

38TH



OAKLAND COUNTY ECONOMIC OUTLOOK

2023-2025

SUMMARY INTRODUCTION

DAVID COULTER

OAKLAND COUNTY EXECUTIVE

In Oakland County, we are achieving our goals while living our values and that applies to all of the goals laid out in our five-year strategic plan. Those goals include encouraging and fostering an environment that will strengthen our thriving and inclusive economy. And we have made significant progress on that front.

It's especially relevant that the Economic Forecast Luncheon today is focused on our efforts in workforce development because our initiatives to educate and train our residents is our North Star. Launched in 2020, Oakland80 is our transformational effort to ensure that 80% of our adults have a post-secondary degree or industry-recognized certificate by 2030. We have hired a team of navigators to provide one-on-one assistance to residents and more than 700 people have received in-depth counseling, coaching and education services from the team.

There are so many individual success stories that the team has shared, but consider just one statistic: In two years, Oakland County has gone from 61% of our residents with a post-secondary degree or training certificate to 67.5%. Oakland County's Economic Development Department is taking a holistic approach, simultaneously working on small, medium and large businesses through a variety of programs:

- The Business Forward team of 16 consultants, who are operating under the umbrella of a new non-profit – Oakland Thrive - are working with thousands of small businesses that make up the backbone of our communities. They met with more than 2,200 businesses, including many women-, minority- or veteran-owned businesses, last year and expect that number to double this year.
- With initiatives like Project Diamond and other economic development tools, the county is looking to retain and expand the 2,600 small and medium manufacturing companies in the county.
- Through a strategic partnership with Automation Alley, we're home to the only Centre for Advanced Manufacturing in North America, which could help bring cost-effective, advanced manufacturing jobs back to the U.S.

With programs like these, we are ensuring Oakland County's economic growth is accessible to all residents and businesses and sustainable for the long term. We have an ongoing plan, committed partners, and talented employees who are driving the continuing success of Oakland County's economy.

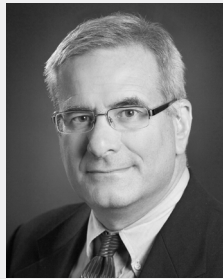


OAKLAND COUNTY ECONOMIC OUTLOOK

2023-2025



Gabriel Ehrlich



Donald Grimes

PRESENTED BY

Dr. Gabriel M. Ehrlich
and Donald R. Grimes
University of Michigan

MAY 2023

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Research Seminar in Quantitative Economics (RSQE)

The Research Seminar in Quantitative Economics (RSQE) is a modeling and forecasting unit that has been in operation at the University of Michigan since 1952. Four times per year, RSQE provides forecasts of both the U.S. economy and the Michigan economy. RSQE hosts the University of Michigan's Annual Economic Outlook Conference, the longest running such event in the U.S., in Ann Arbor each November. RSQE has twice received the prestigious Blue Chip Annual Economic Forecasting Award (AEFA) recognizing "accuracy, timeliness, and professionalism" in economic forecasting.

Dr. Gabriel M. Ehrlich

is the Director of the University's Research Seminar in Quantitative Economics (RSQE). He received his Ph.D. in economics from the University of Michigan. His research focuses on macroeconomics and regional economics. His work has been published widely in academic journals, and he comments frequently in the press on the economic outlook.

Prior to joining RSQE, Dr. Ehrlich worked in the Financial Analysis Division at the Congressional Budget Office (CBO). He earned his undergraduate degrees in finance and economics at the University of Maryland.

Dr. Ehrlich testifies twice per year to the state legislature on Michigan's fiscal and economic outlook. He recently coauthored *The United States Economic Outlook for 2023–2024* and *The Michigan Economic Outlook for 2023–2024*.

Donald R. Grimes

received his master's degree in economics from the University of Michigan. He is a senior research area specialist at the University's Research Seminar in Quantitative Economics (RSQE). His primary research interests are in labor economics and economic forecasting.

For 40 years, he has been engaged in economic forecasting for state and local governments and is frequently called upon for policy advice. He has worked for many years with the Michigan departments of Transportation and Treasury and the Michigan Economic Development Corporation on policy analysis and evaluating economic strategies.

His work has been published recently in the *Economic Development Quarterly*, the *New England Journal of Medicine*, and the *Journal of Health Politics, Policy and Law*. He recently coauthored *The Michigan Economic Outlook for 2023–2024*.

Dr. Michael R. McWilliams

is a senior economist at RSQE. Michael assists with forecasts of the Michigan economy and leads the development of state tax revenue projections. He also participates in RSQE's local economic forecasts for the City of Detroit, Oakland County, MI, and Washtenaw County, MI. In 2018, Michael coauthored an RSQE report on the economic impacts of the Great Lakes Restoration Initiative for the eight Great Lakes states.

Michael earned his Ph.D. in economics from the University of Michigan and received an M.Sc. in economics from the London School of Economics and Political Science. His personal research has focused on a range of topics in environmental and natural resource economics. He recently coauthored *The Michigan Economic Outlook for 2023–2024*.

Jacob T. Burton

is an economist at the University of Michigan's Research Seminar in Quantitative Economics (RSQE), where he contributes to the Michigan and U.S. forecasts four times per year. He received his master's degree in applied economics from Eastern Michigan University. He coauthored *The United States Economic Outlook for 2023–2024* and *The Michigan Economic Outlook for 2023–2024*. His primary fields of interests are in economic forecasting and energy economics.



This Economic Outlook Summary is available online beginning May 8, 2023 at:
AdvantageOakland.com | lsa.umich.edu/econ/rsqe

The Oakland County Economic Outlook for 2023–2025 Executive Summary

*Jacob T. Burton, Gabriel M. Ehrlich, Donald R. Grimes, Owen Kay, and Michael R. McWilliams
University of Michigan*

The economy's course over the past year has perplexed analysts from Washington, D.C. to Wall Street and Silicon Valley. We have not been exempt ourselves here in Southeast Michigan. There was talk that the economy might be slipping into recession in the first half of 2022, as real Gross Domestic Product shrank for two consecutive quarters and consumer price inflation climbed to nearly 9 percent per year. We pushed back on the recession talk back then, pointing to other economic indicators such as strong payroll employment growth and historically low unemployment, and observing that the underlying details of the GDP numbers were better than the top line numbers. That story flipped in the second half of 2022, when decent topline GDP growth masked middling measures of the underlying trend.

The economic trends in Oakland County were also a mixed bag last year. Through the third quarter of 2022, the count of jobs located in the county climbed by nearly 18,000, or 2.6 percent, from one year previously. Even with that growth, though, the county's jobs recovery has lagged Michigan's as a whole. Oakland had recovered only 82 percent of the jobs it lost at the start of the pandemic by the third quarter of 2022, while Michigan had recovered 90 percent. The timelier measure of employment among Oakland County residents also concerns us. Through February 2023, the county's resident employment count had declined by nearly 8,000 over the past 12 months. The different trajectories of jobs at county establishments and the count of employed residents are puzzling. The divergence could reflect commuting, an increase in multiple job holdings by residents, or a decline in self-employment.

We are optimistic that 2023 will feature a return to normalcy in Oakland County's economy despite a slowdown in the national economy. We project the county to add 9,700 payroll jobs this year, a growth rate of 1.4 percent. We expect growth to be relatively widespread across industries, as remaining backlogs of demand in the auto and construction industries cushion local employment against a mild national recession. Job gains continue at roughly the same pace next year before ticking up to 12,000 in 2025. Our forecast takes Oakland County's payroll jobs count back to its pre-pandemic level in the second quarter of 2025 and to 1.2 percent higher by the end of the year.

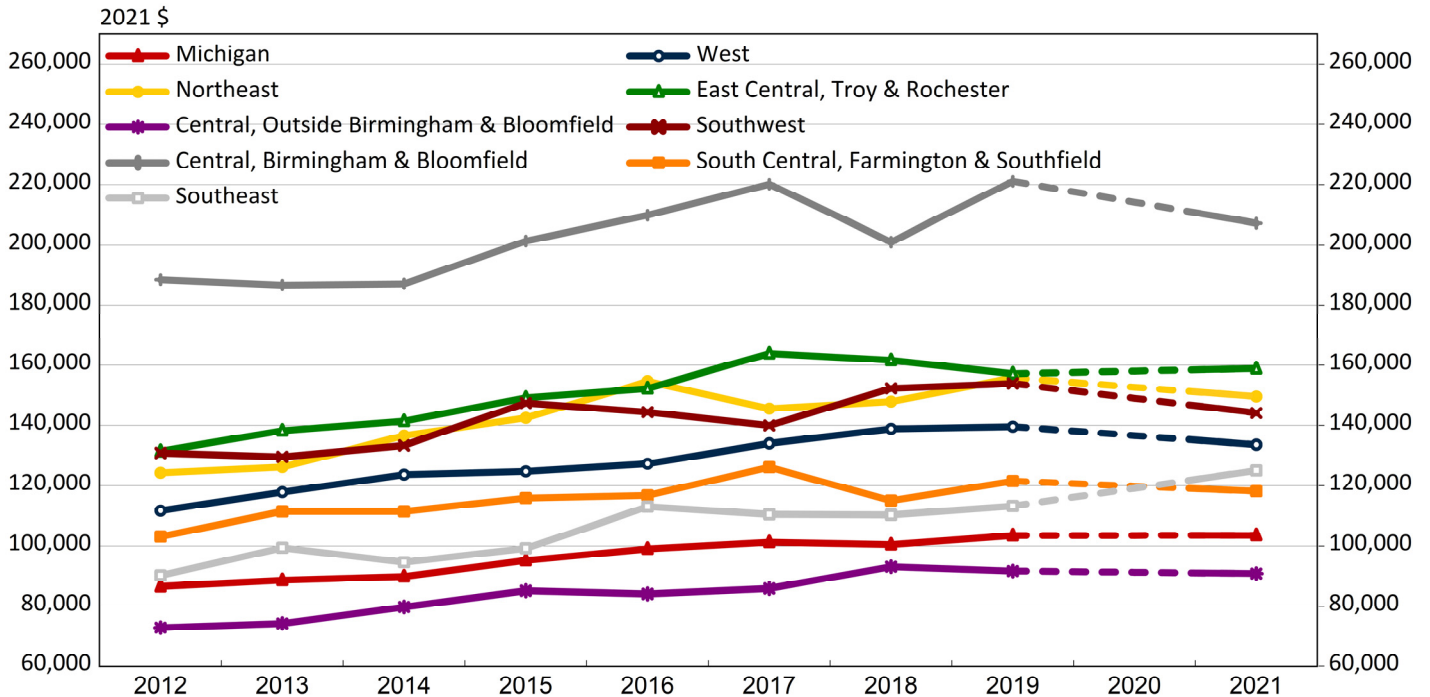
One important reason for our optimism about Oakland's future is the county's persistent strength on a set of key social indicators that we track using the American Community Survey. Among its peer counties, Oakland ranks in the top ten in terms of having low child poverty, a high share of residents employed in professional and managerial occupations, and a high median income. The county also ranks eleventh among its peers on our measure of educational attainment.

Despite those enviable strengths, economic prosperity continues to be spread unevenly within Oakland County. We estimate that as of 2021, the area containing Pontiac and Waterford Township had an average household income after adjusting for household size that was less than one-half the average in the area containing Birmingham, Bloomfield Hills, and Bloomfield Township. There were also stark differences in household incomes by race and ethnicity. For instance, 18 percent of Oakland's non-Hispanic White residents lived in households we classified as lower-income in 2021, while 31 percent resided in upper-income households. Those proportions were nearly reversed for the county's non-Hispanic Black and Hispanic residents. Encouragingly, we are forecasting that wages will grow more quickly in Oakland County's lower-wage industries than in its higher-wage industries over the next three years. That trend should take at least a small bite out of wage inequality in Oakland County by 2025.

The ongoing job growth we forecast for Oakland County will be accompanied by slowing inflation and a persistently low unemployment rate, in addition to narrowing wage inequality. Overall, we judge that to be a solidly positive outlook for the next three years.

