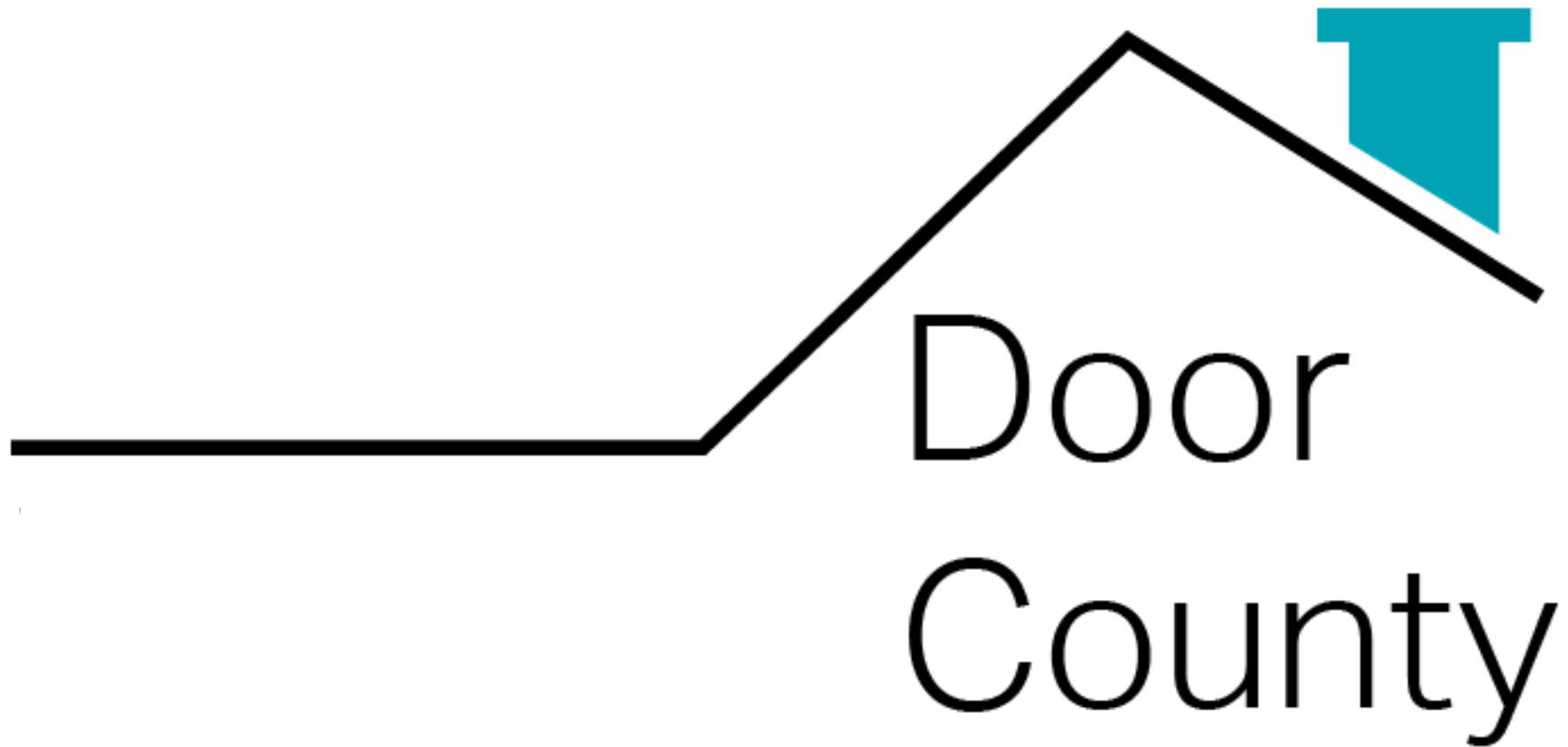


January 25, 2019



HOUSING ANALYSIS

Door County Economic Development Corporation

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Part 1. Executive Summary



Introduction

AECOM was engaged by the Door County Economic Development Corporation (DCEDC) to complete a housing market analysis for Door County. The effort was supported by contributions from the following Organizations:

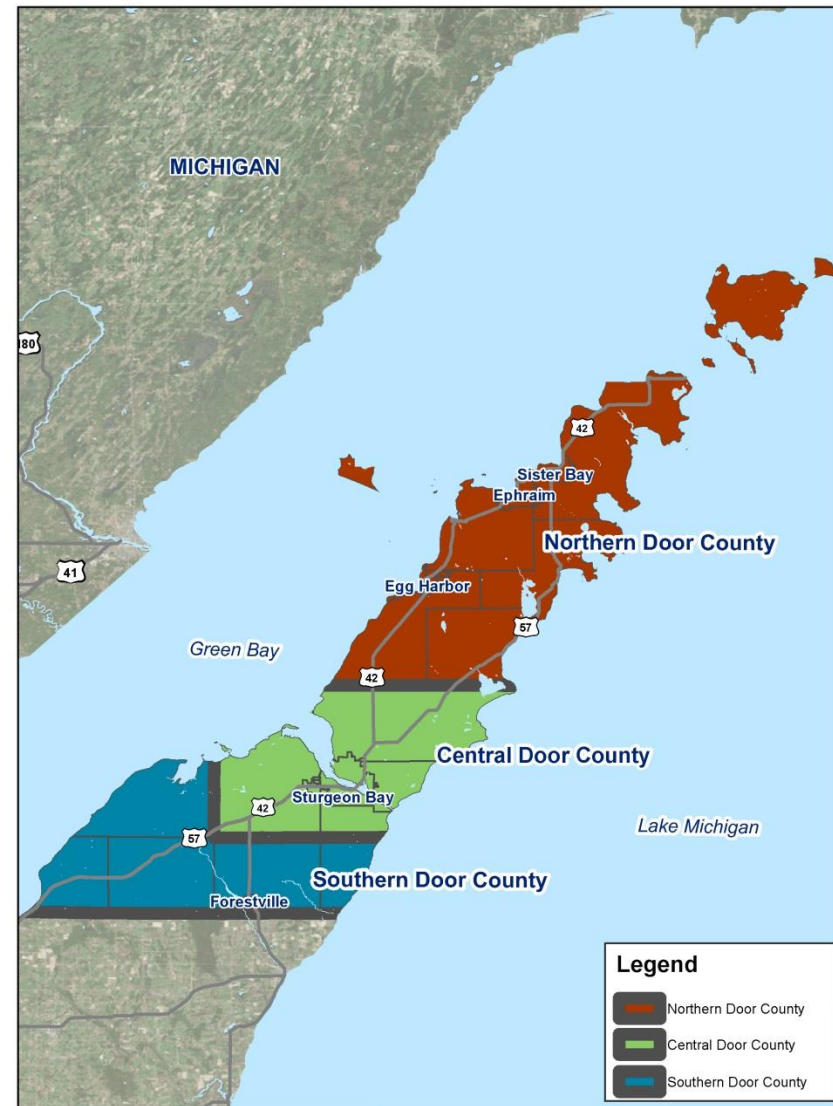
- Private Sector: Cadence, Door County Brewing Co., Door County Coffee, NEW Industries, Nicolet Bank, Renard's Cheese, and Rosewood Dairy.
- Public Sector: City of Sturgeon Bay, County of Door, Town of Gibraltar, Town of Jacksonport, Village of Egg Harbor, Village of Sister Bay, and the Door County Visitor Bureau.
- Stakeholder interviews were conducted with more than 40 individuals that live and/or work in Door County to ensure appropriate cross section of insights. Interview insights focused on Door County's ability to sustain economic growth and support workforce housing.

Purpose

The purpose of this study was to define housing-related issues within Door County and identify strategies for how they could be addressed. The analysis divides Door County into three geographic zones.

- The Northern Zone: Towns of Washington, Liberty Grove, Gibraltar, Baileys Harbor, Egg Harbor and Jacksonport, and the Villages of Sister Bay, Egg Harbor, and Ephraim.
- The Central Zone: Towns of Sevastopol, Sturgeon Bay, and Nasewaupée, and the City of Sturgeon Bay.
- The Southern Zone: Towns of Gardner, Brussels, Union, Forestville, Clay Banks, and the Village of Forestville.

Figure 1. Door County Sub Market Boundaries



Demand Implications

This effort has focused specifically on demand for three types of housing, defined as follows:

- Year-Round Workforce Housing. Housing for employees earning between 60% and 120% of Area Median Income (AMI), which is synonymous with median household income, or the income of the 50th percentile of households. According to the U.S. Census American Community Survey 2016 estimate, median household income in Door County was \$53,980 which directly translates into Door County's AMI. The following table summarizes AMI values for Door County:

Figure 2. Door County Area Median Income (AMI) Values: 2016

Metric	Value
Median Household Income	\$53,900
60% of AMI	\$32,400
120% of AMI	\$64,800

Source: U.S. Census Bureau

Due to data availability constraints, AECOM needed to use a slightly broader income range of \$25,000 to \$75,000 to analyze workforce housing demand.

- Year-Round Senior Housing. People 65 or older living independently.
- Seasonal Housing. Temporary housing (specifically, beds) for seasonal employees.

Since 2010, housing demand in Door County has been driven by three distinct housing market dynamics:

- Job growth, primarily for relocating entry-level employees in manufacturing, health care, and education at salaries generally less than \$35,000 who need rental apartments. Manufacturing job growth since 2010 has been particularly strong, well above statewide averages. Demand growth has unfolded in context with a corresponding lack of new apartment construction since 2010. The lack of apartment construction has created an explicit structural gap in housing markets in the county.
- Second home seekers, primarily households in their 50s and 60s. Analysis of home-buyer zip codes between 2013 and 2017 indicates that 19 of the top 20 origins for second home buyers originated in Wisconsin; 15 of the top 20 zip codes had a median age higher than U.S. average, and 16 of the top 20 had a higher median household income than U.S. average.
- Expanded tourist activity has encouraged new retailers and restaurants to open, particularly in Northern Door County. New establishments have increased demand for seasonal employee housing since 2015.

Over the next five years, the following factors will influence demand and supply for housing in Door County:

- The U.S. Federal Housing Finance Agency indicates that mortgage interest rates are expected to increase from 3.4% in August 2016 to 4.8% by 2020. All things being equal, higher interest rates will increase borrowing costs for future home owners and support demand for rental apartments.
- The Door County economy has expanded in dramatic fashion since 2010, with current unemployment rates well below long-term averages. While there are no expectations for a repeat of the “Great Recession”, odds of an economic slowdown in the next few years have increased. Given that Door’s economic cycles tend to lag behind national trends, the eventual reality of a slowing economy needs to be considered as a downside risk.

The following analysis summarizes the estimated allocation of estimated housing demand in Northern, Central, and Southern Door County. The analysis should be interpreted with several caveats in mind:

1. Housing affordability goes well beyond relationships between rents and home values in context with wages and income. Specifically for Door County, factors including energy prices, housing energy efficiency, access to transit, and cost of living, all ultimately impact affordability in practical terms. Changes in these factors could shift how future housing supply and demand align in Door County.
2. The analysis draws an important distinction between tourists, seasonal visitors (who may reside in Door County for 9 to 11 months per year) and year-around residents. While population data speaks to only modest resident population growth since 2010, the number of tourists and seasonal visits has steadily increased. Our approach understates the influence of “seasonal visitors” who function increasingly like residents and occupy a share of roughly 9,990 housing units in Door County in seasonal use, but not rented.
3. While residents and visitors to Door County are aware of inherent market distinctions between Northern, Central, and Southern Door County, real estate developers who propose future apartment projects will attract residents from in the County. As such, the allocations of demand shown in this report between Northern, Central, and Southern Door County reflect a balanced view of how competitive forces may play out in coming years.
4. For Southern Door specifically, the analysis did not yield a material increment housing demand growth over the next 5 years. While this outcome reflects the methodology used in the analysis, it is not a pre-determined outcome. Southern Door offers proximity to both Sturgeon Bay and Green Bay, with lower land costs. One challenge for Southern Door is a limited supply of land with infrastructure in place to support residential development at reasonable densities (greater than 1 unit per acre).
5. The analysis included an estimate of seasonal bed demand and supply, covering both a “structural” gap in supply (i.e. units demanded but not built between 2010 and 2017) and a future demand estimate over the next five years. As there is no 100% count of seasonal beds in Door County, we estimated the likely current supply to arrive at a current structural gap. Given the scale of the structural gap that was estimated, a 100% count of bed inventory is suggested.

Workforce Housing

The analysis identified a structural gap of 470 apartment units, which has emerged since 2010 as the result of a basic mismatch between general "entry-level" job creation and new housing construction. The "structural gap" represents households that wanted to move to Door County but were unable to find suitable housing. For example, a new worker who takes a job offer in Sturgeon Bay but moves to Green Bay because housing was unavailable would be a part of the structural housing gap. In this report, while the structural gap is focused only on demand between 2010 and 2017, it does influence future demand and supply. For example, if future housing supply and demand were both 100 housing units, but a structural housing gap of 50 units existed, the market could fail to meet demand due to households in the structural gap occupying new units. The study only identified a structural housing gap for apartments.

More than 900 jobs were added since 2010, and while about 950 new housing units were built in Door County, higher construction costs and a constrained supply of land zoned for multi-family development have ensured that newly-built housing units are neither affordable nor available as rental apartments. Cost drivers include a limited supply of construction workers, a limited pool of developers/builders, a shorter construction season, and cost premiums for septic and well systems.

About 200 new apartments are currently in the planning stages or under construction in Sturgeon Bay and Sister Bay, which will begin to offset the estimated 470-unit structural gap. Recently-built apartments generally offer 1-2 parking spaces per unit, with a unit mix that favors 2-bedroom units over 1-bedroom units. Rents generally start at around \$800/month for market-rate 1-bedroom units.

Figure 3. Door County Structural Gap, Cumulative (2010-2017)

Metric	North	Central	South	Total
Workforce Rental Apartments	140	330	0	470

Over the next 5 years, assuming continued employment growth, demand for an additional 110 market-rate rental apartments is estimated.

Figure 4. Door County Future Demand, Cumulative (2018-2023)

Metric	North	Central	South	Total
Workforce Rental Apartments	65	45	0	110

The analysis identified demand for 70 owner-occupied workforce housing units at pricing below \$180,000 over the next 5 years. With higher interest rates anticipated in coming years, this estimate may prove optimistic.

Figure 5. Door County Future Housing Demand, Cumulative (2018-2023)

Metric	North	Central	South	Total
Workforce Owner-Occupied	40	30	0	70

Senior Housing

Since 2010, Door County has seen an increase of about 1,200 “senior” households (between 60 and 74 in age). Growth has been supported by consistent in-migration (about 1,300 residents generally in their 50s) since 2010. Senior apartment demand is expected to originate from:

- Seniors relocating into Door County in search of permanent housing.
- Seniors already living in Door County, and looking to downsize.

Importantly, U.S. Census data indicates that people older than 65 remain less likely to rent compared to younger households. Demand for 200 senior rental units over the next 5 years has been estimated, with rents at market rates.

Figure 6. Door County Future Demand, Cumulative (2018-2023)

Metric	North	Central	South	Total
Senior Rental Apartments	60	135	5	200

The analysis identified demand for an estimated 575 owner-occupied housing units among seniors over the next 5 years. Demographic data suggests that 80%, or 460 of these units, should be single-family residential units. Growth in this segment is expected to slow gradually, as the Generation X cohort moves into its 50s.

Figure 7. Door County Future Demand (2018-2023)

Metric	North	Central	South	Total
Senior Owner-Occupied	295	275	5	575

Seasonal Housing

In response to growing shortages of seasonal labor since 2015, there has been a dramatic increase in the number of J-1 Visa program students in Door County. In response to growing demand, interviews and surveys suggested that Northern Door County employers have added roughly 150 new seasonal beds since 2017. Lacking a 100% inventory of seasonal beds, the following assumptions were used to frame the current rough-order-of-magnitude inventory of seasonal beds:

- 85% of lodging jobs have housing
- 50% of restaurant jobs have housing
- 25% of retail jobs have housing

Based on these assumptions, there were approximately 2,300 seasonal beds in Door County, with a structural gap of 455 seasonal beds. The structural gap represents beds that were never added to inventory in the past.

Figure 8. Door County Structural Gap (2010-2017)

Metric	North	Central	South	Total
Seasonal Employee Beds	200	205	50	455

Over the next 5 years, the analysis identified a need for 115 additional seasonal beds, assuming sustained job growth.

Figure 9. Door County Future Demand (2018-2023)

Metric	North	Central	South	Total
Seasonal Employee Beds	70	40	5	115

Tourism Influences on Housing Demand

While tourism growth since 2010 has supported increases in average daily room rate and occupancy, demand has not triggered a significant increase in the supply of new tourism-linked housing units, as shown in the following table. Rather, Door County Tourism Zone data shows that demand has encouraged a growing share of single-family homes and cottages to be pulled into seasonal rental use. In 2010, 10,167 housing units were in seasonal use, but not rented. By 2017, due to increased visitation, the number of houses being seasonally rented (e.g., AirBnB) increased from 1,074 to 1,290. The analysis suggests that the majority of new commercial units were pulled from otherwise seasonal/vacant housing, with a decrease from 10,167 to 9,992 housing units. In addition to seasonal demand, 954 new housing units were added to Door County's housing inventory.

Figure 10. Estimated Door County Housing Inventory

Metric	2010	2017	Change 2010-2017	Annual Growth 2010-2017
Commercial Units	1,074	1,290	216	2.70%
Single Commercial Units	820	1,020	200	3.20%
Multi Commercial Units	254	270	16	0.90%
Resident Households	12,725	13,638	914	1.00%
Single Owned Units	9,603	10,381	778	1.10%
Multi Owned Units	205	235	30	1.90%
Single Renter Units	1,361	1,436	75	0.80%
Multi Renter Units	1,555	1,586	30	0.30%
Seasonal/Vacant Units	10,167	9,992	-176	-0.20%
Single Seasonal/Vacant Units	8,295	7,952	-343	-0.60%
Multi Seasonal/Vacant Units	1,872	2,040	167	1.20%
Total Housing Units	23,966	24,920	954	0.60%
Single Units	20,079	20,790	711	0.50%
Multi Units	3,887	4,130	243	0.90%

Source: AECOM Analysis

Note: Figures are approximate and rounded

Considerations include:

- The occupancy status of roughly 9,990 units in seasonal use (but not rented) is important. Interviews suggest that a small number of these units remain empty year-round, possibly due to owner age or health issues, and represent an opportunity to be re-positioned to support workforce housing.
- The condition of older, pre-1950 houses and cottages in seasonal use may be influencing below-average appreciation in residential values in the county. These homes are also of concern from an energy efficiency standpoint, in that higher energy costs would increase the total cost of occupancy.

