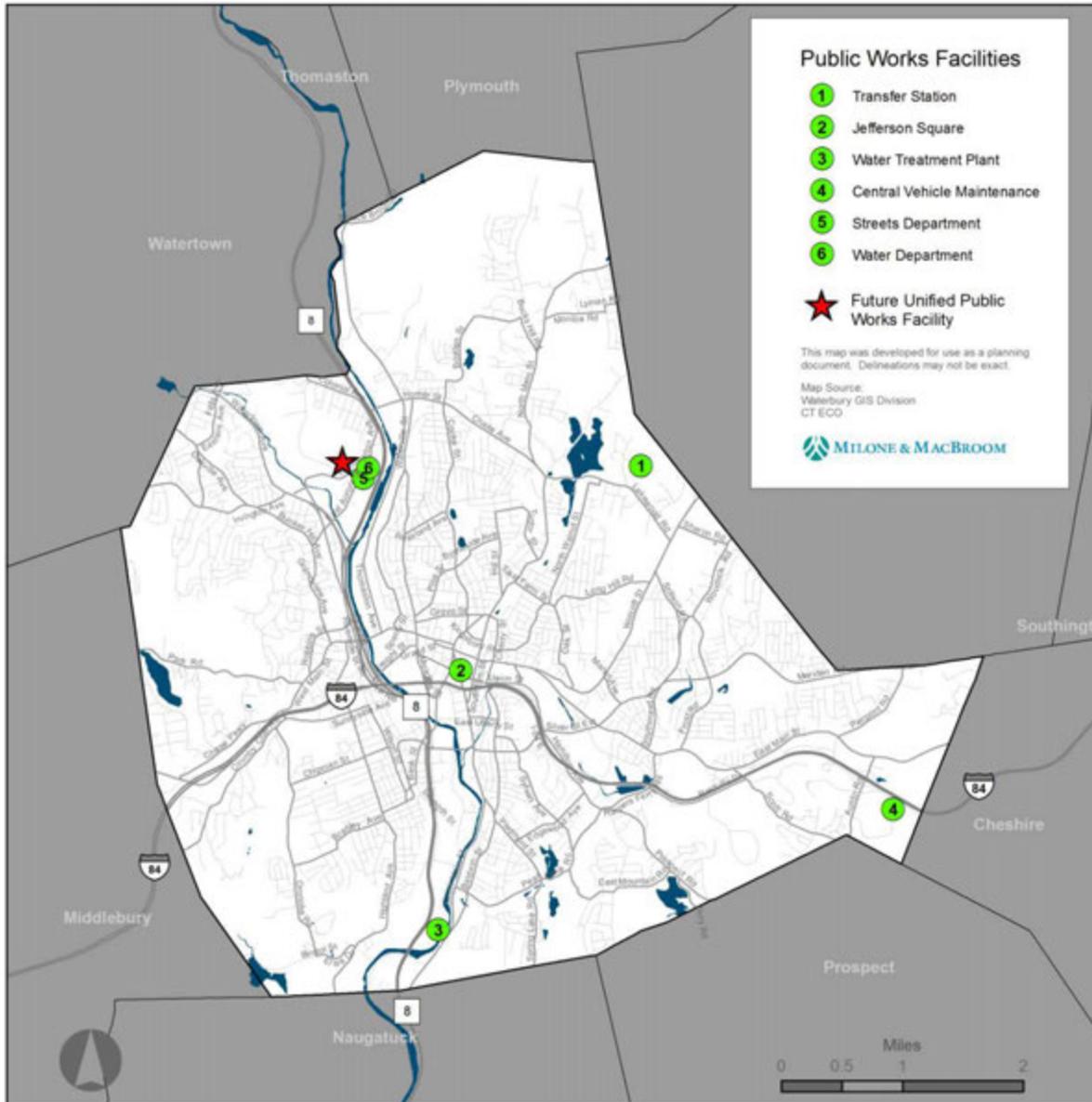
The Streets Department is located at 51 East Aurora Street and houses equipment and materials for street maintenance and snow removal



Jefferson Square in Downtown Waterbury houses the Engineering, Parks and Golf Courses, Public Buildings, and Recreation Bureaus



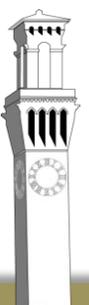
The Central Vehicle Maintenance Garage on Progress Lane is where much of the City's public works fleet is parked and repaired. © Google Maps



BRIDGES

Waterbury is responsible for maintaining 21 bridges with a span of at least 20 feet. In addition, many other bridges located within the city boundary are on the State and Federal Highway network, and are therefore the responsibility of the Connecticut Department of Transportation. Twenty of the bridges are rated in fair or better condition. The East Liberty Street Bridge over the Mad River is scheduled for replacement using for

replacement using a mix of Local Bridge Program Grants offered by the state, as well as local funding.



SOCIAL AND CULTURAL FACILITIES

PUBLIC LIBRARY

The Silas Bronson Public Library is located on Library Park at 267 Grand Street. Established in 1868 with an endowment from Silas Bronson, the existing 53,000 square foot library building was constructed in 1963 with a west-wing addition in 1968. A branch library was built in Bunker Hill in 1962. The management of library facilities is overseen by a Board of Agents. The Library is financed through an endowment and major city funding.



The Silas Bronson Library in Downtown Waterbury

The library is a completely modern information and technology resource center. The collections include more than 240,000 books, 120 computer workstations, and federal, state, and local documents. The library has 20,533 registered resident borrowers. Ongoing projects include improvements to the entry plaza and upgrades to the HVAC system. Planned capital projects include the renovation and expansion of the main library building on Grand Street. The City is actively trying to acquire the funds necessary to complete this project.



