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Indianapolis Metropolitan Area Housing Affordability Report:

*The Data on Boone, Hamilton,
Hancock, Hendricks, Johnson,
Madison, Marion, Morgan,
Putnam, and Shelby Counties*

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ABOUT THE AUTHOR

Steven L. Byers, Ph.D. is the senior economist with the Common Sense Institute. Steven's Experience as an economist spans twenty-three years, including work at federal regulatory agencies (SEC, CFTC, PCAOB) and quantitative economic analysis supporting international trade litigation cases brought before the U.S. International Trade Commission.

ABOUT COMMON SENSE INSTITUTE

Common Sense Institute is a non-partisan research organization dedicated to the protection and promotion of the economy. CSI is at the forefront of important discussions concerning the future of free enterprise and aims to have an impact on the issues that matter most to citizens.

CSI's mission is to examine the fiscal impacts of policies, initiatives, and proposed laws so that citizens are educated and informed on issues impacting their lives. CSI employs rigorous research techniques and dynamic modeling to evaluate the potential impact of these measures on the economy and individual opportunity.

Common Sense Institute was founded in 2010 originally as Common Sense Policy Roundtable. CSI's founders were a concerned group of business and community leaders who observed that divisive partisanship was overwhelming policymaking and believed that sound economic analysis could help Coloradans make fact-based and *common sense* decisions.

TEAMS & FELLOWS STATEMENT

CSI is committed to independent, in-depth research that examines the impacts of policies, initiatives, and proposed laws so citizens are educated and informed on issues impacting their lives. CSI's commitment to institutional independence is rooted in the individual independence of our researchers, economists, and fellows.

At the core of CSI's mission is belief in the power of the free enterprise system. Our work explores ideas that protect and promote jobs and the economy, and the CSI team and fellows take part in this pursuit with academic freedom. Our team's work is guided by data-driven research and evidence.

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Indianapolis Metro Area Housing Affordability Report: January 2023

The cost of housing in the Indianapolis metro area has made it a more expensive place to live. Since 2015, the price of housing in the Indianapolis metro area has exceeded the U.S. average. Significant fluctuations in demand during the pandemic, coupled with a growing supply shortage due to lagging development, have created the conditions for a tight housing market. Mortgage interest rates have also climbed from their 30-year historic lows, increasing costs on the purchase of a home. Although rising rates may provide some relief in terms of demand for housing, permitting for new housing units is also falling and actual home completions will decline as a result.

This report analyzes trends in housing affordability between 2005 and November 2022 (the most current permitting data) and estimates whether there is a deficit or surplus of housing units across the following counties in and around the Indianapolis metro area: Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Putnam, and Shelby. Data sources used and their most recently availability include: the American Community Survey (2021), U.S. Department of Housing and Urban Development (November 2022), the National Association of Homebuilders (2020), S&P CoreLogic Case-Shiller Home Price Indices (3rd Quarter 2022), Zillow (December 2022), and the Indiana Business Research Center (2022). The housing deficit/surplus in 2022 is estimated using forecasts of county populations, average household sizes, and permitting data. It is important to note that the housing unit deficit/surplus estimates may change upon each new data update and release.

KEY FINDINGS

- **The housing deficit in 2022 is in the range of 18,852 to 61,238. To meet population growth by 2028 and close the housing deficit, between 66,000 and 115,000 housing units will need to be built.**
- **Due to elevated prices and rising interest rates, the affordability of purchasing a home in the Indianapolis metro area is near its lowest point in more than 15 years.** In just the past 8 years, the cost of purchasing an average-price home has increased by a range of 61% to 88%; much of that increase occurred over the last two years.
- **Marion and Madison Counties have experienced the largest decreases in affordability over the last 8 years: 88% and 86% respectively.**
- **In Madison County, 92% of permits issued between 2012 and 2022 were for single-family housing units.** Eight percent of permits were for multi-family structures and 71% of those were for structures with five or more units.
- **Marion County is running the largest deficit of housing unit permits.** In 2022, its housing permit deficit was 3,065 units.
- **Hamilton County has the largest surplus of housing unit permits.** In 2022, the county ran a surplus of permitted housing units between 718 and 1,920.
- **Household incomes have not kept pace with rising housing costs.** Between December 2015 and December 2022, the average hourly wage increased by 28% from

\$23.00 to \$29.34. However, due to the rapidly increasing cost of housing, the number of hours of work required to cover the median mortgage payment increased from 30 hours (about one and a quarter days) to 58 hours (about two and a half days), a 95% increase, as seen in Table 4.

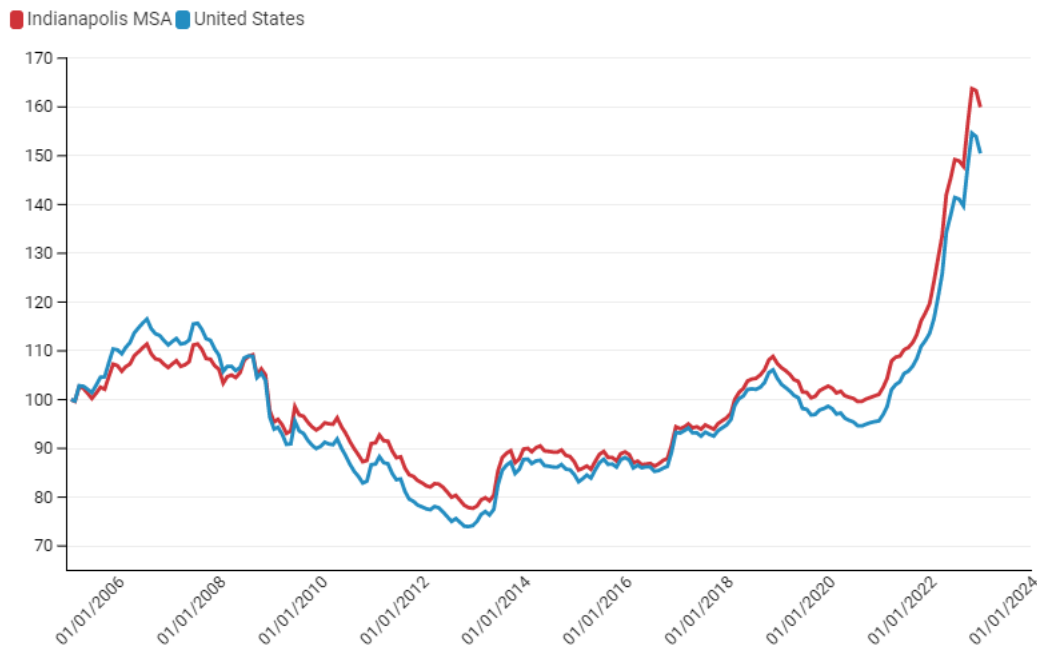
- **Between 11,050 and 19,301 permits are needed annually through 2028 to close the housing supply deficit in the Indianapolis MSA (Metropolitan Statistical Area) and meet the demands of future population growth.** Projected permitting for new housing in 2022 started off well, but it is tapering off as home builders reassess the demand for housing in a higher interest rate environment. From 2005 to 2021, the average annual permitted units issued was 8,765. This historical average is 45% to 79% of what is needed to close the deficit and meet new housing demand by 2028. Based on permit data through October 2022, counties with supply deficits are projected to issue 12,861 permits, which is not enough to close the deficit plus new housing demand by 2028. To avoid a collapse in new home building similar to the one that followed the last recession, permitting must remain at elevated levels for the next several years.
- **Permits in the Indianapolis metro area are increasingly shifting away from single-family homes to multi-family structures.** In 2012, the mix was 80% single-family/20% multi-family. In 2022, the mix was 63% single-family/37% multi-family.
- **Homebuilder confidence has declined by 65% since a recent high in November 2020.** The National Association of Home Builders/Wells Fargo Housing Market Index (HMI) is based on a monthly survey of NAHB members designed to take the pulse of the single-family housing ^[100]. The index can range between 0 and 100, 0 being the lowest confidence and 100 the highest confidence. In December, the NAHB/Wells Fargo Housing Market Index for the Midwestern region was 30, having fallen for 9 straight months from 91, indicating a decrease in homebuilder confidence and a subsequent decrease in new housing going forward.

DECLINING AFFORDABILITY AS MEASURED BY THE HOMEBUYER MISERY INDEX

The “Indianapolis Metro Area Homebuyer Misery Index,” developed by the Common Sense Institute, captures the impact of housing prices and mortgage rates on the affordability of purchasing a new home. The metro-area Homebuyer Misery Index is based on 30-year mortgage rates and Zillow home prices for the counties under consideration.

The mortgage rates are converted into an index with 2005 as its base year. 2005 is the base year due to the availability of home price data from Zillow. The mortgage rate index is then added to the Zillow home price index and normalized. The following graph shows the Indianapolis Metro Area Homebuyer Index based on ten counties versus the U.S. Homebuyer Misery Index. The Indianapolis Metro Area index closely tracks changes in the U.S. Homebuyer Misery Index over time. The substantial increase in both indices from 2012 to the end of 2020 was primarily a function of home prices increasing. Beginning in 2021, home prices went up dramatically and mortgage rates more than doubled by October 2022, consequently the cost to purchase an average priced home went up by 58%. In the last two months of 2022, the misery indices have declined as home prices and mortgage rates have fallen.

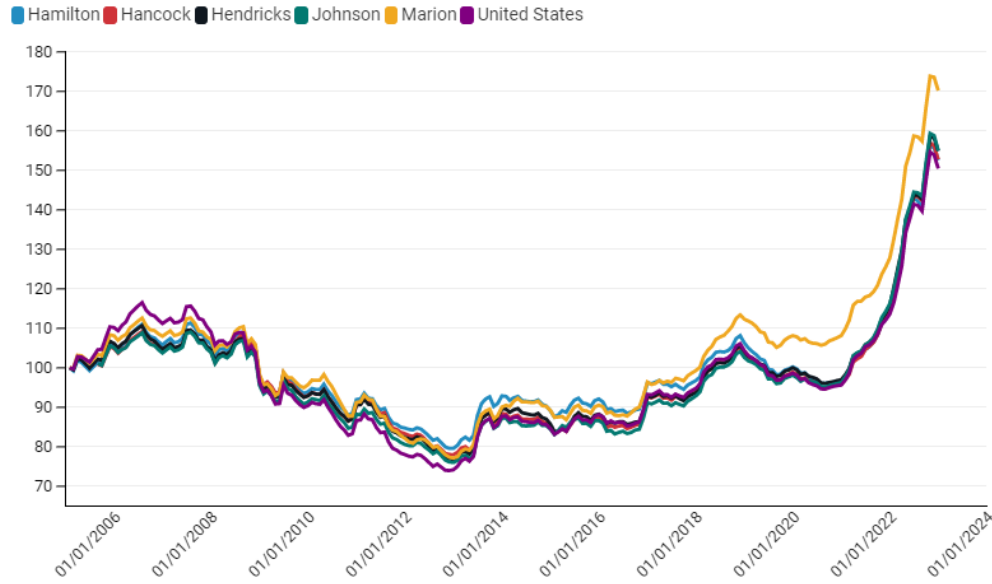
Indianapolis Metro Area Homebuyer Misery Indices



Source: Zillow

The county indices must be viewed as measuring the changes in affordability for each county in isolation and not relative to overall affordability. For example, home prices are highest in Hamilton and lowest in Shelby, but the largest change in affordability has occurred in Madison County. The significant increase in the index value over the last two-and-a-half years reflects a large decrease in home affordability. CSI shows the ten counties relative to each other and the U.S. in two graphs. The first graph shows those counties whose indices were generally above the U.S., and the second graph shows the counties whose indices were below the U.S. The graphs are useful for evaluating and comparing trends in each county to each other and the U.S., but to determine the degree to which a county became more or less affordable relative to the others, the change in the indices must be calculated between two points in time as we have done in **Table 1**. As shown in the following graph, over the last two years, the indices for Hamilton, Hancock, Hendricks, Johnson, and Marion counties were higher than the U.S. Homebuyer Misery Index, with Marion the clear outlier since at least 2012.

Counties Where the Homebuyer Misery Index is Above the U.S. Homebuyer Misery Index

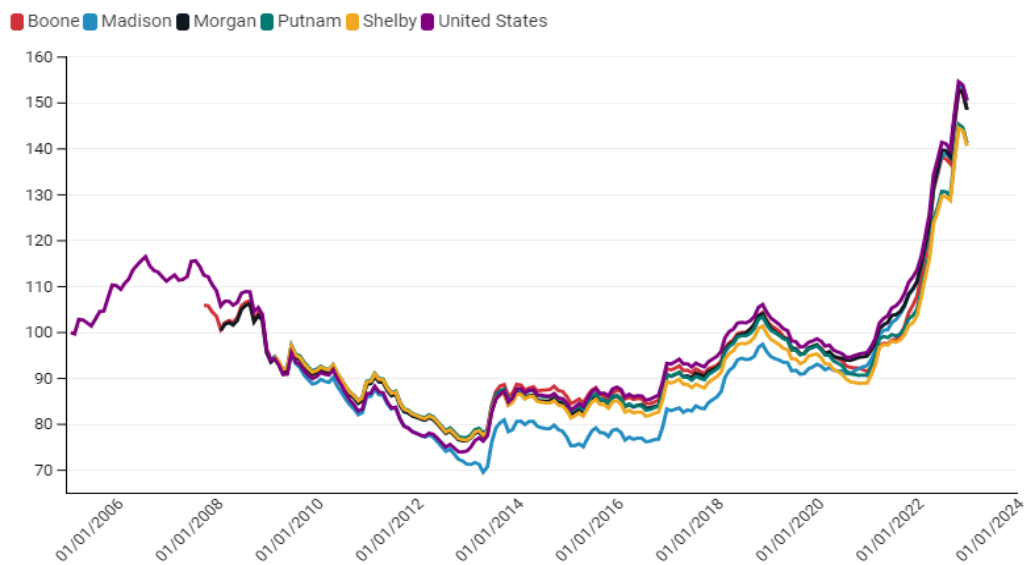


Source: Zillow

The graph below shows the counties whose indices are below the U.S. Homebuyer Misery Index since 2005, these include Boone, Madison, Morgan, Putnam, and Shelby Counties.

