

DRAFT REPORT

ECONOMIC OPPORTUNITIES ANALYSIS (OREGON STATEWIDE PLANNING GOAL 9)



October 2016

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CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

I. INTRODUCTION

The City of Milwaukie is in the process of updating its Comprehensive Plan, which is the City's primary guide for growth and development. To help inform the Comprehensive Plan update, the city has completed an Economic Opportunities Analysis (EOA) in compliance with Oregon Statewide Planning Goal 9 (Economy of the State).

Goal 9 requires that cities and counties located within the Urban Growth Boundary (UGB) reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within the UGB as determined by their Buildable Land Inventory (BLI). The principal purpose for analysis is to assess whether the City has an adequate land supply to accommodate projected employment growth. This EOA assesses the adequacy of its land supply while linking it to infrastructure planning, community involvement and coordination among local governments and the state.

The EOA is organized into six primary sections:

- **Economic Trends:** Provides an overview of national, state and local economic trends affecting Milwaukie, including population projections, employment growth, retail trends and a demographic profile.
- **Target Industries:** Analysis of key industry typologies that the City should consider as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.

- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Milwaukie's Urban Growth Management Area (UGMA).
- **Reconciliation:** Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Recommendations:** Summary of findings and policy implications.

The analysis covers the forecasted need and reconciliation over the twenty-year period, running from 2015 through 2035.

II. EXECUTIVE SUMMARY

The City of Milwaukie is a first tier suburb within the Portland-Vancouver metropolitan area. The City has a strong economic base, with employers providing high quality jobs. It is a net importer of labor, with an estimated 3,300 more jobs than there are city residents active in the workforce. Employment growth within the City since 2010 has been well in excess of neighboring cities, with the employment base expanding 21.8% from 2010 to 2014.

While the employment base in Milwaukie is robust, less than 8% of the local workforce lives and works within the City. Over 45% of the workforce commutes to Portland, while the remainder commute to a range of proximate jurisdictions. Approximately 94% of the local labor needs are met by persons living outside of the City limits.

The City has 44 firms with greater than 50 employees. These firms accounted for over 7,121 jobs in 2014, with an average annual wage of close to \$53,000 per year. An additional 66 firms employed between 20 and 49 employees, with average annual wages approaching \$49,000 per year. The highest average wages by sector were reported for wholesale trade, construction, and manufacturing. Construction and retail trade are the only two sectors that reported average wage levels in excess of the metro area average.

The City of Milwaukie has an irregular city boundary along its eastern and southeastern edges, while its Urban Growth Management Area (UGMA) – the area for which the city has an agreement with Clackamas County to provide city services and pursue future annexation- extends all the way to

Interstate 205. Because employment areas do not recognize jurisdictional boundaries, and the economic and employment base in the city and its UGMA are closely intertwined and often indistinguishable, this EOA presents data and analysis for both incorporated Milwaukie and its greater UGMA, and includes policy recommendations for the greater UGMA.

The City and its UGMA have significant strength and potential for growth in the following key industry clusters:

- **Food Processing and Storage**
- **Metals, Machinery, & Transportation Equipment**
- **Health Services and Continuing Care**
- **Warehouse & Distribution**
- **Business, Professional and Information Services**
- **Maker Manufacturing & Amenity Retail/Hospitality**

The local economy demonstrates the ability to attract and support these industries.

The City's land supply was largely developed, at densities that reflected market conditions in previous business cycles. As a result, the City's capacity for future employment growth is largely represented by redevelopment opportunities. Redevelopment activity is inherently difficult to achieve; as improvements on a property can have significant economic value even if the property appears to be under-utilized.

The forecasted average annual rate of employment growth in the City and the broader Urban Growth Management Area (UGMA) ranges from 1.5% to 1.9%. Within the City of Milwaukie, this rate translates into 6,131 to 7,750 jobs by the year 2035. The forecasts assume a greater proportion of future marginal growth will occur in the service and trade-oriented sectors.

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Metro’s TAZ¹ based forecasts project an average annual growth rate of 1.2% through 2040, which is significantly lower than the forecasts in this analysis. The lower forecast reflects Metro’s modeling structure, which limits projected growth on the basis of estimated capacity.

The forecasted employment growth by sector is converted into short- and long-term demand for land by use type. The forecasted land needs for the City of Milwaukie range from 240 to 339 net acres over the next five years, and 1,003 to 1,177 acres through 2035.

**PROJECTED LAND DEMAND BY SPACE TYPE
CITY OF MILWAUKIE, 2015-2035**

Use Type	Safe Harbor Forecast		Alternative Forecast	
	5-year	20-year	5-year	20-year
Commercial Land	59	172	102	253
Industrial Land	115	588	128	605
Mixed-Use	48	172	78	227
Residential Land	19	70	31	93
TOTAL ACRES	240	1,003	339	1,177

Vacant and developable acreage within the City and UGMA is insufficient to accommodate the projected growth. Thus, the City’s ability to meet future employment needs will be heavily reliant upon redevelopment and intensification of uses.

Given its lack of vacant land, the City’s policies should actively encourage redevelopment and/or reinvestment in established business and industrial parks, with the objective of intensifying the usage of these economic

resources over time. One possible strategy is active intervention to encourage new development for targeted industries and/or in desired development forms. Employment concentrations within the City have distinct attributes, and the appropriate strategy will vary by district. One of the City’s economic strengths is the unique nature of these districts, and the range of locations they offer for economic development.

Future economic development in the City depends largely on strategies that improve quality of life, leverage local resources, and support key industries. To ensure a high quality of life for all residents is pivotal for economic development and prosperity. Efforts to support and utilize existing natural, aesthetic, and cultural resources will strengthen Milwaukie’s unique character, encouraging investment, local spending, and the retention of residents and businesses. Given the City’s limited capacity, efforts to support existing industries are also necessary for economic development.

The City of Milwaukie’s strengths include its designation as one of the Portland metropolitan area’s first tier suburbs, local and regional access, public transit linkages, and a robust local employment base. The City’s primary challenge in attracting and retaining new growth its limited inventory of vacant and developable sites.

The City’s extensive inventory of built-space does offer a marketing advantage for firms that are price sensitive in terms of space. While the City’s employment areas did not see significant new investment in the recent business cycle, the existing inventory of built-space is more likely to redevelop within the planning horizon.

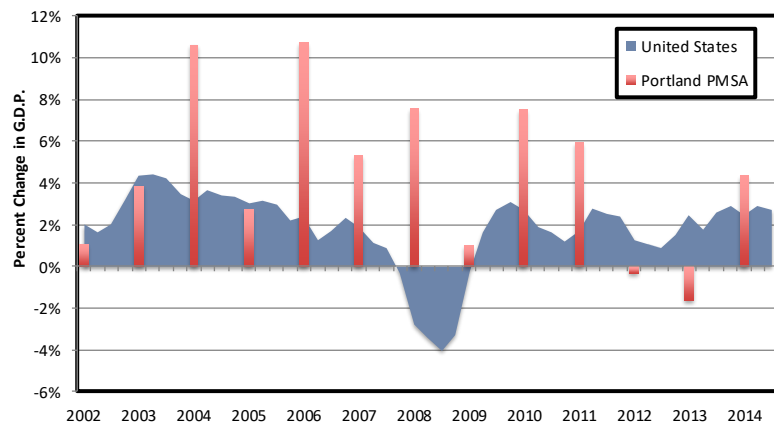
¹ Transportation Analysis Zones

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

CURRENT BUSINESS CYCLE CONDITIONS

Output: Gross Domestic and Metropolitan Product 2002 through 2015



Source: U.S. Bureau of Economic Analysis (BEA)

The Great Recession brought six consecutive quarters of negative economic growth in 2008 and early 2009. The depth and duration of this downturn was the most pronounced since World War II. The recovery and current expansion cycle have been particularly modest to date, as credit markets are more stringent, businesses are more cautious, and housing construction has yet to emerge as a driving catalyst.

Declines in local output growth were less severe during the recession, which is likely due to the region's relatively high share of traded sector industries. Similar to previous cycles, inflection points in economic cycles continue to lag national trends by several years. For example, while national output declined in 2008-2009, local output declined in 2012-2013.

The Congressional Budget Office (CBO) forecasts continued moderate growth around 3% in the near-term while long-term growth is expected to be slightly lower than in past expansion cycles².

Monetary Policy Outlook

The Federal Reserve (The Fed) uses monetary policy to influence business cycles to meet targets for employment and inflation. During the great recession The Fed employed unprecedented measures to stave off a financial crisis and repair economic conditions. In 2015, the Federal Funds Rate remains near 0%. With the current business cycle now in its sixth year, some economists are concerned that maintaining a near-zero rate will limit The Fed's ability to combat the next downturn.

Impact on Milwaukie:

In the near-term, borrowing costs for local companies will increase over the next several years as interest rates trend upwards. However, this will likely occur in the context of continued economic growth; Milwaukie should see positive economic growth exceed national levels through 2020, primarily due to pressure for increased housing density and business investment in capacity expansion

² Congressional Budget Office, The 2015 Long-Term Budget Outlook (June 2015)

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

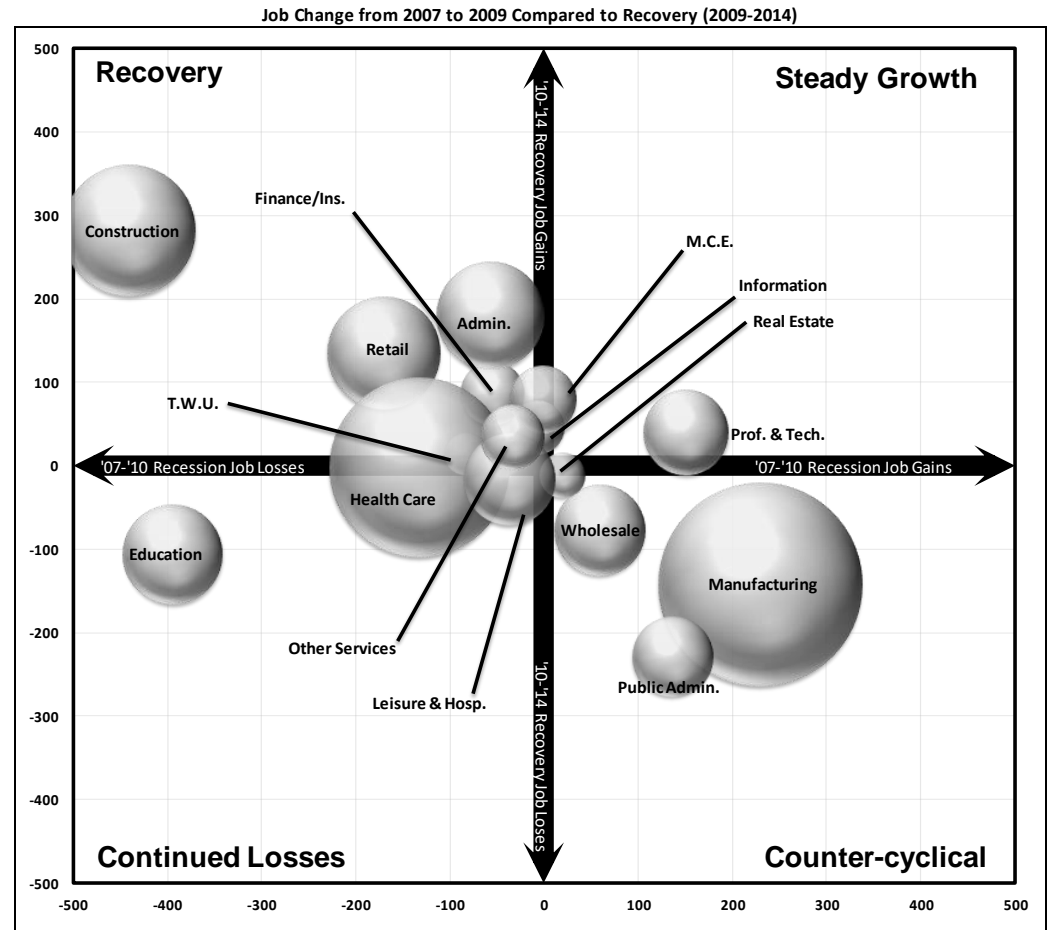
Labor Market Recovery by Industry Sector City of Milwaukie, Oregon (2009-2014)

Most cities in Oregon experienced negative employment growth between 2007 and 2010. During this period, the City shed over 6.3% of its job base. Most of the City's industries were affected, led by construction, education, retail, and health care. Declines in health care and subsequent lackluster recovery is surprising, as health care maintained steady growth through the recession in most markets. The counter cyclical nature of Milwaukie's manufacturing base is likely due to the industry's dominance by large and resilient firms.

Despite recovery in many industries, Milwaukie is still roughly 500 jobs below the pre-recession peak.

Impact on Milwaukie:

Future business cycles in Milwaukie are likely to follow regional trends. However, recent experience suggests that local trends deviate from the status quo for some industry sectors. With the exception of a few sectors (construction, education, manufacturing), employment volatility was relatively moderate during the worst economic recession since the depression. Lower volatility provides greater certainty during national downturns and peaks.

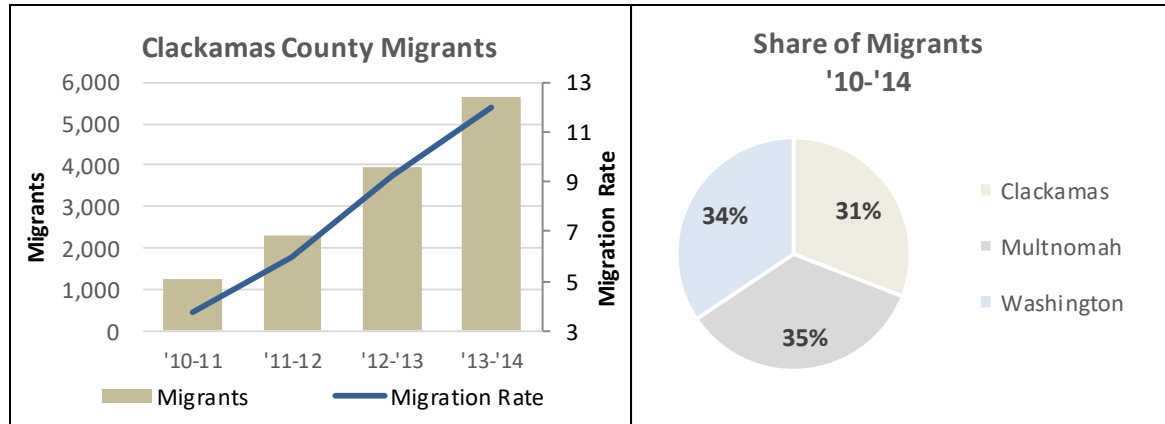


Source: Oregon Employment Department and Johnson Economics

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MIGRATION TRENDS—CLACKAMAS COUNTY AND THE PORTLAND METROPOLITAN AREA

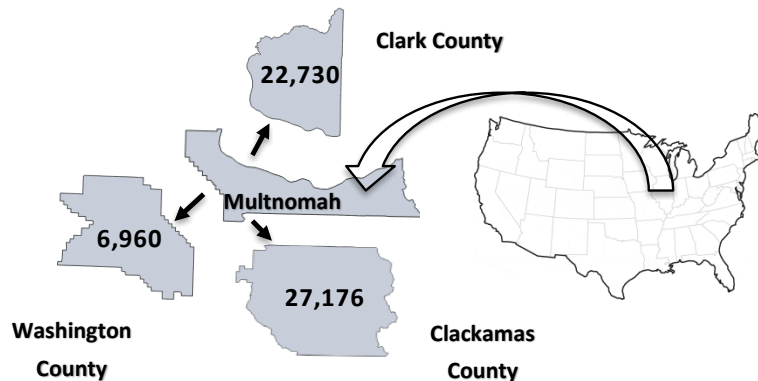


Commensurate with economic expansion and increased employment opportunities, migration into Clackamas County from other regions in the United States and abroad has accelerated rapidly. Since 2010, Clackamas County has accounted for 31% of new migrants to the region and nearly 15% of all net-new migrants to the state of Oregon.

