



The Research Bureau

Report 17-02  
March 2017

# Worcester Almanac 2017

Worcester Regional Research Bureau, Inc.  
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### *A Note from The Research Bureau*

The Worcester Regional Research Bureau is pleased to present the third annual Worcester *Almanac*—our compendium of information of all things Greater Worcester. A small, not-for-profit organization, The Research Bureau’s mission is to serve the public interest of Greater Worcester by conducting independent research and analysis of public policy issues to promote informed public debate and decision-making. We undertake this *Almanac* each year to provide government officials, residents, businesses, and institutions an easy-to-use source for current and trend data on a range of civic concerns.

We would like to thank all those who provide data for this project. If there is any fact or figure about Greater Worcester that you would like to see included in the *Almanac*, please contact us at [wrrb@wrrb.org](mailto:wrrb@wrrb.org). To learn more about our activities or to read our reports, you can visit our website at [www.wrrb.org](http://www.wrrb.org), follow us on Twitter (@WRRBureau), or like us on Facebook (The Research Bureau).

If you believe in the importance of informed local governance and would like to sponsor our efforts, please send a contribution to:

Worcester Regional Research Bureau, Inc.  
500 Salisbury Street  
Worcester, MA 01609



*Photo: Courtesy of Destination Worcester/Discover Central Massachusetts.  
Jason Ouelette & Chelsea Creekmore*

### *A Note from Our Sponsor - MassDevelopment*

Worcester serves as a central location for the Commonwealth's economy thanks to the commitment of its academic, business, civic, and nonprofit institutions. With an office and staff in downtown Worcester that has facilitated investment of more than \$2.2 billion in the city, MassDevelopment provides a wide array of programs and resources to help Worcester develop and grow.

An overview of the projects financed by MassDevelopment in 2016 illustrates the variety of our programs that help to stimulate investment and growth in the City of Worcester. Last year, MassDevelopment provided funding support to projects such as the renovation of affordable housing units at Washington Heights; equipment, construction, and renovation work at multiple UMass Memorial Health Care hospitals; assessment and cleanup of contamination at the former Presmet manufacturing site on Harding Street, which will soon be home to the new Worcester Sports Center. The Agency also provided grants to the EcoTarium, the Family Health Center of Worcester, and co-working space Technocopia through various programs.

Downtown Worcester is both a hub for the city and a focus of MassDevelopment's investment. The historic Hanover Theatre, at the heart of Worcester's designated Transformative Development Initiative District, used MassDevelopment loans, grants, guarantees, and New Markets Tax Credit equity at all stages of its redevelopment to make this dream a reality. Through the Transformative Development Initiative, MassDevelopment is working with city and business leaders to build the surrounding neighborhood into a bustling hub of cultural activity and entertainment in the downtown by using strategic and catalytic investments to revitalize the area. Three co-working spaces (The WorcShop, the Worcester Clean Tech Incubator, and Creative Hub) received grants in the inaugural round of collaborative workspace program awards, playing a continued role in this vibrancy, with The WorcShop serving as a dynamic and exciting venue for the program's announcement.

Central Massachusetts has a strong manufacturing sector in both industry and academia. For the fifth year in a row, a Worcester-based partnership – led by Quinsigamond Community College and made up of the Central Massachusetts Workforce Investment Board, the Worcester Public Schools, and Blackstone Valley Education Foundation – received funding through MassDevelopment's "AMP it up!" program to target teachers, school counselors, college faculty, families, and parents who influence career exploration and decision-making for students in grades 7 through 12 to urge them to pursue manufacturing careers. First-time AMP it up! grant recipient Girls Inc. will also partner with Saint-Gobain and TE Connectivity to show young women in high school the possibilities available in manufacturing careers.

In 2017, Worcester could benefit from new and invigorated MassDevelopment programs. The Baker-Polito Administration's economic development legislation, which the Legislature passed and the Governor signed in 2016, created a site readiness program to create more project-ready industrial and commercial sites. The law also authorized \$45 million in bond funding for the Brownfields Redevelopment Fund and \$45 million for the Transformative Development Initiative, both programs that have boosted key projects in industrial and downtown parts of Worcester.

The Worcester Almanac represents a local effort to understand and monitor changes in the growing Greater Worcester region. MassDevelopment is grateful for a long history and partnership with the Worcester Regional Research Bureau, and we look forward to strengthening our relationship through projects like the Worcester *Almanac*.

- Roy Angel, Lending (rangel@massdevelopment.com)
- Kelly Arvidson, Business Development (karvidson@massdevelopment.com)
- Shyla Matthews, Community Development (smatthews@massdevelopment.com)
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# Government

### City of Worcester Government

# City of Worcester

The City of Worcester, as established by the City Charter, is known as a modified Plan E form of government which is a Council-Manager form of government with a popularly elected Mayor. The Worcester Public Schools is a quasi-independent department of the City.

The City Council is the City's legislative body while the City Manager serves as chief executive officer. The City Council is composed of 11 members - six elected city-wide (or at-large) and five elected from districts. The Mayor is a member of the City Council who receives the most votes in the mayoral election and wins an at-large City Council seat. In addition to his or her role as City Councilor, the Mayor serves as the ceremonial head of the government and chairs both the City Council and School Committee. The City Council hires the City Manager and can remove him or her by majority vote, and also hires the City Clerk and City Auditor. The City Manager hires all City employees (except the City Clerk, City Auditor, and employees of the Worcester Public Schools), oversees City operations, and presents the City Council with an annual budget that must be approved by June 30th of each year. The City Council has the authority to reduce the City Manager's proposed budget, but not increase it. The approved budget must be balanced.

The Worcester School Committee is the Worcester Public Schools' legislative body while the Superintendent of Schools serves as chief executive officer. The School Committee consists of the Mayor and six elected city-wide members. The School Committee sets district-wide school policies, votes on the district budget, and hires and removes the Superintendent.

City Council and School Committee elections are held in odd numbered years.



City of Worcester Seal

**Mayor**

Joseph M. Petty

**City Council**

Anthony J. Economou, District 1  
Candy F. Mero-Carlson, District 2  
George J. Russell, District 3  
Sarai Rivera, District 4  
Gary Rosen, District 5  
Morris Bergman, At-Large  
Michael T. Gaffney, At-Large  
Khrystian E. King, At-Large  
Konstantina B. Lukes, At-Large  
Kathleen M. Toomey, At-Large

**City Manager**

Edward M. Augustus, Jr.

**School Committee**

Dianna L. Biancheria  
Donna M. Colorio  
John L. Foley  
Molly O. McCullough  
John F. Monfredo  
Brian A. O'Connell

**Superintendent**

Maureen Binienda, Superintendent of Schools

**City Clerk**

Susan M. Ledoux

**City Auditor**

Robert V. Stearns

**City Manager's Cabinet**

Kathleen G. Johnson, Assistant City Manager for Operations  
Michael J. Lavoie, Fire Chief  
Richard H. Fiske, III, Emergency Communications & Emergency Management Director  
Steven M. Sargent, Police Chief  
John R. Kelly, Inspectional Services Commissioner  
David M. Moore, City Solicitor  
Paul J. Moosey, Public Works & Parks Commissioner  
Michael E. Traynor, Chief Development Officer  
Thomas F. Zidelis, Chief Financial Officer



### **United States Senators**

Elizabeth Warren  
Edward J. Markey

### **United States Representative**

James P. McGovern

### **Governor**

Charles D. Baker, Jr.

### **Lieutenant Governor**

Karyn Polito

### **Governor's Council**

Jennie L. Caissie

### **State Senators**

Harriette L. Chandler—1st Worcester  
Michael O. Moore—2nd Worcester

### **State Representatives**

John J. Mahoney—13th Worcester  
James J. O'Day—14th Worcester  
Mary S. Keefe—15th Worcester  
Daniel M. Donahue—16th Worcester  
Kate D. Campanale—17th Worcester

### **District Attorney**

Joseph D. Early, Jr.

### **Clerk of Courts**

Dennis P. McManus

### **Register of Deeds**

Anthony J. Vigliotti

### **Register of Probate**

Stephanie K. Fattman

### **County Sheriff**

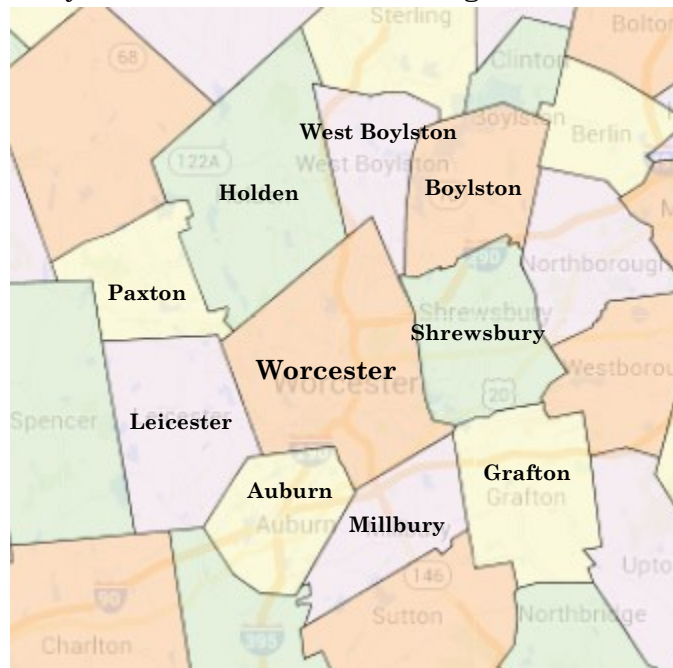
Lewis G. Evangelidis



**Greater Worcester Executive/Administrative Leadership**

Auburn—Julie A. Jacobson—Town Manager  
 Boylston—Martin McNamara—Town Administrator  
 Grafton—Timothy P. McInerney—Town Administrator  
 Holden—Peter Lukes—Town Manager  
 Leicester—Kevin J. Mizikar—Town Administrator  
 Millbury—David Marciello—Town Manager  
 Paxton—Carol Riches—Town Administrator  
 Shrewsbury—Daniel J. Morgado—Town Manager  
 West Boylston—Anita Scheipers—Town Administrator

**City of Worcester & Surrounding Communities**



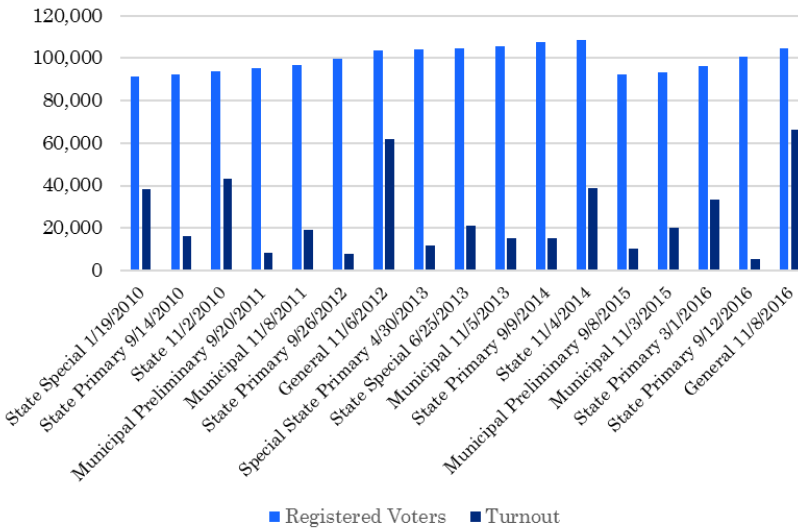
**City of Worcester:**

Area: 37.37 square miles (96.79 square kilometers)  
 Population: 183,382 (2015)  
 Population Density: 4,907.2 persons per square mile

**Worcester County:**

Area: 1,579 square miles (4,090 square kilometers)  
 Population: 810,935 (2015)  
 Population Density: 513.6 persons per square mile  
 60 cities and towns (including Worcester)

## Worcester: Registered Voters & Ballots Cast, 2010-2016



Source: City of Worcester Elections Division.

Voter turnout in the City of Worcester varies depending on the type of election. Municipal elections, which are held in odd numbered years, experience the lowest turnout. Only 21.3% of registered voters turned out in November 2015 to vote for the Mayor, City Council, and School Committee. State elections, which occur in even-numbered years, and especially elections including the election for President, experience the highest turnout. 63.4% of Worcester's electorate voted in the November 2016 general election.

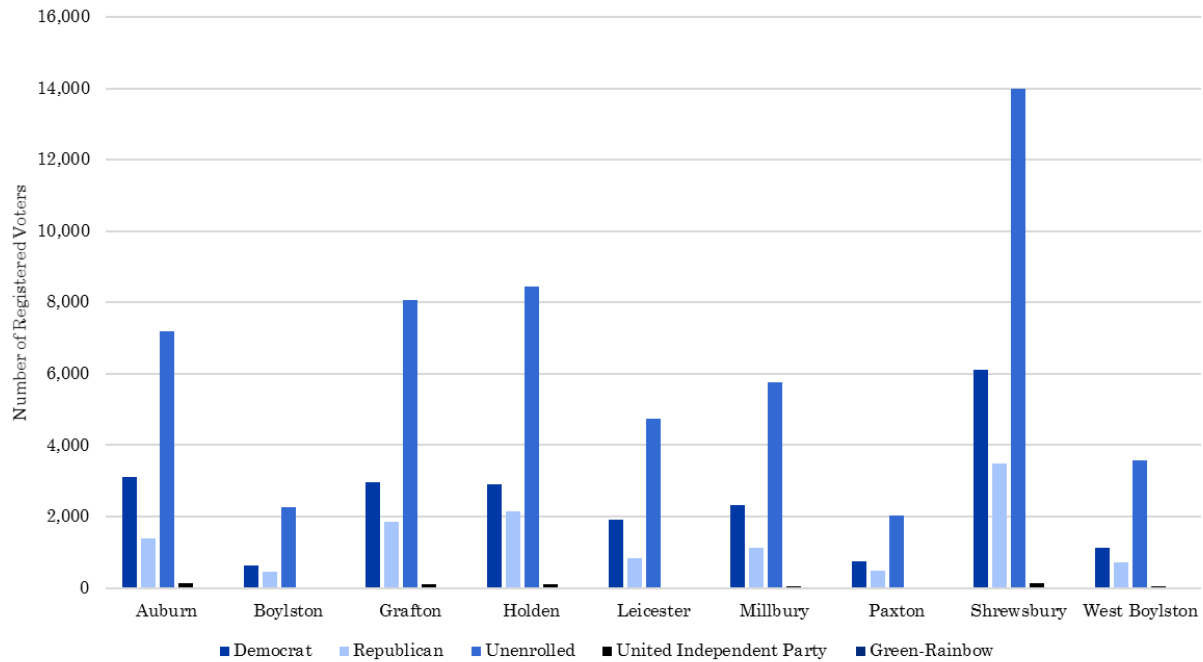
## Worcester: Party Affiliation & Registration, January 2017

Party Affiliation	Registered Voters
Unenrolled	49,795
Democrat	44,730
Republican	8,626
United Independent Party	1,166
Libertarian	217
Green Rainbow	202
Inter 3rd Party	46
Conservative	34
Ma Independent Party	31
Green Party USA	25
Working Families	19
Pizza Party	18
Socialist	17
We the People	15
American Independent	14
Latino Vote Party	9
Pirate	8
Reform	5
Constitution Party	5
Rainbow Coalition	3
America First Party	3
Natural Law Party	2
Veteran Party America	2
World Citizens Party	1
American Term Limits	1
Twelve Visions Party	1

Source: City of Worcester Elections Division.

As of January 2017 there were 104,995 registered voters in the City of Worcester. 47.42% of voters were not enrolled in a political party. 42.6% of voters registered as Democrats while 8.2% of voters registered as Republicans.

## Greater Worcester: Party Affiliation & Registration, as of October 19, 2016



Sources: Individual towns.



## Worcester Almanac: Government

Worcester: Property Tax Rates, FY17	
Type	Fiscal Year 2017
Residential	\$19.22
Commercial/Industrial/ Personal Property (CIP)	\$32.93

Source: City of Worcester. Rates are per \$1,000 of value.

### Tax Shift

The City of Worcester has a dual tax rate, which assesses residential and commercial/industrial/personal (CIP) property at different rates. Under Massachusetts law, communities are limited in their ability to shift the tax burden among classes to ensure that the burden is not shifted solely onto non-voting taxpayers. A single tax rate is represented by a factor of "1."

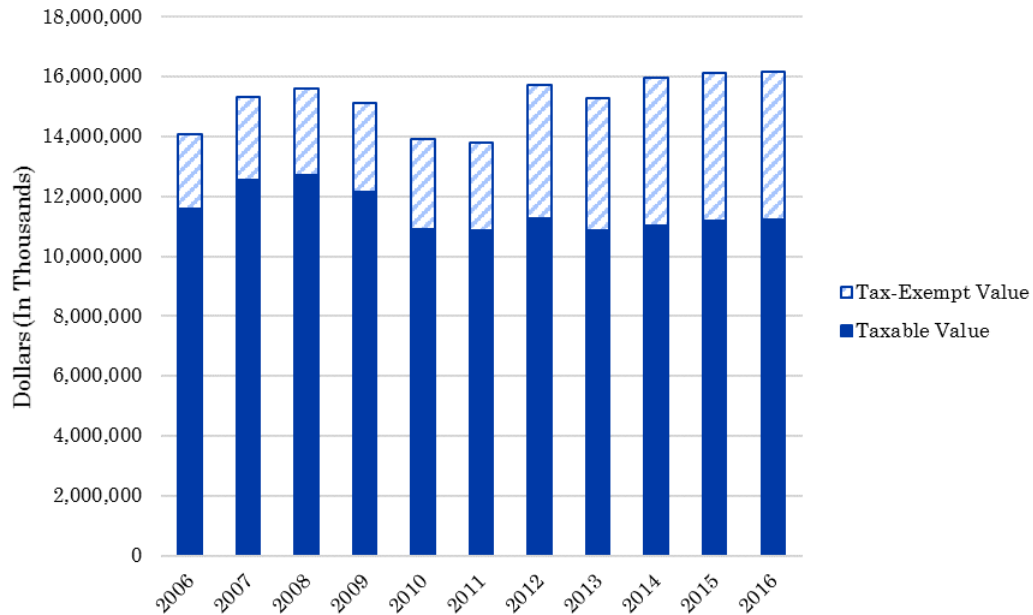
Worcester: Tax Shift, FY17			
Lowest Residential Factor Allowed	Residential Factor Selected	Maximum CIP Shift Allowed	CIP Shift
.8085	.8350	1.5	1.4307

Source: City of Worcester Assessor's Office.