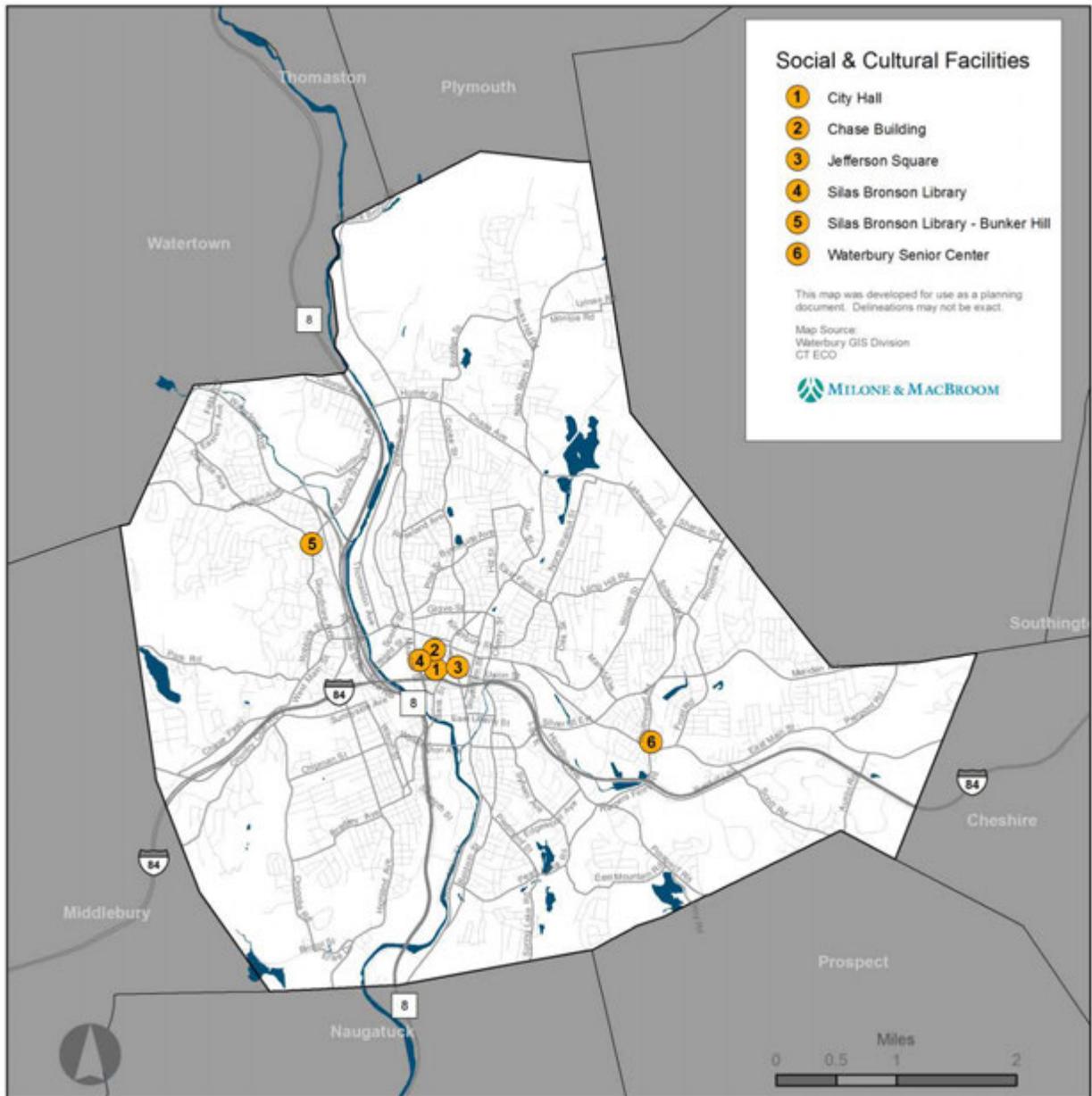
The Chase Building on Grand Street houses several city departments including Education, Information Technology, and Human Resources.

SENIOR CENTER

The Waterbury Senior Center, located at 1985 East Main Street is operated as a division of the Human Services Department. The current facility was built in 2013 on the site of a remediated brownfield. The Waterbury Senior Center serves as a health and wellness, recreational, and educational center for residents over age 60. The Center features programs in health, fitness, dance, arts and crafts, ceramics, and quilting. Seniors can play card games, take classes in technology or other subjects, receive health screenings, or travel to area attractions using Senior Center services. Recently, the Center has seen increased demand for fitness and active recreation programs. The Center is currently open 9:00 am to 2:00 pm, Monday through Friday.



The Waterbury Senior Center, located at 1985 East Main Street, opened in 2013 © Google Maps



GENERAL GOVERNMENT FACILITIES

In addition to police, public works, education and social service facilities, the City of Waterbury has a number of other governmental facilities. Primary among these facilities are City Hall (53,000 square feet), Jefferson Square (46,000 square feet), and the Chase Building (61,000 square feet), that together house the core of municipal operations. City Hall and the Chase Building are architecturally notable, and are listed on the National Register of Historic Places. City Hall received a major building restoration in 2013-14.

Municipal departments located in the City Hall building located at 235 Grand Street include the Mayor’s Office, the Bureau of Administrative Services, the Department of Finance, the City Clerk, and Economic Development. Jefferson Square is located at 185 South Main Street and is home to the Public Works, Inspections, City Planning, Recreation, and Health Departments. The Chase Building, located at 236 Grand Street houses the Education, Information Technology, and Human Resources Departments, the Fire Department, and the Registrar of Voters.



EDUCATIONAL FACILITIES

Educational facilities make up a sizable portion of Waterbury's total land use, covering 686.4 acres, or nearly 4 percent of the City's total land area. Educational land uses are a mix of public, private, and higher education institutions.

PUBLIC SCHOOL SYSTEM

Traditional Public Schools

The Waterbury Public School system consists of one pre-kindergarten school, twenty elementary schools, four middle schools, five high schools, and two special program schools serving over 18,000 students. The locations of these schools is depicted on the Waterbury Public Schools Map, and their addresses and enrollment information are included in the table titled Waterbury Public Schools.

A wide variety of grade configurations are represented at Waterbury's public schools. Out of the twenty elementary schools, sixteen are configured as K-5 schools while the remaining four are K-8 schools. Thirteen elementary schools and the Bucks Hill Pre-K School offer pre-kindergarten classes.

Magnet Schools

Two elementary schools (Rotella and Maloney Schools), and one combined middle school and high school (the Waterbury Arts Magnet School) have magnet programs. These schools are also open to non-Waterbury residents.

Technical Schools

W.F. Kaynor Technical High School offers educational and vocational programs for over 750 high school students. In addition to a high school diploma, students receive training in one of thirteen trades and technologies. The School is located on 43 Tompkins Street in Waterbury, and is open to residents of Waterbury and surrounding towns. Kaynor Tech is part of the Connecticut Technical High School System and is operated by the State of Connecticut Department of Education.

Adult Education

The City operates a Continuing Education Program that offers high school diploma and GED programs for adults. The school also offers a program in Applied Design and Technology, and a Certified Nursing Assistant and Phlebotomy certification program. The school is located at the former Barnard School at 11 Draher Street in the Brooklyn neighborhood.



Waterbury Arts Magnet School



Waterbury Career Academy High School



Reed Elementary School © Waterbury Public Schools

ENROLLMENT TRENDS

Pre-K through grade 12 public school enrollment for the 2014-15 school year is 18,809 students, the highest ever recorded. 659 students are non-Waterbury residents who attend one of the four magnet schools. An ongoing analysis of school enrollment trends indicates that Waterbury experiences a small out-migration of school-age children as they matriculate through the school system. The City experienced a spike in births during the 2007-2009 time period, resulting in unusually large kindergarten classes during the 2012-13 through 2014-15 school years. As a result of increasing enrollment, many schools are operating at or above capacity.

