



# MUSCATINE, IOWA HOUSING ANALYSIS

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# 1. Earnings and Housing Costs

## Introduction

Using 2016 data from the Iowa Workforce Development, the Low-Income Housing Coalition and Bankrate.com mortgage estimates, the following graphs were created to show income needed for different housing prices. Fourteen selected occupations were used, with their annual average salaries. These occupations were selected because they are easily relatable, and they are prominent occupations in Muscatine based on number of individuals employed. The fourteen occupations are, cooks in fast-food restaurants, waiters and waitresses, landscapers, bank tellers, retail salespersons, administrative assistants, construction laborers, production workers, welders, truck drivers, industrial mechanics, police officers, teachers and registered nurses. By presenting the different salaries required to afford different homes, it becomes easier to comprehend when a job title or position is referenced rather than just a figure or number. For instance, a police officer makes an annual income of \$51,520. This is much more presentable than only presenting a figure of \$51,520 as an income reference point. By putting a face and an occupation to a salary, it makes it much easier to understand that occupations that are familiar may be housing cost-burdened.

The median household income for Muscatine is, \$44,601. At this income, a home valued at around \$150,000 is estimated as being affordable. Additional analysis was done to show hourly wages and the ability to afford rents for selected occupations. This analysis can be seen in **Figure 5**, where more details are provided. The owner housing costs were calculated using mortgage estimates, estimated annual insurance costs, estimated utility costs and annual property taxes rates. For this analysis, four price points of housing were calculated. They include the median housing cost of \$109,000 and housing valued at \$150,000, \$200,000 and \$250,000. Affordability of housing is defined by not expending more than 30% of income on housing cost. These housing costs include all utilities and the monthly rent or mortgage payment. If a household expends more than 30% of income on housing, they are considered housing cost-burdened. If housing expenditures exceed more than 50% of income, these households are considered extremely cost-burdened.

Four scenarios were analyzed with different parameters. Scenario 1 is based on a 20% down payment with an interest rate at 4.5%. Scenario 2, assumes a down payment of 20% with an interest rate of 6%. Scenario 3, has a down payment of only 7% with an interest rate of 4.5%. The final scenario uses a 3% down payment with an interest rate of 4.5%. This analysis is beneficial to show not only the annual income needed to afford different valued homes, it shows how different interest rates and down payments can change the affordability of homes of different values. As interest rates are variable, fluctuations are to be expected when financing a mortgage. Down payments of 20% can be difficult for low-income earners. Because of this, many renter households don't have the ability to save for this down payment and don't have the ability to enter into an owner-occupied household. It is often the case that rents are greater than mortgage payments, with the underlying inability to purchase a home due to many factors, these rental households are cost-burdened. Housing affordability is a growing issue in the United States, with more renter occupied households falling in this category.

## Scenario 1

The median home value in Muscatine is \$109,000. The monthly cost for a house at this price is estimated at, \$775 and an annual income of \$31,023 would be needed to afford this home. As can be seen in **Figure 1**, a home of this value is affordable to many of the selected occupations, with the exception of retail salespersons, bank tellers, landscapers, waiters and waitresses and fast food cooks. At the \$150,000 level, an estimated income of \$41,855 is needed, or monthly payments of \$1,046 a month. For a home valued at \$200,000, the monthly payments are estimated at \$1,375 and an annual income of \$55,030 is necessitated. Finally, a \$250,000 valued home to be affordable would require an annual salary of \$68,204 and the monthly payments would be an estimated \$1,553.

As **Figure 1** shows, different occupations have differing salaries and different priced homes become affordable at different levels. For all calculations, a 20% down-payment was assumed with an interest rate of 4.5%. The consolidated tax rate for the City is 39.66546 per \$1,000 assessed value. This levy is calculated after a rollback factor of 0.55734 is applied to the assessed value. The property taxes for the \$109,000 valued home are \$2,409, for \$150,000 home they are \$3,316, for a \$200,000 home they are \$4,421 and for a \$250,000 home they are \$5,526. No assumptions were made for exemptions or credits that may be applicable. Homeowners insurance is also included in this estimate. For a home priced at the median of \$109,000, the estimated insurance cost is \$800. For a \$150,000 the amount was calculated at \$850. The \$200,000 home, had an estimated insurance cost of \$900 a year. Finally, the \$250,000 home has an estimated insurance cost of \$950 annually. Utilities were also included at 15% of monthly costs for all priced homes.



Figure 1: Annual salary needed to afford a home with 20% down payment at 4.5% interest

The table below shows how the cost estimates were calculated, and the inputs used for each calculation. As utilities are reliant on many variables, a common practice is to use an assumption of 15% of monthly payments. It is likely that the cost could fluctuate greatly based on household size, size of house, age of structure and seasonality. Other inputs may also vary, which is why these are estimated figures.

Scenario 1 Cost Table				
<b>Housing Price</b>	\$109,000	\$150,000	\$200,000	\$250,000
<b>Down Payment at 20%</b>	\$21,800	\$30,000	\$40,000	\$50,000
<b>Monthly Loan Payment</b>	\$441.83	\$608.02	\$810.70	\$1,013.37
<b>Utilities at 15%</b>	\$66.27	\$91.20	\$121.61	\$152.01
<b>Monthly Payments and Utilities</b>	\$508.10	\$699.22	\$932.31	\$1,165.38
<b>Annual Insurance</b>	\$800.00	\$850.00	\$900.00	\$950.00
<b>Monthly Insurance</b>	\$66.67	\$70.83	\$75.00	\$79.17
<b>Annual Property Taxes</b>	\$2,409.66	\$3,316.04	\$4,421.39	\$5,526.74
<b>Monthly Property Taxes</b>	\$200.80	\$276.34	\$368.45	\$460.56
<b>Total before utilities</b>	\$709.30	\$955.19	\$1,254.15	\$1,553.10
<b>Total Monthly</b>	\$775.58	\$1,046.39	\$1,375.75	\$1,705.10
<b>Yearly Cost</b>	\$9,306.91	\$12,556.72	\$16,509.05	\$20,461.24
<b>Annual Salary Needed</b>	\$31,023.04	\$41,855.73	\$55,030.17	\$68,204.14

The annual salary table below shows the annual mean salaries used for the selected occupations in the four (4) scenarios for housing affordability. As is shown, the lowest income is for fast food cooks at \$17,860 a year and the highest selected occupations salary is registered nurses, with \$57,730. Five of the selected occupations earned less than \$30,000 annually with the remaining earning more than \$30,000. Overall, three of the selected occupations had a mean annual salary greater than \$50,000.

Annual Salary Table			
Position	Annual Salary	Position	Annual Salary
<b>Cooks, Fast Food</b>	\$17,860	<b>Production Workers</b>	\$32,880
<b>Waiters and Waitresses</b>	\$21,450	<b>Welders</b>	\$34,880
<b>Landscapers</b>	\$24,610	<b>Truck Drivers</b>	\$38,880
<b>Tellers</b>	\$26,050	<b>Industrial Mechanics</b>	\$49,510
<b>Retail Salespersons</b>	\$26,360	<b>Police Officers</b>	\$51,520
<b>Administrative Assistants</b>	\$30,760	<b>Teachers</b>	\$53,270
<b>Construction Laborers</b>	\$31,880	<b>Registered Nurses</b>	\$57,730

Source: Iowa Workforce Development 2016

## Scenario 2

In Scenario 2, the analysis was done using a 20% down payment with an interest rate of 6%. Using a different interest rate, fewer occupations can afford the median \$109,000 home. Making the same assumptions for utility costs, insurance and property taxes, only five occupations can afford the median valued home. The annual salary needed to afford the median valued home is \$34,748. For a \$150,000 home an annual salary of \$46,981 would be required, for a home of \$200,000, the annual salary needed is \$61,864 and for a \$250,000 home, the salary needed is \$76,747, which can be seen in **Figure 2**. To show how a differing interest rate impacts affordability, the \$250,000 in scenario 2 necessitates an annual salary of nearly \$8,000 more than scenario 1.