Oregon experienced high rates of net in-migration, averaging between seven and eight persons per 1,000 residents annually at both the local and state level. In the current decade, net in-migration rates in Clackamas County have exploded to nearly 12 persons per 1,000 between 2013 and 2014. This is among the highest migration rates in Oregon and the highest in the Metro area.

Multnomah County—The Metro Region’s Ellis Island

Net-Migrants from Multnomah County to other Counties ('00-'13)



Multnomah County is a magnet for migrants from other major markets and abroad, with most new residents landing in Portland to begin their new lives. However, many new residents to Oregon eventually transition to outlying cities. Since 2000 nearly 60,000 more people have moved from Portland into neighboring communities than vice versa.



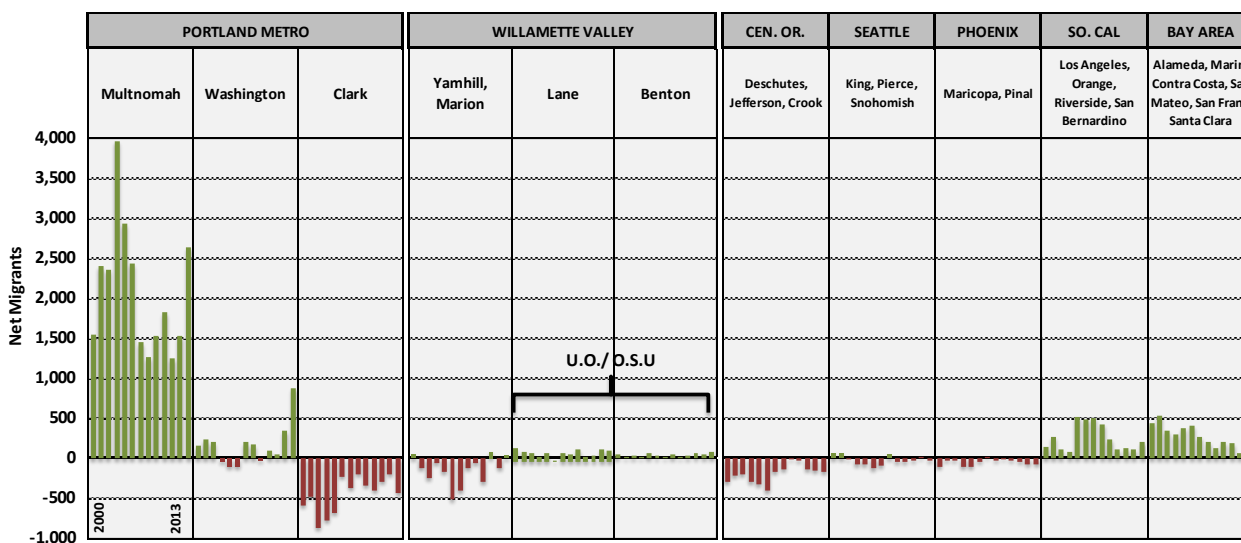
Ellis Island

Source: U.S. Internal Revenue Service County-to-County Migration Statistics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

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NET MIGRATION BETWEEN CLACKAMAS COUNTY AND OTHER MAJOR MARKETS, 2000 THROUGH 2013



Source: U.S. Internal Revenue Service County-to-County Migration Statistics

The figure to the left exhibits net-migration flows between Clackamas County and the primary markets from which people have “flowed” in and out of since the start of 2000. The connection to the rest of the Portland region is as expected, with heavy inflows from Multnomah County and outflows to areas with lower housing costs in Clark County and the Willamette Valley. Persistent inflows from Lane and Benton counties are likely the result of student migration from the University of Oregon and Oregon State University.

Clackamas County’s relatively older age profile is also reflected in outflows to Central Oregon, a hotbed for retirees.

Between other major markets, Clackamas County is a slight exporter of residents to both Seattle and the Phoenix area. However, a considerable share of net-migrants originates from California’s two largest markets.

Impact on Milwaukie:

A history of strong net-migration coupled with a rosy outlook is indicative that migration-driven population growth in the region is likely to continue throughout the planning period. While the extent to which increased density will translate into increased household growth in Milwaukie is uncertain, regional pressure is to be expected. This is a positive sign for industries that heavily depend on the local population base, including health care, retail, food services, education, financial services, housing construction, and most of the other services sector.

Multnomah County has also exhibited a doubling of its migration rate in recent years. Given the systematic relationship of flows between Clackamas and Multnomah, an above-average influx of inter-region migrants should be expected over the next five years.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

POTENTIAL FOR FUTURE GROWTH: HAS MILWAUKIE BEEN DISCOVERED?

The Portland region is experiencing an unprecedented transition, with strong net-migration impacting the character of communities and placing regional pressure to expand housing and commercial development stock. In part the result of a billion-dollar transit investment that links Milwaukie with the Portland Central City, the City is expected to play a considerable role in accommodating regional growth.

Median home prices in the Portland Metro area have climbed rapidly during the current housing cycle, growing 30% between 2012 and 2015.³ Rental apartment rates have followed a similar trajectory. In both cases, price appreciation is driving more residents to look toward secondary markets with strong connectivity and community “bones”, such as Milwaukie. Over the same period, home sale velocity in Milwaukie increased 31% with median prices growing by 43% since 2012. This trend is even further pronounced within station areas (defined here as within a half-mile radius of a light rail station). Since 2012 station areas have seen a 66% increase in home sales and 51% increase in median prices. Price appreciation is highest near the Milwaukie/Main station, with a 69% increase in median sale price. This condition is indicative of several factors that will influence economic conditions over the planning period:

Underlying Demographics

In addition to growth in the number of “rooftops” in the community, Milwaukie is likely to exhibit an uptick in median resident incomes as well. Affordability relative to proximate markets will also likely attract a younger demographic base as Millennials begin to establish families.

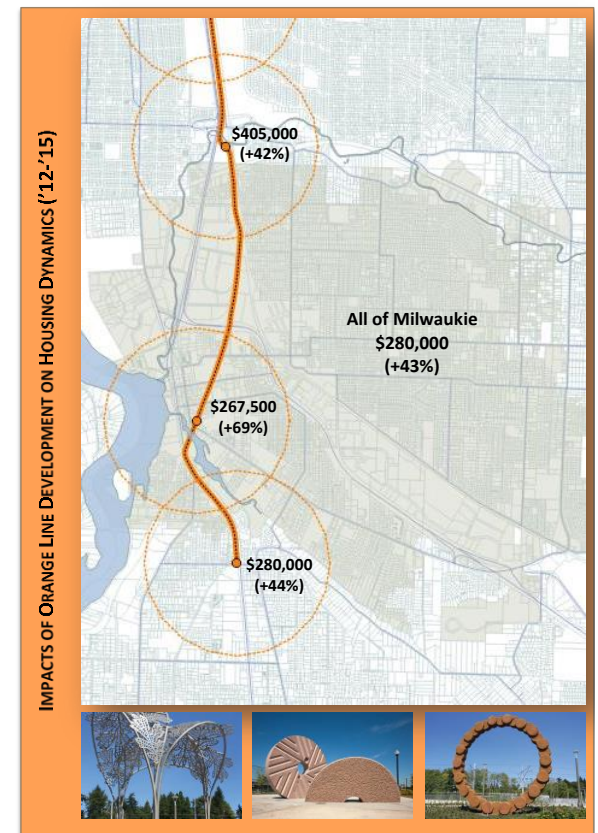
Combined, these factors will create additional demand for retail goods and other household services.

Retail Tenant Types

By extension, a younger and more affluent demographic base will attract a different mix of retail and leisure tenant profiles.

Transition of Product Types

All else equal, increases in achievable pricing will translate into greater redevelopment potential. In combination with economic development tools, redevelopment in strategic areas will likely increase.



³ Source: Regional Multiple Listing Service and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

OREGON EXPORTS: ECONOMIC GROWTH OF WORLD MARKETS

In 2014 Oregon exported over \$20.8 billion dollars in products. Economic development leaders in the region are confident that there is more room for growth. Increasing exports has become a central component of regional economic development strategies. The connection of export growth to job creation is clear; the Oregon Office of Economic Analysis estimates that 86,500 jobs are directly supported by Oregon exports. A key element in the Greater Portland Export Plan is catalyzing under exporting firms, emphasizing the creation of global opportunities for small and medium sized firms.

In 2015, negotiations were underway for the Trans-Pacific Partnership, a free-trade agreement with twelve Pacific Rim countries, including seven of Oregon's top fifteen trading partners. Over 31% of all Oregon exports are currently with existing FTA partners, a full one-third increase in ten years. If approved, the agreement could significantly expand Oregon's export potential.

While many structural conditions are in place to facilitate strong export expansion, prospects for growth are not without risks. Most notably, on-going and reoccurring labor disputes threaten to undermine the stability and certainty of exporting firms in the Portland market. A long-term resolution and return of shipping business will be necessary for the region to meet its export goals. A strengthening U.S. dollar has also begun to erode export growth, a condition that will persist over the intermediate-term.

Impact on Milwaukie:

The manufacturing economy in Milwaukie has been, and will continue to be, highly reliant on global marketplace trends. On the positive side, expanded wealth and purchasing power in emerging markets on the Pacific Rim and in Latin America should continue to drive demand for products and services made locally. However, this reliance goes hand-in-hand with exposure to global instability and volatility.

In the near-term, a stronger dollar will temper export growth, as U.S. products are more expensive to foreign buyers. In the long-term, structural conditions and economic development initiatives are in place for continued export growth.

\$20.8 BILLION EXPORTED

Share of Exports to FTA Partners **10-Year Change**



Source: Oregon Office of Economic Analysis

86,500 JOBS SUPPORTED

Greater Portland Export Plan (Four Strategies):

1. Leverage Primary Exporters
2. Catalyze Under Exporters
3. Build a Healthy Export Pipeline
4. Branding



Greater Portland Global

A joint project between the Brookings Institute and JP Morgan Chase. The plan's focus is on the interaction of exports and Foreign Direct Investment (FDI). A key finding was that excluding Japan; the region lacks FDI out of Pacific Rim



Trans-Pacific Partnership

The largest FTA since NAFTA. Agreement between 12 Pacific Rim countries to lower trade barriers and expand markets.



Labor Disputes

Labor dispute between the longshore union and ICTSI led to the loss of the Port of Portland's two largest container carriers, resulting in an 84% drop in container traffic.



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

OREGON ECONOMIC OUTLOOK

The Oregon Office of Economic Analysis produces a forecast for the Oregon economy on a quarterly basis. Information here is largely derived from these reports and other third party sources.

Both of the indices that track economic conditions in Oregon continue to signal positive growth on the horizon. Unemployment levels are at their lowest since January 2000. Several indicators have recently moderated, including housing starts and business investment. However, these areas are expected to turn positive beyond 2016.

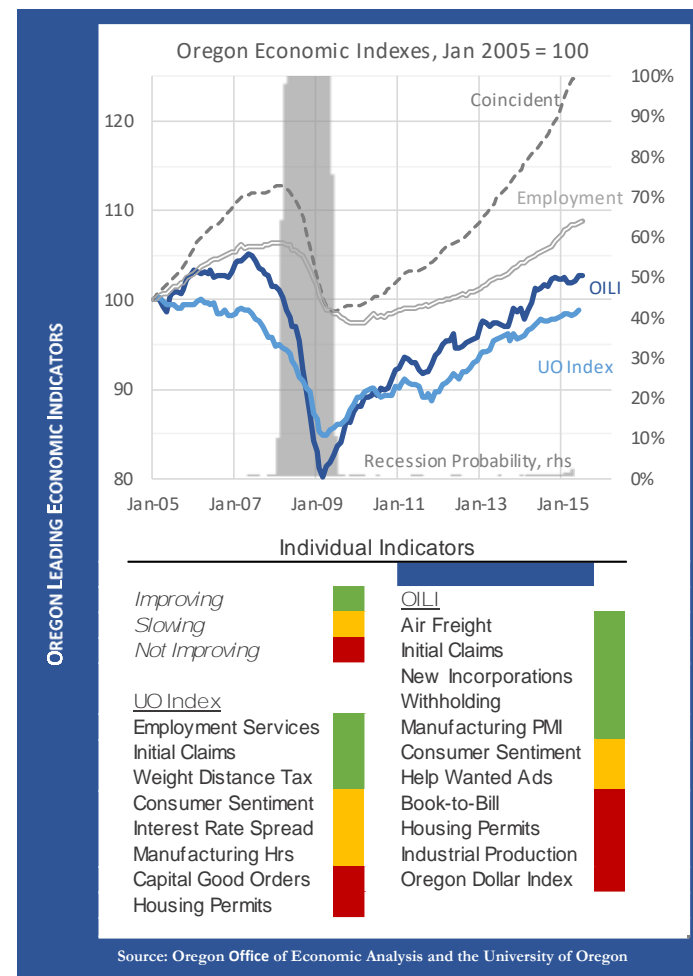
The near-term economic outlook for Oregon calls for stable employment growth in the neighborhood of 3% annually. Private sector growth will be driven in large part by gains in service employment; however, goods-producing industries will grow at above average rates. Over the intermediate-term, Oregon's GDP annual growth is forecasted to be the third fastest among all states through 2020 at 3.8%. The manufacturing employment annual growth rate is expected to be the second fastest in the nation at 1.8%.

Forecast Risks:

- Federal austerity will have a downward pressure on growth. However, federal cuts will impact Oregon to a lesser degree due to an overall lower federal presence.
- The extent that housing construction will maintain pace with growth in demand.
- The European debt crisis will continue to abate global economic growth.
- Commodity prices remain low relative to recent highs but could trend upward.
- Other unforeseen global price shocks.
- Exit strategy from fiscal stimulus.

