

---

## *Section 5*

### *Household & Housing Projections*

---

This section of the plan discusses the projected housing demand for all of Buchanan County. Projections of specific cities can be found in their respective City Profile in Section 6. Note, these projections represent a best estimate based on the historic and projected trends discussed in this study. If variables are adjusted, the projections will adjust. As projected rates and quantities are realized, the projections should be updated. These forecasts should not be strictly interpreted, but rather serve as a reasonably expected guidepost of future needs.

### Household Projections

In order to establish future housing projections, a number of factors must be considered, including population. As explained in Section 2: Population Projections (page 16), a forecast of Buchanan County’s future population was calculated using an average of five different population projections. Figure 5.1 shows these projections. A small portion of the county’s population will live in Group Quarters, such as group homes, skilled nursing facilities, treatment facilities, correction facilities, or similar institutions. The county’s group quarters population declined from 1.64 percent of the total population in 2010 to 0.67 percent of the total population in 2020. The decrease is primarily due to a substantial drop in the population in nursing facilities and skilled nursing facilities, likely due to the COVID-19 pandemic, staff shortages, and seniors increasingly seeking less costly or less restrictive long-term care alternatives. Despite these trends, a partial rebound of the county’s group quarters population can be expected as the senior population increases, and some enter nursing facilities out of necessity. The projections in this document assume the share of the county’s population in group quarters will increase by 0.3 percentage points per decade. Subtracting the number of persons living in group quarters from the county’s estimated population results in the population of the county’s residents requiring housing.

At the time of the 2020 Census, 20,427 of the county residents did not live in group quarters. This number is expected to decrease to 20,365 in 2030 and 20,243 in 2040.

<b>Figure 5.1: Projected Population to be Housed, Buchanan County</b>			
<b>Year</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>
<b>Total Population</b>	20,565	20,565	20,503
<b>Population in Group Quarters</b>	138	200	261
<b>Total Population in Housing</b>	<b>20,427</b>	<b>20,365</b>	<b>20,243</b>

Another important consideration is average household size. Following national trends, Buchanan County’s average household size has declined over the past several decades, as shown in Figure 4.12 in Section 4. From 1980 to 2020, the county’s household size declined at an average rate of 0.1 per decade. For these household projections, the more conservative rate of decrease from 2010 to 2020 is used (0.038 per decade). Figure 5.2 shows projected average household size.

<b>Figure 5.2: Projected Household Size, Buchanan County</b>			
<b>Year</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>
<b>Average Household Size</b>	2.49	2.45	2.42