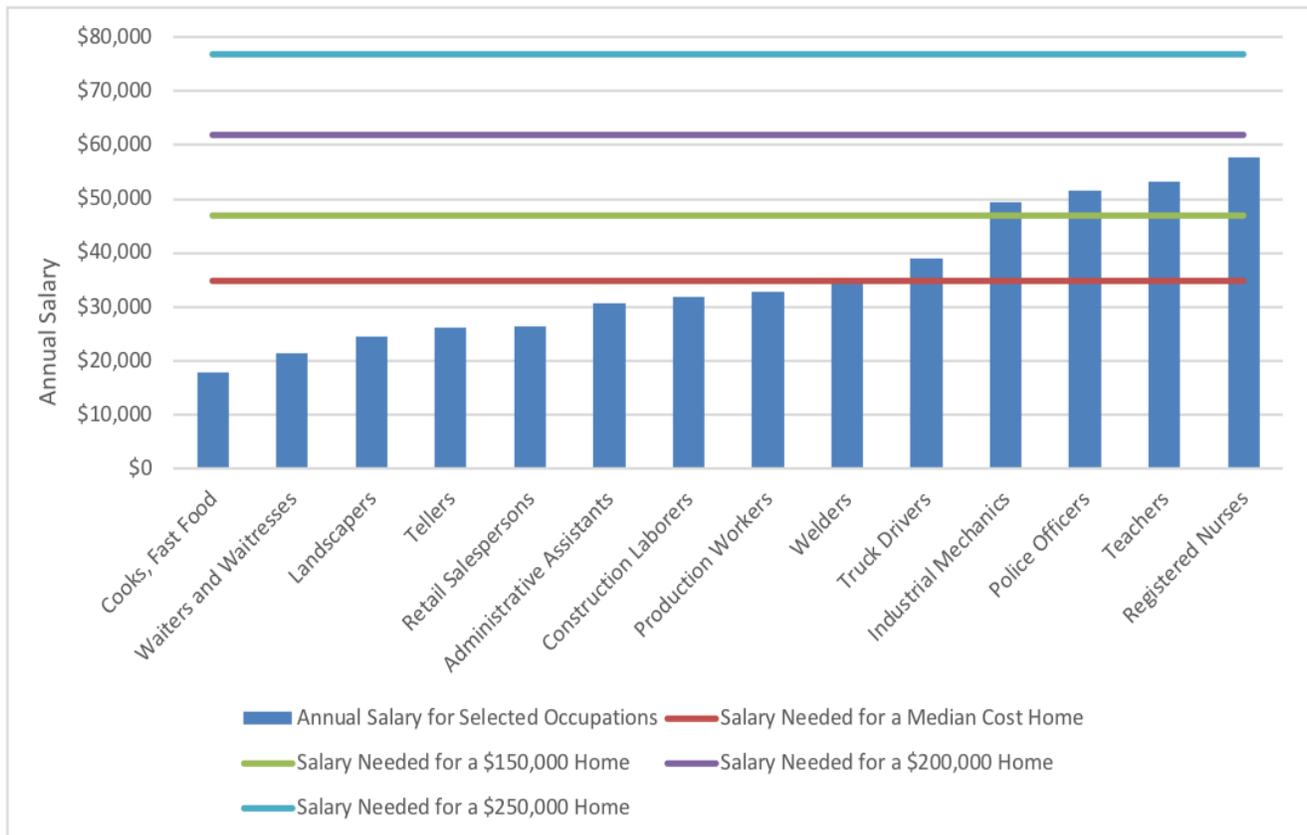


Figure 2: Annual salary needed to afford a home with 20% down payment at 6% interest

## Scenario 3

Scenario 3, assumes a 7% down payment with an interest rate of 4.5%. As discussed previously, 20% down payment can be difficult for households to put down when purchasing a home. By incorporating a 7% down payment, a household could purchase a home and work to gain equity through homeownership. The monthly payments will be greater in comparison to households where a 20% down payment was made. Due to this, less housing would be affordable, but the ownership opportunity is still more accessible than requiring a 20% down payment. Using the same assumptions for utility costs, insurance rates and property taxes, **Figure 3** shows the occupational salaries that can afford housing at different level. Scenario 3 is very similar to scenario 2. This highlights how mortgage interest rates impact monthly housing costs. For the median \$109,000 valued home in this scenario, an annual salary of \$34,325 would be needed. For the home valued at \$150,000, an annual salary of \$46,400 is needed to be affordable. The \$200,000 valued home to be affordable would need an annual salary of \$61,089 and finally, the \$250,000 value home requires a salary of \$75,778.

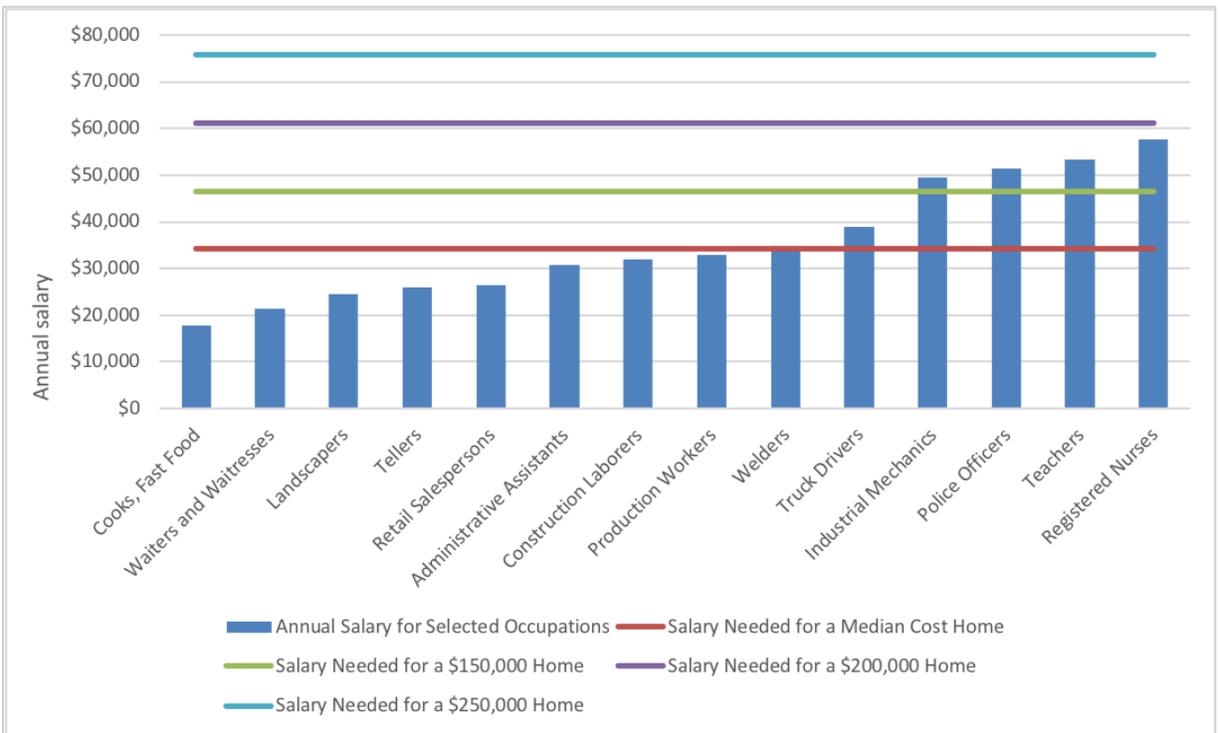


Figure 3: Annual salary needed to afford a home with 7% down payment at 4.5% interest

#### Scenario 4

The final scenario assumes a mortgage with an interest rate of 4.5% and a down payment of only 3%. This scenario follows closely with scenarios 2 and 3. The results of this analysis can be seen in **Figure 4**. Only the homes valued at \$109,000 and \$150,000 are affordable in this scenario. This is the same for scenarios 2 and 3 also. In scenario 1, homes valued at \$109,000, \$150,000 and \$200,000 are affordable based on the selected occupation salaries. In scenario 4, the occupations of industrial mechanic, police officer, teacher and registered nurses can afford a home valued at \$150,000.

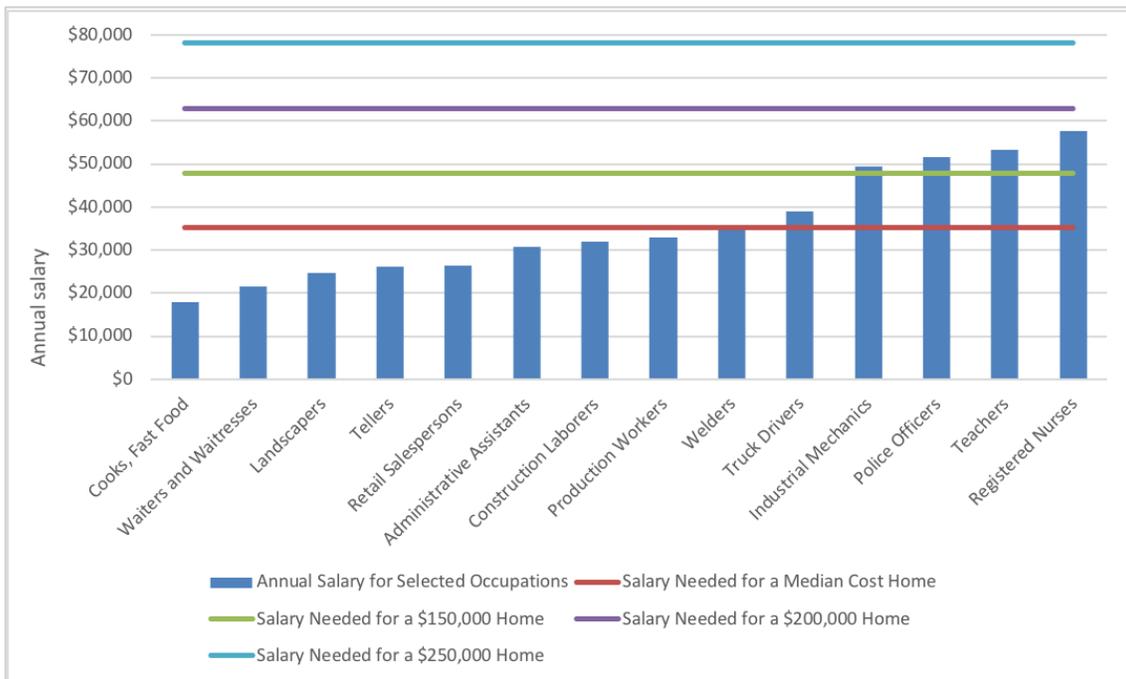


Figure 4: Annual salary needed to afford a home with 3% down payment at 4.5% interest

## Hourly Wages and Rentals

Hourly wages were also used to determine affordability for renters. Using rent estimates for Muscatine County provided by the Low-Income Housing Coalition, the hourly wage to afford different sized rental units was calculated. Many of the hourly wage earners can't afford more than a one-bedroom apartment without becoming cost-burdened. The hourly wage for a full-time worker required to afford a one-bedroom apartment is \$11.52. The estimated mean hourly wage is, \$13.84. At this wage, still only a one-bedroom apartment is affordable. Of the twelve selected occupations, six occupations can afford a two-bedroom apartment based on their hourly wages. The Low-Income Housing Coalition provides the hourly wage estimates to afford the different size rental units and the fair market rent estimates. **Figure 5**, shows that housing affordability is increased when compared to ownership, but many of the benefits of homeownership are not realized. Three occupations fail to earn enough income to afford a one-bedroom apartment based on the Fair Market Rents of Muscatine. Seven occupations can't afford a two-bedroom apartment, nine of the selected occupations can't afford a three-bedroom apartment, which is the same for a four-bedroom apartment in Muscatine. The mean renter wage for Muscatine can only afford a one-bedroom apartment at FMR.