Separate graphs of each county’s Homebuyer Misery Index compared to the national Misery Index and the Case-Shiller Index for the Indianapolis MSA can be found in **Appendix A.**

Counties Where the Homebuyer Misery Index is Below the U.S. Homebuyer Misery Index



Source: Zillow

The change in affordability as of December 2022 relative to January of the previous eight years is shown in **Table 1**. For example, in Marion County, since January 2014, the cost to purchase an average-price home rose by 88%. Home affordability has declined in all ten counties since 2014, but most of the decline has come after 2020. Since May of this year, home prices have leveled off or decreased slightly but affordability has continued to worsen as mortgage rates have increased. Marion County experienced the largest change in affordability in the Indianapolis metro area. In addition to Marion, Madison, Johnson, Hendricks, and Hancock Counties all exceeded the U.S. for decreases in affordability. Boone, Hamilton, Morgan, Putnam, and Shelby Counties experienced slower declines in affordability.

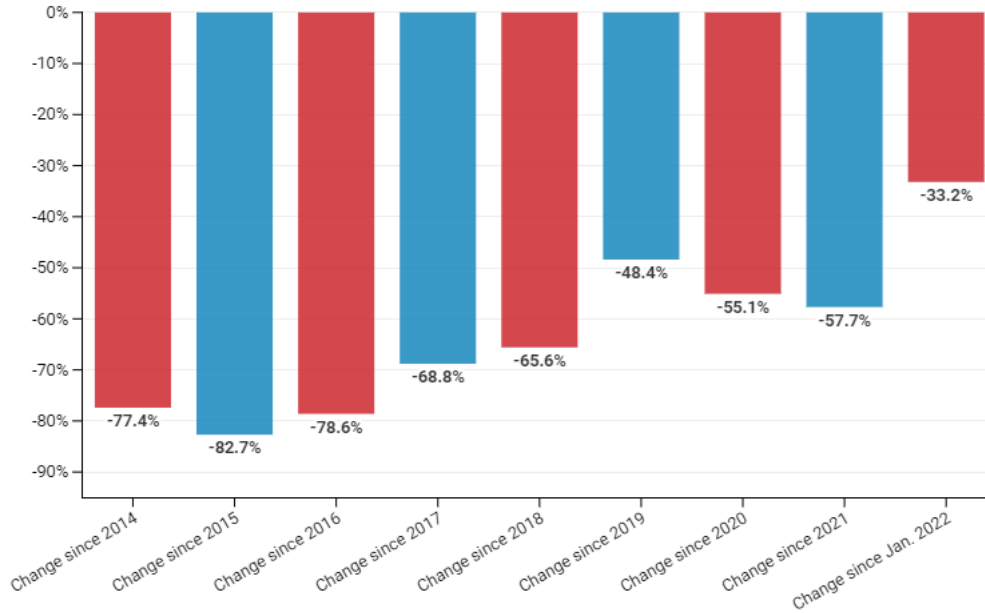
Table 1- Percent Change in Housing Affordability by County in December 2022 Relative to January of Years 2014–2022 Based on the Misery Index – Indianapolis Metro Area

% Change as of Dec. 2022 Since:	Boone County	Hamilton County	Hancock County	Hendricks County	Johnson County	Madison County	Marion County	Morgan County	Putnam County	Shelby County	United States
Jan 2014	-67%	-64%	-72%	-72%	-77%	-86%	-88%	-70%	-61%	-62%	-71%
Jan 2015	-72%	-71%	-79%	-80%	-83%	-95%	-90%	-77%	-67%	-69%	-77%
Jan 2016	-69%	-65%	-74%	-75%	-78%	-90%	-87%	-72%	-63%	-65%	-70%
Jan 2017	-61%	-58%	-64%	-66%	-69%	-80%	-76%	-63%	-55%	-57%	-61%
Jan 2018	-59%	-57%	-61%	-65%	-66%	-75%	-71%	-60%	-53%	-55%	-58%
Jan 2019	-44%	-43%	-47%	-48%	-50%	-57%	-51%	-45%	-38%	-41%	-44%
Jan 2020	-52%	-52%	-54%	-54%	-57%	-61%	-57%	-52%	-45%	-47%	-52%
Jan 2021	-62%	-58%	-59%	-59%	-60%	-62%	-57%	-56%	-55%	-57%	-57%
Jan 2022	-37%	-33%	-33%	-33%	-33%	-35%	-33%	-33%	-34%	-35%	-32%

The following chart shows the average change in affordability for the ten counties combined for every year going back to 2014 through December 2022. Nearly 40% of the change has occurred since January 2022 and 75% has occurred since the beginning of 2021.

Changes in Housing Affordability in the Indianapolis Metro Area

Negative Numbers Indicate Reduced Affordability



Source: Zillow

The Wall Street Journal and Realtors.com began producing their Emerging Housing Markets Index in spring 2021 and has now published six quarterly estimates. The index identifies the top metro areas for home buyers seeking an appreciating housing market, strong local economies, and appealing lifestyle amenities. Three hundred of the most populous core-based statistical areas as measured by the U.S. Census Bureau are evaluated using two principal areas: real-estate markets (50%) and economic health (50%). It utilizes eleven key indicators that are weighted and summed to create a single measure: real-estate supply (16.6%), real-estate demand (16.6%), medium home listing price trend (16.6%), unemployment (6.25%), wages (6.25%), regional price parities (6.25%), amenities (6.25%), small businesses (6.25%), and property taxes (6.25%).ⁱⁱ

Table 2 shows the rankings of the Indiana core-based statistical areas relative to all three hundred most populous areas included in the index. Note that these are cities as opposed to counties. The Indianapolis-Carmel-Anderson MSA is in the lower half of all metro areas in terms of future home price appreciation. This index provides some perspective that while housing affordability is near record lows, as of the latest data from fall 2022, Elkhart-Goshen, Fort Wayne, and Lafayette-West Lafayette are ranked in the top ten housing markets and are viewed as attractive given the potential for prices to continue to rise and for other quality of life amenities and economic factors.

Table 2 - Wall Street Journal/Realtor.com Emerging Housing Markets Index, Ranked Relative to 300 Metropolitan Statistical Areas

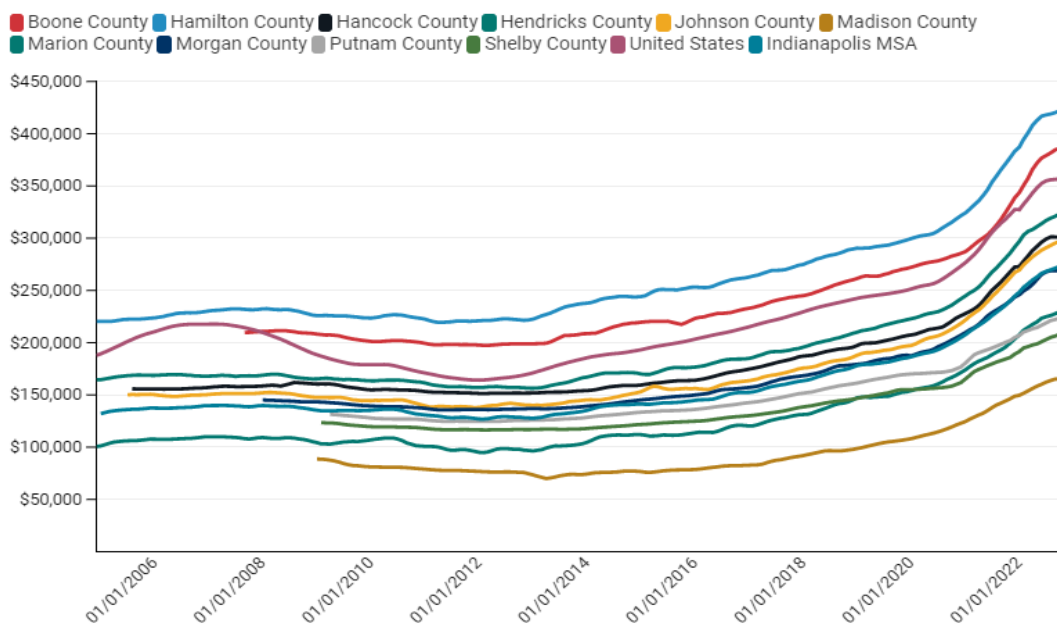
	Spring 2021	Summer 2021	Fall 2021	Spring 2022	Summer 2022	Fall 2022
Bloomington	190	171	175	218	204	212
Elkhart-Goshen	50	13	1	12	1	3
Fort Wayne	34	3	12	13	4	5
Indianapolis-Carmel-Anderson	170	177	154	162	160	138
Lafayette-West Lafayette	6	21	21	59	24	6
Terre Haute	258	159	169	191	176	236

In this table, Indiana cities are ranked among the three hundred most populous metro areas in the U.S. The index identifies the top metro areas for home buyers seeking an appreciating housing market, a strong local economy and appealing lifestyle amenities.

HOME PRICES

The following graph shows home price indices for ten counties based on Zillow prices as well as the S&P/Case-Shiller Home Price Indices for the United States and the Indianapolis MSA. Home prices in the Indianapolis metro area increased by 83% since 2013 and 53% between the beginning of the COVID-19 pandemic and December 2022. Since mid-2022, home price growth the Indianapolis metro area has begun to taper off after continually increasing since 2012. Nationally, home prices increased by 48% between the beginning of the COVID-19 pandemic and December 2022 and have declined by 1.1% since May 2022.

Indianapolis Metro Area Home Prices



Source: Zillow

Table 3 shows the average home prices in the ten counties in this study and the U.S. overall. Among the metro counties, Hamilton is ranked 1st (highest average price) and Madison is 10th (lowest average price). Only Boone and Hamilton counties are more expensive than the U.S. average. An important assumption for estimating a housing surplus/deficit is that a resident that cannot afford a housing unit in their current county cannot afford one in a more expensive county.

Table 3 – December 2022 Home Prices Ranked and Percentage of U.S. Average Home Price			
Region	Average Home Price	Rank	% Of U.S. Average
Boone	\$386,046	2	108%
Hamilton	\$421,725	1	118%
Hancock	\$301,051	4	84%
Hendricks	\$323,083	3	90%
Johnson	\$296,895	5	83%
Madison	\$165,522	10	46%
Marion	\$229,590	7	64%
Morgan	\$268,984	6	75%
Putnam	\$223,415	8	63%
Shelby	\$207,816	9	58%
U.S.	\$357,319		

HOURS OF WORK NEEDED TO AFFORD A HOME MORTGAGE

To measure the impact on the average homeowner in the Indianapolis metro area, Common Sense Institute (CSI) calculated the number of hours that one would have to work while earning the average hourly wage in December from 2013 to 2022 to cover the monthly mortgage payments shown in **Table 4**. Over just the last 12 months, driven primarily by the increase in mortgage rates, an additional 22 hours of work per month has become necessary to cover the mortgage on a newly purchased average-price home.

Table 4 – Indianapolis Metro Area Home Prices, Mortgage Rates, Monthly Payment, Wage Rates, and Hours Required to Cover Monthly Mortgage Payment

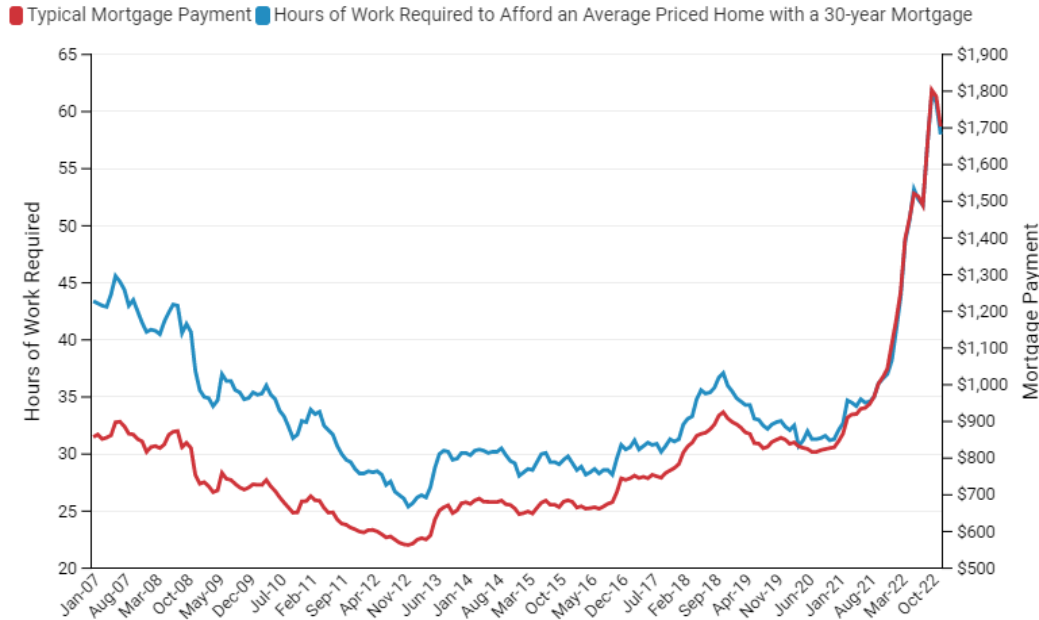
Date	Average Home Price	30-Year Mortgage Rate	Mortgage Payment with 20% Down	Average Wage Rate	Hours of Work at the Average Wage Rate Required to Cover Mortgage Payment	% Annual Change in Hours of Work Required
Dec 2013	\$134,288	4.46%	\$658	\$22.53	29.58	
Dec 2014	\$141,168	3.86%	\$662	\$22.71	28.88	-2.9%
Dec 2015	\$144,155	3.96%	\$681	\$23.00	29.53	2.1%
Dec 2016	\$152,359	4.20%	\$707	\$24.15	29.65	3.6%
Dec 2017	\$162,952	3.95%	\$766	\$24.84	31.32	0.9%
Dec 2018	\$176,452	4.64%	\$925	\$25.26	37.13	15.6%
Dec 2019	\$185,447	3.72%	\$850	\$26.04	32.83	-8.7%
Dec 2020	\$204,925	2.68%	\$827	\$26.46	31.23	-4.7%
Dec 2021	\$244,530	3.10%	\$1,021	\$28.23	36.60	18.1%
Dec 2022	\$274,276	6.35%	\$1,793	\$29.34	58.17	57.3%

Source: Federal Reserve Bank of St. Louis (FRED)

The graph below shows the evolution of monthly mortgage payments on an average-price home and the required hours of work necessary to cover the payment. Required hours fluctuated around 28 from January 2007 until the summer of 2020, after which it increased dramatically as home prices rose. Beginning in the spring of 2022, mortgage rates have increased as the Federal Reserve addresses inflation. Since the start of the pandemic in December 2019, the hours of work required to afford a mortgage on an average-price home increased by 76% from 33 hours to 58 hours (about two and a half days). In the last two months of 2022, home prices and mortgage rates declined, reducing the hours required to work to pay the mortgage on an average-price home.