Impact on Milwaukie:

The direction of the local economy will generally move in line with state trends. Economic indices measure the health and direction of many elements of the economy. Inflection points in these series can act as warning signs of cyclical fluctuation. Current metrics strongly indicate a strong short-term growth forecast in Oregon and more specifically in Milwaukie.



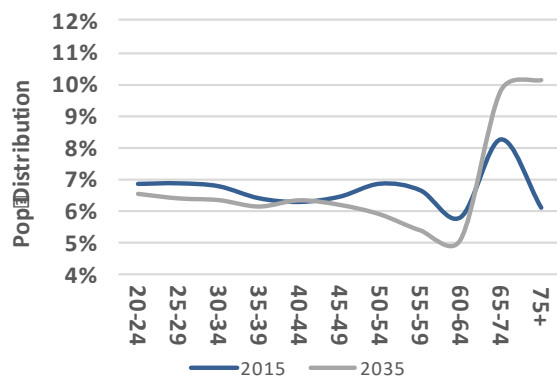
CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

DEMOGRAPHIC SHIFTS—IMPACT ON LABOR MARKET AVAILABILITY

Aging of the Workforce

The aging of the Baby Boomers into their retirement years will perhaps be the greatest challenge to the U.S. economy over the planning period. By 2035 the share of the population age 65 and older will balloon to 21%, up from 14.5% today. The effects of this condition will be a decline in labor force participation, an increase in federal liability for health care services, and higher demand for replacement workers.



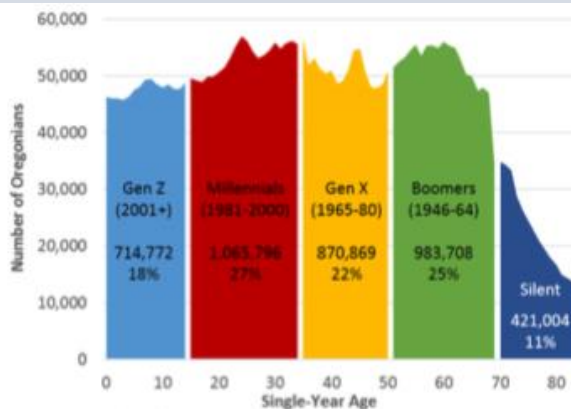
Source: U.S. Census Bureau, Population Division

Impact on Milwaukie:

Milwaukie's population is roughly to that of the metro area in the 25-34 age range. However, the City is slightly skewed toward a lower concentration of families and higher concentration of older residents. Given the manufacturing concentration in the economy, demographic challenges in the workforce may be more pronounced locally.

Millennials

Millennials are now the largest demographic segment in the United States, comprising 27% of all residents and an even greater share of net-migrants. Leading into and during the Great Recession, this cohort faced an unpromising labor market. Many opted to enter or continue post-secondary education, at which point the college enrollment rate for 18-24 year olds rose from 37 to 42%.



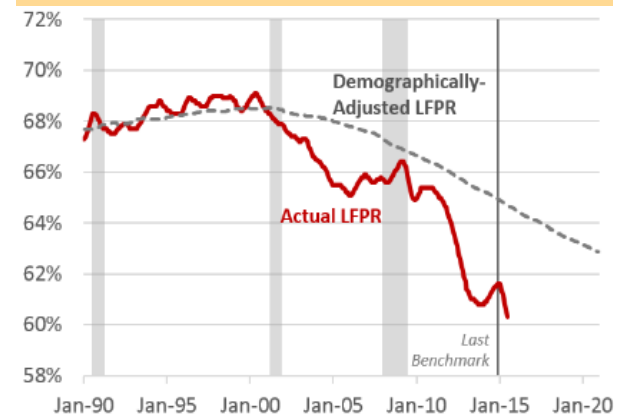
Source: Oregon Office of Economic Analysis

Impact on Milwaukie:

The Millennials represent a demographic “blip” that is both large and better educated than previous generations. As they move into their most productive working years, they will be instrumental in driving up productivity per worker through innovation. With an affordable housing stock, proximity to the central city, and the ability to attract Millennial populations, Milwaukie has a competitive advantage.

Labor Force Participation (LFP)

An aging labor force and generational preferences impose downward pressure on the labor force participation rate. This rate measures the share of the working age population that is employed or is actively seeking work. In 2015 Oregon's rate of 60.2% was the lowest on record. The “participation gap” is the difference between actual LFP and expected LFP based on the underlying. The current participation gap is notably large, which structurally reduces potential employment.



Impact on Milwaukie:

Trained labor will be increasingly difficult to find, necessitating investment in capital that replaces workers. The extent to which this investment occurs will depend on migration rates; higher migration increases the availability of trained labor. The overall economy is at greater risk of performing below potential.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

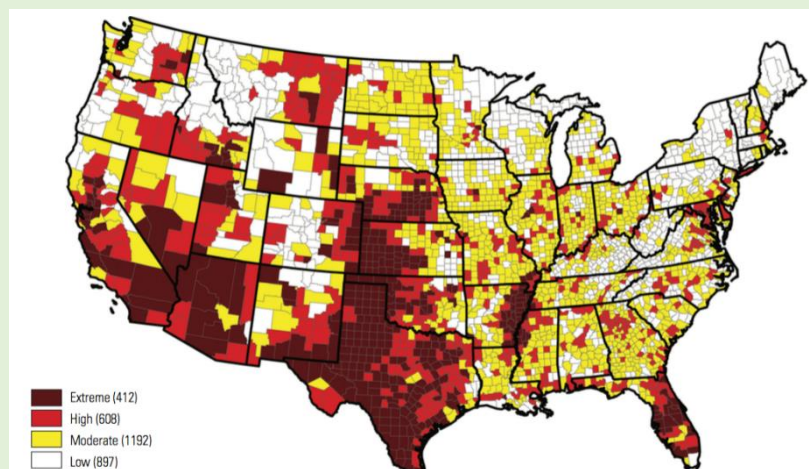
ECONOMIC TRENDS

LONG-TERM MIGRATION FROM OTHER STATES AND ABROAD

The Pacific Northwest: A Climate Refuge?

Continued in-migration from other states will maintain sustained growth in local population and labor force. In the long-term, an acceleration of net-migration rates is likely due to water resource constraints in the U.S South and Southwest. The Pacific Northwest, and more specifically the Willamette Valley, is among the U.S. regions with relatively low risk of water shortage. The ability of population centers in the South and Southwest to accommodate projected population growth is questionable, which makes the Pacific Northwest a likely outlet.

Water Supply Sustainability Risk, 2010 through 2050



Source: Natural Resource Defense Council (2010)

Global Impacts on Migration

Rising globalization has driven growth in emerging economies over the last twenty years, specifically in China, Southeast Asia, India, Latin America and some African countries. This growth has increased incomes and purchasing power in many parts of the world. With incomes in emerging economies expected to grow at an accelerated rate relative to the U.S. over at least the next 50 years, the differential between domestic and foreign incomes and standards of living will certainly decrease.

Impact on Innovation & Entrepreneurship

The effects of lower international migration could potentially have adverse impacts on innovation in America over the long-term. Foreign-born residents have been found to be twice as likely to start a business compared to domestic counterparts. In the high-tech sector, 25% of U.S. tech & engineering companies started over the last 20 years had at least one foreign-born founder.

Source: Wadhwa, Vivek, et al. *America's New Immigrant Entrepreneurs*, 2007

High-Tech
Start-ups with
a Foreign Born
Founder

25%

While a reduction in poverty and increased global demand for goods and services, the higher incomes of emerging countries will reduce their competitive labor. More foreign workers will no longer need to migrate to the U.S. for better opportunities, resulting in lower rates of international migration. Over the last 25 years roughly 35% of population growth in the U.S. was derived from international migration.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

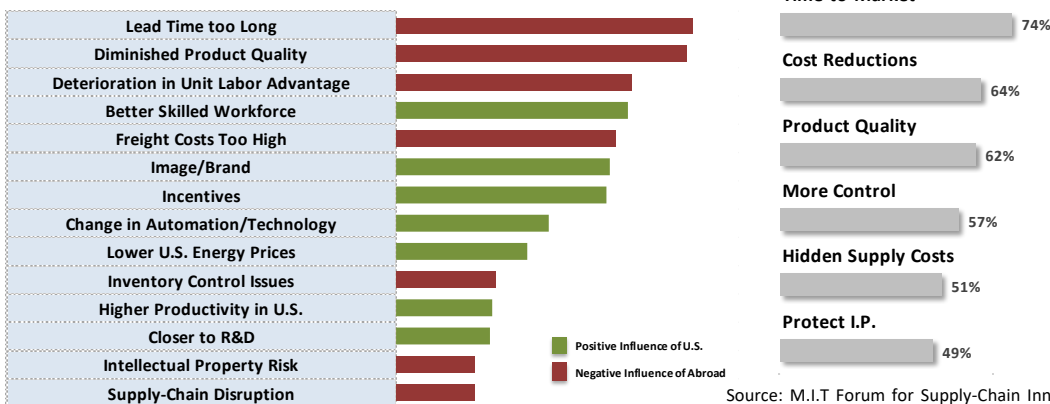
RESHORING PROSPECTS: REIMAGINED U.S. MANUFACTURING

The offshoring trend that occurred over the last half century saw firms capitalize on the cost advantages of labor and to some extent materials in foreign markets, resulting in a shift in production and investment abroad. This phenomenon extended beyond production activities and into some back office functions (i.e. call centers, IT Services, etc.) to shift millions of jobs into emerging markets.

However, as companies face mounting challenges to offshore production, the trend has declined over the last decade. While new off-shoring activity has declined 70%, re-shoring has increased domestic employment by 1,500% (30,000 to 40,000 jobs) in 2013. New Foreign Direct Investment (FDI) added 20,000 jobs Nationally.²

The most commonly cited challenges to sustained foreign production are a deterioration of unit labor cost advantages and increasing time-to-market. Many manufacturing processes are also transitioning toward higher capital utilization that requires a more technically skilled labor force. As a result, the number of domestic manufacturing facilities will continue to rise.

Influences on Reshoring Decision of Reshoring Firms



Source: Reshoring Initiative Library of Reshoring Firms (2014)

Source: M.I.T Forum for Supply-Chain Innovation. Survey of 340 large U.S. based manufactures with production in foreign markets⁴

2 Moser, Harry, "To Reshore or Offshore: How to Objectively Decide," The Reshoring Initiative January 2015

3 Shih, Willy C. "What It Takes to Reshore Manufacturing Successfully" *MIT Sloan Management Review* 56, no. 1 (Fall 2014): 55–62.

4 Simchi-Levi, David. "U.S. Reshoring, a Turning Point." MIT Forum for Supply Chain Innovation. Web. 2012

5 Pricewaterhousecoopers. "Shale Oil, the Next Energy Revolution" (2013)

What Makes the United States More Attractive?

Transportation Costs & Domestic Demand:

The U.S. wealth advantage will persist over the foreseeable future, maintaining depth as a consumption market. Products with domestic demand and low value to weight ratios have the most difficulty absorbing higher transportation costs.

Domestic Energy Costs:

Relatively cheap energy in the U.S., in part a function of the shale revolution and natural gas reserves, could translate into 1.0 to 1.5 million manufacturing jobs through 2035.⁵

Supply Chain Risk:

The United States' geographic diversity protects well against supply-chain shocks (i.e. Japanese Earthquake, Thailand Tsunami, etc.)

Regulatory Environment & Taxation:

Better legal protection of intellectual property and more favorable tax climate.

Talent & Workforce:

The United States still maintains a strong institutional advantage over other manufacturing nations in training and expertise infrastructure. Historic labor cost advantage of emerging economies is deteriorating.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

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RESHORING PROSPECTS: OBSERVATIONS AND OUTLOOK:

According to the Reshoring Initiative, a non-profit organization dedicated to bringing manufacturing jobs back to the United States, high-technology and transportation equipment are the most common industries finding value domestically. Specifically in the high-tech sector, non-cost factors such as reestablishing linkages between R&D and production have been found to improve product design and accelerate innovation⁶. A recent analysis of leading manufacturing “boomtown” markets ranked the Portland-Vancouver-Hillsboro MSA the 10th best market for manufacturing.



Companies that have reshored manufacturing operations in recent years.

Source: Boston Consulting Group

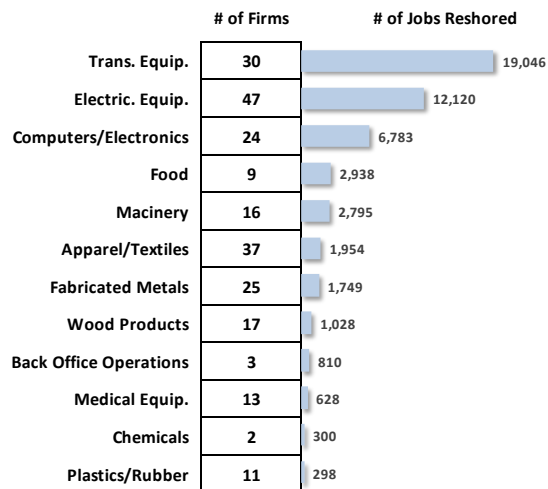
Reshoring Outlook

The extent to which reshoring is a phenomenon that will continue or accelerate is uncertain. However, it is clear that re-shoring is limited to sectors where it is most advantageous--specifically, firms with low labor force utilization in their production activities that can capitalize on the United States’ growing energy advantage. Firms with less reliance on foreign demand will also find advantages. Many large corporate manufacturers are now considering domestic production operations. The primary impediments to reshoring will be reestablishing an eco-system around supply chain infrastructure and overcoming labor skill atrophy. Local and state governments can strengthen their appeal to reshoring firms through favorable corporate tax structures, incentives for R&D, education & training assistance, and investments in infrastructure.