Housing and Workforce Challenges

With the Door County economy effectively at full employment, housing capacity concerns align with unfolding and apparent workforce headwinds:

- Geography, real estate value differentials, and a shortage of apartments make it difficult for people to live in proximity to where they work. Transportation costs, weather (and energy costs), and travel time add an additional dimension to housing challenges in Door County.
- Consistent out-migration of younger households and correspondingly fewer children in high school to support seasonal workforce needs.
- Structurally fewer college students in Wisconsin constrain the supply of people who can work during the summer.
- An expanding economy has increased full-year employment at higher wages, placing seasonal employers at a relative disadvantage.
- Changes to State of Wisconsin unemployment laws have made it more difficult to take off-season unemployment.

Currently unfolding housing market constraints will ultimately lead to decreases in year-around workforce and a reduced pace of economic activity for Door County. Additional sources of labor need to be identified and supplied with workforce housing.



Part 2. Housing Needs Analysis



Introduction

This section of the report summarizes economic and demographic data for Door County related to housing needs. The section is organized into two parts:

1. General Trends – Demographic and economic trends for Door County.
2. Door County Housing Demand from 2018-2023. Demand is stratified based on AECOM estimates of the income, price levels, single versus multi-family units, and number of bedrooms that might be preferred by new households.

Analysis in this section is supported by additional data found in Sections 3 and 4 of this report.

Demographic Analysis

Demographically, Door County has experienced several distinct trends since 2010. County population has increased according to the Wisconsin Department of Administration (DOA), at an annual rate of 0.3% between 2010 and 2017. U.S. Census population estimates were also evaluated and pointed to a slight population decline since 2010. DOA population data was used for this analysis due to its alignment with household and housing unit data for Door County. Central Door accounted for slightly less than 50% of population growth within the County since 2010, although Northern Door experienced a faster annualized rate of population growth, with Southern Door being largely stable.

Figure 11. Door County Population

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	5,237	5,227	5,255	5,269	5,269	5,292	5,275	5,276	0.1%
North	7,897	7,894	7,946	7,996	7,983	8,068	8,010	8,137	0.4%
Central	14,651	14,644	14,666	14,701	14,724	14,815	14,842	14,927	0.3%
Door County	27,785	27,765	27,867	27,966	27,976	28,175	28,127	28,340	0.3%

Source: Wisconsin DOA

When looking at household growth, Door County experienced an annual increase of 1% between 2010 and 2017. The table below depicts these changes.

Figure 12. Door County Households

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	2,110	2,184	2,244	2,231	2,191	2,225	2,225	2,243	0.9%
North	3,802	4,003	4,117	4,111	4,020	4,017	4,011	4,103	1.1%
Central	6,812	7,540	7,577	7,407	7,261	7,139	7,198	7,292	1.0%
Door County	12,725	13,727	13,939	13,749	13,472	13,381	13,435	13,638	1.0%

Source: Wisconsin DOA & U.S. Census Bureau

The relationship between household and population growth is tied to changes in average household size in each zone. Northern Door, while having the smallest average household size of all zones annually between 2010 and 2017, experienced the smallest decrease in average household size in annualized terms.

Northern Door accounted for 43% of total county population increase, but only 33% of the increase in households. The disparity for Northern Door relates to household size. As of 2017, Northern Door County had an average household size of 1.98 people per household, below other zones. The table below summarizes average household size in Door County and each of its zones:

Figure 13. Door County Average Household Size

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	2.48	2.39	2.34	2.36	2.41	2.38	2.37	2.35	-0.77%
North	2.08	1.97	1.93	1.94	1.99	2.01	2.00	1.98	-0.66%
Central	2.15	1.94	1.94	1.98	2.03	2.08	2.06	2.05	-0.70%
Door County	2.18	2.02	2.00	2.03	2.08	2.11	2.09	2.08	-0.71%

Source: Wisconsin DOA & U.S. Census Bureau

Median age in Door County increased by 2.1 years between 2010 and 2016, from 49.3 in 2010 to 51.4 in 2016. The table below depicts median age in Door County and its three zones.

Figure 14. Door County Median Age

Geography	2010	2016	Annual Growth 2010-2016
South	44.5	46.5	0.7%
North	56.0	57.8	0.5%
Central	47.7	49.6	0.7%
Door County	49.3	51.4	0.7%

Source: ESRI & U.S. Census Bureau

While median age was significantly higher in Northern Door than in Central and Southern Door, median age increased at a slightly faster rate in Southern and Central Door between 2010 and 2016 than in Northern Door. As might be expected, Door County experienced net decreases in its householders under the age of 55 between 2010 and 2016 (only householders between 25 and 34 experienced an increase). The table below depicts the number of households in Door County and each Door County zone based on the age of householder. Each Door County zone experienced a unique trend in the distribution of its households by age. For example, Northern and Southern Door both experienced increases in the number of households with a householder age 15 to 24 between 2010 and 2016, yet Central Door experienced a great enough loss in these households to erase the gains made in the Northern and Southern zones. The common trends among all three zones were an increase in households with a householder age 65 to 74 and an increase in households with a householder age 85+.

Figure 15. Door County Households by Age of Householder

Geography	Year	15 to 24	25 to 34	35 to 44	45 to 54	55 to 59	60 to 64	65 to 74	75 to 84	85+
South	2010	60	345	364	457	231	186	227	198	41
	2016	93	206	366	496	295	192	362	153	61
	Change	32	-139	2	39	64	6	135	-45	20
North	2010	25	209	444	698	368	534	818	523	183
	2016	157	179	367	557	321	528	1,074	627	201
	Change	132	-30	-77	-141	-47	-6	256	103	18
Central	2010	670	618	1,070	1,593	659	537	724	637	305
	2016	322	844	869	1,149	787	917	1,172	615	523
	Change	-349	226	-201	-444	128	380	449	-22	218
Door County	2010	755	1,172	1,878	2,748	1,257	1,257	1,769	1,359	530
	2016	571	1,229	1,602	2,202	1,403	1,637	2,609	1,395	786
	Change	-184	58	-276	-545	145	381	840	36	255

Source: Wisconsin DOA & U.S. Census Bureau

Door County added households with incomes above \$50,000 and lost households with incomes below \$50,000. However, trends were notably different across each of Door County's zones, illustrated in the table below. In all Door County zones, the number of households earning over \$100,000 increased and the number of households earning between \$25,000 and \$49,999 decreased. In Southern Door County, the number of households earning less than \$25,000 increased even as these households decreased in the other parts of Door County. In contrast, Central Door County experienced a decrease in the number of households earning between \$75,000 and \$99,999 while this category of households increased in Door County's other zones.

Figure 16. Door County Households by Income

Income	\$0-\$24,999			\$25,000-\$49,999			\$50,000-\$74,999			\$75,000-\$99,999			\$100,000+		
	2010	2016	Change	2010	2016	Change	2010	2016	Change	2010	2016	Change	2010	2016	Change
South	311	364	53	574	525	-49	637	521	-116	323	399	77	266	416	150
North	748	720	-28	1,136	1,045	-91	791	836	45	424	549	125	702	861	159
Central	1,734	1,539	-195	2,143	1,879	-264	1,114	1,693	579	977	947	-30	844	1,141	297
Door County	2,794	2,623	-171	3,853	3,449	-404	2,542	3,050	508	1,724	1,895	171	1,812	2,418	606

Source: Wisconsin DOA & U.S. Census Bureau

In total, the number of households in Door County increased at an annual rate of 1% between 2010 and 2017. Over the same period, though, Door County only added housing units to its inventory at an annual rate of 0.6%. While all zones in Door County experienced slower rates of growth in housing units than households, Northern Door saw the strongest growth rate since 2010. The table below depicts housing unit totals in Door County and the three zones between 2010 and 2017.

Figure 17. Door County Housing Units

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	3,251	3,260	3,273	3,287	3,299	3,304	3,311	3,323	0.3%
North	11,681	11,739	11,801	11,897	11,962	12,041	12,153	12,232	0.7%
Central	9,034	9,073	9,096	9,130	9,184	9,223	9,275	9,365	0.5%
Door County	23,966	24,072	24,170	24,314	24,445	24,568	24,739	24,920	0.6%

Source: Wisconsin DOA & U.S. Census Bureau

Door County also experienced a shift in its occupied housing tenure, or owner-occupied unit and renter-occupied unit split. In 2010, 22.9% of Door County households lived in renter-occupied housing units, lower than the U.S. proportion of 35%. The share of renter-occupied housing units in Door County declined between 2010 and 2017 to 22.2%, even as the U.S. share of renter occupancy increased to 36%. Renter occupancy was most significant in Central Door where it comprised 28% of occupied housing in 2017. Despite being the zone with the most predominant renter base in Door County, Central Door had a higher proportion of renter occupancy in 2010 than in 2017 (29.1% in 2010 compared to 28% in 2017). The tables below depict housing unit tenure shares in Door County for owner-occupied and renter-occupied housing units.

Figure 18. Door County Owner Occupied Housing Shares

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	88.3%	88.7%	87.2%	88.0%	88.5%	86.6%	86.0%	86.0%	-2.3%
North	81.8%	81.8%	81.8%	81.0%	81.3%	82.4%	83.8%	83.7%	1.9%
Central	70.9%	69.6%	69.4%	73.5%	72.3%	73.0%	72.4%	72.0%	1.1%
Door County	77.1%	76.2%	75.9%	78.1%	77.6%	78.1%	78.0%	77.8%	0.8%

Source: Wisconsin DOA & U.S. Census

As shown below, Southern Door, which had the lowest presence of renter occupancy in Door County, experienced an increase in its share of renter occupancy between 2010 and 2017. In contrast, Northern and Central Door County each experienced decrease in their share of renter occupancy over the same period. These trends regarding housing unit growth and owner versus renter allocation reinforce the underlying challenge for housing in Door County. Since 2010, visitor market strength and second home demand have tended to drive the majority of new housing construction, and with higher construction costs, expansion of market rate rental apartments has proven difficult.

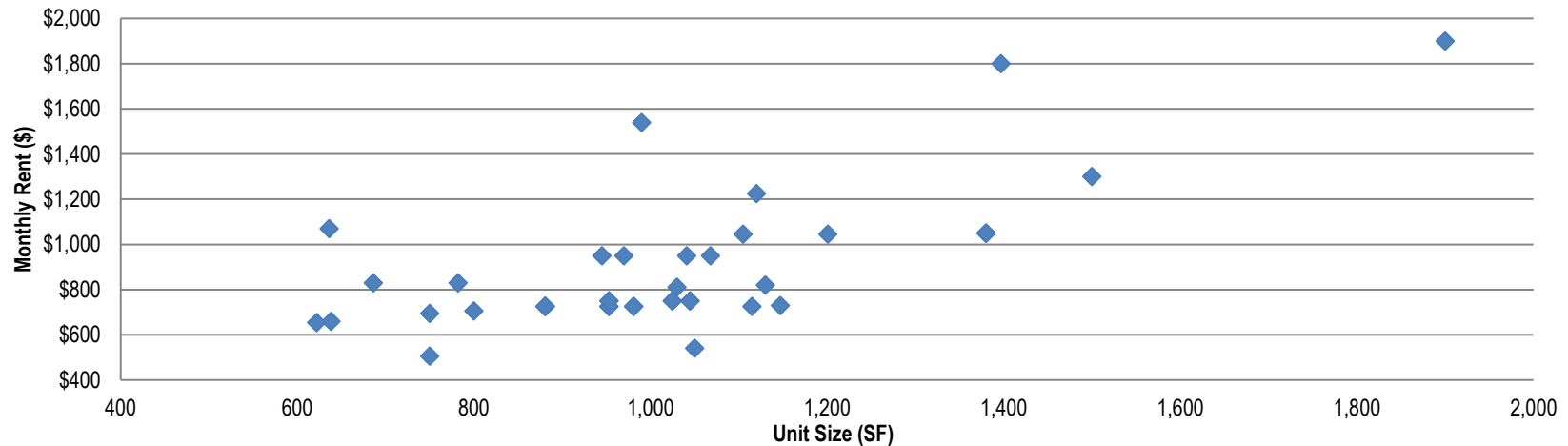
Figure 19. Door County Renter-Occupied Housing Shares

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	11.7%	11.3%	12.8%	12.0%	11.5%	13.4%	14.0%	14.0%	2.3%
North	18.2%	18.2%	18.2%	19.0%	18.7%	17.6%	16.2%	16.3%	-1.9%
Central	29.1%	30.4%	30.6%	26.5%	27.7%	27.0%	27.6%	28.0%	-1.1%
Door County	22.9%	23.8%	24.1%	21.9%	22.4%	21.9%	22.0%	22.2%	-0.8%

Source: Wisconsin DOA & U.S. Census

As of 2018, CoStar (a data source of commercial real estate) identified approximately 1,040 rental apartment units in 26 multi-family apartment buildings in Door County. Seven of Door County’s rental complexes used rent-subsidized or rent-restricted pricing, with asking rents for available units ranging from \$500-\$1,900 per month. In August of 2018, a total of 41 rental apartment listings were identified through online searches. The graphic below depicts the average square footage and monthly rent for these listings.

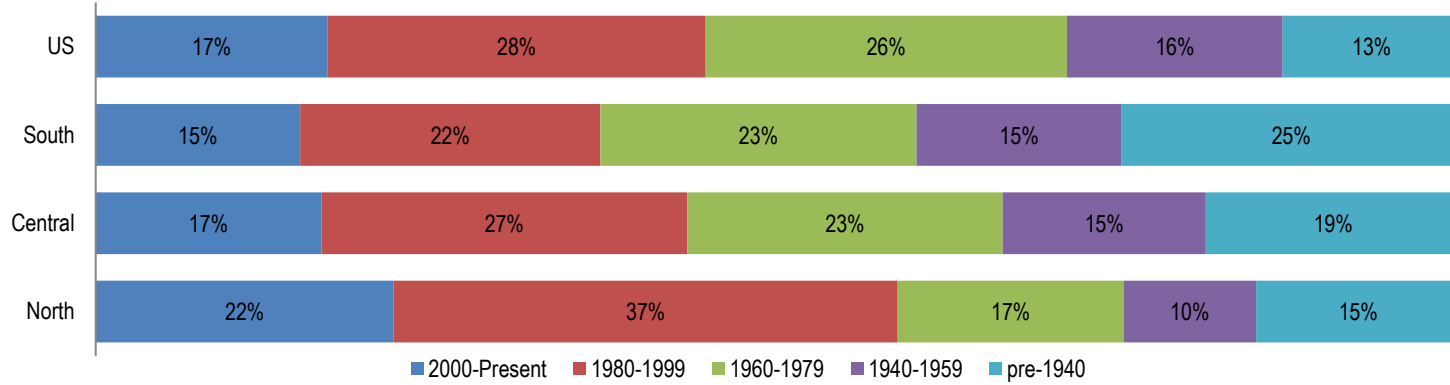
Figure 20. Door County Rental Apartment Unit Listing Price and Square Feet



Source: Online Listing

Relative to the U.S. overall, Door County contains an older housing stock in all three zones. As of 2016, all Door County zones had a higher proportion of their housing units built prior to 1940 than the U.S. average, with this trend most pronounced in Southern Door County. The graphic below depicts the proportional breakdown of housing units in 2016 based on the year of structure construction.

Figure 21. Housing by Year of Construction (2016 Housing Inventory)

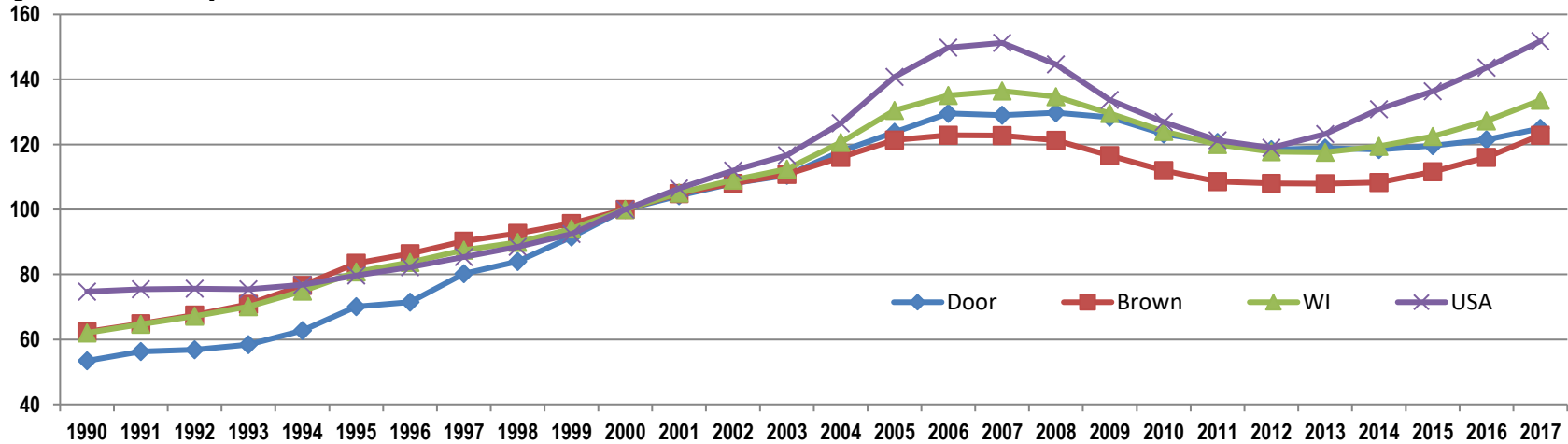


Source: U.S. Census

Residential Property Transactions and Prices

Home prices in Door County have generally not appreciated at the same annual rate as home prices across the U.S., according to the Federal Housing Finance Agency’s house price index (HPI). Between 2000 and 2017, home prices in Door County increased at an annual rate of 1.3%, while U.S. home prices increased at an annual rate of 2.5% over the same time period.

Figure 22. Door County & U.S. Home Price Index



Source: FHFA HPI

Relative to U.S. average, home prices in Door County have increased at a slower rate. Additionally, the total number of property transactions in Door County has increased significantly between 2013 and 2017. In 2013, there were a total of 580 property transactions in Door County. By 2017, there were a total of 948 property transactions in Door County; a 13.1% annual increase between 2013 and 2017. The table below shows property transaction trends by zone between 2013 and 2017.

Figure 24. Door County Property Transaction Totals

Geography	2013	2014	2015	2016	2017	Annual Growth 2013-2017
Central	194	197	317	268	344	15.4%
South	66	58	112	105	112	14.1%
North	320	299	438	301	492	11.4%
Door County	580	554	867	674	948	13.1%

Source: State of Wisconsin

Origin zip codes of Door County homebuyers were also analyzed to understand whether buyer source markets are younger or older than typical U.S. levels. Based on home sales between 2013 and 2017, 19 of the top 20 Zip Codes for Door County homebuyers were located in Wisconsin, with the remaining Zip Codes located in Illinois. 15 of the top 20 Zip Codes had a median age higher than U.S. average and 16 of the top 20 had a higher median household income than the U.S. level. The adjacent table summarizes the top 20 homebuyer Zip Codes located outside Door County.