Mortgage Affordability in the Indianapolis Metro Area

Hours of Work Required to Afford an Average Priced Home with a 30-year Mortgage



Source: Zillow and CSI calculations

INDIANAPOLIS METRO AREA HOUSING SUPPLY SHORTAGE

The Indianapolis metro area has failed to build enough housing to keep pace with demand. Standard housing market reports like those developed by the National Association of REALTORS® track inventory based on homes listed for sale. What those reports do not capture is the total stock of homes needed to maintain a healthy housing market. A healthy housing market is one that has sufficient inventory to maintain efficient vacancy rates, prevent overcrowding and cost burdening, and accommodate demolitions and replacements over time.

CSI estimates the number of homes in ten counties in and around the Indianapolis metro area needed to achieve a healthy housing market under two scenarios. Each scenario is intended to measure the difference between the actual number of homes in a county and the number of homes needed to maintain a healthy market for the local population. The first scenario calculates a housing deficit or surplus based on a low estimate of homes held off the market for purchase by the local population. The second scenario calculates a housing deficit or surplus based on a high estimate of homes held off the market.

Housing units and households – Each scenario uses estimates of housing units and households from both the U.S. Census Bureau’s American Community Survey (ACS) and the Indiana Business Research Center. We adjust the housing units by removing those that are considered uninhabitable by virtue of having no kitchen or plumbing.

Homes held off the market – Total homes held off the market is the number of existing housing units not available for purchase. The estimate includes a range of second homes at

the county level released by the National Association of Homebuildersⁱⁱⁱ and an estimate of uninhabitable homes from ACS. **Table 5** shows the range of NAHB estimates of the share of housing stock allocated to second homes. All counties apart from Putnam have between 0% and 4.99% of the housing stock allocated to second homes. Putnam county has a range of 5% to 10%.

Table 5 – NAHB Estimates of 2020 Percent of Housing Stock Allocated to Second Homes

	Boone	Hamilton	Hancock	Hendricks	Johnson	Madison	Marion	Morgan	Putnam	Shelby
Low	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
High	4.99%	4.99%	4.99%	4.99%	4.99%	4.99%	4.99%	4.99%	10%	4.99%

Desired ratio of total units to local population – To estimate the target number of housing units, the value of 1.1 housing units per household was used to represent a healthy market. This value is derived from the historic average ratio of vacancy rates in the U.S. and was the basis for a housing supply report done for the state of Oregon.^{iv} **Table 6** shows the forecasted change in population and the number of households in 2028 and 2033.

Table 6 - Change in Population and Household by County in 2028 and 2033

	Population		Households	
	2028	2033	2028	2033
Indianapolis Metro Area	113,382	208,567	43,266	79,364
Boone	7,643	13,807	2,940	5,312
Hamilton	45,185	87,080	16,768	32,315
Hancock	4,961	9,598	1,986	3,842
Hendricks	16,300	32,420	5,986	11,906
Johnson	11,015	20,586	4,166	7,786
Madison	-2,798	-5,387	-1,156	2,225
Marion	30,094	49,353	12,201	20,010
Morgan	902	1,302	335	484
Putnam	-230	-355	-84	-130
Shelby	310	164	122	65

Using the scenarios discussed above, the deficit in housing units in 2022 is estimated to have been between 18,852 and 61,328 units. **Table 7** presents summary results for the ten counties in the Indianapolis metro area considered in this study. CSI will continue to monitor new data as it becomes available and will amend the estimates and methodology as required.

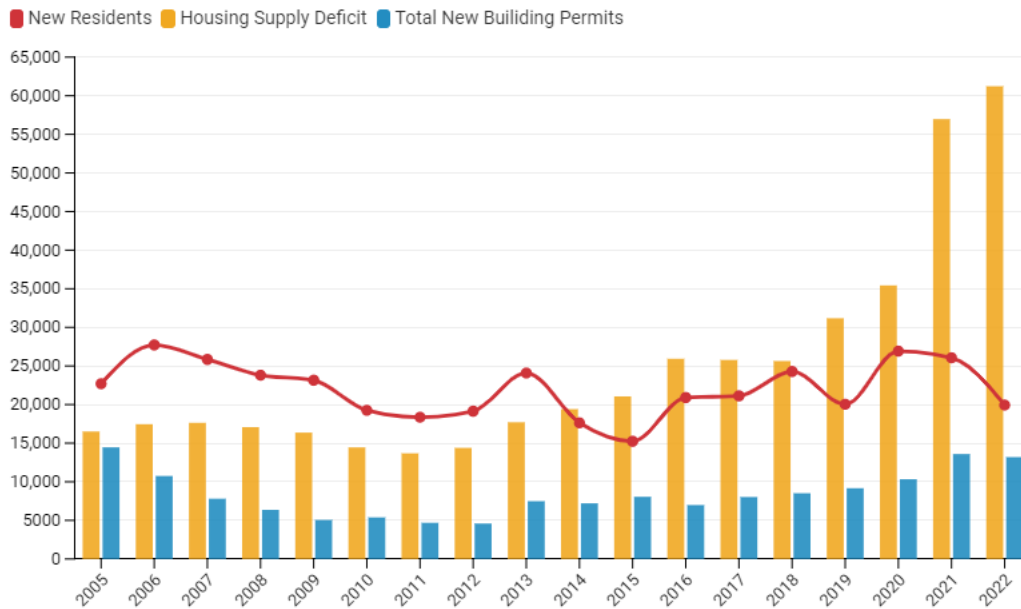
Table 7 - Housing Deficit/Surplus through December 2022

Region	Adjusted Housing Stock 2022	Housing Deficit Rank in 2022 Relative to the Indianapolis Counties		Housing Deficit/Surplus in 2022		Deficit/Surplus as a Percent of 2022 Existing Stock of Housing Units	
		Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Indianapolis Metro Area	902,688			-18,852	-61,328	2.1%	6.8%
Boone	29,501	6	5	-1,970	-3,442	6.7%	11.7%
Hamilton	144,531	8	9	-4,027	-11,240	2.8%	7.8%
Hancock	34,100	7	6	-2,252	-3,954	6.6%	11.6%
Hendricks	67,818	10	8	-5,671	-9,055	8.4%	13.4%
Johnson	65,079	9	7	-4,059	-7,307	6.2%	11.2%
Madison	58,847	4	4	-323	-3,259	0.5%	5.5%
Marion	438,284	1	10	2,294	-19,576	-0.5%	4.5%
Morgan	29,867	2	3	274	-1,217	-0.9%	4.1%
Putnam	15,167	5	2	-412	-1,168	2.7%	7.7%
Shelby	19,494	3	1	-137	-1,109	0.7%	5.7%

BUILDING PERMITS AND THE HOUSING SUPPLY DEFICIT

The housing supply deficit dropped between 2005 and 2012 and then began to accumulate through 2022 as the population continued to increase (see the following graph). At the same time, even though the number of housing unit permits increased, not enough were issued to close the housing deficit. **Appendix B** provides an equivalent graph for all ten counties.

New Residents, New Unit Permits, and the Housing Supply Deficit - Indianapolis Metro Area



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

To erase the estimated statewide deficit and meet new population-driven demand for housing by 2028, an additional 66,299 to 115,803 permitted units are required in total (11,050 to 19,301 per year). CSI tracks building unit permits by county on a quarterly basis to evaluate whether the level of issuance is sufficient to close the existing housing deficit and meet new demand for housing.

See **Table 8** to see the scenario estimates for each of the ten counties included in this study.

Table 8 - Permits Required to Close the 2022 Deficit and Meet New Housing Demand in Select Counties in 2028

Region	Number of Permits Required to Close the Deficit Plus New Demand for Housing in Deficit Counties by 2028		Permits Issued per Year in Deficit Counties	Deficit/Surplus in Permitted Units Issued in Deficit Counties	
	Scenario 1	Scenario 2	2022 (through November)	2022 Scenario 1	2022 Scenario 2
Indianapolis Metro Area	66,299	115,803	12,861	(1,636)	(7,119)
Boone	5,698	7,309	649	(301)	(569)
Hamilton	22,472	29,684	5,665	1,920	718
Hancock	4,629	6,404	1,347	576	280
Hendricks	12,256	15,640	1,246	(797)	(1,361)
Johnson	9,094	12,511	977	(539)	(1,108)
Madison	(2,856)	5,986	331	807	(667)
Marion	11,127	32,998	2,435	580	(3,065)
Morgan	101	1,687	294	277	13
Putnam	529	1,782	117	29	(180)
Shelby	393	1,801	131	66	(169)
Scenario 1 uses the NAHB low estimate of the share of homes held off the market Scenario 2 uses the NAHB high estimate of the share of homes held off the market					

To erase the estimated statewide deficit and meet new population-driven demand for housing by 2033, an additional 107,676 to 153,639 permitted units are required in total, equating to 9,789 to 13,967 per year (see **Table 9**). Closing the deficit and meeting new housing demand by 2033 requires fewer permits per year than does closing the deficit by 2028, because erasing the 2022 deficit is spread out over an additional five years.

Table 9 - Permits Required to Close the 2022 Deficit and New Housing Demand in Select Counties in 2033

Region	Number of Permits Required to Close the Deficit Plus New Demand for Housing in Deficit Counties by 2033		Permits Issued per Year in Deficit Counties	Deficit/Surplus in Permitted Units Issued in Deficit Counties	
	Scenario 1	Scenario 2	2022 (through November)	2022 Scenario 1	2022 Scenario 2
Indianapolis Metro Area	107,676	153,639	12,861	(819)	(2,992)
Boone	8,553	10,165	649	(129)	(275)
Hamilton	39,574	46,786	5,665	2,067	1,412
Hancock	6,759	8,534	1,347	733	571
Hendricks	18,767	22,152	1,246	(460)	(768)
Johnson	13,284	16,702	977	(231)	(541)
Madison	(6,398)	2,444	331	913	109
Marion	19,717	41,587	2,435	643	(1,346)
Morgan	275	1,861	294	269	125
Putnam	445	1,699	117	77	(37)
Shelby	301	1,709	131	104	(24)
Scenario 1 uses the NAHB low estimate of the share of homes held off the market Scenario 2 uses the NAHB high estimate of the share of homes held off the market					

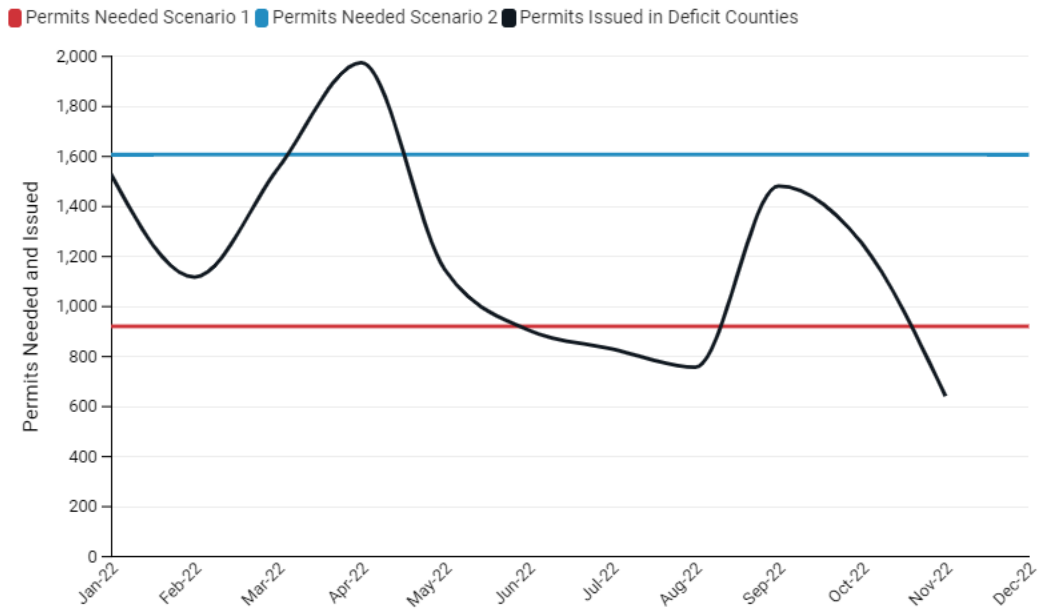
Under scenario 1, based on the permitted unit data through November 2022, six counties, Hamilton, Hancock, Madison, Marion, Morgan, Putnam, and Shelby are on track to issue enough permitted units to close the 2022 housing deficit and meet new housing demand by 2028. Under scenario 2, only Hamilton, Hancock, Madison, and Morgan Counties are on track to issue enough permitted units to do so.

Some counties with housing deficits are consistently issuing enough annual new building unit permits to address local deficits and future housing needs, but these surplus permits do not help alleviate deficits in other counties. In many counties where there are housing deficits, not enough new building unit permits are being issued to cover current deficits let alone new housing demand. Should this continue, the housing supply deficit will continue to grow. The assumption behind this is that surplus houses in one county cannot be moved to counties with deficits and households will not relocate from deficit counties to surplus counties.

The following graph shows the average number of needed housing unit permits in deficit counties required to close the deficit by 2028 for 2 scenarios, and the number of permits issued monthly so far. The red line shows the average monthly required permits to close the 2022 deficit and meet new housing demand by 2028 for scenario 1. The blue line is for scenario 2. In scenario 1, enough permits have been issued in seven months over the first eleven months of 2022 to cover the housing deficit and meet new demand for housing by 2028. However, permitting is trending down as high interest rates are dampening demand for housing and builders are applying for fewer permits. In scenario 2, enough permits were

issued in only one month, April. After April, insufficient permits have been issued to close the deficit and meet new housing demand by 2028. The number of permits issued in deficit counties varies between scenario 1 and 2 because under scenario 2, more counties have supply deficits. Therefore, we are tracking the permits in the additional deficit counties. **Appendix C** provides an equivalent graph for all ten counties.