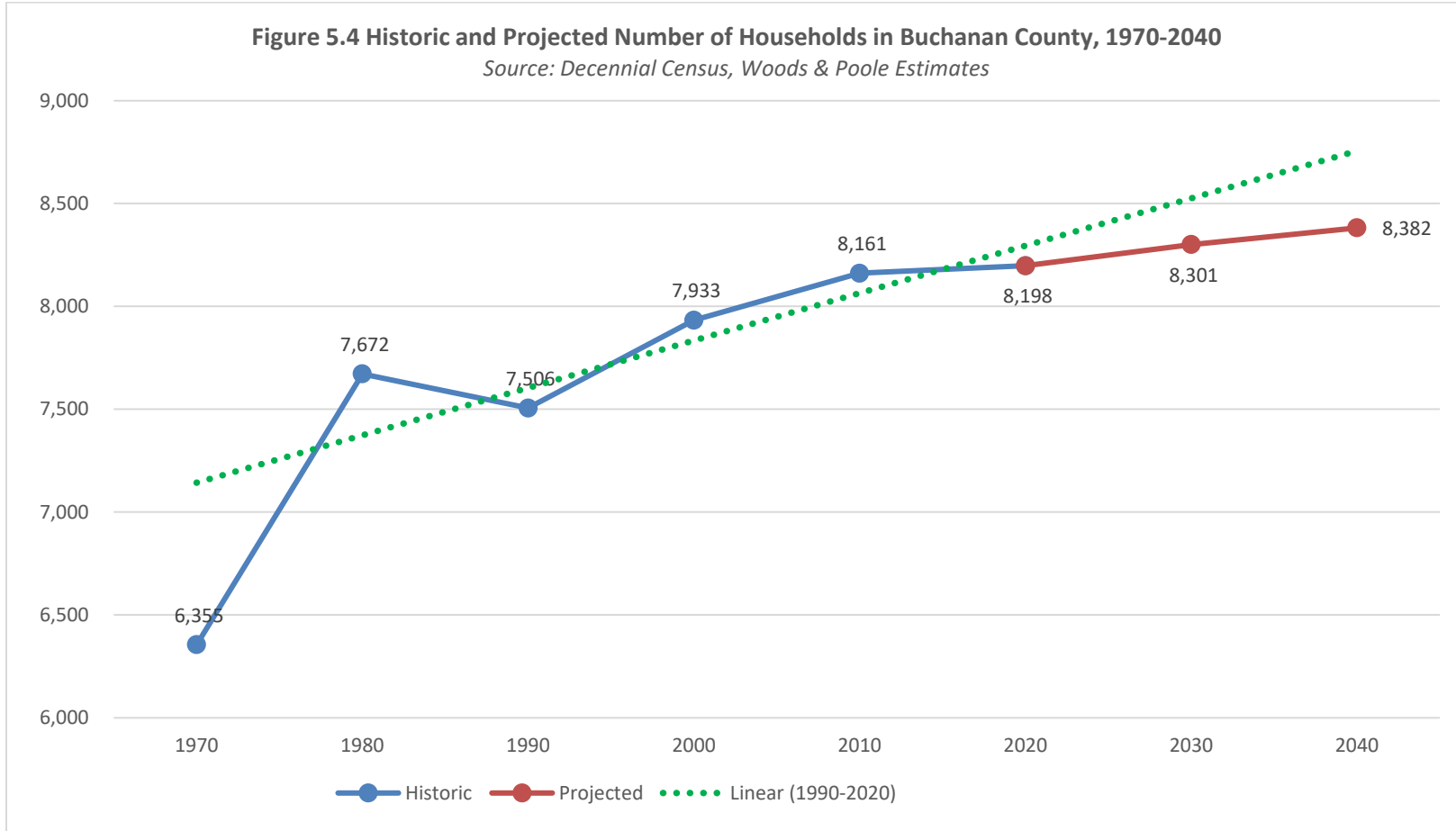
Based on the forecasted assumptions in Figures 5.1 and 5.2, Buchanan County will grow by an estimated 184 new households by 2040 from their 2020 count. Since total population in households is expected to decline during this period, household growth in this forecast scenario is attributed to the county’s projected decline in average household size. Figure 5.3 shows the projected number of households through 2040.

<b>Figure 5.3: Projected Number of Households, Buchanan County</b>			
<b>Year</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>
<b>Population in Households</b>	20,427	20,365	20,243
<b>Household Size</b>	2.49	2.45	2.42
<b>Total</b>	<b>8,198</b>	<b>8,301</b>	<b>8,382</b>
<b>Change from 2020</b>	-	103	184
<b>Percent Change from 2020</b>	-	1.3%	2.2%
<b>Change from Previous</b>	-	103	81
<b>Percent Change from Previous</b>	-	1.3%	1.0%

Figure 5.4 displays the historic number of households (solid blue line) in the County since 1970 as well as a linear projection (dotted green line) based on changes from 1990 to 2020. While the number of households grew more slowly from 2010 to 2020 than in previous decades, it still increased from 8,161 to 8,198. In red is the projected number of households as determined by forecasts in Figure 5.3. While the County’s population is projected to decline slightly by 2040, the number of households is projected to increase to 8,382.

**Figure 5.4 Historic and Projected Number of Households in Buchanan County, 1970-2040**

*Source: Decennial Census, Woods & Poole Estimates*



### Housing Unit Projections

As Section 4 explained, for a community to maintain a healthy housing market, a percentage of housing units must turn over and become vacant to provide a ready housing supply. Buchanan County’s current vacancy rate of 7.7 percent is within the range of the county, state, and national housing vacancy rates since 2000 (Figure 5.5).