Worcester: Tax Value of Property, FY17		
Tax Status	Estimated Value	Percent of Total
Total Taxable and Tax-Exempt Property Value	\$17,228,272,678	100.00%
<i>Taxable Property Values</i>	<i>\$12,266,519,406</i>	<i>71%</i>
<i>Tax-Exempt Property Values</i>	<i>\$4,961,753,272</i>	<i>29%</i>
Class		
Residential	\$8,869,882,042	51.4%
Commercial/Industrial/Personal Property	\$3,396,637,364	19.7%

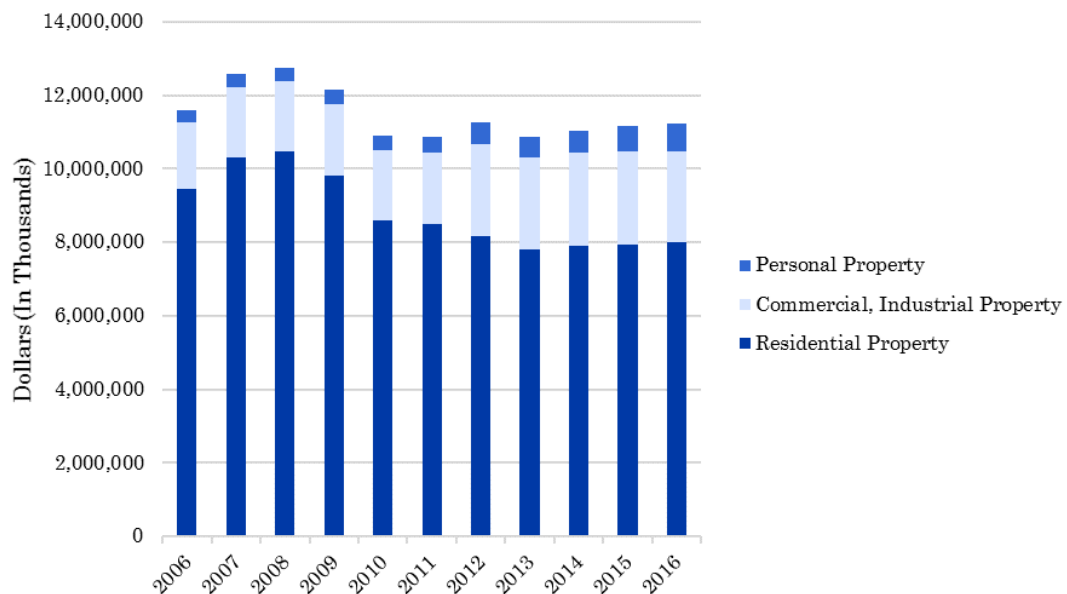
Source: City of Worcester Assessor's Office.

## Worcester: Assessed Value of Taxable & Tax-Exempt Property, 2006-2016



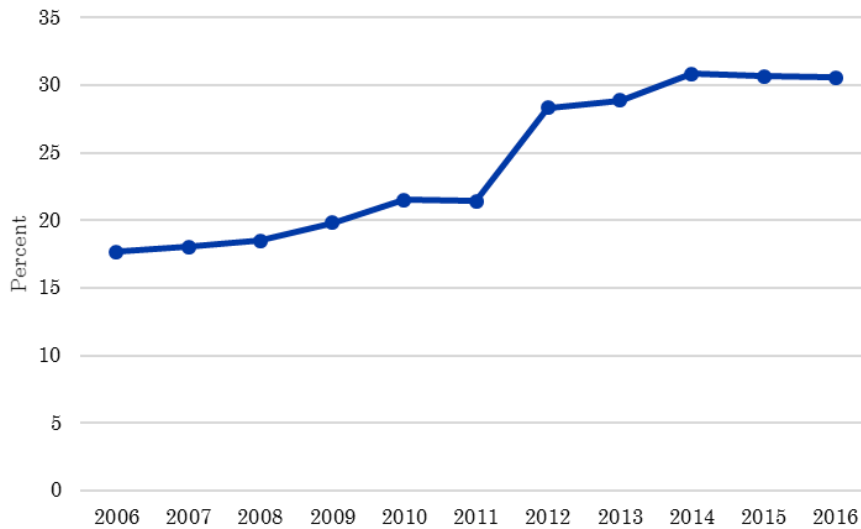
Source: City of Worcester Comprehensive Annual Financial Report, 2016.

## Worcester: Assessed Value of Taxable Property by Classification, 2006-2016



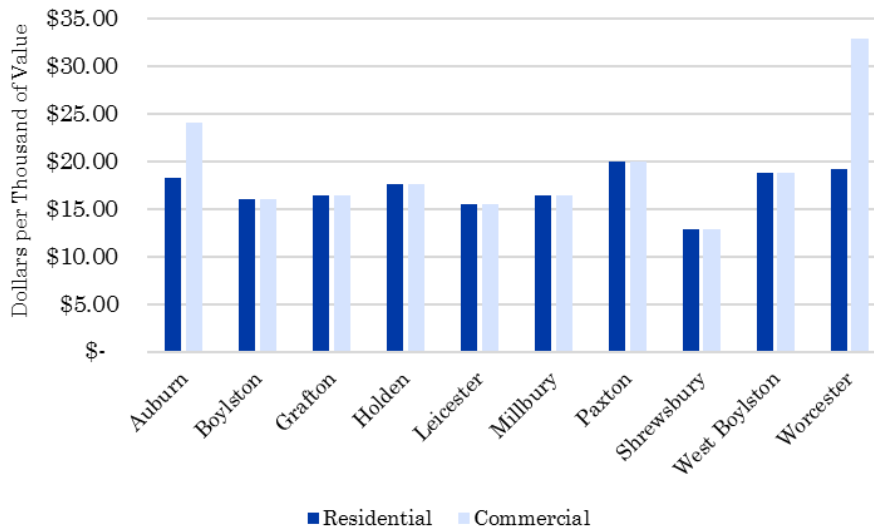
Source: City of Worcester Comprehensive Annual Financial Report, 2016.

## Worcester: Tax-Exempt Value as Percent of Total Property Values, 2006-2016



Source: City of Worcester Comprehensive Annual Financial Report, 2016.

## Greater Worcester: Property Tax Rates, FY17



Only the City of Worcester and the Town of Auburn tax commercial properties at a higher rate than residential properties in Greater Worcester.

Source: Massachusetts Department of Revenue.

Worcester: Other Taxes, FY16		
Meals		
	Tax Rate	Actual
<b>General Fund</b>		
State	6.25%	\$20,730,840
Local	0.75%	\$2,727,742
<b>DCU Center Special District (To City)</b>		
State	6.25%	\$683,146
Local	0.75%	\$81,978
Room Occupancy		
	Tax Rate	Actual
<b>General Fund</b>		
State	5.70%	\$823,651
Local	6%	\$867,001
<b>DCU Center Special District (To City)</b>		
State	5.70%	709,013
Local	6%	746,329
<b>Motor Vehicle Excise</b>	<b>\$25 per \$1000</b>	<b>\$15,554,000</b>

Source: City of Worcester Administration & Finance.

Worcester: Principal Taxpayers, FY16				
Taxpayer	Type of Business	Assessed Valuation	Fiscal 2016 Tax Bill	% of Total Tax Levy
Massachusetts Electric (National Grid)	Electric Utility	\$344,007,000	\$11,689,000	4.25
NSTAR Gas Co. (Eversource)	Gas Utility	\$245,770,000	\$8,351,000	3.04
VHS Acquisition Subsidiary - St. Vincent Hospital	Medical Care	\$148,687,000	\$5,052,000	1.84
New England Power Co.	Electric Utility	\$69,558,000	\$2,364,000	0.86
V3B SA LLC - Lincoln Plaza	Shopping Plaza	\$61,194,000	\$2,079,000	0.76
Worcester Renaissance LLC - City Square	Office/Shopping Mall	\$60,670,000	\$2,062,000	0.75
440 Lincoln St. Holding - Hanover/Allmerica	Insurance	\$56,277,000	\$1,912,000	0.7
Verizon New England	Communications	\$48,556,000	\$1,650,000	0.6
Worcester TC LLC - Abbott Bioresearch	Biotechnology Park	\$44,455,000	\$1,511,000	0.55
Saint-Gobain Abrasives Inc.	Abrasives Manufacturer	\$44,435,000	\$1,510,000	0.55

Source: City of Worcester Comprehensive Annual Financial Report, June 30, 2016.

## Unfunded Liabilities

Upon retirement, Massachusetts state and municipal employees are eligible for pension and other post-employment benefits (OPEB), such as health care. Each year, Massachusetts governmental entities must determine current costs (pension and benefits provided to existing retirees) and future costs (pension and benefits owed upon retirement to current employees, as determined by actuaries) to determine total liability.

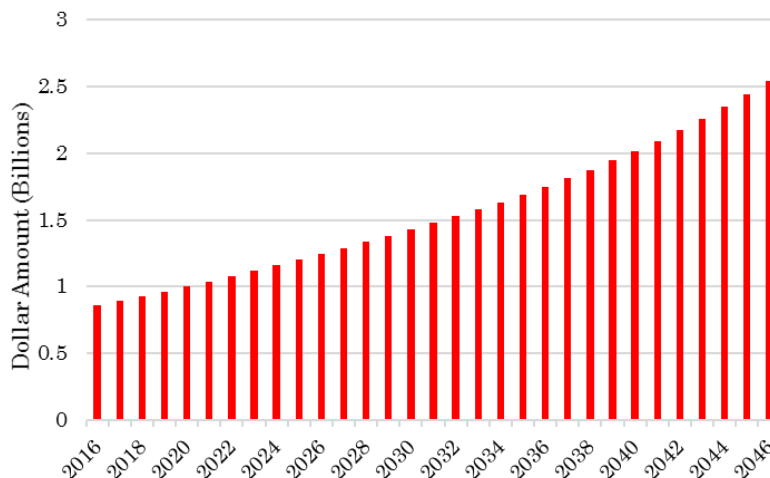
The City of Worcester, like most municipalities, has struggled with outstanding pension and OPEB liability. In 1992, the Commonwealth of Massachusetts offered grant funding to cities and towns that committed to a schedule to eliminate unfunded pension liability. The City of Worcester accepted the offer, committing itself to full pension funding by 2028. In light of the financial downturn, in 2010 the Commonwealth offered cities and towns a waiver on the original plans, which allowed Worcester to extend its schedule to June 30, 2032.

Worcester: Pension Liability, July 1, 2016	
Total Pension Liability	\$1,286,899,596
Funded Portion of Pension Liability	\$797,877,750
Funded Pension Obligation	62%

While pension liabilities must be forward-funded, Massachusetts does not mandate that municipalities address OPEB liabilities. Under the City's Five-Point Plan, Worcester contributes 30% of Free Cash—the surplus funds remaining after the end of the fiscal year—to be deposited into the OPEB Trust. If Free Cash is not available, no funds are deposited. As a result, Worcester's outstanding liability increases annually and is projected to exceed \$2.5 billion within the next 30 years.

Worcester: Other Post-Employment Benefit Liability, July 1, 2016	
Total OPEB Liability	\$860,873,100
Funded Portion of OPEB Liability	\$8,896,391
Funded OPEB Obligation	1%

## Worcester: Other Post-Employment Benefits (OPEB) Projected Liability, 2016-2046



Source: City of Worcester.



## Bond Rating

In order to borrow money, municipalities issue bonds that are purchased by investors for a guaranteed return over time. Bond ratings serve as third-party evaluations of a bond issuer's ability to repay the bond according to the terms. Three primary rating agencies—Fitch Ratings, Moody's Investors Service, and Standard & Poor's Rating Service—evaluate most municipal bonds. Bonds are given ratings ranging from a high of "AAA" or "Aaa" to a low of "C" or "D". Worcester's ratings indicate attractive, high grade bonds that are considered at low risk of default.

Worcester: Bond Ratings, 2016	
Rating Agency	Rating
Fitch Ratings	AA
Moody's Investors Service	Aa3
Standard & Poor's Rating Service	AA-

Source: City of Worcester.

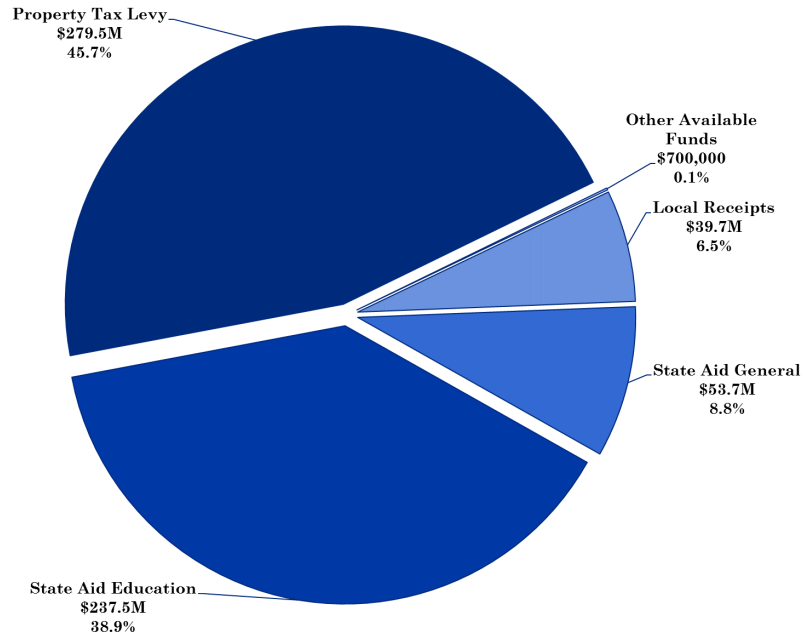
Worcester: Public Debt, 2016	
Total Outstanding Long-Term Indebtedness as of 12/1/2015	\$675,303,470
<i>Self-Supporting Debt*</i>	<i>\$289,004,486</i>
Bond Anticipation Notes as of 6/30/2016	\$85,179,551
Bonded Debt per Capita	\$3,333
Bonded Debt as a % of Assessed Valuation	5.48%
Bonded Debt as a % of Personal Income per Capita	13.63%

Source: City of Worcester. \*Self-Supporting Debt includes water, sewer, CitySquare, public garages, the DCU Special District, and other enterprise accounts.

Worcester: Fund Balance, FY16*	
Fund Balance—FY16	\$43,548,439
Change in Fund Balance—FY15 to FY16	\$8,300,714
Fund Balance as a % of FY17 Budget	7.12%

Source: City of Worcester Comprehensive Annual Financial Report, 2016. \*The City's fund balance is the difference between assets and liabilities in the general fund.

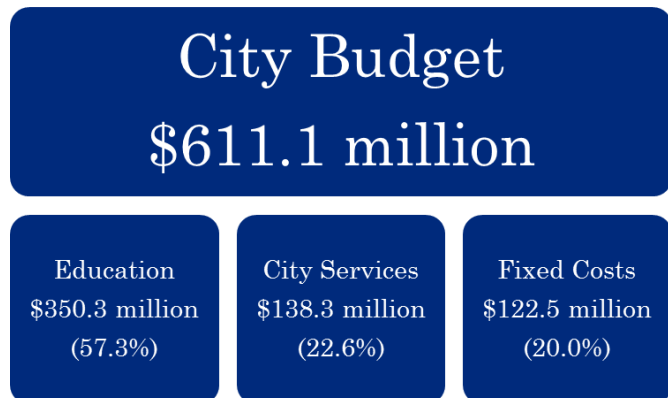
### Worcester: Budgeted Revenues, FY17



The City of Worcester is heavily dependent on local property tax revenues and state aid for education. State education funding is established by the Commonwealth's Chapter 70 formula, which provides education subsidies to cities and towns using standardized criteria including the characteristics of local school-age populations and municipal finances. In 2015, the Commonwealth's Foundation Budget Review Commission called for changes to the formula, including updates for health insurance and special education costs.

The City's final FY17 budget was \$611.1 million. The original budget the City Administration submitted to City Council was \$614.1 million, however City Council requested the removal of \$3 million targeted to the City's public school building stabilization fund. City leadership has discretion over only a small part of the City's expenditures. A significant portion—77%—of the City's annual budget is fixed obligations to education, pensions, and debt service.

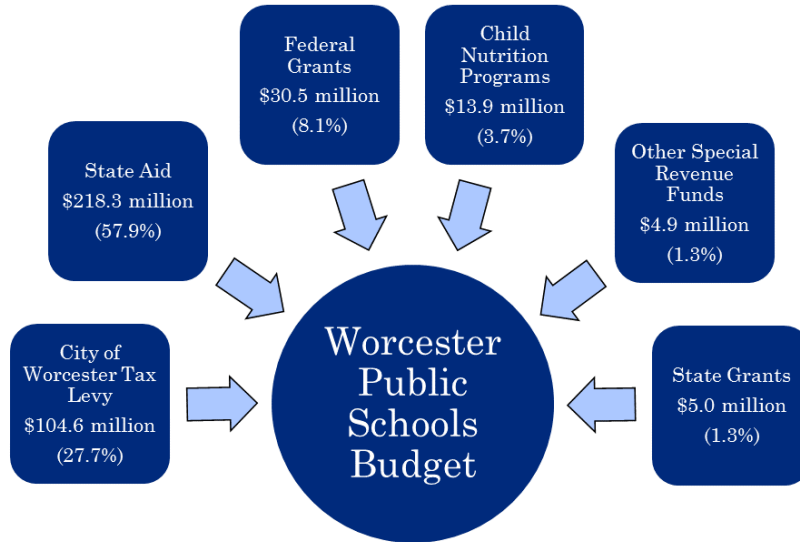
### Worcester: Budgeted Expenditures, FY17



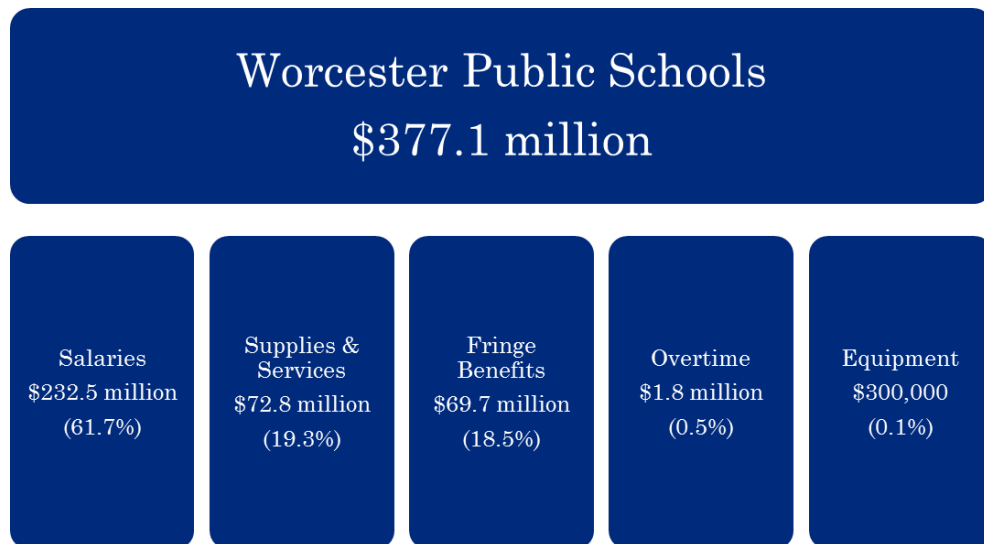
Source: City of Worcester.