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Indianapolis Metro Area



Source: HUD

TYPES OF PERMITS ISSUED

Table 10 shows the number of housing unit permits issued in total and by type for the Indianapolis metro area from 2012 through November 2022. Annual permitted units issued has increased from 5,026 in 2012 by 162% to 13,192 in 2022. The share of permitted single-family units issued has gone from 80% in 2012 down to 63% in 2022. The share of permits for multi-family structures has increased from 20% in 2012 to 37% in 2022. 35% of all permitted units are for structures with five or more units. The number of annual permits issued from 2012 through 2022, by county and type, are shown in **Appendix D**. **Note: Percentages in multi-family subcategories may not always add up to the total for all multi-family structures due to rounding.**

Table 10 – Indianapolis Metro Area Permits Issued by Percentage of Type Issued

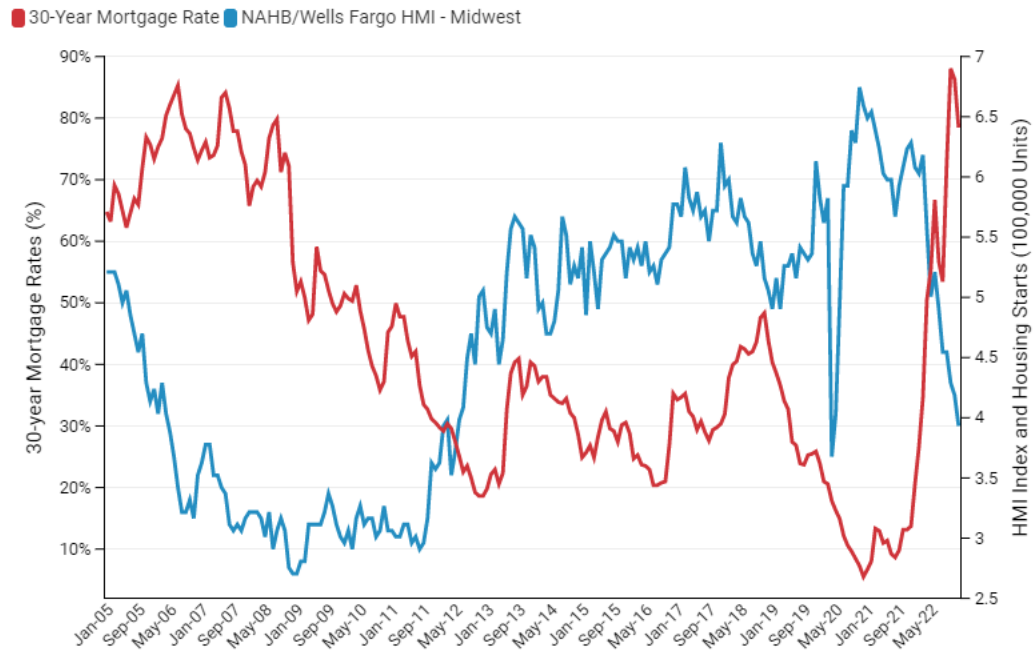
Year	Total Units	Units in Single-Family Structures	Units in All Multi-Family Structures	Units in 2-unit Multi-Family Structures	Units in 3-and 4-unit Multi-Family Structures	Units in 5+ Unit Multi-Family Structures
2012	5,026	80%	20%	1%	3%	16%
2013	8,196	62%	38%	2%	1%	35%
2014	7,958	62%	38%	1%	2%	35%
2015	8,687	59%	41%	1%	1%	39%
2016	7,728	75%	25%	3%	1%	21%
2017	9,000	74%	26%	2%	0%	24%
2018	8,810	82%	18%	1%	0%	17%
2019	9,652	73%	27%	1%	1%	25%
2020	10,938	76%	24%	2%	1%	20%
2021	13,363	75%	25%	2%	1%	22%
2022	13,192	63%	37%	1%	1%	35%
Total 2012 - 2022	102,550	71%	29%	2%	1%	27%

GOING FORWARD

As shown in the following graph, as mortgage rates (red line) have increased since March 2022, demand for housing has begun to taper off. In response, many home builders are re-evaluating their plans for new housing. The November Housing Market Index (HMI) (blue line) released by the National Association of Homebuilders, which reflects builder confidence in the market for newly built single-family homes, fell for the 10th straight month to its lowest point since April 2020.^v

The housing deficit remains and, if builders reduce annual production, which looks increasingly likely based on the HMI, it will not decrease. If population growth continues as forecasted, absent sufficient new housing units, the deficit will grow. Developers might consider changes to the mixture of housing they build, transition to building higher-density and less expensive housing so that the deficit can be erased even in a high interest rate environment.

NAHB/Wells Fargo Housing Market Index (HMI), New Single-Family Starts and Mortgage Rates



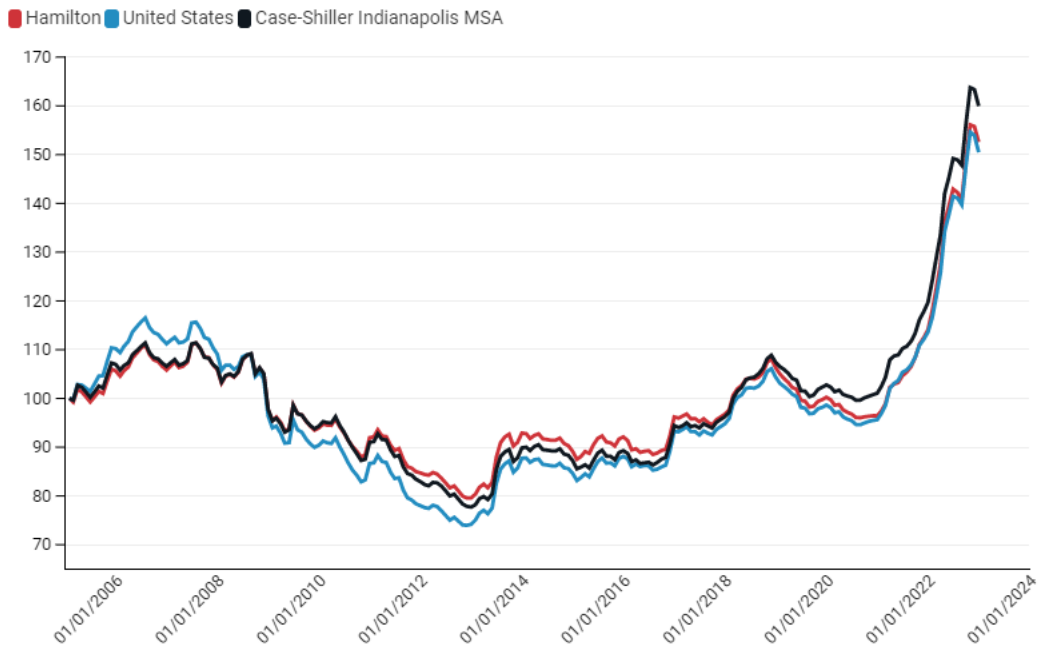
APPENDIX A – COUNTY HOMEBUYER MISERY INDICES

Boone County Homebuyer Misery Index



Source: Zillow

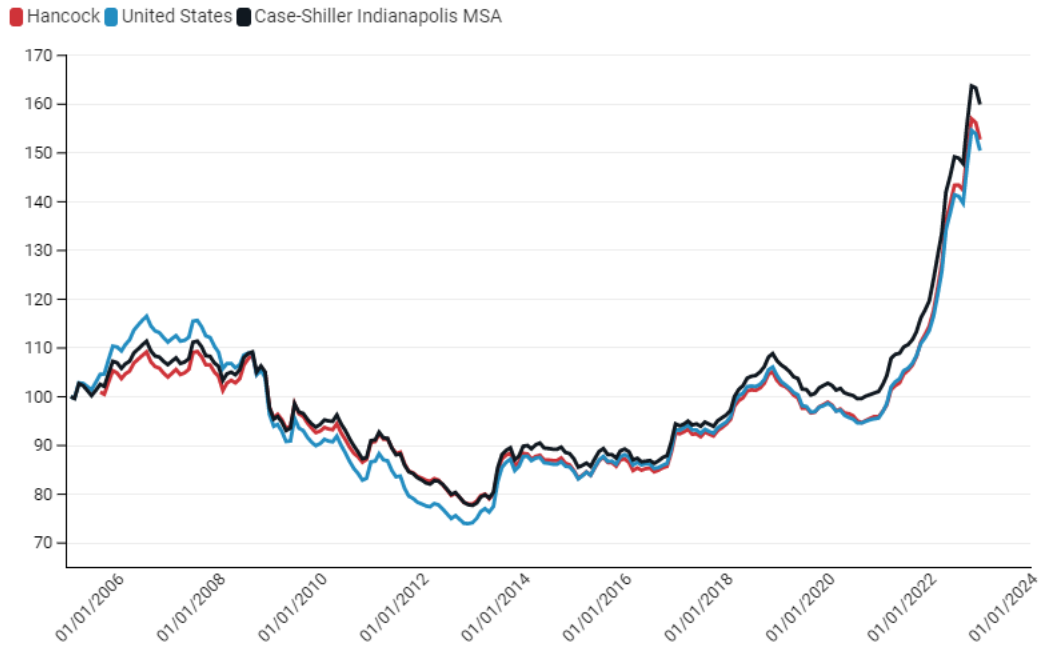
Hamilton County Homebuyer Misery Index



Source: Zillow

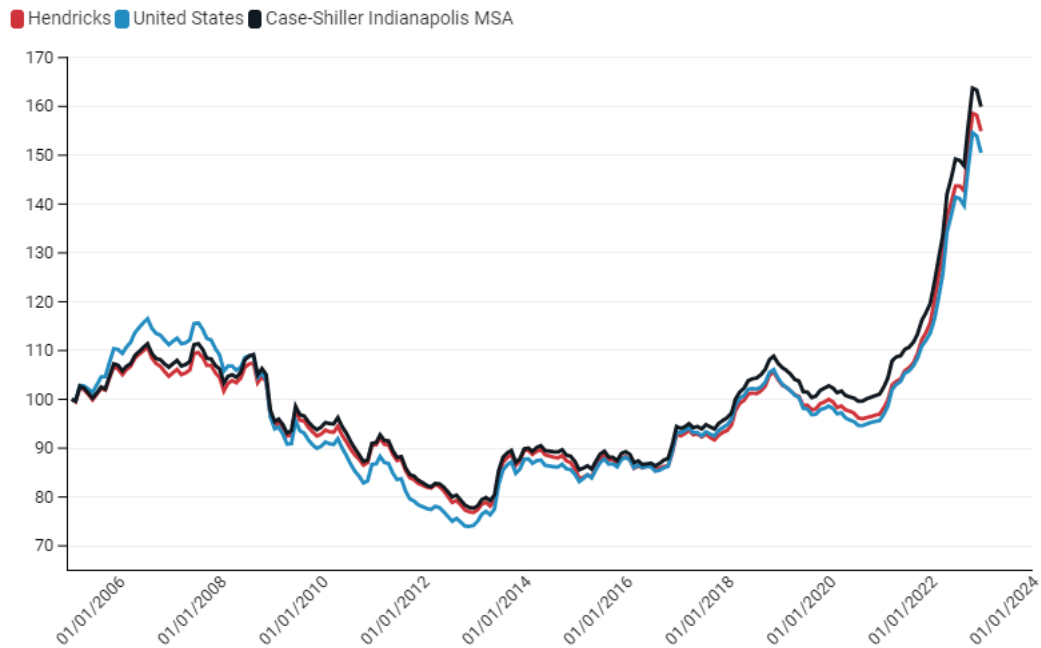
Appendix A – County Homebuyer Misery Indices

