



University of Wisconsin-Whitewater, Department of Economics

FISCAL AND ECONOMIC RESEARCH CENTER

FORT ATKINSON OWNER-OCCUPIED HOUSING REPORT

by

Russell D. Kashian, Ph.D.

Fiscal and Economic Research Center
University of Wisconsin-Whitewater
4302 Hyland Hall
Whitewater, WI 53190

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Contributors

Principle Researcher

Russell Kashian, Ph.D.

Lead Research Assistant: Cole Kinson

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Executive Summary

Purposes, Goals, and Findings

Determining Owner-Occupied Housing Demand

The section titled “Current Demand for Owner-Occupied Housing” is focused on determining owner-occupied housing demand in the current City of Fort Atkinson market. Homeowner Vacancy rates, Absorption rates, and other metrics were analyzed to determine the current demand.

Affordable Owner-Occupied Housing Demand

The affordability of owner-occupied housing in the City of Fort Atkinson was also analyzed in the “Current Demand for Owner-Occupied Housing” section. Monthly homeowner housing costs as a percentage of income were analyzed. *Table 5* and *Table 6* analyze these costs by income bracket.

Change in Demand for Owner-Occupied Housing

The projected change in demand for owner-occupied housing is analyzed in the first part of the section titled “The Outlook of the Owner-Occupied Housing Market”. Household population projections and other metrics are analyzed to provide estimates as to how many owner-occupied homes will be needed by 2025 and by 2030.

Current Available, Buildable Lots & Redevelopment Opportunities

The number of residentially zoned, buildable lots (and their potential to cope with both current and increasing demand) is calculated in this report. Trends and plans for single and two-family home construction are also analyzed.

Geographic Information System (GIS) data and other sources are analyzed in the subsection titled “Redevelopment and Rezoning Opportunities” to provide possibilities for zoning changes and further development to provide a greater supply of owner-occupied housing in the City of Fort Atkinson.

Major Findings and Conclusions: Current Demand for Owner Occupied Housing

Based on the FERC’s analysis, the FERC concludes that:

1. There is significant evidence of a shortage of owner-occupied housing in the City of Fort Atkinson.
2. This shortage likely affects home values in all income tiers in a similar way.
3. This shortage may be affecting single-family homes more than two-family homes.
4. The number of currently platted, but undeveloped, lots would likely provide enough housing to achieve equilibrium in the *current* market, if developed in a very short timeframe.

These findings and conclusions are detailed throughout the “Current Demand for Owner-Occupied Housing” section.

Major Findings and Conclusions: The Outlook of the Owner-Occupied Housing Market

Based on the FERC's analysis, the FERC also concludes that:

1. The demand for owner-occupied housing will increase from 2019 to 2025 and 2030
2. Recent owner occupied housing construction rates are much too low to keep up with population and demand projections, and thus the existing shortage will worsen if construction rates do not increase
3. The current amount of residentially zoned, but undeveloped, land will not provide enough supply of owner-occupied housing to keep up with demand by 2025
4. More land will need to be rezoned or annexed in order to keep up with demand projections for 2025 and 2030.

These findings and conclusions are detailed throughout the "Outlook of the Owner-Occupied Housing Market" section, and in the summary of that section.

Policy Relevance

The final section of the report looks at the policy relevance of the FERC's major findings and conclusions. The possible policy relevant outcomes of the projected housing shortage are laid out, as are possible strategies and options for ensuring sufficient supply of housing in the future.

Report Format

Following the Format of the Baker-Tilly Multi-family Housing Report

The FERC draws from the format of the Baker-Tilly report; however, there are some relevant differences between how multi-family housing demand can be analyzed and how single-family housing demand can be analyzed. The primary difference is in the use of Capture and Penetration rates vs. Absorption rate and Homeowner Vacancy rate. The latter two metrics are useful for analyzing owner-occupied housing demand, whereas the Capture and Penetration rates (used in the Baker-Tilly Multi-family housing Report) are primarily relevant to multi-family housing units. For this reason, the FERC draws upon the Absorption rate, Homeowner Vacancy rate, home values over time, population projections, household trends, and various other metrics to analyze owner-occupied housing demand (and supply).

The Use of the Baker-Tilly PMA: Jefferson County and Fort Atkinson

Demand for owner-occupied housing was estimated for both Jefferson County and for the City of Fort Atkinson exclusively. Jefferson County as a whole was analyzed because it roughly corresponds to the PMA (Primary Market Area) that was used in the Baker-Tilly report.

There exist advantages and disadvantages of the use of each of these areas for analysis. Analyzing the City of Fort Atkinson alone does not take into account the wider market area of the PMA, and so ignores relevant market circumstances (competition, demand, etc.) that originate from outside the City of Fort Atkinson. In fact, a significant portion (perhaps even a majority) of competition and demand in the owner-occupied housing market of the City of Fort Atkinson occurs elsewhere in the PMA.

The drawbacks of analyzing Jefferson County alone is that such an analysis would not provide specific insights regarding the City of Fort Atkinson, and therefore may be less useful. For these reasons, an analysis of both areas is provided throughout this report.

Current Demand for Owner-Occupied Housing

Part 1 of this FERC report analyses the current state of the owner-occupied housing market in the City of Fort Atkinson, and in Jefferson County as a whole. The demand for owner-occupied housing was analyzed by estimating the Absorption Rate, the Homeowner Vacancy Rate, and home values over time. After demand is analyzed, the current supply of lots is analyzed, and lastly opportunities for development of these lots is provided in light of the present-day demand analysis.

- **The Absorption Rate** is used to evaluate the rate at which available homes are sold in a specific market during a given time period. It is calculated by dividing the average number of sales per month by the total number of available homes (Investopedia). According to the National Council of Housing Market Analysts, “A market area’s performance in adding and filling additional units is often a better gauge of its ability to accommodate additional units than household growth statistics, especially in an area with a stable or declining population or an aging housing stock that does not satisfy needs or expectations of current residents.”
- **The Homeowner Vacancy Rate** is used to evaluate unused supply, and is defined by the US Census Bureau as the proportion of the overall homeowner housing inventory that is both vacant and for sale. In other words, the number of houses that are intended to be owner occupied (but are not because they are vacant), divided by the total homeowner housing inventory (all owner-occupied housing, plus all vacant for sale homeowner housing).
- **Housing prices over time** are analyzed to evaluate demand directly. An unusual increase in housing prices over time in a particular area can suggest an undersupply of housing, in combination with other factors.