The Worcester Public Schools allocation within the City budget is augmented by available Federal, State, and other outside grants.

### Worcester Public Schools: Budgeted Revenues, FY17



### Worcester Public Schools: Budgeted Expenditures, FY17



Sources: City of Worcester & Worcester Public Schools Fiscal 2017 Budgets.

Greater Worcester: FY17 Budgets						
	Total City Budget (including schools)	Education Budget	Education % of Total Budget	Police Budget	Fire Budget	Police & Fire % of Total Budget
<b>Auburn</b>	\$58,757,826	\$23,481,301	40%	\$4,085,183	\$2,632,988	11.4%
<b>Boylston</b>	\$14,010,803	\$8,349,065	60%	\$1,015,352	\$477,120	11%
<b>Grafton</b>	\$56,691,042	\$31,929,558	56%	\$2,190,946	\$664,532	5%
<b>Holden</b>	\$44,130,648	\$24,881,564	56%	\$2,260,100	\$1,356,396	8%
<b>Leicester</b>	\$28,659,818	\$16,836,800	59%	\$2,618,641*		9%
<b>Millbury</b>	\$40,906,608	\$20,549,750	50%	\$3,389,517*		8%
<b>Paxton</b>	\$12,474,741	\$6,287,063	50%	\$1,040,499	\$305,955	11%
<b>Shrewsbury</b>	\$113,641,739	\$59,112,145	52%	\$4,612,888	\$3,348,370	7%
<b>West Boylston</b>	\$22,912,114	\$11,317,756	49%	\$1,460,406	\$667,535	9%
<b>Worcester</b>	\$611,094,246	\$350,266,038	57%	\$47,023,806	\$39,454,618	14.1%

Sources: Individual Town Budgets. \*Presented as one item in budget.

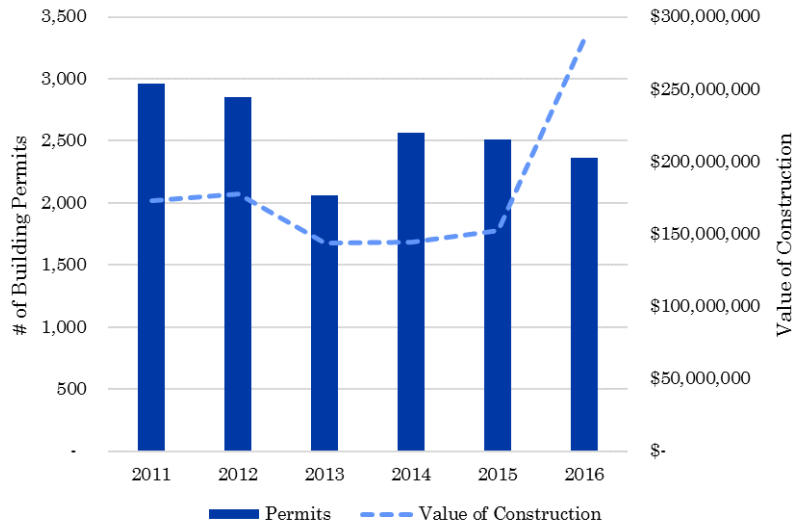
<b>Worcester: Budgeted Employee Counts, FY17</b>	
<b>Positions</b>	<b># of Budgeted Employees</b>
<b>Legislative Offices</b>	
City Council	11
Mayor's Office	2
City Clerk	10
Election Commission	9
City Auditor	8
Retirement	0
<b>City Manager's Office</b>	
City Manager's Office	9
Elder Affairs	8
Public Library	100
<b>Dept. of Economic Development</b>	
Economic Development	37
Workforce Investment Board	10
Workforce Central Career Center	35
Cable Services	4
License Commission	3
<b>Public Health</b>	25
<b>Human Resources</b>	17
<b>Law Department</b>	15
<b>Police Department</b>	508
<b>Fire Department</b>	427
<b>Emergency Communications</b>	67
<b>Dept. of Inspectional Services</b>	61
<b>Worcester Public Schools</b>	3,967
<b>Public Works and Parks</b>	
Golf	2
Public Works	197
Parks, Recreation, and Hope Cemetery	56
Enterprise: Sewer Division	68
Enterprise: Water Division	135
<b>Administration &amp; Finance</b>	
Finance	41
Assessing	10
Technical Services	29
City Energy and Asset Management	13
<b>TOTAL: CITY ONLY</b>	<b>1,917</b>
<b>TOTAL: CITY &amp; WPS</b>	<b>5,884</b>

Source: City of Worcester.

Each year, as part of the annual budget process, the City Council (and the School Committee in the case of the Worcester Public Schools) approves staff positions within City departments. Authorized positions are filled at the discretion of the City or WPS Administration and can be full-time or part-time. While 5,884 positions are budgeted, it is possible that not all of these positions will be filled during the fiscal year or that some of these positions are filled with part-time employees.

<b>Worcester Public Schools: Budgeted Employee Counts, FY17</b>	
<b>Positions</b>	<b># of Budgeted Employees</b>
District Administrators	24
School Administrators	79
Teachers	2,161
Instructional Assistants	599
Bus Monitors	39
Crossing Guards	106
Educational Support	88
Custodial Services	153
Maintenance	33
Full Year Clerical	63
School Year Clerical	68
School Nurses	55
District Support	50
Bus Drivers	43
Child Nutrition	285
Head Start	121
<b>TOTAL WPS</b>	<b>3,967</b>

## Worcester: Real Estate Investment, 2011-2016



Source: City of Worcester Executive Office of Economic Development.

Worcester: Trash and Recycling, 2016	
Trash Collected	21,527 tons
Recycling Collected	10,151 tons
Yard Waste (Includes street leaf pick-up)	93,000 square yards
Scrap Metal (Includes curbside pick-up and drop-off)	92 tons
E - Waste (Majority of e-waste is television and computer monitors)	67.5 tons
# of Garbage Bags Sold	
	Large
	Small
	1.4 million
	1.65 million

Source: Worcester Department of Public Works and Parks.

### Worcester: Public Library System, 2017

# of Independent Branches	3
# of School-Based Branches	4
Print Holdings (including periodicals)	775,101
Total Circulation	963,031
Total Number of Visits	707,913

Source: Worcester Public Library.

### Worcester: Water and Sewer Rates, 2016\*

	FY14	FY15	FY16	FY17
Water Rates	\$3.51	\$3.54	\$3.60	\$3.60
Sewer Rates	\$5.94	\$6.29	\$6.62	\$6.92

Source: City of Worcester Department of Public Works & Parks. \*Rates are per 100 cubic feet of usage.

### Worcester: Parks and Recreation, 2017

# of Parks	60
# of Playgrounds	34
# of Fields for Sports	124
Swimming Beach, Pool, Spray Park	7
Total Park Acreage	1,316.05
% of Total Acreage in City	6.3%
# of State Parks	1
# of State Pools and Beaches	3

Sources: City of Worcester Department of Public Works & Parks; Commonwealth of Massachusetts.

# Demographics & Economy



## City of Worcester Population: 183,382

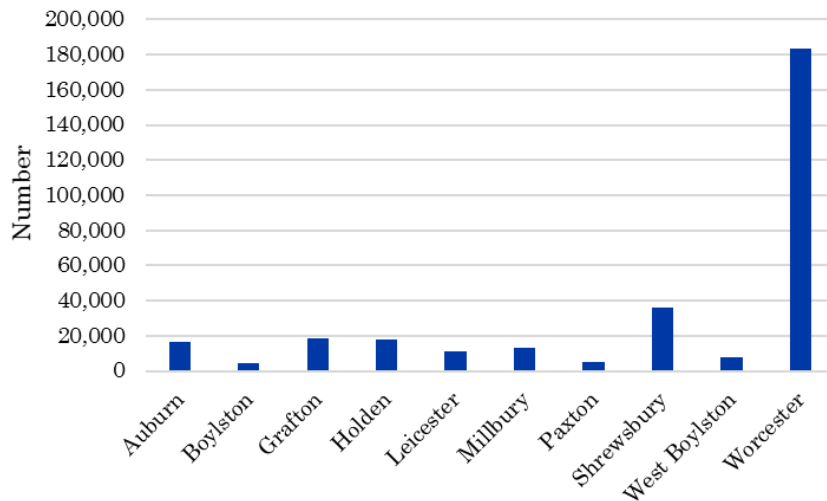
134th Largest City in the United States

2nd Largest City in New England

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

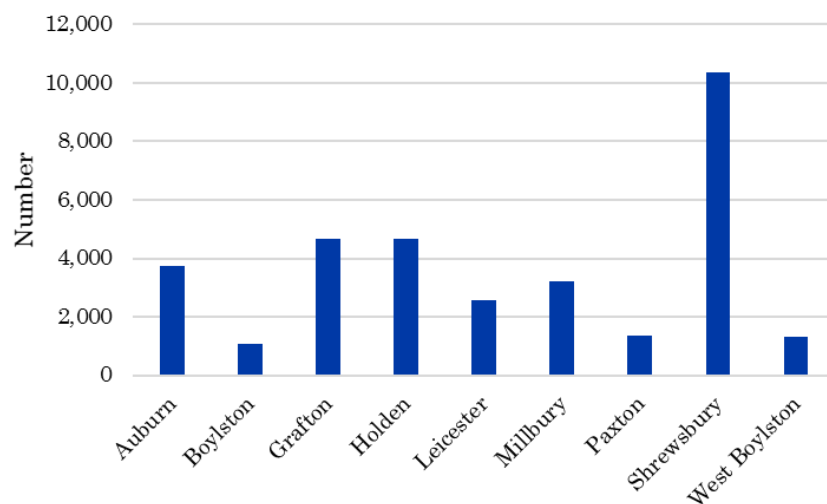
Population

### Greater Worcester: Population, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

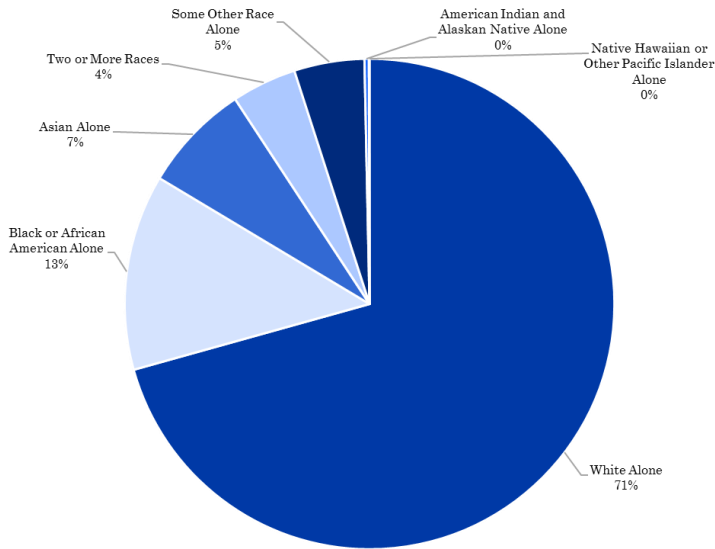
### Greater Worcester: # of Population 19 Years of Age or Under, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

## Population

**Worcester: Population by Race, 2015**

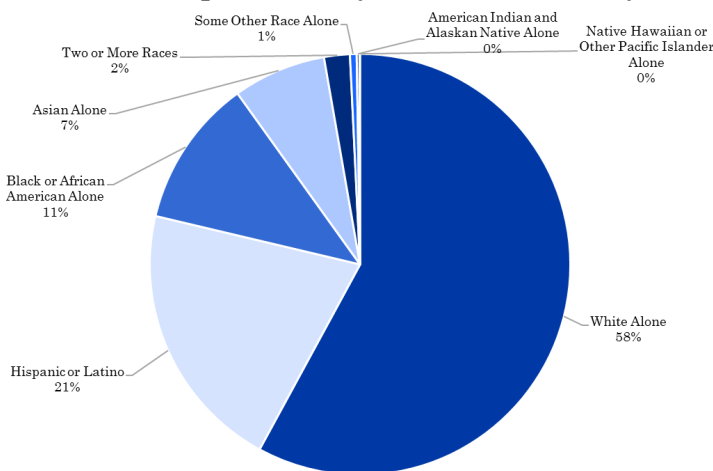


Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

The U.S. Census Bureau tallies five categories of race: “American Indian or Alaska Native,” “Asian,” “Black or African American,” “Native Hawaiian or Other Pacific Islander,” and “White.” Hispanic origin is defined as ethnicity, rather than race, and persons defined as Hispanic or Latino can be of any race.

“**Worcester Population by Race, 2015**” illustrates Worcester’s racial composition according to the Census Bureau’s five racial categories. People of Hispanic origin fall into any one of the five categories.

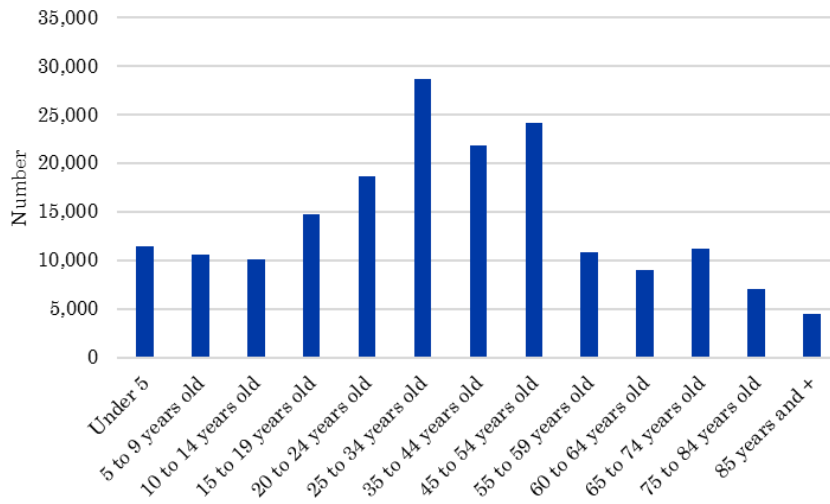
**Worcester: Population by Race & Ethnicity, 2015**



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

“**Worcester Population by Race & Ethnicity, 2015**” illustrates Worcester’s population by both race and ethnicity. It indicates that people who identify as Hispanic or Latino make up approximately 21% of Worcester’s population, however it does not account for their racial composition and therefore may undercount certain racial categories.

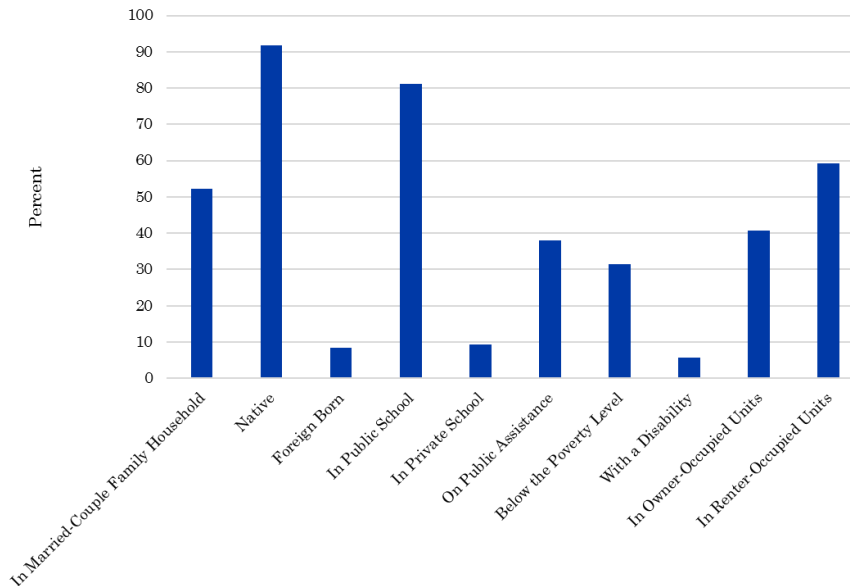
## Worcester: Population by Age, 2015



According to the U.S. Census Bureau, the median age of Worcester residents is 33.8 years old. The median age of Massachusetts is 39.3 and the median age of the United States is 37.6.

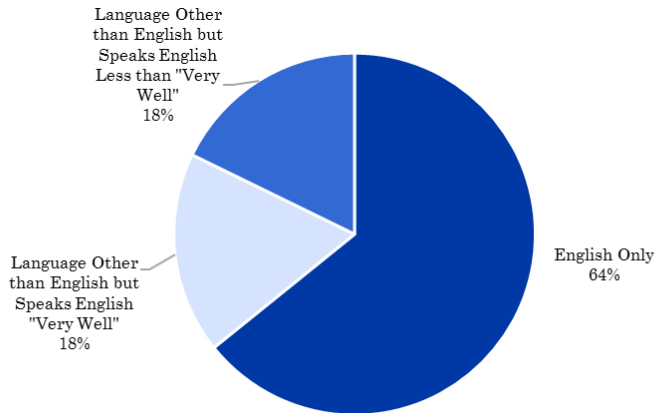
Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

## Worcester: % Under 18 Years of Age by Characteristics, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

### Worcester: Language Spoken At Home and English Fluency, 2015



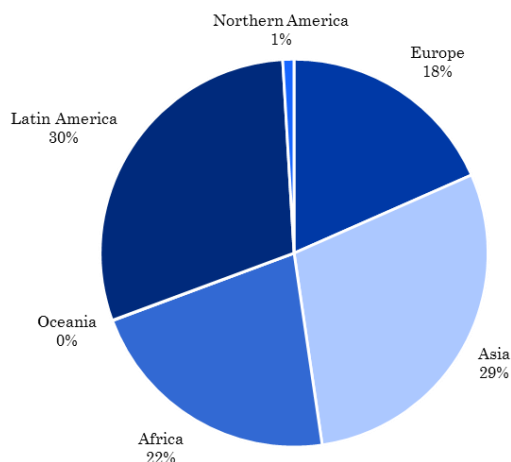
In 2015, 64.2% of the Worcester population spoke English, 16.5% spoke Spanish, and 19.3% spoke some other language. According to the Worcester Public Schools, more than 90 languages are spoken by children in the school system.

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

Worcester: Foreign Born Residents, 2015		
Total Foreign Born	Foreign Born Naturalized Citizen	Foreign Born Not US Citizen
40,203	19,894	20,309

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

### Worcester: Region of Origin of Foreign Born Residents, 2015



Approximately 1 in 5 residents of Worcester was born outside the United States, with nearly one-third of those residents originating in Latin America followed closely by Asia.