Figure 5.5: Historic Vacancy Rate			
Year	2000	2010	2020
Buchanan County	8.8%	9.0%	7.7%
Iowa	6.8%	8.6%	8.8%
United States	9.0%	11.4%	9.7%

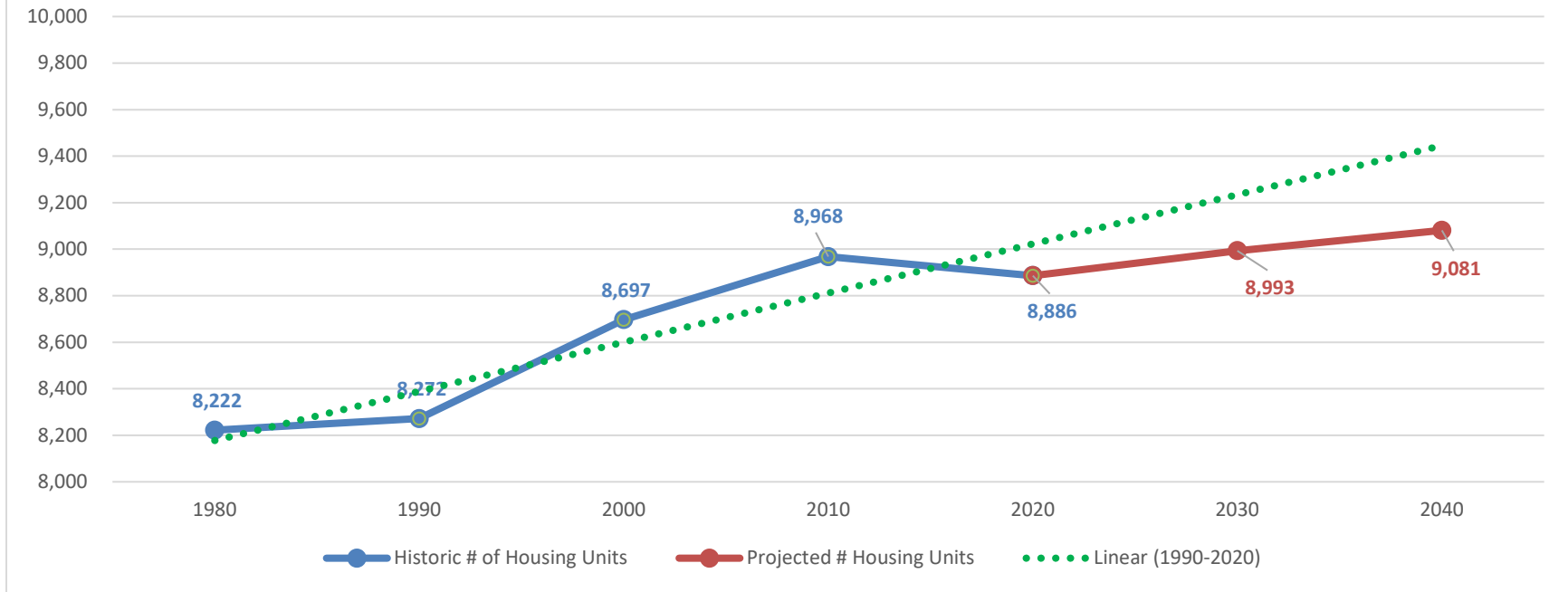
Figure 5.6 shows the projected number of housing units that will be needed to house the forecasted number of households (Figure 5.3) and maintain a housing vacancy rate of 7.7 percent. According to the projections, by 2040, it is estimated that there will be demand for an additional 195 housing units.

Figure 5.6: Projected Need for Housing Units			
Year	2020	2030	2040
# of Units to be Occupied by Households	8,198	8,301	8,382
Vacant Units at Given Time (7.7%)	688	692	699
<b>Total</b>	<b>8,886</b>	<b>8,993</b>	<b>9,081</b>
<b>Change from 2020</b>	-	<b>107</b>	<b>195</b>
<b>Percent Change from 2020</b>	-	<b>1.2%</b>	<b>2.2%</b>
<b>Change from Previous</b>	-	<b>107</b>	<b>88</b>
<b>Percent Change from Previous</b>	-	<b>1.2%</b>	<b>1.0%</b>

Figure 5.7 shows the historic number of housing units in the County and the projected need for units based on the data in Figure 5.6. The Figure below suggests that the County's historic rate (linear trend shown in green) of increasing its total housing units would be adequate to provide for the projected 2040 demand.