PRIMARY INDUSTRIES IMPACTED

- Appliance & Electrical Equip.
- Computers/Electronics
- Transportation Equipment
- Next Gen Textiles/Wearables
- Furniture
- Fabricated Metals
- Plastics & Rubber

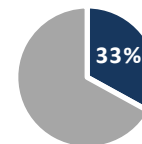
Reshoring Activity by Industry Since 2007



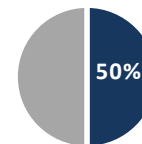
Source: Reshoring Initiative Library of Reshoring Firms (2014)

⁶ Shih (2014)

⁷ <http://www.forbes.com/sites/joelkotkin/2015/07/23>



Executives surveyed at companies of **more than \$1 billion** that are planning or considering reshoring



Executives surveyed at companies of **more than \$10 billion** that are planning or considering reshoring

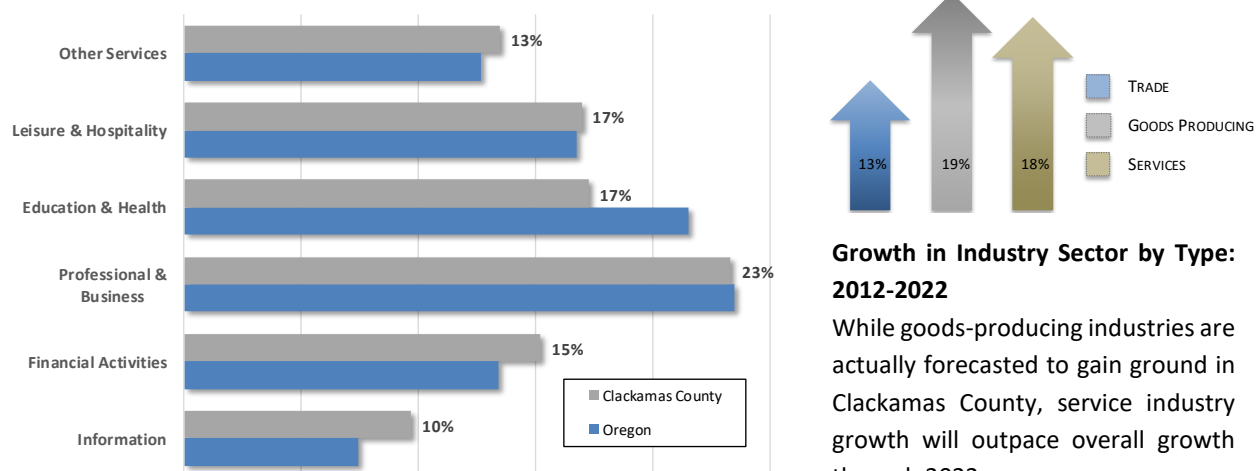
Source: Boston Consulting Group

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

SHIFTS IN INDUSTRIAL AND OCCUPATIONAL COMPOSITION

While renewed optimism for the manufacturing economy is a positive sign for goods-producing sectors, the U.S. economy will continue to be driven by growth in the service industry. Through 2022, estimates from the Oregon Employment Department suggest service industry growth will increase by 20%. Growth rates will be most pronounced in Health Care and Professional Services.



Source: Oregon Office of Economic Analysis, 2012-2022 Occupational Demand Forecast

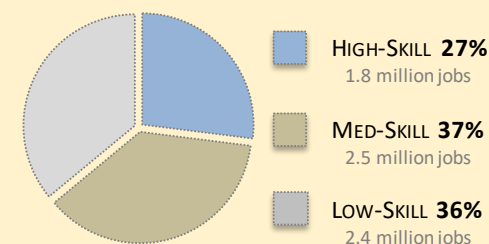
Changes in Occupational Demands⁸

Over just the next two years, 37% of job demand (2.5 million jobs) in the United States economy is expected to be for medium-skilled workers, a significant shift from previous years. These positions often require Associate's level training or specialized training programs ranging from 12 to 24 months, with many paying above median family wages.

For lower-skilled workers, demand forecasts are also high. However, low-skilled jobs ranging from cashiers to mechanical assemblers are at the greatest risk of becoming automated. Up to 70% of low-skilled jobs are at risk of being automated over the next 20 years.

New U.S. Jobs

Middle-skill jobs are expected to make up the largest share of new jobs in coming years.



Impact on Milwaukie:

The ways that firms across all sectors utilize labor will continue to change in coming cycles. Automation and capital investment will continue to drive gains in productivity per employee, partially overcoming demographic and labor force challenges on the horizon. Forward-looking communities will be cognizant of these shifts, working with local colleges, training institutions, and even major employers to tailor workforce skills around shifting occupational needs. A focus on medium and higher-skilled occupations with a low risk of becoming automated will be critical. From a land use perspective, higher rates of capital utilization could mean lower employment densities and unforeseen shifts in the way firms utilize commercial/industrial space and land.

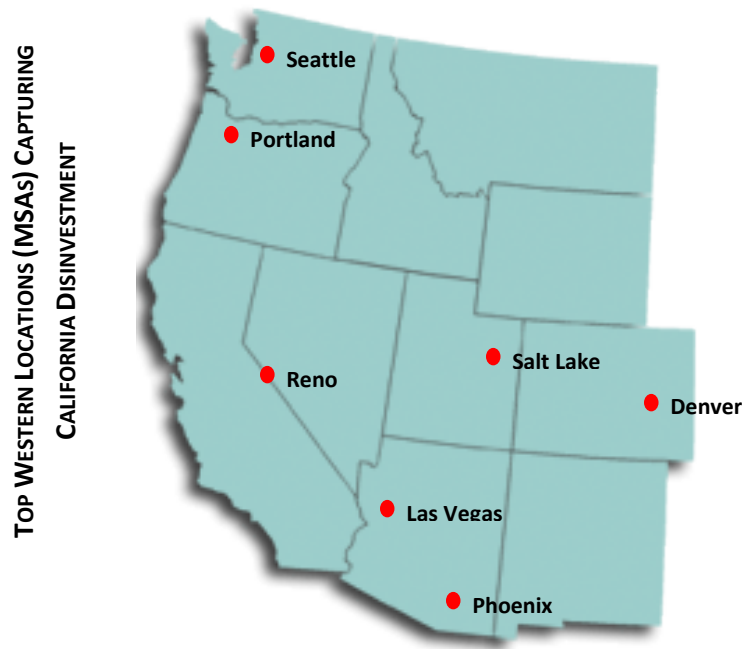
⁸ U.S.A. Today Series, "Where the Jobs Are?" (2015) <http://www.usatoday.com/topic/9f65db3e-8cf8-4180-a9fe-eb96dfbba681/where-the-jobs-are/>

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

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CALIFORNIA DISINVESTMENT IN SERVICES, SOFTWARE, & TECHNOLOGY

While the Portland Metropolitan Area has benefited from resident migration from California for many years, recent experience suggests that California business migration is a relevant economic driver as well. High business taxes and stringent regulatory policies have made business increasingly costly in California, with many companies considering relocations, outposts, or future expansion in lower cost markets. A recent survey of California disinvestment events found as many as 9,000 businesses or business divisions have left California over the last seven years⁹. This trend is increasingly common in the software/technology sectors, where Silicon Valley strongholds are establishing lower cost West Coast outposts in high-talent markets. The Portland Metropolitan Area is a strategic market to capture these expansion opportunities, offering abundant talent, less competition, high quality of life, and a cultural connection to many of these firms' ideals.



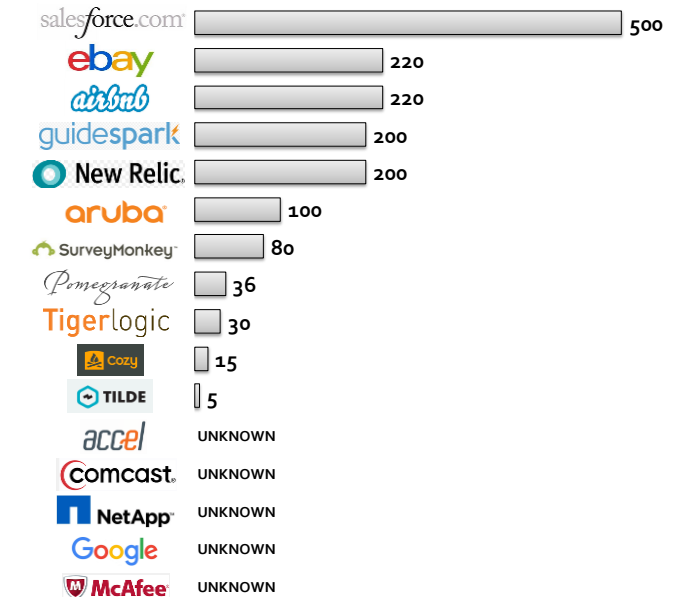
Portland Metro Rank in Capturing California Disinvestment Events

Portland is among the top landing spots for California disinvestment events. The Portland-Vancouver-Hillsboro MSA ranked 6th in the top landing spots for California firms (31 events). By municipality, Portland ranked 7th.

Portland Metro Rank in Capturing California Disinvestment

6th

California Service Companies and Announced Jobs Entering the Portland Metro Market (2008-2015)



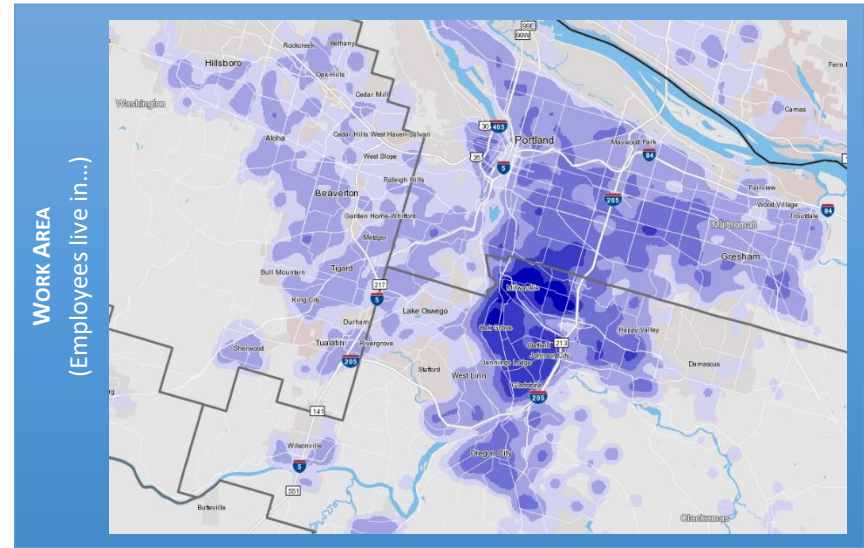
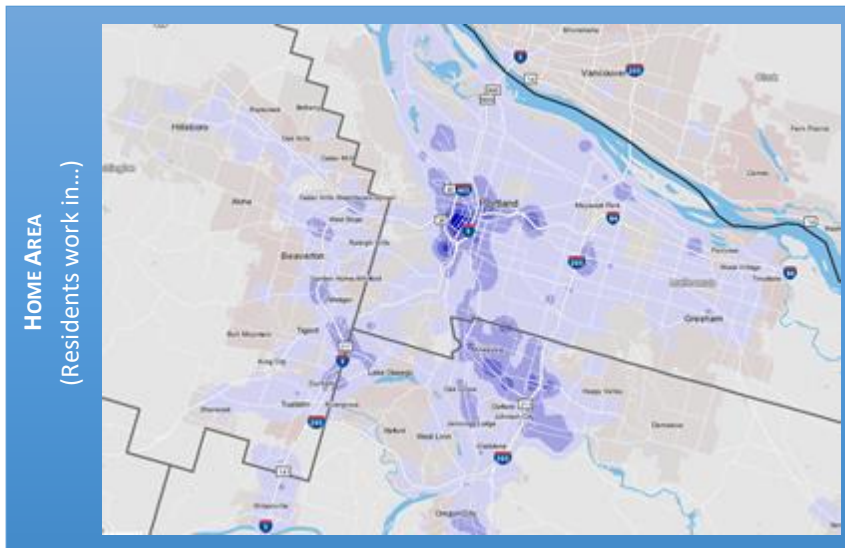
⁹ Vranich, Joseph. "Businesses Continue to Leave California: a Seven-Year Review", Spectrum Location Solutions (2015)

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

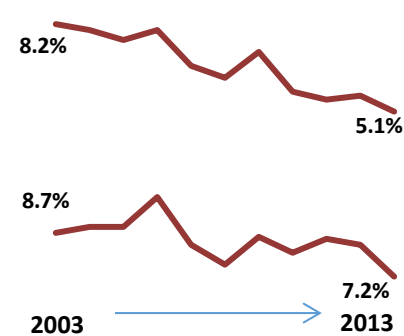
COMMUTE PATTERNS—CITY OF MILWAUKIE

Commuting patterns are an important element in the local economy. They are indicative of the labor-shed that companies can draw from, the extent to which job creation translates into increased demand for housing, goods, and services, and the overall balance of population and employment in the community. Overall, Milwaukie has a broad labor shed, drawing workers from western Multnomah and northwestern Clackamas County. The combination of the Willamette River and links to the westside generally limits Milwaukie’s access to Washington County labor markets. In Milwaukie, roughly 63% of the workforce lives within 10 miles of their job.



Inflow-Outflow Map (2013)

Most workers in Milwaukie live elsewhere in the region, but within a 10-mile buffer. Workers take advantage of ample quality housing stock in Southeast and Northeast Portland.



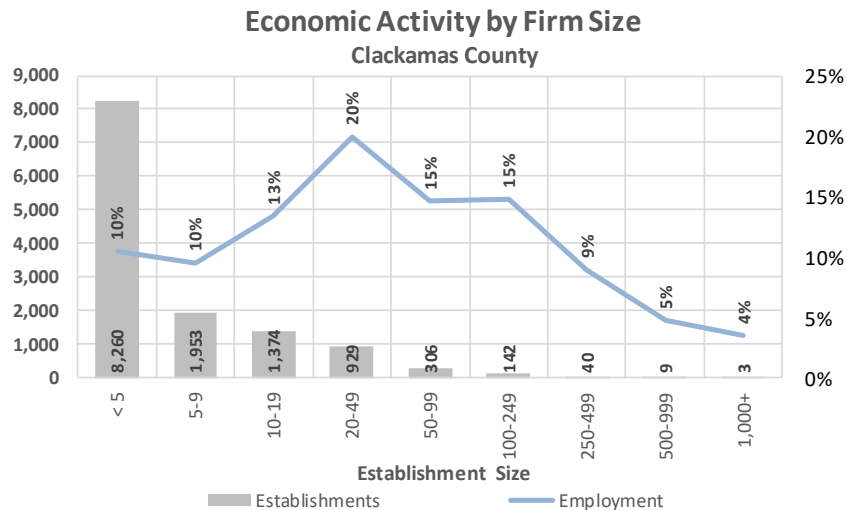
Employment Efficiency measures the share of workers in Milwaukie that live in the community. Fewer workers are choosing to live locally.

Labor Force Efficiency measures the share of residents who work in the community. Fewer Milwaukie residents are finding jobs locally.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

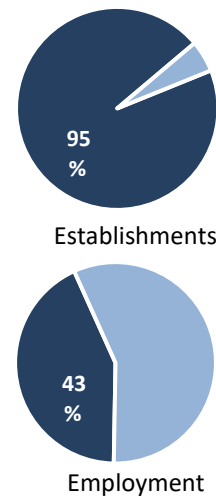
ECONOMIC TRENDS

SMALL BUSINESS AND NEW BUSINESS FORMATION



Source: Oregon Employment Department Quarterly Census of Employment & Wages

Percent of Milwaukie Business Activity in Small Business (2014)



Small businesses with 50 or fewer employees comprise roughly 95% of private sector establishments in the local economy. However, large firms comprise a considerably larger share of employment (57%). Milwaukie's 10 largest enterprises account for one out of every three private sector jobs.