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

Worcester: Households, 2015	
<b>Total # of Households</b>	<b>68,576</b>
<i>Family Households</i>	<i>57%</i>
<i>Non-Family Households</i>	<i>43%</i>
<i>Households with Children under 18</i>	<i>29.5%</i>
<i>Average Family size</i>	<i>3.23</i>
<b>Average Household Size</b>	
<i>Owner-occupied</i>	<i>2.66</i>
<i>Housing Renter-occupied</i>	<i>2.38</i>
<b>Median Household Income</b>	<b>\$45,472</b>

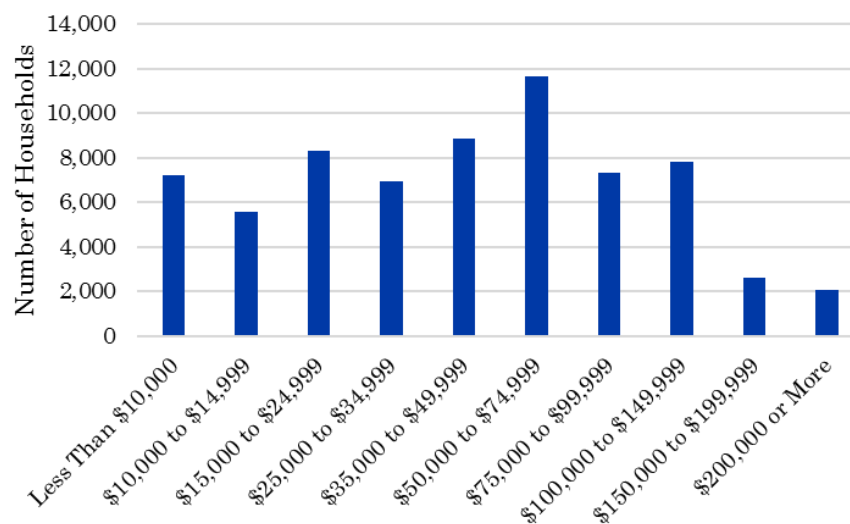
Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

According to the U.S. Census Bureau, the median household income in Worcester is \$45,472. The median household income of Massachusetts is \$68,563 and the median household income of the United States is \$53,889.

According to the U.S. Department of Housing and Urban Development, the Worcester Area Median Family Income (which includes Worcester and surrounding towns) is \$79,700.

N.B. "Median Household Income" is the income that has an equal number of households above and below that income level.

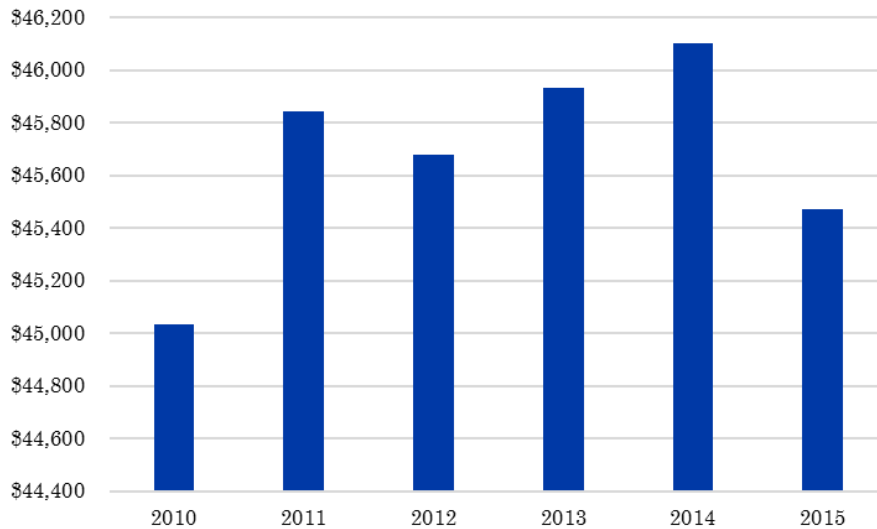
**Worcester: Household Income, 2015**



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

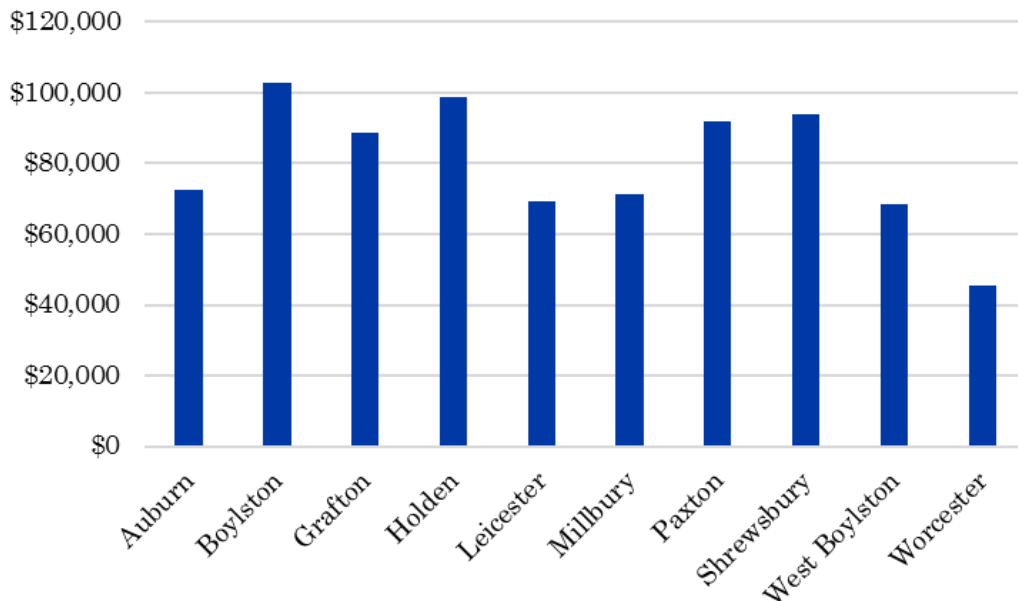
## Income

### Worcester: Median Household Income, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

### Greater Worcester: Median Household Income, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

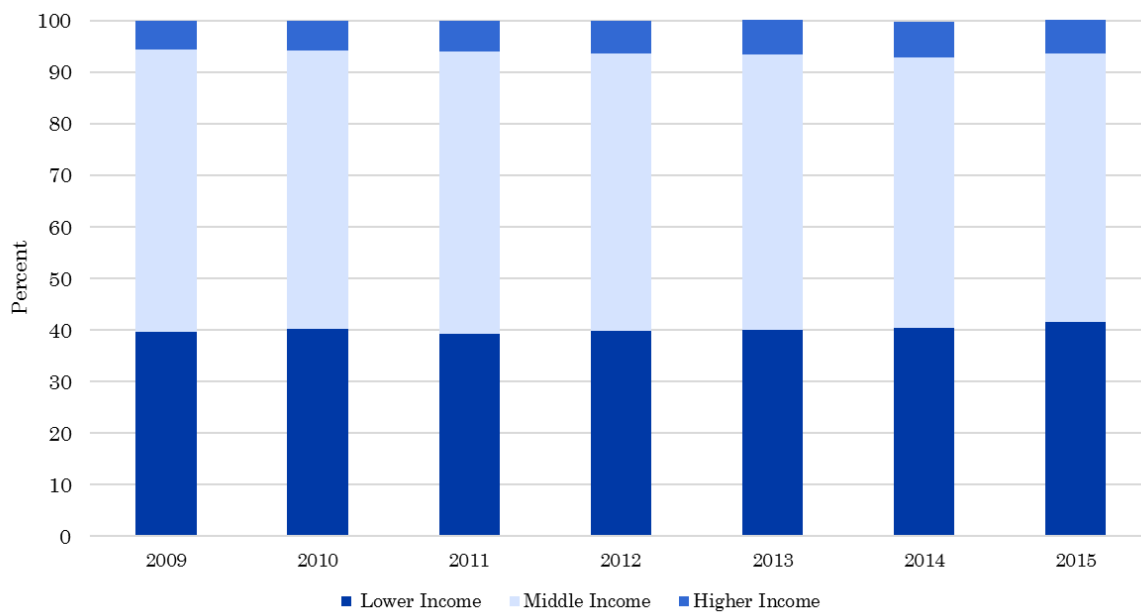
## Worcester's Middle Income\*

The Pew Research Center defines middle income, or middle class, as households between 67% to 200% of the state median income. In Massachusetts, with a median household income of \$68,563, a middle class household income would range from \$45,937 to \$137,126. The Census Bureau does not divide income groups into lower, middle, and upper income categories and its household income categories do not allow for exact determinations. However, the chart below uses the closest categories to approximate The Pew Research Center's definition of middle income for Worcester. In 2015, approximately 52.1% of Worcester households were in the middle income range, 41.5% of Worcester households were in the lower income range, and 6.9% of Worcester households were in the upper income range.

### Income Ranges

Lower Income: \$0—\$34,999    Middle Income: \$35,000—\$149,999    Higher Income: \$150,000+

## Worcester: % of Households by Income Level, 2009 - 2015



Sources: U.S. Census Bureau, 5-Year American Community Surveys.

### \*According to Pew Research Center:

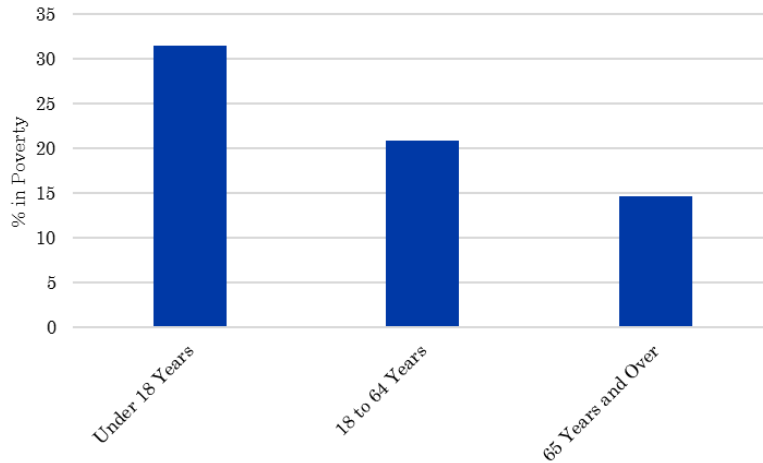
**Middle income or middle class?** The terms “middle income” and “middle class” are often used interchangeably. This is especially true among economists who typically define the middle class in terms of income or consumption. But being middle class can connote more than income, be it a college education, white-collar work, economic security, owning a home, or having certain social and political values. Class could also be a state of mind, that is, it could be a matter of self-identification (Pew Research Center, [2008](#), [2012](#)). The interplay among these many factors is examined in studies by Hout ([2007](#)) and Savage et al. ([2013](#)), among others.

Source: Pew Research Center, *Social and Demographic Trends*, <http://www.pewsocialtrends.org/2015/12/09/the-american-middle-class-is-losing-ground/>, Accessed March 2016.

## Poverty

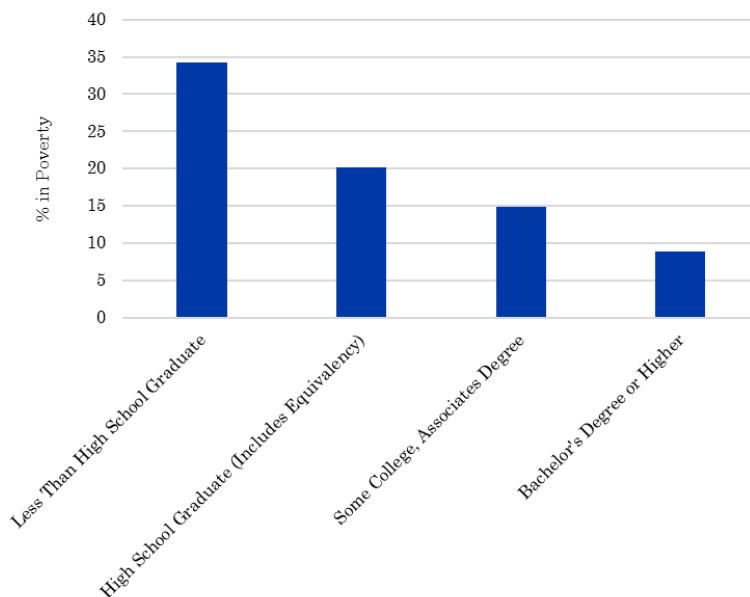
According to the U.S. Census Bureau, **22.4% of Worcester's population is below the poverty level**, while 11.6% of the Massachusetts population and 15.5% of the United States population is below the poverty level. The weighted average poverty threshold for a family of four in 2017 is \$24,600. Poverty is defined using pre-tax income.

### Worcester: % in Poverty by Age, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

### Worcester: % in Poverty by Educational Attainment, 2015\*

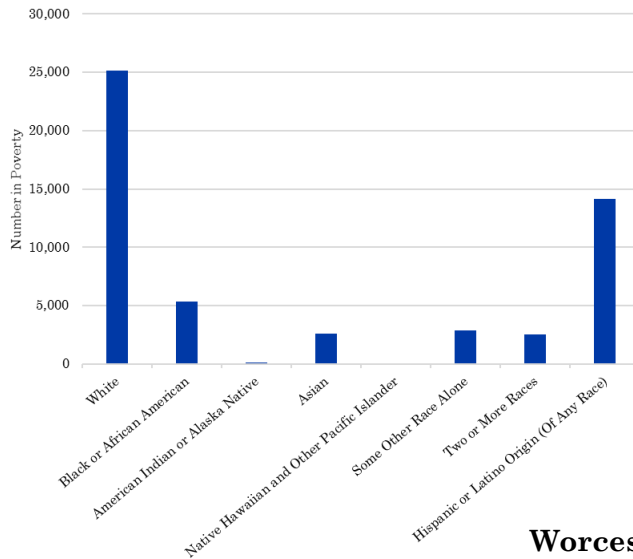


Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

\*Chart includes population 25 years and over only.

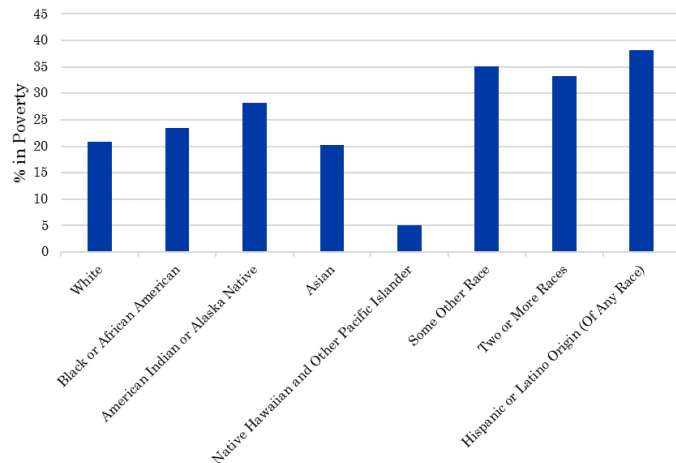


## Worcester: # in Poverty by Race, 2015

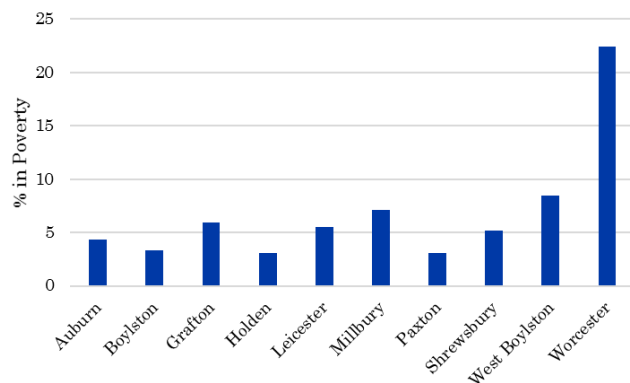


While the highest number Worcester residents in poverty are White, people of Hispanic or Latino origin are in poverty at a higher rate than all other racial and ethnic categories.

## Worcester: % in Poverty by Race, 2015

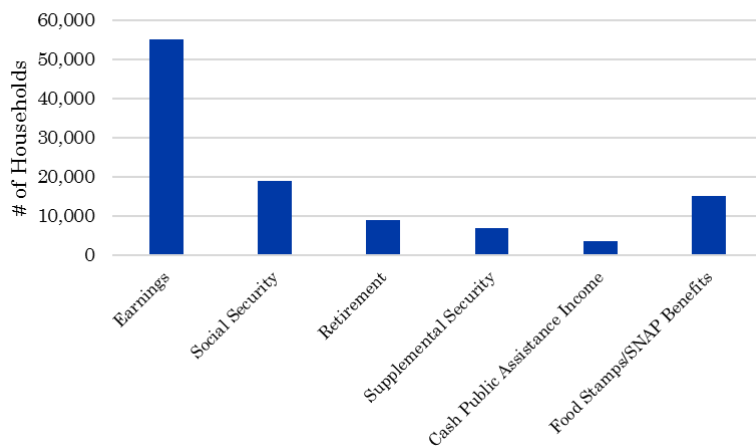


## Greater Worcester: % in Poverty, 2015



Source: U.S. Census Bureau, 2010-2015 5-Year American Community Survey.

## Worcester: Sources of Household Income, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

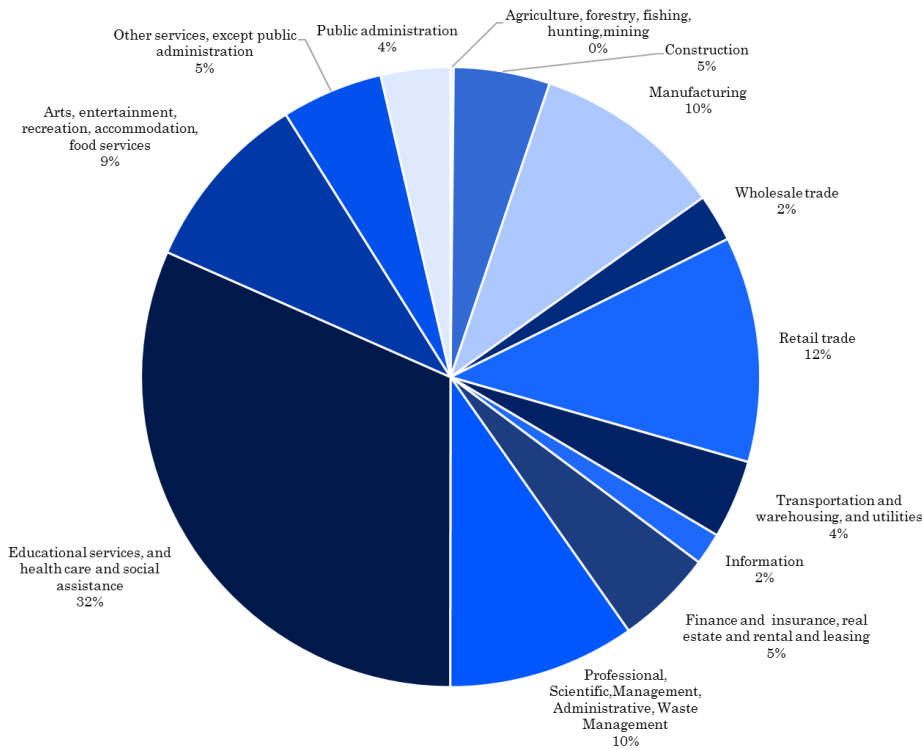
In 2015, the large majority of Worcester's 68,576 households derived income through earnings. Other income sources included Social Security and Food Stamps/SNAP (Supplemental Nutrition Assistance Program) Benefits. The mean earnings for Worcester households was \$62,460.