The Board of Education has recently considered an elementary school redistricting plan to address overcrowding and other issues. The City Council and Board of Education are undertaking a long range school facilities planning process that will guide the school system into the future.

PRIVATE, PAROCHIAL, AND CHARTER SCHOOLS

As of the 2013-14 school year, 2,113 Waterbury residents were enrolled in non-public schools. From 2007 to 2013, non-public school enrollment declined by over 500 students, a drop of 20 percent. Non-public school enrollment is comprised mostly of private, parochial, and other religious schools, such as Yeshivas.

Private Schools

Chase Collegiate School is an independent day school for students from Pre-K through grade 12. As of 2013, the school had an enrollment of 440 students who are divided between the lower school (grades K-5), middle school (grades 6-8), and upper school (grades 9-12). Chase Collegiate School is located on Chase Parkway in the Country Club neighborhood.

Children’s Community School is a private, non-profit school located in the old Sacred Heart School Building at 31 Wolcott Street. The school serves nearly 150 students in grades Pre-K through 5.

Parochial and Other Religious Schools

Waterbury is home to four Catholic grammar schools and two Catholic High Schools. The four grammar schools (St. Mary’s, St. Peter and Paul, Blessed Sacrament, and Our Lady of Mount Carmel) serve approximately 1,000 Pre-K through 8th grade students. Holy Cross High School has an enrollment of approximately 730 students, while Sacred Heart High School has approximately 350 students.

Over the last decade, several parochial schools, including St. Anne’s, St. Joseph’s, St. Francis Xavier, and St. Margaret’s, have closed or merged as a result of declining enrollments. Several of these buildings have been repurposed. St. Francis Xavier School has been converted into a twenty-unit affordable housing complex, and St. Margaret’s is now home to the Brass City Charter School.



The former St. Francis Xavier School on Baldwin Street has been converted into affordable housing © Google Maps



Waterbury Public Schools

School	Location	Grades Served	2014-15 Enrollment
Crosby High School	300 Pierpont Road	9-12	1,288
Kennedy High School	422 Highland Avenue	9-12	1,304
Wilby High School	460 Bucks Hill Road	9-12	1,235
Waterbury Arts Magnet High School ¹	16 South Elm Street	9-12	490
Waterbury Career Academy High School ²	175 Birch Street	9-12	469
North End Middle School	534 Bucks Hill Road	6-8	1,016
Wallace Middle School	3465 East Main Street	6-8	1,159
Waterbury Arts Magnet Middle School ¹	16 South Elm Street	6-8	330
West Side Middle School	483 Chase Parkway	6-8	1,021
Bucks Hill Elementary School	330 Bucks Hill Road	PK-5	561
Bucks Hill Pre-K School	330 Bucks Hill Road	PK	201
Bunker Hill Elementary School	170 Bunker Hill Avenue	PK-5	510
Chase Elementary School	40 Woodtick Road	K-5	816
Carrington School ³	24 Kenmore Avenue	PK-8	487
Wendell Cross Elementary School	1255 Hamilton Avenue	PK-5	366
Driggs Elementary School	77 Woodlawn Terrace	PK-5	528
Duggan School	38 West Porter Street	PK-8	464
Generali Elementary School	3196 East Main Street	K-5	603
Gilmartin School	94 Spring Lake Road	PK-8	506
Hopeville Elementary School	2 Cypress Street	K-5	475
Kingsbury Elementary School	220 Columbia Boulevard	K-5	512
Maloney Magnet School ¹	233 South Elm Street	K-5	613
Reed School	33 Griggs Street	PK-8	427
Regan Elementary School	2780 Elementary School	K-5	279
Rotella Magnet School ¹	380 Pierpont Road	PK-5	612
Sprague Elementary School	1443 Thomaston Avenue	PK-5	461
Tinker Elementary School	809 Highland Avenue	K-5	572
Walsh Elementary School	55 Dikeman Street	PK-5	455
Washington Elementary School	685 Baldwin Street	PK-5	340
Wilson Elementary School	235 Birch Street	PK-5	445
State Street School ⁴	58 Griggs Street	K-12	76
Enlightenment School ⁴	30 Church Street	6-12	179
Total PK Enrollment	-	PK	668
Total K-5 Enrollment	-	K-5	9,095
Total 6-8 Enrollment	-	6-8	4,099
Total 9-12 Enrollment	-	9-12	4,938
Total Enrollment	-	PK-12	18,800

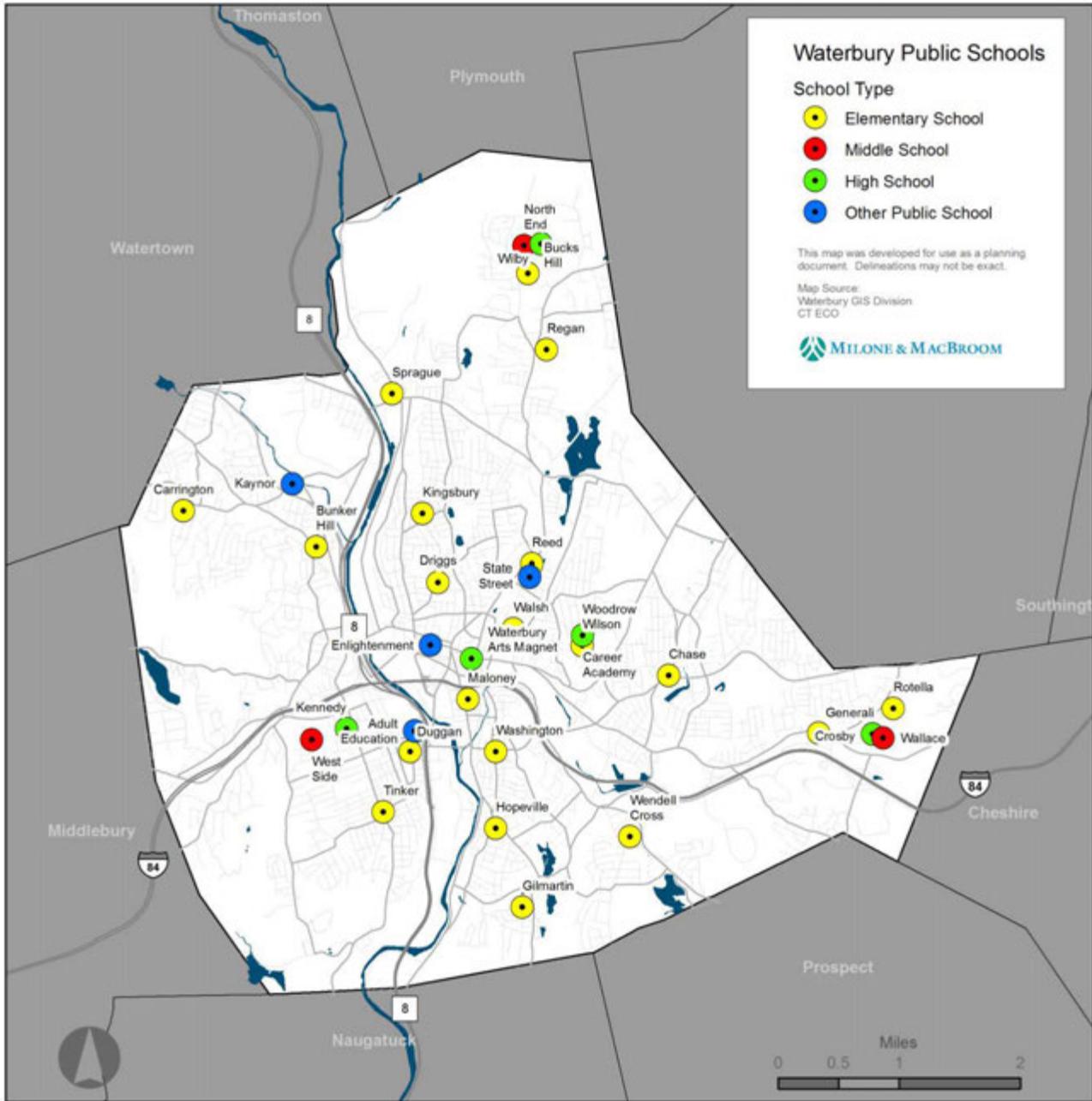
1. Magnet school also accepts students from other municipalities