Figure 23. Top 20 Origin Zip Codes for New Door County Homebuyers

Zip Code	Median Age	Median Income
54115	36.3	\$69,388
54313	41.3	\$76,569
54915	37.1	\$63,675
54311	34.9	\$61,180
54217	40.4	\$65,292
53044	43.8	\$78,500
54301	38.5	\$53,011
54956	39.1	\$62,864
53217	43.3	\$98,750
53045	47.8	\$96,160
53704	36.1	\$52,804
53158	42	\$76,250
54201	46.8	\$44,661
53092	50.1	\$93,619
60068	44.2	\$92,474
54220	44.5	\$44,544
53593	38.7	\$102,320
53066	41.9	\$83,513
53051	44.1	\$74,238
53213	35.6	\$68,370
U.S. Average	37.7	\$55,322

Source: U.S. Census Bureau & State of Wisconsin

Door County Housing Demand

Methodology

This section of the document describes how housing demand was calculated. This report focuses on housing demand from three source markets:

- Year-round workers – workers that work in Door County for 12 months;
- Seasonal workers – workers that work in Door County for less than a year;
- Seniors – residents of Door County over the age of 65.

For each source market, two types of demand were calculated:

- Historic “Structural” Gap (2010-2017) – represents the total housing that should have been built in Door County to accommodate demand but was not built.
- Future demand (2018-2023) – represents how many housing units should be demanded based on growth forecasts.

Based on AECOM’s demand calculations, a historic gap in housing was not present for the senior source market. The process for calculating housing demand is detailed below:

Year-round workers (*calculations used to determine results*)

Historic “Structural” Gap

1. Calculate year-round worker growth in Door County between 2010 and 2017 to determine net new jobs (i.e., new jobs that are created from economic growth).
2. Use the annual replacement rate (i.e., the number of existing jobs that need to be replaced due to retirement or job change) to determine how many existing jobs were replaced in Door County between 2010 and 2017.
3. Add net new jobs (from step 1) with replacement jobs (from step 2) to get the number of new workers in Door County’s economy.
4. Divide newly created jobs by household size to estimate households that should have been created.
5. Subtract historical demand (from step 4) from growth in Door County housing units between 2010 and 2017.
6. If the result of step 6 is positive, year-round worker demand exceeded housing supply increases, indicating that there is a historic gap in housing.

Future demand

1. Calculate year-round worker growth rate from 2010 to 2017.
2. Use 2010 to 2017 growth rate to estimate Door County employment between 2018 and 2023.

3. Calculate year-round worker growth between 2018 to 2023 to determine net new jobs.
4. Use the annual replacement rate (i.e., the number of existing jobs that are replaced due to retirement or moving) to determine how many existing jobs should be replaced in Door County between 2018 and 2023.
5. Add net new jobs (from step 3) with replacement jobs (from step 4) to get the number of new workers that should be added between 2018 and 2023.
6. Divide newly created jobs by household size to estimate households that should have been created.
7. Result is the total year-round worker demand for housing that should be present between 2018 and 2023.

Seasonal workers (*calculations used to determine results*)

Historic gap

1. Calculate seasonal worker employment in 2017.
2. Calculate the number of seasonal beds (i.e., where seasonal workers sleep/live) in Door County as of 2017 based on survey data.
3. Subtract the number of seasonal beds (from step 2) from the number of seasonal workers in 2017 (step 1). If the result is positive (i.e., more workers than beds), the result is the historic gap in seasonal worker housing.

Future demand

1. Calculate seasonal worker growth between 2010 and 2017.
2. Use 2010-2017 growth in seasonal workers to estimate seasonal employment between 2018 and 2023.
3. Subtract the 2017 seasonal worker value (step 1) from the 2023 seasonal worker value (step 2). The result is the future demand for seasonal worker housing.

Seniors (*calculations used to determine results*)

Future demand

1. Calculate annual senior migration to Door County using U.S. Census migration data.
2. Convert new senior migrants to households using average household size.
3. Use annual senior migration to calculate the number of senior households that should arrive in Door County between 2018 and 2023.

Data sources that were used in this analysis are as follows:

- U.S. Census Bureau American Community Survey (ACS) - ACS is a survey conducted by the U.S. Census Bureau, created to provide nationally consistent and current Census data, and has been collected since 2005. The tool allows for demographic analysis down to a Census block group level). ACS provided information on age & household size, housing preferences (e.g., tenure), and household income.
- State of Wisconsin Department of Administration - All population and housing unit metrics for Door County and its zones were derived from DOA data.
- EMSI - EMSI is a private source of labor market data. EMSI allows detailed industry data to be collected at geographic levels as specific as the county level without any suppression of data. Employment values from EMSI were preferable to those provided by the BLS due to the practice of data suppression across different industries in the BLS data, a practice which is more pronounced in rural areas.
- Bureau of Labor Statistics Quarterly Census of Employment & Wages (QCEW) - Seasonal and monthly employment levels by industry are available from QCEW. Metrics related to seasonal employment were used to analyze seasonal demand for housing and the impact of seasonality on Door County's economy.
- U.S. Census Bureau Intercensal Estimates - Data used includes resident population and housing unit estimates for Census-defined geographies. Estimates were used to acquire population and housing unit values for geographic areas outside of Door County.
- U.S. Census Bureau Decennial Census - Every 10 years, the U.S. Census Bureau conducts a Decennial Census to take a count of U.S. population and demographic attributes of the population.
- ESRI Business Analyst - ESRI is a geographic information system (GIS) mapping software provider that includes the ability for demographic analysis. Geospatial data was retrieved from ESRI Business Analyst to provide metrics for non-Census defined areas. ESRI has the capability to aggregate Census Block Points to determine median values for custom geographic areas.
- BLS LAUS - Employment data from the LAUS program provides labor force and employment totals for all counties in the United States. These metrics were collected for Door County to analyze its workforce.
- State of Wisconsin RETR - The RETR program provides data on property transactions across Wisconsin from 2013 to 2018 (as the latter became available). Transaction prices and attributes (e.g., residence of buyer/seller) were collected from the RETR program to analyze the housing market of Door County's zones.
- Door County Tourism Zone - Information related to the dwellings and units used for tourism-related rentals was collected from the Door County Tourism Zone, as was information on the related room tax.
- U.S. Census On the Map - Data from On the Map includes totals for workers that work or live in user-defined geographies. For this analysis, On the Map allowed for employment data to be collected at the zone level in Door County. Since data from On the Map is only available from 2002-2015, EMSI employment values were paired with the geographic data from On the Map to obtain 2017 employment values in each zone.

Northern Door County

The following table summarizes known changes in households by tenure for Northern Door County. Northern Door experienced an increase of 324 owner-occupied households and a decrease of 23 renter-occupied households between 2010 and 2017. The loss in renter-occupied housing may reflect increasing tourism demand, which tends to push existing housing units into tourism occupancy. Additionally, due to increasing demand for seasonal employment, a number of homes have been acquired with the intention of converting them into housing for seasonal employees.

Figure 25. Northern Door County, Households by Tenure

Tenure	2010	2011	2012	2013	2014	2015	2016	2017	Change 2010-2017
Owner	3,112	3,273	3,368	3,330	3,268	3,309	3,361	3,436	324
Renter	691	730	750	781	752	708	650	668	-23

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Workforce Housing: Owner-Occupied Units

Demographic data indicates that of the roughly 40 owner-occupied workforce housing units needed in Northern Door between 2018 and 2023, a majority could be occupied by households earning \$25,000 to \$49,999.

Figure 26. Northern Door: Workforce Owner Demand by Income

Income Group	Demand 2018-2023
\$25,000-\$49,999	35
\$50,000-\$74,999	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Based on projected household incomes, the analysis identified potential demand for 35 owner-occupied housing units priced between \$60,000 and \$124,999, with the remaining housing units priced between \$125,000 and \$199,999.

Figure 27. Northern Door: Workforce Owner Demand by Price

Price Range	Demand 2018-2023
\$60,000-\$124,999	35
\$125,000-\$199,999	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Owner-occupied housing units are more likely to have 2 bedrooms according to U.S. Census data, as shown below.

Figure 28. Northern Door: Workforce Owner Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	5
2	35

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Demographic data suggests that there should be 30 single-family housing units and 10 multi-family owner-occupied units.

Figure 29. Northern Door: Workforce Owner Demand by Units

Units	Demand 2018-2023
Single	30
Multi	10

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Workforce Housing: Renter-Occupied Units

Demographic data suggests that of the 65 renter-occupied workforce housing units estimated to be needed in Northern Door between 2018 and 2023, about 50 could be occupied by households earning \$25,000 to \$49,999.

Figure 30. Northern Door: Workforce Renter Demand by Income

Income Group	Demand 2018-2023
\$25,000-\$49,999	50
\$50,000-\$74,999	15

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Based on the projected household incomes, the analysis suggests that about 30 new renter-occupied housing units could rent out between \$800 and \$999 per month.

Figure 31. Northern Door: Workforce Renter Demand by Rent

Rent Range	Demand 2018-2023
\$500-\$799	20
\$800-\$999	35
\$1,000-\$1,499	10

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Demographic data suggests a need for a balance between 1 and 2-bedroom units.

Figure 32. Northern Door: Workforce Renter Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	30
2	35

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Of the 65 projected renter occupied housing units, the analysis suggests that 50 should be single-family units while 15 should be multi-family units.

Figure 33. Northern Door: Workforce Renter Demand by Units

Units	Demand 2018-2023
Single	50
Multi	15

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Senior Housing: Owner-Occupied Units

Demographic data regarding senior households suggests that the 295 owner-occupied senior housing units projected as needed could be distributed within the following income levels.

Figure 34. Northern Door: Senior Owner Demand by Income

Income Group	Demand 2018-2023
\$0-\$24,999	70
\$25,000-\$49,999	110
\$50,000-\$74,999	25
\$75,000+	90

Source: U.S. Census Bureau & Wisconsin DOA

Anticipated prices for owner-occupied senior housing units are estimated below.

Figure 35. Northern Door: Senior Owner Demand by Price

Price Range	Demand 2018-2023
\$0-\$59,999	70
\$60,000-\$124,999	110
\$125,000-\$199,999	25
\$200,000+	90

Source: U.S. Census Bureau & Wisconsin DOA

Demographic analysis of senior demand for owner-occupied units in Northern Door points to a majority of 2-bedroom units.

Figure 36. Northern Door: Senior Owner Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	40
2	255

Source: U.S. Census Bureau & Wisconsin DOA

Demographic data suggests that of the 295 projected owner-occupied senior units, 220 should be single-family units and 75 should be multi-family units.

Figure 37. Northern Door: Senior Owner Demand by Units

Units	Demand 2018-2023
Single	220
Multi	75

Source: U.S. Census Bureau & Wisconsin DOA

Senior Housing: Renter-Occupied Housing Units

Demographic data of senior households suggests that of the 60 renter-occupied senior housing units expected in Northern Door, new housing units should accommodate the following income levels.

Figure 38. Northern Door: Senior Renter Demand by Income

Income Group	Demand 2018-2023
\$0-\$24,999	20
\$25,000-\$49,999	30
\$50,000-\$74,999	5
\$75,000+	5

Source: U.S. Census Bureau & Wisconsin DOA

Anticipated rents for senior housing units should reflect incomes of new households, as shown below.

Figure 39. Northern Door: Senior Renter Demand by Rent

Rent Range	Demand 2018-2023
\$0-\$499	20
\$500-\$999	30
\$1,000-\$1,499	5
\$1,500+	5

Source: U.S. Census Bureau & Wisconsin DOA

Demographic analysis of senior rental unit demand points to a rough balance between 1- and 2-bedroom units.

Figure 40. Northern Door: Senior Renter Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	25
2	35

Source: U.S. Census Bureau & Wisconsin DOA

Demographic data suggests that a majority of new units should be single-family units, while 15 should be multi-family units.

Figure 41. Northern Door: Senior Renter Demand by Units

Units	Demand 2018-2023
Single	45
Multi	15

Source: U.S. Census Bureau & Wisconsin DOA

Seasonal Housing

Seasonal employment levels in Northern Door suggest that 70 new seasonal housing units (e.g., beds for seasonal workers) could be needed between 2017 and 2023.

Figure 42. Northern Door: Seasonal Bed Demand (2018-2023)

Seasonal Demand	70
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Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Central Door County

Central Door experienced an increase of 418 owner households and an increase of 61 renter households between 2010 and 2017.

Figure 43. Central Door County (Households by Tenure)

Tenure	2010	2011	2012	2013	2014	2015	2016	2017	Change 2010-2017
Owner	4,833	5,247	5,256	5,442	5,247	5,209	5,209	5,251	418
Renter	1,980	2,292	2,321	1,965	2,014	1,930	1,990	2,041	61

Source: U.S. Census Bureau & Wisconsin DOA

Workforce Housing: Owner-Occupied Units

Demographic data suggests that of the 30 owner-occupied workforce housing units expected in Central Door between 2018 and 2023, a majority are expected to be occupied by households earning \$25,000 to \$49,999.

Figure 44. Central Door: Workforce Owner Demand by Income

Income Group	Demand 2018-2023
\$25,000-\$49,999	25
\$50,000-\$74,999	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Based on anticipated household incomes, the analysis suggests that a majority of new owner-occupied housing units could be priced between \$60,000 and \$124,999 and the remaining housing units priced between \$125,000 and \$199,999.

Figure 45. Central Door: Workforce Owner Demand by Price

Price Range	Demand 2018-2023
\$60,000-\$124,999	25
\$125,000-\$199,999	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

The analysis suggests that a majority of new housing units should favor 2-bedroom units over 1-bedroom units.

Figure 46. Central Door: Workforce Owner Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	5
2	25

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Demographics suggest that 25 owner-occupied units should be single-family units in Central Door, while 5 should be multi-family units.

Figure 47. Central Door: Workforce Owner Demand by Units

Units	Demand 2018-2023
Single	25
Multi	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Workforce Housing: Renter-Occupied Units

Demographic data suggests that of the 45 renter-occupied workforce housing units expected in Central Door between 2018 and 2023, a majority could be occupied by households earning \$25,000 to \$49,999.

Figure 48. Central Door: Workforce Renter Demand by Income

Income Group	Demand 2018-2023
\$25,000-\$49,999	40
\$50,000-\$74,999	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Based on anticipated household incomes, the analysis suggests that a majority of rental units should rent out between \$500 and \$999 per month, with remaining housing units renting out between \$1,000 and \$1,499 per month.

Figure 49. Central Door: Workforce Renter Demand by Rent

Rent Range	Demand 2018-2023
\$500-\$799	20
\$800-\$999	20
\$1,000-\$1,499	5

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Demographic data suggests that 20 new renter-occupied housing units should contain 1 bedroom, with a slight majority offering 2 bedrooms.

Figure 50. Central Door: Workforce Renter Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	20
2	25

Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Of the 45 renter-occupied units in Central Door, analysis suggests that 35 should be single-family units, while 10 should be multi-family units.

Figure 51. Central Door: Workforce Renter Demand by Units

Units	Demand 2018-2023
Single	35
Multi	10

Source: U.S. Census Bureau & Wisconsin DOA

Senior Housing: Owner-Occupied Units

Demographic data for senior households suggests that 275 owner-occupied senior housing units could be accommodated at the following income levels.

Figure 52. Central Door: Senior Owner Demand by Income

Income Group	Demand 2018-2023
\$0-\$24,999	70
\$25,000-\$49,999	115
\$50,000-\$74,999	25
\$75,000+	65

Source: U.S. Census Bureau & Wisconsin DOA

Prices for owner-occupied senior housing units should reflect the incomes of each new household, as shown below. Demographic analysis suggests that a majority of demand should include 2-bedroom units.

Figure 53. Central Door: Senior Owner Demand by Price

Price Range	Demand 2018-2023
\$0-\$59,999	70
\$60,000-\$124,999	115
\$125,000-\$199,999	25
\$200,000+	65

Source: U.S. Census Bureau & Wisconsin DOA

Figure 54. Central Door: Senior Owner Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	35
2	240

Source: U.S. Census Bureau & Wisconsin DOA

Demographic analysis suggests that there should be 240 single-family housing units and 35 multi-family housing units.

Figure 55. Central Door: Senior Owner Demand by Units

Units	Demand 2018-2023
Single	240
Multi	35

Source: U.S. Census Bureau & Wisconsin DOA

Senior Housing: Renter-Occupied Housing Units

Demographic data suggests that 135 owner-occupied senior housing units could be accommodated at the following income levels.

Figure 56. Central Door: Senior Renter Demand by Income

Income Group	Demand 2018-2023
\$0-\$24,999	45
\$25,000-\$49,999	75
\$50,000-\$74,999	5
\$75,000+	10

Source: U.S. Census Bureau & Wisconsin DOA

Rents for renter-occupied senior units reflect anticipated household incomes, with the following number of housing units anticipated.

Figure 57. Central Door: Senior Renter Demand by Rent

Rent Range	Demand 2018-2023
\$0-\$499	45
\$500-\$799	40
\$800-\$999	35
\$1,000-\$1,499	5
\$1,500+	10

Source: U.S. Census Bureau & Wisconsin DOA

Demographic analysis of senior demand for owner-occupied units in Central Door suggests that a majority of renter-occupied senior housing units should include 2 bedrooms.

Figure 58. Central Door: Senior Renter Demand by Bedrooms

Bedrooms	Demand 2018-2023
1	60
2	75

Source: U.S. Census Bureau & Wisconsin DOA

Demographic data suggests that there should be 115 single-family housing units and 20 multi-family units.

Figure 59. Central Door: Senior Renter Demand by Units

Units	Demand 2018-2023
Single	115
Multi	20

Source: U.S. Census Bureau & Wisconsin DOA

Seasonal Housing

Seasonal employment levels in Central Door suggest that 40 new seasonal housing units (e.g., beds for seasonal workers) could be needed between 2018 and 2023.

Figure 60. Central Door: Seasonal Bed Demand 2018-2023

Seasonal Demand	40
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Source: U.S. Census Bureau, EMSI & Wisconsin DOA

Southern Door County

Southern Door County experienced an increase of 66 owner-occupied households and an increase of 67 renter-occupied households between 2010 and 2017.

Figure 61. Southern Door County Households by Tenure

Tenure	2010	2011	2012	2013	2014	2015	2016	2017	Change 2010-2017
Owner	1,864	1,937	1,957	1,963	1,939	1,926	1,914	1,930	66
Renter	246	247	287	268	252	299	311	313	67

Source: U.S. Census Bureau & Wisconsin DOA

Workforce, Senior, and Seasonal Housing

Employment and demographic data for Southern Door County do not indicate that workforce and senior housing are significant drivers of housing demand. Analysis suggests that although the number of workers living in Southern Door County has increased, a majority of these workers do not work in Southern Door County. Seasonal employment levels in Southern Door County suggest that 5 new seasonal housing units (e.g., beds for seasonal workers) could be needed between 2018 and 2023.

Economic Analysis

Employment

Economically, Door County experienced unique trends between 2010 and 2017, presenting opportunities and challenges. Door County's decrease in unemployment since 2011 has been dramatically faster compared to previous economic cycles (1994 and 2003). County labor force levels have slowly decreased between 2010 and 2017, falling from 15,758 in 2010 to 15,682 in 2017. The graphics below depict unemployment rates and labor force totals for Door County between 1990 and 2017.