Figure 1

Average Annual Three-Person Equivalent Household Income in Oakland County



- Figure 1 shows the average annual three-person equivalent household income for residents of Oakland County and Michigan. Oakland County average incomes are shown separately for the county's eight Public Use Microdata Areas (PUMAs) designated by the U.S. Census Bureau. Appendix D provides a map displaying those PUMA regions.
- Our income measures are calculated from the American Community Survey (ACS) microdata and are displayed for 2012–19 and 2021. Due to COVID-19 pandemic related disruptions, the traditional ACS microdata, and therefore our adjusted household income measures, are unavailable for 2020.
- We adjust household income for inflation, local cost of living, and household size. Our household size adjustments account for the greater expenses that larger households face. Our inflation and local cost of living adjustments account for differences by time period and geography; they allow us to report all households' incomes in 2021 dollars on a standard scale relative to the national average.
- Oakland County's relative prosperity is readily apparent. In 2021, the average three-person equivalent household income in Oakland County was \$141,000, significantly higher than the state's average of \$104,000. Without adjustments, the average household income in 2021 was \$118,000 in Oakland and \$86,000 in Michigan. Median household income was \$87,000 in Oakland and \$63,000 in Michigan.
- In 2021, the average adjusted income in six of the eight PUMA regions was between \$118,000 and \$159,000. However, two PUMA regions were noticeable outliers. The Birmingham and Bloomfield PUMA region had an average adjusted income of \$207,000, nearly twice the state's average. In contrast, the neighboring Central, Outside Birmingham and Bloomfield region containing Pontiac and Waterford Township, had an average adjusted income of \$91,000, well below the rest of Oakland County and the state overall.
- The relative differences in income across Oakland County and between the county and the state have held roughly stable over the past ten years. Adjusted household income growth has averaged roughly 2 percent per year in both Oakland County and Michigan as a whole. Furthermore, income disparities between PUMA regions in the county have remained relatively constant, except for the Southeast PUMA, where income growth has been faster than the rest of the county, at approximately 3.5 percent per year.

Table 1

Population Distributions by Income Group in Oakland County, 2021

	Lower-Income Population	Middle-Income Population	Upper-Income Population	Population Share
Oakland County	20%	52%	28%	
Michigan	30%	53%	17%	
Oakland County - Race/Ethnicity				
Hispanic	32%	51%	17%	5%
Non-Hispanic Asian	12%	57%	32%	8%
Non-Hispanic Black	30%	52%	18%	13%
Non-Hispanic White	18%	51%	31%	69%
Non-Hispanic Other Races	21%	56%	23%	5%
Oakland County - Home Ownership Status				
Owner-Occupied	14%	52%	33%	77%
Rented	38%	53%	9%	22%

Note: some totals do not sum to 100 percent because of rounding.

- Table 1 contains detailed information on the shares of Oakland County residents living in lower-, middle-, and upper-income households in 2021.
- We define the threshold between lower- and middle-income households to be two-thirds the median three-person equivalent household income in the United States, adjusted for local cost of living and household size. We define the threshold between middle- and upper-income households to be twice the adjusted median national income.
- In areas where the cost of living was equal to the national average, we classify a three-person household as middle income if it had an adjusted household income between approximately \$54,300 and \$162,800. The range was \$44,300 to \$133,000 for a two-person household and \$31,300 to \$94,000 for a single-person household.
- Oakland County has fewer lower-income residents and more upper-income residents than Michigan. In Oakland County, 20 percent of residents live in low-income households, compared to 30 percent of Michigan residents. Conversely, the share of Oakland County residents living in higher-income households (28 percent) is much larger than the share of Michigan residents (17 percent).
- Within Oakland County, there are clear differences along racial and ethnic lines. While the share of Oakland residents living in middle-income households is similar for all racial and ethnic groups (ranging from 51 to 57 percent), there are large differences between the shares living in lower- and upper-income households. While only 12 percent of Non-Hispanic Asian residents and 18 percent of Non-Hispanic White residents live in lower-income households, 30 percent of Non-Hispanic Black residents and 32 percent of Hispanic residents do so.
- On the other end of the income distribution, only 17 percent of Hispanic residents and 18 percent of Non-Hispanic Black residents live in upper-income households, much lower shares than the 31 percent of Non-Hispanic White residents and 32 percent of Non-Hispanic Asian residents who do so.
- Finally, some of the most dramatic income differences in Oakland County are between homeowners and renters. Only 9 percent of renters live in upper-income households, while 38 percent live in lower-income households. In contrast, only 14 percent of residents who own their homes live in lower-income households, and many of those residents are senior citizens with limited income but who own their homes without a mortgage.

Table 2

Oakland County Compared with Its Peers*

County	State	Population 2021	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional	Sum of Rankings	Rank of Sum
Fairfax	VA	1,139,720	1	9	1	1	2	14	1
Montgomery	MD	1,054,827	5	16	2	2	3	28	2
Nassau	NY	1,390,907	13	1	3	4	12	33	3
Westchester	NY	997,895	8	14	4	3	8	37	4
Collin	TX	1,109,462	9	7	8	7	6	37	4
Wake	NC	1,150,204	3	12	6	16	5	42	6
Bergen	NJ	953,819	7	11	7	9	11	45	7
Hennepin	MN	1,267,416	6	10	9	18	10	53	8
Denton	TX	941,647	15	4	11	10	13	53	8
Oakland	MI	1,270,017	11	5	10	19	9	54	10
DuPage	IL	924,885	12	3	13	11	16	55	11
Fairfield	CT	959,768	17	13	5	6	17	58	12
Travis	TX	1,305,154	10	22	12	13	7	64	13
Fulton	GA	1,065,334	4	27	15	15	4	65	14
Suffolk	NY	1,526,344	21	2	14	8	22	67	15
Contra Costa	CA	1,161,413	20	15	16	5	19	75	16
New York	NY	1,576,876	2	35	23	17	1	78	17
St. Louis	MO	997,187	18	19	20	22	15	94	18
Allegheny	PA	1,238,090	14	20	17	30	14	95	19
Mecklenburg	NC	1,122,276	16	18	21	24	18	97	20
Salt Lake	UT	1,186,421	29	6	18	25	26	104	21
Honolulu	HI	1,000,890	23	17	22	14	31	107	22
Prince George's	MD	955,306	38	24	19	12	25	118	23
Erie	NY	950,683	19	28	26	31	23	127	24
Franklin	OH	1,321,414	22	31	27	28	20	128	25
Pierce	WA	925,708	37	8	24	21	38	128	25
Pinellas	FL	956,615	24	21	28	33	24	130	27
Palm Beach	FL	1,497,987	25	23	33	20	33	134	28
Sacramento	CA	1,588,921	36	26	25	23	29	139	29
Gwinnett	GA	964,546	28	25	29	29	36	147	30
Hillsborough	FL	1,478,194	26	29	31	34	28	148	31
Pima	AZ	1,052,030	34	30	30	26	30	150	32
Duval	FL	999,935	31	33	37	27	35	163	33
Orange	FL	1,422,746	27	32	35	35	34	163	33
Cuyahoga	OH	1,249,387	30	36	32	38	27	163	33
Marion	IN	971,102	35	34	34	37	37	177	36
Philadelphia	PA	1,576,251	33	41	41	41	21	177	36
Milwaukee	WI	928,059	32	37	38	40	32	179	38
Shelby	TN	924,454	39	38	36	32	39	184	39
Fresno	CA	1,013,581	41	40	39	36	40	196	40
Kern	CA	917,673	42	39	40	39	42	202	41
Bronx	NY	1,424,948	40	42	42	42	41	207	42

*All counties in the United States with a population between 900,000 and 1,600,000 in 2021

**Adjusted for cost of living

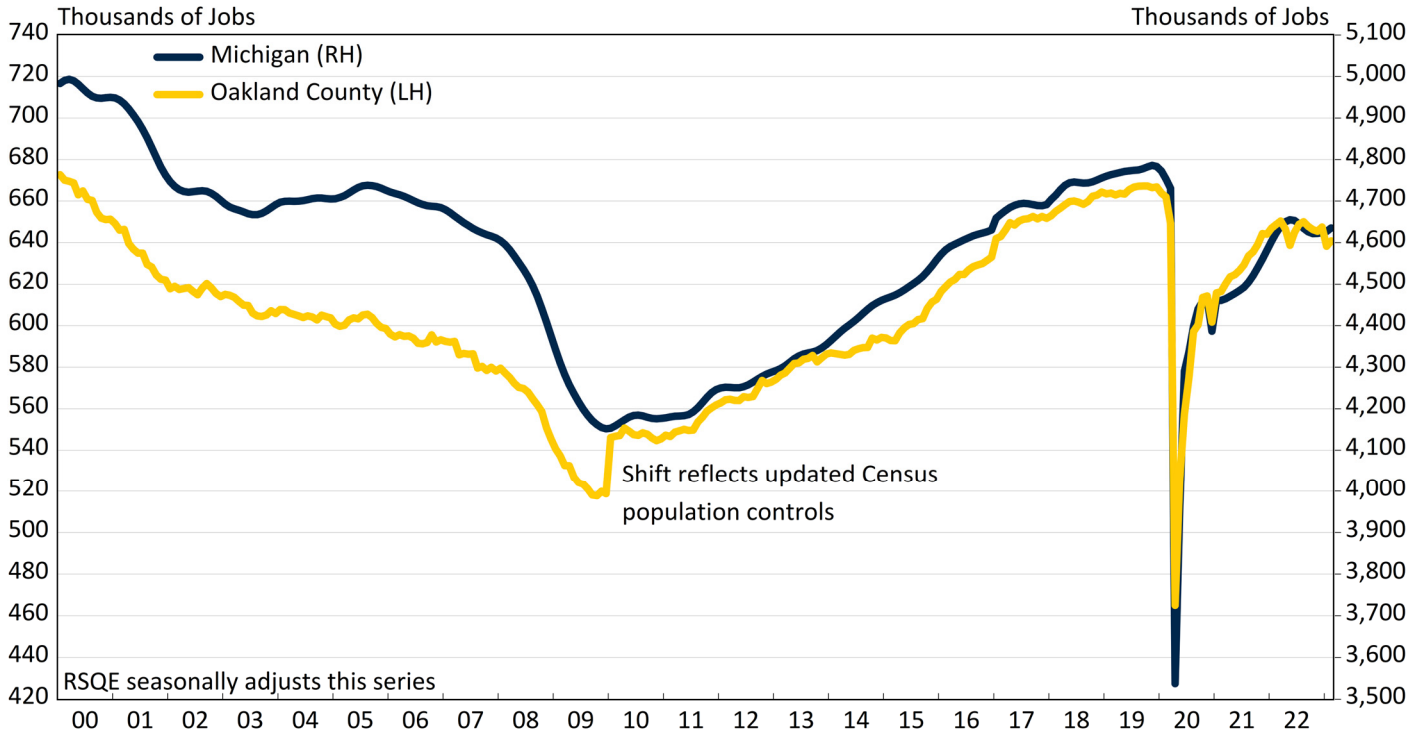
Source: American Community Survey 2021. Census Bureau Population Estimates, March 2022.

Oakland County Compared with Its Peers*

- We ranked Oakland County among its peers on five measures that we believe provide useful insights into the county's economic well-being. We considered all counties in the United States with populations between 900,000 and 1.6 million residents in 2021 as Oakland's peer group. A total of 41 other counties matched this description, with Oakland's population of 1.27 million in the middle of the pack.
- Many of the nation's most economically successful counties are included in this group. Like Oakland, many are also among the select group of U.S. counties that have a AAA bond rating with multiple rating agencies.
- In Table 2, we arrange the 42 counties by the sum of their rankings across the five measures to calculate an overall rank. Oakland places 10th overall. We believe that Oakland's top-ten ranking among this group of counties reflects its solid and enduring economic fundamentals.
- The five measures we consider are: (1) educational attainment—the share of the population aged 25 to 64 with at least an associate's degree in 2021; (2) child poverty—the share of the population aged 17 and under who lived within families whose income was below the poverty level in 2021; (3) median family income adjusted for the local cost of living in 2021; (4) high-income seniors—the share of persons aged 65 and older with income at least five times the poverty level in 2021; and (5) professional occupations—the share of employed county residents working in professional and managerial occupations in 2021.
- A lower number for a rank indicates a better position among the counties: a rank of 1 is the best and 42 is the worst. Oakland County ranks between 5th and 19th across the various measures (the underlying data for Table 2 is presented in Appendix C).
- Oakland ranks within the top ten in child poverty (5th), professional occupations (8th), and median income (10th). Oakland's educational attainment level just missed the cut for the top ten, but the county still managed an 11th place finish. Oakland's placement in these categories has helped it to maintain its overall top-ten position among its peer group for quite some time. This is an impressive achievement considering that a number of these counties contain some of the top-rated local economies around the nation.
- Oakland's lowest ranking came in the share of high-income seniors, but the county's ranking of 19th on this metric still placed the county within the top half of its peer group.
- We believe Oakland County's strong overall performance in these measures suggest it is well positioned for the future despite the current challenges facing the local and national economies. The combination of an educated populace, a high share of managerial and professional jobs, and an attractive standard of living should provide a solid foundation for economic prosperity over our forecast period and in the years to come.