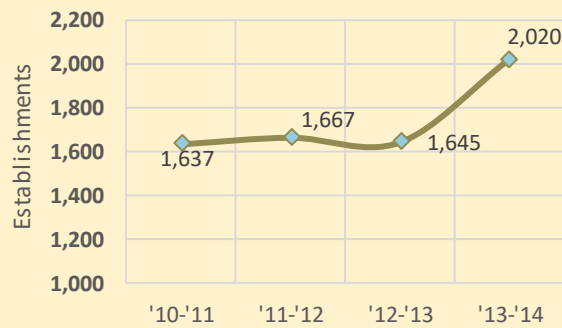
A high rate of small businesses is important for future economic growth, while large businesses provide an anchor for the economy, training of workers across a broad range of skills, and attracting outside investment. Local examples include the recent sales of Precision Castparts and Blount.

Small businesses generally pay relatively lower wages than the large economy-wide average. However, this is in large part the function of a higher concentration in lower wage industries such as food services and retail.

New Business Formation

Following several years of relatively flat new business growth, new business formation in Clackamas County skyrocketed in 2014, increasing by over 22%. This is an encouraging sign for the local economy, indicating an increased appetite for risk and an improved flow of capital through the economy. In Milwaukie, business formation was also strong. Between 2013 and 2014 the community posted a net increase of 90 private sector businesses.

Source: U.S. Census Bureau, Statistics of U.S. Businesses Division (SUBS)



Impact on Milwaukie:

Small businesses present a diverse range of opportunities for growth, while large firms anchor the local economy. High rates of business formation indicate ease of market entry and inclination for risk. Business formation also has a strong correlation to innovation and economic growth.

The exhibited increase in new business formation will ultimately result in winners and losers, as only some firms mature to become foundations in the economy. Strategies to support small business growth and provide opportunities to expand in place (retention) will facilitate higher economic growth in the community.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

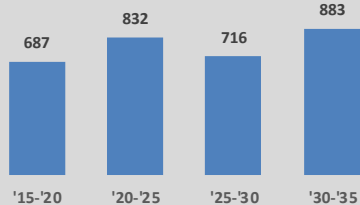
REGIONAL AND LOCAL POPULATION FORECASTS

Over the next 20-years, the three-county region is expected to add nearly a half-million new residents. The largest share of growth will be captured in Washington County, representing 44.7% of regional growth (221,600 new residents). This represents a slight acceleration of the 42% capture rate exhibited since 2000.

MILWAUKIE'S POPULATION FORECAST

Since the 2000 Census, Milwaukie's population has effectively remained unchanged with a decline of only 41 residents. Expectations are that growth will occur in the community. Although future growth is expected, there is little available land for new housing development; marginal growth will occur largely through redevelopment and infill. Over the next 20 years, Metro's Subarea 6 (which includes Milwaukie and part of Gladstone) is expected to add over 3,100 new residents. However, this forecast was made in advance of a billion-dollar transit investment that will likely translate into greater redevelopment in Milwaukie.

2015-2035 Subarea Forecast¹¹



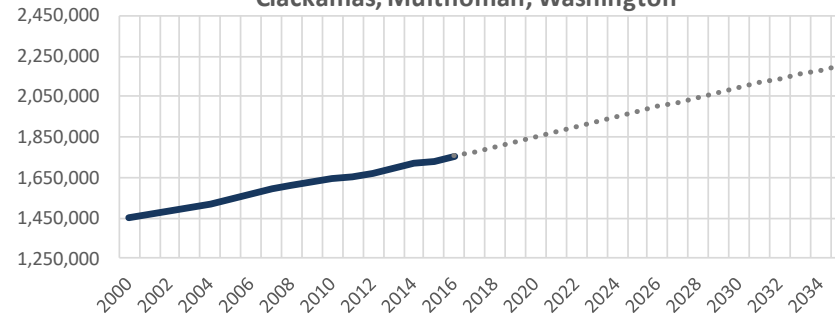
Source: Metro. Housing Needs Study for the Portland Metropolitan Area (2008)

¹¹ Subarea for this Forecast includes all of the City of Milwaukie and part of Gladstone

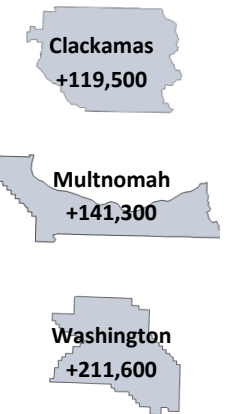
¹² Ottaviano, Gianmarco I.P. and Peri, Giovanni, Rethinking the Effects of Immigration on Wages (August 2006). NBER Working Paper No. w12497. Available at SSRN: <http://ssrn.com/abstract=927381>

20-Year Population Forecast (2015-2035)

Clackamas, Multnomah, Washington



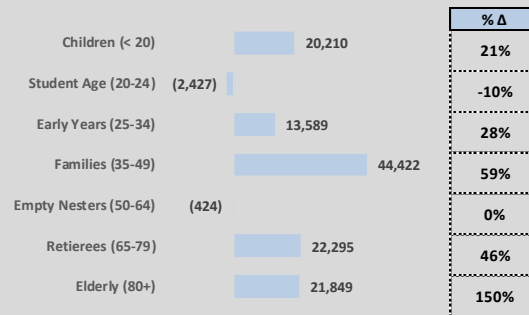
Source: Oregon Office of Economic Analysis



FUTURE AGE COMPOSITION

The average age of Clackamas County residents is expected to increase in 2035; over 44,000 residents will be retirees or elderly. The number of families is also expected to increase significantly, at 59%.

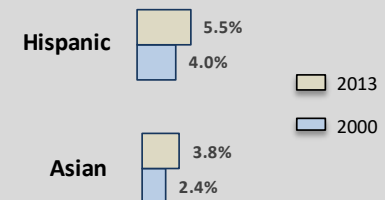
Population Forecast by Age—Clackamas Co. (2015-2035)



SHIFTING DIVERSITY

Milwaukie is not a particularly diverse community, as only 13.6% of the population identify as non-white. However, the non-white population has increased by 4.6% since 2000. Hispanic and Asian populations are the largest minority group. Greater community diversity is correlated with growth in new business formation, sharing of innovative ideas, growth in productivity¹², and greater cultural engagement.

Change in Racial Composition—Milwaukie



Source: U.S. Census, American Community Survey

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

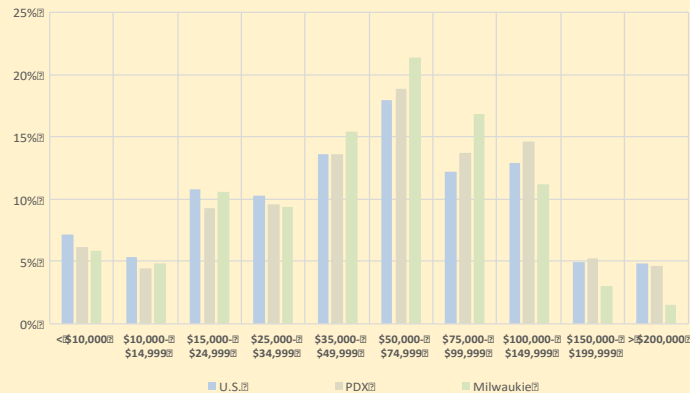
ECONOMIC TRENDS

INCOME AND WAGES

Household income is an indicator of purchasing power and economic prosperity of a community. Wages of the local workforce are determined by the competitive market for labor. All else equal, businesses generally prefer locations with lower overall wages, as it reduces operational costs. In 2014, household incomes and annual wages were below average in the City of Milwaukie.

DISTRIBUTION OF HOUSEHOLDS BY INCOME (2014)

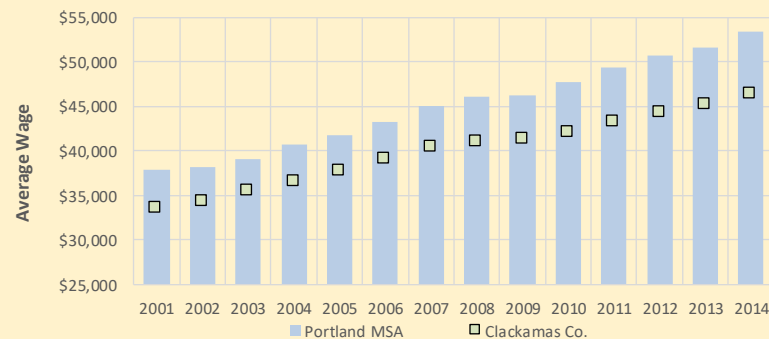
Incomes of Milwaukie residents are generally on par with regional counterparts, which are slightly higher than the national average. In 2014, 32% of local households earned greater than \$75,000 annually compared to 38% at the regional level. Higher household incomes translate into greater purchasing power, which influences demand for goods and services as well as the types of businesses that are attracted to the community.



Source: U.S. Census Bureau, American Community Survey

AVERAGE ANNUAL WAGES (2014)

Wages in Clackamas County are structurally lower than the regional average by a margin of 13%, and this gap has been widening over the last ten years. In Milwaukie, wages are below the regional average in the industry sectors, but higher in the retail and construction sectors. The highest wages in the community are in the manufacturing, construction, and wholesale sectors.



Source: Oregon Employment Department, Quarterly Census of Employment & Wages



Construction
\$62,000



Manufacturing
\$61,400



Wholesale
\$62,400



Health Care
\$43,600



Professional
\$48,400

Impact on Milwaukie:

Higher resident incomes drive demand for goods and services. As Milwaukie gentrifies, the community will increasingly attract higher end retail and amenities. Relatively low wages in certain sectors will benefit Milwaukie inter-region business decisions, particularly in the context of the region's national reputation as lower cost labor market.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

ECONOMIC TRENDS

OTHER FACTORS AND CONDITIONS

In addition to trends and conditions previously reviewed in this report, the following factors are expected to influence economic conditions nationally and locally over the planning period.

INCREASED LIFE EXPECTANCY

Increased life expectancy and demographic shifts will continue to support accelerated growth in demand for health care, financial, legal, and assisted living services.

This condition will also place additional pressure on the future program income requirements necessary to support federal obligations for Social Security and Medicare.

GLOBAL CLIMATE CHANGE

Global climate change has the potential to reduce global gross domestic product by as much as 1.5%¹².

In the Pacific Northwest, climate change poses several threats to economic prosperity, most notably to the agriculture and tourism.

RISING GLOBAL DEMAND

Rising global demand is expected to benefit the primary sectors of resource rich countries. In the U.S., those sectors are energy and agricultural markets.



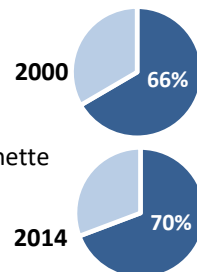
An ancillary benefit of rising global interdependency is a dilution of risk associated with domestic shocks, a product of which could lead to greater global stability.

SHIFT IN PREFERENCES: URBANIZATION

Urbanization is likely to continue increasing within Oregon. A larger share of the world's population is living in urban areas and Oregon is not an exception. Since 2000 the share of Oregon's population living in cities has increased from 66% to 70%.

The share of Oregon residents living in the Willamette Valley is expected to reach 71% by 2035.

Share of Residents in Incorporated Cities



Source: Portland State Population Research Center and the Oregon Office of Economic Analysis

FULFILLMENT OF REPLACEMENT WORKERS

The greatest concern posed by a declining labor force is the ability to replace skilled labor of retiring Baby Boomers. In Oregon, replacement openings will reach 392,000 between 2012 and 2022. The most affected occupational groups will include retail and food service workers, teachers, nurses, office workers, and medium-skill health care workers.

Oregon Demand for Replacement Workers

392,000

Source: Oregon Employment Department, 2012-2022 Occupational Forecast

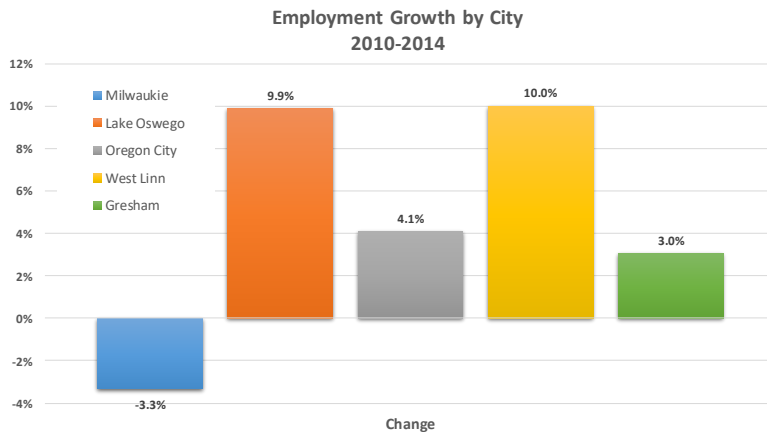
12 Elwell, Craig. CRS Report to Congress: Long-Term Growth of the U.S. Economy: Significance, Determinants, and Policy (2006)

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

CITY OF MILWAUKIE SUMMARY

The City of Milwaukie has a strong economic base, with employers providing high quality jobs. The area has an estimated 3,300 more jobs than residents active in the workforce, and is one of the few jurisdictions in the Portland metropolitan area that is a net importer of labor. While the City has a relatively large employment base, employment growth since 2010 has lagged that of neighboring cities, with the employment base contracting 3.3% from 2010 to 2014.⁴

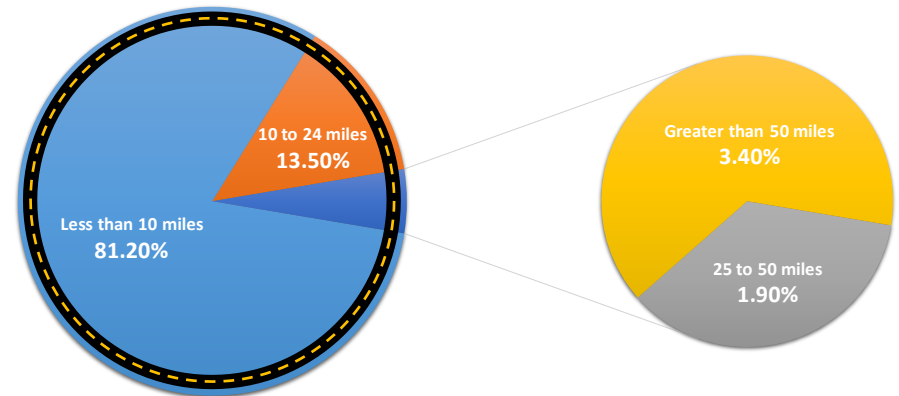


While the employment base in Milwaukie is robust, less than 8% of the local workforce lives and works within the City. Over 45% of the workforce commute to Portland, while the remainder commute to a range of proximate jurisdictions. More than 81% of the local workforce commute less than ten miles for employment. Approximately 94% of the local labor needs are met by persons living outside of the City limits.

WHERE ARE MILWAUKIE RESIDENTS EMPLOYED?