Figure 62. Door County Unemployment Rates

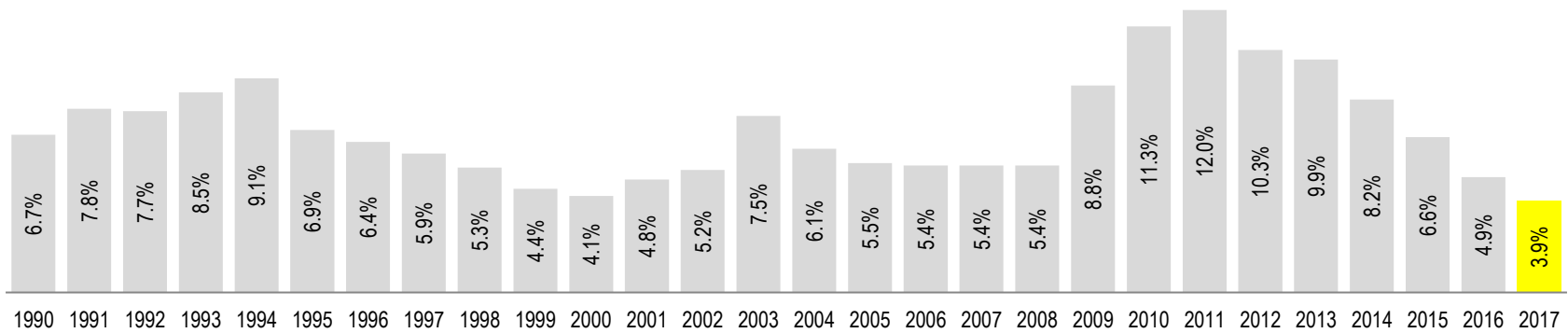
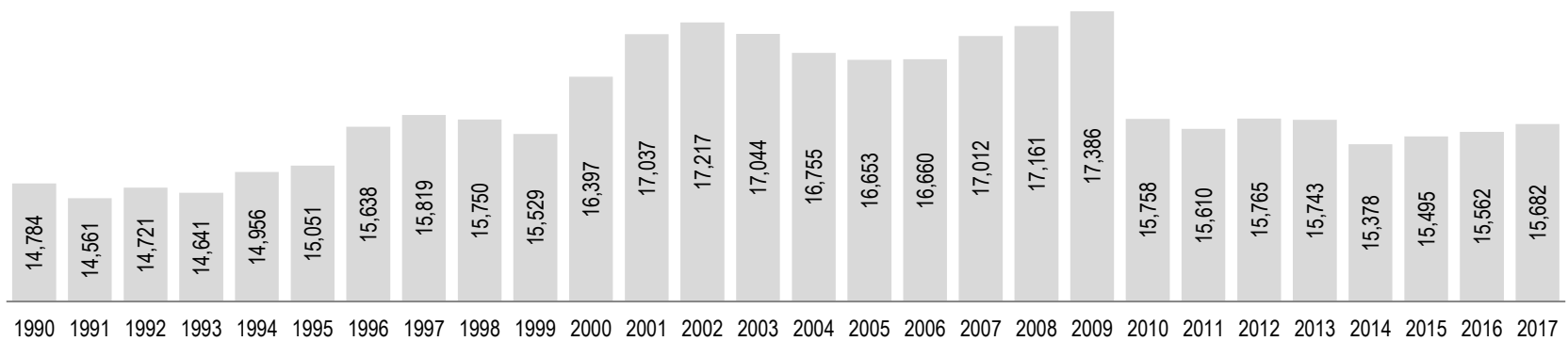


Figure 63. Door County Total Labor Force



Source: BLS

Historically, Door County's economy has included significant manufacturing, agricultural, and accommodation employment. These sectors represented larger shares of employment in Door County than in the U.S. on average. Between 2010 and 2017, Door County's manufacturing sector added the largest number of jobs to the local economy.

Figure 64. Door County Employment by Sector (2 Digit NAICS)

NAICS	Sector	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
11	Agriculture	218	227	220	232	251	253	248	240	1.4%
21	Mining	11	10	7	4	4	7	6	6	-7.2%
22	Utilities	31	29	29	30	31	32	30	29	-0.9%
23	Construction	641	583	594	583	585	609	632	635	-0.1%
31	Manufacturing	1,897	1,742	2,060	2,098	2,195	2,386	2,416	2,434	3.6%
42	Wholesale	148	142	145	146	155	151	152	149	0.0%
44	Retail	1,720	1,698	1,811	1,805	1,818	1,859	1,931	1,992	2.1%
48	Transportation	128	128	139	139	148	170	163	169	4.0%
51	Information	178	196	193	195	155	161	174	167	-0.8%
52	Finance	341	346	315	312	303	303	258	234	-5.2%
53	Real Estate	164	170	169	177	179	160	159	164	0.0%
54	Professional Services	218	214	201	209	195	198	189	184	-2.4%
55	Management	13	4	9	8	5	7	19	22	7.6%
56	Administrative/Support	337	335	288	278	275	303	297	309	-1.2%
61	Education	80	79	81	80	78	74	77	74	-1.0%
62	Health Care	1,413	1,445	1,519	1,554	1,476	1,513	1,529	1,504	0.9%
71	Arts	365	342	339	309	285	286	301	325	-1.7%
72	Accommodation	2,546	2,473	2,499	2,573	2,550	2,608	2,628	2,710	0.9%
81	Other	848	850	878	891	846	874	882	883	0.6%
90	Government	1,920	1,901	1,932	1,888	1,880	1,869	1,931	1,900	-0.1%
Total		13,215	12,914	13,428	13,513	13,414	13,824	14,021	14,129	1.0%

Source: EMSI

In absolute terms, manufacturing employment resulted in 537 new jobs in Door County between 2010 and 2017, whereas growth in traditional tourism related sectors resulted in 437 new jobs. Wages in 18 industry sectors increased in Door County between 2010 and 2017, as indicated in the table below.

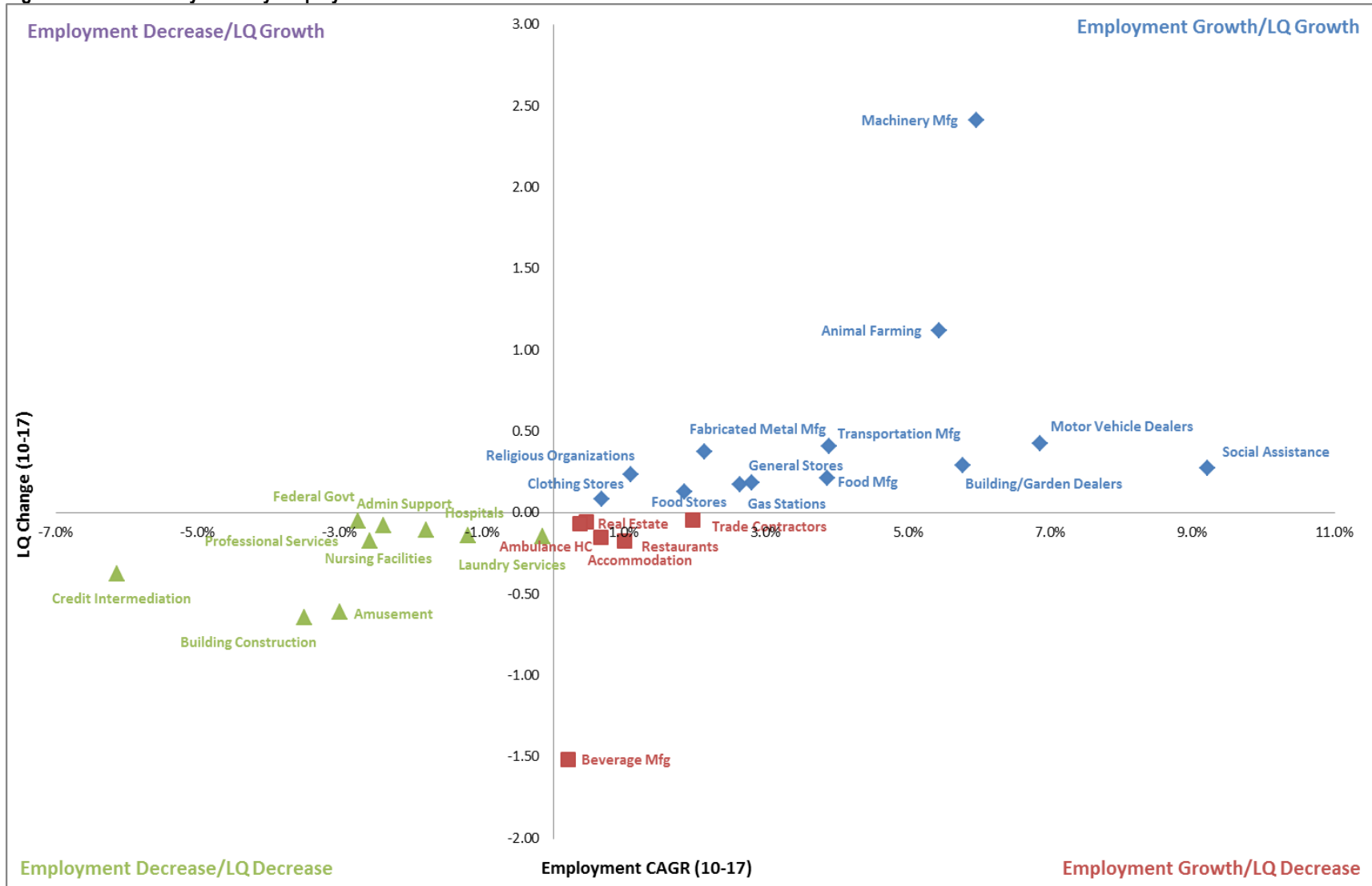
Figure 65. Door County Wages by Sector (2 Digit NAICS)

NAICS	Sector	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
11	Agriculture	\$22,173	\$23,938	\$25,029	\$25,843	\$26,482	\$27,688	\$26,664	\$26,647	2.7%
21	Mining	\$44,382	\$42,440	\$31,894	\$30,182	\$41,340	\$27,016	\$29,156	\$27,693	-6.5%
22	Utilities	\$87,931	\$79,611	\$81,526	\$81,218	\$87,570	\$84,436	\$82,571	\$84,017	-0.6%
23	Construction	\$36,342	\$36,546	\$39,012	\$42,078	\$43,374	\$45,685	\$46,886	\$47,090	3.8%
31	Manufacturing	\$43,097	\$42,096	\$44,414	\$45,876	\$45,711	\$46,732	\$48,209	\$48,765	1.8%
42	Wholesale	\$38,715	\$39,854	\$39,290	\$39,899	\$40,057	\$41,817	\$43,113	\$44,007	1.8%
44	Retail	\$20,240	\$20,922	\$21,234	\$21,686	\$23,034	\$23,823	\$24,097	\$24,459	2.7%
48	Transportation	\$23,652	\$24,340	\$25,863	\$26,289	\$27,116	\$30,225	\$29,874	\$30,252	3.6%
51	Information	\$25,505	\$29,016	\$30,982	\$30,194	\$32,538	\$31,688	\$30,667	\$34,043	4.2%
52	Finance	\$41,944	\$42,814	\$44,771	\$45,113	\$46,950	\$51,476	\$58,334	\$53,304	3.5%
53	Real Estate	\$17,242	\$19,746	\$21,593	\$21,876	\$23,394	\$24,172	\$25,848	\$26,900	6.6%
54	Professional Services	\$34,418	\$35,495	\$37,402	\$37,642	\$38,709	\$42,637	\$42,936	\$46,049	4.2%
55	Management	\$95,949	\$48,485	\$29,182	\$30,338	\$67,927	\$66,192	\$51,461	\$40,828	-11.5%
56	Administrative/Support	\$22,620	\$23,425	\$26,351	\$27,789	\$27,733	\$29,218	\$27,628	\$27,828	3.0%
61	Education	\$21,443	\$21,896	\$21,712	\$23,186	\$21,601	\$27,665	\$27,490	\$27,892	3.8%
62	Health Care	\$38,556	\$39,925	\$41,281	\$41,195	\$41,949	\$43,755	\$44,192	\$46,560	2.7%
71	Arts	\$20,904	\$20,695	\$21,295	\$21,941	\$23,623	\$23,104	\$23,519	\$23,502	1.7%
72	Accommodation	\$14,045	\$14,687	\$15,220	\$15,446	\$16,290	\$17,170	\$18,263	\$18,649	4.1%
81	Other	\$15,271	\$15,798	\$16,062	\$17,191	\$18,306	\$18,865	\$19,132	\$19,699	3.7%
90	Government	\$33,180	\$33,061	\$32,157	\$33,933	\$34,215	\$35,230	\$34,356	\$35,366	0.9%

Source: EMSI

Location quotients (LQ) are a commonly used metric to determine the concentration of employment in given industries. LQs represent the percent share of employment in a specific geography (e.g., Door County) relative to a larger geography (generally the U.S.). For example, if retail jobs represented 20% of Door County’s employment and represented 10% of U.S. employment, Door County’s LQ for retail workers would be 2.0 (20%/10%). The graphic below summarizes 28 industries in Door County based on their annual employment growth rate from 2010-2017 (the x-axis of the graph moving left to right) and employment location quotient change from 2010-2017 (the y-axis, moving up and down):

Figure 66. Door County Industry Employment X/Y Plot



Source: EMSI

Tourism

In addition to providing employment for over 33% of Door County's workers, tourism industries have a significant impact on the economic output and housing environment of Door County. In 2017, Door County's tourism sector created a revenue stream of \$85.6 million, with over 75% of this revenue generated in Northern Door. The table below summarizes total tourism revenues in Door County and each Door County zone between 2010 and 2017.

Figure 67. Door County Tourism Revenue (\$)

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	\$472,531	\$487,810	\$489,458	\$499,661	\$579,819	\$761,940	\$749,524	\$784,816	7.5%
North	\$44,500,655	\$45,212,348	\$48,311,424	\$50,263,918	\$52,086,192	\$56,712,405	\$61,240,794	\$64,346,260	5.4%
Central	\$14,151,866	\$14,535,291	\$15,396,448	\$16,311,516	\$17,387,115	\$18,393,891	\$20,460,729	\$20,514,209	5.4%
Door County	\$59,125,053	\$60,235,450	\$64,197,330	\$67,075,096	\$70,053,126	\$75,868,236	\$82,451,047	\$85,645,285	5.4%

Source: Door County Tourism Zone

As of 2017, there were a total of 4,860 tourism rental units with a permit in Door County. As with tourism revenue, over 75% of these units were located in Northern Door. Notably, 27% of all tourism-permitted units in Door County were houses or condos (as defined by the Door County Tourism Zone). The total number of tourism-permitted units in Door County and its three zones are depicted in the table below.

Figure 68. Door County Tourism Units (Permits)

Geography	2010	2011	2012	2013	2014	2015	2016	2017
South	65	65	65	67	74	77	76	80
North	3,564	3,484	3,521	3,540	3,502	3,515	3,566	3,621
Central	1,073	1,097	1,090	1,101	1,096	1,120	1,131	1,159
Door County	4,702	4,646	4,676	4,708	4,672	4,712	4,773	4,860

Source: Door County Tourism Zone

Although tourism units increased in total across Door County, growth in tourism units was primarily generated by an increase in home, condo, and resort units. Between 2010 and 2017, these three unit types were responsible for all of Door County's growth in tourism units.

Land Availability Implications

County GIS land use data was used to identify areas within Door County served by water and/or sewer and zoned for multi-family use. This conceptual analysis considered development limitations (steep slopes, woodlands, proximity to water/floodplain, etc.). Parcels that appeared developed but might be underutilized were not included. This conceptual analysis identified two areas of concern:

1. A very limited supply of land served with water and/or sewer.
2. A very limited supply of land zoned for multi-family apartment use.

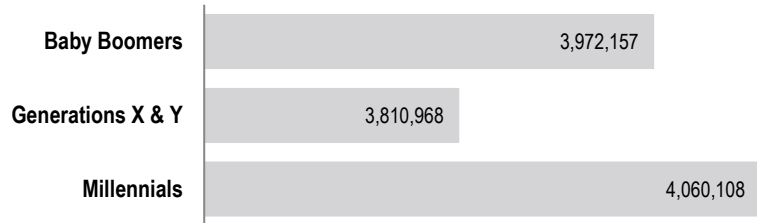
Further analysis would be needed to refine these conceptual findings.

Generational Housing Demand

Migration trends reinforce the importance of households in their 50s driving demand for second homes in Door County. With the number of Midwestern households in the 50-60 age group expected to decrease as the smaller Generation X cohort moves into their 50s, practical

concerns about Door County’s positioning as a destination for younger families comes to the forefront.

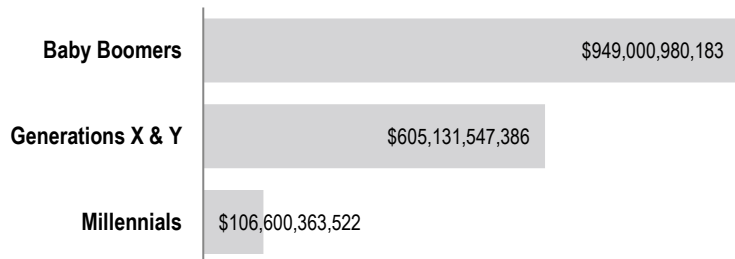
Figure 69. Households by Generation- Midwestern U.S.



Source: U.S. Census Bureau & ESRI

While Millennials are expected to be more significant than Boomers from a population standpoint, Millennials face significant headwinds in terms of net worth. Analysis suggests that the average Millennial household will need to increase net worth at a rate of about 7% annually over the next 35 years to catch up to the average Boomer.

Figure 70. Household Aggregate Net Worth by Generation, Midwestern U.S



Source: U.S. Census Bureau & ESRI

Part 3. Challenges and Opportunities



Introduction

This section details housing best practices and strategies that can be used to mitigate housing challenges in Door County. Housing challenges and best practices are discussed first. Strategies to put best practices in place are then analyzed.

Best Practices

Workforce housing challenges playing out in Door County are consistent in many respects with national issues. The U.S. economy is now in an extended expansionary economic cycle in which the pace of new housing construction has lagged behind long-term trends.

According to HUD,

Families who pay more than 30% of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care. An estimated 12 million renter and homeowner households now pay more than 50% of their annual incomes for housing. A family with one full-time worker earning the minimum wage cannot afford the local fair-market rent for a two-bedroom apartment anywhere in the United States.