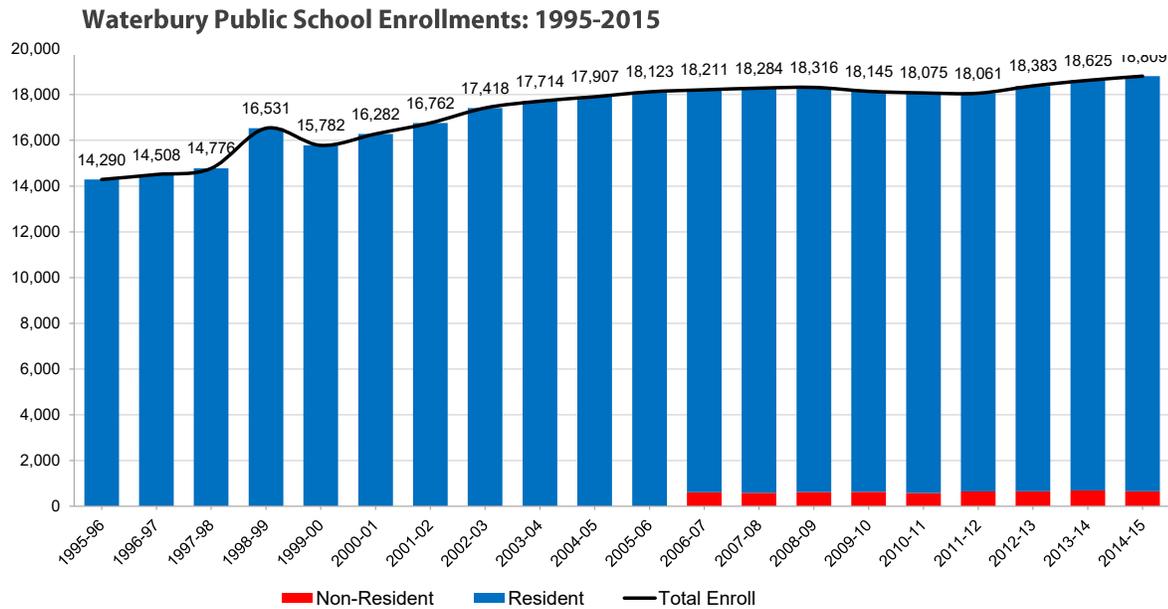
2. Waterbury Career Academy opened in 2013 and does not have an 11th or 12 grade class in 2014-15

3. Carrington School opened in 2013 and does not have an 8th grade class in 2014-15

4. Part of Waterbury Public Schools' Alternative Programs

Source: City of Waterbury





Source: WPS and CT CeDar (2015). Non-resident data available only for 2006-07 school year and beyond.

Waterbury has a growing Jewish community. The Yeshiva K'tana of Waterbury is on Hillside Avenue and serves students from Pre-K through 8th grade. Current enrollment is approximately 300 students. The school is located on the site of the former UConn campus in the Hillside neighborhood.

Education. Brass City Charter opened in 2013 and is located in the old St. Margaret's School at 212 Chestnut Street. The school serves approximately 140 students in grades Pre-K through 3rd grade, but will eventually expand to Pre-K through 8th grade as existing students graduate to higher grades.



The Benedict Miller House, formerly part of the UConn Waterbury campus, is now part of the Yeshiva K'tana School. © www.historicbuildingsct.com

Charter Schools

Waterbury is home to one charter school, Brass City Charter, which is independently operated under supervision from the State Department of

HIGHER EDUCATION

Waterbury is home to several public and private higher education institutions. With approximately 7,195 students, Naugatuck Valley Community College (NVCC) is the largest higher education institution in the city. NVCC is located on Chase Parkway in the West End of the City. It offers Associates degrees and certificates in a broad range of academic areas including nursing, business, social sciences, and STEM (science, technology, engineering, and mathematics) subjects. In 2012, NVCC opened a new Advanced Manufacturing Technology Center, which offers training in a variety of machine tools as well as computer-aided design. NVCC partners with Western Connecticut State University (Western at Waterbury), which allows students to complete Bachelor's degrees in Business and Nursing.

In 2002, the Waterbury campus of the University of Connecticut (UConn) relocated from its Hillside campus to its current campus on East Main Street in Downtown Waterbury. UConn Waterbury offers eight undergraduate, two graduate, and two professional certificate programs. UConn Waterbury is a commuter campus, with no on-campus housing provided for students. Enrollment is approximately 1,000 undergraduate and graduate students. When the renovation of the Rectory Building on East Main Street is complete, UConn will use the upper floors as additional classroom and meeting space.

Post University is a private university located on Country Club Road in the City's Country Club neighborhood. Post offers certificate, Associate's, undergraduate, and graduate degree programs in Business, Arts and Sciences, Public Service, and Education. Approximately 465 students live on campus, while total daytime on-campus enrollment is about 800 students. The University has a large and growing online degree program, with over 15,000 students.

The University of Bridgeport operates a satellite campus on Progress Lane in Waterbury, offering thirteen certificate, undergraduate, and graduate programs.