Worcester Economic Index, 2016	
Month	Worcester Economic Index
January	108.3
February	108.6
March	108.9
April	109.1
May	109.4
June	109.7
July	110.1
August	110.4
September	110.8
October	111.0
November	111.2
December	111.3

Source: Thomas White, Assumption College.

The quarterly Worcester Economic Indicators Report, developed by Thomas White, Chair of the Economics and Global Studies department at Assumption College, measures the health of the City of Worcester's economy using three variables: non-farm payroll data, total household employment, and the unemployment rate. The base year is January 2001 (January 2001 = 100).

## Worcester: Employment by Industry, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

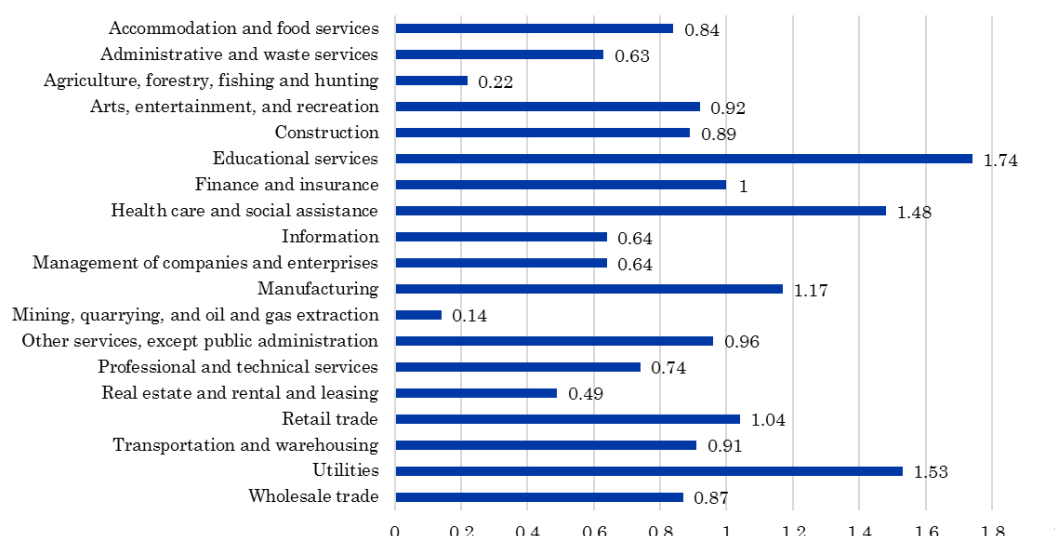
Worcester: Employment & Wages by Industry, 2015		
Industry, Population Over 16 Employed	2015	Median Earnings
Public Administration	3,059	\$53,796
Finance and Insurance, and Real Estate and Rental and Leasing	4,252	\$44,689
Information	1,410	\$41,389
Professional, Scientific, Management, Administrative Waste Management	8,225	\$41,196
Manufacturing	8,399	\$40,697
Construction	4,226	\$40,369
Wholesale Trade	2,086	\$34,625
Educational Services, Health Care, Social Assistance	26,568	\$31,759
Transportation, Warehousing, Utilities	3,449	\$30,763
Agriculture, Forestry, Fishing, Hunting, Mining	135	\$26,250
Retail Trade	9,901	\$22,129
Other Services, except Public Administration	4,455	\$21,896
Arts, Entertainment, Recreation, Accommodation Services	7,967	\$15,916

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.



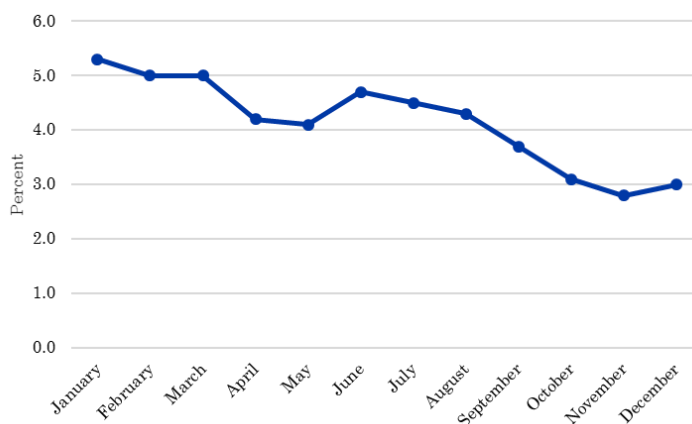
The location quotient (LQ) shows the distribution of employees in a particular industry and geographic region compared to the distribution of employees in that same industry in the entire United States. The national average of employees for each industry is represented by the number “1”. If Worcester County has more employment in a certain industry than the national average, the County number is greater than one. For example, the County’s LQ of 1.73 in Educational Services means that Worcester County has 1.73 times the per capita number of employees in that field compared with the national average.

## Worcester County: Location Quotient, 2015



Source: Bureau of Labor Statistics.

## Worcester Metropolitan Statistical Area: Unemployment Rate, 2016



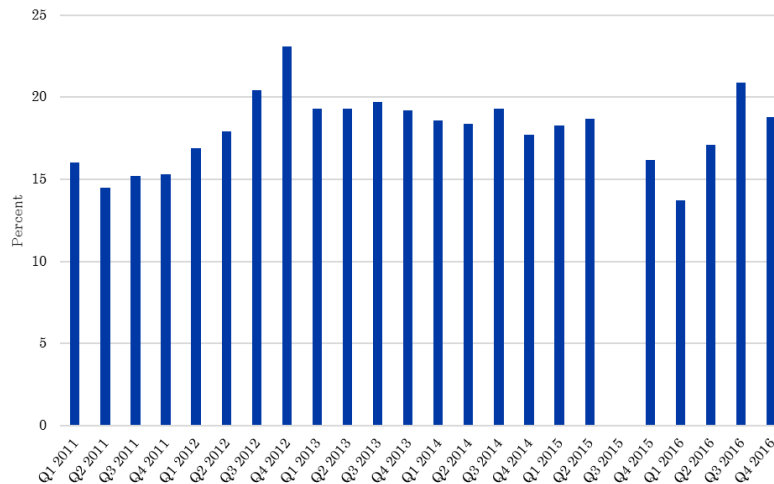
Source: Bureau of Labor Statistics. December numbers are preliminary.

A metropolitan statistical area includes a central urban area and surrounding suburban and rural areas that are connected economically. The Census Bureau defines the Worcester Metropolitan Statistical Area as Worcester County, Massachusetts and Windham County, Connecticut.

Worcester: Office and R&D Space, 2016*				
	1Q 2016	2Q 2016	3Q 2016	4Q 2016
Square Feet (SF) Supply	2,057,183	2,057,183	2,057,183	2,057,183
Direct SF Available	267,338	305,667	383,184	370,012
Sublease SF Available	13,600	45,980	45,980	17,600
Vacancy Rate (%)	13.7%	17.1%	20.9%	18.8%

Source: Colliers International. \*Based on a survey of select properties.

## Worcester: Quarterly Office & R&D Vacancy Rate, 2011-2016\*



Source: Colliers International. \*Based on a survey of select properties.

Colliers International completes a survey of office vacancies for Greater Boston that includes select buildings in Worcester. Colliers did not complete a market survey in 3rd Quarter 2015.

Worcester: Hotels, 2016*	
	Rooms
Beechwood Hotel	73
Courtyard Worcester	134
Hampton Inn & Suites	100
Hilton Garden Inn Worcester	199
Holiday Inn Express Worcester Downtown	96
Quality Inn & Suites Worcester	49
Residence Inn Worcester	129
Suburban Extended Stay Worcester	65
<b>Total Hotel Rooms</b>	<b>845</b>

Source: Discover Central Massachusetts.

Worcester: Hotel Market, 2016	
Occupancy	77.1%
Supply	302,525 Room Nights
Demand	227,883 Room Nights
Average Daily Rate	\$136.75
Revenue per Available Room	\$102.96

Source: Discover Central Massachusetts.

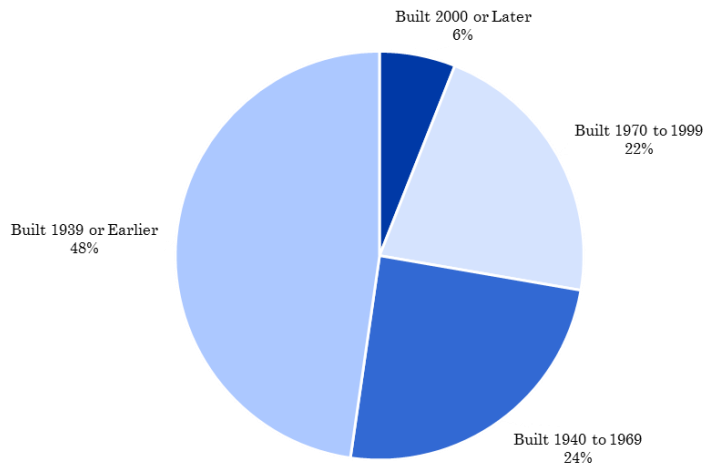
Two hotels are currently under construction in Worcester: Homewood Suites by Hilton at Washington Square (118 Rooms, Opening 2017) and AC Marriott at CitySquare (168 Rooms, Opening 2017).

## Housing

Worcester: Housing Units, 2015	
Total Housing Units	75,724
Occupied Housing Units	68,576
Vacant Housing Units	7,148
Housing Units in Multi-Unit Structures	46,616

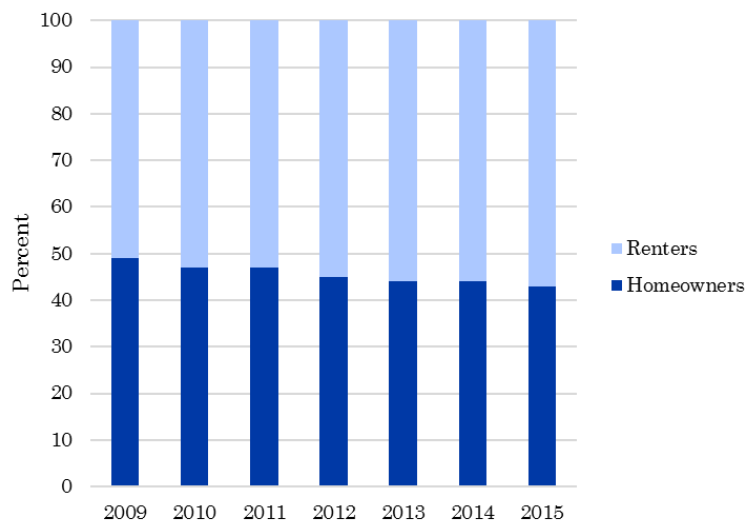
Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

### Worcester: Age of Housing Stock, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

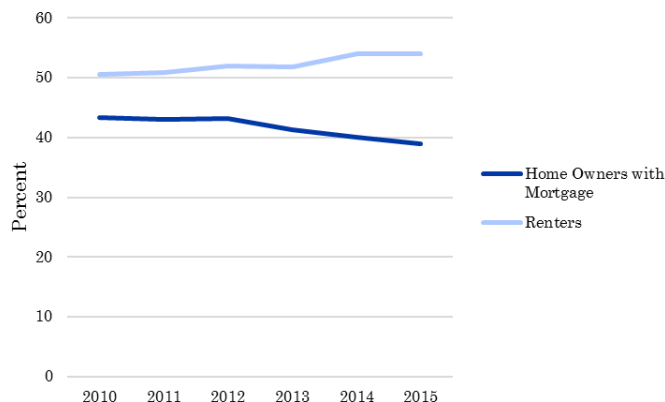
### Worcester: Owner-Occupied, and Renter-Occupied as a Percent of Total Households, 2009-2015



In 2015 there were 68,576 households in Worcester. 29,499 (43%) of those households were owner-occupied and 39,077 (57%) were renter-occupied.

Source: U.S. Census Bureau, 2015-Year American Community Survey.

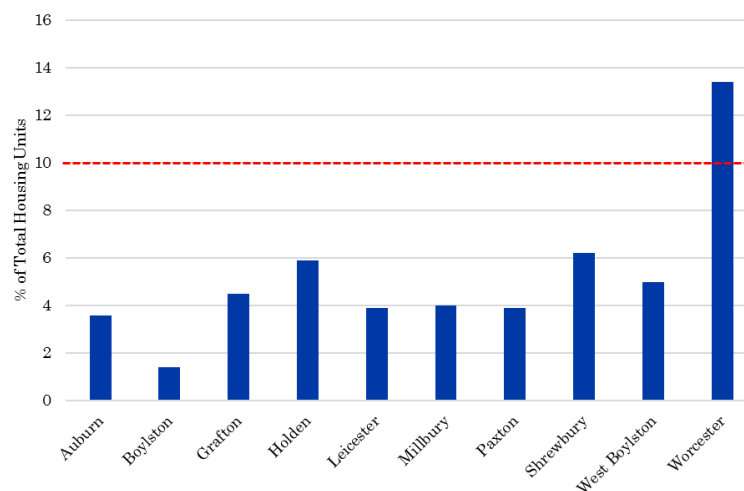
## Worcester: % of Households Spending 30% or More of Income on Housing, 2010-2015



Source: U.S. Census Bureau, 2010-2015 5-Year American Community Survey.

Massachusetts General Laws Chapter 40B was adopted in 1969 as part of the Massachusetts Comprehensive Permit Act to encourage and facilitate the building of affordable, long-term housing for low-income individuals and families across the Commonwealth and to ensure that low-income residents can remain in their localities if housing costs increase. The law calls on every Massachusetts community to ensure that 10% of all housing units meet certain affordability requirements.

## Greater Worcester: Chapter 40B Subsidized Housing Inventory, 2015



Source: Massachusetts Department of Housing & Community Development. As of December 2015. Red line indicates 10% threshold called for under Chapter 40B.

Annual Worcester County Point-in-Time Count, January 29, 2014				
	Sheltered		Unsheltered	Total
	Emergency Shelter	Transitional Housing		
# under age 18	296	108	0	404
# ages 18 - 24	63	19	3	85
# ages 24+	291	241	28	560
<b>Total Homeless</b>	<b>650</b>	<b>368</b>	<b>31</b>	<b>1,049</b>

Source: Central Massachusetts Housing Alliance.

## Veterans

Worcester: Veterans, 2015	
<b>Number</b>	8,741
Veterans as % of Population 18 and Older	6.13%
% of Veterans—Male	92.5%
% of Veterans—Female	7.5%
% of Veterans—Disabled	27.5%
% of Veterans—Below the Poverty Line	10.5%
<b>Period of Service</b>	
Gulf War (September 2001 or later)	1,110
Gulf War (August 1990 to August 2001)	1,396
Vietnam Era	2,447
Korean War	1,098
World War II	1,018

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.



# Health



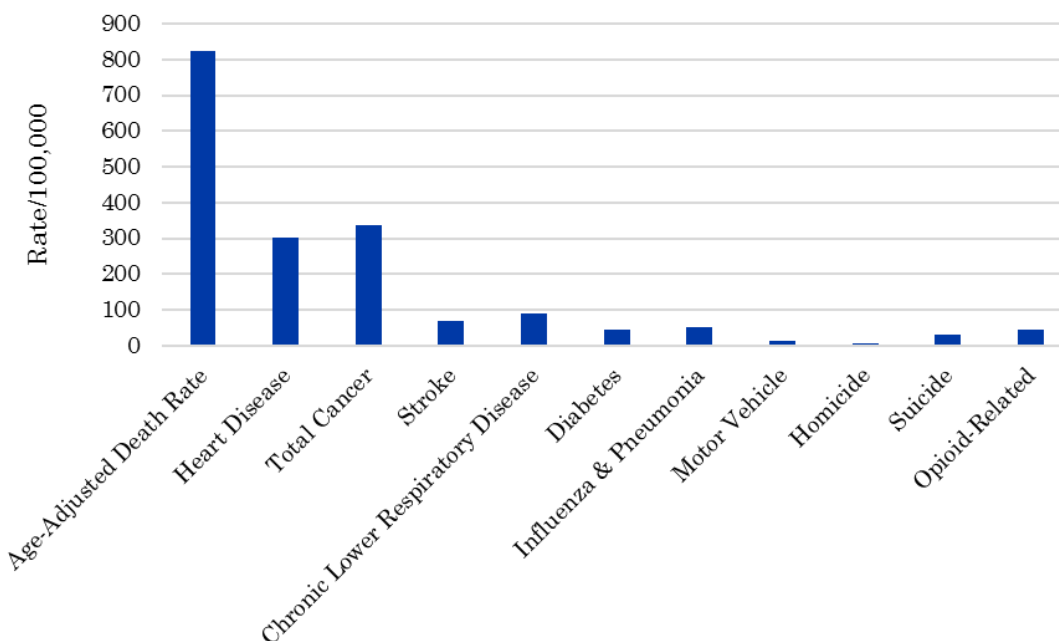
## Worcester Almanac: Health

### Worcester: Vital Statistics, 2016

Births	6,088
Deaths	3,179
Marriages	1,252

Source: City of Worcester Clerk's Office.

### Worcester: Selected Causes of Death, 2013



Source: Massachusetts Department of Public Health.

### Worcester: Massachusetts Community Health Information Profile Data

	Worcester	Massachusetts
Fertility Rate (per 1,000) (2010)	58.0	53.8
Teen Birth Rate (Ages 15-19 per 1,000 births) (2014)	16.3	10.6
Infant Mortality Rate (per 1,000 births) (2010-2012)	6.42	4.29
Admission to DPH-Funded Treatment (2014)	4,915	104,233
Current Smokers (Percent of Population) (2014)	21.4	17.4
Binge Drinkers (Percent of Population) (2014)	16	19
Overweight (Percent of Population) (2013)	60	58
Obese (Percent of Population) (2014)	31.1	23.3
Diabetic (Percent of Population) (2014)	10.8	9.7

Source: Greater Worcester Community Health Assessment, 2015, Massachusetts Department of Public Health. Except for Teen Birth Rate and Infant Mortality, all numbers relate to individuals 18 years old or above.