Our experience reinforces the role of diverse conduits, tools, and funding sources to support development of workforce housing:

- Generated rental income from owned properties or proceeds from property sales by housing authorities, not-for-profit housing organizations, and community development corporations;
- Allocation of municipal Tax Increment Financing (TIF) proceeds to support construction of affordable housing units;
- Encouragement of employer-assisted housing programs;
- Establishment of special real estate transfer taxes and impact fees;
- Establishment of special sales tax and hotel taxes, or (in Wisconsin) implementation of Premier Resort Area taxes;

- Access to federal and state tax credit programs (Low Income Housing Tax Credit, New Markets Tax Credit, and Historic Tax credit programs);
- Access to federal and state grants and low-interest loans for use as soft debt/gap financing in support of affordable housing;
- The emerging role of non-profit organizations (housing trusts, community development corporations, etc.) in supporting workforce housing.

Practical national challenges with implementation of workforce housing programs include:

- “Not in my backyard” (NIMBY) concerns aligned with confusion over the semantics of “affordable” and “workforce” labels on housing;
- Housing authorities can struggle with reinvestment costs for older affordable housing units that are owned and operated by the authority;
- Deed restrictions on owner-occupied homes to ensure affordability require oversight to ensure that current and future home owners remain aware of deed restrictions;
- In destination resort areas where land availability is seriously constrained, affordable programs can, over time, effectively prevent people from moving out of units defined as affordable.

In Wisconsin, recent state-level policy has tended to encourage the private sector and non-profit sector to develop affordable housing, primarily through low income housing tax credits. In early 2018, legislation was enacted (Act 176 of 2018) to support a state affordable housing tax credit, with reported funding of \$7 million, administered by the Wisconsin Housing and Economic Development Authority (WHEDA).

Wisconsin and Door County-specific affordable housing insights include:

- Recently built dormitory projects in the Wisconsin Dells have helped offset seasonal bed shortages. The Hiawatha Residence project was developed in two phases and reportedly funded with a share of Premium Resort Tax proceeds. The facility only rents to verified seasonal workers;
- Communities such as Lake Delton have revisited municipal codes to ensure proper regulation of transient employee housing, backed by financial penalties for landlords who are found to be in violation. News reports suggest that the enhanced village code was passed in 2015 and included funding for a housing inspector;
- Pioneer Ridge is a recently built 72-unit affordable housing project in the Wisconsin Dells. It opened in 2016, supported by a reported \$724,000 in low income housing tax credits and a reported \$715,000 in City of Wisconsin Dells Tax Increment financing support. Rents are based on tenant income qualification, and reportedly range between \$400 and \$1,000 per month;
- While there are a large number of housing authorities in Wisconsin (including Door County), a majority serve primarily as conduits for HUD Section 8 rental assistance programs and have limited capacity (staff and financial resources) to rapidly expand support for workforce housing programs;
- Wisconsin state law does not currently permit establishment of inclusionary zoning ordinances that could otherwise require developers to build a certain percentage of units within their projects as affordable units;
- In Door County, current residential densities are modest, making it difficult for developers to build at higher densities in exchange for provision of affordable units;

- While non-profit housing organizations are playing an increasing role in support of affordable programs both nationally and in Wisconsin, smaller counties can struggle to support a new non-profit organization (e.g., new board members/financial resources).

The following examples provide insight as to how workforce housing programs have been managed:

Housing Authorities manage HUD Section 8 housing choice vouchers, and develop/manage rental property and/or deed-restricted housing. Examples include:

- In Colorado, the Aspen-Pitkin County Housing Authority is supported by state enabling legislation that allows the entity to incur debt, secure mortgages, condemn property, and pursue grant funding; the Authority manages about 3,000 housing units;
- In Traverse City, MI, the Traverse City Housing Commission (TCHC) owns and manages two housing projects totaling 131 units, focused on affordable, elderly, and very low income people. The TCHC also manages the Section 8 housing choice voucher system to provide rental assistance for 208 families;
- In Oshkosh, WI, the Oshkosh / Winnebago County Housing Authority supports 413 section 8 housing choice vouchers and maintains 650 public housing units.

Door County has a housing authority (DCHA) which provides housing assistance through the HUD Section 8 program, but owns no housing units. In 2017, DCHA paid \$704,227 in housing assistance related to Section 8 housing covering rent and utility payments, for an average of about \$276 per unit per month.

Housing Trust Funds facilitate government program coordination/management, and generate funding for affordable projects. Examples include the City of Milwaukee's housing trust fund, which serves as a conduit for funding of affordable housing renovation

and construction, through low interest loans and grants. Community foundations can participate in housing trust fund programs. In California, the Marin Community Foundation supports affordable housing through supportive partnerships and access to affordable housing loans. The Door County Community Foundation (DCCF) is an example of a not-for-profit organization in Door County that could play an expanded role in support of workforce housing efforts.

Community Development Corporations are non-profit organizations focused on housing that offer counseling and education as well as lending and development/renovation of housing. In Green Bay, NeighborWorks Green Bay provides a host of residential services across a larger trade area which includes Door County. NeighborWorks Green Bay is developing affordable new townhomes in Green Bay for between \$154,000 and \$174,000.

Land Banks reserve land for affordable housing, and support processes that allow foreclosed/bank-owned properties to be brought to market. In Minneapolis, the Twin Cities Community Land Bank facilitates the purchase of foreclosed/vacant properties by affordable housing developers, while also making loans to developers and homebuyers. Door County does not currently have a land bank.

Community Land & Housing Trusts are used to maintain housing affordability, owning land for the long-term and ground leasing property for housing development. Some land trusts operate explicitly to preserve open space, while others focus on affordable housing. The Champlain Housing Trust (Vermont) owns and manages more than 2,200 apartment units and 565 owner-occupied units. Door County has a Land Trust focused exclusively on land preservation.

Priority Actions

The strategy identifies three initial critical path efforts in response to apparent workforce housing challenges in Door County:

1. Complete a 100% count of all seasonal employee beds in North and Central County and work with private sector operators to: 1) identify properties that can be converted into seasonal bed use; and 2) consider public private partnerships to ensure sufficient seasonal bed capacity;
2. Work with local units of government to: 1) identify 3-5 publically-owned properties that can be used for development of market rate workforce housing units; and 2) increase the amount of land zoned for multi-family housing;
3. Identify organizational capacity and financial resources to support growth in the number of market rate workforce rental units. Organizations such as the Door County Housing Authority, Door County Economic Development Corporation, and the Door County Tourism Zone, as well as the non-profit Green Bay Neighbor Works organization, have potential to support workforce housing.

Future Actions

Beyond initial critical path efforts, the analysis identified several additional areas of focus that will support future development of workforce housing in Door County:

- Encourage the development of a centralized on-line clearinghouse for listing available 12-month rental properties in Door County;
- Conduct annual outreach with the owners of the roughly 9,990 housing units in seasonal occupancy to understand owner motivations. While an initial goal would be to simply clarify seasonal occupancy trends, the ultimate goal should be to establish the number of housing units that remain vacant year-round, and could be suitable for 12-month rentals;

- Expand county-wide GIS capacity by completing a 100% count of all housing units, differentiating between resident occupancy, seasonal occupancy, and tourist occupancy, and identifying true four-season homes vs. three-season cottages. Partnerships with area utilities would shed light on housing unit energy efficiency, a factor which could otherwise increase costs of ownership. The ultimate goal would be a database that connects parcel and improvement attributes, providing visibility into property age and condition, utility connections, and alignment with tourism zone databases;
- Evaluate zoning code inconsistencies between prevailing county codes and individual town and village codes. One example concerns accessory dwelling units on residentially-zoned, agriculturally-zoned, and commercially-zoned property. While accessory dwelling units are permitted in the county code, they are not in the City of Sturgeon Bay;
- Evaluate infrastructure strategies that facilitate public water and sewer connections and increase broadband penetration;
- Given the constrained construction market in Door County, organizations such as Northeast Wisconsin Technical College should consider expansion of skilled trades curriculum so that students can gain credit and build houses. Ranken Technical College in St. Louis is a leading example of this approach.

A high-level review of the Door County Comprehensive Zoning Ordinance was completed in order to understand housing-specific influences. The following positives were identified about the county code:

- Allows for accessory dwelling units on residentially-zoned, agriculturally-zoned, and commercially-zoned property;
- Allows for small/dense lots;
- Allows for multi-family development and mixed use development;

The analysis also noted areas where the County code could be modified:

- Consider removing density-restrictive town zoning overlays. Some towns were granted an overlay which grants specific zoning for those areas, often with stricter (larger) lot size requirements, etc.;
- Allow for taller structures. Current height restrictions cap buildings at 35';
- Consider proactive re-zoning for higher densities in areas with sewer and/or water service, or in immediately adjacent areas.

Individual town/village zoning codes could consider other modifications:

- The City of Sturgeon Bay has one standard density ratio of one unit per 3,500 sq. ft. of lot area, regardless of project location. Flexibility with density can support project economics, particularly for sites closer to urban core areas;
- The need for developers to seek Planned Unit Development or conditional use permits for larger apartment projects tends to increase entitlement risk, increasing costs.

Current Developments

Projects recently completed or currently underway include:

- Tall Pines Estates – 4 buildings with 16 units per building; mix of 1 and 2-bedroom apartments and rents that range between \$800 and \$1000/month;
- Maritime Heights – 34 townhomes in four buildings; mix of 2 and 3 bedroom units, with rents between \$700 and \$900/month;
- Sturgeon Bay Estates – a three-building, 58-unit project, with a mix of 1, 2, and 3 bedrooms, renting for between \$845 and \$1,145/month. Unit sizes range from 686 sf. to 1,201 sf.;
- Projects in Sister Bay include Niagara Ridge Apartments – 36 units, generally 2-bedroom configurations, with rents between \$1,000 and \$1,200/month; unit sizes range from 1,120 to 1,200 sf.



Part 4. Technical Appendix



Stakeholder Interviews

AECOM completed interviews with 42 people who live and/or work in Door County, from Brussels to Sister Bay. Private-sector interviews focused on companies in manufacturing (from shipbuilding to food) as well as services (restaurants and retail, hotels, management companies, resort operators) and real estate development and brokerage. Public and non-profit sector interviews included representatives of local government, business associations, education, and health care institutions. Finally, an additional 40 people from Door County participated in a public, facilitated workshop in the Kress Pavilion in Egg Harbor. The interviews focused on two broad lines of questioning:

- What does Door County need/want to be? How does this vision impact home affordability?
- To what extent is a perceived combination of limited rental apartments and affordable starter homes effectively limiting the ability of younger people to move into or remain in Door County?

Interview and workshop insights are summarized as follows:

- General Observations
- Workforce
- Tourism Tax Revenue
- Housing Availability and Construction
- Zoning and Development
- Infrastructure

General Observations

- Door County's unique geography creates challenges for workforce mobility and housing. The labor pool is constrained due to longer commuting distances to areas such as Green Bay, where there is a

greater supply of workers. Travel times were viewed as being prohibitive.

- In economic terms, Door County tends to lag behind in recovery from recessions and to enter recessions more slowly than U.S. averages; this trend was validated through analysis of employment data between 1990 and 2017.
- Manufacturing in Door County has recovered strongly since 2010.
- Interviewees expressed concern that housing costs and workforce constraints are impacting economic growth, whether that means finding employees to fill manufacturing and professional jobs or adequately staffing tourist destinations to maintain a high-quality experience for visitors.
- In Door County there are a surprising number of abandoned farmhouses.

Workforce

Insights relate to three distinct employment markets:

- Northern Door: This area is dominated by seasonal service-sector jobs in hospitality, retail, and restaurant-related sectors, along with some agriculture;
- Central Door: Manufacturing supports both full-year and seasonal jobs; some agriculture is also present;
- Southern Door: This area of the County primarily has an agricultural economy.

For Southern and Central Door, residential demand appears tied to consequential "churn" in entry level positions for new teachers, health care professionals, manufacturers, college students (Northeast Wisconsin Technical College) and other relocating workers. Limited or unacceptable housing options are creating a significant employee retention problem.

Interviewees noted that Sturgeon Bay tends to be the “relief valve” for housing, with most new employees able to find “something” in Sturgeon Bay within 2-3 months of starting a search.

As Door County’s tourism season has extended into the fall, it has put pressure on traditional employment practices. In Northern Door, growth in the number of retiree households (and commensurately fewer family households with children) along with reduced capacity in traditional sources of summer help (high school/college students) has constrained the labor market. Not only are there fewer high school and college students, but many are choosing to work only one summer, or work part-time.

Other Northern Door workforce factors include:

- Traditionally, when people inquired about a summer position, the question of whether the employer would pay unemployment benefits in winter would come up. Apparently this model is changing, in part because workers can find higher-paying jobs. Recent changes in state unemployment laws have affected this trend.
- In Northern Door, employees are working multiple shifts at different establishments, so the loss of one employee impacts capacity at multiple establishments. As the labor market has tightened, employers in Northern Door County have increasingly turned to hiring seasonal foreign student workers through the J-1 visa program. Employers who use J-1s must provide housing.
- Agriculture labor demand in Southern Door in recent years is becoming more year-round rather than seasonal. Agriculture operators are starting to provide permanent, year-round housing for their workers.

During the summer of 2017, seasonal employers reportedly had such difficulty in finding staff that their operations were affected. While in prior years, a majority of seasonal hires had been identified by March;

in 2017, companies were only set for 50% of anticipated staffing levels in May. Several businesses reportedly reduced open hours by limiting service to breakfast and lunch only, closing earlier or opening later than usual. Other efforts Northern Door employers are undertaking include:

- Store owners are getting more aggressive with hiring efforts, increasing wages, for example, and looking for employees from further away, with source markets that increasingly include Algoma and Green Bay. Travel time makes sustaining these commuting distances a challenge from a retention standpoint.
- Purchasing houses to secure beds for seasonal employees. Older hotels are also being purchased for renovation as seasonal housing. Companies make housing available at a cost average of \$6/day or \$200-\$300/month. While the number of seasonal beds has increased, the precise supply of these beds is uncertain.

For Northern Door, use of the J-1 program has grown steadily over the past four years. One challenge is that many J-1 employees depart by the end of September. In fall, many restaurants are stretched during October. Interviews suggest that the J-1 program is not predictable, with some applicants denied a visa, so companies have to plan for the eventuality that a share of their applicants will fall through. Also, as J1s tend to not have cars, transportation is a challenge.

Tourism Tax Revenue

The Door County Tourism Zone Room Tax was a frequent topic of conversation, with debate ranging across several topics:

- Due to increased support for marketing, visitation into Door County has grown considerably since 2010, with greater penetration from Minneapolis and other Midwestern markets;
- While the tax has raised significant revenue for tourism promotion in Door County, interviewees had divergent views as to the scale, use, and consequence of this revenue. Some questioned why tax

dollars returned to local units of government reportedly are spent on non-tourism related items (e.g., added to general fund);

- Given apparent stresses that some companies are facing to find employees, some interviewees suggested an interest in “letting off the gas” so that employers could “catch their breath” rather than constantly reacting to increasing demand.

Housing Availability and Construction

Housing has been a focus of debate in Door County for many years, in part since the county has been under-built for multi-family units since well before the recession, linked with reported apartment occupancies at or above 97%. The county also struggles with consequential seasonal housing demand during the summer and a surplus of vacant seasonal units during the winter and spring. Interviewees discussed a specific need for more senior housing.

While construction costs in Door County tend to be higher than national averages, a limited supply of construction workers, a shorter construction season, and a limited pool of developers/builders (who tend to specialize in custom homes) adds to the challenge of building new housing. Also, with septic system and well installation costs for new rural homes at roughly \$10,000 to \$20,000, building affordable housing in the County’s rural areas can be challenging. For 2018, developers anticipated cost acceleration in lumber and supplies. One builder confirmed they are booked through the end of 2019, and need more employees in the skilled trades to support existing contracts.

Interviews suggested that while the Door County housing market was late in recovering from the recession, over the past three years, an increasing number of homes for sale are seeing multiple offers, linked with second home demand. Sturgeon Bay is also seeing more second home demand now, with many properties getting multiple offers. Interviews identified an array of challenges facing residents in finding housing in Door County:

- Their ability to connect into local networks and find housing through “word of mouth.” The county currently does not appear to have a centralized place for people to find out about rentals;
- Limited supply of “affordable” housing units priced between \$100,000 and \$200,000;
- Limited supply of “affordable” apartments, with rents between \$500 and \$900 per month;
- Seasonal workers in particular seem to face a limited supply of units/beds that can be rented on a monthly basis, with additional concerns about sub-standard quality of units;
- Limited supply of “affordable” rental units for seniors;
- Housing supply is not necessarily aligned to the needs of smaller households, with some residents occupying housing that is too large for their needs.

An increasing proportion of seasonal units are being converted to short-term rentals through AirBnB and Vacation Rentals by Owner (VRBO). The increased use of single-family homes for short-term rentals precludes these homes from being used for long-term leases.

In the 1970s, Sturgeon Bay benefitted from a shipbuilding boom, which supported a surge in housing construction (mostly single-family). Then as the market for shipping declined, related employment fell, and demand for housing softened, leaving a number of housing subdivisions with a surplus of empty platted lots. Over the last 20 years, as the County’s economy recovered, many of these subdivisions were gradually absorbed.

For Northern Door residents, the idea of housing many seasonal employees in a larger dormitory was viewed as a concern. Also, in Northern Door there are practical challenges with the housing stock; reportedly, no two houses are alike, and while records are not clear, it appears that many older homes are really 3-season houses (they are not fully winterized).

Zoning and Development

The County zoning framework includes unincorporated communities where the County administers zoning, as well as incorporated communities with their own zoning codes. County-wide, there is a significant amount of land classified under various low density agriculture designations. In some cases, minimum lot sizes can be 20 to 35 acres.

One town in Southern Door is zoned almost entirely as exclusive agriculture, generally requiring 35 acres for new lots. Generally, the county is not zoned for future development, but only allows higher density uses in areas that currently have such uses. In Southern Door, Concentrated Animal Feeding Operations (CAFOs) from Kewaunee County are leasing increasing acreage for manure spreading, removing acres from active agricultural production. The unfolding impact of CAFOs in adjacent Kewaunee County on contaminated wells is raising awareness in Door County. Interviewees spoke of emerging sensitivity to impacts of septic fields associated with residential and commercial development, especially in context with older wells.

Interviews covered “small homes” or “tiny homes” as a solution to the need for seasonal housing in the northern part of the county, many of which could be regulated under campground classifications.

Infrastructure

- The City of Sturgeon Bay supports the majority of public infrastructure including utilities, water, sanitary, electric. Sister Bay is the only other jurisdiction with a municipal water system. Sanitary sewer systems exist only in the following areas:
 - City of Sturgeon Bay
 - Villages of Ephraim, Egg Harbor, Forestville, and Sister Bay
 - Maplewood (Town of Forestville)
 - Fish Creek (Town of Gibraltar)

- Institute and Valmy (Town of Sevastopol)
- Public transit in Door County is limited. Door-Tran has grown since 2007, providing subsidized rides across the county, along with Door-2-Door. Companies such as Uber and Lyft are only just starting and coverage is limited.
- There is general concern about the quality and speed of wireless cell phone coverage and reliable internet data speeds across the county.