CONCLUSION

Community facilities represent major public capital investments that support and shape city development in many ways. Their availability may attract development to locations where service is available or constrain development where none is possible. In particular, the availability of water and sanitary sewer service often drive the type and density of possible development, and determine the locations where it could occur. The rollout schedule for available infrastructure can be used to pace growth in designated areas.



The University of Connecticut campus in Downtown Waterbury





15. PARKS, RECREATION, & OPEN SPACE

Open space is any piece of land that is undeveloped and is accessible to the public. Open spaces can include parks, community gardens, cemeteries, playgrounds, and other undeveloped public lands. The State of Connecticut Department of Energy & Environmental Protection (DEEP) has established a goal of preserving 21% of Connecticut's land as open space by 2023, with 11% of that undeveloped land being in the ownership of municipalities and other non-state entities. In Waterbury, 2,104.4 acres, or 11.3% of the City is composed of open space.

Parks, playgrounds, greenways, trails, and community open spaces help keep Waterbury residents fit and healthy. Physical activity improves both physical and mental well-being. According to the Centers for Disease Control and Prevention (CDC), only 25 percent of American adults engage in recommended levels of physical activity, and 29 percent engage in no leisure-time physical activity at all. This sedentary lifestyle is contributing to an increased incidence of obesity and obesity-related diseases. The presence of open spaces also helps to maintain property values, reduces the urban heat island effect, and minimizes stormwater runoff and pollution. This Chapter presents an overview of Waterbury's parks, recreational areas, and open spaces.



PARKS AND RECREATION ADMINISTRATION

The City's Bureau of Parks and Golf Courses, part of the Department of Public Works, manages Waterbury's parks, pools, and lake facility, as well as its two municipal golf courses. The Bureau of Parks and Golf Courses manages nearly 1,000 acres of municipal property, 643 acres of which are public parks, while the remaining acreage is utilized by the golf courses. The Parks are governed by a seven-person Board of Park Commissioners, which meets monthly. The Bureau of Recreation manages the activities and programs that are conducted within Waterbury's parks and recreational facilities. The Bureau of Recreation offers programming for children, adults, and seniors at five different facilities throughout the City.

PUBLIC PARKS

Over half of Waterbury's 643 acres of parkland lie within its five largest parks: East Mountain Park (50 acres), Fulton Park (64 acres), Bucks Hill-Montoe Park (77 acres), Hamilton Park (82 acres), and Lakewood Park (92 acres). The remaining 278 acres of parkland are divided amongst the remaining 24 remaining parks, and 22 parklets and playgrounds.

Waterbury's oldest park is The Green, which is located in the center of Downtown. The Green has been preserved as an open space since the City's first European settlement in the 1670s. Originally a swampy lowland "common" used for animal grazing, the Green was drained and converted into a park in the 1820s.

Spawned by the City Beautiful movement, an early 20th century reform movement that aimed to improve the civic and social quality of communities through stately improvements to public land, many of Waterbury's parks were built in the 1900s through 1920s. Five of these parks were designed by the Olmsted Brothers, sons of the founder of American landscape architecture, Frederick Law Olmsted: Library Park, Hayden Park, Fulton Park, Chase Park and Hamilton Park. Each of these parks reflects the philosophy and style that distinguish Olmsted parks as sculptural art works that create environments for a higher level of social

interaction. As the City's population shifted to the outer neighborhoods in the 1950s through 1970s, new parks and playgrounds, such as Bucks Hill Park and Sloping Acres Park, were built on the City's fringes.

Today, the City has put a renewed emphasis on its park system. In recent years, the Bureau of Parks and Golf Courses has rehabilitated its park system by replacing outdated playground equipment, resurfacing basketball and tennis courts, and adding amenities such as bathrooms. Private organizations like the Fulton Park Conservancy and Friends of the Waterbury Greenway, Inc. support specific parks and projects. However, funding necessary park improvements remains an ongoing challenge.



Hamilton Park is the second largest park in the City, covering over 82 acres.



Library Park was designed by the Olmsted Brothers in the 1920s.

PARKS INVENTORY

There are 29 municipally-controlled parks in Waterbury (see table and map on pages 4 & 5). With the exceptions of the Green, Library, Hayden, and Rowland Parks, all parks have active recreational facilities. There are a total of 25 playgrounds, 31 basketball courts, 28 tennis courts, 13 spray areas/spray pools, 3 swimming pools, 41 ball fields, and 14 soccer/football fields. Over the last decade, several tennis courts were converted into basketball courts in response to the changing recreation preferences of City residents. The Parks Bureau continues to evaluate its underutilized recreational facilities, and will repurpose them as new facilities, such as basketball or handball courts, as funding permits.

A park's user base is influenced by its adjacent land uses, its connectivity with surrounding neighborhoods, and the types of recreational facilities that it has. A large park with lots of amenities, such as Fulton Park or Hamilton Park, draws a user base from across the City. Smaller parks such as Fairlawn Park and Town Plot Park, primarily serve residents in surrounding neighborhoods. The land uses surrounding parks also determine its user base over the course of any given day. A park in a primarily residential neighborhood, such as Sloping Acres Park, will likely receive its heaviest use on weekends and after school on weekdays. Parks in the downtown area will be used by a combination of office workers, residents, and visitors, and will likely receive their heaviest use during typical working hours. Parks surrounded by more diverse land uses attract a wider variety of patrons, and will receive their heaviest use by different groups of patrons at different times.



Parks that offer significant recreational opportunities, such as Bucks Hill Park, draw a user-base from across the City. © Bing Maps



Fairlawn Park is a small park in the center of a residential area. Its users come primarily from the surrounding neighborhood and it is used most heavily on weekends and after school on weekdays. © Google Maps



Urban parks, such as the Green, primarily draw users from surrounding residences, offices, and institutions. A greater density of uses in the downtown can help attract a more diverse user-base to the Green.