AVERAGE COMMUTING DISTANCE OF MILWAUKIE RESIDENTS



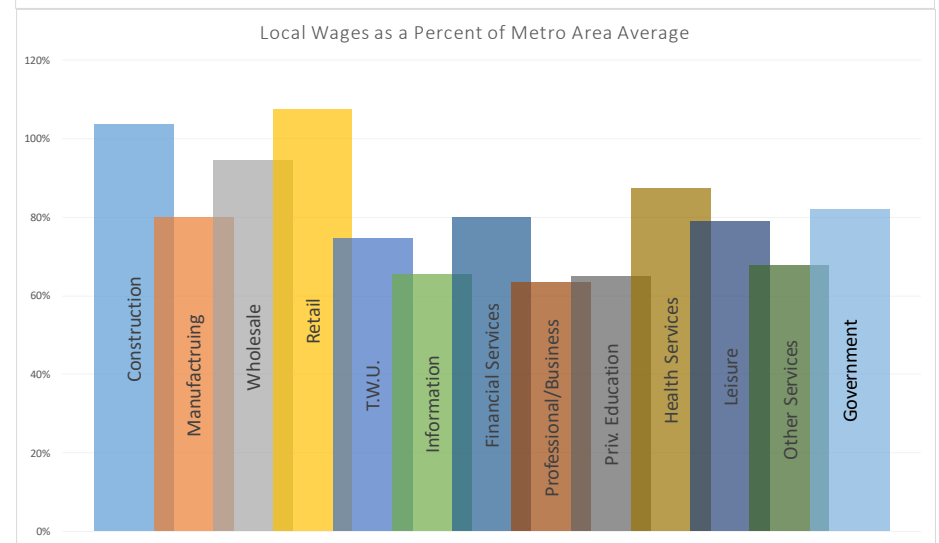
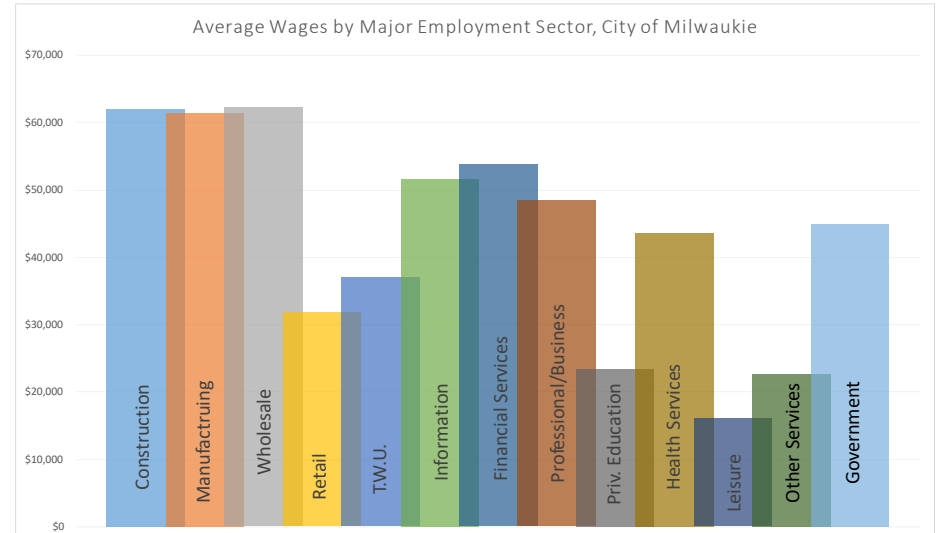
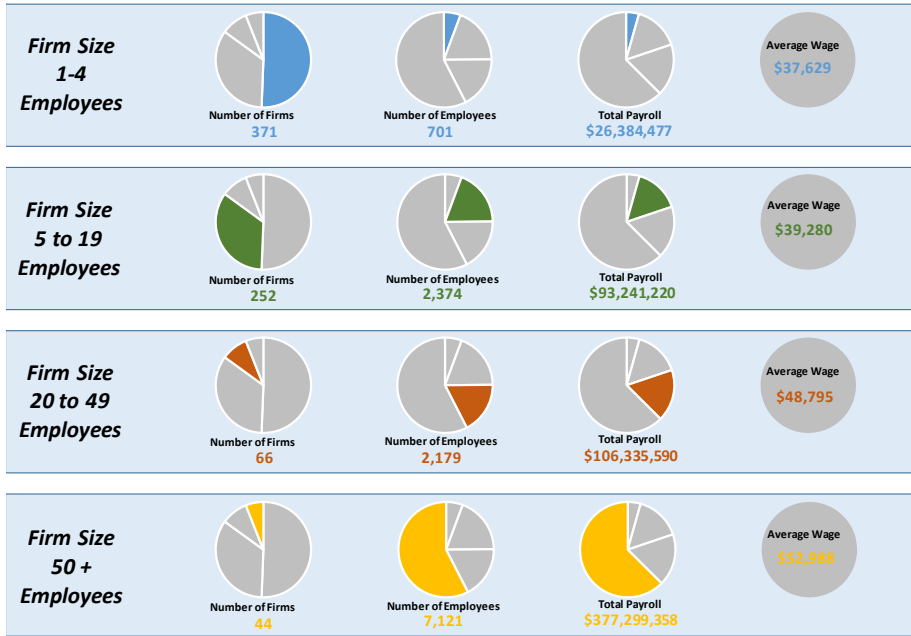
⁴ ONTheMap, US Census Bureau

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

The City has 44 firms with greater than 50 employees. These firms accounted for over 7,121 jobs in 2014, with an average annual wage of nearly \$53,000 per year. An additional 66 firms employed between 20 and 49 employees, with average annual wages approaching \$49,000 per year. Sectors with the highest average wages include wholesale trade, construction, and manufacturing. Construction and retail trade are the only two sectors that reported average wage levels in excess of the metro area average.

Milwaukie Firms Grouped by Employment Capacity and Wages Paid (Data from Oregon Employment Department 2014)



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

IV. TARGET INDUSTRY ANALYSIS

This element of the Economic Opportunities Analysis utilizes a range of tools to assess the economic landscape in Milwaukie. The objective of this process is to identify a range of industry typologies that can be considered targeted economic opportunities over the planning period.

In this process, we identify the anchors and clusters of interrelated industries that have already capitalized on Milwaukie’s competitive advantages and assembled locally. However, this analysis also considers how economies and industries are changing, the impact of recent investments in infrastructure, and how exogenous factors may shape future economic growth. In other words, targeted industry typologies are not only those with a large existing presence.

The research and analysis in this and the previous section present an evaluation of the likely forces that will drive economic growth and land need in coming cycle.

While some planning decisions are made at the jurisdictional level, in reality economies do not conform to jurisdictional boundaries. Businesses in the City of Milwaukie function in a regional and in some cases global context. Milwaukie’s existing city limits abuts a considerable amount of unincorporated employment land, which may be considered for future annexations. In order to assess targeted industries in this analysis, we relied on Milwaukie’s urban services boundary, which is roughly approximated in the map to the right.



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

INDUSTRY CLUSTERS DEFINED

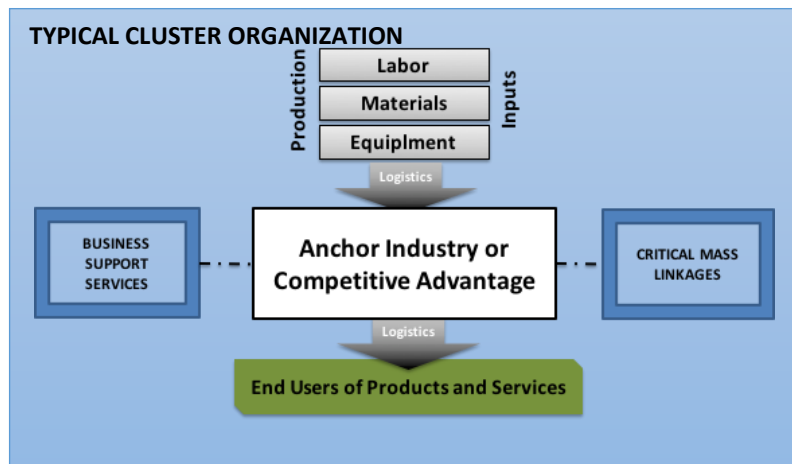
Sound regional economies are best organized around a healthy set of **industry clusters**—similar and related businesses and industries that are mutually supportive, regionally competitive, attract capital investment, and encourage entrepreneurship. Generally, clusters develop as an agglomeration of businesses in a geography that holds an innate competitive advantage in that industry—whether it is natural resources, human capital, political policies, or geography. For example, Oregon’s oldest industries—namely forestry and agriculture, emerged from physical and environmental attributes such as its climate, trees, soils, and access to shipping and distribution networks. In turn, these industries spawned interrelated clusters that include Food Processing & Manufacturing, Wood Product Manufacturing, Wholesaling & Distribution, Machinery Manufacturing, and host of other industries. In many local economies, we also find that a large firm or group of firms can often anchor a local cluster; for example, Blount and PCC Structurals anchor the Metals and Machinery manufacturing cluster in Milwaukie.

While specialization is a critical factor, it is important to understand that a cluster is not only defined by a high concentration of employment or output within a given sector or group of similar sectors. Rather, it is the vertical integration of supply chains, distribution, wholesaling, or even competitively unrelated industries that share common inputs such as materials and trained labor. Clusters can organize around natural resources, training institutions, or a particular firm or group of firms, among many other factors.

In contrast, targeted industries are subsectors within those clusters where a particular community may have a competitive advantage. For example, an industry that fills an existing gap in the supply chain network, or a completely unrelated industry that has similar labor demands. Further, a

targeted industry does not have to be part of an existing cluster network, or even be present in the local economy. In this analysis we identify some “aspirational” industries with emerging opportunities for local economic development.

In our analysis, we attempt to draw inferences about the organization of Milwaukie’s clusters across anchor, primary, and ancillary industries, while identifying the local characteristics that could encourage growth within this economic ecosystem.



The distinction between targeted industries and industry clusters is commonly lost in economic development, with the two terms often used synonymously. We make the distinction here to highlight that cluster analysis is a useful **tool** in identifying potential target industries, but not all industries in a cluster may be targets.

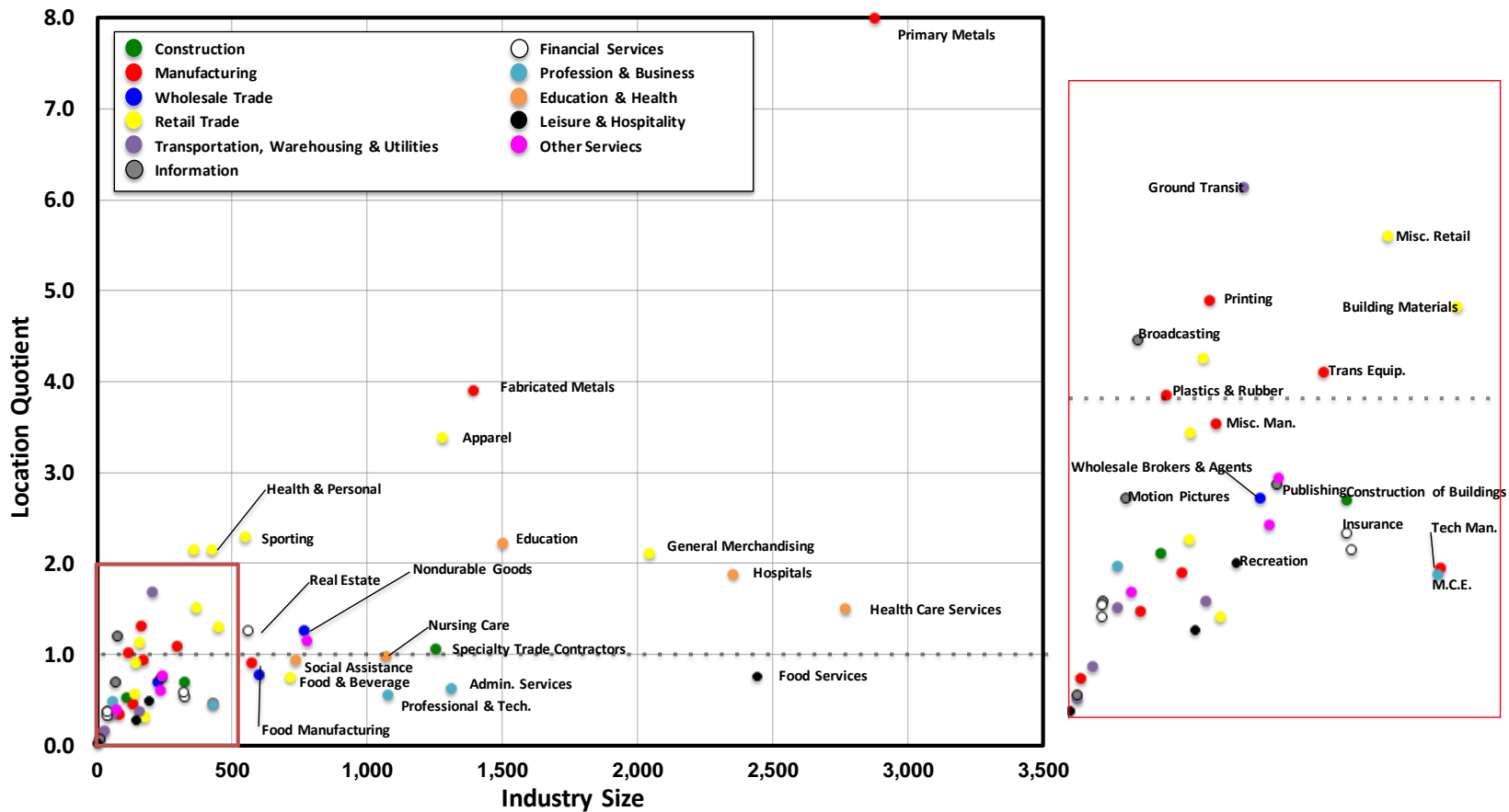
CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

ECONOMIC SPECIALIZATION

The most common analytical tool to evaluate economic specialization is a location quotient analysis. This metric compares the concentration of employment in an industry at the local level to a larger region. For example, a location quotient of 1.50 for widget manufacturing indicates that the local share of employment in widget manufacturing is 50% higher than the national average. Generally, 1.50 is a common threshold

indicating relatively high specialization. Large industries are also considerable components of the local economy and should be considered when evaluating economic specialization. The graphics below indicate the location quotients of industries in the Milwaukie UGMA using 2014 QCEW data. When we plot these industries graphically by size, specialization, and sector, we can begin to see some patterns in the data.