Figure 2

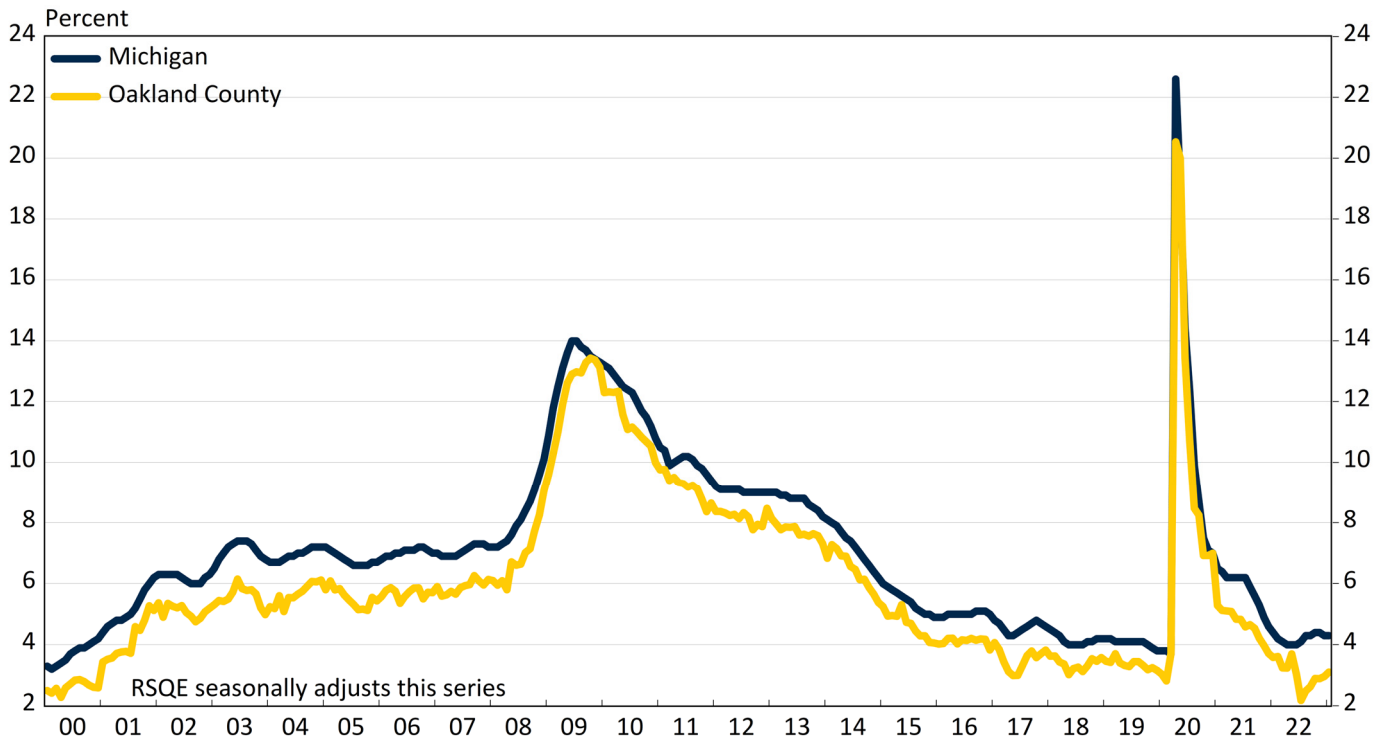
Monthly Household Employment, Michigan and Oakland County



- Figure 2 shows monthly household employment in Oakland County and in Michigan. The household employment data presented in this figure depicts the count of employed residents, regardless of where they work.
- Household employment in Michigan declined by 1.2 million, or 26 percent, during the initial months of the COVID-19 pandemic. Oakland County residents were hit more severely by the initial downturn, with 200,000, or 30 percent of employed residents, losing their jobs.
- By December 2020, both Michigan and Oakland County had regained roughly 70 percent of their pandemic-related household employment losses.
- The pace of growth shifted towards Oakland County during 2021, as the economy began to fully reopen. By the end of the year, Oakland County residents had recovered almost 90 percent of their initial job losses, taking the county to 3 percent below its pre-pandemic employment level. Michigan residents, however, had only recovered 86 percent of their losses.
- Resident employment growth came to a standstill in both the county and the state in 2022. Residents of Oakland County and Michigan lost jobs in five different months last year, following the national trend in which household employment declined in four separate months.
- Household employment in Michigan increased by a modest 0.9 percent from the end of 2021 to the end of 2022. Household employment in Oakland County grew by only 0.5 percent during that time.
- Household employment in Oakland County increased by 2,600 in February 2023 after declining by 9,200 in January. Even though the county did not fully recuperate its January losses, we expect that household employment will continue to recover as the economy stabilizes over the next few years and labor force growth picks back up.

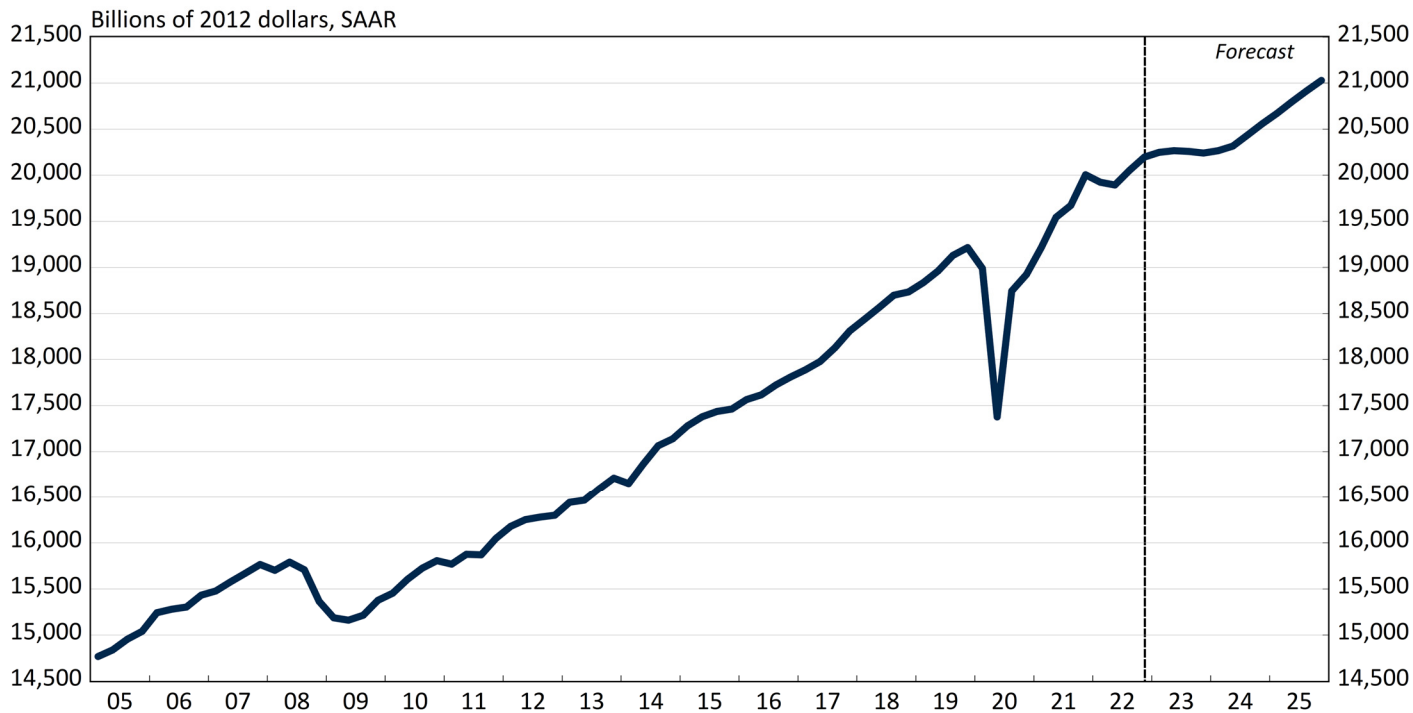
Figure 3

Monthly Unemployment Rate, Michigan and Oakland County



- Figure 3 shows unemployment rates for Michigan and Oakland County. Both series are seasonally adjusted; we have seasonally adjusted the Oakland unemployment rate series ourselves.
- Oakland County's labor market has run consistently tighter than the state's over the past twenty years. Since exiting the Great Recession, Oakland County's unemployment rate has averaged 0.9 percentage points below Michigan's.
- Although the local jobless rate spiked to a peak of 20.5 percent in April 2020, it remained 2.1 percentage points less than the state's. The local unemployment rate declined to an average of 3.0 percent in 2022, or only 0.2 percentage points above its pre-pandemic level.
- For comparison, Michigan's unemployment rate averaged 4.2 percent last year, or 0.4 percentage points above its pre-pandemic rate.
- Oakland County's full unemployment recovery masks an important underlying trend, which is that the county's labor force has seen hardly any growth since last summer. The statewide economy is struggling with this challenge as well.
- As of February 2023, Oakland County's labor force remains 22,100 residents, or 3.2 percent, below its pre-pandemic level. Michigan's labor force stands a bit closer to full recovery, roughly 2.0 percent below its pre-pandemic level.
- The lack of growth in Oakland's labor force since last summer is a cause for concern. We are cautiously optimistic that this trend will reverse over the years to come, but we will be watching the county's labor force closely.
- Without sufficient growth in its labor force, Oakland's current labor shortage will prove to be very persistent.