Hancock County Homebuyer Misery Index



Source: Zillow

Hendricks County Homebuyer Misery Index



Source: Zillow

Appendix A – County Homebuyer Misery Indices

Johnson County Homebuyer Misery Index



Source: Zillow

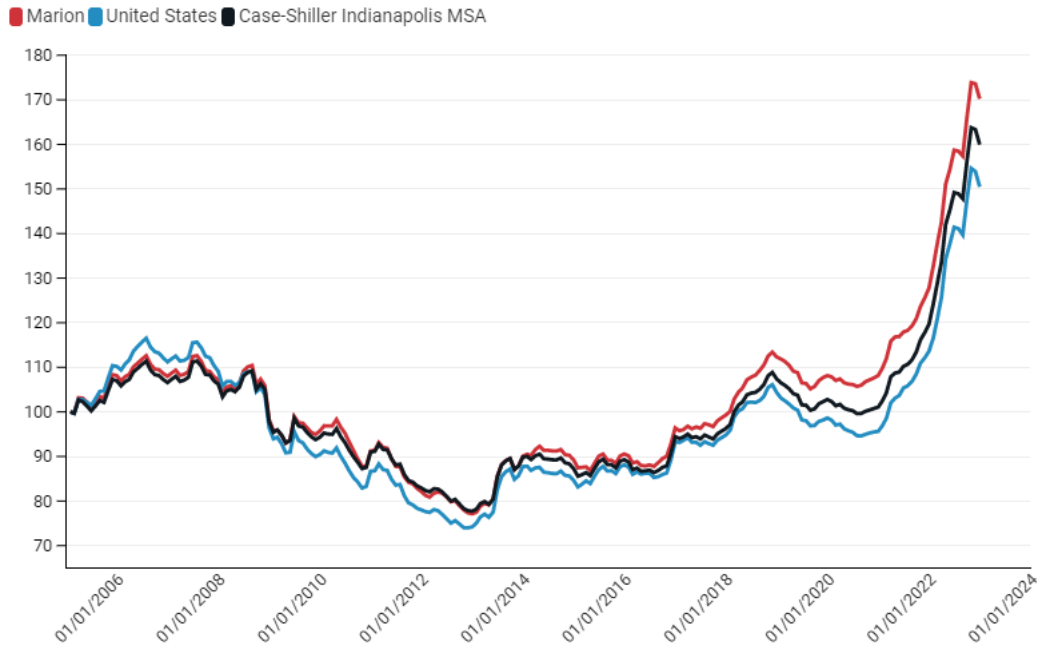
Madison County Homebuyer Misery Index



Source: Zillow

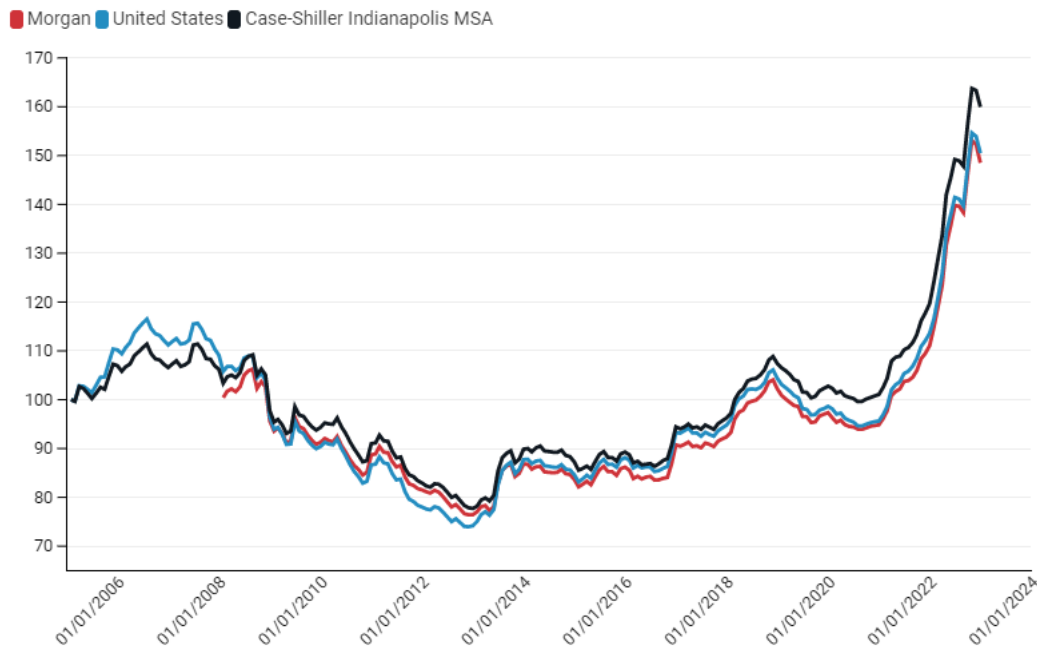
Appendix A – County Homebuyer Misery Indices

Marion County Homebuyer Misery Index



Source: Zillow

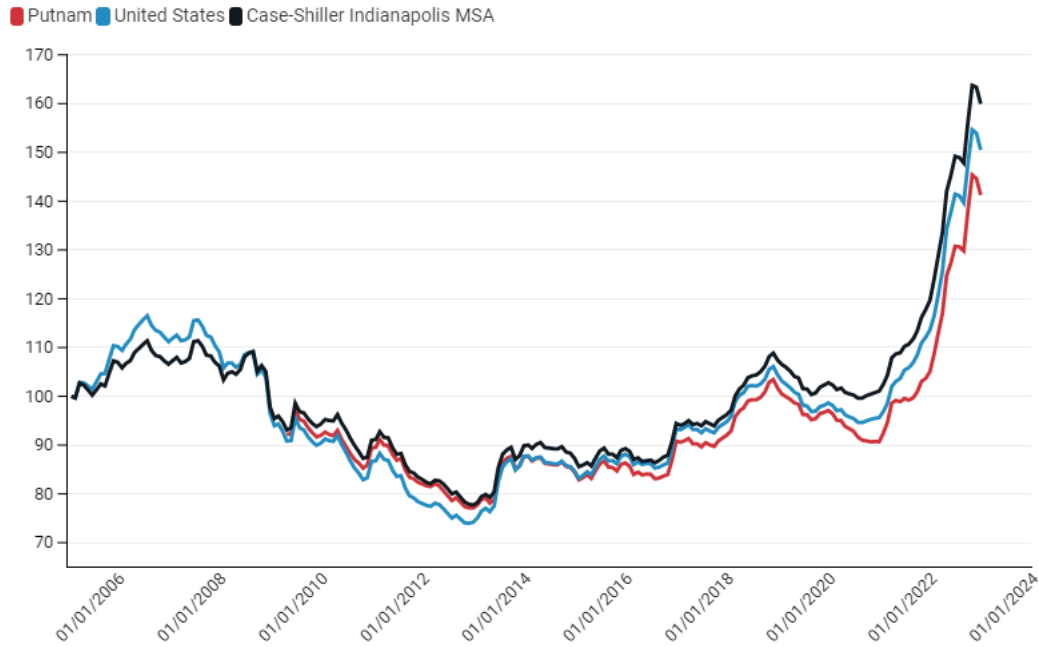
Morgan County Homebuyer Misery Index



Source: Zillow

Appendix A – County Homebuyer Misery Indices

Putnam County Homebuyer Misery Index



Source: Zillow

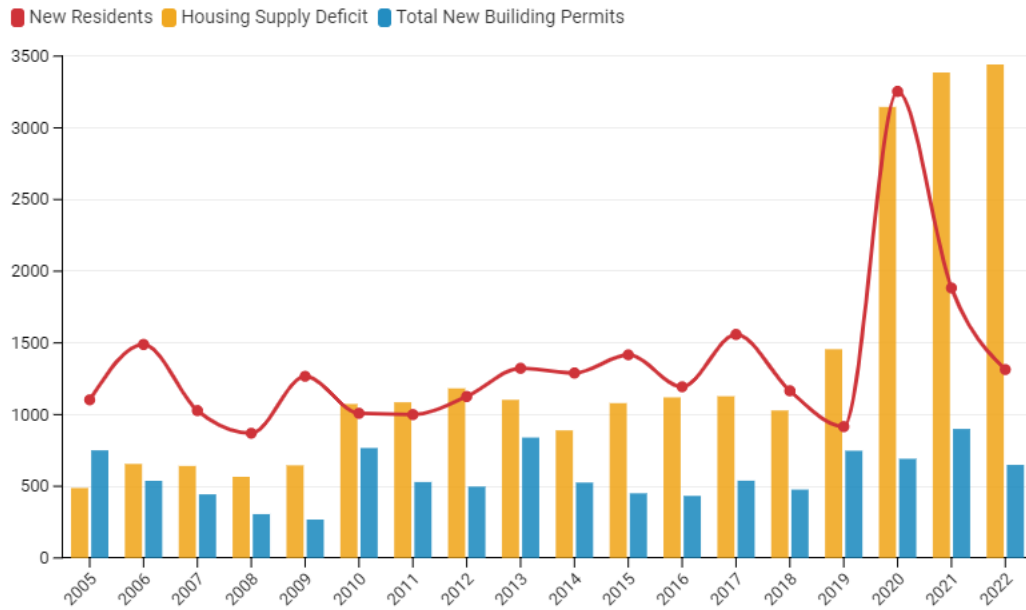
Shelby County Homebuyer Misery Index



Source: Zillow

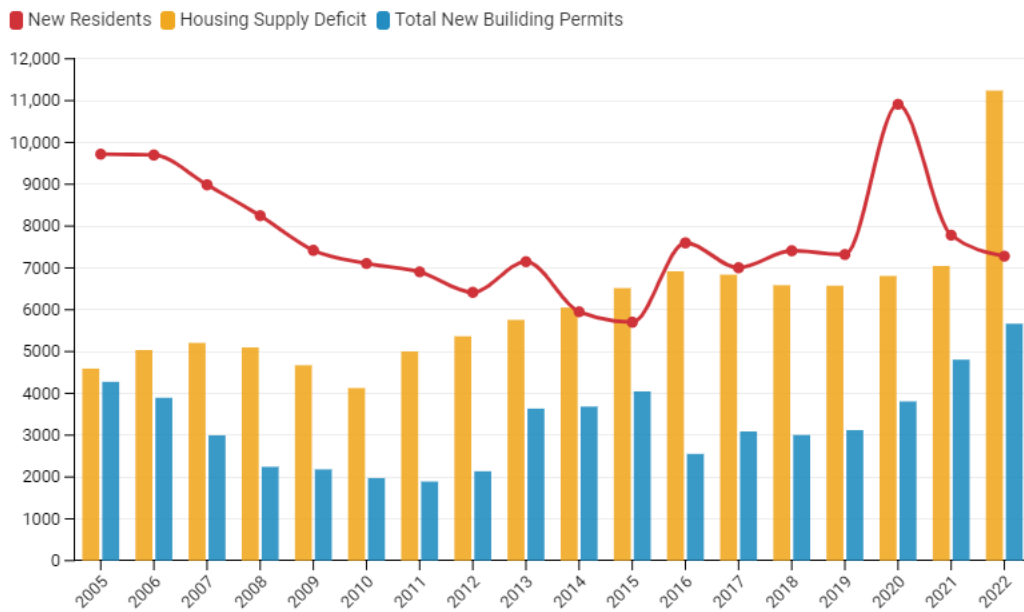
APPENDIX B – NEW RESIDENTS, PERMITS, AND THE HOUSING SUPPLY DEFICIT

New Residents Growth, New Unit Permits, and the Housing Supply Deficit - Boone County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

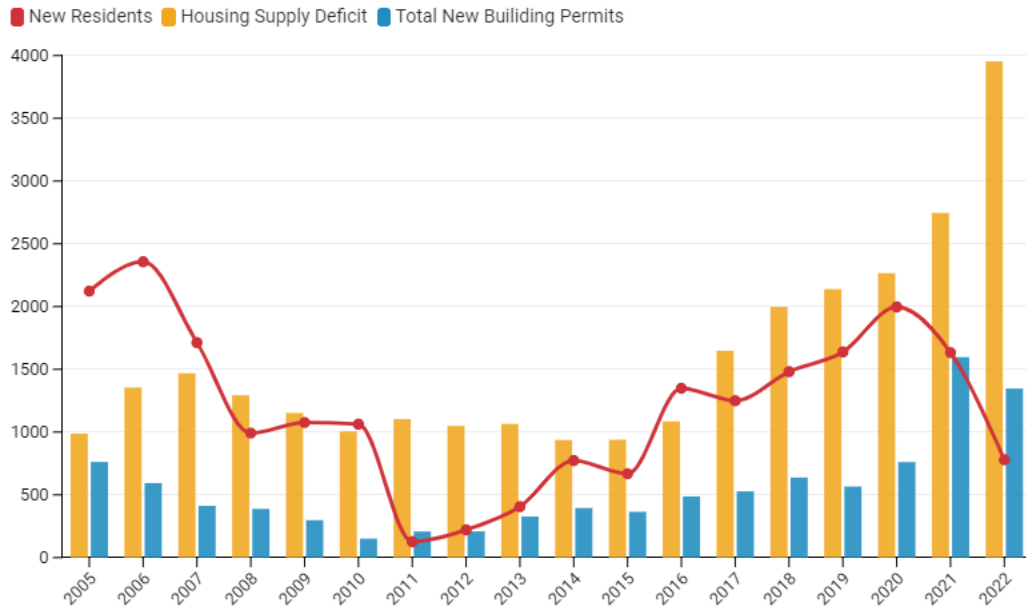
New Residents, New Unit Permits, and the Housing Supply Deficit - Hamilton County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

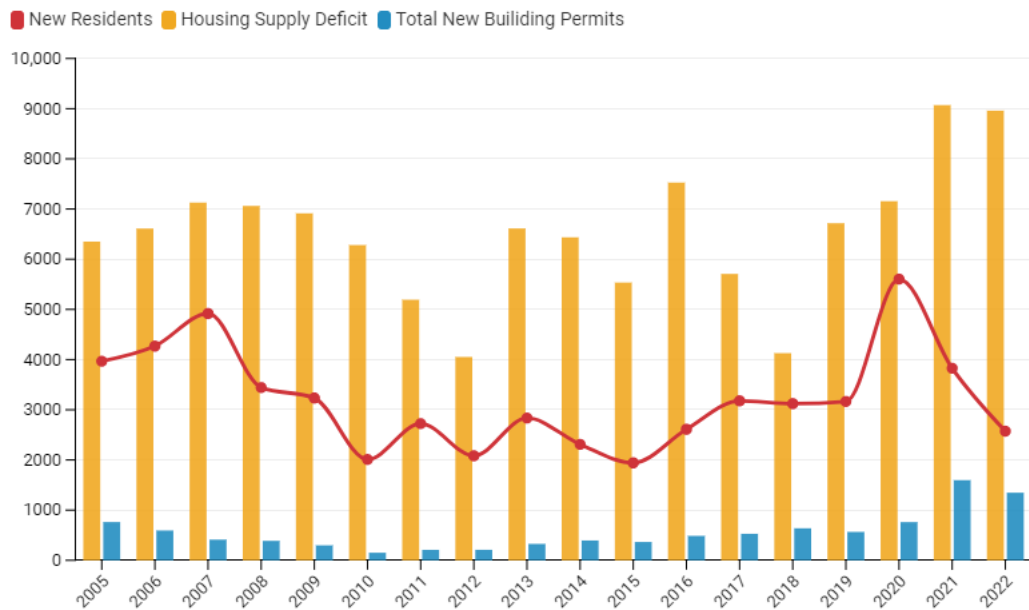
Appendix B – New Residents, Permits, and the Housing Supply Deficit

New Residents, New Unit Permits, and the Housing Supply Deficit - Hancock County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