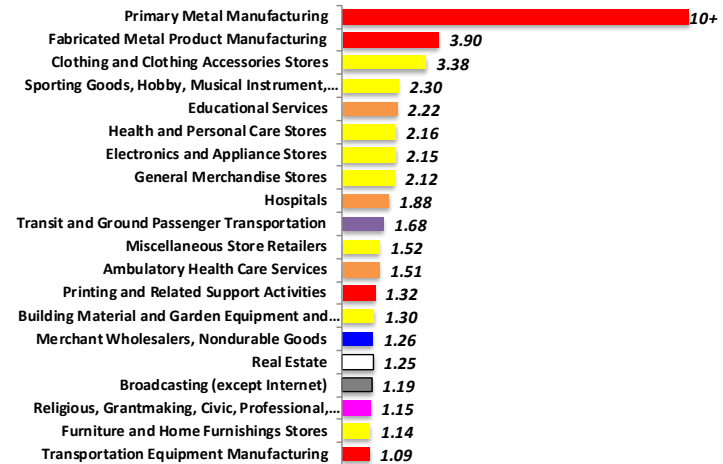
CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

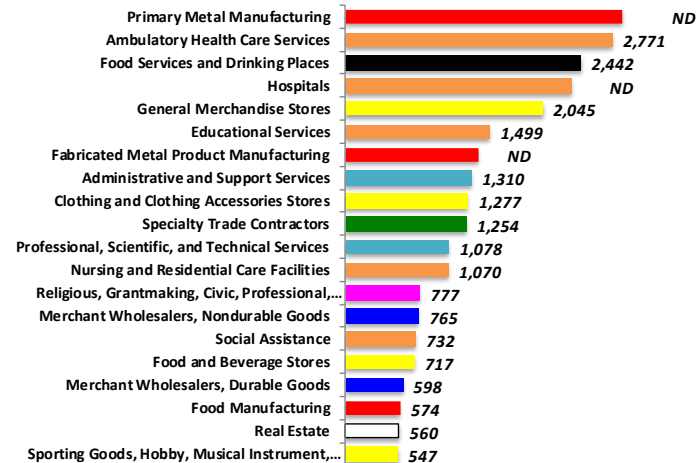
Economic Specialization—Milwaukie UGMA’s Largest and Most Concentrated Industries

- The 20 most specialized industries (highest location quotient) in the study area account for over 57% of all employment in the economy.
- Metals manufacturing is clearly a critical local industry. Combined, primary and fabricated metals manufacturing is nearly eight times more concentrated than the national average. This segment employs one out of every eight workers in the economy.
- The study area has an abundance of retail services. However, this can largely be attributed to the inclusion of Clackamas Town Center in the study area. Without Clackamas Town Center retail concentrations are more in line with typical averages.
- Due to disclosure reasons⁵, computer and electronics manufacturing does not show up as a top industry because it has been combined with another segment. However, the study area does have measurable high-tech employment, albeit limited to a few firms.
- Health care is by far the largest segment of the economy, accounting for 20% of the economy with an above average specialization.
- The study area has a strong foundation in the construction sector, where all three subsectors combine to account for nearly 1,700 jobs.
- Service industries in professional, technical, and information services are not highly concentrated in the study area, but still represent a measurable share of the economy.
- Wholesaling and transportation is a final economic segment that has both an above average concentration and top share of the economy. This segment is generally tied to existing production operations in the study area.

LOCATION QUOTIENT



TOTAL JOBS



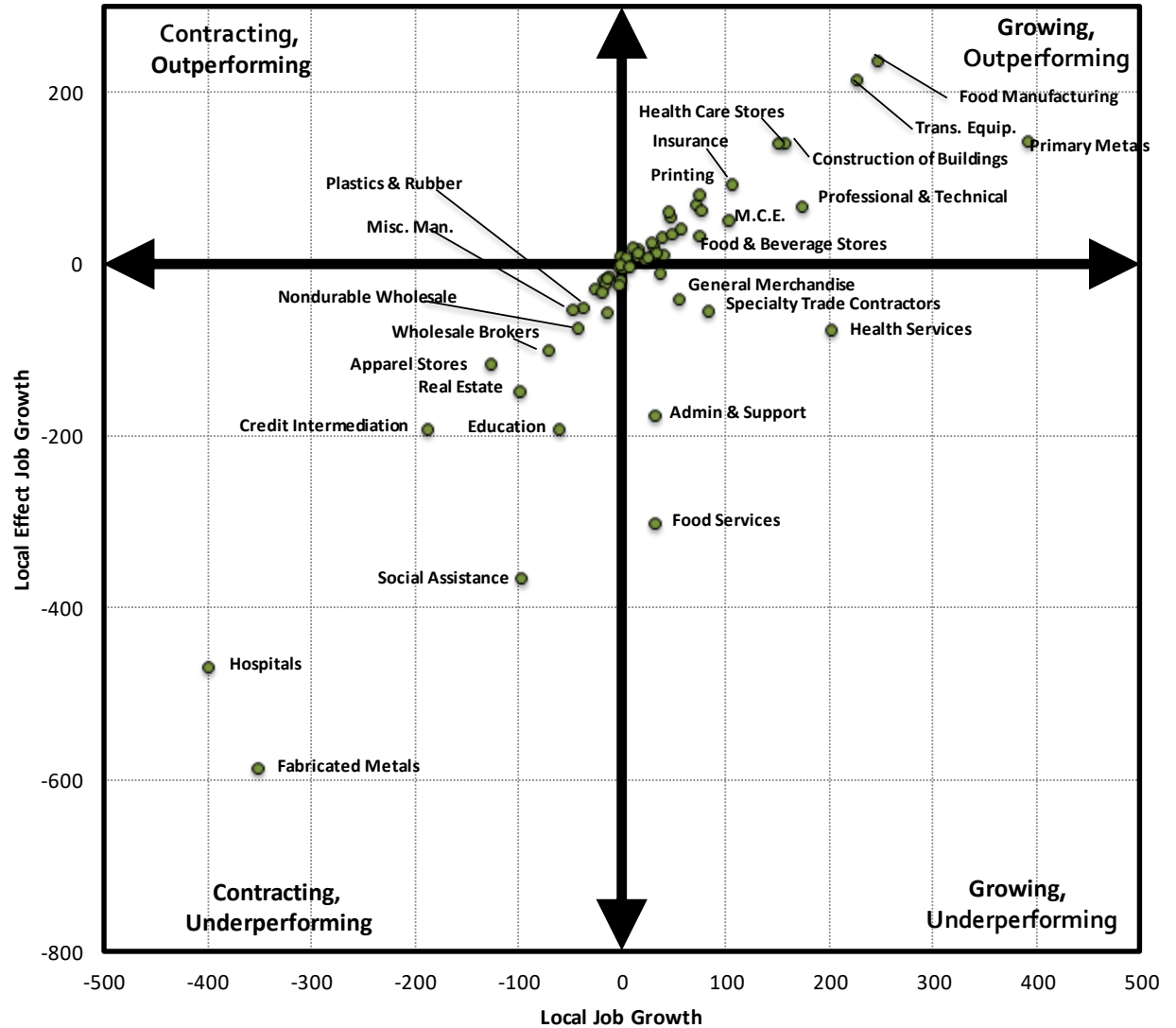
⁵ State law prohibits the disclosure of employment information about a particular industry when information about a specific firm can be ascertained from the data. For this reason, industries are commonly aggregated to avoid disclosing confidential information

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

Economic Drivers – Shift Share

The identification of unique and shifting economic drivers in a local or regional economy are critical in informing the character and nature of future employment and land demand over a planning cycle. To this end, we employ a shift-share analysis of the local economy emerging out of the current expansion cycle. A shift-share analysis is an analytical procedure that measures local effect of economic performance within a particular industry or occupation. The process considers local economic performance in the context of national economic trends—indicating the extent to which local growth can be attributed to unique regional competitiveness or simply growth in line with broader trends. For example, consider that Widget Manufacturing is growing at a 1.5% rate locally, about the same rate as the local economy. On the surface we would consider the Widget Manufacturing industry to be healthy and contributing soundly to local economic expansion. However, consider also that Widget Manufacturing is booming across the country, growing at a robust 4% annually. In this context, local widget manufactures are struggling, and some local or regional condition is stifling economic opportunities.



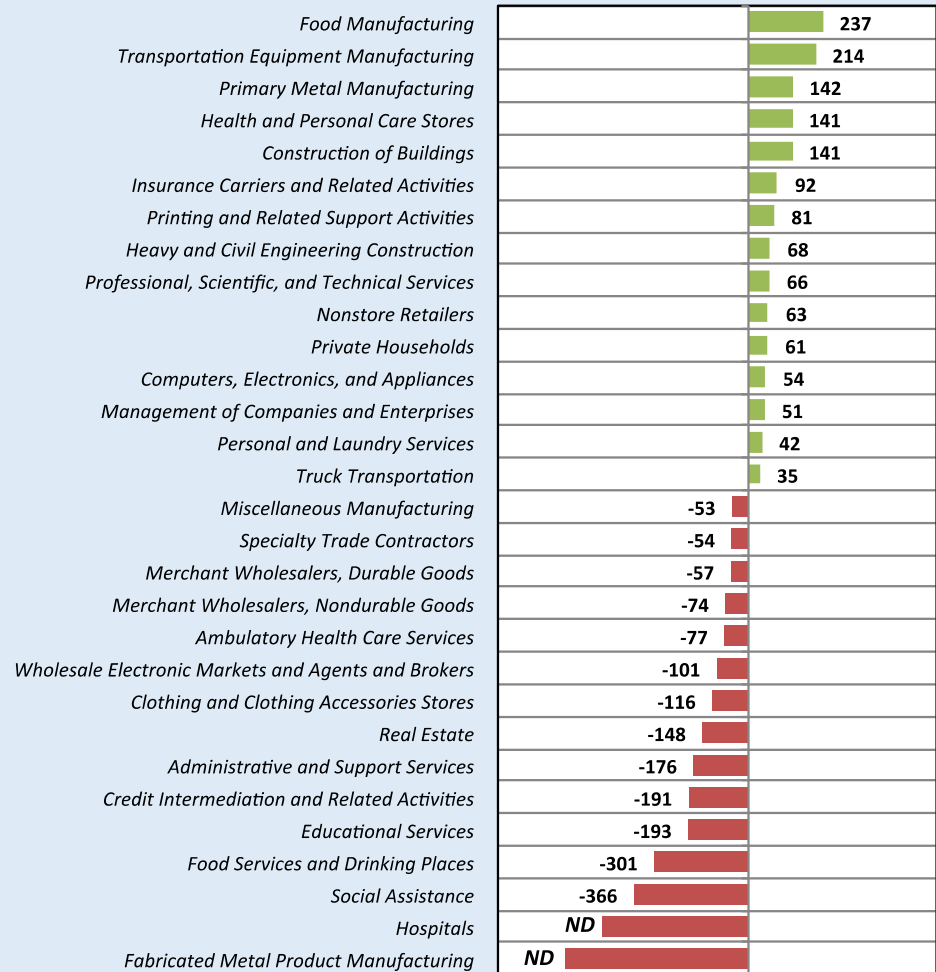
CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

Economic Drivers—Champions and Challenges in the Milwaukie Economy

- With the exception of a select few industries (contractors, health services, restaurants, administration services), the economic direction of most local industries is in line with national trends. Not a single industry is contracting locally and performing better than the national average.
- The balance between industries that are outperforming and those that are underperforming locally represents net economic expansion during the cycle. Champions are pulling the economy forward while challenging industries are hindering growth. Challenging sectors can reverse course over the duration of a cycle and turn positive, but champions are finding local competitive advantages in a growth market.
- It is clear that balanced, low volatility is the norm across most industries, with high volatility in several key sectors. Large local effect losses in fabricated metals and hospitals are largely isolated to large key employers, however there have been some firm departures in fabricated metals.
- Contraction and underperformance across all three wholesaling subsectors are also cause for concern. Firms in these industries are facing local structural challenges.
- Conversely, it is encouraging for an economy with a large manufacturing base to exhibit three manufacturing sectors atop its champion sectors.
- Additional strength in professional services, construction, and high-tech manufacturing are also positive signs for expansion.

LOCAL EFFECT JOB GROWTH (2010 – 2014)



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

TARGET INDUSTRY IDENTIFICATION—REGIONAL CONTEXT

The profiles identified on the following pages represent an assessment of potential target industries derived from the analysis above. However, because Milwaukie functions as part of a regional economy, our approach considers the broader economic context.

As a component of its on-going “Economic Landscape” project, Clackamas County tracks countywide conditions across a range of identified industry targets. Clackamas County’s Comprehensive Plan further identifies additional industry targets including destination retail/hospitality, tourism, and specialty agriculture.

In a metro-wide context, the Greater Portland 2020 initiative identified key sectors influencing growth in targeted industries for the Portland region, several of which are directly applicable to Milwaukie and Clackamas County.

Future Refinement

This assessment of potential industry targets is a preliminary draft. Prior to development of economic forecasts, this analysis will be refined and improved upon through coordination with City officials, stakeholders, and interviews within the business community.

GREATER PORTLAND TARGETED INDUSTRIES



Clean Tech



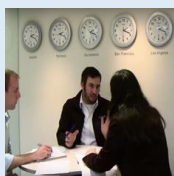
Athletic &
Outdoor



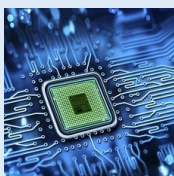
Metals &
Machinery



Health Science
& Tech



Software &
Media



Computers &
Electronics

SOURCE: Greater Portland Inc.

CLACKAMAS COUNTY TARGETED INDUSTRIES

- PROFESSIONAL & BUSINESS SERVICES
- HEALTH CARE
- WHOLESALE TRADE
- METALS & MACHINERY MANUFACTURING
- HIGH-TECH MANUFACTURING
- NURSERIES & GREENHOUSES
- TRUCKING & DISTRIBUTION
- FOOD & BEVERAGE PROCESSING
- WOOD PRODUCTS MANUFACTURING

SOURCE: Clackamas County Economic Landscape Report (June 2012)

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

INDUSTRY CLUSTER – FOOD PROCESSING AND STORAGE

Food Processing in Milwaukie is organized around several large employers, and can be considered an extension of a regional food processing cluster that extends across I-205 and into the Clackamas Industrial Area.

While commercial brewing does not show up in the state employment data (the employer most likely claims employment at another location), Breakside Brewing’s commercial operations and taproom have become a staple of the Milwaukie Expressway industrial corridor.

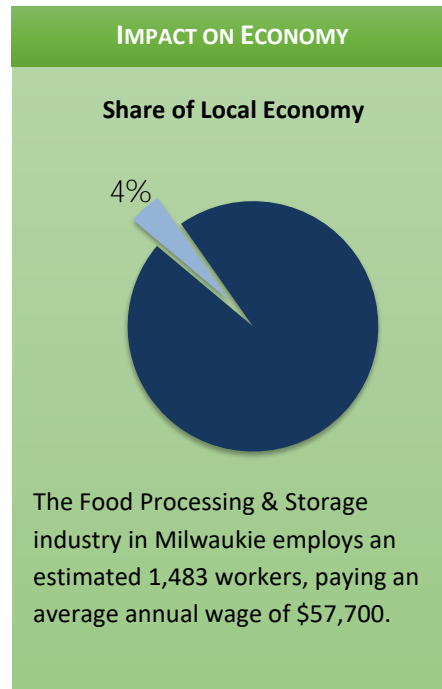
Food manufacturing was identified as the leading driver of economic growth since 2010, with the combined industries growing by 29% over the same period.