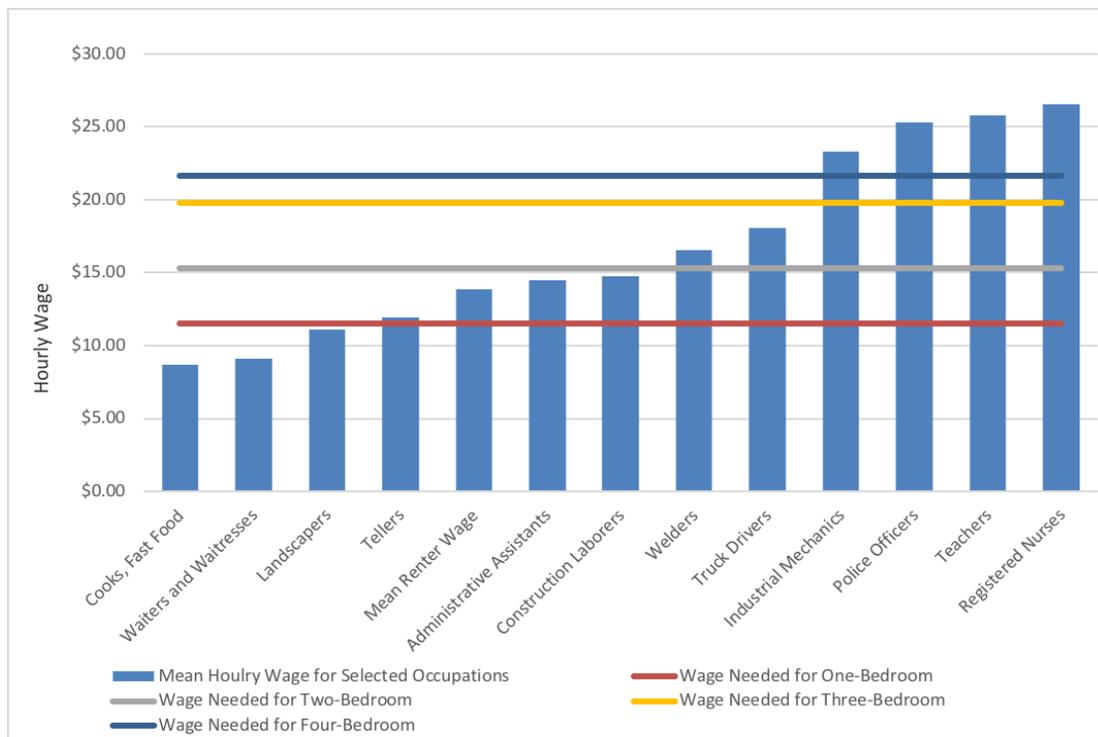


Figure 5: Hourly wage needed to afford rental units at different sizes

## Housing Affordability Scenario

Based on the current minimum wage of \$7.25 an hour, housing affordability is extremely difficult. At this wage, the monthly affordable rent is \$377. To afford a one-bedroom FMR unit, 64 hours of work hours would be needed, for a two-bedroom, 84 hours of work are needed, a three-bedroom unit would require 109 work hours and a four-bedroom FMR unit would need 119 work hours at minimum wage to be affordable<sup>1</sup>. This shows how difficult it is to pay for housing based on the current minimum wage. As the median gross rent in Muscatine is, \$779, an estimated hourly wage of more than \$14 is needed. This figure is nearly twice the current minimum wage. To combat decreased affordability in housing, the supply of affordable housing needs to be increase in Muscatine.

<sup>1</sup> National Low-Income Housing Coalition- Out of Reach 2017: Iowa

Housing affordability is inextricably linked to wages and salaries. One overlooked component to monthly ownership costs is the amount of inputs other than the monthly mortgage payment. For example, property taxes are an overlooked expenditure for housing costs. With the inclusion of all other inputs, housing affordability can quickly become out of reach for many perspective homeowners. Difficulties can arise when making choices on purchasing a home. If the market isn't providing enough quality housing at affordable levels, perspective owners may overreach to housing that is better quality, making them a cost-burdened household. Perspective owners may also look at less expensive housing that is in better quality, leading to a decrease in the supply of affordable housing for lower-income owners.

## 2. Housing supply

The chart and graphs below, are new single-family and multi-family issued permits for years 2010-2016. A total of 226 permits for new units between single and multi-family exist in these years. Through the years, the number of new permits is varied. 115 new single-family housing units and 111 new multi-family housing units were permitted. The trendline in **Figure 6**, shows fewer new single-family housing units. It should be noted these are only issued permits for residential units, this does not indicate actual built out units.

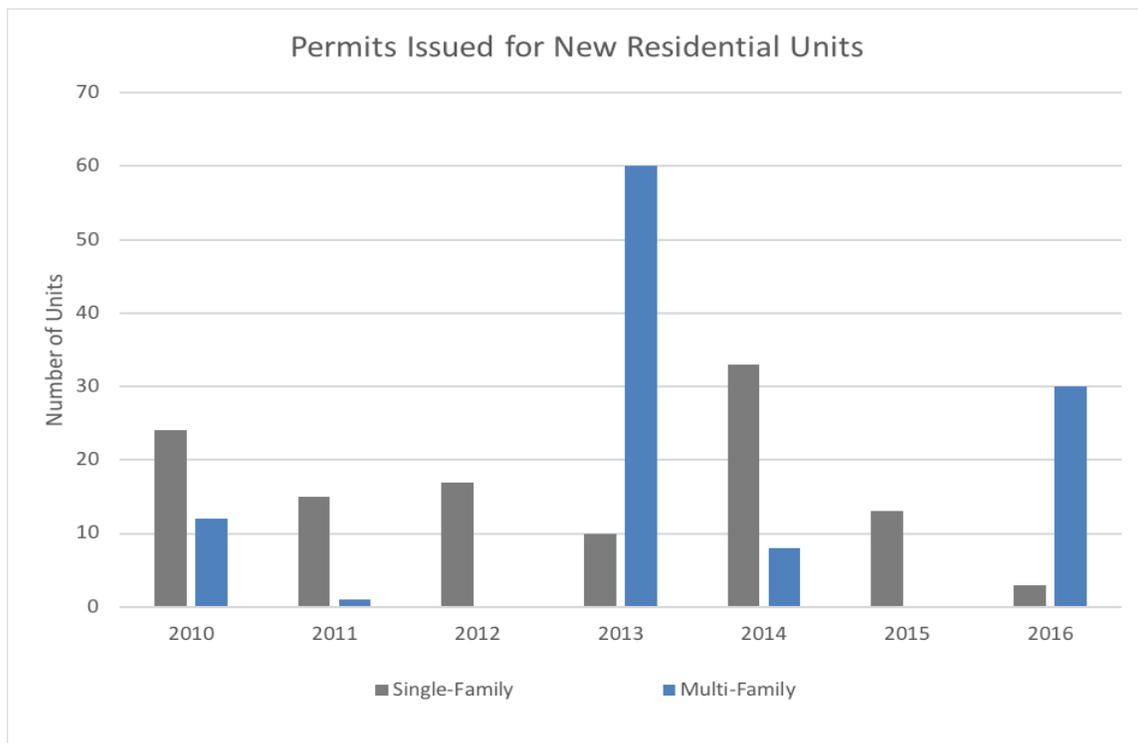


Figure 6: New residential permits (Source: Muscatine Housing Market Demand Study)

### New Construction

As labor and material prices have increased, so to have the costs of constructing new housing units. On average, there about ten (10) new housing units built each year with a price point starting at more than \$200,000. As can be referenced in the annual salary scenarios, of the selected occupations, a \$200,000 valued home is only affordable to registered nurses in scenario 1, which assumes a 20% down payment with an interest rate of 4.5% for a 30-year mortgage loan. According to the City of Muscatine, much of this newly constructed housing has a value of around \$300,000 and is targeted to seniors. These figures further represent the inability to construct moderately priced housing that is affordable to many income levels.