**Figure 5.7: Historic and Projected Number of Housing Units in Buchanan County, 1980-2040**

*Source: Decennial Census, Woods & Poole Estimates*

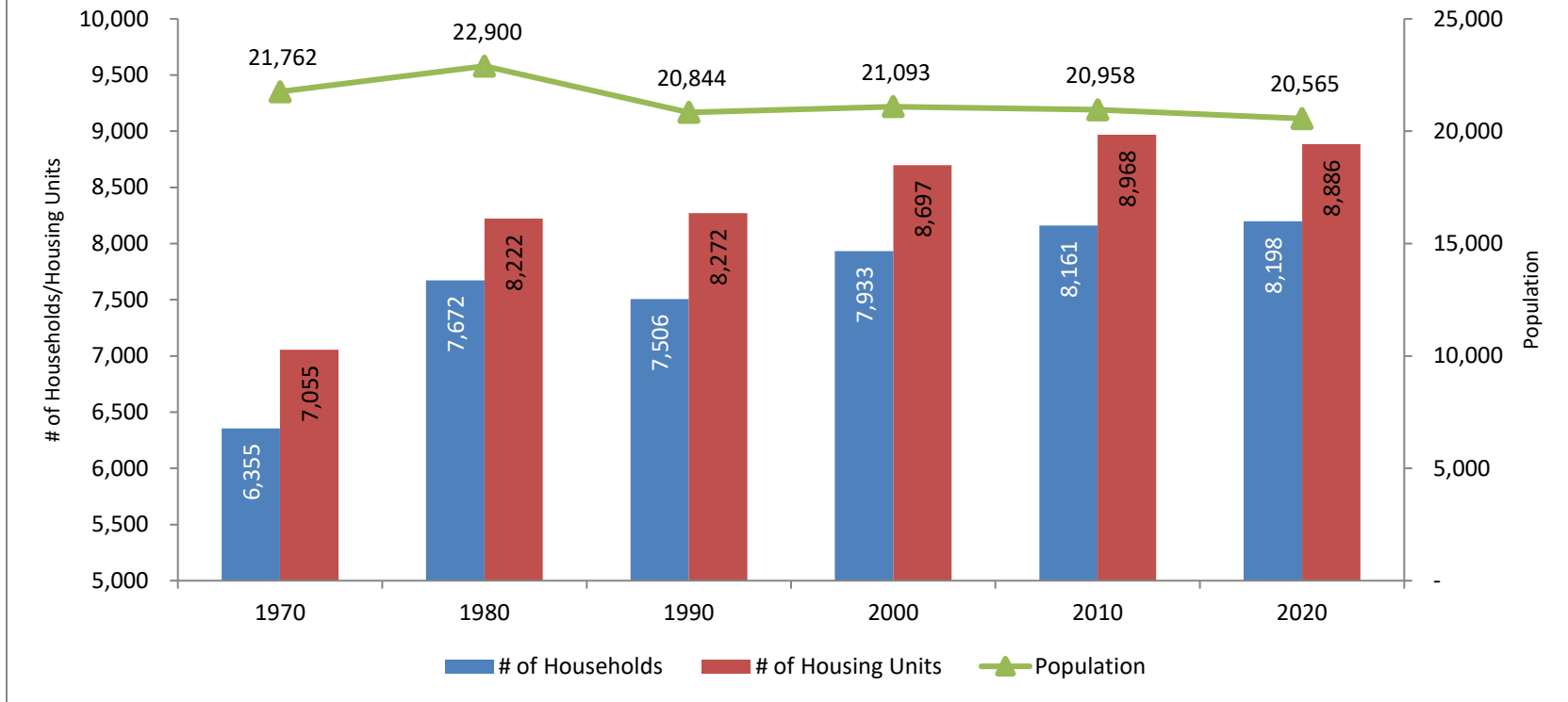


An alternative way to show the historic trends discussed in the projections above, is shown as Figure 5.8, which displays Population, Housing Unit, and Household data of Buchanan County from 1970 through 2020. Figure 5.8 illustrates how, despite population decline, housing demand has and is expected to continue to increase as the number of households in the county increases. Consider, that from 1970 to 2010, in Buchanan County:

- The population decreased by 5.5 percent (-1,197) from 21,762 to 20,565.
- The number of Housing Units increased by 26.0 percent (+1,831) from 7,055 to 8,886.
- The number of Households increased by 29.0 percent (+1,843) from 6,355 to 8,198.

**Figure 5.8: Historic Population, Housing Units, and Households in Buchanan County, 1970-2020**

Source: US Census Bureau



### New Construction Trends

Construction of new housing units will be necessary to replace annual losses but to also provide for new demand.