National Benchmarking

AECOM completed a review of similar counties across the U.S. based on data reported by the U.S. Department of Agriculture. These counties tend to focus on recreation and/or retirement. The specific USDA definitions are as follows:

Recreation Counties – Identified by calculating the percentage employed; the percentage of total earnings in entertainment, recreation, accommodations, eating and drinking places, and real estate; and the percentage of vacant housing units intended for seasonal or occasional use reported in the 2010 Census of Population. The four variables measuring employment, earnings, income, and seasonal housing were converted to a weighted index and counties scoring at least two-thirds of a standard deviation above the mean were considered to be recreation counties.

Retirement Destination Counties – Defined as counties where the number of residents age 60 or older grew by at least 15% between 2000 and 2010.

AECOM used this database to compare Door County with the following areas:

- National Water - Counties in the Continental U.S. adjacent to an ocean or one of the Great Lakes;
- Great Lakes Water - Counties adjacent to one of the Great Lakes;
- Interior West - Counties located in Colorado, Utah, Idaho, Wyoming, or Montana;
- Continental U.S. - All U.S. Counties

After counties were organized as above, the groupings were organized into four sub-groups:

- Recreation Counties – All USDA defined Recreation Counties located in the specified area;

- Retirement Counties – All USDA defined Retirement Counties located in the specified area;
- Retirement & Recreation Counties – All Counties in the specified area classified as both a Recreation and a Retirement County;
- All Counties – All Counties located in the geography.

Generally urban counties with year-round populations above 225,000 were removed from each group to focus on primarily rural benchmarks. Subsequently, statistical means and medians for each group were collected for the following metrics:

- Population (2017) - Source: U.S. Census Intercensal Estimates
- Population Growth (2010-2017) - Source: U.S. Census 2010, U.S. Census Intercensal Estimates
- Manufacturing Employment Location Quotient (2017) - Source: EMSI
- Accommodation Employment Location Quotient (2017) - Source: EMSI
- Percentage of Population under 40 (2016) - Source: U.S. Census ACS

After values were calculated for each geographical group, the values were then compared against Door County's value.

Findings from the benchmarking exercise include the following:

- Door County's total population level closely mirrors other Great Lakes recreation counties. However, the demographics of Door County's population make it unique. For example, Door County had an older population than all benchmark groups that were analyzed, which presents a unique housing dynamic that should be addressed. In addition to tackling workforce housing, Door County also should address housing needs for those older than the typical working age (i.e., 65 and up);

- Unlike most recreation counties throughout the United States, Door County possesses a highly diverse economy. Relative to all groups of counties that were analyzed, Door County had a higher concentration of manufacturing employment. Manufacturing workers have different work schedules and responsibilities than accommodation workers (the predominant employment group in most recreation counties). As a result, Door County should consider how this unique mixture of workers impacts housing choices. Year-round housing for manufacturing workers should also be considered in housing choices in addition to housing for the more seasonal accommodation industries;
- Population growth in Door County has been lower than the U.S. average since 2010, a trend that is common across the Great Lakes. A feature of Great Lakes low population growth is an outflow of people in their 20s (e.g., kids graduate high school or college and decide to move to a different city). For Door County, population growth trends are crucial to understand because they have a direct impact on housing. If Door County employers wish to attract younger workers to their establishments, a housing strategy that can attract these groups should be considered. Since this is a regional trend that is not unique to Door County, a housing strategy that differentiates Door County could help attract or retain younger people.

Figure 71. Door County Population (2017) Benchmarking

Geography	Group	Counties	Population (2017)	
			Mean	Median
National Water Counties	Recreation	52	48,003	32,719
	Retirement	33	80,459	68,376
	Recreation & Retirement	9	67,873	68,376
	All	259	213,423	63,550
Great Lakes Water Counties	Recreation	25	29,319	23,895
	Retirement	4	66,805	54,690
	Recreation & Retirement	3	40,464	17,573
	All	80	126,314	44,365
Interior West Counties	Recreation	71	22,226	9,434
	Retirement	40	40,232	13,440
	Recreation & Retirement	22	34,444	9,138
	All	216	55,814	11,899
Continental U.S. Counties	Recreation	382	38,131	23,418
	Retirement	388	58,441	37,566
	Recreation & Retirement	107	48,469	26,646
	All	3,107	104,138	26,004
Door County	Door County	1	28,340	28,340

Source: Wisconsin DOA & U.S. Census Bureau Population (Under 40 Years of Age)

Figure 72. Door County % Under Age 40 (2016) Benchmarking

Geography	Group	Counties	Population Under 40 (%)	
			Mean	Median
National Water Counties	Recreation	52	42.5%	42.4%
	Retirement	33	47.2%	47.7%
	Recreation & Retirement	9	41.8%	44.1%
	All	259	48.9%	48.8%
Great Lakes Water Counties	Recreation	25	41.5%	39.7%
	Retirement	4	45.1%	43.7%
	Recreation & Retirement	3	41.3%	39.7%
	All	80	46.7%	48.0%
Interior West Counties	Recreation	71	44.9%	45.9%
	Retirement	40	47.9%	47.3%
	Recreation & Retirement	22	46.6%	47.6%
	All	216	49.4%	49.5%
Continental U.S. Counties	Recreation	382	42.8%	42.5%
	Retirement	388	47.5%	47.3%
	Recreation & Retirement	107	42.0%	40.9%
	All	3,107	48.9%	48.6%
Door County	Door County	1	35.9%	35.9%

Source: U.S. Census Bureau

Figure 73. Population Growth (2010-2017) Benchmarking

Geography	Group	Counties	Pop Growth (2010-2017)	
			Mean	Median
National Water Counties	Recreation	52	0.2%	-0.1%
	Retirement	33	0.8%	0.6%
	Recreation & Retirement	9	1.1%	0.8%
	All	259	0.3%	0.2%
Great Lakes Water Counties	Recreation	25	-0.3%	-0.3%
	Retirement	4	0.8%	0.7%
	Recreation & Retirement	3	0.5%	0.6%
	All	80	-0.1%	-0.2%
Interior West Counties	Recreation	71	0.7%	0.8%
	Retirement	40	0.9%	0.8%
	Recreation & Retirement	22	0.9%	1.0%
	All	216	0.5%	0.4%
Continental U.S. Counties	Recreation	382	0.2%	0.0%
	Retirement	388	0.7%	0.6%
	Recreation & Retirement	107	0.7%	0.6%
	All	3,107	0.1%	-0.1%
Door County	Door County	1	0.3%	0.3%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 74. Manufacturing LQ (2017)- Benchmarking

Geography	Group	Counties	Manufacturing LQ (2017)	
			Mean	Median
National Water Counties	Recreation	52	1.04	0.75
	Retirement	33	0.79	0.55
	Recreation & Retirement	9	0.69	0.71
	All	259	1.18	0.88
Great Lakes Water Counties	Recreation	25	1.26	1.13
	Retirement	4	1.07	1.22
	Recreation & Retirement	3	0.95	1.13
	All	80	1.76	1.74
Interior West Counties	Recreation	71	0.42	0.34
	Retirement	40	0.85	0.63
	Recreation & Retirement	22	0.60	0.50
	All	216	0.62	0.43
Continental U.S. Counties	Recreation	382	0.91	0.67
	Retirement	388	1.25	0.95
	Recreation & Retirement	107	0.73	0.62
	All	3,107	1.41	1.10
Door County	Door County	1	2.08	2.08

Source: EMSI

Figure 75. Accommodation LQ, 2017 - Benchmarking

Geography	Group	Counties	Accommodation LQ	
			Mean	Median
National Water Counties	Recreation	52	1.63	1.39
	Retirement	33	1.21	1.22
	Recreation & Retirement	9	1.70	1.39
	All	259	1.04	0.94
Great Lakes Water Counties	Recreation	25	1.49	1.30
	Retirement	4	1.51	1.19
	Recreation & Retirement	3	1.75	1.33
	All	80	1.06	0.93
Interior West Counties	Recreation	71	1.85	1.42
	Retirement	40	1.36	1.15
	Recreation & Retirement	22	1.67	1.42
	All	216	1.17	0.98
Continental U.S. Counties	Recreation	382	1.59	1.36
	Retirement	388	1.12	1.04
	Recreation & Retirement	107	1.56	1.39
	All	3,107	0.91	0.86
Door County	Door County	1	2.14	2.14

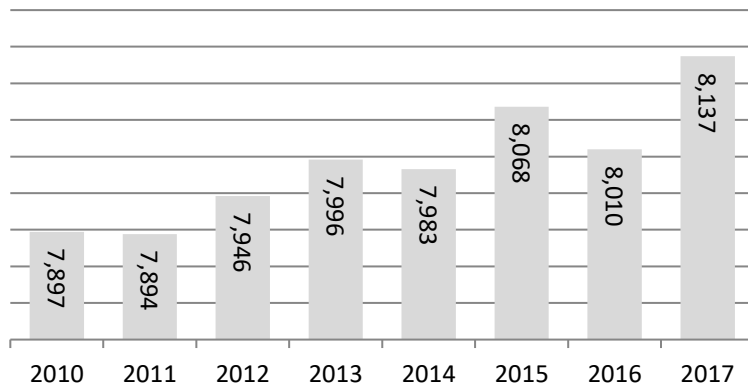
Source: EMSI

Zone Specific Data

This section details the zone-level analysis for Door County. Three distinct geographic zones were identified. For each zone, a demographic and economic analysis was conducted, focused on post-2010 trends relative to state and national benchmarks. All analysis in this chapter is organized by zone.

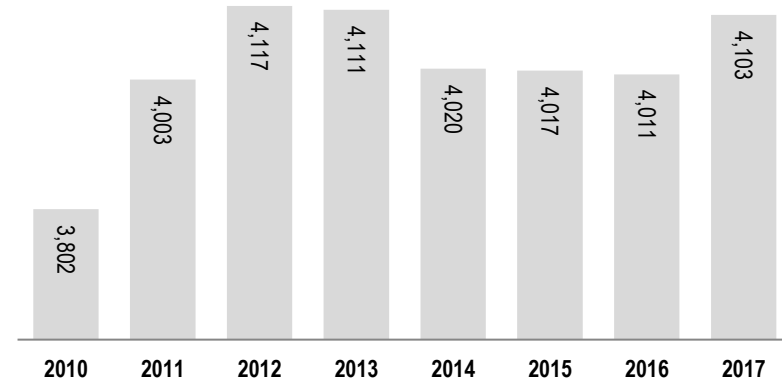
Zone Tables

Figure 76. Northern Door County Population



Source: Wisconsin DOA & U.S. Census Bureau

Figure 77. Northern Door County Households



Source: Wisconsin DOA & U.S. Census Bureau

Figure 78. Northern Door County Average Household Size

Geography	2010	2016	Annual Growth 2010-2016
North	2.08	2.00	-0.7%
Wisconsin	2.43	2.43	0.0%
U.S.	2.58	2.64	0.4%

Source: U.S. Census Bureau & Wisconsin DOA

Figure 79. Northern Door County Median Age

Geography	2010	2016	Annual Growth 2010-2016
North	56.0	57.8	0.5%
Wisconsin	38.4	39.3	0.4%
U.S.	37.1	38.0	0.4%

Source: ESRI

Figure 80. Northern Door County Age of Householder Summary

Householder Age	North			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
15 to 24	25	157	36.1%	134,772	111,487	-3.1%	5,397,943	4,551,082	-2.8%
25 to 34	209	179	-2.5%	357,765	351,740	-0.3%	18,147,102	17,979,598	-0.2%
35 to 44	444	367	-3.1%	418,222	376,222	-1.7%	22,176,488	20,645,597	-1.2%
45 to 54	698	557	-3.7%	497,498	458,446	-1.4%	24,621,008	23,555,187	-0.7%
55 to 59	368	321	-2.3%	215,506	240,850	1.9%	10,796,351	11,936,496	1.7%
60 to 64	534	528	-0.2%	169,086	215,165	4.1%	9,057,760	10,802,457	3.0%
65 to 74	818	1,074	4.6%	234,865	298,899	4.1%	12,506,173	15,879,519	4.1%
75 to 84	523	627	3.0%	174,837	173,895	-0.1%	8,416,787	8,647,028	0.5%
85+	183	201	1.6%	72,060	83,542	2.5%	3,116,384	3,719,273	3.0%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 81. Northern Door County Households by Income

Income Group	North			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
\$0-\$24,999	748	720	-0.6%	508,415	486,750	-0.7%	26,909,874	26,297,668	-0.4%
\$25,000-\$49,999	1,136	1,045	-1.4%	592,797	567,621	-0.7%	28,176,742	27,217,272	-0.6%
\$50,000-\$74,999	791	836	0.9%	468,400	450,855	-0.6%	21,201,711	20,913,779	-0.2%
\$75,000-\$99,999	424	549	4.4%	312,071	315,177	0.2%	14,097,295	14,361,853	0.3%
\$100,000+	702	861	3.4%	392,928	489,843	3.7%	23,850,374	28,925,665	3.3%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 82. Northern Door County Housing Units

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2016
North	11,681	11,739	11,801	11,897	11,962	12,041	12,153	12,232	0.7%
Wisconsin	2,624,358	2,633,571	2,641,823	2,652,071	2,664,833	2,677,960	2,693,773	2,712,143	0.5%
U.S.	131,826,694	132,321,030	132,843,303	133,549,872	134,401,303	135,299,886	136,312,356	137,403,460	0.6%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 83. Northern Door County Housing Tenure

Geography	Owner			Renter		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
North	3,112	3,361	1.3%	730	668	-1.5%
Wisconsin	1,551,558	1,547,633	0.0%	728,210	762,613	0.8%
U.S.	75,986,074	74,881,068	-0.2%	40,730,218	42,835,169	0.8%

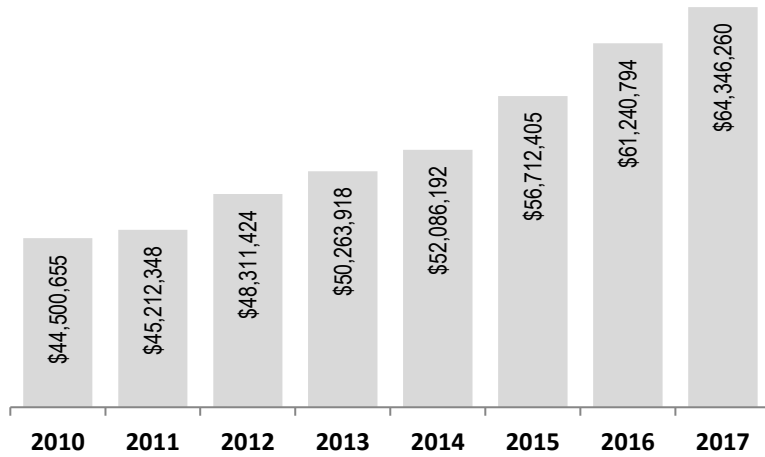
Source: Wisconsin DOA & U.S. Census Bureau

Figure 84. Northern Door County Employment by Industry

Sector	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
Agriculture	90	83	86	87	82	105	102	97	1.1%
Mining	0	0	0	0	0	0	0	0	N/A
Utilities	6	6	4	5	6	6	6	5	-1.3%
Construction	186	189	205	171	155	190	199	201	1.2%
Manufacturing	82	85	151	135	198	199	202	204	14.0%
Wholesale	22	12	24	26	26	14	14	14	-6.0%
Retail	494	468	545	491	518	564	584	597	2.7%
Transportation	33	40	40	43	39	47	44	44	4.3%
Information	43	40	47	50	60	70	78	77	8.6%
Finance	49	58	49	51	45	39	35	33	-5.6%
Real Estate	69	60	60	53	62	68	68	71	0.4%
Professional Services	40	29	29	32	32	32	29	28	-4.9%
Management	0	1	2	4	1	2	5	6	N/A
Administrative Support	104	104	115	102	89	122	128	143	4.6%
Education	17	16	18	17	18	17	18	17	0.1%
Health Care	127	158	170	167	158	164	162	157	3.1%
Arts	228	203	189	206	206	200	219	245	1.0%
Accommodation	1,129	1,117	1,139	1,192	1,130	1,224	1,245	1,296	2.0%
Other	218	211	220	245	237	229	237	244	1.6%
Government	406	421	427	461	445	490	524	530	3.9%
Total	3,342	3,302	3,519	3,538	3,507	3,781	3,897	4,010	2.6%

Source: EMSI & U.S. Census On the Map

Figure 85. Northern Door County Tourism Revenue (\$)



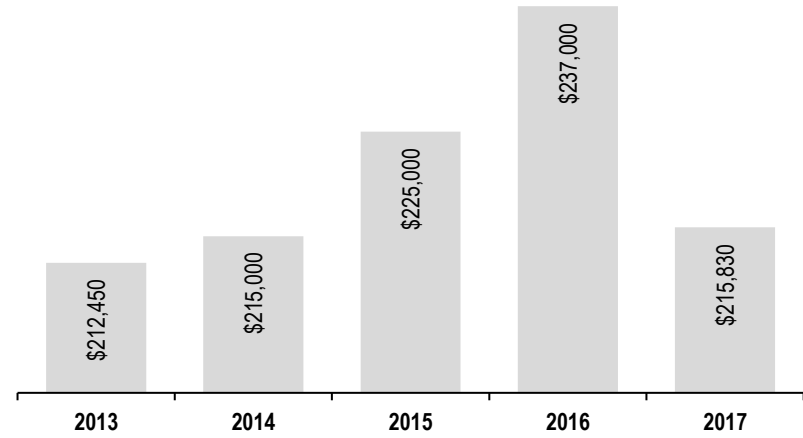
Source: Door County Tourism Zone

Figure 86. Northern Door County Property Transaction Summary

Metric	2013	2014	2015	2016	2017	Annual Growth 13-17
Total Transactions	320	299	438	301	492	11.4%
Out of State Grantee	107	104	116	102	163	11.1%
In Door Grantee	59	70	121	70	121	19.7%

Source: State of Wisconsin

Figure 87. Northern Door County Median Transaction Price (\$)