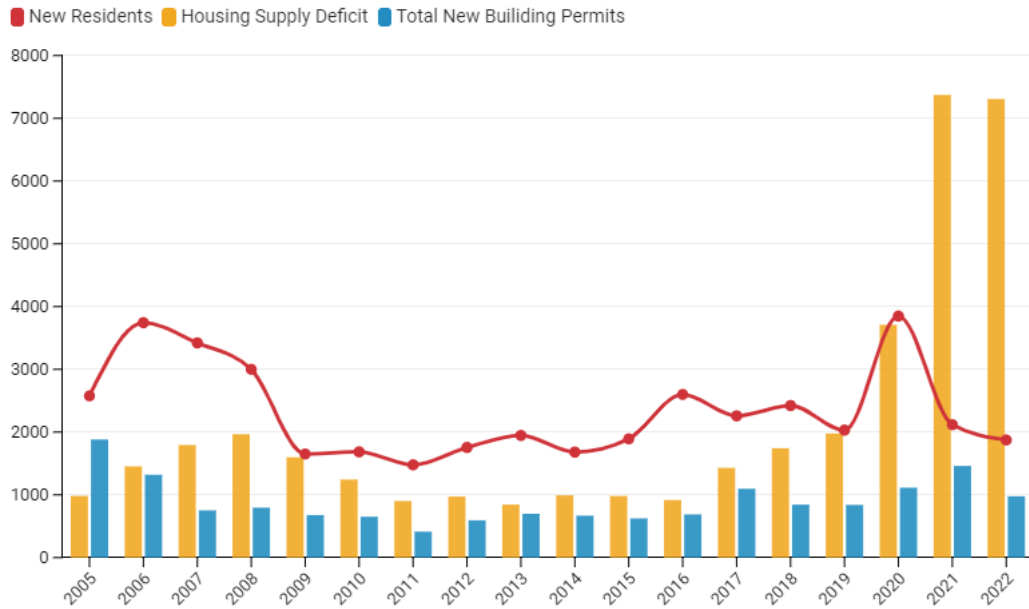
New Residents, New Unit Permits, and the Housing Supply Deficit - Hendricks County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

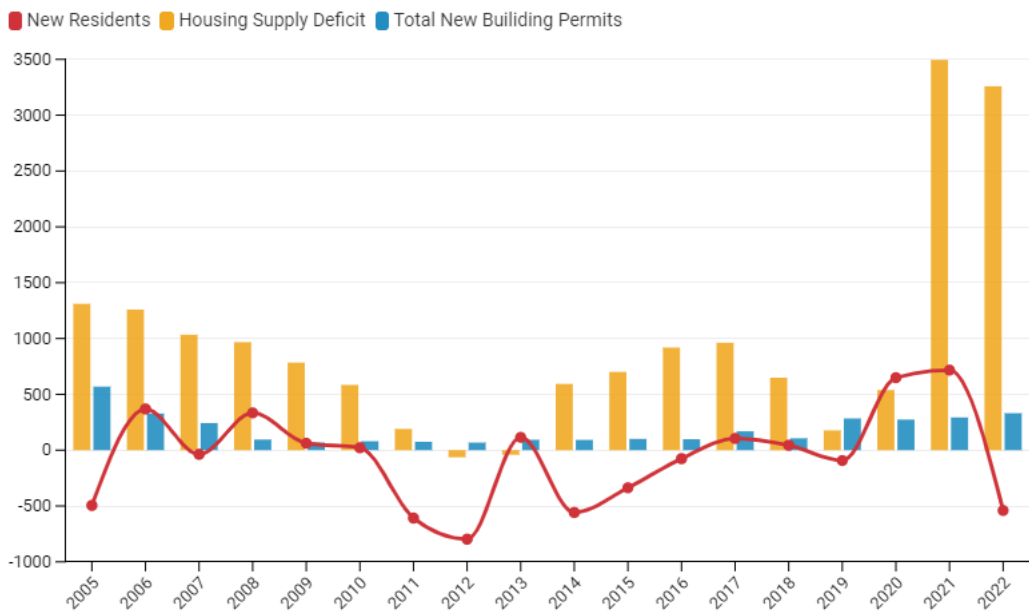
Appendix B – New Residents, Permits, and the Housing Supply Deficit

New Residents, New Unit Permits, and the Housing Supply Deficit - Johnson County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

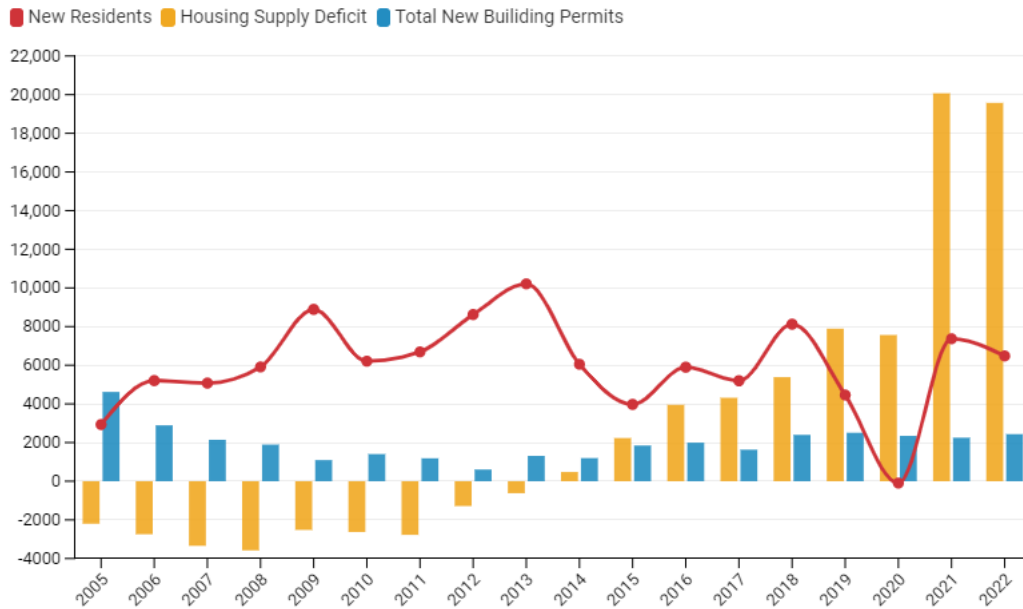
New Residents, New Unit Permits, and the Housing Supply Deficit - Madison County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

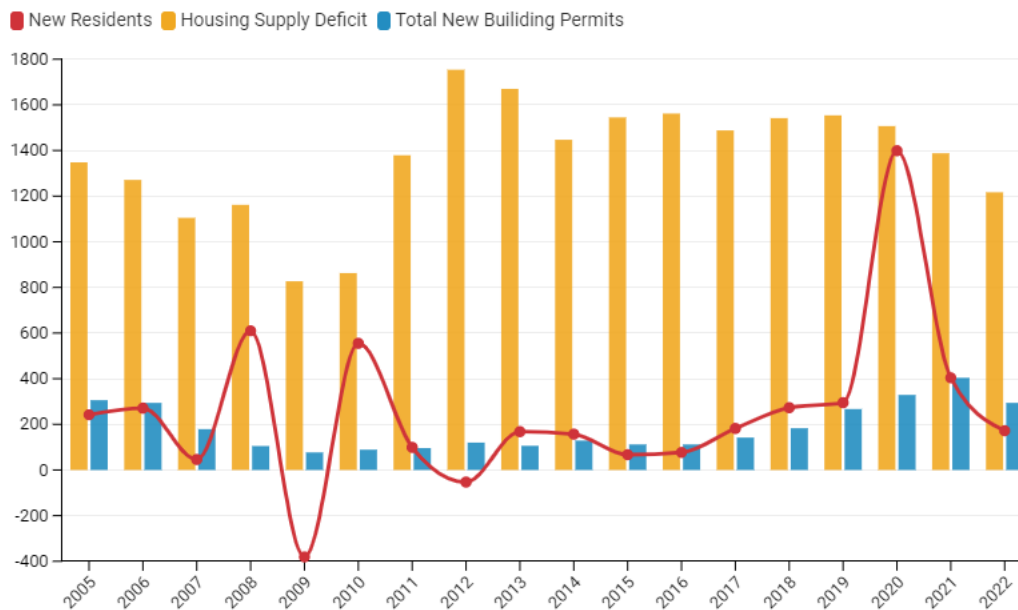
Appendix B – New Residents, Permits, and the Housing Supply Deficit

New Residents, New Unit Permits, and the Housing Supply Deficit - Marion County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

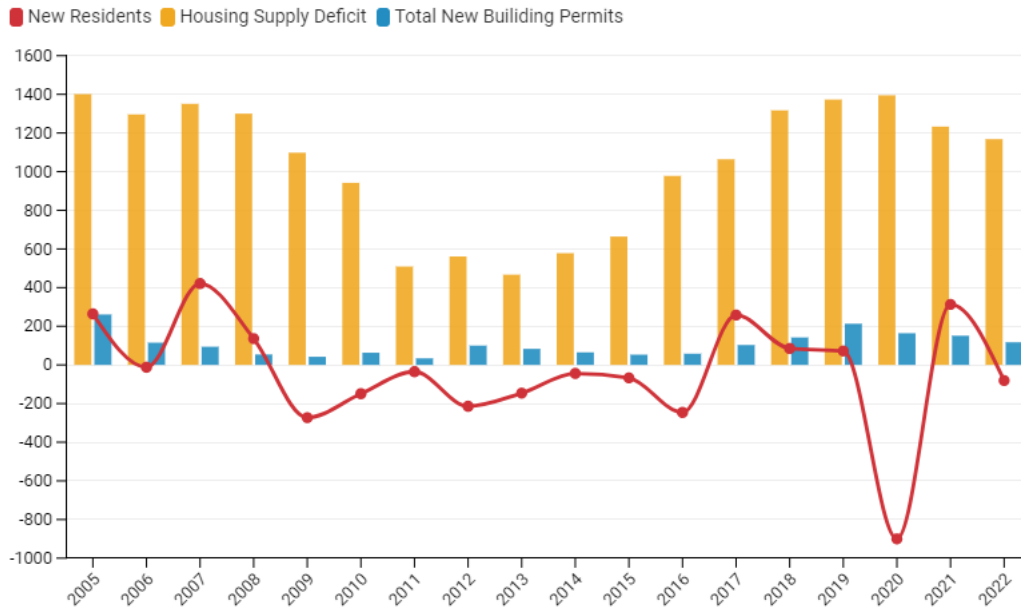
New Residents, New Unit Permits, and the Housing Supply Deficit - Morgan County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

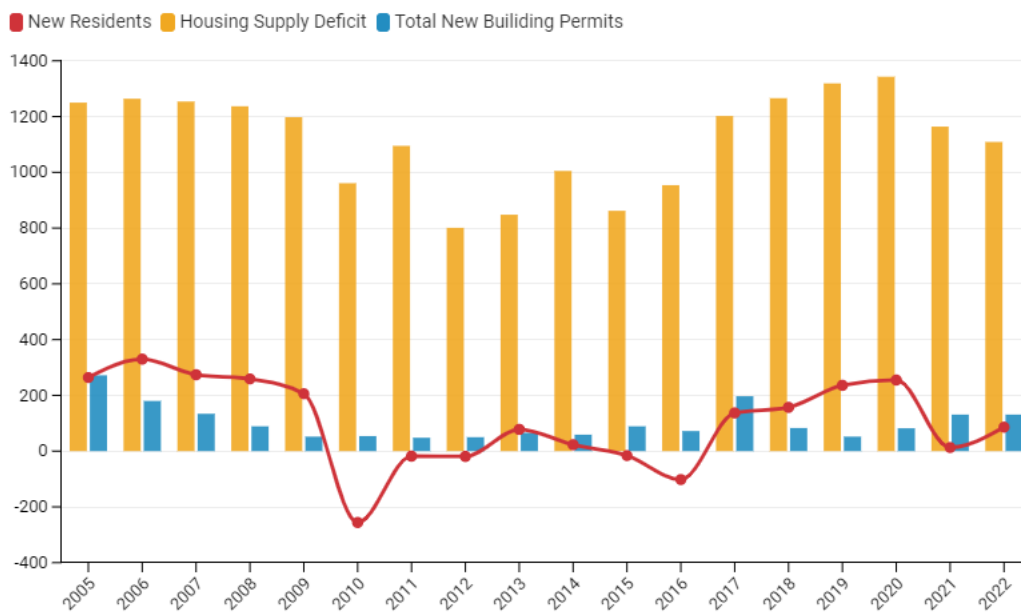
Appendix B – New Residents, Permits, and the Housing Supply Deficit

New Residents, New Unit Permits, and the Housing Supply Deficit - Putnam County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

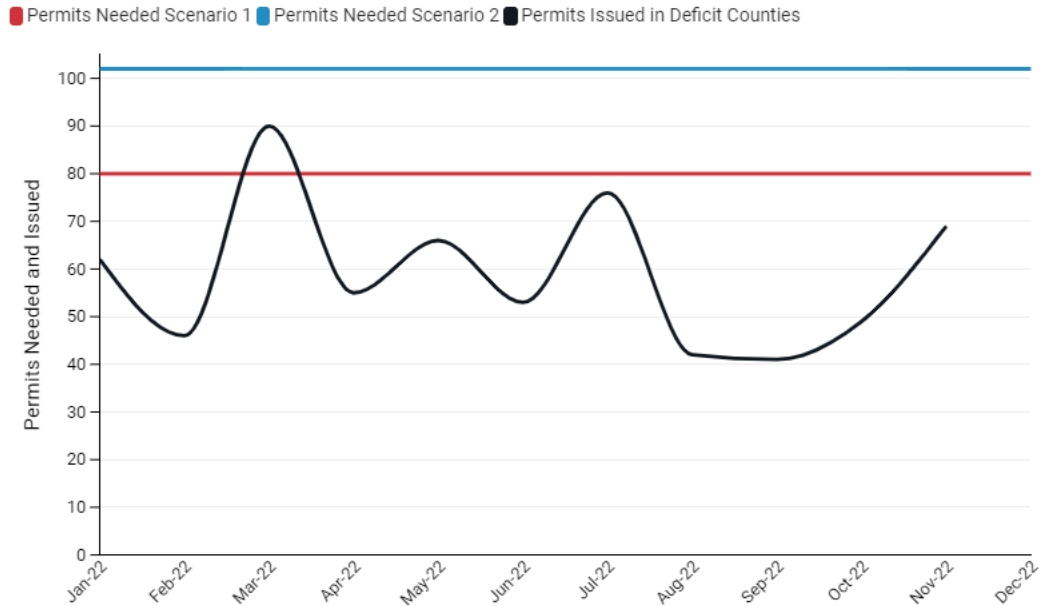
New Residents, New Unit Permits, and the Housing Supply Deficit - Shelby County, IN