One new multi-family affordable housing project that was funded in 2015, is now in the final phases of construction. This project is a Low-Income Housing Tax Credit (LIHTC) project, and the City of Muscatine provided Tax Increment Financing (TIF) funding and project-based vouchers. To make a future project fiscally feasible, TIF, project-based vouchers and State Housing Trust Fund dollars were allocated to an upcoming multi-family affordable housing project that is in the predevelopment stages. In fall 2017 the City of Muscatine also allocated project-based vouchers to a 6-unit rehab project that will serve homeless families. Project-based vouchers help pay for rent in privately owned rental housing, but only in specific privately-owned buildings or units. That means that if you get a project-based voucher, you don't get to choose the unit you live in. this is different than housing choice vouchers, which allows the voucher recipient which unit they would like to live in.

### Households and Vacancy in Muscatine

It should be noted that because ACS data is an estimate, margin of errors make it difficult to know precise information. The chart below shows that between 7.2 and 9.2% of housing units are vacant. The supply of housing appears to be sufficient, the market study suggests the type and quality of housing may be factor causing households to locate outside of Muscatine. Overall, Muscatine is experiencing slow growth in the number of households. This is in part due to shrinking household sizes and the increase in population. Vacancy has fluctuated and as these figures are estimates, the vacancy may be stagnant or seeing little variation. Rehabilitation of dilapidated and the creation of new housing units should sufficiently facilitate the growing population and need for housing in Muscatine.

Selected Housing Characteristics						
Year	2011	2012	2013	2014	2015	2016
<b>Total Units</b>	9,981	9,954	10,048	10,370	10,169	10,221
<b>Households</b>	9,176	9,240	9,214	9,413	9,318	9,357
<b>Vacant Units</b>	805	714	834	957	851	864
<b>Vacancy Percent</b>	8.1%	7.2%	8.3%	9.2%	8.4%	8.5%
<b>New Units by Year</b>	16	17	70	41	13	33

Source: American Community Survey- 2011, 2012, 2013, 2014, 2015 and 2016

### Inflow/Outflow for Employment

As is represented in **Figure 7**, A large number of workers commute into Muscatine and live outside of the City. The difference between those commuting in and commuting out for employment is, 4,676. Ideally, this figure should be nearer to an even split. Or even fewer people commuting in to work in Muscatine.



Figure 7: Source: U.S. Census, On the Map Application and Muscatine Housing Demand Study

### 3. City of Muscatine Affordable Housing

#### Section 8 and Public Housing

The City of Muscatine is currently authorized a total of 376 housing choice vouchers. Housing choice vouchers as referenced above provide rental assistance to very-low income earning families, the elderly and the disabled. This is an attempt for all to afford housing that is safe, decent and sanitary in privately held housing units. Because housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments. The participant is free to choose any housing that meets the requirements of the program and is not limited to units located in subsidized housing projects. The housing choice voucher program is administered by the federal government. Local public housing agencies administer allocated housing choice vouchers.

In the case if the City of Muscatine, they only have the budget authority for 340 housing choice vouchers. The remaining 36 vouchers aren't administered. The overall rent is subsidized through the use of housing choice vouchers to provide affordable housing. The City, owns and operates 150 public housing units in total. 50 of these units are for families and 100 units are for households 50 years of age and above. The City also manages a 50 unit elderly housing project. In total there are about 750 units (including vouchers) where rent is based on income in the City of Muscatine. Around 36 families are on the waitlist for housing units provided for the age of 50 and up. 379 applicants are on the waitlist for the housing choice voucher and 71 applicants for the above described 50 unit family housing project. A total of 486 applicants are on the waitlist for rental assistance in the City. This further enforces the need for additional affordable housing unit creation and development in the City of Muscatine.

#### Federal Funding

The only federal resources the City has had for affordable housing in the past 5 years are the Public Housing and Housing Choice Voucher allocations. The funds for the past five (5) years are as follows, \$914,725 for capital funds (public housing building maintenance), \$354,701 for public housing operations, \$8,284,489 for rental assistance payments and \$931,099 to administer the voucher program. The total amount of funding received in the past five (5) years is \$10,485,014. The City of Muscatine also receives other funding for services to support participants in other related programs or for counseling, but no other assistance directly to house families.

#### State and Local Funding

The only state and local funding the City of Muscatine has received or spent over the past five (5) years is \$96,700 for down payment assistance through the Housing Trust Funds. Some local resources have been used for services for public housing clients or other low-income residents, but not for direct housing assistance. The City of Muscatine has allocated \$1.173 million in TIF for two (2) LIHTC projects. Current efforts are being made at the city-level to donate or convey city-owned land/property to non-profits for the development of more affordable housing projects. As land is expensive, removing this expense can increase the feasibility of new developments.

## 4. Cost-burdened households

The percentage of cost-burdened households in Muscatine, for both owner and renter occupied households can be seen in **Figure 8** and the table below. Overall, the amount of cost-burdened renter households is greater than owner-occupied households. Small variations from year to year can be seen. From 2011 to 2016, over 40% of all renter-occupied households were cost-burdened.

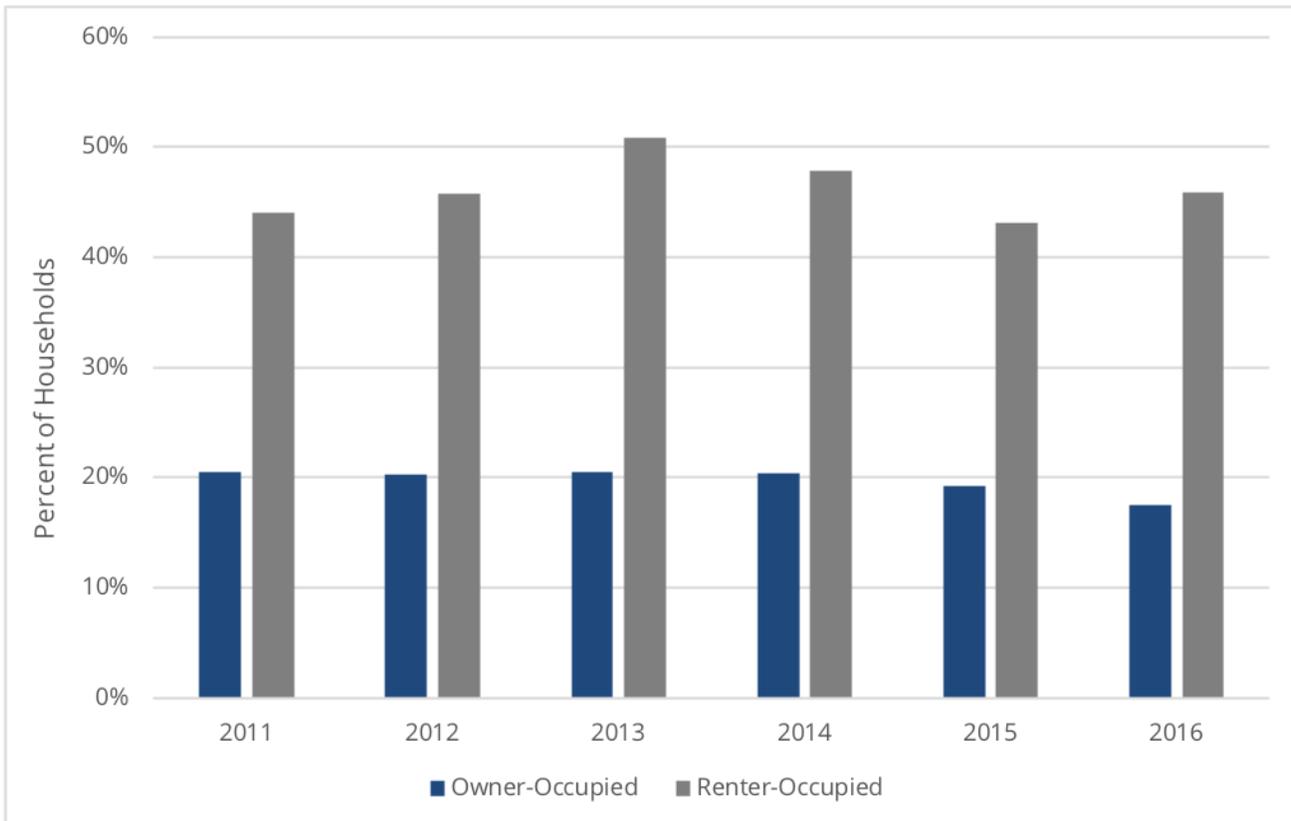


Figure 8: Source: Cost-burdened households American Community Survey- 2011, 2012, 2013, 2014, 2015 and 2016

Cost Burdened Households						
Year	2011	2012	2013	2014	2015	2016
Owner Units						
<b>Total Units</b>	6,427	6,212	6,274	6,477	6,303	6,403
<b>Cost Burdened: Owner</b>	1,312	1,280	1,324	1,279	1,197	1,121
<b>Owner-Occupied</b>	20%	20%	20%	20%	19%	17%
Renter Units						
<b>Total Units</b>	2,794	3,028	2,940	2,936	3,015	2,954
<b>Cost Burdened: Renter</b>	1,300	1,380	1,491	1,405	1,304	1,260
<b>Renter-Occupied</b>	44%	46%	51%	48%	43%	46%
Total Units						
<b>Total Occupied Units</b>	9,221	9,240	9,214	9,413	9,318	9,357
<b>Total Cost Burdened Units</b>	2,612	2,660	2,815	2,684	2,501	2,381
<b>Total</b>	28%	29%	31%	29%	27%	25%

Source: American Community Survey- 2011, 2012, 2013, 2014, 2015 and 2016

## Cost-Burdened by Income Group

To further understand the current and past cost-burdened situation in Muscatine, analysis was done looking at cost-burdened households by income from 2007 to 2016 for both owner-occupied and renter-occupied households. These results can be found in **Figures 9 and 10**. For all years analyzed, the largest cost-burdened income group is that which earns less than \$20,000. The second income group that is the most cost-burdened is that which earns \$20,000 to \$34,999 annually. As lower income earners have a decreased ability in housing choice, they are not finding the supply that can facilitate their incomes without becoming cost-burdened. A housing supply mismatch seems to be present in Muscatine.