Absorption Rate: Jefferson County and Fort Atkinson

The Absorption Rate is important for estimating housing demand because it provides insight on the rate at which houses are selling, compared to the unused supply of homes. The Absorption Rate is calculated by taking the average number of sales per month over a certain period (in this case 1 year) and dividing it by the number of for-sale homes. Current demand for owner-occupied housing was estimated for both Jefferson County, and for the City of Fort Atkinson exclusively.

Methodology

The Absorption Rate was calculated using home listings on Zillow.com. The analysis of for-sale single-family and two-family homes were completed separately. *Table 1* and *Table 2* present this information.

- **Fort Atkinson City, Single-family Homes:** The Fort Atkinson single-family search resulted in 163 homes sold in the past 12 months (~13.6 sold per month). The number of available-to-be-sold homes at the time of the analysis was 41. These figures yielded a 33.1% Absorption rate.
- **Jefferson County, Single-family Homes:** The Jefferson County single-family home search resulted in 72 homes sold per month, and a 22.5% Absorption Rate.
- **Fort Atkinson City, Condos and Co-Ops:** The small number of condos and co-ops makes this figure limited, but nonetheless there were about 1.5 condos and co-ops sold per month, for an Absorption Rate of 30%
- **Jefferson County, Condos and Co-Ops:** There were 4 Condos and Co-ops sold per month, for an Absorption Rate of 20.6%

Table 1

Absorption Rate: Single-Family, Owner-Occupied Homes					
	Homes	Months	Sold per month	Available to be sold*	Absorption Rate
City of Fort Atkinson	163	12	13.58333	41	33.10%
Jefferson County	867	12	72	321	22.50%

**Search criteria: Houses or townhouses, 1 or more bedrooms, 1 or more bathrooms, new construction excluded. This search criteria was used to exclude not yet completely constructed homes, which would not count towards the Absorption Rate.*

***Table created using data from Zillow.com on 7/19*

Table 2

Absorption Rate: Condos and Co-ops					
	Homes	Months	sold per month	Available to be sold*	Absorption Rate
City of Fort Atkinson	18	12	1.5	5	30.0%
Jefferson County	42	12	4	17	20.6%

**Search criteria: Condos and Co-Ops, 1 or more bedrooms, 1 or more bathrooms, new construction excluded. This search criteria was used to exclude not yet completely constructed homes, which would not count towards the Absorption Rate. Does not include rented 2 family homes (duplexes).*

***Table created using data from Zillow.com on 7/19*

According to Investopedia, “Traditionally, an Absorption Rate above 20% has signaled a seller's market in which homes are sold quickly. An Absorption Rate below 15% is an indicator of a buyer's market”. In other words, an Absorption Rate above 20% (seller's market) suggests that supply is not increasing as fast as demand is increasing (i.e., a shortage). Jefferson County (24% Absorption Rate) is above this 20% threshold, and the City of Fort Atkinson (33.1% Absorption Rate) is significantly above this threshold. This suggests there is excess demand for single-family, owner-occupied housing in Jefferson County, and more so in the City of Fort Atkinson. The data for two-family homes is more limited, but paints a similar picture as can be seen in *Table 2*.

Homeowner Vacancy Rate

The Homeowner Vacancy Rate is defined by the US Census Bureau as the proportion of the homeowner housing inventory which is vacant for-sale. It is computed by dividing the number of vacant units for sale by the number of owner-occupied homes plus all vacant for-sale homes (US Census Bureau). In other words, the Homeowner Vacancy Rate is calculated by taking the number of houses that are intended to be owner occupied (but are not because they are vacant), and dividing that number by the total homeowner housing inventory (all owner-occupied housing, plus all vacant for-sale homeowner housing).

The Homeowner Vacancy Rate is important for estimating demand of owner-occupied housing primarily because it provides information as to how much housing supply is currently unused. Simply analyzing the overall vacancy rate is insufficient to determine demand in this scenario for two reasons: 1) the overall household vacancy rate does not distinguish between owner-occupied, single-family housing vs. multi-family housing, and 2) the overall vacancy rate does not take into account homes which are technically “vacant”, but which are still being used or don't necessarily represent a surplus of housing (i.e. vacation homes, seasonal homes, homes which are vacant because the occupants were not home at the time of the Census, etc.). The Homeowner Vacancy Rate is therefore a more useful metric for analyzing demand for owner-occupied housing.

A normal Homeowner Vacancy Rate is often considered to be between 1.5% and 2%, and the average Homeowner Vacancy Rate for the United States is currently at 1.4% (US Census Bureau). A Homeowner Vacancy Rate lower than this signals that there may not be enough choices for homeowners to choose a home they would like to buy (i.e. it signals a potential shortage of housing).

Data and Analysis

The Homeowner Vacancy Rate in Jefferson County as of 2017 was 1.2% (ACS Survey). The Homeowner Vacancy Rate could not be precisely determined for the City of Fort Atkinson, but based upon FERC analysis, the Homeowner Vacancy Rate is likely below 1.4% and may be significantly below that rate. From 2016 to 2017, the Homeowner Vacancy Rate in the City of Fort Atkinson dropped significantly, from roughly 2.4 to 1.5 percent (American Community Survey, ACS). Although the Homeowner Vacancy Rate estimate for the City of Fort Atkinson as provided by the ACS demonstrates a decrease, it is not useful in assessing the current Homeowner Vacancy Rate for two reasons. For one, the most recent estimates have a wider

margin of error than the measurement itself. Secondly, the most recent ACS data is derived from 2013-2017 data, which may be outdated.