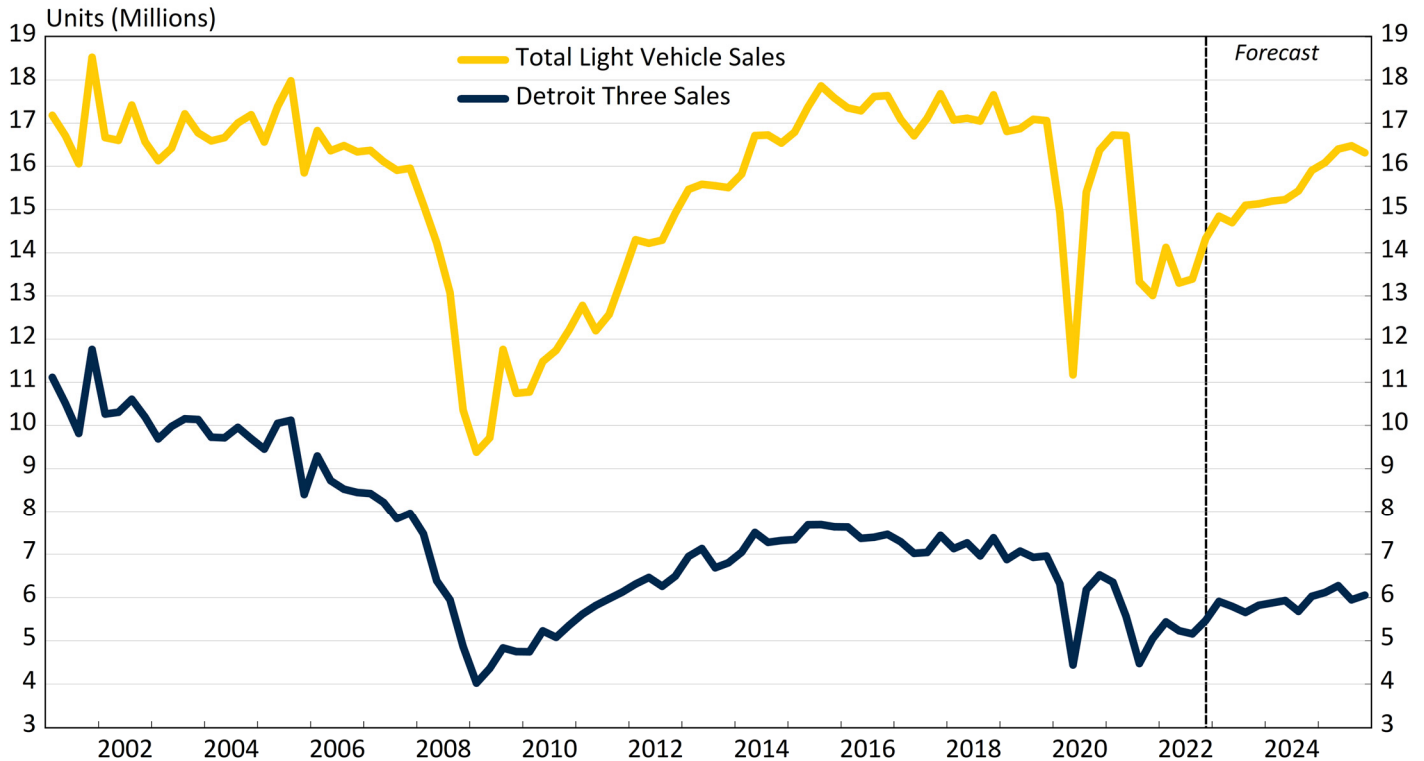
Figure 4
U.S. Real GDP



- Oakland County’s economic future is closely tied to the overall health of the national economy. Figure 4 shows our February 2023 forecast for quarterly U.S. real GDP.
- Real GDP grew at a 2.9 percent annualized pace in the fourth quarter of 2022, but domestic final sales contributed only 0.9 percentage points to that growth. We interpret the overall data stream as suggesting the economy’s momentum is likely to slow this year.
- We project that real GDP will contract by a cumulative 0.1 percent during the second half of 2023, as the Fed continues its fight to tame inflation. We project consumption growth to stall under the weight of stagnant real incomes and tightening credit standards. The recent turmoil in the banking industry is likely to weigh on business and consumer lending activity.
- We expect growth to return next year, reaching 2.4 percent in the second half of 2024 as monetary policy loosens, investment spending increases, and consumption growth picks up.
- We forecast that real GDP will increase by 2.2 percent in 2025 as interest rates continue to fall, inflation stabilizes below 2.5 percent, and real income growth increases. That would be the fastest rate of annual GDP growth since the rebound from the pandemic recession in 2021.
- As of the writing of this report in April 2023, the Fed’s target range for the federal funds rate stood at 4.75–5.0 percent. Our forecast assumes the Fed will raise its target to a terminal range for this cycle of 5.0–5.25 percent at the May or June meeting of the Federal Open Market Committee.
- We expect the Fed to hold that target range through the end of 2023 and begin decreasing the target range during the first quarter of next year. By the end of 2025, the target range is expected to decrease to 3.5–3.75 percent as inflation remains slightly above the Fed’s 2 percent target.
- With fiscal policy largely on cruise control owing to divided government, we anticipate that the federal deficit will increase from 4.4 percent of GDP in fiscal 2022 to an average of 5.0 percent in fiscal 2023–25. The increase in the deficit comes primarily from larger interest payments as new borrowing is met with higher interest rates.

Figure 5

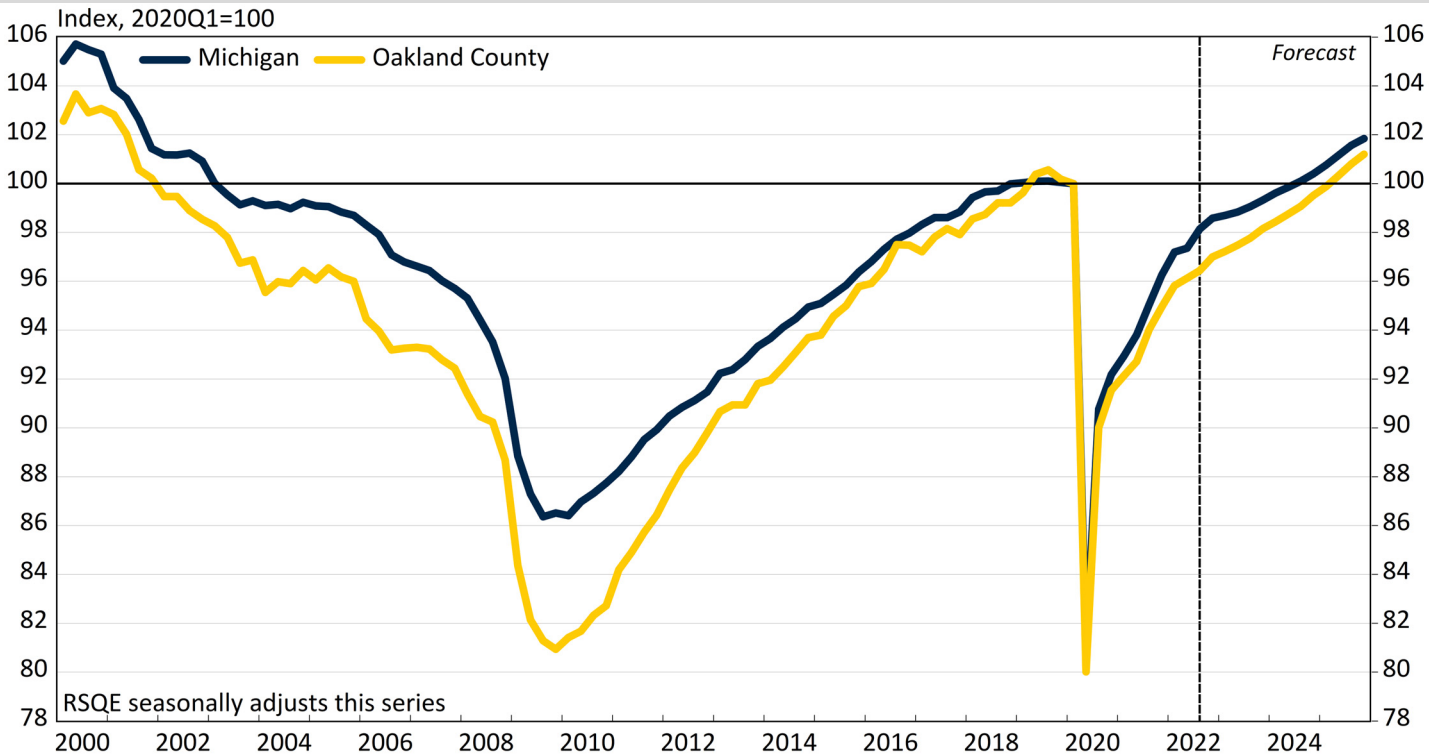
U.S. and Detroit Three Light Vehicle Sales



- Figure 5 shows our quarterly forecast for total U.S. and Detroit Three light vehicle sales. Sales totaled 13.8 million units in 2022, the lowest annual count since 2011.
- The annualized pace of sales jumped to 15.3 million in the first quarter of 2023, as tax breaks on new battery and hybrid electric vehicles kicked in and supply constraints continued to ease.
- We forecast that sales will cool a bit before exceeding 15.0 million units again in the third quarter of 2023. We expect that pace to stagnate over the subsequent year as high prices and interest rates finally put a dent in demand.
- As the economy begins to rev up during the second half of 2024, the pace of light vehicle sales continues to climb toward the 16-million-unit pace.
- We expect that light vehicle sales will increase to 16.4 million units in the second half of 2025 as interest rates continue to decline and broad economic growth resumes. That sales pace nonetheless remains nearly 600,000 units below the pre-pandemic level as high prices deter consumers.
- The Detroit Three's share of the market increased from 35.9 percent in 2021 to 38.6 percent in 2022 as supply constraints eased over the course of last year.
- We forecast that the Detroit Three's share of the market will tick up to 38.8 percent in 2023 as production volumes across the industry continue to normalize. Unfortunately, the Detroit Three's share of the market cannot defy gravity for too long, and we expect their share of the market to slip to 38.1 percent next year and 37.4 percent in 2025.
- Even though we are forecasting the Detroit Three's share of the market to decline, we expect that their unit sales pace will increase as the broader light vehicle market continues to recover.
- Our forecast calls for the Detroit Three sales pace to increase from 5.3 million units in 2022 to 6.1 million units in 2025. That sales pace would be roughly 900,000 units, or 12.4 percent, lower than in 2019.
- One reason we expect both total and the Detroit Three's sales to lag behind the pre-pandemic pace is an ongoing prioritization of pricing discipline relative to unit sales volumes.

Figure 6

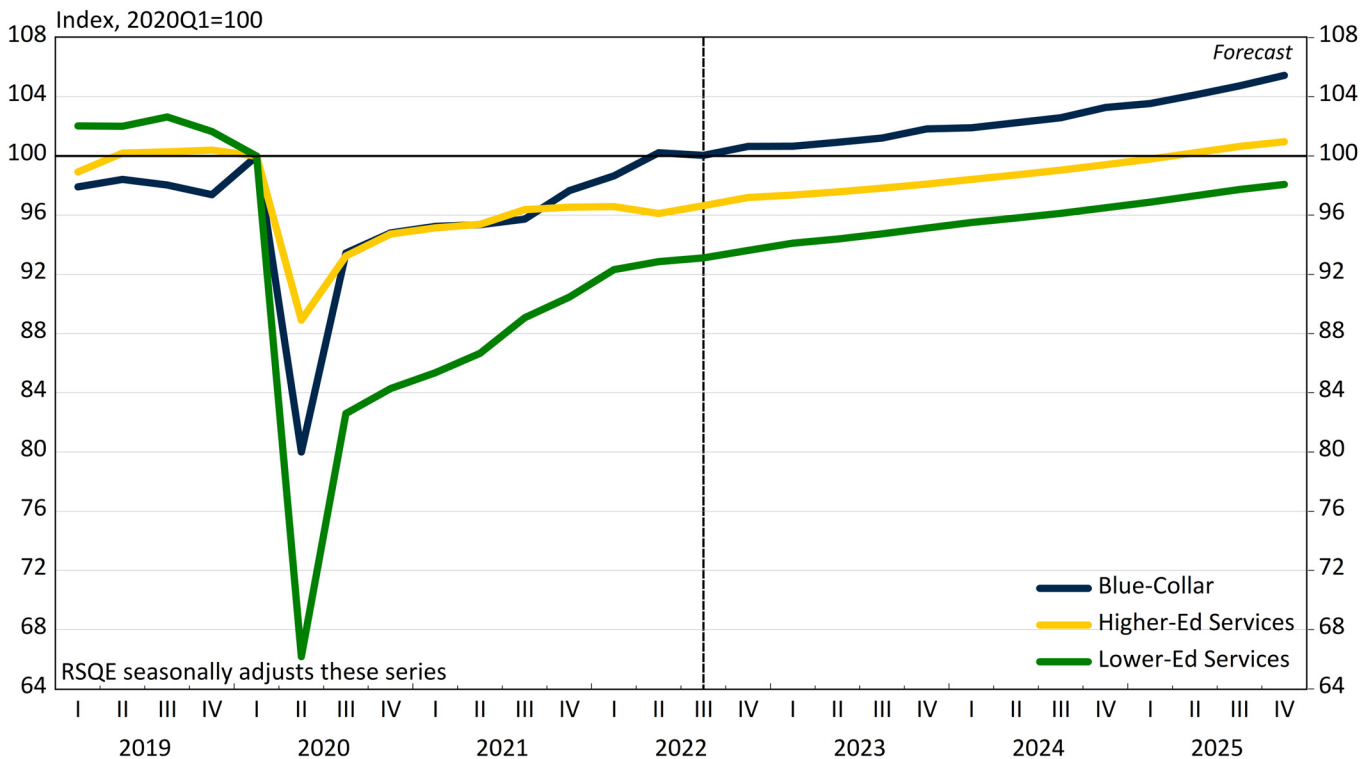
Quarterly Payroll Employment Indices, Michigan and Oakland County



- Figure 6 displays our forecast for Michigan's and Oakland County's payroll employment levels, with values indexed to 100 in 2020q1.
- From the end of the Great Recession (2009q3) to the beginning of the pandemic (2020q1), employment in Oakland County grew more quickly than in the state, averaging roughly 2.0 percent per year compared to the state's 1.4 percent per year.
- The COVID-19 recession led employment in the state of Michigan to decline by 844,600 jobs, or 19 percent, in the second quarter of 2020. Oakland County lost 148,800 jobs, 20 percent of the total, at the start of the pandemic.
- The state has outperformed the county in recouping its job losses to date. By the end of 2022, Michigan had recovered 93 percent of its initial job losses, while we estimate that Oakland County had recovered 85 percent.
- We are forecasting that growth differential to reverse course going forward, with the county's job growth (1.4 percent per year) slightly outpacing the state's (1.2 percent per year) over the next three years.
- We expect employment in Oakland County to return to its pre-pandemic level in the second quarter of 2025 and to exceed that level by 1.2 percent by the end of 2025.
- We forecast employment in Michigan to return to its 2020q1 employment level in the third quarter of 2024 and to exceed that value by 1.8 percent by the end of 2025.
- Job growth in Oakland, and statewide, is being increasingly constrained by slow growth in the labor force. One reason for the sluggish labor force growth is that the population in the county and state is relatively old and thus retired or about to retire. According to the Census Bureau, in 2021, 24.9 percent of the county's population was 60 or older compared to 25.1 percent in Michigan and 23.2 percent in the United States.
- We are forecasting that Oakland's labor force will grow by 0.7 percent per year over the next three years. If that growth does not materialize, the unemployment rate will be lower and/or job gains will be smaller than we are forecasting.