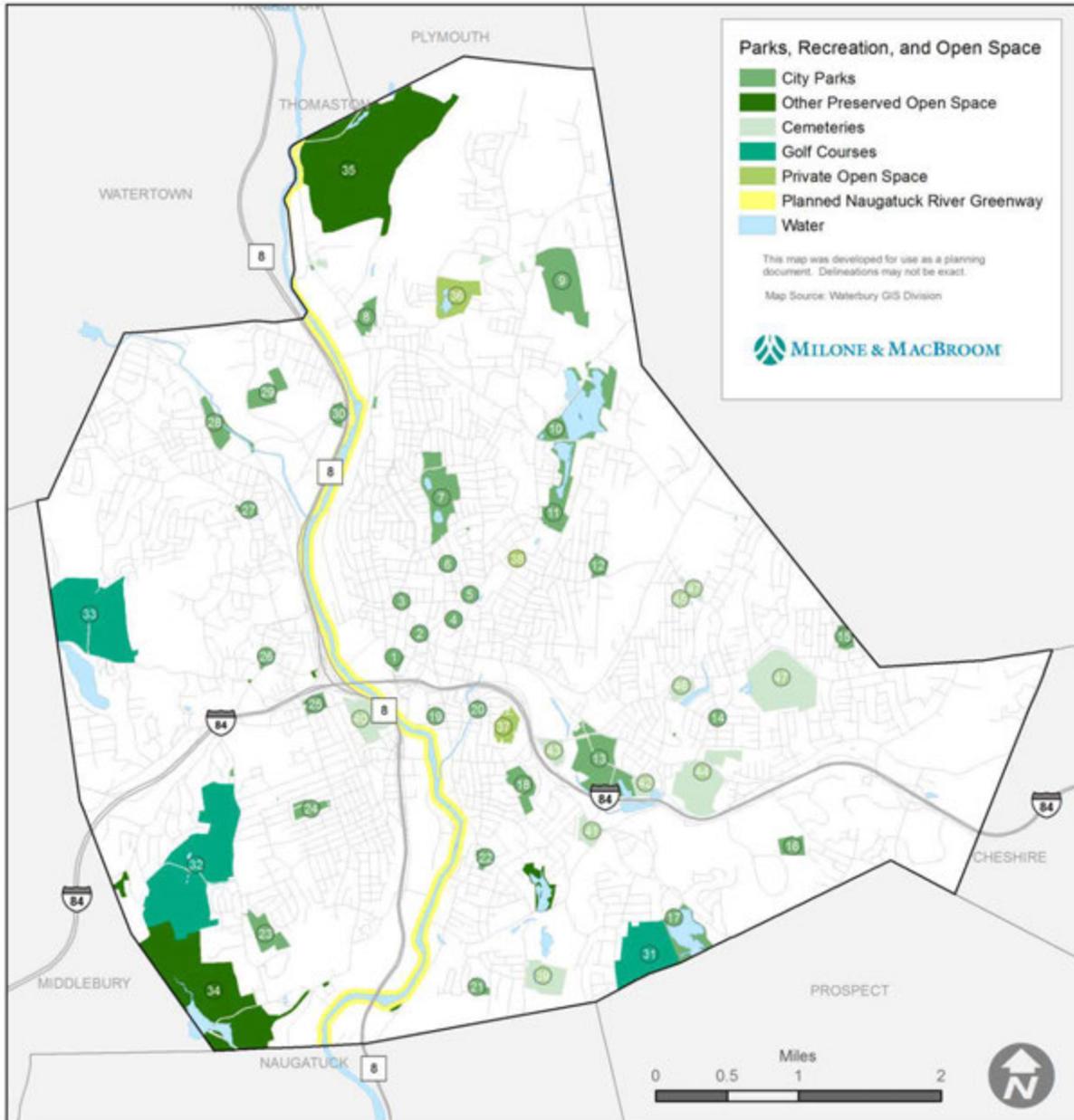


Waterbury Public Parks Inventory

Park	Type	Number of Facilities					
		Playground	Swimming Pool	Ball Fields	Football & Soccer	Basketball Courts	Tennis Courts
Waterville	Active	1		4		2	2
Coe	Active	1		2		1	
Municipal Stadium	Active			4	1		
Schoefield (Bunker Hill)	Active	1		2	1	1	
Rowland	Passive						
Chase	Active	2		1	1	2	4
Town Plot	Active	2		1	1	2	
Murray	Active	1		4	1	2	2
Huntingdon	Active			3	1		
Fulton	Active	1	1	4	1	2	5
Pearl St.	Active	1					
Hayden	Passive						
The Green	Passive						
Library	Passive						
Rivera - Hughes	Active	1				1	
Hopeville	Active	1		1			2
Curtin	Active	1		1			4
Bucks Hill - Montoe	Active	1		4	1	2	3
Lakewood	Active	1	1			1	
City Mills	Active	1		1	1	2	
Long Hill Rec	Active	1		1		1	
MLK	Active	1				1	
North End	Active	1				5	
River Baldwin Rec	Active	1				1	
Hamilton	Active	1	1	3	2	1	3
Washington	Active	1		1		1	3
East Mountain	Active	1		3	2	1	
Fairlawn	Active	1				1	
Sloping Acres	Active	1		1	1	1	
Total All Parks		25	3	41	14	31	28

Source: City of Waterbury, Parks Master Plan, 2007. Updated with 2015 aerial imagery

Parks, Recreation, and Open Space



- | | | | | |
|------------------------|-----------------------------|----------------------|--------------------------------|---------------------------|
| 1 Library Park | 11 City Mills Park | 21 Curtin Park | 31 East Mountain Golf Course | 41 St. Josephs Cemetery 1 |
| 2 The Green | 12 Long Hill Park | 22 Hopeville Park | 32 Waterbury Country Club | 42 Lithuanian Cemetery |
| 3 Hayden Park | 13 Hamilton Park | 23 Murray Park | 33 Western Hills Golf Course | 43 St. Josephs Cemetery 2 |
| 4 North End Rec Center | 14 Fairlawn Park | 24 Town Plot Park | 34 Hop Brook Rec. Area | 44 Cavalry Cemetery |
| 5 MLK Park | 15 Sloping Acres Park | 25 Chase Park | 35 Mattatuck State Forest | 45 St. Marys Cemetery |
| 6 Pearl Street Park | 16 Scott Road Park | 26 Rowland Park | 36 American-Italian Civic Club | 46 Pine Grove Cemetery 1 |
| 7 Fulton Park | 17 East Mountain Park | 27 Schoefield Park | 37 Holy Land | 47 Pine Grove Cemetery 2 |
| 8 Waterville Park | 18 Washington Park | 28 Municipal Stadium | 38 PAL Rec. Center | 48 Hebrew Cemetery |
| 9 Bucks Hill Park | 19 Rivera-Hughes Park | 29 Coe Park | 39 All Saints Cemetery | |
| 10 Lakewood Park | 20 River-Baldwin Rec Center | 30 Huntingdon Park | 40 Riverside Cemetery | |



RECREATION

Public Golf Courses

The Waterbury Bureau of Parks and Golf Courses operates and maintains two 18-hole public golf courses. East Mountain Golf Course, a par 70 course, opened in 1932. Western Hills Golf Course, on a rolling terrain just north of I-84, opened in 1960. Both courses were redesigned in 2007.