Figure 5.9 shows the number of new unit construction build starts from 2017 through 2021. During the past five years, the County has experienced an annual average of 37.2 new housing units, comprised almost entirely of single-family structures.

From 2017 to 2021, Independence generated the single highest number of housing units starts – accounting for 47.7 percent of new units in Buchanan County. With its population comprising 29.5 percent of the County’s total, Independence is overrepresented in new housing starts.

Figure 5.9: New Housing Unit Starts in Buchanan County, 2017-2021								
Jurisdiction	2017	2018	2019	2020	2021	5-Year Totals 2017-2021	Annual Average 2017-2021	Annual Average 2012-2016
Aurora	0	0	0	0	0	0	0	0.6
Brandon	1	0	1	1	0	3	0.6	0.4
Fairbank*	4	3	4	5	4	20	4	0.2
Hazleton	1	1	0	1	0	3	0.6	0.8
Independence	22	19	16	17	18	92	18.4	13.6
Jesup**	3	3	4	7	2	19	3.8	6.0
Lamont	0	0	0	1	1	2	0.4	0.4
Quasqueton	1	1	0	0	2	4	0.8	1.6
Rowley	0	0	0	0	0	0	0	0.2
Stanley	0	0	0	0	0	0	0	0
Winthrop	1	0	0	0	0	1	0.2	1.0
Unincorporated	20	12	8	5	22	67	13.4	16.0
<b>Buchanan Co. Total</b>	<b>48</b>	<b>36</b>	<b>29</b>	<b>34</b>	<b>46</b>	<b>193</b>	<b>38.6</b>	<b>40.8</b>

Source: Buchanan County Assessor, \*also Fayette County Assessor (no housing starts in Stanley during this period)  
\*\*also Black Hawk County Assessor

At 34.7 percent of the new housing units, unincorporated Buchanan County (36.4 percent of county population) had the next highest number of starts followed by Jesup (12.2 percent of population), which accounted for 8.3 percent of the Buchanan County’s housing starts. (During this period, Jesup also had 3 housing starts in Black Hawk County). The other eight cities, which represent 21.9 percent of the County population, were responsible for 9.8 percent of new unit starts.

For comparison, Figure 5.9 includes the annual average housing starts from 2012 to 2016. Between this period and the 2017-2022 period, average annual housing starts dropped from 40.8 to 38.6, equivalent to 22 fewer housing starts per decade. The distribution of housing starts also became more concentrated in Independence, with fewer housing starts in Jesup’s Buchanan County territory, unincorporated areas, or other cities in Buchanan County.



## Housing Loss Trends

Over time, some existing housing units will also be lost due to demolition, deterioration, or otherwise being removed from the housing market by their owners. The 2009 *Iowa Housing Needs Assessment* by Iowa State University estimates an annual loss rate of 1 percent of units for areas like Buchanan County (“All Other” Category). The Projected Annual percentage loss of housing stock by county projected by the study are shown in Figure 5.10.

**Figure 5.10: Projected Annual Percentage of Iowa Housing Stock by County Type**

Tenure and Occupancy Status	Estimated Percentage of Total Units Lost Per Year			
	Iowa	Metropolitan	Micropolitan	All Other
<b>Owner Occupied</b>	<b>0.83</b>	<b>0.81</b>	<b>0.86</b>	<b>0.85</b>
Single Family	0.70	0.67	0.72	0.74
2 to 4 multi-family	1.61	1.56	1.74	1.65
5+ multi-family	0.77	0.79	0.78	0.68
Mobile home	2.88	2.84	2.91	2.92
<b>Renter Occupied</b>	<b>1.02</b>	<b>0.99</b>	<b>1.10</b>	<b>1.06</b>
Single family	0.76	0.73	0.76	0.78
2 to 4 multi-family	1.57	1.55	1.62	1.56
5+ multi-family	0.83	0.82	0.92	0.79
Mobile home	3.01	2.94	3.09	3.03
<b>Vacant</b>	<b>1.86</b>	<b>1.53</b>	<b>2.04</b>	<b>2.07</b>
<b>Grand Total:</b>	<b>0.95</b>	<b>0.90</b>	<b>1.02</b>	<b>1.00</b>

*Source: Annual Percentage loss factors for the 2009 Iowa housing stock by county type, estimated by Iowa State University Department of Economics, as prepared for the Iowa Housing Needs Assessment: Key Issues and Indicators, [www.extension.iastate.edu](http://www.extension.iastate.edu)*

As stated in the study,

“[Figure 5.10] contains Iowa-specific annual loss factors by tenure and occupancy status, type of structure and major urbanization level....