Sources: National Association of Homebuilders, Indiana Business Research Center, U.S. Census Bureau ACS

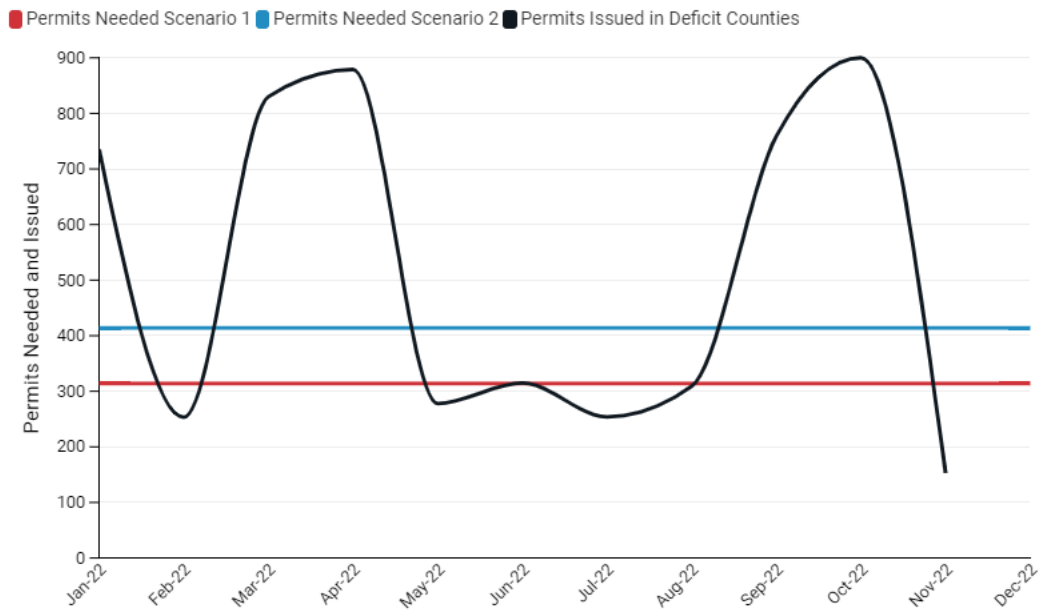
APPENDIX C – AVERAGE MONTHLY HOUSING PERMITS NEEDED VS. ISSUED

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Boone County



Source: HUD

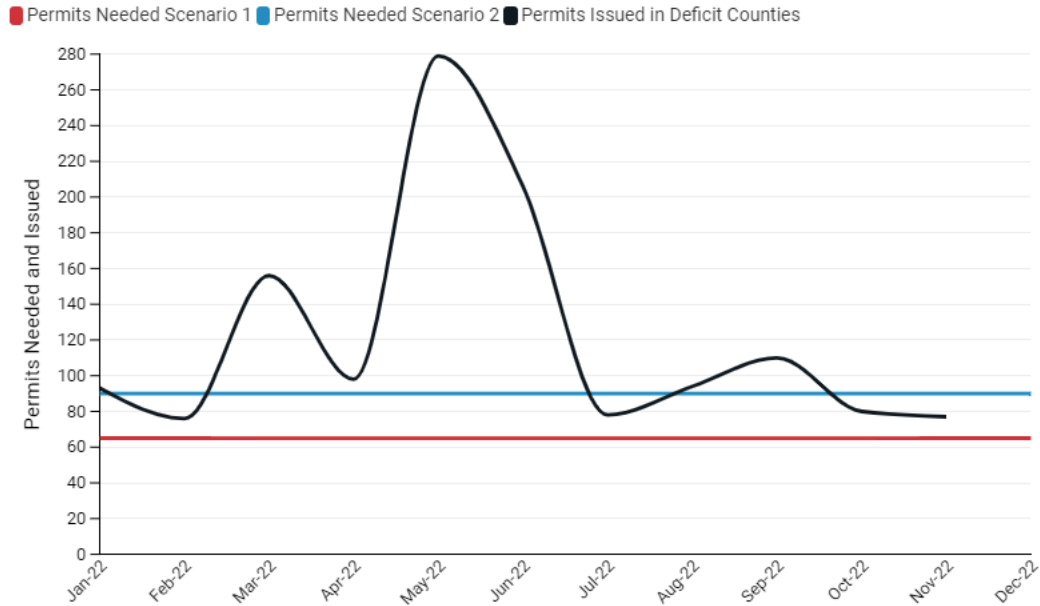
Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Hamilton County



Source: HUD

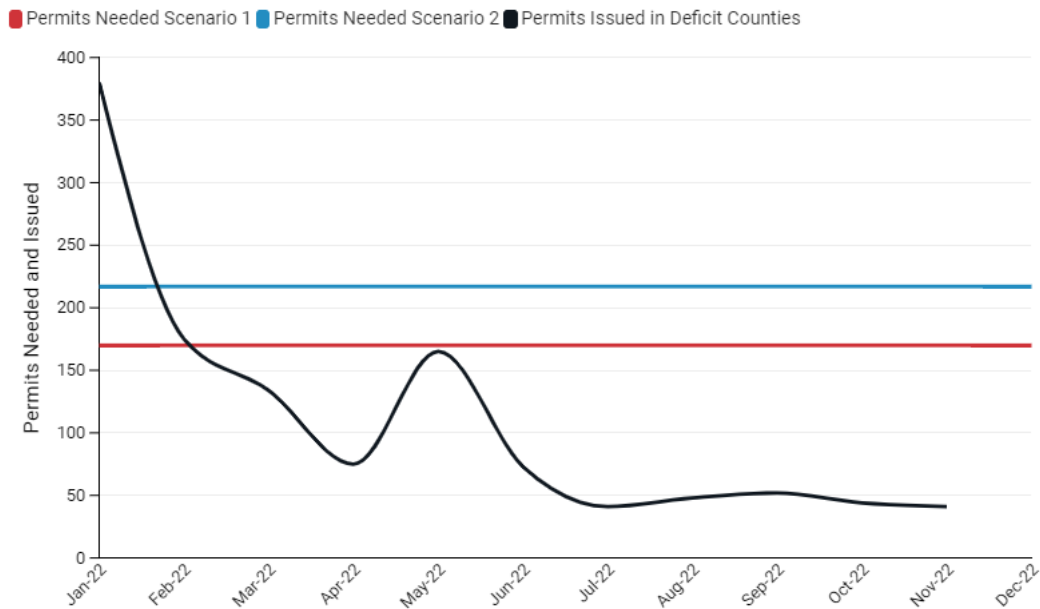
Appendix C – Average Monthly Housing Units Permits Needed vs. Issued

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Hancock County



Source: HUD

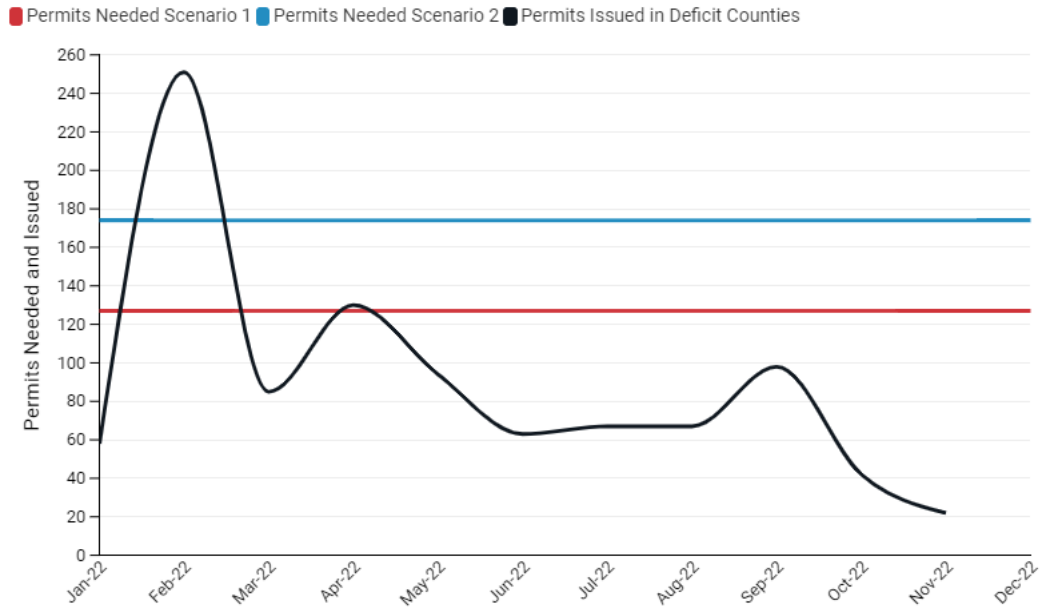
Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Hendricks County



Source: HUD

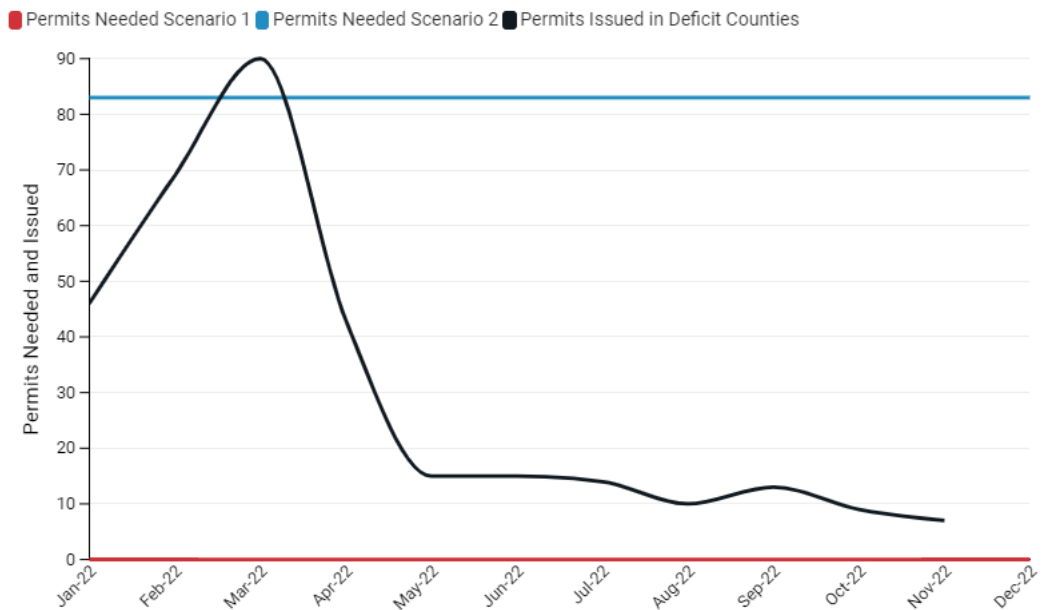
Appendix C – Average Monthly Housing Units Permits Needed vs. Issued

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Johnson County



Source: HUD

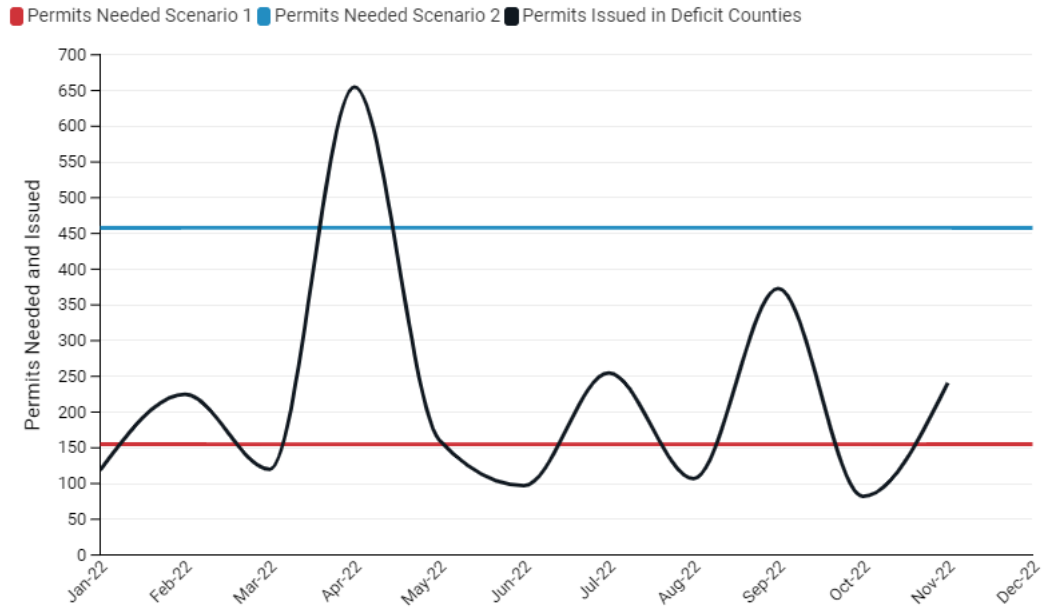
Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Madison County



Source: HUD

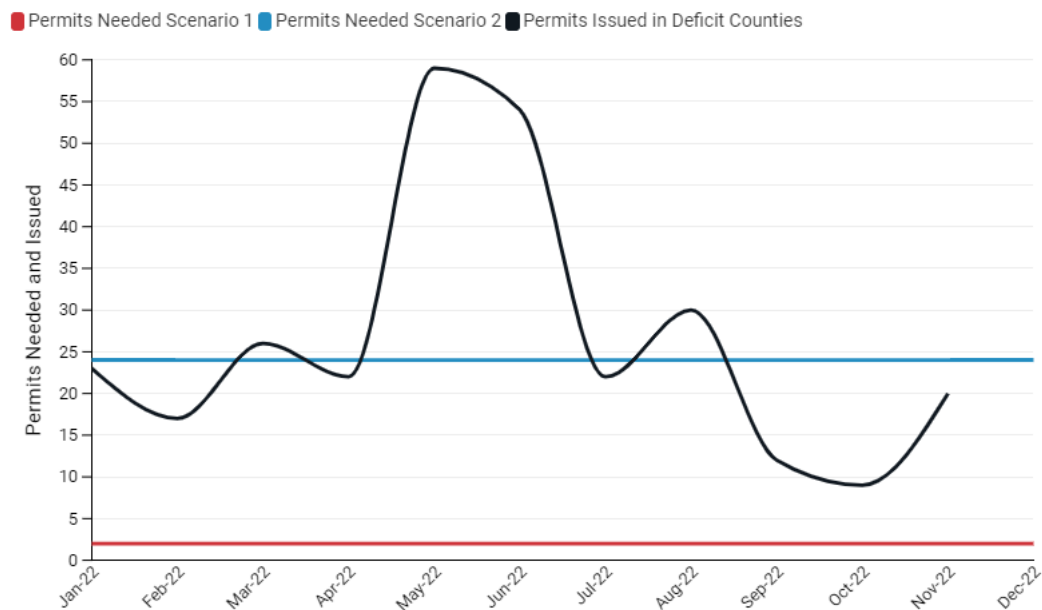
Appendix C – Average Monthly Housing Units Permits Needed vs. Issued