Recreation Centers

The City of Waterbury maintains four dedicated recreation centers: Berkeley Warner Recreation Center, River-Baldwin Recreation Center, Waterville Recreation Center, and North End Recreation Center, each of which offer programs and activities for city residents of all ages. In addition, the city maintains two additional facilities, Chase Park House, and William Tracy Park House, which also provide programming for residents. The City is also home to numerous private recreation centers such as the Greater Waterbury YMCA and the Waterbury Athletic Center.

Municipal Stadium Complex

Originally constructed in 1930, Municipal Stadium is a 3,000-seat baseball facility operated by the Waterbury Parks and Recreation Department. It is located on Route 73 and adjacent to Steel Brook and W.F. Kaynor Technical High School. The stadium was home to several minor-league baseball teams through much of its history. The complex also contains the Ray Snyder Senior Memorial Field, a newly renovated baseball and football facility that hosts Waterbury public school games and the Brass City Brawlers, a semi-professional football team.

A renovation of Waterbury Municipal Stadium is underway. The renovations include improvements to both the grandstand and the baseball diamond.



The River-Baldwin Recreation Center © Bing Maps



Overview of East Mountain Golf Course © Google Maps



The Municipal Stadium Complex includes facilities for baseball, softball, and football © Bing Maps

Hop Brook Recreation Area

Hop Brook Lake and Dam, and the woods and fields surrounding those resources, compose the 536-acre Hop Brook Recreation Area. This natural area owned by the Army Corps of Engineers crosses the boundaries of Waterbury, Middlebury, and Naugatuck. The Area provides visitors with opportunities to fish, hike, swim, canoe, and picnic. More than seven miles of trails wind through the Area, which supports a wide variety of wildlife.

In addition to these natural features, the Hop Brook Recreation Area also includes an **11-hole disc golf course, a volleyball court, and other recreational amenities.**



Hop Brook Dam Recreation Area offers residents a variety of outdoor opportunities, including swimming, volleyball, and disc golf © USACE

Police Activity League Complex

Opened in October 2014, the Waterbury Police Department offers a variety of youth programs at a 2.2 acre site adjacent to Jonathan Reed Elementary in Waterbury's North End. This park was developed on a remediated brownfield site, and includes a walking path, a little league baseball field, four outdoor basketball courts, a recreation center, and a playground. The park is open to the public. In 2014, PAL offered recreation opportunities to over 4,200 member youth from Waterbury and surrounding communities.

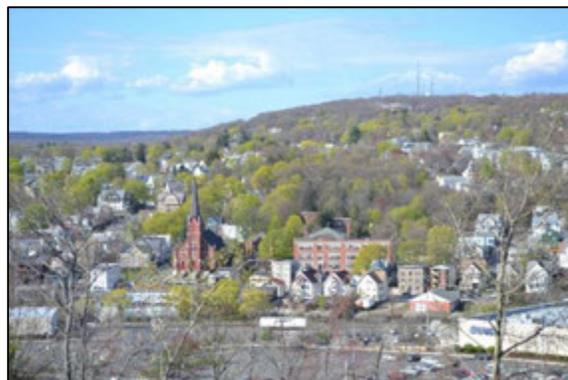


The recently completed Police Activity League (PAL) recreation complex offers programs for over 4,200 member youth from the Waterbury area. © Google Maps

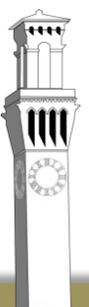
PRIVATE OPEN SPACE

Holy Land, USA

Holy Land, USA is an 18-acre Biblically-themed private park that towers over the south side of I-84. Originally constructed in 1955, the grounds of the park feature a chapel, stations of the cross, replicas of ancient architecture, ruins, and biblical scenes, and an illuminated cross over fifty feet high, which has been a significant local landmark for the last half century. The site also offers breathtaking views of the entire city. The park was closed in the 1980s, and thereafter fell into disrepair. Starting in 2013, significant investment was made to clean and revitalize the property, including the installation of a new illuminated cross. Rehabilitation of the site has been conducted with private fundraising and volunteer labor.



Views of the picturesque East End of Waterbury from the grounds of Holy Land, USA.



American-Italian Civic Club

Waterbury's American-Italian Civic Club owns and maintains a 42.9-acre property that includes a fraternal club and a recreational site on two adjacent plots of land on Boyden Street. The property includes a large picnic pavilion attached to the club, swimming facilities, and encompasses all of Lake Wequapauset.

Country Club of Waterbury

In addition to the two public courses, the Country Club of Waterbury also owns 234 acres of property on Oronoke Road on which they operate an 18-hole golf course, a clubhouse, tennis courts, and a swimming pool. Use of these facilities is limited to Club members only.

PRESERVED OPEN SPACE

Mattatuck State Forest

Mattatuck State Forest is a 4,510-acre natural area that is composed of 20 non-contiguous parcels, and crosses the borders of Waterbury, Harwinton, Litchfield, Plymouth, Thomaston, and Watertown. The Waterbury portion of the forest is comprised of four parcels totaling 373.8 acres. The forest is free and open to the public, and is operated by the Connecticut Department of Energy and Environmental Protection (DEEP). Visitors to the forest can hike, hunt, and mountain bike. The forest's miles of rugged trails provide scenic overlooks of the City of Waterbury.

Within Mattatuck State Forest lies the Hancock Brook Trail, a 2.8-mile Blue-Blazed hiking trail managed by the Connecticut Forest and Park Association that loops through the Waterville section of the City. A number of historic resources lie along the trail, including the Sheffield Street Bridge, constructed in 1884.

Conservation Easements

A conservation easement is a restriction that is placed on a piece of property to protect natural resources associated with the property. A conservation easement will limit the uses and/or

development of the property to preserve its natural characteristics that are worthy of conservation. Typically, conservation easements are donated or sold to a non-profit organization, such as a land trust. Statewide, non-governmental organizations such as land trusts own 1682 easements in Connecticut, totaling 64,990 acres. The Waterbury Land Trust, founded in 1998, is currently active, however the National Conservation Easement Database (NCED) indicates that no easements are currently owned by the Land Trust.

Watershed Lands

While not within the City boundaries, the Bureau of Water owns approximately 7,000 acres of watershed land in Litchfield County. It is crucially important to protect land around public water supplies. The undeveloped lands that surround Waterbury's reservoir system naturally filter groundwater and reduce erosion and dam sedimentation.