“The loss factors represent the expected percentage loss during any given year due to conversion, merger, commercial use, damage or condemnation, demolition or disaster, and other causes. The estimates were derived from national rates of loss, with adjustments to

reflect the relative age of Iowa’s housing stock. The differences in values across the county types primarily reflect the differing age composition of housing stock in the state’s metropolitan, micropolitan, and all other regions.”

Using the Iowa Housing Needs Assessment projection of an annual housing unit loss of 1 percent of counties like Buchanan, it is estimated that Buchanan County would lose an estimated 1,618 units between 2020 and 2040, as shown Figure 5.12 on the following page.

Buchanan County’s housing demolition records from 2017 through 2021 (Figure 5.11) show a demolition rate of 38.8 units per year. Based on the 2020 Census count of 8,886 housing units, this 38.8-unit loss equates to approximately 0.44 percent per year. Based on this most recent 5-year demolition rate, the county will lose an estimated 776 housing units between 2020 and 2040. Notably, the demolition rate from 2017 to 2021 (38.8 units/year) is marginally higher than the rate of housing unit starts during the same period (38.6 units/year), indicating that the County is losing homes faster than they are being replaced. This is borne out in Figure 5.8, which shows a net loss of 82 units from 2010 to 2020.

<b>Figure 5.11: Homes Demolished in Buchanan County, 2017-2021</b>	
<b>Year</b>	<b># of Homes Demolished</b>
<b>2017</b>	50
<b>2018</b>	31
<b>2019</b>	39
<b>2020</b>	34
<b>2021</b>	40
<b>Annual Average</b>	<b>38.8</b>
38.8 / 8,886	0.44%

*Source: Buchanan County Assessor’s Office; estimated # of housing units in County per 2020 Census*

Figure 5.12 compares cumulative projected housing unit losses from 2020 based on the attrition rate in Figure 5.10 and the demolition rate in Figure 5.11. For each decade, the two estimates of unit losses are averaged.

<b>Figure 5.12: Cumulative Housing Unit Loss Projections from 2020</b>			
	<b>1% Annual Attrition</b>	<b>Historic Demo Rate</b>	<b>Average</b>
<b>Year</b>	<b>Units Lost</b>	<b>Units Lost</b>	
<b>2030</b>	850	388	<b>619</b>
<b>2040</b>	1,618	776	<b>1,197</b>

*Source: U.S. Census Bureau 2020 (total housing units), Iowa State University 2010 (attrition rate from Housing Needs Assessment), Buchanan County Assessor (demolition rate).*

## Housing Demand Based on New Construction and Loss Rates

Based on projected demolition, attrition, and new construction rates discussed, the County is not producing an adequate supply of housing to meet the projected demand. Below, Figure 5.13 shows the projected number of housing units necessary for the county to meet demand while factoring in the projected housing loss and new construction rates described above.

By 2030, the projected housing unit demand in the County is estimated to be 8,993 (Row A). Using the projected housing loss rate from Figure 5.12 (average of attrition and demolition rates), it is estimated that by 2030, the County will lose 619 housing units that existed in 2020 (Row C) – resulting in only 8,267 remaining units of the city’s 8,886 2020 housing count (Row D). By 2040, the County will have a cumulative estimated unit loss of 1,197 units, leaving only 7,689 of the units that existed in 2020.

**Figure 5.13: Projected Housing Demand with Loss/New Construction Trends**

Row		2030	2040
A	<b>Projected Total Unit Demand</b> (Figure 5.6)	<b>8,993</b>	<b>9,081</b>
B	<b>2020 Housing Unit Count</b> (Figure 4.5)	8,886	
C	<b>Projected # of Units Lost</b> (Figure 5.12)	-619	-1,197
D	<b>Projected # of Remaining 2020 Units</b> (Rows B-C)	8,267	7,689
E	<b>Unit Shortage with Loss</b> (Rows A-D)	726	1,392
F	<b>Projected # of New Const. Units</b> (Figure 5.10)	386	772
G	<b>Projected # of Total Units</b> (Rows D+F)	8,653	8,461
H	<b>Unit Shortage with Proj. New/Loss</b> (Rows A-G)	<b>340</b>	<b>620</b>

Based on the recent new unit construction trends (Figure 5.9), Row F shows the projected number of new housing units that will be built. Row H shows the total shortage of housing units that is expected at the loss and new construction rates discussed. It is estimated that, at the current rate, by 2030 the County’s housing supply will fall short of projected demand by 340 units. By 2040, the cumulative projected shortfall will be 620 units.