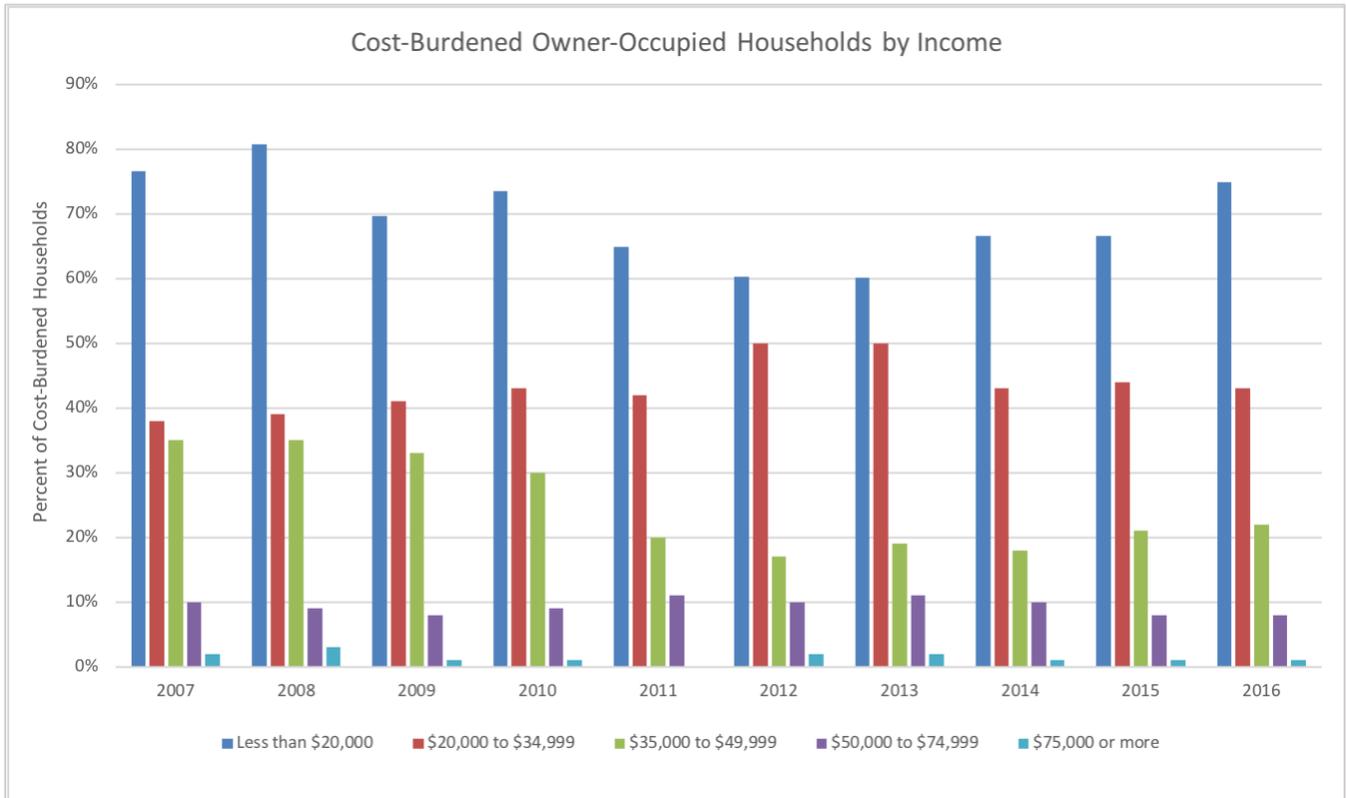


Figure 9: Owner-occupied cost-burdened households by income (Source: American Community Survey 2003 – 2015)

Cost-Burden Households by Income 2007 - 2016										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Owner-Occupied										
<b>Less than \$20,000</b>	77%	81%	70%	73%	65%	60%	60%	67%	67%	75%
<b>\$20,000 to \$34,999</b>	38%	39%	41%	43%	42%	50%	50%	43%	44%	43%
<b>\$35,000 to \$49,999</b>	35%	35%	33%	30%	20%	17%	19%	18%	21%	22%
<b>\$50,000 to \$74,999</b>	10%	9%	8%	9%	11%	10%	11%	10%	8%	8%
<b>\$75,000 or more</b>	2%	3%	1%	1%	0%	2%	2%	1%	1%	1%
Renter-Occupied										
<b>Less than \$20,000</b>	77%	79%	71%	75%	79%	79%	81%	85%	85%	87%
<b>\$20,000 to \$34,999</b>	58%	51%	53%	55%	69%	76%	85%	79%	66%	69%
<b>\$35,000 to \$49,999</b>	18%	20%	24%	4%	8%	10%	12%	10%	17%	5%
<b>\$50,000 to \$74,999</b>	0%	0%	0%	0%	0%	7%	6%	6%	6%	3%
<b>\$75,000 or more</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Source: American Community Survey 2003 - 2015</b>										

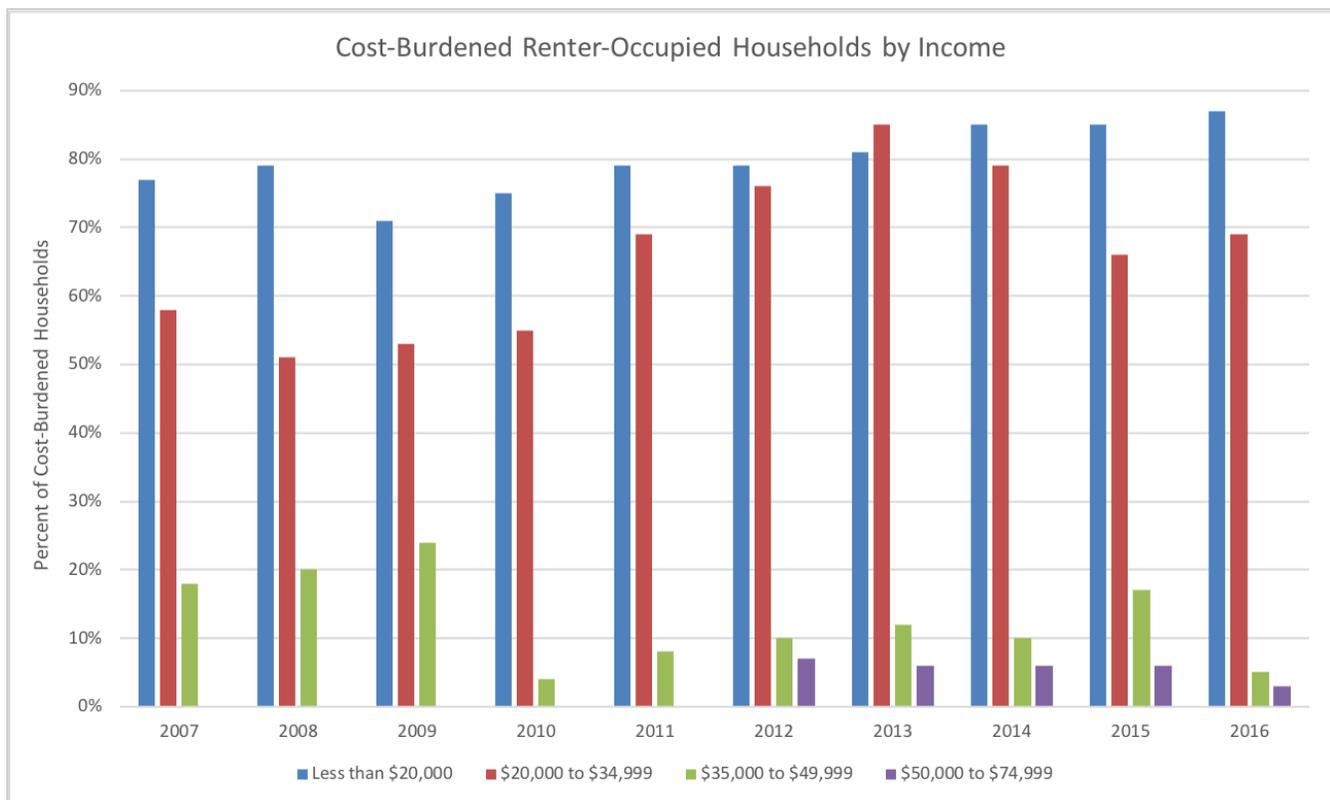


Figure 10: Renter-occupied housing cost-burdened households by income (Source: American Community Survey 2003 – 2015)

As **Figure 10** indicates, the income groups which earn less than \$20,000 and between \$20,000 to \$34,999 are the most cost-burdened income groups for renter-occupied households. More than 50% of renter households are cost burdened at both of these income groups. For households earning less than \$20,000 annually, more than 70% of all households are cost-burdened. **Figure 11**, shows the need for housing for income earners from \$0 to 25,000. At this income level, an estimated 994 units need to become available to be affordable for the number of households in Muscatine.