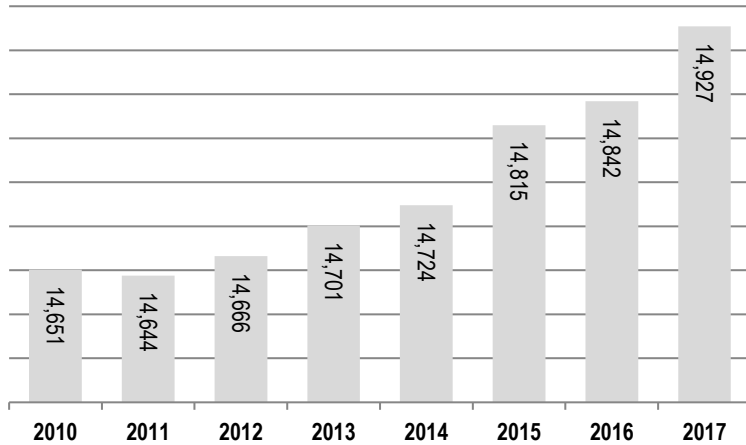
Source: State of Wisconsin

Figure 88. Northern Door County Median Transaction Price by Community

Town	2013	2014	2015	2016	2017	Annual Growth
Baileys Harbor	\$155,000	\$270,000	\$178,000	\$277,500	\$219,900	9.1%
Egg Harbor Town	\$130,000	\$142,450	\$128,000	\$125,000	\$107,900	-4.6%
Egg Harbor Village	\$261,000	\$250,000	\$304,900	\$292,500	\$248,950	-1.2%
Ephraim	\$330,000	\$216,000	\$240,000	\$308,500	\$279,000	-4.1%
Gibraltar	\$252,000	\$218,750	\$225,000	\$269,900	\$258,250	0.6%
Jacksonport	\$220,000	\$182,000	\$258,500	\$237,000	\$175,000	-5.6%
Liberty Grove	\$275,000	\$221,000	\$230,000	\$169,000	\$257,500	-1.6%
Sister Bay	\$161,000	\$154,000	\$187,000	\$197,250	\$179,000	2.7%
Washington Island	\$132,450	\$150,000	\$222,500	\$140,000	\$197,000	10.4%

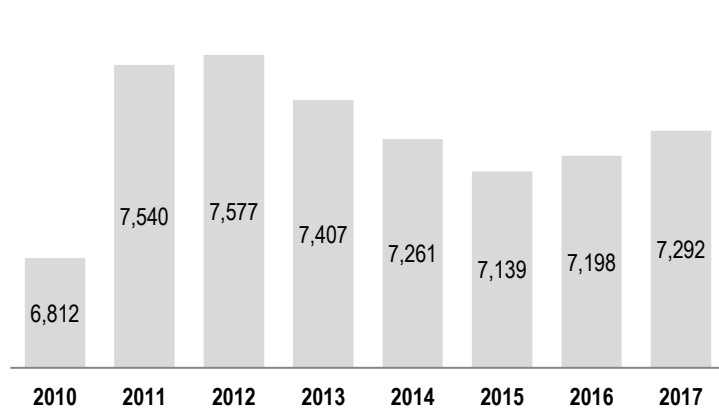
Source: State of Wisconsin

Figure 89. Central Door County Population



Source: Wisconsin DOA & U.S. Census Bureau

Figure 90. Central Door County Households



Source: Wisconsin DOA & U.S. Census Bureau

Figure 91. Central Door County Average Household Size

Geography	2010	2016	Annual Growth 2010-2016
Central	2.15	2.06	-0.7%
Wisconsin	2.43	2.43	0.0%
U.S.	2.58	2.64	0.4%

Source: U.S. Census Bureau & Wisconsin DOA

Figure 92. Central Door County Median Age

Geography	2010	2016	Annual Growth 2010-2016
Central	47.7	49.6	0.7%
Wisconsin	38.4	39.3	0.4%
U.S.	37.1	38.0	0.4%

Source: ESRI

Figure 93. Central Door County Age of Householder Summary

Householder Age	Central			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	CAGR 2010-2016	2010	2016	Annual Growth 2010-2016
15 to 24	670	322	-11.5%	134,772	111,487	-3.1%	5,397,943	4,551,082	-2.8%
25 to 34	618	844	5.3%	357,765	351,740	-0.3%	18,147,102	17,979,598	-0.2%
35 to 44	1,070	869	-3.4%	418,222	376,222	-1.7%	22,176,488	20,645,597	-1.2%
45 to 54	1,593	1,149	-5.3%	497,498	458,446	-1.4%	24,621,008	23,555,187	-0.7%
55 to 59	659	787	3.0%	215,506	240,850	1.9%	10,796,351	11,936,496	1.7%
60 to 64	537	917	9.3%	169,086	215,165	4.1%	9,057,760	10,802,457	3.0%
65 to 74	724	1,172	8.4%	234,865	298,899	4.1%	12,506,173	15,879,519	4.1%
75 to 84	637	615	-0.6%	174,837	173,895	-0.1%	8,416,787	8,647,028	0.5%
85+	305	523	9.4%	72,060	83,542	2.5%	3,116,384	3,719,273	3.0%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 94. Central Door County Households by Income

Income Group	Central			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
\$0-\$24,999	1,734	1,539	-2.0%	508,415	486,750	-0.7%	26,909,874	26,297,668	-0.4%
\$25,000-\$49,999	2,143	1,879	-2.2%	592,797	567,621	-0.7%	28,176,742	27,217,272	-0.6%
\$50,000-\$74,999	1,114	1,693	7.2%	468,400	450,855	-0.6%	21,201,711	20,913,779	-0.2%
\$75,000-\$99,999	977	947	-0.5%	312,071	315,177	0.2%	14,097,295	14,361,853	0.3%
\$100,000+	844	1,141	5.2%	392,928	489,843	3.7%	23,850,374	28,925,665	3.3%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 95. Central Door County Housing Units

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
Central	9,034	9,073	9,096	9,130	9,184	9,223	9,275	9,365	0.5%
Wisconsin	2,624,358	2,633,571	2,641,823	2,652,071	2,664,833	2,677,960	2,693,773	2,712,143	0.5%
U.S.	131,826,694	132,321,030	132,843,303	133,549,872	134,401,303	135,299,886	136,312,356	137,403,460	0.6%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 96. Central Door County Housing Tenure

Geography	Owner			Renter		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
Central	4,833	5,209	1.3%	1,980	1,990	-1.9%
Wisconsin	1,551,558	1,547,633	0.0%	728,210	762,613	0.8%
U.S.	75,986,074	74,881,068	-0.2%	40,730,218	42,835,169	0.8%

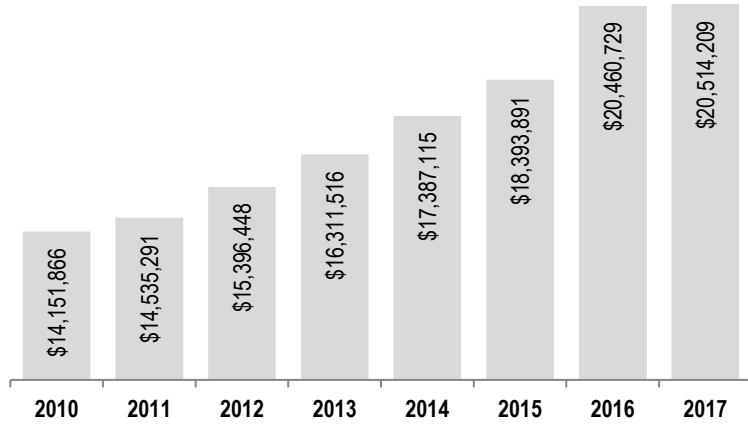
Source: Wisconsin DOA & U.S. Census Bureau

Figure 97. Central Door County Employment

Sector	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
Agriculture	121	135	93	89	102	74	66	59	-9.8%
Mining	11	10	0	0	0	0	0	0	-100.0%
Utilities	25	23	24	25	25	26	24	24	-0.8%
Construction	353	304	292	327	342	309	315	311	-1.8%
Manufacturing	1,792	1,648	1,883	1,940	1,967	2,158	2,185	2,201	3.0%
Wholesale	121	122	100	106	121	133	134	131	1.2%
Retail	1,097	1,094	1,163	1,213	1,185	1,182	1,230	1,274	2.2%
Transportation	72	62	75	72	85	102	100	105	5.6%
Information	126	142	138	133	89	87	91	85	-5.4%
Finance	283	281	257	255	243	252	213	191	-5.4%
Real Estate	93	107	109	124	117	92	91	93	0.0%
Professional Services	172	181	165	170	155	163	156	152	-1.7%
Management	13	3	6	4	4	5	14	16	3.0%
Administrative Support	227	223	139	163	162	161	150	146	-6.1%
Education	39	39	39	41	37	36	37	36	-1.3%
Health Care	1,274	1,275	1,342	1,376	1,310	1,339	1,357	1,338	0.7%
Arts	137	137	138	95	77	87	82	79	-7.5%
Accommodation	1,350	1,293	1,244	1,255	1,331	1,291	1,288	1,313	-0.4%
Other	621	633	649	639	601	642	642	636	0.3%
Government	1,186	1,187	1,272	1,216	1,191	1,270	1,303	1,274	1.0%
Total	9,113	8,900	9,129	9,242	9,146	9,409	9,478	9,466	0.5%

Source: EMSI & U.S. Census On the Map

Figure 98. Central Door County Tourism Revenue



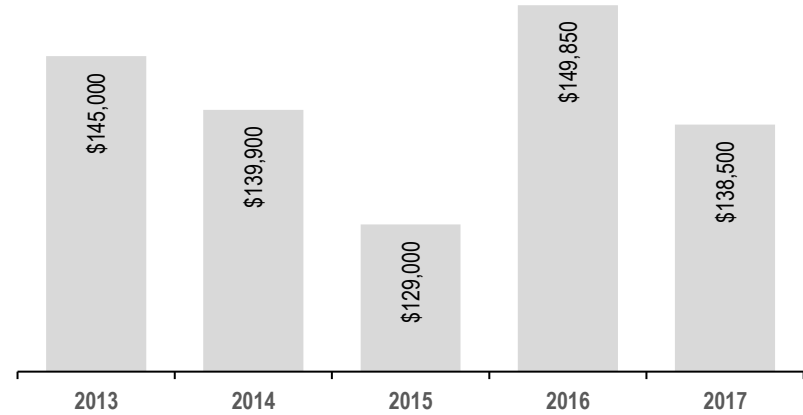
Source: Door County Tourism Zone

Figure 99. Central Door County Property Transactions

Metric	2013	2014	2015	2016	2017	Annual Growth 2013-2017
Total Transactions	194	197	317	268	344	15.4%
Out of State Grantee	39	32	46	29	49	5.9%
In Door Grantee	122	126	212	167	240	18.4%

Source: State of Wisconsin

Figure 100. Central Door County Median Property Transaction Price



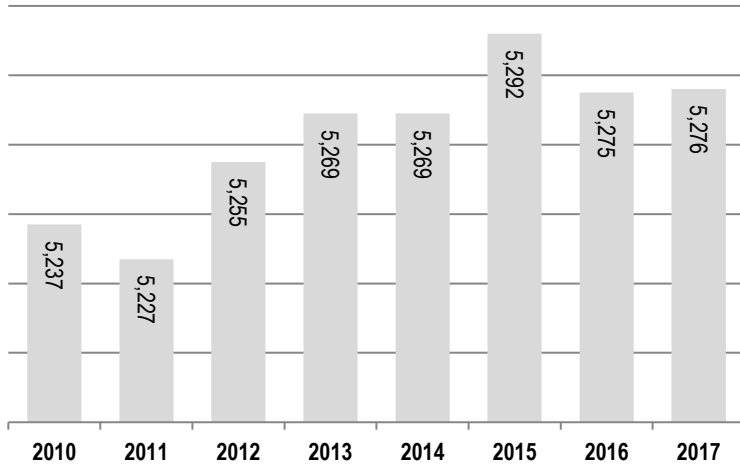
Source: State of Wisconsin

Figure 101. Central Door County Median Property Transaction Price

Town	2013	2014	2015	2016	2017	Annual Growth
Nasewaupée	\$89,500	\$185,000	\$85,500	\$129,900	\$130,000	9.8%
Sevastopol	\$275,000	\$265,000	\$215,240	\$282,500	\$190,000	-8.8%
Sturgeon Bay City	\$132,300	\$122,500	\$122,750	\$135,000	\$134,700	0.5%
Sturgeon Bay Town	\$230,000	\$132,000	\$249,000	\$200,525	\$198,000	-3.7%

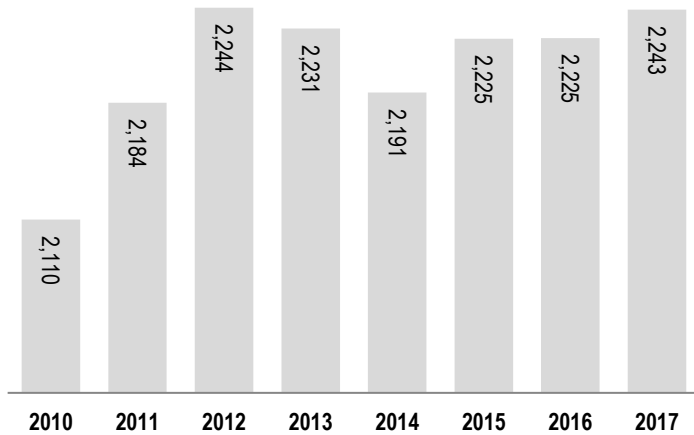
Source: State of Wisconsin

Figure 102. Southern Door County Population



Source: Wisconsin DOA & U.S. Census Bureau

Figure 103. Southern Door County Households



Source: Wisconsin DOA & U.S. Census Bureau

Figure 104. Southern Door County Average Household Size

Geography	2010	2016	Annual Growth 2010-2016
South	2.48	2.37	-0.8%
Wisconsin	2.43	2.43	0.0%
U.S.	2.58	2.64	0.4%

Source: U.S. Census Bureau & Wisconsin DOA

Figure 105. Southern Door County Median Age

Geography	2010	2016	Annual Growth 2010-2016
South	44.5	46.5	0.7%
Wisconsin	38.4	39.3	0.4%
U.S.	37.1	38.0	0.4%

Source: ESRI

Figure 106. Southern Door County Age of Householder Summary

Householder Age	South			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
15 to 24	60	93	7.4%	134,772	111,487	-3.1%	5,397,943	4,551,082	-2.8%
25 to 34	345	206	-8.2%	357,765	351,740	-0.3%	18,147,102	17,979,598	-0.2%
35 to 44	364	366	0.1%	418,222	376,222	-1.7%	22,176,488	20,645,597	-1.2%
45 to 54	457	496	1.4%	497,498	458,446	-1.4%	24,621,008	23,555,187	-0.7%
55 to 59	231	295	4.2%	215,506	240,850	1.9%	10,796,351	11,936,496	1.7%
60 to 64	186	192	0.6%	169,086	215,165	4.1%	9,057,760	10,802,457	3.0%
65 to 74	227	362	8.1%	234,865	298,899	4.1%	12,506,173	15,879,519	4.1%
75 to 84	198	153	-4.2%	174,837	173,895	-0.1%	8,416,787	8,647,028	0.5%
85+	41	61	6.7%	72,060	83,542	2.5%	3,116,384	3,719,273	3.0%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 107. Southern Door County Households by Income

Income Group	South			Wisconsin			U.S.		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
\$0-\$24,999	311	364	2.6%	508,415	486,750	-0.7%	26,909,874	26,297,668	-0.4%
\$25,000-\$49,999	574	525	-1.5%	592,797	567,621	-0.7%	28,176,742	27,217,272	-0.6%
\$50,000-\$74,999	637	521	-3.3%	468,400	450,855	-0.6%	21,201,711	20,913,779	-0.2%
\$75,000-\$99,999	323	399	3.6%	312,071	315,177	0.2%	14,097,295	14,361,853	0.3%
\$100,000+	266	416	7.8%	392,928	489,843	3.7%	23,850,374	28,925,665	3.3%

Source: U.S. Census Bureau & Wisconsin DOA

Figure 108. Southern Door County Housing Unit Inventory

Geography	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
South	3,251	3,260	3,273	3,287	3,299	3,304	3,311	3,323	0.3%
Wisconsin	2,624,358	2,633,571	2,641,823	2,652,071	2,664,833	2,677,960	2,693,773	2,712,143	0.5%
U.S.	131,826,694	132,321,030	132,843,303	133,549,872	134,401,303	135,299,886	136,312,356	137,403,460	0.6%

Source: Wisconsin DOA & U.S. Census Bureau

Figure 109. Southern Door County Housing Tenure

Geography	Owner			Renter		
	2010	2016	Annual Growth 2010-2016	2010	2016	Annual Growth 2010-2016
South	1,864	1,914	0.4%	246	313	4.1%
Wisconsin	1,551,558	1,547,633	0.0%	728,210	762,613	0.8%
U.S.	75,986,074	74,881,068	-0.2%	40,730,218	42,835,169	0.8%

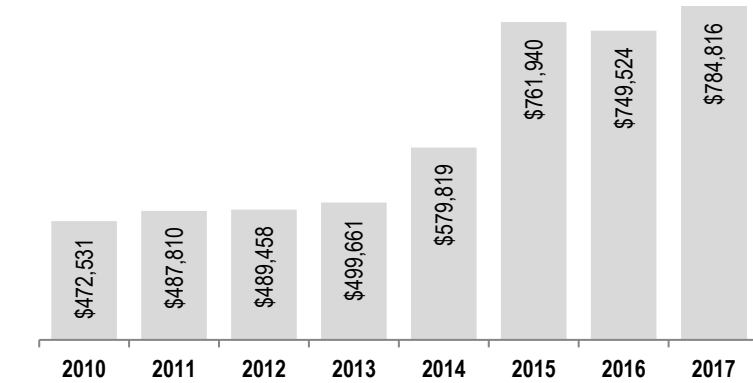
Source: Wisconsin DOA & U.S. Census Bureau

Figure 110. Southern Door County Employment

Sector	2010	2011	2012	2013	2014	2015	2016	2017	Annual Growth 2010-2017
Agriculture	7	10	41	57	66	75	80	84	42.9%
Mining	0	0	7	4	4	7	6	6	N/A
Utilities	0	0	0	0	0	0	0	0	N/A
Construction	103	91	97	85	88	110	118	122	2.6%
Manufacturing	23	9	26	23	31	29	29	29	3.4%
Wholesale	6	8	22	15	7	4	4	3	-8.4%
Retail	129	135	103	101	115	114	118	121	-1.0%
Transportation	24	25	24	25	24	20	19	19	-2.9%
Information	9	14	9	13	6	4	5	5	-7.8%
Finance	8	6	8	6	15	12	10	9	2.2%
Real Estate	2	3	0	0	0	0	0	0	-100.0%
Professional Services	6	4	7	7	7	4	3	3	-8.2%
Management	0	0	1	0	0	0	0	0	N/A
Administrative Support	6	8	33	12	24	20	19	20	18.7%
Education	24	23	24	23	23	21	22	21	-1.4%
Health Care	11	11	7	11	8	9	9	9	-3.2%
Arts	0	2	12	7	2	0	0	0	N/A
Accommodation	66	63	117	127	88	93	96	100	6.1%
Other	9	6	8	7	8	4	4	4	-11.7%
Government	328	293	233	210	245	108	105	96	-16.1%
Total	760	712	780	733	760	634	646	653	-2.1%

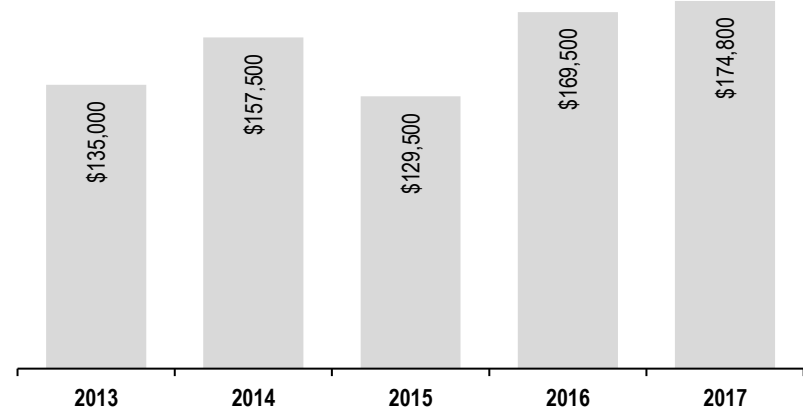
Source: EMSI & U.S. Census On the Map

Figure 111. Southern Door County Tourism Revenue



Source: Door County Tourism Zone

Figure 113. Southern Door County Median Property Transaction Price



Source: State of Wisconsin

Figure 112. Southern Door County Property Transactions

Metric	2013	2014	2015	2016	2017	Annual Growth 2013-2017
Total Transactions	66	58	112	105	112	14.1%
Out of State Grantee	4	7	15	8	12	31.6%
In Door Grantee	31	33	51	74	63	19.4%

Source: State of Wisconsin

Figure 114. Southern Door County Median Property Transaction Price by Town

Town	2013	2014	2015	2016	2017	Annual Growth
Brussels	\$153,500	\$168,000	\$130,000	\$200,000	\$166,900	2.1%
Clay Banks	\$362,000	\$112,500	\$225,000	\$292,500	\$222,350	-11.5%
Forestville Town	\$125,000	\$89,000	\$125,000	\$184,750	\$150,000	4.7%
Forestville Village	\$82,500	\$84,450	\$121,500	\$90,000	\$112,000	7.9%
Gardner	\$144,000	\$184,000	\$115,000	\$155,000	\$247,200	14.5%
Union	\$200,000	\$223,250	\$206,000	\$225,000	\$233,000	3.9%

Source: State of Wisconsin

Tourism Activity Trends

Overview

Tourism has increased in Door County following the 2008 Recession, with annual growth in tourism related metrics such as employment, retail sales, and hotel revenue.