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Marion County



Source: HUD

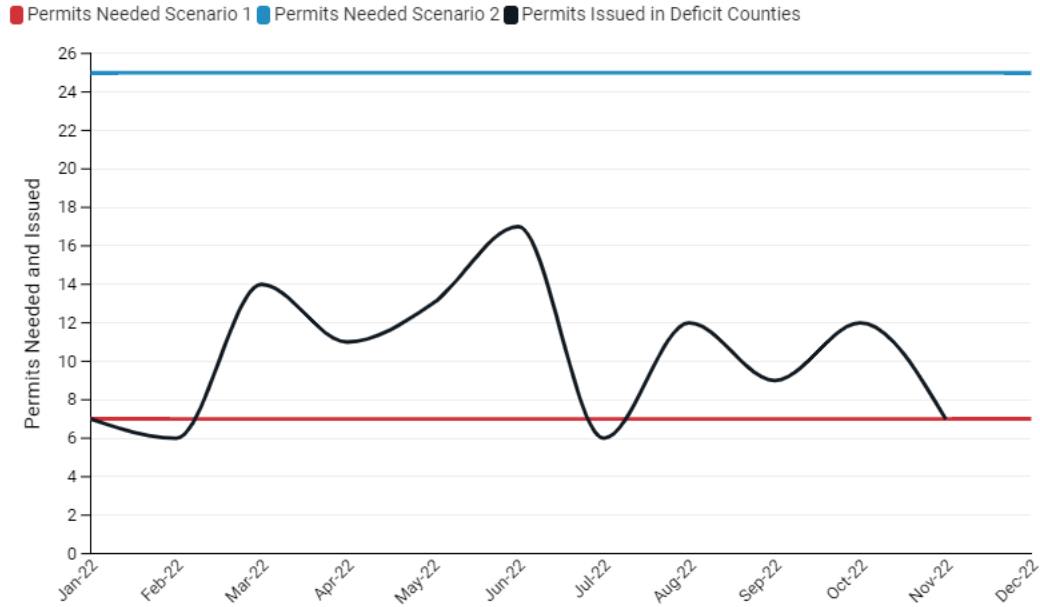
Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Morgan County



Source: HUD

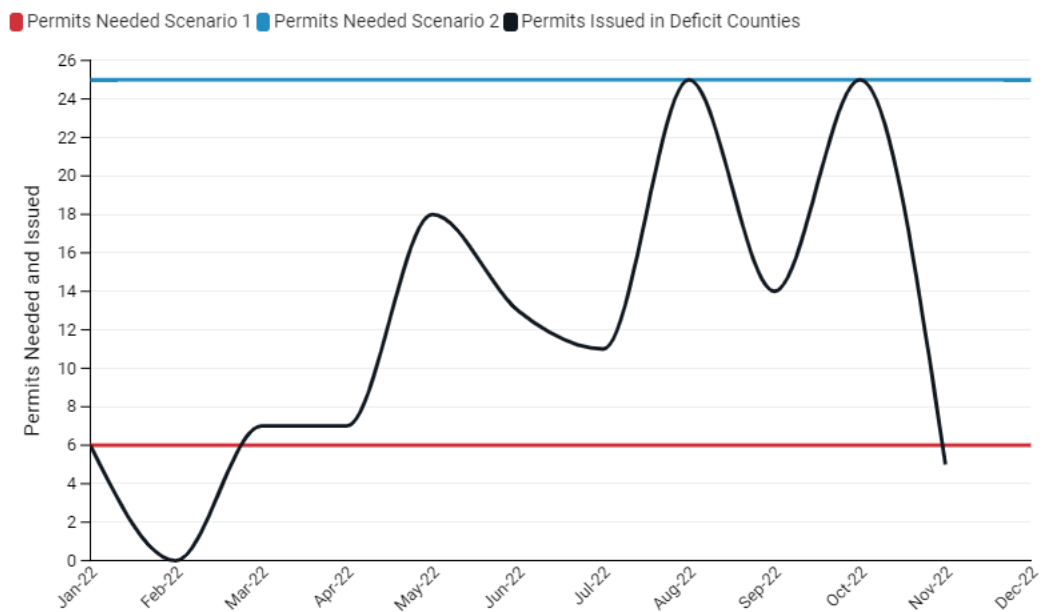
Appendix C – Average Monthly Housing Units Permits Needed vs. Issued

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Putnam County



Source: HUD

Average Monthly Housing Unit Permits Needed to Close the Deficit Plus New Demand by 2028 vs. Issued - Shelby County



Source: HUD

APPENDIX D – TYPES OF BUILDING PERMITS ISSUED BY COUNTY

Boone County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	498	840	526	451	433	539	477	748	692	900	649	6753
% of Units in Single-Family Structures	74%	58%	81%	86%	96%	78%	99%	68%	97%	88%	100%	83%
% of Units in All Multi-Family Structures	26%	42%	19%	14%	4%	22%	1%	32%	3%	12%	0%	17%
% of Units in 2-unit Multi-Family Structures	0%	10%	1%	4%	4%	9%	1%	3%	3%	1%	0%	4%
% of Units in 3- and 4-unit Multi-Family Structures	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
% of Units in 5+ Unit Multi-Family Structures	26%	32%	16%	9%	0%	13%	0%	29%	0%	12%	0%	14%

Hamilton County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	2,137	3,635	3,684	4,047	2,553	3,089	3,005	3,122	3,807	4,806	5,665	39,550
% of Units in Single-Family Structures	77%	56%	50%	47%	85%	80%	90%	77%	67%	72%	52%	66%
% of Units in All Multi-Family Structures	23%	44%	50%	53%	15%	20%	10%	23%	33%	28%	48%	34%
% of Units in 2-unit Multi-Family Structures	1%	1%	0%	1%	2%	0%	0%	1%	2%	3%	1%	1%
% of Units in 3- and 4-unit Multi-Family Structures	1%	0%	2%	1%	3%	1%	0%	1%	1%	1%	1%	1%
% of Units in 5+ Unit Multi-Family Structures	21%	43%	47%	51%	10%	20%	10%	22%	30%	25%	47%	32%

Appendix D – Types of Permits Issued by County

Hancock County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	209	327	395	365	487	528	638	566	761	1597	1347	7220
% of Units in Single-Family Structures	92%	83%	97%	99%	84%	89%	96%	99%	98%	72%	76%	86%
% of Units in All Multi-Family Structures	8%	17%	3%	1%	16%	11%	4%	1%	2%	28%	24%	14%
% of Units in 2-unit Multi-Family Structures	4%	1%	1%	1%	1%	1%	1%	1%	2%	2%	1%	1%
% of Units in 3- and 4-unit Multi-Family Structures	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
% of Units in 5+ Unit Multi-Family Structures	0%	13%	0%	0%	16%	10%	4%	0%	0%	26%	22%	13%

Hendricks County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	646	1039	1145	999	1232	1504	935	1053	1371	1370	1246	12540
% of Units in Single-Family Structures	87%	67%	61%	75%	73%	74%	96%	83%	98%	99%	77%	81%
% of Units in All Multi-Family Structures	13%	33%	39%	25%	27%	26%	4%	17%	2%	1%	23%	19%
% of Units in 2-unit Multi-Family Structures	0%	1%	3%	0%	2%	2%	1%	2%	0%	1%	2%	1%
% of Units in 3- and 4-unit Multi-Family Structures	0%	2%	1%	1%	0%	1%	0%	1%	1%	0%	0%	1%
% of Units in 5+ Unit Multi-Family Structures	12%	31%	36%	24%	25%	23%	3%	14%	1%	0%	20%	17%

Appendix D – Types of Permits Issued by County

Johnson County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	594	698	668	624	688	1097	843	839	1114	1460	977	9602
% of Units in Single-Family Structures	87%	92%	99%	97%	97%	73%	100%	97%	87%	75%	75%	87%
% of Units in All Multi-Family Structures	13%	8%	1%	3%	3%	27%	0%	3%	13%	25%	25%	13%
% of Units in 2-unit Multi-Family Structures	2%	4%	1%	3%	3%	1%	0%	2%	4%	3%	3%	3%
% of Units in 3- and 4-unit Multi-Family Structures	11%	1%	0%	0%	0%	1%	0%	1%	0%	0%	0%	1%
% of Units in 5+ Unit Multi-Family Structures	0%	3%	0%	0%	0%	25%	0%	0%	9%	22%	22%	10%

Madison County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	68	93	92	101	98	169	106	284	274	293	331	1909
% of Units in Single-Family Structures	97%	100%	96%	91%	89%	64%	96%	80%	99%	98%	100%	92%
% of Units in All Multi-Family Structures	3%	0%	4%	9%	11%	36%	4%	20%	1%	2%	0%	8%
% of Units in 2-unit Multi-Family Structures	3%	0%	4%	6%	2%	0%	4%	3%	1%	2%	0%	2%
% of Units in 3- and 4-unit Multi-Family Structures	0%	0%	0%	3%	0%	0%	0%	3%	0%	0%	0%	1%
% of Units in 5+ Unit Multi-Family Structures	0%	0%	0%	0%	9%	36%	0%	14%	0%	0%	0%	6%

Appendix D – Types of Permits Issued by County

Marion County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	604	1309	1195	1846	1995	1632	2398	2508	2344	2251	2435	20517
% of Units in Single-Family Structures	85%	49%	54%	44%	46%	60%	50%	49%	52%	57%	47%	52%
% of Units in All Multi-Family Structures	15%	51%	46%	56%	54%	40%	50%	51%	48%	43%	53%	48%
% of Units in 2-unit Multi-Family Structures	1%	2%	3%	2%	4%	2%	3%	1%	1%	4%	2%	2%
% of Units in 3- and 4-unit Multi-Family Structures	1%	1%	1%	1%	0%	0%	0%	1%	4%	1%	1%	1%
% of Units in 5+ Unit Multi-Family Structures	13%	49%	42%	53%	49%	37%	47%	49%	43%	39%	51%	45%

Morgan County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	120	106	129	112	112	142	183	267	329	404	294	2198
% of Units in Single-Family Structures	93%	96%	98%	98%	100%	100%	95%	98%	97%	97%	99%	97%
% of Units in All Multi-Family Structures	7%	4%	2%	2%	0%	0%	5%	2%	3%	3%	1%	3%
% of Units in 2-unit Multi-Family Structures	0%	4%	2%	2%	0%	0%	5%	2%	3%	3%	1%	2%
% of Units in 3- and 4-unit Multi-Family Structures	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
% of Units in 5+ Unit Multi-Family Structures	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix D – Types of Permits Issued by County

Putnam County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	100	83	65	53	58	103	142	213	164	151	117	1249
% of Units in Single-Family Structures	34%	59%	54%	96%	90%	88%	99%	57%	100%	96%	100%	80%
% of Units in All Multi-Family Structures	66%	41%	46%	4%	10%	12%	1%	43%	0%	4%	0%	20%
% of Units in 2-unit Multi-Family Structures	0%	2%	0%	4%	10%	12%	1%	0%	0%	4%	0%	2%
% of Units in 3- and 4-unit Multi-Family Structures	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
% of Units in 5+ Unit Multi-Family Structures	66%	34%	46%	0%	0%	0%	0%	43%	0%	0%	0%	17%

Shelby County - Permits by Percentage of Type Issued												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 2012 - 2022
Total Units	50	66	59	89	72	197	83	52	82	131	131	1012
% of Units in Single-Family Structures	62%	65%	66%	55%	86%	39%	100%	100%	100%	94%	91%	75%
% of Units in All Multi-Family Structures	38%	35%	34%	45%	14%	61%	0%	0%	0%	6%	9%	25%
% of Units in 2-unit Multi-Family Structures	0%	0%	7%	0%	14%	0%	0%	0%	0%	0%	9%	3%
% of Units in 3- and 4-unit Multi-Family Structures	38%	35%	0%	0%	0%	0%	0%	0%	0%	6%	0%	5%
% of Units in 5+ Unit Multi-Family Structures	0%	0%	27%	45%	0%	61%	0%	0%	0%	0%	0%	17%

ⁱ The NAHB/Wells Fargo HMI is a weighted average of three separate component indices: Present Single-Family Sales, Single-Family Sales for the Next Six Months, and Traffic of Prospective Buyers. Each month, a panel of builders rates the first two on a scale of “good,” “fair” or “poor” and the last on a scale of “high to very high,” “average” or “low to very low”. An index is calculated for each series by applying the formula “(good – poor + 100)/2” or, for Traffic, “(high/very high – low/very low + 100)/2”.

Each resulting index is first seasonally adjusted, then weighted to produce the HMI. The weights are .5920 for Present Sales, .1358 for Sales for the Next Six Months, and .2722 for Traffic. The weights were chosen to **maximize the correlation with starts** through the following six months. The HMI can range between 0 and 100.

ⁱⁱ https://www.wsj.com/articles/see-the-full-rankings-for-wsj-realtor-coms-summer-emerging-housing-markets-index-11658779946?mod=article_relatedinline

ⁱⁱⁱ The Nation’s Stock of Second Homes, Zhao, Na., May 2013, National Association of Home Builders

^{iv} Implementing a Regional Housing Needs Methodology in Oregon: Approach, Results, and Initial Recommendations. August 2020. ECONorthwest.

^v <https://www.nahb.org/news-and-economics/press-releases/2022/07/builder-confidence-plunges-as-affordability-woes-mount>