Worcester: Uninsured, 2015		
	# of Uninsured	% of Population
Worcester	7,730	4.3%
Massachusetts	235,963	3.6%

Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

Worcester: # of Beds—Licensed or Certified Health Care Facilities, February 2017	
Acute Hospitals	1,017
Non-Acute Hospitals	390
Renal Dialysis	47
Nursing Homes	2,315
Rest Homes	278

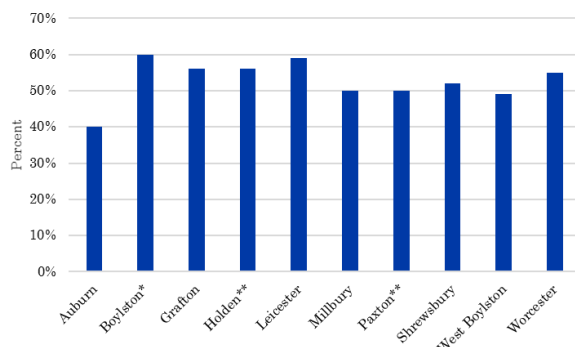
Source: Massachusetts Department of Public Health.

Worcester: National Institutes of Health Funding, FY16		
Biomedical Research Models, Inc.	2 Awards	\$1,213,864
Clark University	1 Award	\$450,900
Glsynthesis, Inc.	1 Award	\$597,909
Microbiotix, Inc.	10 Awards	\$4,523,172
Signablok, Inc.	1 Award	\$223,443
University of Massachusetts Medical School	344 Awards	\$153,892,824
Worcester Polytechnic Institute	9 Awards	\$2,641,651
Zata Pharmaceuticals, Inc.	1 Award	\$796,420
<b>Total</b>	<b>369 Awards</b>	<b>\$164,340,183</b>

Source: National Institutes of Health.

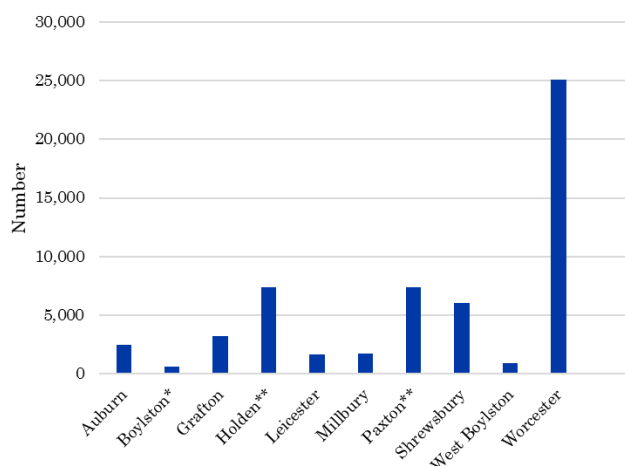
# Education

## Greater Worcester: Education as % of FY17 Municipal Budget



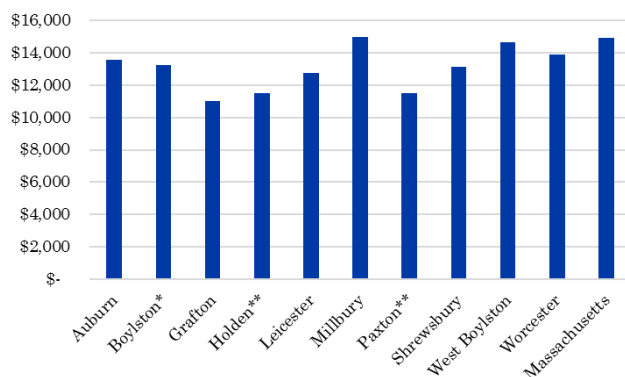
Sources: Individual Town Budgets.

## Greater Worcester: # of Students, 2016



Sources: Massachusetts Department of Elementary & Secondary Education, and the Wachusett Regional School District.

## Greater Worcester: Per Pupil Spending, 2015



Source: Massachusetts Department of Elementary & Secondary Education.

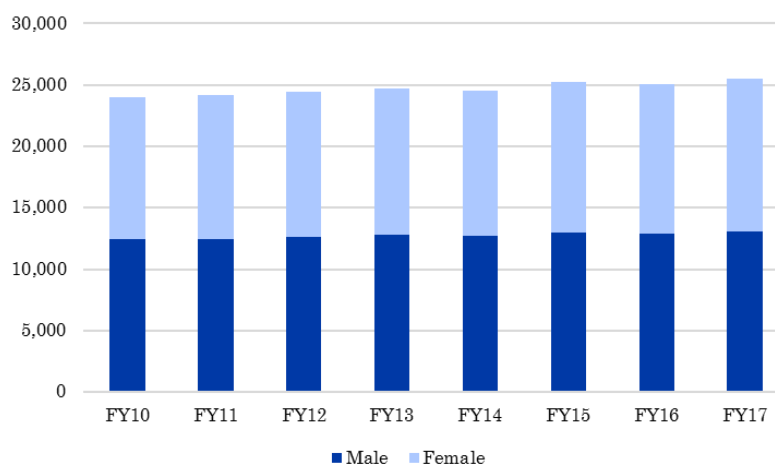
\*The town of Boylston oversees a K-5 elementary school and is part of the Berlin-Boylston Regional School District for Grades 6-12.

\*\*The towns of Holden and Paxton are part of the Wachusett Regional School District. Per-pupil spending reflects district wide spending.

Worcester Public Schools: FY17	
	# of Schools
Elementary Schools	33
Middle Schools	4
Grade 7-12 Schools	2
High Schools	5
Head Start Program	1
<i>Total</i>	<i>45</i>
	# of Students
Elementary Schools	16,148
Middle Schools	3,239
Grade 7-12 Schools	786
High Schools	5,306
<i>Total</i>	<i>25,479</i>
	# of Employees
Administrators	103
Teachers and Educators	2,760
Other	1,103
<i>Total</i>	<i>3,966</i>

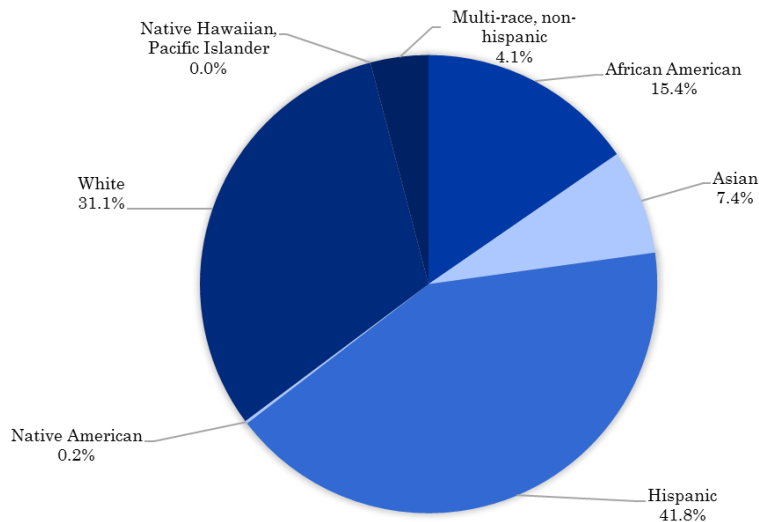
Source: Worcester Public Schools & Massachusetts Department of Elementary & Secondary Education.

**Worcester Public Schools: Enrollment by Gender, FY10-FY17**



Source: Massachusetts Department of Elementary & Secondary Education.

### Worcester Public Schools: Enrollment by Race/Ethnicity, 2016-2017

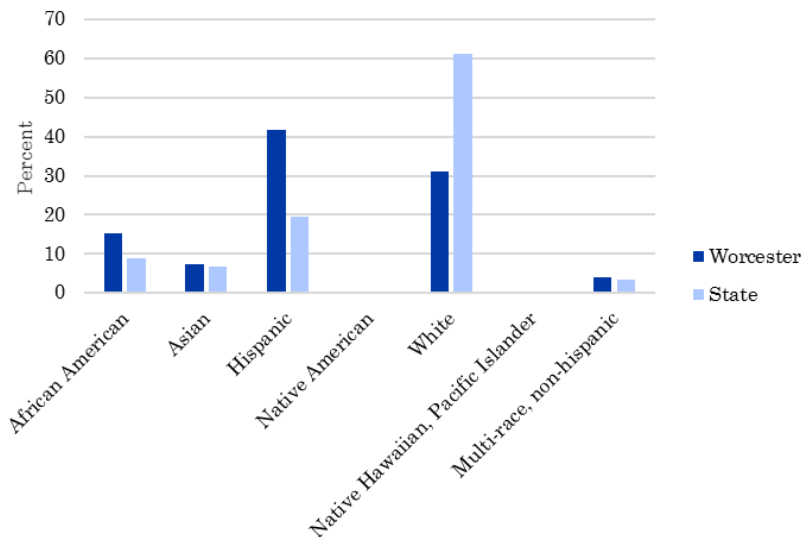


The U.S. Census Bureau tallies five categories of race: "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or Other Pacific Islander," and "White." Hispanic origin is defined as ethnicity, rather than race, and persons defined as Hispanic or Latino can be of any race.

Enrollment

Source: Massachusetts Department of Elementary & Secondary Education.

### Worcester Public Schools: Enrollment by Race/Ethnicity Compared to State, 2016-2017



Source: Massachusetts Department of Elementary & Secondary Education.

## Worcester Public Schools: Enrollment FY17

# Enrollment

Elementary & Middle Schools	# of Students	High Schools	# of Students
Belmont Street Community	558	Burncoat Senior High	1,023
Burncoat Middle School	563	Claremont Academy	532
Burncoat Street	259	Doherty Memorial High	1,555
Canterbury	376	North High	1,307
Chandler Elementary Community	514	South High Community	1,421
Chandler Magnet	464	University Park Campus School	254
City View	497	Worcester Technical High	1,389
Clark Street Community	203	<b>Total Number of Students</b>	<b>25,479</b>
Columbus Park	476		
Elm Park Community	499		
Flagg Street	404		
Forest Grove Middle	997		
Francis J. McGrath Elementary	299		
Gates Lane	596		
Goddard School/Science Technical	517		
Grafton Street	409		
Head Start	560		
Heard Street	269		
Jacob Hiatt Magnet	442		
Lake View	299		
Lincoln Street	285		
May Street	337		
Midland Street	242		
Nelson Place	454		
Norrback Avenue	566		
Quinsigamond	805		
Rice Square	412		
Roosevelt	654		
Sullivan Middle	863		
Tatnuck	385		
Thorndyke Road	376		
Union Hill	521		
Vernon Hill	561		
Wawecus Road	147		
West Tatnuck	341		
Woodland Academy	627		
Worcester Arts Magnet School	405		
Worcester East Middle	816		

### Worcester Public Schools: Level 2016

Level 1	10
Level 2	12
Level 3	21
Level 4	1

Source: Massachusetts Department of Elementary & Secondary Education.

According to the Massachusetts Department of Elementary & Secondary Education, “All Massachusetts districts and schools with sufficient data are classified into one of five accountability and assistance levels, with the highest performing in Level 1 and lowest performing in Level 5. In general, a district is classified into the level of its lowest performing school, unless the district was classified into Level 4 or 5 as a result of action by the Board of Elementary and Secondary Education.”

Source: Massachusetts Department of Elementary & Secondary Education



### Worcester: Private Schools, 2017

Alhuda Academy (Pre-K-8)
Bancroft School (Pre-K-12)
Holy Name Junior/Senior High School (7-12)
Nativity School of Worcester (5-8)
Notre Dame Academy (7-12)
Our Lady of the Angels School (Pre-K-8)
Saint Mary's Schools of Worcester (Pre-K-12)
Saint Peter Central Catholic School (Pre-K-8)
Saint Peter Marian Junior-Senior High School (7-12)
Saint Stephen School (Pre-K-8)
Venerini Academy Elementary School (Pre-K-8)
Worcester Academy (6-12+)
Worcester Seventh Day Adventist School (1-8)

### Worcester: Charter Schools, 2017

Abby Kelley Foster Charter Public School (K-12)
Seven Hills Charter Public School (K-8)

### Worcester: Independent Public Schools, 2017

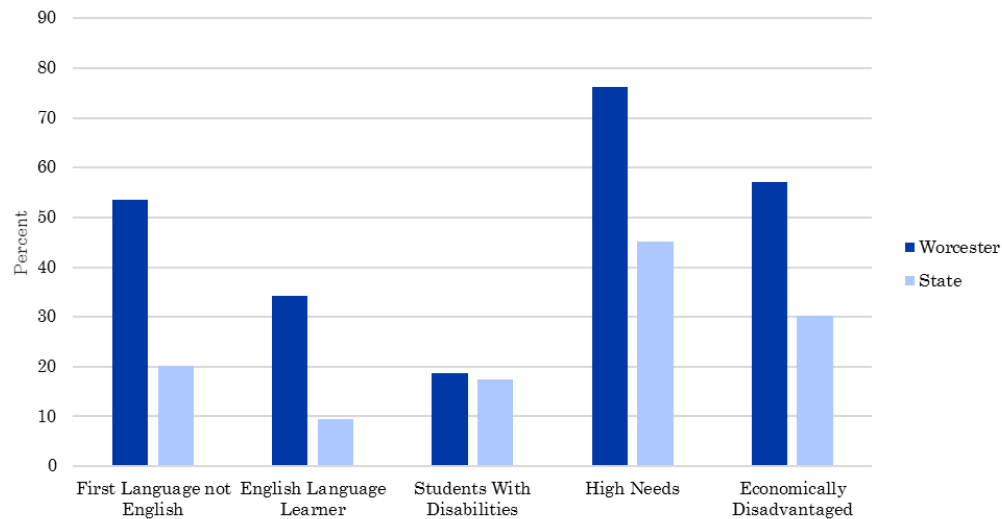
Massachusetts Academy of Math and Science (11-12)
---

*Sources: Massachusetts Department of Elementary & Secondary Education and Worcester Regional Research Bureau.*

Worcester Public Schools: Indicators, 2015-2016		
	Worcester	Massachusetts
Grade 9-12 Drop Out Rate	1.9%	1.9%
Retention Rate	2.1%	1.5%
Attendance Rate	94.6%	94.9%
Average Number of Days Absent	9.0	8.8
% Students with Unexcused Absences Greater than 9 Days	28.5%	13.8%

Source: Massachusetts Department of Elementary & Secondary Education.

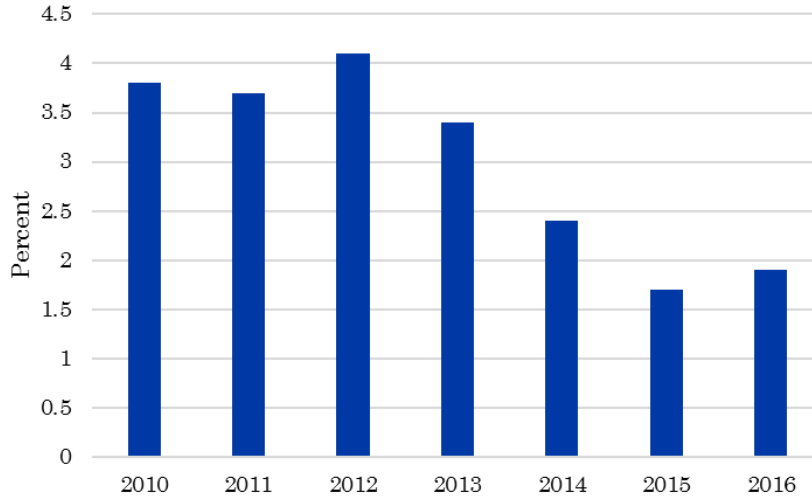
### Worcester Public Schools: Selected Populations, 2017



Source: Massachusetts Department of Elementary & Secondary Education.

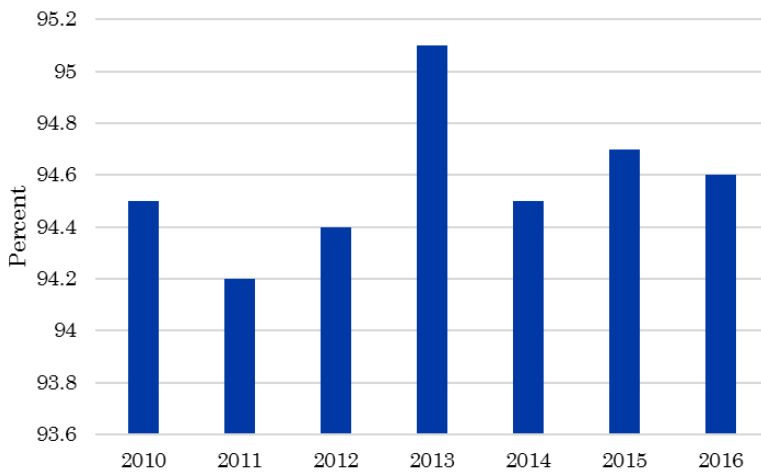
The “First Language Not English” category includes individuals who learned English after learning another language and does not address the individual’s proficiency with English itself. “English Language Learner” identifies individuals who struggle to complete normal classwork in English.

## Worcester Public Schools: Grades 9-12 Drop-Out Rates, 2010-2016



Source: Massachusetts Department of Elementary & Secondary Education.

## Worcester Public Schools: Attendance Rates, 2010-2016



Source: Massachusetts Department of Elementary & Secondary Education.

# Graduation Rates

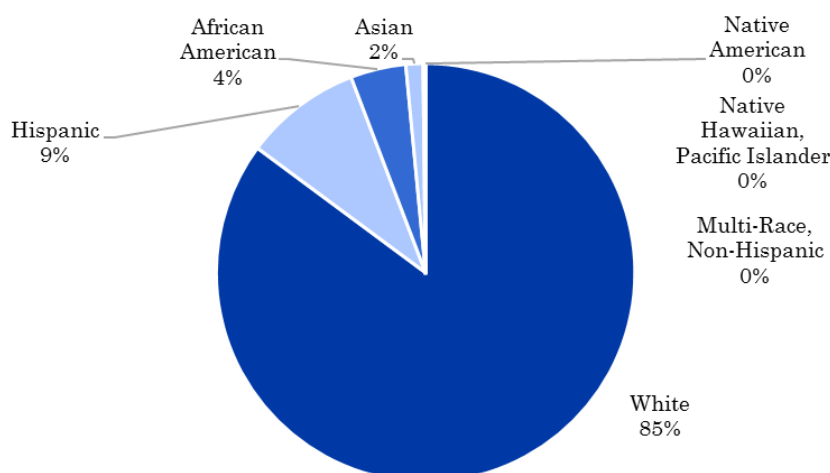
Worcester Public Schools: 4-Year Graduation Rates, Class of 2016*				
	% Graduated**	% Still in School	% H.S. Equiv.	% Dropped Out
<b>All Students</b>	<b>81.9</b>	<b>9.5</b>	<b>0.7</b>	<b>5.8</b>
Male	77.8	12.5	1.1	6.3
Female	86.4	6.2	0.3	5.3
ELL	74.3	13.4	0.2	6.8
Students with Disabilities	61.5	23.0	1.6	10.1
Low income	79.9	10.5	0.8	6.3
High needs	79.7	10.8	0.8	6.3
African American/Black	86.4	9.1	0.9	2.4
Asian	93.6	4.3	0.0	1.4
Hispanic/Latino	77.1	11.1	0.3	7.8
American Indian or Alaska Native	-	-	-	-
White	84.0	8.2	1.2	6.1
Native Hawaiian or Pacific Islander	-	-	-	-
Multi-race, Non-Hispanic/Latino	60.5	18.6	2.3	11.6

Source: Massachusetts Department of Elementary & Secondary Education. \*Graduation rates are not publicly reported for cohort counts fewer than 6. \*\*Indicates the percentage of students who graduate with a regular high school diploma within 4 years.