Hotel revenue and retail sales increased most dramatically between 2010 and 2017, at annual rates above 4%. Despite these healthy increases (i.e., people staying in hotels and purchasing goods in stores), employment metrics increased at slower rates. Retail employment increased at less than half of the rate of retail sales (2.1% annually). As a result, retail workers in Door County have been forced to increase productivity (i.e. retail sales per retail worker) to sustain this increase in tourism activity.

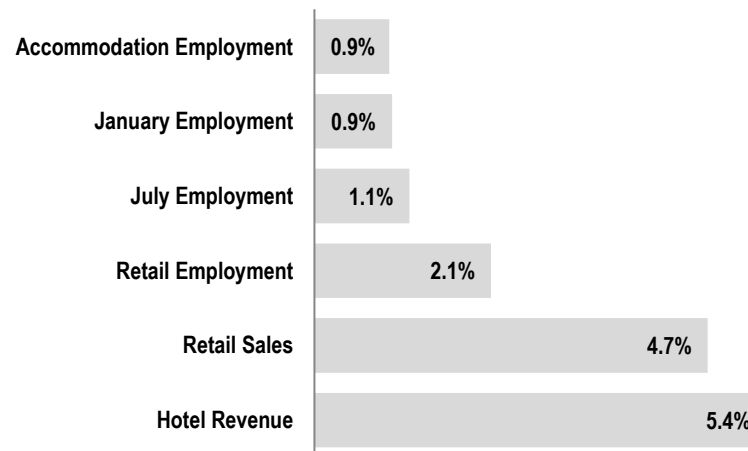
Accommodation employment in Door County increased at a modest annual rate of 0.9% between 2010 and 2017. In context, hotel revenue increased at an annual rate of 5.4% over the same period. The disparity in growth rates indicates that Accommodation workers have been forced to increase productivity by a greater order or magnitude than Retail workers, sustaining a hotel revenue growth rate over 6 times the size of the Accommodation employment growth rate.

Demand for labor in tourism-related sectors could be hindered by the status of Door County's labor force moving forward. Record low unemployment rates combined with low or negative labor force growth indicate that tourism businesses will have to compete for the remaining local labor force or use an alternate source of labor as a supplement. Roughly equivalent increases in January and July employment in Door County indicate that labor demand has been increasing year-round rather than only during peak tourism season.

Hotel revenue in Door County increased most significantly for housing units that have been used for commercial purposes following the 2008

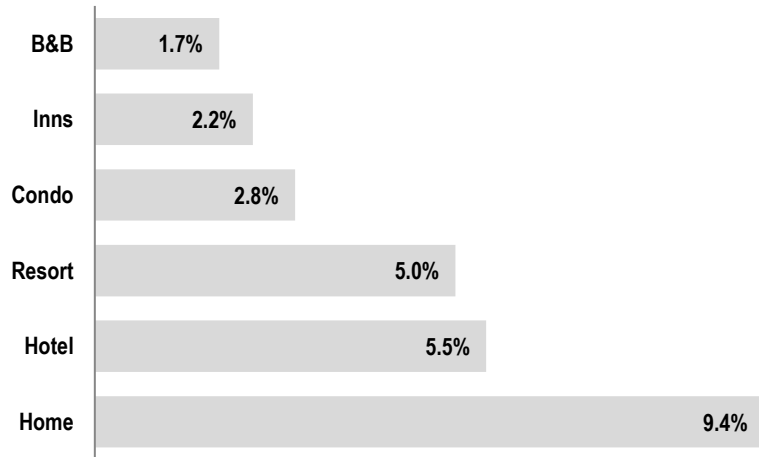
Recession. Between 2010 and 2017, hotel revenue from residential housing units increased at an annual rate of 9.4%, indicating that housing units that could be used for worker housing are instead being rented out for tourism purposes.

Figure 115. Tourism Related CAGR (2010-2017)



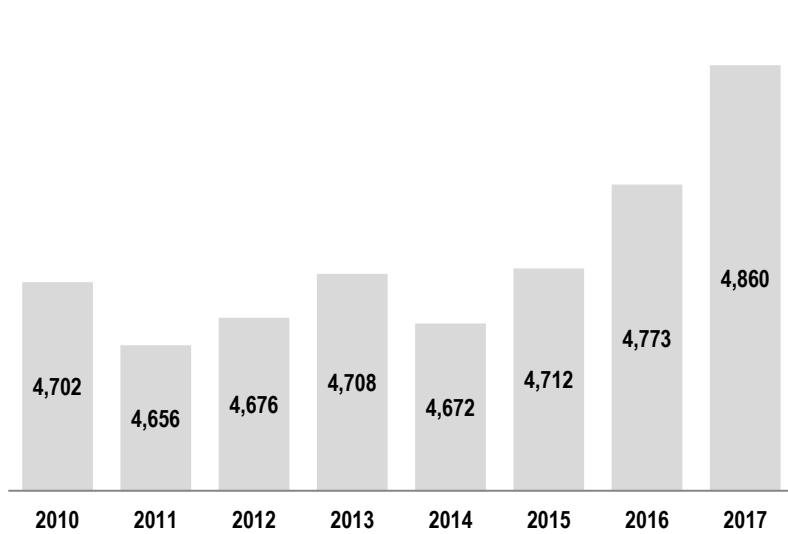
Source: Door County Tourism Zone

Figure 116. Tourism Revenue CAGR (2010-2017): By Structure Type



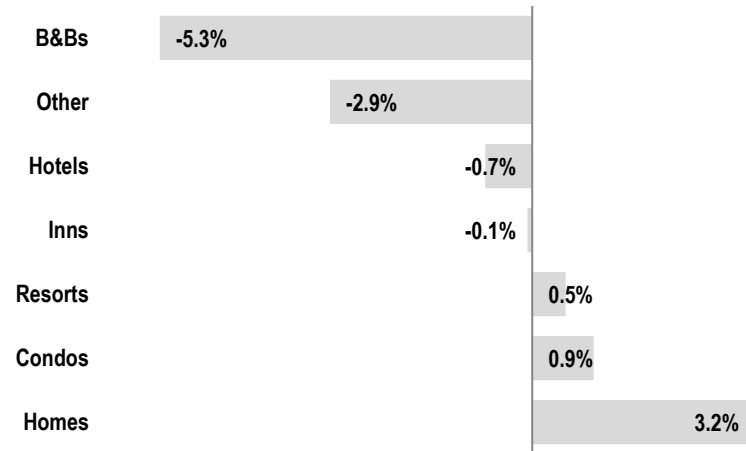
Source: Door County Tourism Zone

Figure 117. Door County: Total Tourism Units



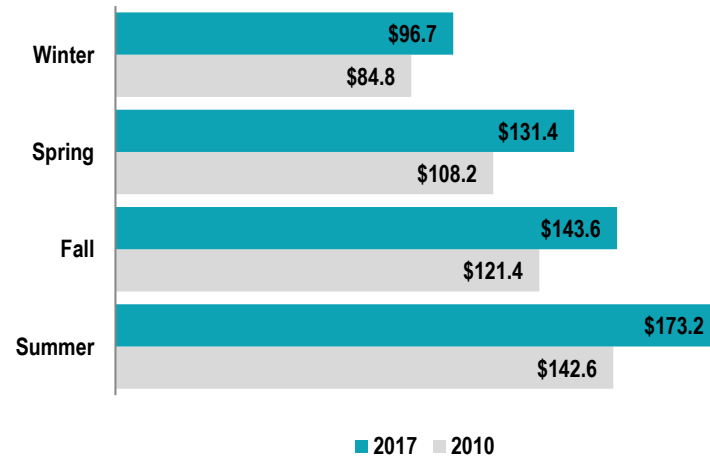
Source: Door County Tourism Zone

Figure 118. Tourism Unit CAGR (2010-2017): By Unit Type



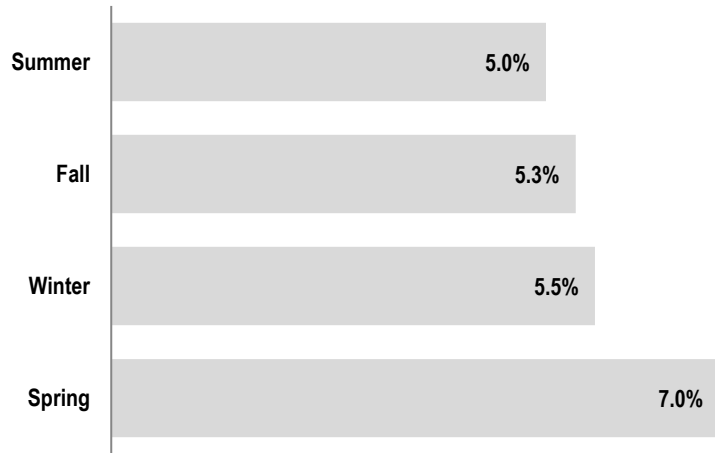
Source: Door County Tourism Zone

Figure 119. ADR by Season (\$)



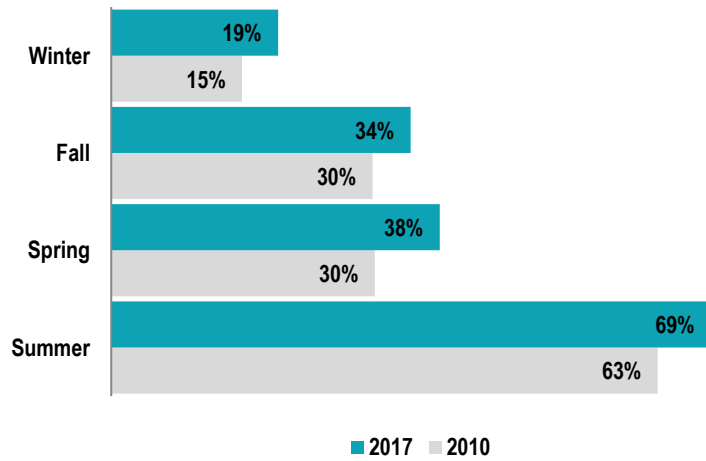
Source: Door County Tourism Zone

Figure 120. CAGR Tourism Revenue (2010-2017)



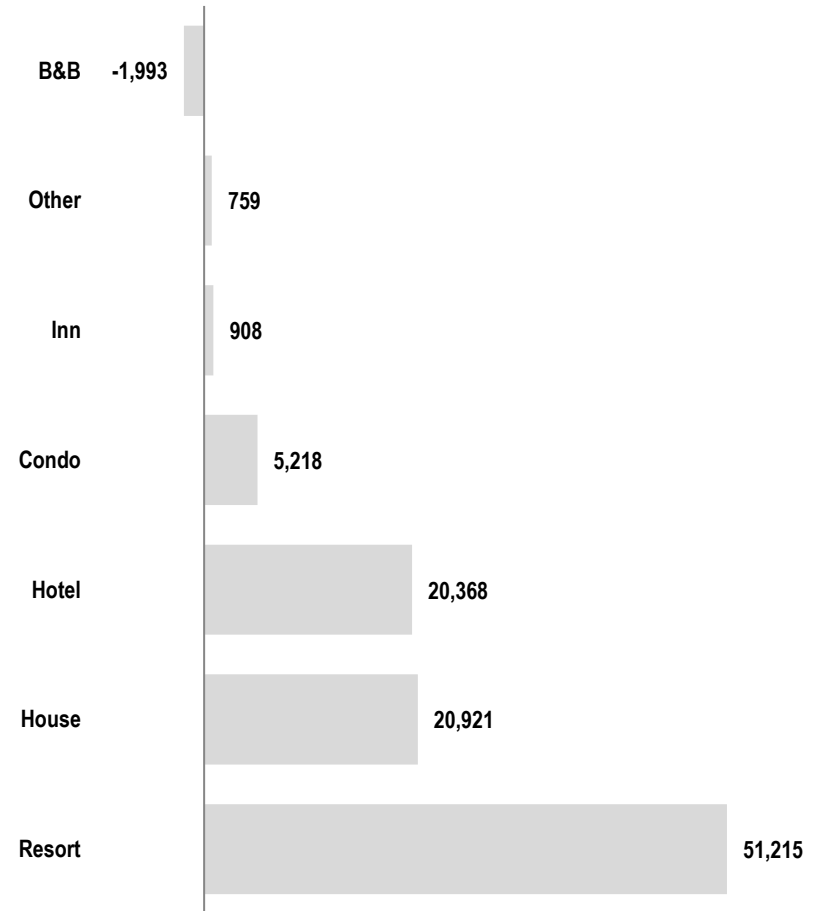
Source: Door County Tourism Zone

Figure 121. Tourism Occupancy



Source: Door County Tourism Zone

Figure 122. Change in Filled Room Nights (2010-2017)



Source: Door County Tourism Zone

Short-Term Rental Rate of Return (ROI) Perspective

Based on current market factors, (e.g. property taxes, home insurance, rent rates), and using a simplified ROI approach, a Door County home priced at \$249,900 could yield greater profit under short-term rental. If the home could be seasonally rented at \$222 per night (average daily rate in Door County as of 2017), and assuming 38% occupancy (average occupancy rate for homes used for tourism purposes in Door County), an investor could realize an annual rate of return equal to 10.7% of the principal used to purchase the home. Renting out at average AirBnB rates (\$140 per night) would yield a return of 6.2% on principal. A 12-month lease at median rents (\$843 per month) would still allow the investor to realize a profit, although only at an estimated 2.4% return on principal. The graphics below summarize these estimated returns:

Figure 123. Investment in a \$249,900 Home in Door County (3 bedroom)

Scenario	Return on Investment
Air BNB - \$140 per Night	6.20%
Seasonally Rent - \$222 per Night	10.70%
Long-term Rental- \$843 per Month	2.40%

Source: Door County Tourism Zone, US Census, AirBnB

Figure 124. Summary of Investment Revenues

Scenario	Monthly Return
Monthly Revenue (AirBnB)- 38% Filled	\$1,618
Monthly Revenue (Seasonal Tourism)- 38% Filled	\$2,561
Monthly Revenue (Long-term Lease)	\$843

Source: Door County Tourism Zone, US Census, AirBnB

The above analysis reflects only a simplified rate of return estimate. It does not fully consider the likelihood of increased maintenance costs due to weekly rentals, marketing expenses, or higher taxes due to use as an income-producing property. Broader market changes in real

estate value and owner income tax status also have bearing on actual return potentials.

In Closing

Door County experienced significant growth in tourism since 2010. Increases in tourism activity are reflected in the total number of structures (i.e., units) that were used for tourism-related activities, as well as the number of room-nights and or units available and occupied in Door County daily.

Between 2010 and 2017, Door County added 158 tourism units, or 23 per year. These 158 new tourism units represent additional physical units that were used for tourism purposes in some capacity (e.g. year-round, seasonal). In contrast, the total number of available units, or room nights, increased by 57,551 between 2010 and 2017. On an annualized basis, Door County added room nights faster than it added tourism units, indicating a shift towards tourism usage for units that are not used for tourism year-round (e.g. a house that was rented out 50 nights per year for tourism purposes in 2010 increased to 80 nights per year in 2017).

Occupancy of tourism units increased from a rate of 38% in 2010 to 44% in 2017. Growth in occupancy was significant for resort tourism units (increase from 34% in 2010 to 42% in 2017), while hotel units remained the most occupied units as of 2017 (53% occupancy). Average daily rates were highest for houses in Door County (e.g. residential homes rented out for tourism purposes), averaging \$221 in 2017.

Tourism revenue increased most significantly during spring, with 7% increases in revenue annually between 2010 and 2017, along with an annual increase of 4% in occupancy between 2010 and 2017. Summer months remain the most significant periods of time for tourism activity in Door County with 59% of all tourism revenue being generated during summer months in Door County and 52% of all filled room nights

occurring in the summer months of 2017. Average daily room rates in summer months averaged 1.8 times the average daily rate of winter months in Door County throughout 2017.

By unit type, an additional 200 residential housing units and 16 condos were used for tourism purposes in 2017 relative to 2010. In contrast, the number of hotels and B&Bs used for tourism purposes in Door County decreased by 59 and 50 respectively. Despite changes in the numbers of permitted tourism units in Door County, total available room nights and filled nights by property type varied significantly. In 2017, 45% of all available room nights were in resort units, while 25% of all available room nights were located in hotel units. Residential homes provided the third largest number of available room nights in Door County, representing 15% of all available room nights. Residential homes experienced the largest increase in room night availability between 2010 and 2017, adding a total of 43,312 room nights over the 7-year period. Resort units added the second largest number of room nights between 2010 and 2017, adding 16,729 room nights over the study period.

Although more residential homes were used for tourism purposes in 2017 than in 2010, 73% of all filled room nights in 2017 were in resort and hotel properties. Residential homes represented 13% of all filled room nights in 2017, up 1% from the share these properties represented in 2010. In total, tourists stayed in residential housing units for 20,921 more room nights in 2017 than in 2010, however resort units added 51,215 room nights over the same period.

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