Figure 7

Job Indices in Oakland County by Selected Industries



- On the chart above, we categorize each of Oakland’s industries into one of three groups. The graph displays our forecast for each group’s total employment level, with values indexed to 100 in 2020q1.
- The **blue-collar** industries comprise mining; construction; manufacturing; and wholesale trade, transportation and warehousing, and utilities. These industries’ job count declined by 20 percent in the second quarter of 2020, but they recovered all of those losses by the second quarter of 2022.
- We estimate that blue-collar employment grew slowly during the remainder of 2022. We expect stronger job growth (1.5 percent per year) over the next three years, taking the blue-collar industries to 8,300 jobs, or 5.4 percent, above their pre-pandemic employment level at the end of our forecast.
- The **higher-education** services industries comprise information; finance; professional, scientific, and technical services; management of companies and enterprises; private education and health services; and government (which includes public education). These are industries that tend to employ highly educated workers.
- The pandemic led to relatively few job losses in Oakland’s higher-education services industries, and the initial job recovery was relatively brisk. Job gains in these industries have been modest since the end of 2020, however. We estimate that the higher-education services industries had only recovered about three-quarters of their pandemic-related job losses by the end of 2022.
- We forecast slightly stronger job growth for higher-educational attainment services industries going forward. This industry group averages 1.3 percent growth per year over the next three years, taking its employment to 3,500 jobs, or 1.0 percent, above the pre-pandemic level by the end of 2025.
- The **lower-education** services industries comprise retail trade; leisure and hospitality; administrative support services and waste management; and other services. These industries tend to employ less well-educated workers, and they suffered the worst of the pandemic’s impact, shrinking by one-third in 2020q2. Their recovery so far has been incomplete, with employment remaining 6.4 percent below pre-pandemic levels in 2022q4. We are forecasting steady growth for these industries through 2025 (1.6 percent per year), but that performance is not enough to make up all of their initial pandemic losses—employment remains 4,400 or 1.9 percent below the pre-pandemic level by the end of 2025.

Table 3

Forecast of Jobs in Oakland County by Major Industry Division

	2021	Forecast Employment				Average Annual Wage
		2022	2023	2024	2025	2021 \$
Total Jobs (Number of jobs)	696,246	717,753	727,501	737,098	749,067	71,131
(Annual percentage change)	(3.4)	(3.1)	(1.4)	(1.3)	(1.6)	
Blue-Collar	146,567	152,508	154,440	156,496	159,485	87,201
Utilities	1,576	1,586	1,599	1,617	1,635	154,793
Wholesale trade	35,831	36,518	36,954	37,497	38,079	104,565
Transportation equipment (Motor Vehicles & Parts) manufacturing	19,834	21,652	22,430	22,772	23,173	101,772
Construction	28,633	29,237	29,113	29,273	30,094	82,386
Other manufacturing	45,946	47,212	47,716	48,220	48,845	78,082
Transportation and warehousing	13,623	15,167	15,429	15,883	16,388	56,948
Natural resources and mining	1,125	1,136	1,198	1,234	1,271	44,002
Higher-Ed Services	344,018	346,788	350,674	354,924	360,324	82,042
Management of companies and enterprises	18,932	17,801	18,042	18,408	18,948	120,960
Finance and insurance	43,603	41,156	39,239	39,350	39,735	106,283
Professional, scientific, and technical services	99,292	99,902	101,227	102,371	104,215	100,879
Information	13,414	13,604	13,888	14,009	14,143	98,173
Real estate and rental and leasing	16,165	17,086	17,077	17,107	17,108	70,342
Total Government	43,402	44,690	45,718	45,858	46,003	60,586
Private health and social services	99,098	101,360	103,895	106,032	108,195	57,760
Private education	10,113	11,187	11,588	11,791	11,976	47,035
Lower-Ed Services	203,432	215,205	218,942	222,165	225,674	41,232
Administrative support and waste management	54,571	55,231	54,931	55,835	57,003	53,583
Other services	20,185	20,839	21,009	21,369	21,780	44,837
Retail trade	71,819	73,427	73,647	73,634	73,570	43,683
Arts, entertainment and recreation	8,312	10,355	11,138	11,384	11,604	28,904
Accommodation and food services	48,545	55,354	58,218	59,942	61,717	24,336
Unclassified	2,228	3,252	3,444	3,513	3,583	59,337
<i>Addendum:</i>						
Total Private	652,844	673,063	681,783	691,240	703,064	71,832

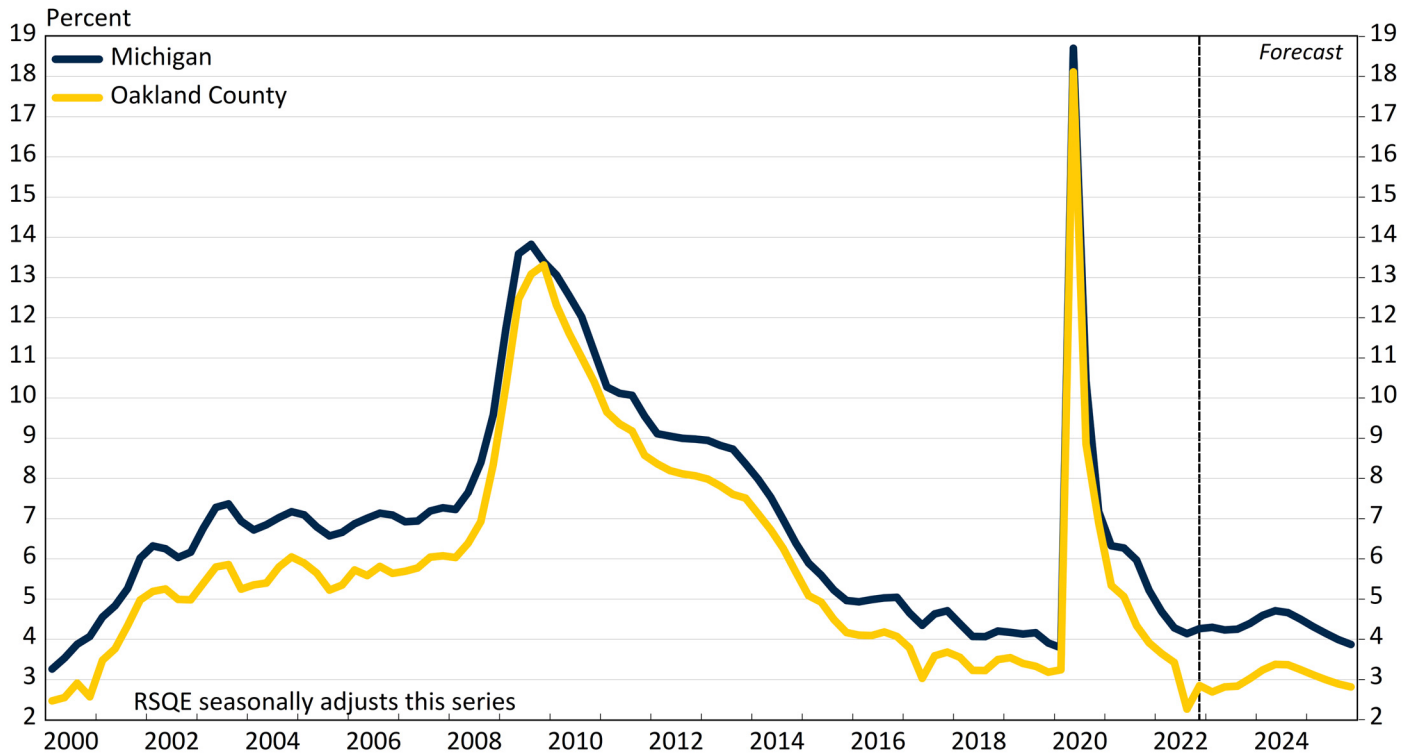
- On an annual average basis, employment in Oakland County declined by 9.8 percent in 2020. The number of jobs grew by 3.4 percent in 2021. We estimate that job growth decelerated to 3.1 percent in 2022.
- We are forecasting that job growth in the county will slow to a pace of 1.4 percent in 2023 and 1.3 percent in 2024, before inching up to 1.6 percent in 2025. Over the next three years we are forecasting that Oakland County will add a total of 31,300 jobs.
- The vast majority (30,000) of the net job gains in the county between 2022 and 2025 are forecast to occur in the private sector. The government sector, which includes Oakland University, Oakland Community College, the K-12 public schools as well as general government administration adds only 1,300 jobs over that period.
- The federal government introduced an updated NAICS industry classification system in 2022, which appears to have created a large discontinuity between 2021 and 2022 for some industries.

Forecast of Jobs in Oakland County by Major Industry Division

- In Table 3, we divide Oakland's major private sector industries into the three industry categories` described previously. Within each category the major industries are listed in descending order based on their average annual wage in 2021. Appendix B displays a full list of roughly 90 industries, organized by NAICS code.
- Employment in the blue-collar industries increased by 5,940 in 2022, with particularly strong growth in motor vehicle manufacturing (1,820 jobs). We believe these job gains were partly the result of the reclassification change. We expect the blue-collar industries group to grow by about 2,330 jobs per year over the next three years, and motor vehicle manufacturing by about 510 jobs per year. If our forecast is accurate, Oakland's 2025 job count in motor vehicle manufacturing would be the highest since 2008, but it would still be only about one-half the number in 2001.
- Non-automotive manufacturing has been steadily adding jobs since 2020, and we expect that growth to continue. By 2025, Oakland's employment in non-automotive manufacturing is forecast to be just 30 jobs short of 2019 levels.
- The construction industry added 1,550 jobs in 2021, and an additional 600 jobs in 2022. We expect increasing mortgage rates will cost the county 120 construction jobs in 2023 and will limit job growth to 160 in 2024. Growth picks up in 2025 with the county expected to add 820 jobs. Compared to 2019 levels, construction employment is forecast to be up by 2,870 jobs in 2025.
- Within the higher-education services industry group, the management of companies industry is estimated to have lost 1,130 jobs in 2022. We suspect this drop may be mostly due to the reclassification of jobs in motor vehicle manufacturing. We are forecasting that this industry will add a total of 1,150 jobs over the next three years.
- Employment in the finance and insurance industry declined by 2,450 jobs in 2022 and is forecast to lose an additional 1,920 jobs in 2023 before recovering a total of 500 jobs in 2024 and 2025. The job losses are concentrated in the credit intermediation industry and reflect the impact of rising interest rates on mortgage originations.
- Employment in professional and technical services has recovered slowly since the COVID-19 recession. We estimate that it grew by only 610 jobs (0.6 percent) in 2022. Over the next three years we are forecasting that growth will accelerate, averaging 1.4 percent per year. Despite this improvement we expect that Oakland's professional and technical services industry will remain about 340 jobs short of 2019 levels in 2025.
- Employment in private health and social services initially recovered slowly from the pandemic, but job gains accelerated in 2022. We forecast private health and social services will add 6,840 jobs over the next three years (2.2 percent per year). Our forecast leaves industry employment in 2025 roughly 1,050 jobs (1.0 percent) higher than in 2019. The most rapid job growth over the next three years will be in home health care, nursing and residential care facilities, and social services.
- Among Oakland's lower-education services industries, employment in retail trade stood at 83,100 jobs in 2001, but it declined to 78,900 by 2019. Employment fell another 9,340 jobs in 2020, then recovered 2,280 in 2021 and 1,610 in 2022. We forecast employment gains in retail trade to stall out, adding only 140 jobs over the next three years. Our forecast would leave retail trade employment in 2025 about 6.7 percent below 2019 levels, and 11.5 percent below 2001 levels.
- Employment in accommodations and food services declined by 25.7 percent in 2020 (15,700 jobs). Initially the recovery was slow (3,120 jobs added in 2021), but we estimate the pace of recovery picked up in 2022 (6,810 jobs or 14.0 percent). We are forecasting that growth will slow to an average of 3.7 percent per year over the next three years (6,360 jobs total) so that employment in 2025 slightly exceeds 2019 levels.
- The arts and recreation industry lost 39.1 percent of its jobs in 2020. It recovered about 80 percent of those job losses in 2021 and 2022. Over the next three years, we expect the industry will add 1,250 jobs (3.9 percent per year) so that employment in 2025 slightly exceeds 2019 levels
- Administrative support services and other services are forecast to see moderate growth over the next three years (1.1 percent per year and 1.5 percent per year, respectively). They nonetheless remain well short of 2019 employment levels in 2025.