Worcester Public Schools: Teacher Data, 2015-2016		
	Worcester	State
Total Number of Teachers	1,763.0	72,384.1
Student-Teacher Ratio	14.2 to 1	13.2 to 1
% of Teachers Licensed in Teaching Assignment	97.5	97.4
% of Core Academic Classes Taught by Highly Qualified Teachers*	97.9	96.3

Source: Massachusetts Department of Elementary & Secondary Education. \*Highly Qualified Teachers have a bachelor's degree, a valid and active Massachusetts Teacher License, and demonstrate core competency in the courses they teach.

**Worcester Public Schools: Staffing by Race, 2015-2016**



Source: Massachusetts Department of Elementary & Secondary Education.

Worcester Public Schools: Staffing by Gender, 2015-2016		
	Worcester	Massachusetts
<b>Males</b>	667.1	26,240.5
<b>Females</b>	2,550.5	103,655.5

Source: Massachusetts Department of Elementary & Secondary Education.

## Test Results

Worcester Public Schools: MCAS Test Results by Percent, Spring 2016*								
Grade and Subject	Advanced		Proficient		Needs Improvement		Warning/ Failing	
	WPS	MA	WPS	MA	WPS	MA	WPS	MA
Grade 03 - Reading	5	*	37	*	43	*	14	*
Grade 03 - Mathematics	21	*	32	*	28	*	19	*
Grade 04 - Eng. Language Arts	9	*	38	*	32	*	20	*
Grade 04 - Mathematics	10	*	28	*	45	*	17	*
Grade 05 - Eng. Language Arts	19	*	42	*	29	*	10	*
Grade 05 - Mathematics	19	*	26	*	36	*	19	*
Grade 05 - Science & Tech/Eng.	7	16	22	31	45	38	26	14
Grade 06 - Eng. Language Arts	14	*	47	*	27	*	13	*
Grade 06 - Mathematics	18	*	34	*	29	*	19	*
Grade 07 - Eng. Language Arts	*	*	*	*	*	*	*	*
Grade 07 - Mathematics	*	*	*	*	*	*	*	*
Grade 08 - Eng. Language Arts	*	*	*	*	*	*	*	*
Grade 08 - Mathematics	*	*	*	*	*	*	*	*
Grade 08 - Science & Tech/Eng.	2	6	18	35	40	40	39	19
Grade 10 - Eng. Language Arts	31	47	51	45	12	6	5	3
Grade 10 - Mathematics	36	54	24	24	23	15	17	8
Grade 10 - Science & Tech/Eng.	12	29	39	44	39	21	10	5
All Grades - Eng. Language Arts	*	*	*	*	*	*	*	*
All Grades - Mathematics	*	*	*	*	*	*	*	*
All Grades - Science & Tech/Eng.	7	17	26	37	42	33	25	13

Source: Massachusetts Department of Elementary & Secondary Education.

\*According to the DESE, Spring 2016 state-level achievement and growth results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test. Spring 2016 Worcester results in grades 3-8 ELA and Mathematics include only the students who participated in MCAS, since some students in the district participated in the PARCC test. (See Page 55.)

Worcester Public Schools: PARCC Test Results by Percent, Spring 2016*					
Grade and Subject	Level 5	Level 4	Level 3	Level 2	Level 1
	WPS	WPS	WPS	WPS	WPS
GRADE 3 ELA/L	3	33	24	21	20
GRADE 3 Math	5	29	26	22	18
GRADE 4 ELA/L	4	28	28	24	15
GRADE 4 Math	1	25	25	27	22
GRADE 5 ELA/L	3	39	35	16	9
GRADE 5 Math	4	23	24	30	18
GRADE 6 ELA/L	8	41	30	14	8
GRADE 6 Math	4	26	29	28	14
GRADE 7 ELA/	13	33	26	17	11
GRADE 7 Math	4	25	34	25	12
GRADE 8 ELA/L	9	41	25	16	9
GRADE 8 Math	4	29	24	21	21
GRADE 8 ALG. I	38	63	0	0	0
GRADES 3-8 ELA/L	7	36	27	18	12
GRADES 3-8 MATH	4	27	27	25	17

Source: Massachusetts Department of Elementary & Secondary Education.

\*According to the DESE, Spring 2016 state-level achievement and growth results in grades 3-8 ELA and Mathematics are not reported because some students in Massachusetts participated in the MCAS test. Spring 2016 Worcester results in grades 3-8 ELA and Mathematics include only the students who participated in PARCC, since some students in the district participated in the MCAS test. (See Page 54.)

## PARCC Achievement Level Definitions:

**Level 5:** Exceeded Expectations

(varies by grade—850)

**Level 4:** Met Expectations (750—varies by grade)

**Level 3:** Approached Expectations (725-749)

**Level 2:** Partially met Expectations (700-724)

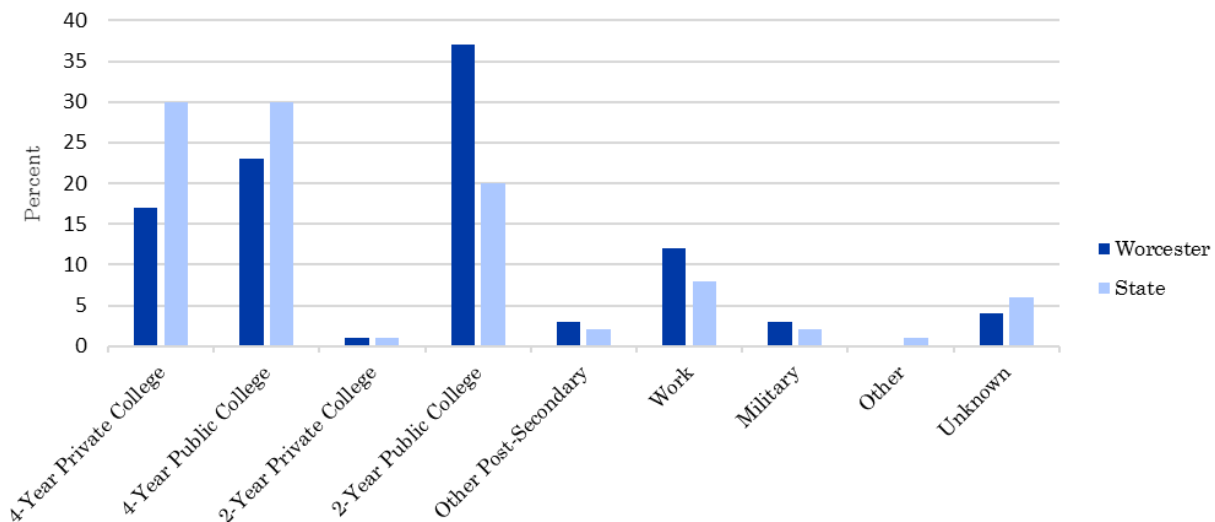
**Level 1:** Did not meet Expectations (650-699)

## Test Results

Worcester Public Schools: SAT Performance Report, 2015-2016				
	# of Test Takers	Average Reading Score	Average Writing Score	Average Math Score
All Students	969	437	426	451
Limited English Proficiency	115	301	312	336
Low Income	422	412	406	427
Special Education	57	352	343	340
High Needs	517	402	397	416
Female	557	442	437	445
Male	412	431	412	461
American Indian or Alaska Native*	1	-	-	-
Asian	115	442	427	488
Black or African American	214	410	409	414
Hispanic	279	409	395	423
Multi-race, Non-Hispanic	19	443	445	447
White	341	475	462	486

Source: Massachusetts Department of Elementary & Secondary Education. \*Results not reported for populations less than 10.

## Worcester Public Schools: Plans of High School Graduates, 2015-2016



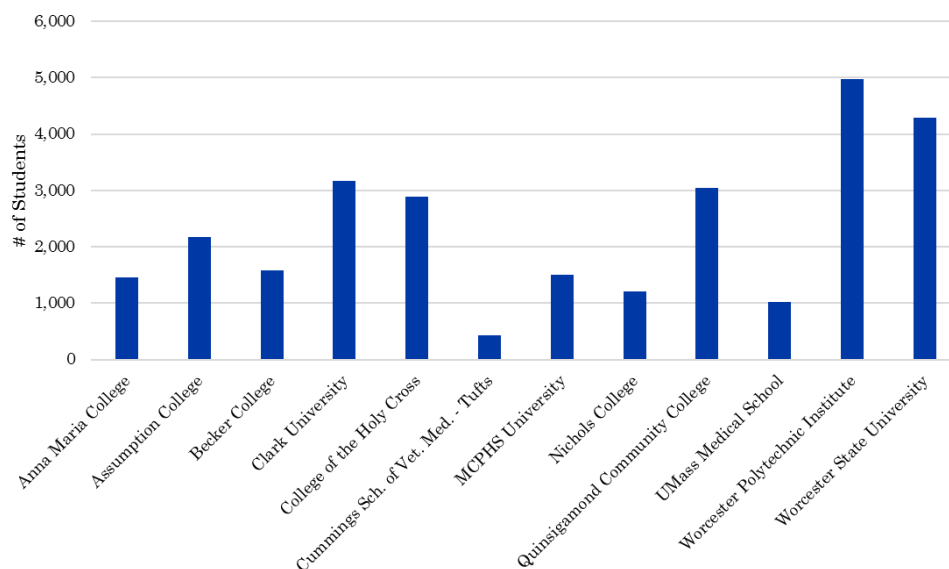
Source: Massachusetts Department of Elementary & Secondary Education.



Greater Worcester: Colleges, 2016
Anna Maria College (Paxton)
Assumption College (Worcester)
Becker College (Worcester & Leicester)
Clark University (Worcester)
College of the Holy Cross (Worcester)
MCPHS University (Worcester & Boston)
Nichols College (Dudley)
Quinsigamond Community College (Worcester)
Tufts Cummings School of Veterinary Medicine (Grafton)
University of Massachusetts Medical School (Worcester)
Worcester Polytechnic Institute (Worcester)
Worcester State University (Worcester)

Source: Worcester Regional Research Bureau, Inc.

### Greater Worcester: Full-Time Enrollment at Colleges & Universities, 2015



As of September 2015, the Greater Worcester colleges and universities enrolled 27,714 full-time students.

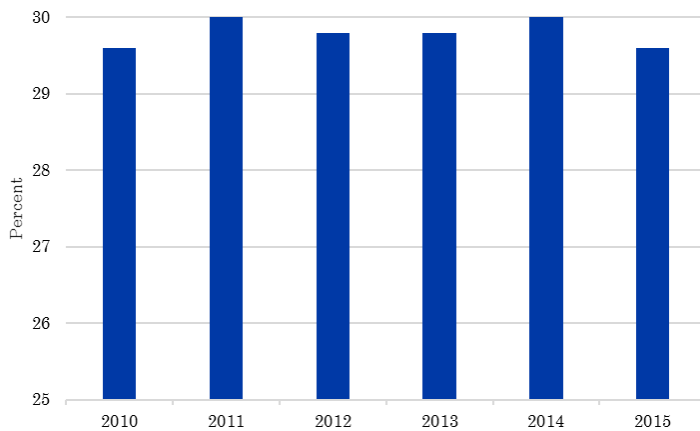
Source: Worcester Business Journal.

### Worcester: Educational Attainment, 2015

Population 25 Years and Over	117,639	100%
Less than 9th Grade	8,564	7.2%
9th to 12th Grade, No Diploma	10,118	8.6%
High School Graduate, Includes Equivalency	34,910	29.7%
Some College, No Degree	19,627	16.7%
Associate's Degree	9,578	8.1%
Bachelor's Degree	21,755	18.5%
Graduate or Professional Degree	13,087	11.1%

Source: U.S. Census Bureau, 2010-2015 5-Year American Community Survey.

### Worcester: Population with Bachelor's Degree or Higher, 2010 –2015



Source: U.S. Census Bureau, 2010-2015 5-Year American Community Survey.

### Greater Worcester: % Population 25 and Over with Bachelor's Degree or Higher, 2015

Auburn	36.1%
Boylston	53.5%
Grafton	50.3%
Holden	51.7%
Leicester	26.2%
Millbury	31.7%
Paxton	51.7%
Shrewsbury	54.2%
West Boylston	32.8%
Worcester	29.6%

Source: U.S. Census Bureau, 2015 5-Year American Community Survey

# Public Safety

## Worcester Almanac: Public Safety

Worcester: Crime Statistics, 2016	
Incidents	136,343
Arrests	5,964
Disorderly Conduct	18,464
Noise Disturbances	4,854
Traffic Accidents	9,375
Aggravated Domestic Assault	273
Aggravated Non-Domestic Assault	444
Shootings	26
Shooting Victims	30
Stabbings/Slashings	112
Murder	8
Robberies	434
Breaking & Entering	1,529
Motor Vehicle Theft	552
Larceny from Motor Vehicle	1,433
Vandalism	1,656

Source: Worcester Police Department.

Worcester: Fire Department Activity, 2016	
<b>Fire Calls</b>	39,852
<i>Building Fires</i>	828
<b>Emergency Medical Calls</b>	22,319
<b>False Alarms</b>	3,979
<b>Number of Companies</b>	21
<i>Engines</i>	13
<i>Ladders</i>	7
<i>Rescue</i>	1

Source: Worcester Fire Department.

Worcester: Fire Stations, 2017	
Station	Address
Grove Street - Headquarters	141 Grove Street
Southeast Station	745 Grafton Street
South Division	180 Southbridge Street
Burncoat Street	19 Burncoat Street
Park Avenue	424 Park Avenue
Tatnuck Square	1067 Pleasant Street
Webster Square	40 Webster Street
Greendale	438 Boylston Street
Franklin Street	266 Franklin Street
McKeon Road	80 McKeon Road

Source: Worcester Fire Department.

Worcester: Staffing for Police & Fire, FY16 Budget	
FIRE	Number
Fire Chief	1
Deputy Fire Chief	2
District Fire Chief	12
Captain	24
Lieutenant	70
Firefighter	283
Recruits	24
Other	11
<b>Total</b>	<b>427</b>
POLICE	Number
Chief of Police	1
Deputy Police Chief	4
Police Captain	7
Police Lieutenant	21
Police Sergeant	53
Police Officers	359
Recruits	8
Other	53
<b>Total</b>	<b>508</b>

Source: City of Worcester.

Licenses in Worcester, January 2017	
Second-Hand Motor Vehicle Licenses	243
Second-Hand Article Licenses	67
Common Victualer Background Checks	38
Hawkers and Peddlers Licenses	30
Solicit and Canvas	56
Fortune Tellers Licenses	1
Ice Cream Vendor Permits	20

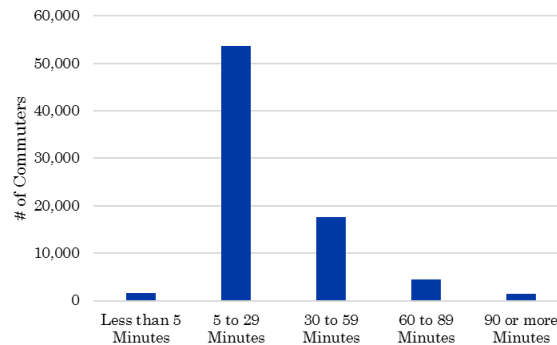
*Source: Worcester Police Department.*

Worcester: Firearm Licenses, January 2017	
Firearm Identification Cards (FIDs)	779
Licenses to Carry (LTCs)	6328

*Source: Worcester Police Department.*

# Transportation & Infrastructure

## Worcester: Commute Times, 2015



Source: U.S. Census Bureau, 2015 5-Year American Community Survey.

## Worcester: Work Commute Patterns (Workers 16 Years and Older), 2015

	# of Worcester Residents	% of Worcester Residents	# of MA Residents	% of MA Residents
Car, Truck, or Van—Drove Alone	60,295	73%	2,390,090	71%
Car, Truck, or Van—Carpooled	9,578	12%	258,094	8%
Public Transportation (Excluding Taxicab)	2,778	3%	327,144	10%
Walked	4,849	6%	161,164	5%
Other Means (Taxicab, motorcycle, bicycle, or other means)	1,559	2%	58,506	2%
Worked at Home	2,985	4%	151,751	4.5%
<b>Total</b>	<b>82,044</b>	<b>100%</b>	<b>3,346,749</b>	<b>100%*</b>

Source: U.S. Census Bureau, 2015 5-Year American Community Survey. \*As a result of rounding, adds to 100.5%

## Greater Worcester: Registered Motor Vehicles, 2014

	Auto-mobiles	Trailers	Light Trucks	Heavy Trucks	Motor-cycles	Other	Luxury Vehicles	Total Vehicles
Auburn	7,395	1,282	5,215	728	498	1,979	914	18,011
Boylston	2,147	357	1,621	193	162	483	462	5,425
Grafton	8,002	1,014	5,484	303	574	1,385	1,399	18,161
Holden	7,951	1,050	5,476	311	564	1,690	1,291	18,333
Leicester	4,404	866	3,549	258	499	1,084	487	11,147
Millbury	5,777	1,051	4,368	456	594	1,269	793	14,308
Paxton	1,839	310	1,455	90	173	476	391	4,734
Shrewsbury	2,664	464	2,048	181	325	464	302	6,448
West Boylston	14,551	537	7,313	667	561	1,582	2,469	27,680
Worcester	59,907	3,757	33,704	1,934	2,695	11,085	8,461	121,543

Source: Massachusetts Department of Revenue.



Worcester: Street Infrastructure, 2016	
Streets (Miles)	516
<i>Public Streets (Miles)</i>	435
<i>Private Streets (Miles)</i>	81
Sidewalks (Miles)	488
<i>Asphalt (Miles)</i>	307
<i>Concrete (Miles)</i>	181
Street Lights	13,783
Gas Street Lights	28
Traffic Signals	208
Parking Meters—On-Street	900
Electric Car Charging Stations	6

Source: City of Worcester Department of Public Works & Parks.

Worcester: Water and Sewer Infrastructure, 2016	
Miles of Water Pipe	592
Fire Hydrants	5,860
<i>Public</i>	5,365
<i>Private</i>	495
Total Miles of Sewer Pipes	830
<i>Miles Sanitary Sewers</i>	398
<i>Miles of Surface Sewers</i>	371
<i>Miles of Combined Sewers</i>	61
Number of Manholes	28,293
Number of Catch Basins	15,184

Source: City of Worcester Department of Public Works & Parks.