INCOME RANGE	# HOUSEHOLDS	AFFORDABLE RANGE FOR OWNER UNITS	# OF UNITS	AFFORDABLE RENTAL RANGE	# OF UNITS	TOTAL AFFORDABLE UNITS	BALANCE
\$0-25,000	2,429	\$0-50,000	842	\$0-400	593	1,435	-994
\$25,000-49,999	2,526	\$50,000-99,999	2,007	\$400-800	1,113	3,120	594
\$50,000-74,999	2,104	\$100,000-149,999	1,953	\$800-1,250	1,199	3,152	1,048
\$75-99,999	1,098	\$150,000-200,000	804	\$1,250-1,500	31	835	-263
\$100-150,000	852	\$200-\$300,000	445	\$1,500-2,000	79	524	-328
\$150,000+	309	\$300,000+	252	\$2,000+	0	252	-57
2015 Median	9,318		6,303		3,015	9,318	0

Figure 11: Housing gap analysis (Source: Muscatine Housing Demand Study)

## Monthly Housing Costs by Tenure

**Figure 12**, indicates the percentage of units by their monthly housing costs in Muscatine. As would be anticipated for Muscatine, fewer high-end rental units are available as households would have the preference to own a home rather than rent. The largest proportion of renter households spend between \$800 - \$999 a month. The largest group for owner households is spending between \$400 - \$599 a month on housing costs.

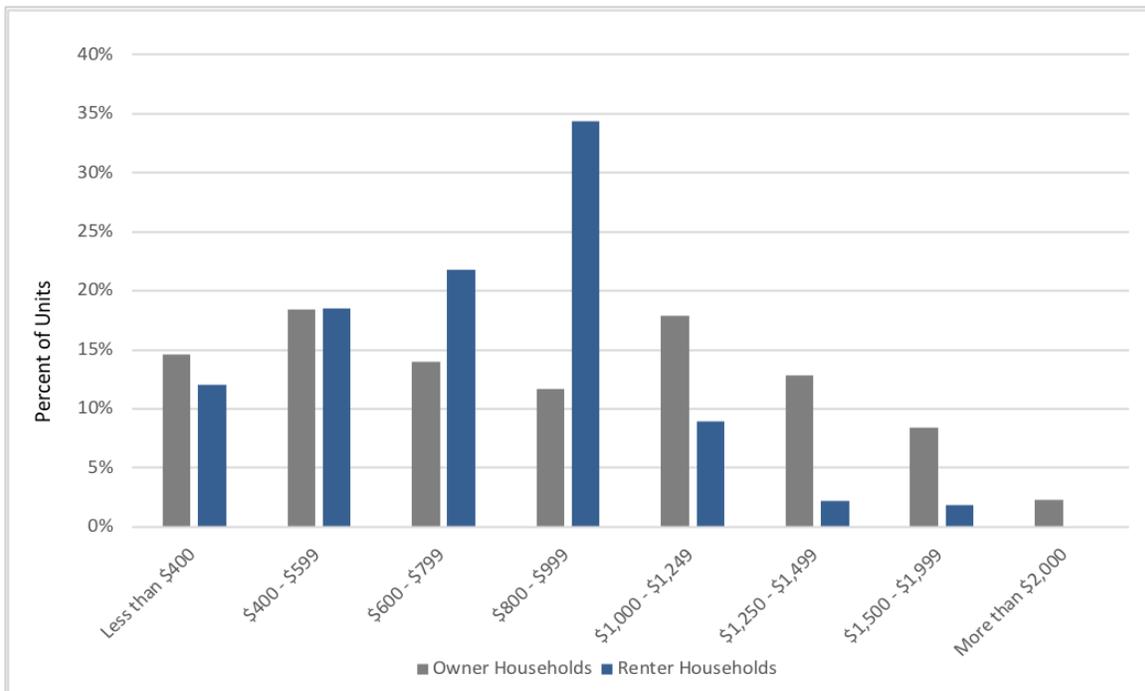


Figure 12: Monthly housing costs (Source: American Community Survey 2012 - 2016)

## Regional Housing Affordability

Overall, the current status of housing affordability for both owners and renters in Muscatine is similar to many other cities in the state and it is similar to the state as a whole. This can be seen in the table below. The City of Muscatine has an estimated 43% of renter-occupied housing paying more than 30% of their income on housing and 19% of owner-occupied housing is paying more than 30% of income on total housing costs. The state has an estimated 17% of owner-occupied household paying more than 30% of income on housing and 41% of renter-occupied households paying more than 30% of income on gross rent.

Regional Housing Affordability		
	% PAYING MORE THAN 30% ON OWNER COSTS	% PAYING MORE THAN 30% ON GROSS RENT
<b>Muscatine</b>	19%	43%
<b>Clinton</b>	19%	47%
<b>Ottumwa</b>	20%	49%
<b>Burlington</b>	23%	45%
<b>Washington</b>	17%	43%
<b>Bettendorf</b>	15%	45%
<b>Davenport</b>	20%	44%
<b>Statewide</b>	17%	41%

Source: 2011-2015 American Community Survey, Muscatine Housing Demand Study

## 5. Housing Age and Quality Characteristics

### Housing Quality

As of 2016 there were 39 structures tagged as uninhabitable because of building code violations related to neglect, fire, or other structural damage. The median constructed age of housing in Muscatine is 1958. This shows that the housing is aging as the median age is 59 years old for housing units. The Muscatine Housing Demand Study highlights that much of the most dilapidated housing is in the core of the city or more centrally located, this is logical as it was constructed first. Due to the quality and age of the older housing stock, many potential households that are employed in Muscatine are locating in areas outside of the city.

### Housing Age

Overall, the housing in Muscatine is aging. An estimated 36.44% of the housing was built in 1939 or before. For housing built before 1960, the total estimated percentage is 50.63%. the largest percentage of housing was constructed between 1970 and 1979. 1,791 housing units were built in this decade, or 17.52% of the total housing stock in Muscatine. As the housing ages, more inputs are required for maintenance and upkeep. As the chart indicates, fewer homes are being constructed as more housing is aging out of occupancy. With the median age of housing at around 59 years-old, the City will continue to face challenges related to housing quality and values.

Year Structure Built and Median Values by Age			
	Total	Percent	Median Value (\$)
	10,221	100%	
<b>Built 2014 or later</b>	0	-	-
<b>Built 2010 to 2013</b>	21	0.21%	-
<b>Built 2000 to 2009</b>	687	6.72%	\$170,900
<b>Built 1990 to 1999</b>	859	8.40%	\$104,900
<b>Built 1980 to 1989</b>	574	5.62%	\$132,400
<b>Built 1970 to 1979</b>	1,791	17.52%	\$135,100
<b>Built 1960 to 1969</b>	1,114	10.90%	\$129,800
<b>Built 1950 to 1959</b>	854	8.36%	\$114,300
<b>Built 1940 to 1949</b>	596	5.83%	\$86,100
<b>Built 1939 or earlier</b>	3,725	36.44%	\$91,900
<b>Median</b>	<b>1958</b>		<b>\$109,000</b>
<b>Source: 2012-2016 American Community Survey</b>			

### Housing Value by Year Built

As can be seen in the table above, housing values differ by year built. As has been stated, the median housing value is \$109,000. Homes built between 2000 and 2009 had the highest median value at \$170,900. The year range with the lowest median value is from 1940 and 1949, these homes have a median value of \$86,100. An outlying year built rang is 1990 and 1999, the median value for this range is \$104,900. More investigation would be required to determine the significance of this result.

## Multi-Family Zoning in Muscatine

Zoning can impact the availability and spatial location of multi-family developments through limitations enacted on multi-family zone districts. The City of Muscatine currently allows for multi-family developments in three zone districts. These are zone districts R-5, R-6 and R-L. Residential zones R-1, R-2, R-3 and R-4 don't allow for multi-family developments, they are intended for lower density single-family, duplex and mobile home developments. **Figure 13**, exhibits the amount of total land area within the municipal boundary that is zoned for residential uses of varying scales and types, in comparison to the rest of the land uses in the city. Overall, 22.1% of the land in Muscatine is zoned for non-residential uses such as, industrial and commercial. The remaining is designated for residential uses. A total of 6.6% of the land area in Muscatine is zoned in a way that allows for multi-family residential. The remaining 71.3% of the residentially classified land uses are designated for lower-density residential uses. To provide for greater flexibility, more land should be zoned for multi-family uses in Muscatine. 77.9% of zoned land is classified as residential land in Muscatine.