Furthermore, although the Homeowner Vacancy Rate in the City of Fort Atkinson could not be precisely determined for the present day, the FERC's analysis suggests it must be lower than 1.5 percent. This is because, even assuming all currently for-sale housing is vacant instead of occupied (an unlikely scenario), the Homeowner Vacancy Rate is still calculated to be approximately 1.5%. The 1.5% figure therefore represents an implausible upper-bound estimate of the Homeowner Vacancy Rate, and is very likely to be an overestimate. Even so, the implausible upper estimate only just achieves a normal Homeowner Vacancy Rate.

As illustrated in *Table 3* and *Table 4*, if the actual Homeowner Vacancy Rate of the City of Fort Atkinson is between 0.50% and 1.25%, then the number of additional vacant for-sale homes required to achieve a 1.5% Homeowner Vacancy Rate would be in the range of 8-31 homeowner housing units.

Possible Homeowner Vacancy Rate (4 scenarios)				
	0.50%	0.75%	1%	1.25%
The # of Vacant For-Sale Homes According to Each Scenario*	15	23	30	38
Total Needed for a 1.5% Homeowner Vacancy Rate**	46	46	46	46
Additional # of Vacant For-Sale Homes Required to Achieve a 1.5% Homeowner Vacancy Rate	31	23	16	8

*Rounded down to the nearest integer

**Calculated using the estimate of 3,026 Owner-Occupied Homes in Fort Atkinson (ESRI 2018)

Table 3

Table 4

Homeowner Vacancy Rate (City of Fort Atkinson)				
All Owner Occupied Homes*	For-Sale (Zillow)	Vacant For-Sale (Different Scenarios)	Total Homeowner Housing Inventory	Homeowner Vacancy Rate
3026	46	46	3072	1.50%
3026	46	38.2	3064	1.25%
3026	46	30.36	3056	0.99%
3026	46	23	3049	0.75%
3026	46	15.18	3041	0.50%

*Source: ESRI 2018

Housing Prices Over Time: Jefferson County & Fort Atkinson

Housing prices across the state (and across the country) have continued to rise since 2013. The housing market for both the City of Fort Atkinson and Jefferson County as a whole is no exception to this rule. As can be seen in *Figure 2*, the median home prices for Wisconsin, Jefferson County, and the City of Fort Atkinson have all risen. Zillow.com also provides the “Zillow Home Value Index” for these areas, which is essentially the median of the market value of homes in a given area.

The Zillow data suggests that Jefferson County has outpaced statewide increases, particularly within the past year. Home prices in the City of Fort Atkinson specifically are more in line with statewide increases. In total, the home prices for the City of Fort Atkinson and Jefferson County are suggestive of excess demand, particularly in combination with the Homeowner Vacancy Rate and Absorption Rate. By and large, home values for the City of Fort Atkinson have increased at a similar pace as statewide values, and Jefferson County home values have outpaced statewide home values, especially in the past two years.

Figure 1 (Source: Zillow.com)

Fort Atkinson Home Prices & Values

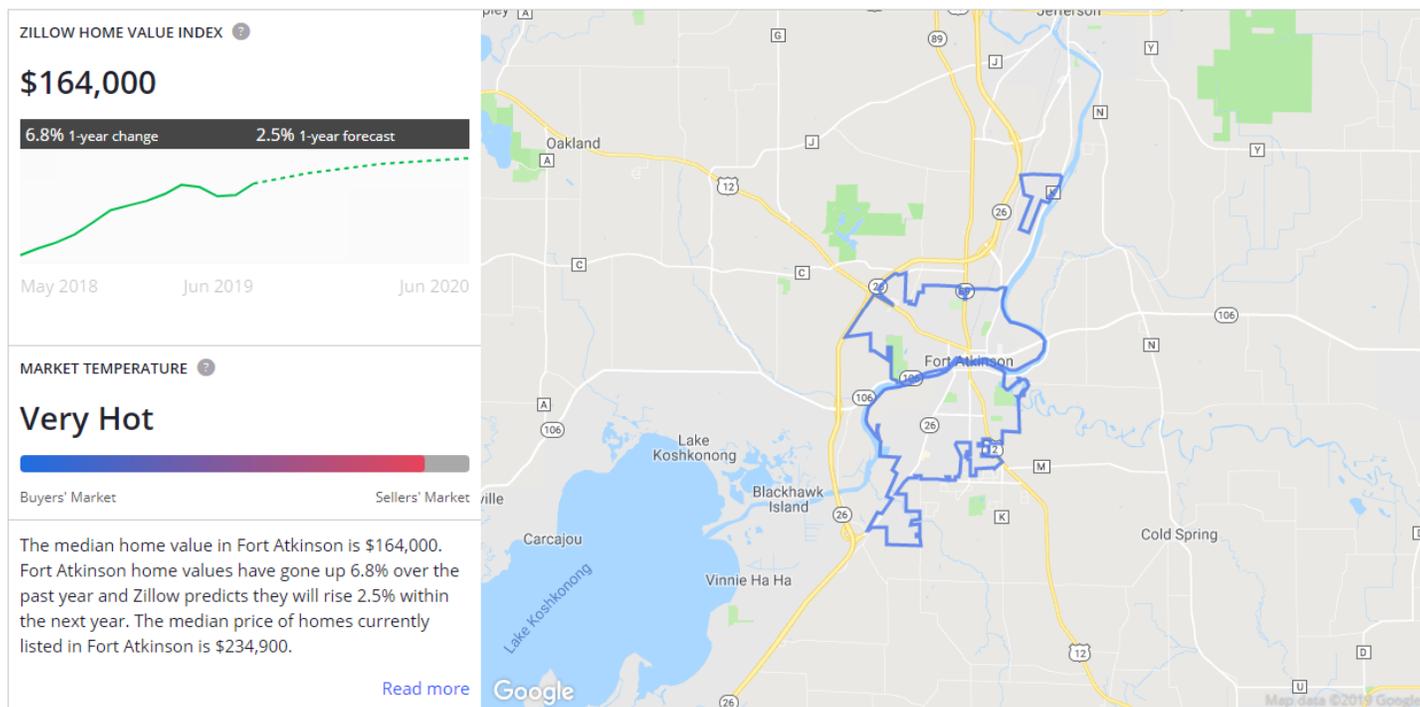


Figure 2 (Source: Zillow.com)