Worcester Municipal Parking Garages Capacity, 2016	
Pearl Elm	819
Federal Plaza	511
Major Taylor Boulevard	983
Union Station	500
Worcester Common	500
Surface lots (13 lots)	980*

Sources: Worcester Comprehensive Annual Financial Report, June, 20, 2016; Worcester Regional Research Bureau, "Parking in Worcester: Left by the Curb," June 2016. \*Approximate.



## Worcester Almanac: Transportation

Worcester Regional Transit Authority, 2016	
<b>Service Area</b>	
Square Miles	866
Population	479,329
<b>Key Data</b>	
Annual Passenger Miles	15,064,419
Annual Unlinked Trips*	4,240,488
Average Weekday Unlinked Trips*	15,070
Average Saturday Unlinked Trips*	6,147
Average Sunday Unlinked Trips*	1,987
Annual Vehicle Revenue Miles	3,231,346
Annual Vehicle Revenue Hours	254,614
Vehicles Operated in Maximum Service	103
Vehicles Available for Maximum Service	131
# of Electric Buses	6
# of Clean Diesel Buses	29
# of Hybrid Diesel-Electric Buses	17

Sources: Central Massachusetts Regional Planning Commission and Worcester Regional Transit Authority. \*Passengers are counted each time they board a vehicle no matter how many vehicles used to arrive at destination.

The Worcester Regional Transit Authority was established in September 1974 to contract for the operation of mass transportation facilities and services in the Worcester region. It is the second largest regional transit authority in Massachusetts, serving 37 communities. While the WRTA owns the facilities and rolling stock, the organization contracts with Central Mass Transit Management, Inc., and Paratransit Brokerage Services, Transit Management Inc. for the provision of services.

MBTA Commuter Rail, December 2016	
Inbound Trains (Weekday)	20
Outbound Trains (Weekday)	20
Inbound Trains (Weekend & Holiday)	9
Outbound Trains (Weekend & Holiday)	9
Typical Weekday Inbound Boardings: Union Station	1,500

Source: Massachusetts Bay Transportation Authority.

Worcester Regional Airport/ORH, 2016	
<b>Aircraft Operations</b>	
Transient General Aviation	19,107
Local General Aviation	12,796
Air Taxi	1,103
Commercial	2,160
Military	871
<b>Daily Commercial Departures</b>	
Jet Blue	Orlando & Fort Lauderdale, FL
<b>Aircraft Based at Field</b>	
Single Engine Planes	57
Multi-Engine Planes	2

Source: Massachusetts Port Authority.

### Worcester: Taxi and Livery Service, January 2017

Taxi Medallions	110
Taxi Drivers	336
Registered Livery Vehicles	183
Livery Drivers	279

Source: Worcester Police Department.

### Worcester: Most Recent Traffic Counts for Each Location\*

Location	Average Annual Daily Traffic Count
I-290 above Washington Square (2015)	137,568
I-290 above College Square (2016)	95,812
I-190 at I290 Southbound (2015)	27,995
I-90 & I-290 Interchange (All Directions) (2010)	67,523
Belmont Street at Lake Avenue (2015)	31,722
I-290 Exit 13 (Kelley Square) (All Directions) (2014)	29,587
Belmont Street at Lincoln Square (2015)	29,532
I-90 & Rt. 146 Interchange (All Directions) (2014)	24,549
Park Avenue at Chandler Street (2015)	20,037
Pleasant Street at South Flagg Street (2015)	15,587
Grafton Street at Sunderland Road (2015)	15,432
Plantation Street at Boylston Street (2015)	14,647
Salisbury Street at Park Avenue (2015)	14,067
West Boylston Street at West Mountain Street (2015)	11,422
Mill Street at Chandler Street (2015)	9,763
Green Street at Winter Street (2015)	8,621
Airport Drive at Mill Street (2015)	5,692
Pleasant Street at Park Ave. (2015)	10,414
Highland Ave. at Newton Square (2015)	21,271

Source: Massachusetts Department of Transportation. \*Numbers for traffic is both directions.

# Arts, Culture, & Sports

## Greater Worcester: High School and College Athletic Achievements, 2016

**Assumption College** Women's Cross-Country finished 27th in the nation at the NCAA Cham-

**Assumption College** Women's Swim Team won its 3rd consecutive Northeast-10 Championship

**College of the Holy Cross Men's Basketball** won the Patriot League Tournament and qualified for the NCAA Tournament.

In the **Clark University High School Basketball Tournament**, one of the longest running high school tournaments in the country, **Sutton** won the Small School Championship and **Nashoba** won the Large School Tournament.

**Millbury Girl's Soccer** won the State Championship.

**Shrewsbury Legion Baseball Team** won the State Championship.

Sources: Assumption College Athletic Department; Charter TV 3.

## Worcester: Bravehearts Baseball, 2016

Wins	Losses	Percentage	Awards
37	18	0.672	Future Collegiate Baseball League of New England Organization of the Year Award

### Attendance

The team finished 9th in total attendance and 10th in average attendance among 169 teams, with 54,789 fans coming out to Hanover Insurance Park at Fitton Field.

Source: Worcester Bravehearts.

## Greater Worcester: Other Notable Sport Achievements and Milestones

**Dorian McMenemy**, a Northborough resident and former Algonquin High School Student, represented the Dominican Republic in the 2016 Olympics, swimming in the 100 meter butterfly competition.

**Worcester State University** opened a new \$52 million wellness center, kicking off the opening with a midnight basketball game on November 14th at the John Brissette Competition Court against **Clark University**.

The **Worcester Railers** announced they would be Worcester's newest pro hockey team, playing in the East Coast Hockey League (ECHL).

Source: Charter TV 3.

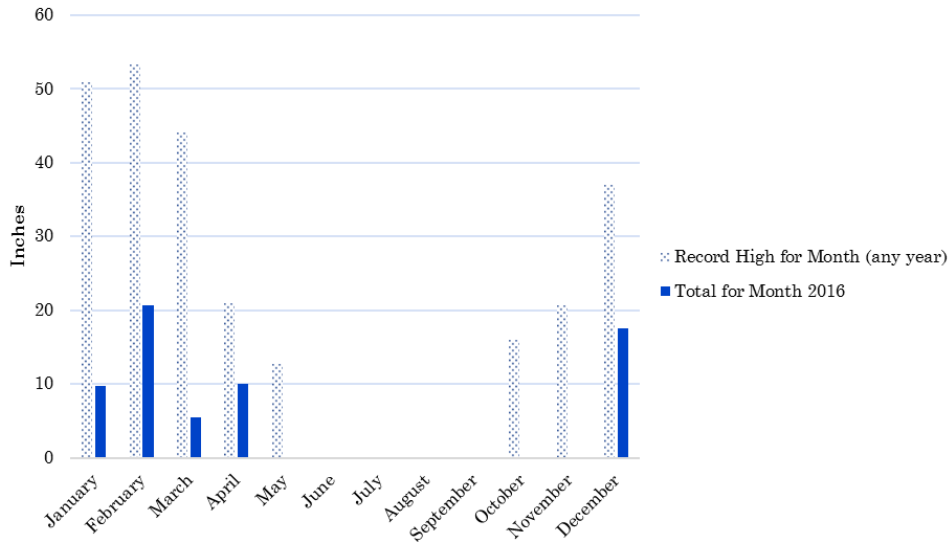
**Worcester Cultural Coalition**—In 2016, the Worcester Cultural Coalition consisted of the City of Worcester and 59 cultural organizations in Greater Worcester. Coalition partners, together with the DCU Center, drew over 2.8 million visitors to the region. Coalition members are:

- All Saints Church
- American Antiquarian Society
- American Guild of Organists- Worcester
- Art in the Park-Worcester
- Artist Group at the Sprinkler Factory
- Arts Transcending Borders
- ArtsWorcester
- Audio Journal
- Calliope Productions
- Canal District Alliance
- Centro Inc.
- Clark Arts
- EcoTarium
- First Congregational Church
- First Night Worcester
- Gallery at Worcester State University
- The Hanover Theatre
- International Center of Worcester
- Iris and B. Gerald Cantor Art Gallery at the College of the Holy Cross
- Joy of Music Program
- Massachusetts Audubon/Broad Meadow Brook
- Massachusetts Symphony
- Master Singers of Worcester
- Mechanics Hall
- Museum of Russian Icons
- Music at Trinity Lutheran
- Music Worcester
- Old Sturbridge Village
- Pakachoag Music School of Greater Worcester
- Preservation Worcester
- Regional Environmental Council
- Saint Spyridon Cathedral Arts & Culture
- Salisbury Mansion
- Salisbury Singers, Inc.
- Southeast Asian Coalition Central MA
- Tower Hill Botanical Garden
- Tuckerman Hall
- Valley Cast
- VSA Massachusetts
- WCCA TV13
- WCUW Public Radio
- WICN Public Radio
- Worcester Art Museum
- Worcester Arts Council
- Worcester Center for Crafts
- Worcester Center for the Performing Arts
- Worcester Chamber Music Society
- Worcester Children's Chorus
- Worcester County Light Opera Club
- Worcester County Poetry Association
- Worcester Historical Museum
- Worcester Inter-Tribal Indian Center
- Worcester Jewish Community Center
- Worcester Public Library
- Worcester Schubertiad
- Worcester Shakespeare Company
- Worcester State University Visual and Performing Arts
- Worcester Women's History Project
- Worcester Youth Symphony

*Source: Worcester Cultural Coalition.*

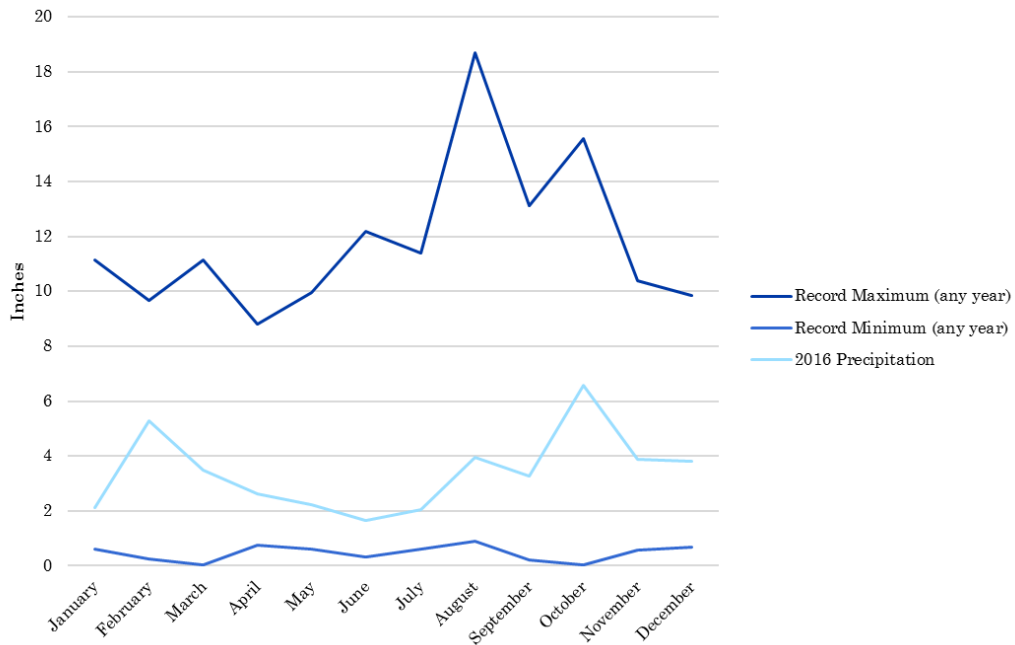
# Weather & Environment

## Worcester: Snowfall & Record High by Month, 2016



Source: National Oceanic & Atmospheric Administration.

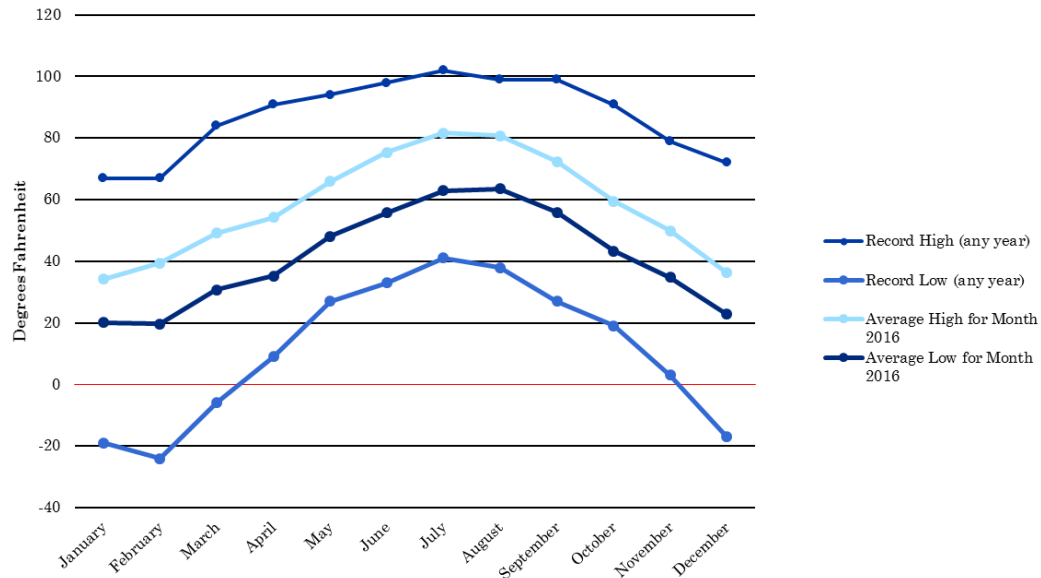
## Worcester: Precipitation & Record High and Low by Month, 2016



Source: National Oceanic & Atmospheric Administration.

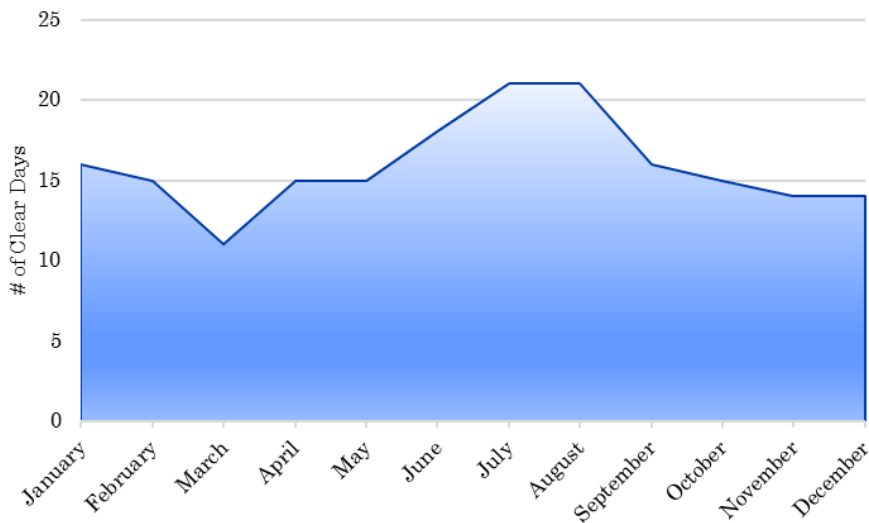


## Worcester: Average High and Low Temperatures Compared to Record, 2016



Source: National Oceanic & Atmospheric Administration.

## Worcester: Number of Clear Days, 2016



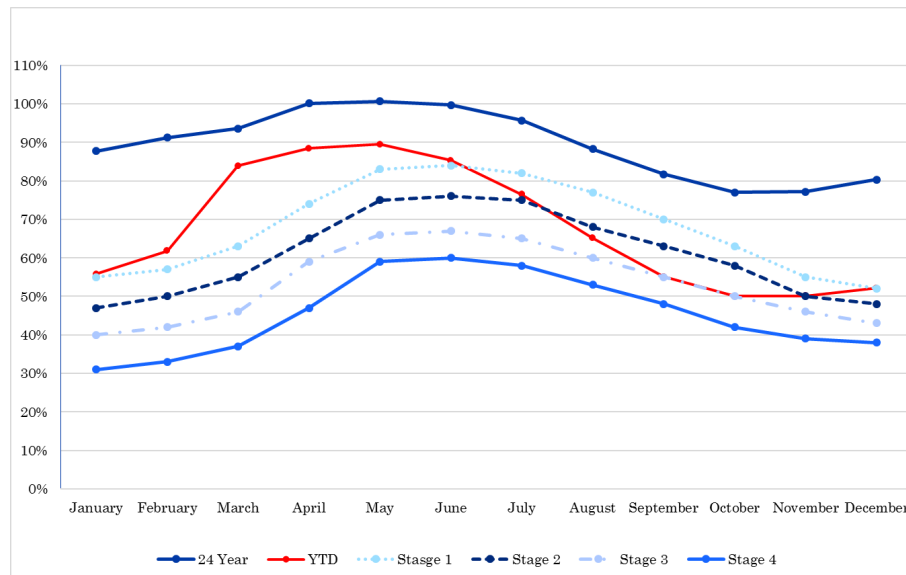
Source: National Oceanic & Atmospheric Administration.

Worcester: Reservoirs—Acres and Capacity	
<b>High Service Reservoirs</b>	
Lynde Brook	– 132 acres; 342.75 feet; 717,422,000 gallons
Kettle Brook, No. 1	– 11.50 acres; 364.35 feet; 19,307,000 gallons
Kettle Brook, No. 2	– 30.76 acres; 507.5 feet; 127,310,000 gallons
Kettle Brook, No. 3	– 37.41 acres; 559 feet; 152,306,000 gallons
Kettle Brook, No. 4	– 118.61 acres; 604.73 feet; 513,746,000 gallons
<b>Low Service Reservoirs</b>	
Holden, No. 1	– 130 acres; 269.85 feet; 729,319,000 gallons
Holden, No. 2	– 52.63 acres; 237.80 feet; 257,398,000 gallons
Kendall	– 175 acres; 333 feet; 792,163,000 gallons
Pine Hill	– 345 acres; 429 feet; 2,970,967,000 gallons

Source: City of Worcester.

According to the City's Department of Public Works & Parks, which manages Worcester's water and sewer operations, water consumption for 2016 was 8,242 million gallons, slightly above the five-year average of 8,144 million gallons. As of March 1, 2017, the City's reservoirs were at 83.2% capacity; the average for this time of year is 93% capacity.

## Worcester: Drought Stages, 2016



Source: City of Worcester.

Worcester's rainfall deficit was 10.48 inches in 2015 and 9.77 inches in 2016 for a total deficit of 20.25 inches. As the chart above indicates, for the entire year of 2016, Worcester's reservoir capacity was below the 24-year average for all of 2016 and in drought conditions for six months of 2016. In September and October, the crisis reached Stage 3 drought conditions. During declared drought and water emergencies, violators can face fines up to \$300 per infraction. In January 2017, Worcester was at a declared Stage 2 Drought Warning.

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*The Research Bureau serves the public interest of Greater Worcester by conducting independent, non-partisan research and analysis of public policy issues to promote informed public debate and decision-making.*

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