**Figure 5.14: Current and Projected Number of Households by Housing Tenure**

	2020	2030	2040
<b>Total Number of Households</b> (Figure 5.3)	<b>8,198</b>	<b>8,301</b>	<b>8,382</b>
<b>Owner-Occupied</b> (80%)	<b>6,562</b>	<b>6,641</b>	<b>6,705</b>
Change from 2020	-	79	143
Percent Change from 2020	-	1.2%	2.2%
<b>Renter-Occupied</b> (20%)	<b>1,636</b>	<b>1,660</b>	<b>1,676</b>
Change from 2020	-	24	40
Percent Change from 2020	-	1.5%	2.5%

## Owner and Renter-Occupied Housing

In 2020, renters comprised 20 percent of the county’s occupied households, a share that has been fairly consistent since 2000. Figure 5.14 displays the anticipated number of households in the county by expected housing tenure (i.e. rent or own). Assuming the county’s rental household rate maintains at 20 percent, by 2040 there is reasonably expected demand for an additional 143 owner-occupied and 40 renter-occupied households from 2020 count.

Figure 5.15 below, as well as Figure 4.2 in the previous section, provide a breakdown of the County’s housing units by units per structure, according to the 2016-2020 American Community Survey. At 83.4 percent, a notably high percentage of the county’s housing units are 1-unit, detached structures (i.e. traditional single-family homes). While it is anticipated the county will maintain this character, as the number of households and demand for developable land increases, so may demand for multifamily housing for workforce, young families, and seniors.

Figure 5.15 provides an example of how the housing demand for the county could be achieved balancing the units by structure type. The projected new housing construction includes both the units needed to replace those lost through attrition, and units needed to meet new household demand (see Figure 5.13, Row E). The data assumes an adjustment towards a higher rate of multi-family construction.

Figure 5.15: Housing Type Scenario of Projected Unit Demand															
2020						2030					2040 (cumulative from 2020)				
Projected Unit Need with Losses (Figure 5.13, Row E)						726					1,392 (cumulative from 2020)				
	# of Structures	# of Units	% of Units	Owner Occupied	Renter Occupied	# of New Structures	# of New Units	% of New Units	New Owner Units	New Renter Units	# of New Structures	# of New Units	% of New Units	New Owner Units	New Renter Units
1-Unit detached	7,600	7,600	83.4%	6,042	864	572	572	78.8%	511	61	1,097	1,097	78.8%	981	116
1-Unit attached*	173	173	1.9%	110	59	28	28	3.9%	22	6	54	54	3.9%	42	12
2 Units	102	204	2.2%	15	130	15	30	4.1%	21	9	29	58	4.2%	41	17
3 or 4 Units	-	355	3.9%	13	258	8	26	3.6%	4	22	15	50	3.6%	8	42
5 to 9 Units	-	101	1.1%	4	82	5	32	4.4%	4	28	9	59	4.2%	8	54
10 to 19 Units	-	39	0.4%	0	39	1	10	1.4%	0	10	2	290	1.4%	0	20
20+ Units	-	159	1.7%	23	62	0	0	0%	0	0	0	0	0%	0	0
Mobile Homes	482	482	5.3%	215	111	28	28	3.9%	18	10	54	54	3.9%	35	19
<b>Totals</b>	-	<b>9,113</b>	<b>100%</b>	<b>6,422</b>	<b>1,605</b>	<b>657</b>	<b>726</b>	<b>100%</b>	<b>581</b>	<b>145</b>	<b>1,260</b>	<b>1,392</b>	<b>100%</b>	<b>1,115</b>	<b>277</b>

Source: 2016-2020 ACS Estimates. \*Each attached unit is counted as 1 structure.

## Homeownership Affordability Analysis

Estimates of housing affordability for sample price ranges for owner-occupied units were developed based on current household income. As previously discussed, spending 30 percent of household income on housing is the standard threshold used to determine if housing is affordable. A household that spends more than 30 percent of their household income on housing costs is considered “cost burdened.”