Fort Atkinson Market Overview

Data through Jun 30, 2019

\$164,000 ZHVI

2.5% 1-yr forecast (Jun 30, 2020)

\$234,900 Median listing price

No data Median sale price



Affordability of Housing and Demand Analysis by Income Bracket:

In addition to the prior analysis of home values, the FERC also analyzed the affordability of housing using American Community Survey data. Specifically, the FERC analyzed the average monthly housing costs for homeowners across various income brackets, as a percentage of their monthly income. This analysis was completed for both the City of Fort Atkinson and Jefferson County as a whole. As can be seen in *Table 5* and *Table 6*, the City of Fort Atkinson’s housing affordability is comparable to Jefferson County’s overall housing affordability for each income bracket.

Table 5

Fort Atkinson City: Costs by Income Bracket		
Yearly Income	Monthly Housing Costs as a Percentage of Average Monthly Income	Percentage of Owner-Occupied Households for Specified Income Bracket
Less than \$20,000:	housing costs are less than 20 percent of income	0%
	housing costs are 20 to 29 percent of income	11%
	housing costs are greater than 30 percent of income	89%
\$20,000 to \$34,999:	housing costs are less than 20 percent of income	16%
	housing costs are 20 to 29 percent of income	30%
	housing costs are greater than 30 percent of income	54%
\$35,000 to \$49,999	housing costs are less than 20 percent of income	37%
	housing costs are 20 to 29 percent of income	19%
	housing costs are greater than 30 percent of income	44%
\$50,000 to \$74,999	housing costs are less than 20 percent of income	38%
	housing costs are 20 to 29 percent of income	45%
	housing costs are greater than 30 percent of income	17%
\$75,000 or more	housing costs are less than 20 percent of income	84%
	housing costs are 20 to 29 percent of income	13%
	housing costs are greater than 30 percent of income	3%

*Zero or negative income: <1%

**Calculated using American Community Survey (2013-2017) data.

Table 6

Jefferson County: Costs by Income Bracket		
Yearly Income	Monthly Housing Costs as a percentage of Average Monthly Income	Percentage of Owner-Occupied Households for Specified Income Bracket
Less than \$20,000:	Housing costs are less than 20 percent of income	1%
	Housing costs are 20 to 29 percent of income	7%
	Housing costs are greater than 30 percent of income	92%
\$20,000 to \$34,999:	Housing costs are less than 20 percent of income	19%
	Housing costs are 20 to 29 percent of income	29%
	Housing costs are greater than 30 percent of income	52%
\$35,000 to \$49,999	Housing costs are less than 20 percent of income	36%
	Housing costs are 20 to 29 percent of income	26%
	Housing costs are greater than 30 percent of income	38%
\$50,000 to \$74,999	Housing costs are less than 20 percent of income	42%
	Housing costs are 20 to 29 percent of income	38%
	Housing costs are greater than 30 percent of income	20%
\$75,000 or more	Housing costs are less than 20 percent of income	71%
	Housing costs are 20 to 29 percent of income	25%
	Housing costs are greater than 30 percent of income	4%

*Zero or negative income: <1%

**Calculated using American Community Survey (2013-2017) data.

Summary: Current Demand for Owner Occupied Housing

Three important aspects of housing demand were analyzed for both Jefferson County and the City of Fort Atkinson; the Absorption Rate, the Homeowner Vacancy Rate, and home values over time. The Absorption Rate analysis is suggestive of excess demand for owner-occupied housing in Jefferson County, and doubly so for the City of Fort Atkinson.

Although the Homeowner Vacancy Rate could not be determined precisely, analysis suggests that it is below the optimum level, and possibly significantly below the optimum level. Therefore, the analysis of the Homeowner Vacancy Rate is suggestive of excess demand for owner-occupied housing.

Together, these two indicators (as well as home values) suggest that there is excess demand for owner-occupied housing in the City of Fort Atkinson (i.e. a possible shortage of owner-occupied housing). The number of additional owner-occupied homes that would likely be needed to achieve a 1.5% Homeowner Vacancy Rate would be between 8 and 31 new homes (if the actual Homeowner Vacancy Rate is between 0.5% and 1.25%). 27 new single-family homes would likely achieve the 15% Absorption Rate. Traditionally, a 15%-20% Absorption Rate, and a 1.5%-2% Homeowner Vacancy Rate suggests a market close to equilibrium (Investopedia, US Census).

Owner Occupied Housing: Opportunities and Current Supply

Although the evidence suggests there is a shortage of single-family and two-family housing in the City of Fort Atkinson, currently platted but undeveloped lots could likely provide the necessary “buffer” supply of owner-occupied housing to achieve a market equilibrium in the current market and for the next few years.

As of 10/10/18, there were 45 platted lots zoned as single-family in the City of Fort Atkinson (Table 7 below). Each single-family lot would provide 1 owner-occupied housing unit each. This, in combination with 20 different two-family platted lots (some of which would be owner-occupied), would provide about 80 owner-occupied housing units (assuming 2 units per two-family lot). This supply can provide a basis for future housing construction and lot rezoning, which is discussed in the next section.

However, an analysis of the medium term future of the City of Fort Atkinson owner-occupied housing market projects a worsening shortage in the absence of an increase in construction rates and additional residentially zoned land. Due to the comparatively long time horizon associated with rezoning, platting, and ultimately developing owner-occupied housing, these projections are relevant to current planning. These projections are discussed throughout the rest of this report.