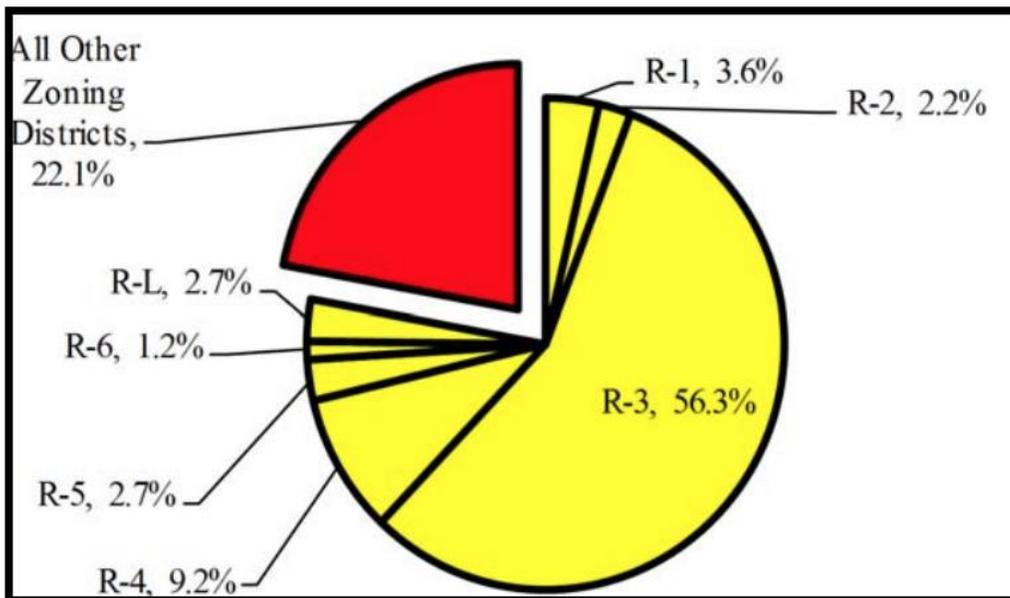


Figure 13: Breakdown of zoning districts (Source: City of Muscatine Comprehensive Plan)

**Figure 14** shows a total of 623 parcels are zoned R-5, R-6 or R-L, with a total acreage of 727.4. This means multi-family housing is allowed on only 7.5% of the total land acreage within the City's municipal boundary. The total amount of acreage as a percent of the total zoned land for low-density residential is 39.7%. The City is providing a greater amount of land resources and opportunities for the provision of single-family, duplex and other low-density residential uses in comparison to multi-family--moderate and high-density residential uses. Through zoning, the place and quantity allowed for multi-family residential housing can be greatly prescribed and limited.

### Residential Zoning Districts

		R-1	R-2	R-3	R-4	R-5	R-6	RL	Total
<b>All Parcels Within a Zoning District</b>									
All Parcels Within a Zoning District	# of Parcels	337	203	5,278	859	255	112	256	7,300
	Acreage(1)	709.3	206.1	2,757.8	178.5	65.0	167.2	495.2	4,579.0
Percentage of the Citywide Total by:	# of Parcels	3.6%	2.2%	56.3%	9.2%	2.7%	1.2%	2.7%	77.9%
	Acreage(1)	7.3%	2.1%	28.5%	1.8%	0.7%	1.7%	5.1%	47.3%

Figure 14: Residential zoned land uses by district (Source: City of Muscatine Comprehensive Plan)

## 6. City Fiscal Capacity

### Bonding Capacity

For the City of Muscatine to build and develop housing programs, they can issue bonds. The State of Iowa limits the amount of debt service to 5% of the total taxable valuation of a municipality. The total taxable valuation of all properties in Muscatine is \$914,442,529. The total bonding capacity is 5% or \$45,672,126. The city currently has several bonds issued, totaling \$37,650,000. Removing this total from the 5% total debt service limit, \$8,022,126 is available to be issued as bonds. Overall, there is bonding capacity in Muscatine, but other factors determine if the fiscal standing of the city lends itself to incurring more debt.

City of Muscatine Bonding Capacity			
Debt Service-Total Taxable Valuation	Total Bonding Capacity (5%)	Current Bond Totals	Remaining Bonding Capacity
\$913,442,529	\$45,672,126	\$37,650,000	\$8,022,126
<b>Source: Iowa Department of Management 2018</b>			

## 7. Muscatine Community School District

### School Ratings

A total of 10 schools are in the Muscatine Community School District. The State of Iowa provides a rating system of six categories. The Iowa's School Report Card (SRC) is comprised of multiple measures which are combined to determine an overall performance rating. These categories are, exceptional, high-performing, commendable, acceptable, needs improvement and priority.<sup>2</sup> The SRC uses eight measurements for assessment. The measures are, academic proficiency, closing the achievement gap, annual growth, college and career ready growth, on-track for college readiness, graduation rate, average daily attendance and staff retention. The following list was from best to worst as defined by the state. The table below shows the rating categories and the score the school must receive to fall into each category.

State of Iowa School Rating Scale			
<b>Exceptional</b>		71 and above	
<b>High-Performing</b>		68.0	- 70.9
<b>Commendable</b>		64.0	- 67.9
<b>Acceptable</b>		57.0	- 63.9
<b>Needs Improvement</b>		53.0	- 56.9
<b>Priority</b>		0.0	- 52.9
<b>Source: Iowa Department of Education</b>			

The ratings for all the public schools in the Muscatine Community School District can be seen in the table below. Of the ten schools, three have a rating of commendable, three are rated as acceptable and four are rated as needs improvement. The current status of many of the school ratings as needs improvement is a concern. As schools are a determining factor for family households to locate in a geographic area of a city or in a city, poor school ratings and scores may cause fewer families to move to Muscatine. No public schools in Muscatine have a rating of high-performing or exceptional.

Muscatine Community School District State Ratings			
School	School Type	Grades	Rank
<b>McKinley Elementary School</b>	Elementary	K - 5th	Commendable
<b>Mulberry Elementary School</b>	Elementary	K - 5th	Acceptable
<b>Jefferson Elementary School</b>	Elementary	K - 5th	Acceptable
<b>Franklin Elementary School</b>	Elementary	K - 5th	Commendable
<b>Madison Elementary School</b>	Elementary	K - 5th	Needs Improvement
<b>Colorado Elementary School</b>	Elementary	K - 5th	Needs Improvement
<b>Grant Elementary School</b>	Elementary	K - 5th	Commendable
<b>Central Middle School</b>	Middle	5th - 8th	Acceptable
<b>West Middle School</b>	Middle	6th - 8th	Needs Improvement
<b>Muscatine High School</b>	High	9th - 12th	Needs Improvement
<b>Source: Iowa Department of Education 2017</b>			

<sup>2</sup> Iowa Department of Education

## State Assessment Scores

Proficiency rates are a score used to rate each public school with the other seven variables, but this score can also be used to determine how each grade in comparison to the state in the subjects of reading and math. Overall, the Muscatine Community School District has a lower proficiency rate for all grade levels and both subjects when compared to the state averages. The only subject and grade that have the same proficiency rate is the subject of reading at the third-grade level, where no difference exists between them. Using a grade by grade proficiency rating, areas of need or deficiency can be found and addressed.

Muscatine Community School District 2016 - 2017 State Assessment Scores				
Grade	Subject	Percent Proficient	State	Difference
3rd	Reading	75.4	75.4	0
	Math	76.3	77.9	-1.6
4th	Reading	69.5	75.3	-5.8
	Math	70.3	78.4	-8.1
5th	Reading	73.5	76.1	-2.6
	Math	67.7	75.4	-7.7
6th	Reading	68.1	74.4	-6.3
	Math	59.1	76.0	-16.9
7th	Reading	71.2	75.5	-4.3
	Math	77.2	83.1	-5.9
8th	Reading	75.6	75.8	-0.2
	Math	68.4	76.1	-7.7
11th	Reading	67.5	78.7	-11.2
	Math	78.3	82.4	-4.1

Source: Iowa Department of Education

## ACT Scores

American College Testing or ACT scores are an assessment used for determining education levels prior to entering college. The table below, shows the scores in the four subjects and an overall combined score for Muscatine Community School District. The subjects of English, math, reading and science are tested in the ACT exam. The past five years of scores are provided with the state average for combined or total scores. The combined scores for Muscatine Community School District in 2013 was, 22, which was slightly higher than the state average of 21.7. In 2017, the combined score for Muscatine was 19.4, which has dropped when compared to all of the years except 2016.

Average ACT Scores by Subject for Muscatine Community School district						
Subject	English	Math	Reading	Science	Combined	State
2013	21.4	20.8	22.7	22.6	22	21.7
2014	21.1	20.2	22.6	22.1	21.7	
2015	20.6	20.2	22	21.6	21.2	
2016	18.1	18	20.2	20	19.2	
2017	18.1	18.6	20.2	19.9	19.4	

Source: Iowa Department of Education

## Appendix

Scenario 1 Cost Table				
Housing Price	\$109,000	\$150,000	\$200,000	\$250,000
Down Payment at 20%	\$21,800	\$30,000	\$40,000	\$50,000
Monthly Loan Payment	\$441.83	\$608.02	\$810.70	\$1,013.37
Utilities at 15%	\$66.27	\$91.20	\$121.61	\$152.01
Monthly Payments and Utilities	\$508.10	\$699.22	\$932.31	\$1,165.38
Annual Insurance	\$800.00	\$850.00	\$900.00	\$950.00
Monthly Insurance	\$66.67	\$70.83	\$75.00	\$79.17
Annual Property Taxes	\$2,409.66	\$3,316.04	\$4,421.39	\$5,526.74
Monthly Property Taxes	\$200.80	\$276.34	\$368.45	\$460.56
Total before utilities	\$709.30	\$955.19	\$1,254.15	\$1,553.10
Total Monthly	\$775.58	\$1,046.39	\$1,375.75	\$1,705.10
Yearly Cost	\$9,306.91	\$12,556.72	\$16,509.05	\$20,461.24
Annual Salary Needed	\$31,023.04	\$41,855.73	\$55,030.17	\$68,204.14