Figure 5.16 shows the number of households in Buchanan County by income range. This data is used for projecting the number and percent of County households which could afford one of the homes in the scenario under the “Affordability of Buchanan County Households” in Figure 5.17. For the purposes of calculations, it was assumed that the count within a given income range would be evenly balanced throughout the range. For example, of the 254 households with an income between \$10,000 to \$14,999, an estimated 51 households have incomes under \$11,000 and 203 households have incomes between \$11,000 and \$14,999.

Figure 5.17 is a homeowner affordability analysis of Buchanan County, estimating the percentage of households that would be able to purchase the house at an affordable rate – spending either 30 percent or 20 percent on housing costs. Three home scenarios are used, with values of \$100,000, \$175,000, and \$250,000. The scenario assumes good credit, a 30-year mortgage at a 6.00 percent annual interest rate, and a 10 percent down payment. The monthly expense analysis includes estimated mortgage payment as well as property tax, homeowner’s insurance, and monthly utilities.

Variations in total household income and percent of income spent on housing by any given household results in an array of housing types that households are able to afford. The typical Buchanan County homeowner spends less than 30 percent on housing. Of Buchanan County households with a mortgage, 60.1 percent spend less than 20 percent, 19.7 percent spend between 20 and 30 percent, and 20.2 percent spend more than 30 percent on their household income on housing (see Figure 4.16).

Using 30 percent of their annual income, an estimated 53 percent of households in Buchanan County can afford a \$175,000 house. However, as noted, the majority of households spend less than 30 percent of income on housing. Therefore, the number of households able to afford paying 20 percent of income to housing was also calculated. Under this scenario, 30 percent of households could still afford a \$175,000 house. A majority of county households could afford a home valued at \$100,000 or less at both 20 percent and 30 percent rates.

**Figure 5.16: Buchanan County Household Income, 2020**

Annual Income	# of Households	% of Households
Less than \$10,000	242	3.0%
\$10,000 to \$14,999	254	3.2%
\$15,000 to \$24,999	868	10.8%
\$25,000 to \$34,999	695	8.7%
\$35,000 to \$49,999	970	12.1%
\$50,000 to \$74,999	1,389	17.3%
\$75,000 to \$99,999	1,476	18.4%
\$100,000 to \$149,999	1,381	17.2%
\$150,000 or more	752	9.4%
<b>Total</b>	<b>8,027</b>	<b>100%</b>
<b>Median Household Income</b>	<b>\$67,252</b>	

*Source: 2016-2020 ACS Estimates*

Figure 5.17: Buchanan County Housing Affordability based on Household Income

Home Value and Financing Assumptions			
	<u>Starter Home</u>	<u>Move-Up</u>	<u>Executive</u>
Home Value	\$ 100,000	\$175,000	\$250,000
Down Payment (10%)	\$10,000	\$17,500	\$25,000
Loan Principal	\$90,000	\$157,500	\$225,000
Interest Rate	6.00%	6.00%	6.00%
Monthly Payments (30 year)	360	360	360
Monthly Expenses			
Mortgage Payment	\$539.60	\$944.29	\$1,348.99
Homeowners Insurance	\$83.33	\$145.83	\$208.33
Property Tax	\$137.49	\$252.40	\$367.30
Utilities	\$250.00	\$250.00	\$250.00
<b>Total Monthly Expense</b>	<b>\$1,010.42</b>	<b>\$1,592.52</b>	<b>\$2,174.62</b>
<b>Annual Expense</b>	<b>\$12,125.04</b>	<b>\$19,110.24</b>	<b>\$26,095.45</b>
Affordability to Buchanan County Households			
Housing Cost as % of Household Income	<u>30%</u>	<u>30%</u>	<u>30%</u>
Minimum Monthly Household Income	\$3,074.18	\$4,493.97	\$6,415.42
Minimum Annual Household Income	\$36,890.21	\$53,927.59	\$76,985.04
<b>% of County Households able to Afford</b>	<b>70%</b>	<b>53%</b>	<b>36%</b>
Housing Cost as % of Household Income	<u>20%</u>	<u>20%</u>	<u>20%</u>
Minimum Monthly Household Income	\$3,802.07	\$6,712.58	\$9,623.13
Minimum Annual Household Income	\$45,624.83	\$80,551.00	\$115,477.52
<b>% of County Households able to Afford</b>	<b>55%</b>	<b>30%</b>	<b>16%</b>