Table 7

<i>Residential Lots Currently Platted But Undeveloped As of 10-10-18**</i>		
	R1	R2
Koshkonong Estates #4*	7	12
Crescent Beauty Farms*	27	3
Theron	8	0
Highland Heights & Hawk's Glen	3	5
Total # of Lots	45	20

*Denotes area with some wetlands

**Table created using data from the 2019 City of Fort Atkinson Annual Budget

Outlook of the Fort Atkinson Owner-Occupied Housing Market

(2025-2030)

As the population and demographics of the City of Fort Atkinson changes, so too will the owner-occupied housing market in the City of Fort Atkinson. This second part of this FERC report analyses the medium-term (2025 and 2030) projections of owner-occupied housing needs in the City of Fort Atkinson, and how these projections are relevant for current planning. This FERC report details the rezoning and redevelopment opportunities that could be pursued in light of these projections in the last part of the report.

The FERC analyzed the increase in the population of households (not to be confused with housing units), as well as the number of owner-occupied homes needed to house the additional household population.

In terms of supply, the FERC analyzed the number of platted but undeveloped lots, as well as the number of buildable lots zoned for either single-family residential housing (R1) or two-family residential housing (R2). This supply of buildable lots was analyzed and compared to demand projections, in order to help determine what redevelopment and/or rezoning opportunities would be needed to achieve equilibrium over time.

Demand Projections

In terms of demand, the FERC analyzed household population projections, as well as owner-to-renter ratio projections and family size projections. The estimated population of Fort Atkinson as of 2018 was 12,505 (according to US Census estimates). More important for owner-occupied housing demand and housing needs, however, is the total number of households (i.e. the household population). The total household population, according to the Wisconsin Department of Administration (WISDOA), is estimated to be 5,636 in the year 2020.

WIS DOA Projections & Adjusted Projections

Two different household population projection scenarios are used in this report. In the tables that reference "WISDOA Projection", household population projections are taken directly from the Wisconsin Department of Administration. WISDOA Projections for household & population growth were utilized in the *2008 City of Fort Atkinson Comprehensive Plan* as well as the *2019 City of Fort Atkinson Comprehensive Plan*. (Vandewalle & Associates, Inc.)

Adjusted Projection Model: Methodology

2000-2010 WISDOA projections for Fort Atkinson were compared to actual 2000-2010 population growth, providing a projection of household population in case the WISDOA projections are off by a similar margin from 2020-2030. Census data indicates that actual population growth for 2000 to 2010 was 72% of WIS DOA projected growth. Thus, the adjusted household population scenario referenced throughout the rest of this report is simply 72% of the WISDOA projected household population increase (both for 2020-2025 and 2020-2030).

Population and Household Projections (2025)

WISDOA Projection: The difference between the number of households in 2025 and 2020 was calculated to be 237 households, according to the Wisconsin Department of Administration. This corresponds to about a 149 homeowner household population increase from 2020 to 2025 (the rest are renter households).

Adjusted Projection: The difference between the number of households in 2025 and 2020 was calculated to be 171 households, according to the adjusted projection (see page 17). This corresponds to about a 107 homeowner household population increase from 2020 to 2025 (the rest are renter households). *Table 8* below details 2020-2025 household population projections using the Wisconsin DOA projection scenario and the adjusted projection scenario.

***Table 8,
2020-2025
Homeowner
Household
Projection***

	WIS DOA Projection	Adjusted Projection**
Project household population increase	237	171
Projected increase in the number of homeowner households*	149	107
Number of Additional Homeowner Households Per Year	30	21

*Calculated using the Americans Community Survey (2013-2017) estimate of a 62.7% owner occupied household rate. It therefore assumes an owner-occupied household rate that does not change significantly in the future.

**Adjusted projection is 72% of the WISDOA projection. For methodology, see page 17.

Population and Household Projections (2030)

WISDOA Projection: The difference between the number of households in 2030 and 2020 was calculated to be 465 households, according to the Wisconsin Department of Administration. This corresponds to about a 292 homeowner household population increase from 2020 to 2030 (the rest are renter households).

Adjusted Projection: The difference between the number of households in 2030 and 2020 was calculated to be 335 households, according to the adjusted projection (see page 17). This corresponds to about a 210 homeowner household population increase from 2020 to 2030 (the rest are renter households). *Table 9* below details 2020-2030 household population projections using the Wisconsin DOA projection scenario and the adjusted projection scenario.

Table 9, 2020-2030 Homeowner Household Projection

	WIS DOA Projection	Adjusted Projection**
Project household population increase	465	335
Projected increase in the number of homeowner households*	292	210
Number of Additional Homeowner Households Per Year	29	21

*Calculated using the Americans Community Survey (2013-2017) estimate of a 62.7% owner occupied household rate. It therefore assumes an owner-occupied household rate that does not change significantly in the future.

**Adjusted projection is 72% of the WISDOA projection. For methodology, see page 17.

Zoning, Construction, and Development

R1 (Single-family), R2 (Two-family), and R3 (Multi-family) Housing

There are three zoning codes for residential housing in the City of Fort Atkinson: Single-family (R1), Two-Family (R2), and Multi-family (R3). It is assumed in this report that no housing zoned as R3 is owner-occupied. For this reason, only housing zoned as R1 and R2 is analyzed in this report. It should be noted at the outset, however, that some percentage of R2 housing is actually renter occupied. For the purposes of this report, all R2 housing is treated as if it is owner-occupied.

As can be seen in *Table 11*, R2 housing is estimated to make up 18% of all R1 and R2 housing units combined (R1 makes up the other 82%). This figure was calculated using estimates from the American Community Survey, and has a fairly large margin of error. As such, it should be treated as a rough estimate.

Table 10

R1 vs R2: Percentage of Non-Multi-family Housing (City of Fort Atkinson)		
Units in Structure	Estimated Number of Units	Percent
<i>1 Unit, Detached</i> (assumed R1)	3181	82%
<i>1 Unit: Attached or 2 Units</i> (assumed R2)	711	18%
Total	3892	100%

*Calculated using American Community Survey (2013-2017) estimates

Recent Construction

As of 10/10/2018, there were 45 R1 lots and 20 R2 lots that were platted but undeveloped (City of Fort Atkinson Annual Budget, 2019). As can be seen in *Table 7* (page 15), if all of these lots were fully developed, they could provide housing for a total of 85 households (assuming two households per R2 lot). On their own, this supply of platted but undeveloped lots will not provide enough supply to keep up with demand projections over the next 5 years, especially when the current evidence of a shortage is taken into account.