Figure 8

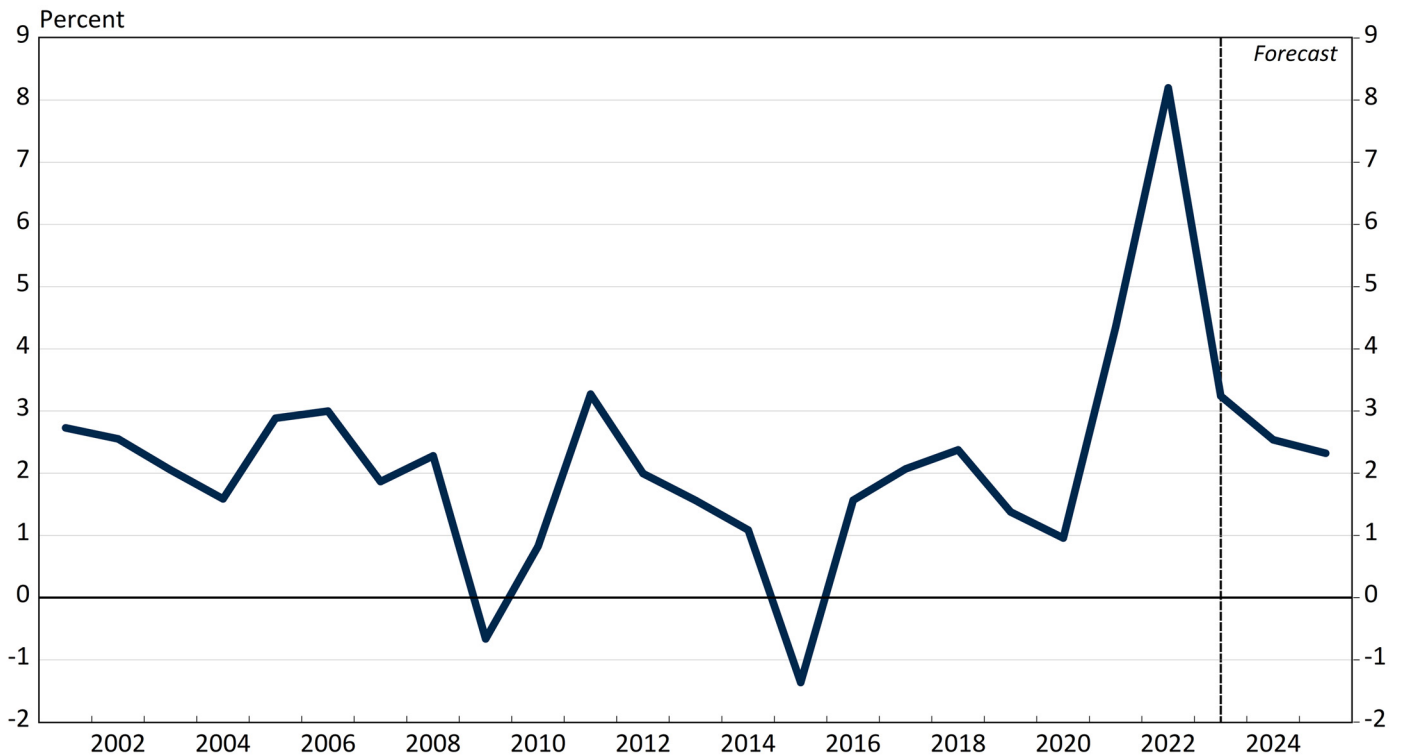
Quarterly Unemployment Rate, Michigan and Oakland County



- We expect that Oakland’s unemployment rate will average 2.7 percent in the first quarter of 2023 before edging up to 3.0 by the end of the year as county residents continue to return to the labor force.
- Oakland’s unemployment rate rises modestly in the first half of next year as the national recession we are forecasting puts a slight chill into the local labor market. The jobless rate climbs up to 3.4 percent in mid-2024.
- Even though we are forecasting an increase in the unemployment rate, we expect the count of employed Oakland County residents to keep growing in almost every quarter of our forecast period. From mid-2023 through early 2024, the local labor force grows more quickly than the number of employed residents, which puts upward pressure on the unemployment rate.
- Michigan’s unemployment rate rises from 4.2 percent in the second quarter of this year to 4.7 percent in the second and third quarters of 2024.
- In contrast to its experience following the Great Recession, we believe that Oakland County will have no problem shaking off the national economic slowdown we are forecasting.
- Oakland’s unemployment rate took six years to decline to its 2001 average rate of 4.1 percent after peaking at 13.3 percent in the fourth quarter of 2009. We expect that Oakland’s unemployment rate will rise to a cyclical peak of only 3.4 percent in mid-2024 and fully recover the following year.
- We project Oakland’s unemployment rate to fall to 2.8 percent by the end of 2025 as national economic growth picks up. Michigan’s unemployment rate finishes 2025 at 3.9 percent in our forecast.
- The county’s unemployment rate at the end of our forecast would stand four-tenths of a percentage point below its average in the first quarter of 2020, prior to the COVID-19 pandemic.
- Perhaps the most important theme to take away from our forecast of the local unemployment rate is that labor shortages will be an ongoing fact of life for the foreseeable future in Southeast Michigan.
- Relative to our statewide forecast, we are projecting faster population growth in Oakland County, with a return to pre-pandemic labor force levels by the end of our forecast. That encouraging trend reflects the enduring strength of the county’s economy.

Figure 9

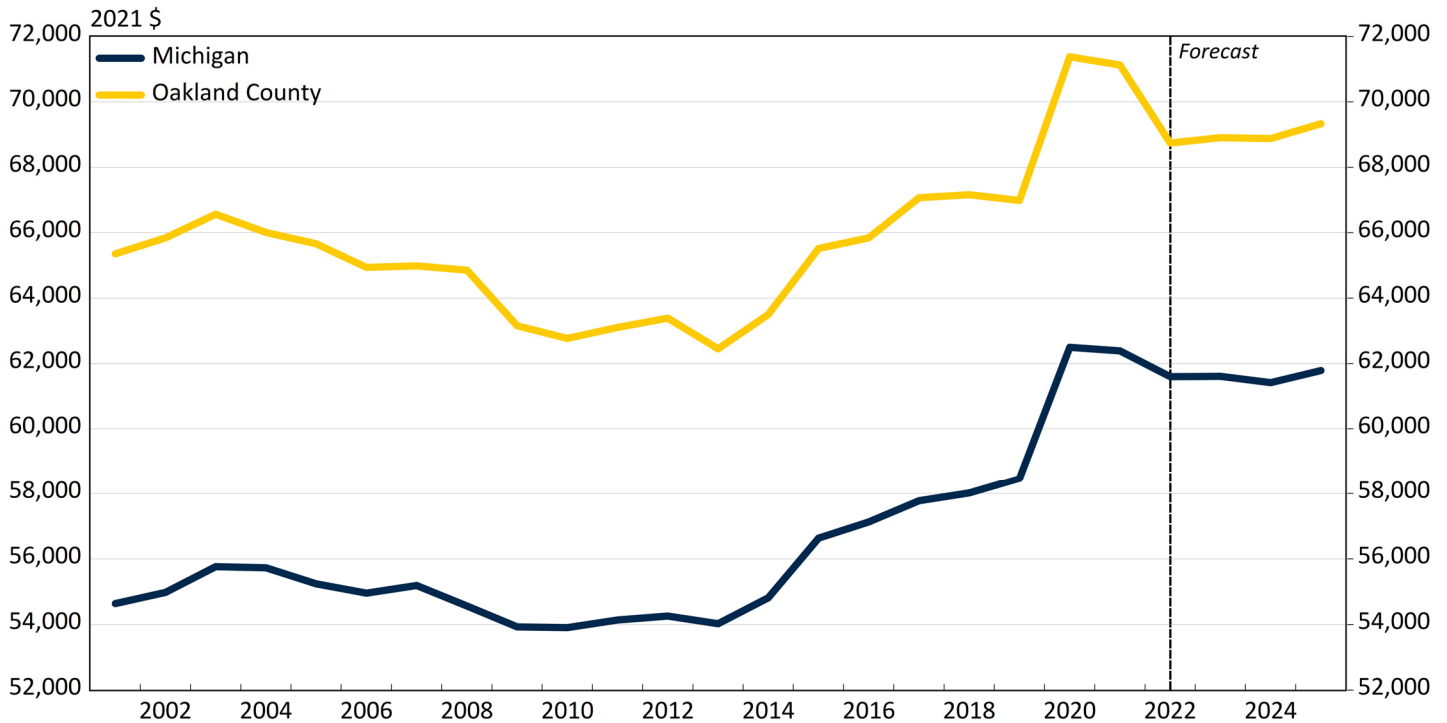
Detroit CPI Inflation Rate



- Figure 9 shows history and our forecast of annual local inflation from 2001 to 2025. We measure local inflation by the growth rate of the Detroit Consumer Price Index (CPI), as county-level consumer price data are not available.
- Calendar year average local inflation spiked from 1.0 percent in 2020 to 4.4 percent in 2021 and a whopping 8.2 percent in 2022.
- Although the spike in energy and food prices following Russia’s invasion in Ukraine was a significant contributor to last year’s inflation surge, it was far from the only cause. So-called core inflation, which strips out food and energy prices, clocked in at 6.1 percent nationally, far above the Federal Reserve’s target.
- A small consolation is that inflation slowed down over the second half of last year. The annualized pace of quarterly local inflation slowed from an eye-popping 13.1 percent in the second quarter of 2022 to 3.1 percent in the fourth quarter.
- We nonetheless believe it is too early for the Federal Reserve to declare victory on inflation. Volatile monthly readings, data revisions, and a hot labor market all mean that the Fed has work left to do.
- We expect local inflation to average 3.2 percent this year. That would be a very welcome deceleration from last year’s pace, although it would still be above the Fed’s target of 2 percent per year.
- Local inflation slows to 2.5 percent in 2024 and 2.3 percent in 2025. It nonetheless remains above its pre-pandemic trend over our forecast horizon. From 2010 to 2019, Detroit CPI inflation averaged only 1.5 percent per year.