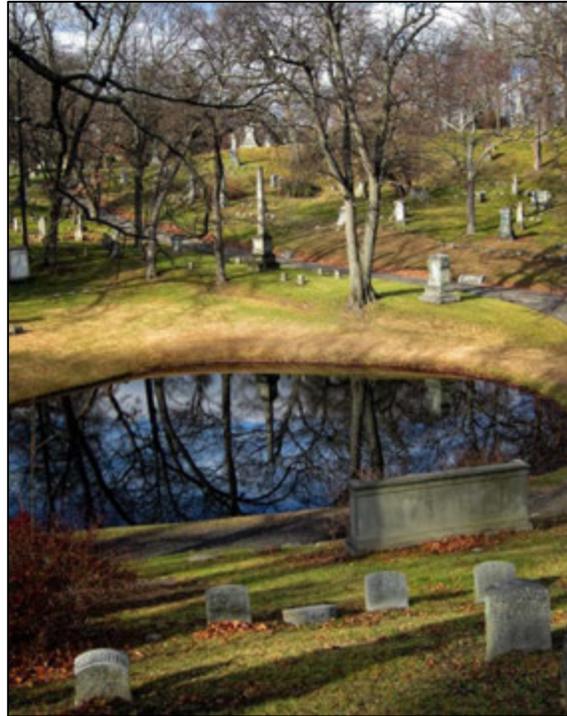
Hancock Brook Trail, part of the Blue-Blazed hiking trail network, runs through Mattatuck State Forest. © H. Morrow Long via Creative Commons

CEMETERIES

Cemeteries in the City of Waterbury comprise 318.8 acres of land and 27 distinct parcels, making up 1.7% of the City's overall land. The City's cemeteries represent a variety of religious and non-denominational backgrounds. Several of these cemeteries lie adjacent to I-84 and contribute positively to the visual character of the highway corridor. Waterbury's cemeteries also contribute environmental benefits that are typical of many open spaces, such as reducing the impact of urban heat islands, and reducing stormwater runoff from development.

As with other open spaces, cemeteries reduce the urban heat island effect in densely built-up communities. The term urban heat island refers to the phenomenon in which urban regions experience warmer temperatures than their rural surroundings. Urban heat islands develop as a result of buildings, roads, and other man-made construction replacing open land and vegetation. Dry, impermeable surfaces like pavement heat to temperatures significantly higher than vegetation, and the inclusion of open spaces like cemeteries at regular intervals throughout the urban landscape helps to mitigate the damaging health and environmental effects of urban heat islands.

In addition to conserving high levels of heat, impervious surfaces such as pavement also rapidly pool stormwater, increasing a number of negative health and environmental impacts - the volume of runoff into streams, the potential for flooding, the spread of pollutants, breeding areas for mosquitoes, and the potential for waterborne illnesses. In a natural setting such as a cemetery, rain falls on vegetation and is captured by plants or absorbed by soil, mitigating these negative consequences of stormwater runoff.



Riverside Cemetery is listed on the National Register of Historic Places © Sid Graves



I-84 overlooks Old Saint Joseph's Cemetery © Bing Maps



UNDEVELOPED LAND

Undeveloped land is “perceived open space” and is often indistinguishable from protected open space. Often in private ownership, perceived open space could potentially be built on in the future because it has no formal restrictions limiting its development. Connecticut Public Act 490 permits municipalities to assess undeveloped land at its use value rather than its fair market value for the purpose of local property taxation, functionally reducing the assessment on land that is categorized as farm, forest, or open space. The reduced assessment diminishes the tax burden on the parcel, thereby reducing the incentive to develop the land. This program helps to defer development and maintain the amount of “perceived open space” in Connecticut communities.



Undeveloped land, such as this parcel on Boyden Street, may be perceived as open space by residents, but there are no safeguards preventing its future development. © Google Maps

RECENT PARKS & OPEN SPACE PLANNING EFFORTS

PARK RENOVATIONS

The maintenance and renovation of existing park space remains a priority for the City. Waterbury relies on an assortment of local, state, and federal funds for park maintenance, including local Capital Improvement Funds, Community Development Block Grants (CDBG), and State Municipal Revenue Sharing Account (MRSA) funds. During Fiscal Year

2015, Waterbury spent approximately \$1 million on parks, a majority of which came from CDBG funds.

Over the last decade, park improvements have focused on updating playground equipment, and renovating basketball courts and recreation centers. The Bureau of Parks and Golf Courses is overseeing an ongoing effort to repair splash pads and spray pools and is installing new ADA-accessible bathrooms at several parks.

In 2012, the Waterbury Green Master Plan was completed. The plan recommends a variety of streetscape, infrastructure and amenity improvements. The City is funding improvements to the Green through its Downtown Next initiative, which will incorporate new benches, new light posts, an upgraded electrical system, a Wi-Fi hotspot, and new trash receptacles.



The Green will undergo a variety of amenity and infrastructure improvements over the next few years.

THE NAUGATUCK RIVER GREENWAY AND PLATT PARK

The Naugatuck River Greenway is a planned 44-mile trail that, when completed, will link 11 municipalities along the Naugatuck River. The Greenway is currently operational in Derby, Ansonia, Beacon Falls, Naugatuck, and Watertown. Phase I of the Waterbury portion of the Greenway is currently in final design. Phase I is a 2.2 mile long stretch consisting of a shared-use (bicycle and pedestrian) path along the east side of the Naugatuck River. The Greenway will run from the planned Platt Park north to Eagle Street. Platt Park, a passive recreational park with a parking lot,

shared-use paths, a kayak launch, and educational amenities, will be incorporated into the Greenway at the northeast corner of Platts Mill Road and South Main Street.

Phase II of the Greenway is a 2.4 mile segment of trail that will run from Eagle Street north to West Main Street. Preliminary design for Phase II of the Greenway has been completed. The City is actively seeking a funding source for environmental reviews, final design, and construction. Future phases of the Greenway will connect from West Main Street to the Thomaston Town Line.



Phase II of the Naugatuck River Greenway will create a continuous non-motorized corridor between the Naugatuck town line and West Main Street, with connections to Downtown Waterbury. © RBA Group

JACKSON STREET PARK

The City's long-term vision for the Naugatuck River Greenway also includes the creation of a new park along the river, revitalizing an abandoned and disused waterfront close to Downtown. According to the preliminary concept plan, the proposed Jackson Street Park will comprise approximately 19 acres of riverfront property and will include both active and passive park facilities.

Proposed facilities include ball fields, basketball courts, playgrounds, a kayak launch, and picnic areas. The large lawn area proposed for the park could be used for soccer or major public events.



Jackson Street Park is part of a long-term City vision to reclaim underutilized land along the Naugatuck River. © RBA Group

CONCLUSION

The open access and sense of joint endeavor provided by parks, recreational amenities, and open space can knit a community together across demographic groups in a way that few other physical features can. In addition to promoting alternative transportation modes and healthy behaviors for residents, visitors, and workers, parks and open spaces provide a valuable break in the urban landscape, providing natural beauty, fresh air, health and environmental benefits, and a place of repose to all who visit them. Well-maintained recreational amenities have the potential to spur economic development, raising the value of nearby properties as they improve citizens' quality of life. Continued investment in parks and recreation is critically important to Waterbury's future.





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