Also worth noting is the recent pace of construction in the City of Fort Atkinson. As can be seen in *Table 11*, the average annual number of R1 and R2 homes constructed in the past three years is 11.7 homes.

Table 11

	R1 Built	R2 Built (2 homes per building)	Total households
2016	8	2	12
2017	7	4	15
2018	10	4	18
Average	8.3	3.3	11.7

**Source: Fort Atkinson Annual Report, for the years 2016, 2017, and 2018*

Undeveloped Residential Lots

As of 10/10/2018, there were 45 R1 lots and 20 R2 lots that were platted but undeveloped (City of Fort Atkinson Annual Budget, 2018). Using satellite imagery and on-site analysis, an additional 11 R1 lots and an additional 13 R2 lots were determined to be undeveloped, platted, and buildable (i.e. not within a 100 year floodplain) as of the writing of this report. All of these additional lots were in the Koshkonong Estates #4 subdivision. Thus, there is a total of 56 R1 lots and 33 R2 lots available for development in the City of Fort Atkinson.

As can be seen in *Table 14*, if all of these lots were fully developed, they could provide housing for a maximum of 97 households. This 97 figure assumes that lots in Koshkonong Estates #4 will continue to be developed as R1 housing, despite actually being zoned as R2.

On their own, this supply of platted but undeveloped lots will not provide enough supply to keep up with demand projections over the next 5 years, especially when the current evidence of a shortage is taken into account. It could provide enough housing to manage the current shortage, however.

Table 12, Undeveloped Residential Lots in Fort Atkinson City

	Zoned as R1	Zoned as R2
Total undeveloped lots*	56	48
Lots which contain mostly 100 year floodplains*	0	15
Number of buildable lots*	56	33

*Values are approximate, some error may be present due to outdated parcel data as well as difficulty interpreting unbuildable wetlands

**Sources: ESRI, City of Fort Atkinson Zoning Map, Jefferson County GIS

	R1 lots	R2 lots	Total (R2 and R1)
Number of buildable lots*	56	33	84
Total number of additional homeowner households supplied	56	41**	97

*Values are approximate, some error may be present due to outdated parcel data as well as difficulty interpreting unbuildable wetlands

**Assumes continuing single family development in Koshkonong estates

Table 13, Fort Atkinson City: Undeveloped Lots, Housing Supply Potential**Table 14, Fort Atkinson Shortage Projection**

	Adjusted Projection Scenario**	WISDOA Projection Scenario
Number of buildable lots	84 lots	84 lots
Total number of homeowner households supplied*	97 households	97 households
Projected additional supply needed by 2025	107 units	149 units
Difference (missing supply by 2025)***	10 units short	52 units short
Projected supply needed by 2030	210 units	292 units
Difference (missing supply by 2030)	113 units short	195 units short

*Assumes continuing single-family development in Koshkonong Estates #4

**Adjusted household projection is 72% of the WISDOA household projection. For

methodology, see page 17.

****Does not take into account the current shortage*

Summary: Fort Atkinson Owner-Occupied Housing Outlook

Low Construction Rates

According to the WISDOA Projection Scenario (see *Table 8* and *Table 9*), the approximate number of households that should be constructed in order to keep up with population projections should be around 30 owner-occupied housing units annually over the next 5 years, for a total of 149 owner-occupied housing units built by 2025. In comparison, the City of Fort Atkinson has only averaged 11.7 owner-occupied (R1 + R2) homes built annually over the past three years.

Not Enough Residential Land for 2025

In the FERC's analysis, the full use of all buildable, residentially zoned lots will not provide enough supply of housing to keep up with demand projections for more than 2-4 years (especially in light of the evidence of a present day shortage). Depending on the projection scenario used, the currently available lot supply would still leave a shortage of at least 10 to 52 houses by 2025, and 113 to 195 houses by 2030.

Policy Relevance:

Homeowner Housing Shortage Outcomes & Solutions

As was shown in the previous section of this report, the City of Fort Atkinson is already facing a shortage of housing. In this section of the report, the undesirable outcomes and possible solutions to the current shortage and future shortage projections are addressed in depth.

The Undesirable Outcomes of a Shortage:

Ultimately, a shortage of housing is undesirable in many ways, as it limits the selection of homes that potential buyers have the ability to purchase. An Absorption rate too high and a Homeowner Vacancy rate too low signal this shortage and lack of selection (see pages 6-9). The available selection of homes in Fort Atkinson is already affected, as can be seen in the high Absorption rate and low Homeowner Vacancy rate.

Housing scarcity and lack of housing selection is an undesirable outcome for the potential buyer, the city, and many of the city's current residents and businesses. In a shortage, many potential buyers will have to choose between substandard housing, a house further away from the location they would have preferred (i.e. just outside of Fort Atkinson), or both.

As a consequence, the city would lose out on additional residents who could have contributed to the city in the form of taxes, other economic activity, or both. This, in turn, is undesirable for the citizens of Fort Atkinson. In some cases, returning residents may be unable to live near the place they grew up or wish to live (e.g. near relatives who are current residents) due to lack of housing selection. This shortage of housing may also be undesirable for many local businesses and employers (because less residents could mean less customers and employees).

Despite the evidence of a current housing shortage for the City of Fort Atkinson, home prices in the city have not shown signs of rising faster than the rate of Jefferson County as a whole (see pages 10 & 11). This could be due to a variety of potential factors, including possible competition from home sales near Fort Atkinson that could act as a substitute supply of housing.

Future shortage

In the event that construction rates do not improve, and household population increases continue as projected, the existing shortage will worsen. Furthermore, even if construction rates do improve in the next couple of years, the city is projected to run out of buildable residential land before 2025 (see pages 19 to 21). Thus, in the absence of the amelioration of these problems, the existing shortage is projected to worsen substantially over time.