Scenario 2 Cost Table				
Housing Price	\$109,000	\$150,000	\$200,000	\$250,000
Down Payment at 20%	\$21,800	\$30,000	\$40,000	\$50,000
Monthly Loan Payment	\$522.81	\$719.46	\$959.28	\$1,199.10
Utilities at 15%	\$78.42	\$107.92	\$143.89	\$179.87
Monthly Payments and Utilities	\$601.23	\$827.38	\$1,103.17	\$1,378.97
Annual Insurance	\$800.00	\$850.00	\$900.00	\$950.00
Monthly Insurance	\$66.67	\$70.83	\$75.00	\$79.17
Annual Property Taxes	\$2,409.66	\$3,316.04	\$4,421.39	\$5,526.74
Monthly Property Taxes	\$200.80	\$276.34	\$368.45	\$460.56
Total before utilities	\$790.28	\$1,066.63	\$1,402.73	\$1,738.83
Total Monthly	\$868.70	\$1,174.55	\$1,546.62	\$1,918.69
Yearly Cost	\$10,424.44	\$14,094.59	\$18,559.45	\$23,024.32
Annual Salary Needed	\$34,748.12	\$46,981.97	\$61,864.85	\$76,747.72

Scenario 3 Cost Table				
Housing Price	\$109,000	\$150,000	\$200,000	\$250,000
Down Payment at 7%	\$7,630	\$10,500	\$14,000	\$17,500
Monthly Loan Payment	\$513.63	\$706.83	\$942.43	\$1,178.04
Utilities at 15%	\$77.04	\$106.02	\$141.36	\$176.71
Monthly Payments and Utilities	\$590.67	\$812.85	\$1,083.79	\$1,354.75
Annual Insurance	\$800.00	\$850.00	\$900.00	\$950.00
Monthly Insurance	\$66.67	\$70.83	\$75.00	\$79.17
Annual Property Taxes	\$2,409.66	\$3,316.04	\$4,421.39	\$5,526.74
Monthly Property Taxes	\$200.80	\$276.34	\$368.45	\$460.56
Total before utilities	\$781.10	\$1,054.00	\$1,385.88	\$1,717.77
Total Monthly	\$858.15	\$1,160.02	\$1,527.24	\$1,894.47
Yearly Cost	\$10,297.75	\$13,920.30	\$18,326.92	\$22,733.69
Annual Salary Needed	\$34,325.84	\$46,400.99	\$61,089.75	\$75,778.96

Scenario 4 Cost Table				
Housing Price	\$109,000	\$150,000	\$200,000	\$250,000
Down Payment at 3%	\$3,270	\$4,500	\$6,000	\$7,500
Monthly Loan Payment	\$535.72	\$737.23	\$982.97	\$1,228.71
Utilities at 15%	\$80.36	\$110.58	\$147.45	\$184.31
Monthly Payments and Utilities	\$616.08	\$847.81	\$1,130.42	\$1,413.02
Annual Insurance	\$800.00	\$850.00	\$900.00	\$950.00
Monthly Insurance	\$66.67	\$70.83	\$75.00	\$79.17
Annual Property Taxes	\$2,409.66	\$3,316.04	\$4,421.39	\$5,526.74
Monthly Property Taxes	\$200.80	\$276.34	\$368.45	\$460.56
Total before utilities	\$803.19	\$1,084.40	\$1,426.42	\$1,768.44
Total Monthly	\$883.55	\$1,194.98	\$1,573.86	\$1,952.74
Yearly Cost	\$10,602.59	\$14,339.82	\$18,886.38	\$23,432.94
Annual Salary Needed	\$35,341.98	\$47,799.39	\$62,954.59	\$78,109.78

<b>Cost-Burdened Owner-Occupied Households by Income 2007-2016</b>											
		<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Income</b>	<b>Total HHs</b>	9,357	9,318	9,413	9,214	9,240	9,176	9,398	8,953	8,938	8,875
	<b>Total Owner HHs</b>	6,403	6,303	6,477	6,274	6,212	6,427	6,788	6,581	6,623	6,366
	<b>% of Total</b>	68%	68%	69%	68%	67%	70%	72%	74%	74%	72%
<b>Less than \$20,000</b>	<b>Total</b>	430	527	621	616	678	801	849	793	796	647
	<b>Not CB</b>	108	176	208	246	270	282	225	241	153	152
	<b>Not CB %</b>	25%	33%	33%	40%	40%	35%	27%	30%	19%	23%
	<b>CB</b>	322	351	413	370	408	519	624	552	643	495
	<b>CB %</b>	75%	67%	67%	60%	60%	65%	73%	70%	81%	77%
<b>\$20,000 to \$34,999</b>	<b>Total</b>	925	1034	1100	1105	1053	960	1003	806	769	806
	<b>Not CB</b>	526	584	625	556	526	560	570	472	472	502
	<b>Not CB %</b>	57%	56%	57%	50%	50%	58%	57%	59%	61%	62%
	<b>CB</b>	399	450	475	549	527	400	433	334	297	304
	<b>CB %</b>	43%	44%	43%	50%	50%	42%	43%	41%	39%	38%
<b>\$35,000 to \$49,999:</b>	<b>Total</b>	1,106	1,125	1,143	1,067	940	1,045	1,134	1,057	963	1,248
	<b>Not CB</b>	865	892	936	860	781	840	789	704	626	816
	<b>Not CB %</b>	78%	79%	82%	81%	83%	80%	70%	67%	65%	65%
	<b>CB</b>	241	233	207	207	159	205	345	353	337	432
	<b>CB %</b>	22%	21%	18%	19%	17%	20%	30%	33%	35%	35%
<b>\$50,000 to \$74,999:</b>	<b>Total</b>	1,561	1,583	1,498	1,369	1,559	1,608	1,727	1,778	1,831	1,673
	<b>Not CB</b>	1431	1449	1342	1213	1407	1429	1568	1628	1663	1502
	<b>Not CB %</b>	92%	92%	90%	89%	90%	89%	91%	92%	91%	90%
	<b>CB</b>	130	134	156	156	152	179	159	150	168	171
	<b>CB %</b>	8%	8%	10%	11%	10%	11%	9%	8%	9%	10%
<b>\$75,000 or more</b>	<b>Total</b>	2,336	2,001	2,072	2,117	1,969	2,001	2,061	2,127	2,238	1,992
	<b>Not CB</b>	2,307	1,972	2,044	2,075	1,935	1,992	2,038	2,101	2,179	1,959
	<b>Not CB %</b>	99%	99%	99%	98%	98%	100%	99%	99%	97%	98%
	<b>CB</b>	29	29	28	42	34	9	23	26	59	33
	<b>CB %</b>	1%	1%	1%	2%	2%	0%	1%	1%	3%	2%

<b>Cost-Burdened Renter-Occupied Households by Income 2007-2016</b>											
		<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Household Income</b>	<b>Total HHs</b>	9,357	9,318	9,413	9,214	9,240	9,176	9,398	8,953	8,938	8,875
	<b>Total renter HHs</b>	2,954	3,015	2,936	2,940	3,028	2,749	2,610	2,372	2,315	2,509
	<b>% of Total</b>	32%	32%	31%	32%	33%	30%	28%	26%	26%	28%
<b>Less than \$20,000</b>	<b>Total</b>	1,057	1,041	1,015	1,081	1,068	1,054	946	941	1,022	1,092
	<b>Not CB</b>	139	158	151	208	223	223	237	274	211	247
	<b>Not CB %</b>	13%	15%	15%	19%	21%	21%	25%	29%	21%	23%
	<b>CB</b>	918	883	864	873	845	831	709	667	811	845
	<b>CB %</b>	87%	85%	85%	81%	79%	79%	75%	71%	79%	77%
<b>\$20,000 to \$34,999:</b>	<b>Total</b>	341	432	525	677	595	620	635	473	377	627
	<b>Not CB</b>	107	145	112	104	140	191	286	221	186	261
	<b>Not CB %</b>	31%	34%	21%	15%	24%	31%	45%	47%	49%	42%
	<b>CB</b>	234	287	413	573	455	429	349	252	191	366
	<b>CB %</b>	69%	66%	79%	85%	76%	69%	55%	53%	51%	58%
<b>\$35,000 to \$49,999:</b>	<b>Total</b>	530	514	416	368	503	389	306	365	333	318
	<b>Not CB</b>	437	410	316	352	464	349	268	328	278	301
	<b>Not CB %</b>	82%	80%	76%	96%	92%	90%	88%	90%	83%	95%
	<b>CB</b>	93	104	100	16	39	40	38	37	55	17
	<b>CB %</b>	18%	20%	24%	4%	8%	10%	12%	10%	17%	5%
<b>\$50,000 to \$74,999:</b>	<b>Total</b>	466	505	489	482	556	309	355	293	264	148
	<b>Not CB</b>	451	475	461	453	515	309	355	293	264	148
	<b>Not CB %</b>	97%	94%	94%	94%	93%	100%	100%	100%	100%	100%
	<b>CB</b>	15	30	28	29	41	0	0	0	0	0
	<b>CB %</b>	3%	6%	6%	6%	7%	0%	0%	0%	0%	0%
<b>\$75,000 or more:</b>	<b>Total</b>	285	247	250	189	174	219	181	74	171	128
	<b>Not CB</b>	285	247	250	189	174	219	181	74	171	128
	<b>Not CB %</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	<b>CB</b>	0	0	0	0	0	0	0	0	0	0
	<b>CB %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%