Figure 10

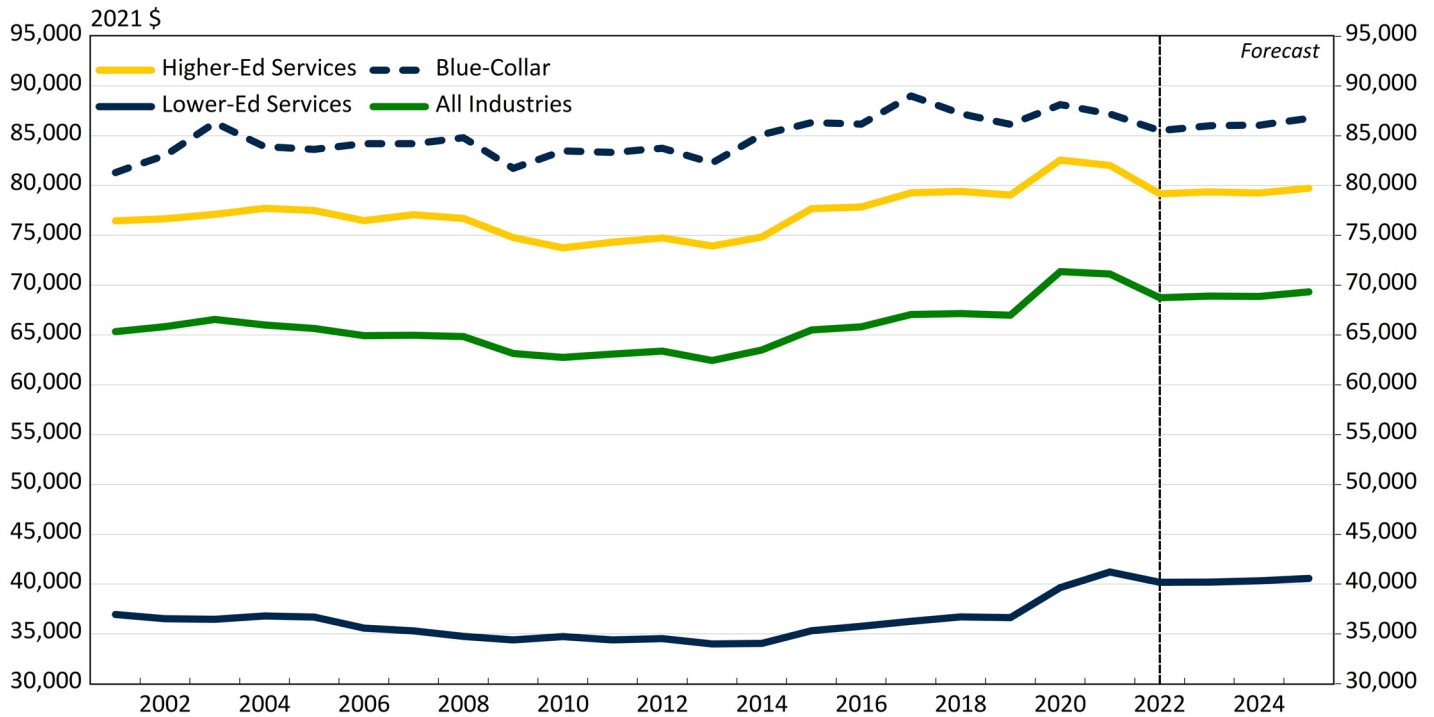
Average Annual Real Wage, Michigan and Oakland County



- Figure 10 shows the average annual real wages for all workers in Oakland County and in Michigan from 2001 to 2025, adjusted for inflation to be expressed in 2021 dollars.
- The average real wage in Oakland County has consistently been higher than in Michigan, but Oakland’s advantage has narrowed over time from almost 20 percent in 2002 to slightly less than 15 percent in 2019.
- Both Oakland County and Michigan saw large jumps in average real wages during 2020. Real wages grew by 6.6 percent in Oakland County and by 6.9 percent statewide. Those were the largest single-year increases in real wages on record.
- The jump in average wages in 2020 was caused by the disproportionate loss of lower-paying jobs relative to higher-paying jobs during the COVID-19 pandemic. Few individual workers experienced wage increases of that magnitude.
- In 2021, real wages fell by 0.4 percent in Oakland County and by 0.2 percent in Michigan. In 2022, real wages fell by an additional 3.4 percent in Oakland and 1.3 percent statewide. We estimate that as of 2022, the average real wage in Oakland County was only 11.6 percent higher than in the state.
- The reason the average real wage declined more last year in Oakland than statewide is primarily because employment growth in the county’s higher-education services industries lagged behind the state’s. In 2022, employment in the higher-education services industries increased by 2.3 percent in Michigan, but by only 0.8 percent in Oakland, causing the county’s employment composition to shift slightly to lower-education service industries relative to the state.
- We expect real wage growth in both the county and the state to return to the positive side of the ledger in 2023, but only barely. We forecast that over the next three years, the average real wage will increase by 0.3 percent per year in Oakland County and 0.1 percent per year in Michigan.
- In 2025, real wages are forecast to average \$69,300 in Oakland and \$61,800 in Michigan. Thus, Oakland County’s average real wage in 2025 will stand 3.5 percent above 2019 levels, while average real wages statewide will stand 5.7 percent higher.

Figure 11

Average Annual Real Wage in Oakland County by Selected Industry Group



- Figure 11 shows the average annual real wage in Oakland County for the same three industry categories as in Figure 7: traditional blue-collar industries, higher-education service industries, and lower-education service industries.
- Average wages in the blue-collar and higher-education services industries are about twice as high as wages in the lower-education services industries.
- The 2020 pandemic recession caused a spike in average wages in all three industry groups: 2.3 percent in the blue-collar industries, 4.4 percent in the higher-education services industries, and 8.3 percent in the lower-education services industries.
- The relatively large increase in wages in the lower-education services industries reflects the fact that the lowest-paid industries within this group (arts and recreation and accommodations and food services) lost the greatest share of jobs in 2020.
- In 2021, the average annual real wage declined in the blue-collar industries and higher-education services industries, but it increased by 4.0 percent in the lower-education services industries.
- We estimate that inflation substantially exceeded wage growth in 2022, leading the average real wage to decline by 1.9 percent in the blue-collar industries, by 3.5 percent in the higher-education services industries, and by 2.5 percent in the lower-education services industries.
- Over the next three years, the average real wage is forecast to grow by 0.5 percent per year in the blue-collar industries, by 0.2 percent per year in the higher-education services industries, and by 0.3 percent per year in the lower-education services industries.
- By 2025, real wages are expected to stand around 0.7 percent higher than their 2019 levels in the blue-collar industries, and 0.9 percent higher in the higher-education services industries. In contrast, by 2025 the average real wage will stand 10.8 percent higher in Oakland's lower-education services industries than in 2019.
- The increase in wages in the lower-education services industries will help to narrow wage inequality in Oakland County. In 2019, the county's lower-education services industry workers were paid only 43 percent of the blue-collar average, and 46 percent of the higher-education services average. In 2025 they will be earning 47 percent and 51 percent of those groups' average wages.

Review of the Forecast

Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs
1986	+ 1.4	1999	- 1.2	2012	- 2.6
1987	+ 0.7	2000	+ 0.6	2013	- 1.1
1988	- 1.8	2001	+ 1.9	2014	- 0.3
1989	- 1.9	2002	+ 3.2	2015	- 0.1
1990	+ 2.2	2003	+ 1.5	2016	- 0.1
1991	+ 3.9	2004	+ 2.6	2017	+ 1.1
1992	- 2.0	2005	+ 1.4	2018	+ 0.5
1993	+ 0.5	2006	+ 3.4	2019	+ 0.2
1994	- 1.3	2007	0.0	2020	+ 0.9
1995	+ 0.2	2008	+ 2.3	2021	+ 0.8
1996	- 0.5	2009	+ 5.5	2022	+ 1.0
1997	+ 0.6	2010	- 1.7		
1998	+ 1.3	2011	- 2.5		

(Positive numbers indicate that the forecast was too high; negative numbers indicate that it was too low.)

Average absolute forecast error 1986–2022: 1.5%

	Forecast 2022	Actual 2022
Unemployment rate	3.1%	3.0%
Consumer inflation rate	7.0%	8.2%

Forecast Date: April 2022

- In last year's report, we had forecast that Oakland County would gain 28,200 private jobs in 2022, for an increase of 4.3 percent. We now estimate that the county gained 20,200 private jobs last year, an increase of 3.1 percent. Due to revisions to the calendar 2021 job count, our forecast error for the 2022 employment level comes to an over-prediction of 7,000 jobs, or 1.0 percentage point after rounding.
- That forecast error was well below our average absolute error of 1.5 percent since 1986.
- We also over-predicted employment in Oakland County's government sector. We had forecast that government employment in the county would gain 1,600 jobs in 2022, an increase of 1.6 percent. We now estimate that the county gained 1,300 jobs last year, an increase of 1.3 percent.
- We had forecast that Oakland's unemployment rate would decrease from 3.3 percent in 2021 to 3.1 percent in 2022. Oakland's unemployment rate actually decreased from 4.7 percent in 2021 to 3.0 percent in 2022.
- Last year, we forecast that local prices would increase by 7.0 percent from 2021 to 2022. Local prices ended up increasing by 8.2 percent last year, amid continued supply shortages and spikes in energy and food prices following Russia's invasion of Ukraine.
- Although we slightly over-estimated the strength of Oakland County's economy in 2022, the county's overall performance suggests that it is well positioned for the future as one of the most prosperous counties in both Michigan and the United States.

Appendix B:

Forecast of Jobs in Oakland County by Detailed Industry

	Estimate	Forecast		Average Annual Wage	
	2022	2023	2024	2025	
Total Payroll Jobs (Number of jobs)	717,753	727,501	737,098	749,067	71,131
(Annual percentage change)	(3.1)	(1.4)	(1.3)	(1.6)	
Total Government	44,690	45,718	45,858	46,003	60,586
Federal government	4,562	4,522	4,519	4,519	76,612
State Government	3,757	3,781	3,823	3,872	63,554
Local Government	36,371	37,415	37,516	37,612	58,197
Total Private	673,063	681,783	691,240	703,064	71,832
Private Goods-Producing	99,237	100,458	101,499	103,383	83,889
Natural resources and mining	1,136	1,198	1,234	1,271	44,002
Construction	29,237	29,113	29,273	30,094	82,386
Construction of buildings	8,020	8,029	8,053	8,282	84,554
Heavy and civil engineering construction	3,022	3,158	3,221	3,379	96,930
Specialty trade contractors	18,195	17,926	17,998	18,433	79,223
Manufacturing	68,864	70,147	70,992	72,018	85,225
Printing and related support activities	2,029	2,052	2,063	2,074	62,856
Chemicals	4,290	4,449	4,599	4,764	101,944
Plastics and rubber products	5,150	5,264	5,353	5,469	61,315
Nonmetallic mineral products	1,119	1,122	1,139	1,158	74,171
Fabricated metals	9,177	9,058	8,947	8,870	76,909
Machinery	10,458	10,503	10,603	10,726	90,943
Computer and electronic products	3,212	3,243	3,262	3,281	84,661
Transportation equipment	21,652	22,430	22,772	23,173	101,772
Miscellaneous manufacturing	4,926	5,079	5,220	5,371	62,539
Manufacturing NEC	6,852	6,947	7,035	7,132	70,798
Private Service-Providing	573,827	581,325	589,741	599,680	69,766
Trade, transportation, and utilities	126,699	127,629	128,631	129,672	64,336
Wholesale trade	36,518	36,954	37,497	38,079	104,565
Merchant wholesalers, durable goods	25,629	25,853	26,283	26,736	104,243
Merchant wholesalers, nondurable goods	8,062	8,289	8,422	8,569	94,686
Wholesale electronic markets, agents, brokers	2,827	2,811	2,791	2,774	135,440
Retail trade	73,427	73,647	73,634	73,570	43,683
Motor vehicle and parts dealers	11,505	11,470	11,560	11,675	80,985
Building material and garden supply dealers	6,797	6,710	6,722	6,738	45,739
Food and beverage stores	12,839	13,165	13,361	13,486	28,829
Furniture, home furnishings, electronics, and appliance retailers	5,222	5,038	4,960	4,897	58,799
General merchandise retailers	13,835	13,468	13,243	13,022	31,962
Health and personal care stores	7,523	7,652	7,894	8,211	42,549
Gasoline stations and fuel dealers	2,158	2,160	2,166	2,173	27,804
Clothing and clothing accessories stores	6,289	6,178	5,978	5,782	27,755
Sporting goods, hobby, musical instrument, book, and miscellaneous retailers	7,259	7,806	7,750	7,586	29,078
Transportation and warehousing	15,167	15,429	15,883	16,388	56,948
Truck transportation	4,151	4,195	4,222	4,259	64,578
Couriers and messengers	3,549	3,570	3,695	3,831	44,053
Warehousing and storage	2,827	2,830	2,892	2,957	76,997
Transportation and warehousing NEC	4,641	4,834	5,075	5,342	52,812
Utilities	1,586	1,599	1,617	1,635	154,793
Information	13,604	13,888	14,009	14,143	98,173
Publishing	3,862	3,782	3,787	3,792	103,943
Telecommunications	3,671	3,712	3,675	3,638	95,703
Computing infrastructure providers	1,932	1,999	2,044	2,091	104,450
Information NEC	4,139	4,395	4,502	4,621	92,156

Appendix B:

Forecast of Jobs in Oakland County by Detailed Industry

	Estimate	Forecast		Average Annual Wage	
	2022	2023	2024	2025	
Financial activities	58,243	56,315	56,456	56,843	96,562
Finance and insurance	41,156	39,239	39,350	39,735	106,283
Credit intermediation and related activities	20,895	19,073	19,207	19,539	95,370
Insurance carriers and related activities	15,480	15,348	15,270	15,246	96,715
Finance and insurance NEC	4,781	4,817	4,872	4,951	186,448
Real estate and rental and leasing	17,086	17,077	17,107	17,108	70,342
Professional and business services	172,935	174,200	176,614	180,167	88,143
Professional and technical services	99,902	101,227	102,371	104,215	100,879
Legal services	12,182	12,169	12,257	12,362	102,928
Accounting and bookkeeping services	6,605	6,615	6,599	6,586	78,057
Architectural and engineering services	38,073	39,100	39,649	40,524	107,498
Specialized design services	2,340	2,409	2,431	2,486	114,802
Computer systems design and related services	18,190	17,972	18,064	18,360	102,133
Management and technical consulting services	10,286	10,440	10,554	10,772	98,713
Scientific research and development services	1,454	1,491	1,518	1,559	149,660
Advertising, PR, and related services	3,300	3,297	3,219	3,183	104,998
Other professional and technical services	7,473	7,735	8,080	8,383	66,952
Management of companies and enterprises	17,801	18,042	18,408	18,948	120,960
Administrative support and waste management	55,231	54,931	55,835	57,003	53,583
Private education and health services	112,548	115,484	117,823	120,172	56,767
Education services	11,187	11,588	11,791	11,976	47,035
Health care and social assistance	101,360	103,895	106,032	108,195	57,760
Ambulatory health care	42,519	43,409	44,144	44,863	62,380
Offices of physicians	14,504	14,802	14,975	15,130	87,258
Offices of dentists	6,714	6,739	6,843	6,951	59,085
Offices of other health practitioners	7,039	7,207	7,397	7,582	45,457
Home health care services	8,113	8,428	8,656	8,874	41,302
Other Ambulatory Health Care Services	6,149	6,232	6,273	6,324	55,165
Hospitals	31,396	31,876	32,346	32,783	71,782
Nursing and residential care facilities	15,320	15,834	16,321	16,821	36,076
Social assistance	12,126	12,777	13,221	13,729	30,461
Leisure and hospitality	65,748	69,356	71,327	73,320	25,004
Arts, entertainment, and recreation	10,355	11,138	11,384	11,604	28,904
Accommodation and food services	55,354	58,218	59,942	61,717	24,336
Accommodation	4,655	4,980	5,231	5,518	27,580
Food services and drinking places	50,698	53,239	54,711	56,199	24,035
Restaurants and other eating places	45,074	47,246	48,594	49,942	23,614
Full-service restaurants	23,275	24,398	25,310	26,346	26,728
Limited-service restaurants	17,988	18,941	19,322	19,570	20,430
Other Restaurants and Other Drinking Places	3,811	3,906	3,962	4,026	21,446
Special food services	3,094	3,368	3,398	3,425	30,084
Drinking places, alcoholic beverages	2,530	2,625	2,719	2,832	24,393
Other services	20,839	21,009	21,369	21,780	44,837
Private unclassified service-providing	3,252	3,444	3,513	3,583	59,337

Addendum

Unemployment Rate	3.0	2.8	3.3	3.0
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Appendix C:

Oakland County Compared with Its Peers Indicator Values*

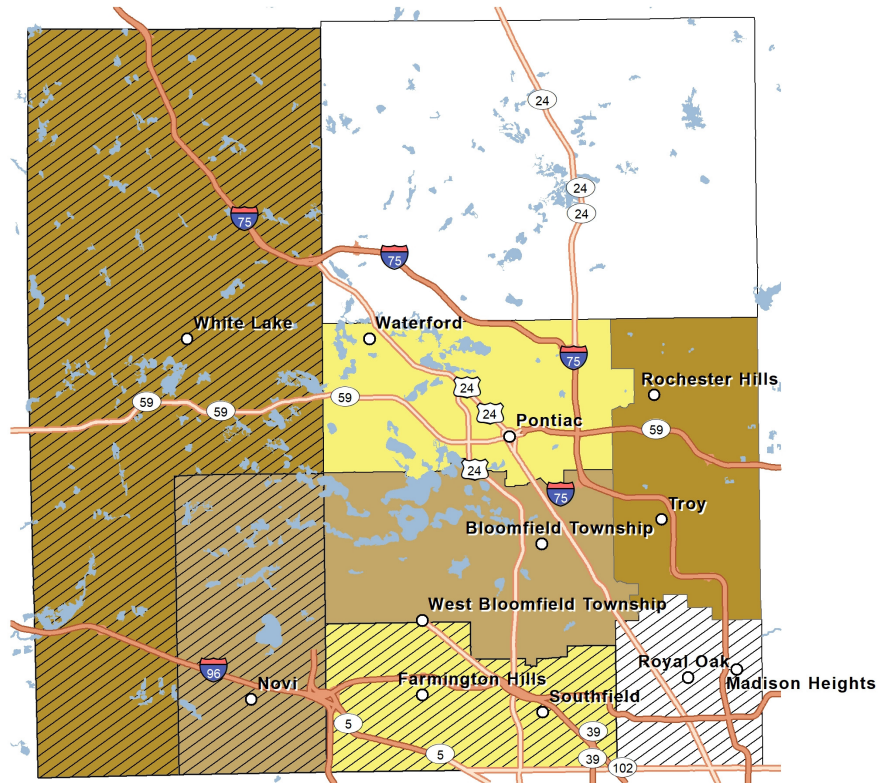
County	State	Population 2021	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional
Fairfax	VA	1,139,720	72.7%	9.6%	140,078	63.2%	63.3%
Montgomery	MD	1,054,827	66.7%	12.0%	124,144	58.7%	60.9%
Nassau	NY	1,390,907	61.1%	6.1%	123,829	50.6%	52.3%
Westchester	NY	997,895	63.9%	11.2%	122,851	51.3%	56.7%
Collin	TX	1,109,462	63.7%	8.9%	113,313	47.5%	57.3%
Wake	NC	1,150,204	67.3%	10.6%	116,331	41.3%	57.6%
Bergen	NJ	953,819	64.3%	10.2%	113,509	46.8%	54.1%
Hennepin	MN	1,267,416	64.8%	9.7%	112,903	39.9%	54.3%
Denton	TX	941,647	59.4%	7.8%	112,190	46.7%	52.3%
Oakland	MI	1,270,017	62.5%	8.4%	112,894	38.9%	54.4%
DuPage	IL	924,885	61.5%	7.7%	111,146	46.3%	49.9%
Fairfield	CT	959,768	58.7%	11.1%	120,303	47.8%	49.8%
Travis	TX	1,305,154	63.1%	14.9%	111,982	44.2%	57.2%
Fulton	GA	1,065,334	67.1%	18.5%	109,084	42.3%	58.3%
Suffolk	NY	1,526,344	52.6%	6.6%	109,774	47.2%	44.2%
Contra Costa	CA	1,161,413	53.7%	12.0%	106,984	49.5%	48.2%
New York	NY	1,576,876	70.0%	22.7%	92,804	40.3%	63.9%
St. Louis	MO	997,187	57.2%	13.7%	96,455	37.0%	50.1%
Allegheny	PA	1,238,090	60.5%	14.0%	98,942	31.1%	50.6%
Mecklenburg	NC	1,122,276	59.0%	13.6%	95,815	36.4%	49.0%
Salt Lake	UT	1,186,421	47.2%	8.9%	98,144	36.4%	43.6%
Honolulu	HI	1,000,890	50.7%	12.1%	94,345	42.8%	41.9%
Prince George's	MD	955,306	42.6%	15.6%	96,460	45.6%	43.7%
Erie	NY	950,683	54.7%	19.2%	88,812	30.3%	44.2%
Franklin	OH	1,321,414	51.2%	20.2%	87,071	33.0%	45.8%
Pierce	WA	925,708	42.8%	9.6%	89,603	37.4%	37.8%
Pinellas	FL	956,615	50.1%	14.2%	85,514	29.2%	43.8%
Palm Beach	FL	1,497,987	49.2%	15.4%	79,266	38.3%	41.2%
Sacramento	CA	1,588,921	43.1%	16.9%	89,574	36.5%	42.3%
Gwinnett	GA	964,546	48.9%	16.3%	84,655	31.1%	40.4%
Hillsborough	FL	1,478,194	49.0%	19.6%	81,513	29.0%	42.3%
Pima	AZ	1,052,030	43.4%	20.0%	82,472	33.9%	41.9%
Duval	FL	999,935	43.9%	20.7%	75,520	33.1%	40.5%
Orange	FL	1,422,746	49.0%	20.5%	76,263	27.9%	41.0%
Cuyahoga	OH	1,249,387	46.5%	23.1%	81,490	26.5%	43.3%
Marion	IN	971,102	43.3%	21.1%	76,743	27.0%	39.2%
Philadelphia	PA	1,576,251	43.6%	34.2%	63,062	20.7%	45.0%
Milwaukee	WI	928,059	43.7%	24.0%	75,407	24.4%	41.8%
Shelby	TN	924,454	42.1%	24.1%	75,926	29.3%	37.5%
Fresno	CA	1,013,581	31.8%	27.4%	69,743	27.4%	34.4%
Kern	CA	917,673	26.0%	25.9%	64,092	25.8%	29.8%
Bronx	NY	1,424,948	32.9%	34.4%	45,786	18.3%	30.2%
<i>State of Michigan</i>		10,050,811	43.8%	17.8%	85,433	27.1%	39.8%
<i>United States</i>		331,893,745	45.7%	16.9%	85,806	31.9%	42.2%

*All counties in the United States with a population between 900,000 and 1,600,000 in 2021.

**Adjusted for cost of living.

Source: American Community Survey 2021. Census Bureau Population Estimates, March 2022. Median Family Income adjusted using BEA price parity indices for 2021 and extended to counties by relative gross rent.

Oakland County PUMA Regions



- | | |
|--|--|
| Northeast | Southeast |
| Central, Outside Birmingham & Bloomfield | South Central, Farmington & Southfield |
| Central, Birmingham & Bloomfield | Southwest |
| East Central, Troy & Rochester | West |



OUR STORY: By the Numbers

CUSTOMERS

 **3,805**

Employers served by Business Solutions Professionals during 2021-22

 **28,377**

Job candidates served by our Employment Services staff during the past two years

 **8,301**

Job positions filled with the assistance of our team during 2021-22

TRAINING WORKSHOPS

5,829 Participants in more than 525 virtual career workshops for job seekers during 2021-22

1,021 Businesses that have participated in our virtual workshops for employers since 2021

YOUTH CAREER EXPLORATION

15,900 High school students and advisors who participated in MiCareerQuest Southeast, the region's largest annual career exploration event, during its first two years

817 High school students who participated in Oakland County Manufacturing Day in 2022, visiting 31 Oakland County employers

GOING PRO TALENT FUND

\$6,248,619

Amount of Going PRO Talent Fund training grants provided to 198 companies in 2022-23, to train 2,700 workers, including 77 apprentices

WORKFORCE DEVELOPMENT PROGRAMS

465 Youth ages 16-24 who have participated in our Oakland NEXT youth internship program during the past two years


246 Graduates of our PLC/Robotics Technician and CNC Machine Operator training programs administered with Oakland Community College

33 People who have received training/support through Oakland County Michigan Works! for apprenticeship positions in the manufacturing, information technology, accounting and health science sectors during 2021-22

 **370** Successful conviction expungements for 204 people who have applied to Oakland County's Clean Slate program since last year

 **758** Employees from 22 companies who have taken advantage of the Oakland County Business Resource Network since its launch, helping them keep their jobs

OAKLAND80

 **1,092** Number of people served by Career and Education Navigators through Oakland80 since 2022

\$499,702 Amount awarded to 355 recipients of the Oakland80 Tuition Scholarship, designed to help residents obtain a post-secondary degree or credential

648 Oakland County Childcare Scholarships awarded to local families; each worth \$1,200

Six Locations to Serve Oakland County Customers:

Novi
Oak Park

Pontiac
Southfield

Troy
Waterford

Questions? Contact:

Jennifer Llewellyn
llewellynj@oakgov.com | (248) 452-2256

A Proud Partner of the American Job Center Network | Equal Opportunity Employer/Program. Auxiliary aids and services are available upon request to individuals with disabilities. | Michigan Relay Center or 711 | Funded by: David Coulter, Oakland County Executive, Oakland County Workforce Development Board, Michigan Department of Labor and Economic Opportunity

1-800-285-WORKS | OaklandCountyMiWorks.com



BUSINESS

Fostering innovation, investment and growth in Oakland County, our Business Development team helps businesses locate and expand in our region.



COMMUNITY

Providing community development services for all of the cities, villages and townships in Oakland County.



TRANSIT

Maintaining and expanding public transit throughout Oakland County.



WORKFORCE

Helping our businesses with talent, and connecting talent with jobs.



VETERANS SERVICES

Assisting veterans and their families with a variety of needs, from filing and appealing claims, to applying for grants and more.

AdvantageOakland.com

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