A worsening shortage in the city would, in all likelihood, worsen the negative effects of a lack of home selection, and possibly begin to affect housing costs for homebuyers. Any possible increase in the cost of living could further discourage people from moving to Fort Atkinson. Again, this would be an undesirable outcome for the city, the potential resident, many local businesses and even current residents.

Additional Buildable Land Necessary

As can be seen in *Table 15*, the projected amount of buildable, residential land needed (in addition to existing buildable and undeveloped lots) to avoid a worsening homeowner housing shortage is (using WISDOA population projections) 9.9 to acres by 2025, and 37.1 acres by 2030.

Table 15, Additional Acreage Needed

	2020-2025 Adjusted Projection Scenario**	2020-2025 WISDOA Projection Scenario	2020-2025 Adjusted Projection Scenario**	2020-2025 WISDOA Projection Scenario
Projected missing homeowner housing supply (adjusted for existing land)*	10	52	113	195
Additional buildable acres needed (rezoned or annexed) to provide R1 housing for each homeowner household***	1.9 acres	9.9 acres	21.5 acres	37.1 acres

*Assumes all existing buildable R1 & R2 land will be fully developed (For sources, see table 15)

**Adjusted projection is 72% of the WISDOA projection. For methodology, see page 17.

***Assumes all R1 housing is built at the minimum lot size (0.19 acres)

Possible Strategies to Address the Worsening Shortage:

Despite the evidence of a worsening shortage, there are possible strategies for increasing the supply of housing that are within the scope of city governance.

Increase Construction Rates

As stated previously, increased construction rates are needed to address the projections of a worsening shortage. At first glance, it may appear that the city cannot do anything to affect construction rates, because the city is not involved with the development of homeowner housing. However, there are things that the city can do to attract developers.

These possible strategies revolve around increasing the supply of available and buildable lots, increasing the desirability of available and buildable lots, or both. Although there is an existing (albeit limited) supply of buildable residential lots, an additional increase in the supply of buildable residential lots could potentially attract developers who wish to develop in different locations.

Brownfield Rezoning and Redevelopment

As indicated by the orange circle in *Figure 3*, there is a brownfield in a northern part of the city. If this brownfield was made suitable for development and rezoned, it could provide around 13 acres of buildable land.

Annexation

Annexation is a strategy that the city could employ to provide a sufficient supply of buildable land suitable for homeowner housing development. Different locations were analyzed

in terms of their suitability for development. The possible annexation analysis *only* considers the physical suitability of the land, such as floodplain status and its location in relation to the city. This analysis *does not* take into account any other topographical features, or factors such as land ownership. For this reason, the FERC's analysis of possible areas for annexation *does not* focus on specific lots of land, rather the analysis focuses on general areas. These areas are depicted in *Figure 3* and *Figure 4*, and are described in depth below.

- **East:**

The maps below (*Figure 3* and *Figure 4*) show that nearly all land east of current city limits is unsuitable for residential development, because nearly all land east of the city is within a 100 year floodplain. However, there is some land directly east of the city that could be suitable for residential development.

- **South:**

Locations directly south of the city are largely unsuitable for annexation for residential development, because of the existing township that is already developed. However, there is a moderately sized area of land that is undeveloped just between the city and the township that is both close and suitable for development. Additionally, the city could decide to wrap around the southern township, as there is potentially suitable land south of the township.

- **West:**

The land west of the city is also mostly within a 100 year floodplain, and is therefore unsuitable for residential development. However, there is some land directly west of the city and south of the river that could be suitable for residential development.

- **North:**

Land directly north of the city may be very suitable for residential development. Although some wetlands exist in this area, there is a large amount of land close to the city that is both contiguous and not within a 100 year floodplain.

The land northeast of current city limits is likely unsuitable for residential development, because any development would be separated from the rest of the city by a state highway (State Highway 26) and an interstate highway (US Highway 12).

The land northwest of the city is largely unsuitable, as it is either already developed, within a floodplain, or otherwise separated from other residential development.

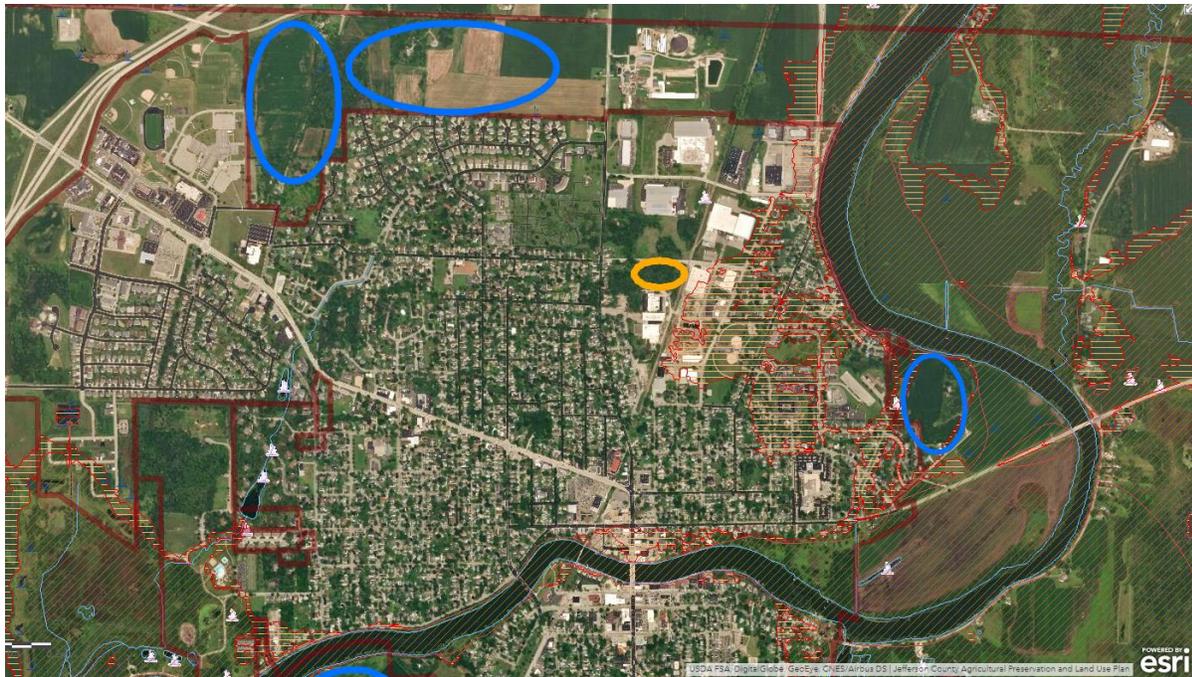


Figure 3, Possible Areas for Annexation: North. The orange ellipse indicates a brownfield.

Sources: ESRI GIS data, Jefferson County Agricultural Preservation and Land Use Plan [2015 GIS floodplain data], Fort Atkinson Zoning Map

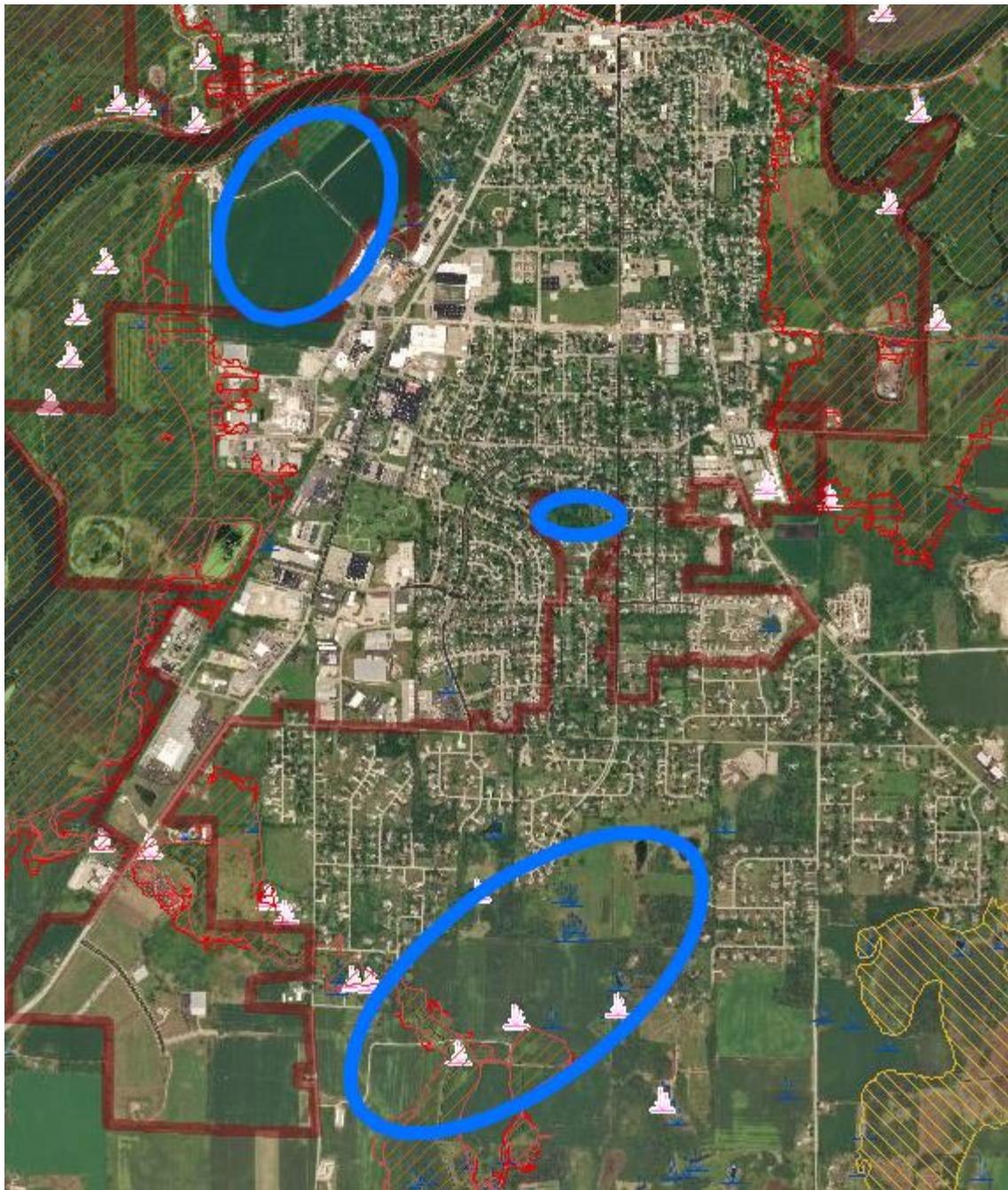


Figure 4, Possible Areas for Annexation: South

Sources: ESRI GIS data, Jefferson County Agricultural Preservation and Land Use Plan [2015 GIS floodplain data], Fort Atkinson Zoning Map

Rezoning & Making Existing Land Suitable for Development

The city does have a few large lots that are zoned and platted for commercial buildings. Rezoning some of these lots could provide a fairly large supply of housing. For example, there is a large undeveloped lot just below the high school, directly adjacent to US Highway 12 and State Highway 26. However, discussion with city officials and analysis of the features of the surrounding area (such as busy highways, schools, commercial properties) suggest that this area is likely not suitable for homeowner housing development. Similar limitations exist with other commercially and industrially zoned areas in other areas in other parts of the city.

Aside from the brownfield mentioned previously, the FERC concludes (as a result of discussions with city officials and analysis of GIS data) that there is likely an extremely limited amount of undeveloped land within city limits suitable for single or two-family housing development that is not already zoned residentially and accounted for in *Table 13* and *Table 14*. Floodplains, wetlands, zoning issues, surrounding physical features, and other problems hinder possible development.

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