Looking forward, an infusion of capital from recent acquisitions and investments should facilitate expanded markets for existing firms. However, real opportunities for growth exist for smaller, less present craft firms and startups (see Maker Manufacturing Profile for additional information).



ANCHOR TARGET INDUSTRIES
▪ Commercial Baking
▪ Flour Milling
▪ Grocery Merchant Wholesalers
▪ Alcohol Merchant Wholesalers
▪ Commercial Printing
▪ Specialty/Craft Manufacturers

MAJOR EMPLOYERS
Bob’s Red Mill
Dave’s Killer Bread
Breakside Brewing
Alpine Foods
Unified Grocers
Core Mark International
Craftsman Label



TRENDS AND EVENTS

- Dave’s Killer Bread becomes best-selling organic bread in the U.S., and is acquired by Flower Foods for \$275 million.
- Breakside Brewery opens 30-barrel production facility and tasting room. Expands to a second brewpub in NW Portland.
- Bob’s Red Mill sales expand rapidly on strong export growth.
- Uncertainty around the U.S. Export-Import Bank threatens export growth for small businesses.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

METALS, MACHINERY, & TRANSPORTATION

Metals and Machinery Manufacturing is a legacy industry in Clackamas County, having been a mainstay of the economy for decades. In Milwaukie, the majority of metals manufacturing activities are tied to the machinery or transportation equipment industries, specifically aerospace. Recent landmark acquisitions signal change on the horizon at the industry level, as several of the region’s largest firms reorganize and position for a new generation of products.

The future is likely to bring increased integration of microelectronics, software, and optics into transportation and equipment systems, creating opportunities for horizontal pivots into new industries outside of metals. Successful firms in this industry will be those that adapt well to new additive manufacturing practices and overcome labor challenges associated with replacement workers.

The study area also has an established network of associated wholesalers. Ancillary industries that support this group include construction and maintenance of buildings, systems, and equipment.

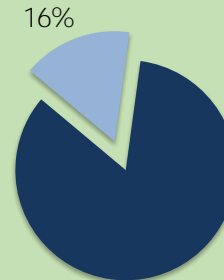


TRENDS AND EVENTS

- Blount International struggles to maintain export growth in light of currency headwind. Is acquired by American Securities and P2 Capital Partners for \$855 million. Company will be taken private.
- Precision Castparts and its subsidiaries are acquired by Berkshire Hathaway for \$37 billion in one of the largest acquisitions in U.S. History, signaling Warren Buffet’s company is banking on growth in the aerospace industry.
- The industry will continue to shift toward increased automation and adoption of advanced practices.

IMPACT ON ECONOMY

Share of Local Economy



The combined Metals, Machinery, and Transportation Equipment industry in Milwaukie employs an estimated 5,444 workers, paying an average wage of \$63,600 annually.

ANCHOR TARGET INDUSTRIES

- Primary & Fabricated Metals
- Machinery
- Transportation Equipment
- Metals and Equipment Wholesalers
- Testing & Calibration Labs
- Computer & Electronic Systems for Aerospace
- Software & R&D

MAJOR EMPLOYERS

- Miles Fiberglass
- PCC Structurals
- Blount
- Grovtech
- American Metal Specialties
- Warn Industries
- Ran-Tech Engineering
- OECO

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

HEALTH SERVICES AND CONTINUING CARE

Health Care and Health Services is the largest sector of the study area economy, accounting for one out of every five jobs. Despite continued growth in the Health Service sector at the regional and even national level, growth among local companies has been stagnating. The sector is well balanced across subsectors, with considerable employment in hospital, health services, and continuing care. However, Milwaukie’s health sector is largely population-serving health care services. The economy does not have much activity in medical manufacturing, laboratories, research, or biotechnology.

Looking forward, demographics and policy will continue to drive need for these types of health services, specifically continuing care. The extent to which the local economy can capitalize on anticipated regional growth in biotechnology research/development remains to be seen. Workforce characteristics may be favorable but an anomalous/catalytic event is likely required for the cluster to expand beyond population-serving functions.

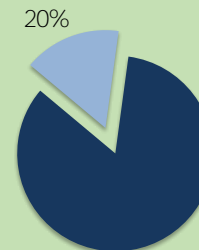


TRENDS AND EVENTS

- The OHSU Knight Cancer Challenge offers opportunity to put Oregon “on the map” for bio-tech research.
- The Affordable Care Act is passed, likely leading to permanent increases in demand for health services. The ACA is broadly expected to cause market consolidation in the hospital and insurance industry.
- Over the next 20 years nearly one million Baby Boomers in Oregon will be entering their retirement years and beyond. An estimated 5 to 8% of Boomers will age in multi-family retirement and care facilities*.

IMPACT ON ECONOMY

Share of Local Economy



The Health Services industry in Milwaukie employs an estimated 7,129 workers, paying an average wage of \$70,000 annually.

ANCHOR TARGET INDUSTRIES

- Hospitals
- Offices of Physicians, Dentists, and Specialists
- Kidney Dialysis Centers
- HMO Medical Centers
- Nursing and Residential Care
- Pharmacy Services

MAJOR EMPLOYERS

- Sunnyside Hospital
- Providence
- Kaiser
- Consonus
- American Medical Response
- Rehab Specialists
- Willamette View

* American Senior Housing Association

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

WAREHOUSE & DISTRIBUTION

Businesses in Warehousing and Distribution include those involved in the wholesale, storage, or movement of goods and services. Warehousing and Distribution is generally an ancillary economic function in the economy. That is, W&D firms agglomerate in proximity to the firms they serve. In some instances, geographic location (proximity to markets) and site advantages (multi-modal transit linkages) attract regionally serving distribution and logistics activities exogenous of local industry. In Milwaukie, it would appear most of this sector's impact is driven by local business factors.

Over the last several years, the industry has declined slightly in the local market. However, the region is currently in a development cycle for W&D space, largely locating on greenfield sites.

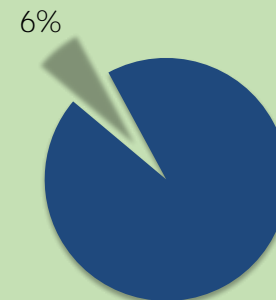


TRENDS AND EVENTS

- In 2014-2015 over three million square feet of industrial space in the Portland Metro Area had been delivered or is under development. The majority is for distribution uses.
- Large distribution center tenants are announced in Gresham, Tualatin, and the Columbia Corridor.
- Emerging trends in distribution and logistics include a growing influence of e-commerce, greater reliability on information technology, decentralization & nearshoring, and investments in automation.

IMPACT ON ECONOMY

Share of Local Economy



The Warehouse & Distribution industry in Milwaukie employs an estimated 2,041 workers, paying an average wage of \$58,000 annually.

ANCHOR TARGET INDUSTRIES

- Durable Goods Wholesale
- Nondurable Goods Wholesale
- Wholesale Trade Agents & Brokers
- Truck Transportation
- Warehousing & Storage

MAJOR EMPLOYERS

- Unified Grocers
- Core Mark International
- Cross Point NW
- Norlift
- Titan Freight
- HD Supply Management

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

BUSINESS, PROFESSIONAL, AND INFORMATION

Business and Professional Services industries are expected to make up the largest share of regional growth over the next 20-years. These businesses include a range of services from creative design, computer programming, technical engineering, call centers, and financial services.

This cluster also includes those that more commonly require traditional office space, but some sectors locate in either creative office or flex business parks. New applications in business technology (IT) and strong corporate profits provide a rosy outlook for businesses in this sector. Specifically, Professional and Technical Services is expected to expand by over 26% over the next ten years. Increasing rents for Class A office space in the Central Business District will drive small and medium sized firms into secondary locations. Milwaukie currently has a below-average supply of businesses in these industries.



TRENDS AND EVENTS

- The Oregon Employment Department forecasts that Professional & Technical Services will be Clackamas County's 2nd fastest growing sector over the next ten years, led by Computer Systems Design.
- Information Technology and Cloud based business systems will continue to permeate through all facets of industry.
- The Portland Metropolitan Region has emerged as a hotbed for software development and computer programming talent.

ANCHOR TARGET INDUSTRIES

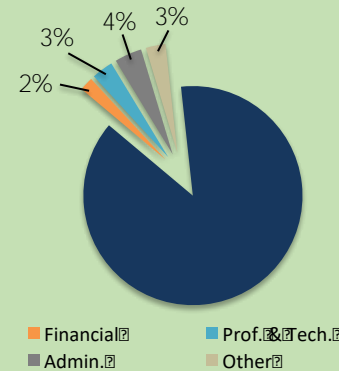
- **Software/Computer Programming**
- **Specialized Design**
- **Engineering & Technical Consulting**
- **Financial, Legal, & Real Estate Services.**
- **Temporary Help Services**
- **Enterprise Headquarters**
- **Administration Services**
- **Back Office Functions**

MAJOR EMPLOYERS

- Princeton Prop. Management**
- Active Telesource**
- Moda Health**
- Crossmark**
- Pacific marketing**
- K & B Engineering**
- Advantis Credit Union**
- Warehouse Demo Services**

IMPACT ON ECONOMY

Share of Local Economy



The Business Services industry in Milwaukie employs an estimated 4,124 workers, paying an average wage of \$46,000 annually.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

MAKER MANUFACTURING & AMENITY

In addition to the aforementioned sector based targeted industries, Milwaukie should prioritize recruitment and development in the following areas. These industry groups have community-wide ancillary impacts ranging from a positive influence on property values to attracting new residents and tenants. These industries often influence the culture and character of districts within a community.

MAKER/CRAFT INDUSTRIAL

In Portland’s Central City, the Central Eastside Industrial District has undertaken a considerable transition over the last ten years. The district emerged as a low cost incubator district, with some of the region’s most successful businesses starting up in the area. However, the district has transitioned in recent years as space costs have increased markedly. The recent SE Quadrant Plan changed zoning in parts of the district to accommodate higher intensity uses. The lack of affordability will increasingly displace niche and incubating firms. As a part of the SE Quadrant process, areas of the Central Eastside—including Milwaukie, were identified as likely outlets for future incubating activity.

- **PUBLISHING & SOFTWARE**
- **COFFEE ROASTING/BAKING/FOOD PRODUCTS**
- **BREWING/VINTING/DISTILLING**
- **CRAFT MANUFACTURING/CUSTOM FABRICATION**
- **SPECIALTY AGRICULTURE**
- **APPAREL/JEWELRY/RECREATION EQUIP.**





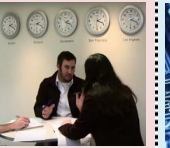
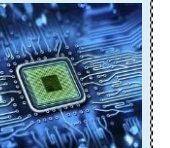


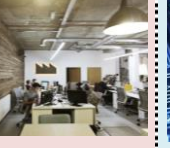




AMENITY RETAIL/HOSPITALITY

Quality retail, restaurant, recreation, and hospitality tenants make a community an attractive place to live and work. Studies have shown that amenity based supportive uses have a positive impact on housing values and attract residents and businesses alike. This is a growing phenomenon in the context of emerging consumer preferences observed across Millennial and Boomer generations. Attraction of these types of businesses offers Milwaukie to raise its amenity profile and work toward becoming a true 18-hour community where people gather to work as well as recreate.

- **SPECIALTY FOOD/GROCERY**
- **COFFEE/CAFÉ**
- **BREW PUB/WINE OR BOTTLE SHOPS**
- **FULL SERVICE LOCAL RESTAURANTS**
- **FOOD CART PODS**
- **BOOKSTORES AND BOUTIQUES**
- **WELLNESS & SPA SERVICES**

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

TARGET INDUSTRY ANALYSIS

REGIONAL TARGET INDUSTRIES	 Clean Tech	 Athletic & Outdoor	 Metals & Machinery	 Health Science & Tech	 Software & Media	 Computers & Electronics			
CLACKAMAS TARGET INDUSTRIES			 Metals & Machinery	 Health Care	 Professional Services	 High-Tech Manufacturing	 Wholesale Trade	 Trucking & Distribution	 Food & Beverage Manufacturing
MILWAUKIE DATA			<i>Fabricated Metals</i>	<i>Hospitals</i>	<i>Management of Companies</i>	<i>Computer & Electronics</i>	<i>Durable Wholesale</i>	<i>Warehouse/ Distribution</i>	<i>Commercial Baking</i>
			<i>Primary Metals</i>	<i>Health Care</i>	<i>Publishing</i>	<i>Medical Devices</i>	<i>Grocery Mer. Wholesale</i>	<i>Flour Milling</i>	
			<i>Testing Labs</i>	<i>Nursing Care</i>	<i>Insurance</i>	<i>Aerospace</i>	<i>Wholesale Agent/Brokers</i>		
			<i>Technical Services</i>						
OTHER INDUSTRIES: <i>Specialty Trade Contractors, Temp. Help, Telemarketing Services, Real Estate, Retail, Misc. Manufacturing, Printing, Transportation Equipment, Construction of Buildings</i>									

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

OVERVIEW OF METHODOLOGY

Updating the Base Year

The first analytical step of the analysis is to update covered employment to the 2015 base year. Our foundational Milwaukie-specific QCEW dataset provides covered employment by industry through 2014. To update these estimates, we use observed industry specific growth rates for Clackamas County between 2014 and 2015 (summary level county employment data is released on a timelier basis than place level data).

Conversion to Total Employment

The first step in the analysis is to convert “covered”⁶ employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or commissioned workers. In Clackamas County, the data from the Bureau of Economic Analysis (BEA) suggests that non-covered workers have averaged roughly 33% of the employment base over the last five years. We find this rate to be abnormally high compared to other urban settings. As such, we revised the conversion rates to reflect a 25% share. The differential is most common in real estate, where commissioned workers comprise an unusably large share jobs. Taken together, the assumed 2015 total employment base is 16,941 jobs in Milwaukie and 48,386 in the UGMA.

City of Milwaukie	Covered Employment		'10-'14	Conversion	2014 Total	'14-'15	2015 Base
Industry	2010	2014	AAGR	Rate ¹	Employment	AAGR ²	Year Employment
Construction	951	1,233	6.7%	80.8%	1,525	5.9%	1,614
Manufacturing	3,111	2,967	-1.2%	86.6%	3,426	0.4%	3,439
Wholesale Trade	658	580	-3.1%	82.5%	703	4.2%	732
Retail Trade	764	899	4.2%	73.1%	1,230	3.0%	1,266
T.W.U.	112	126	3.1%	61.1%	207	3.5%	214
Information	155	201	6.7%	76.8%	262	22.5%	321
Finance & Insurance	195	281	9.5%	63.6%	441	1.2%	446
Real Estate	148	136	-2.1%	29.9%	456	1.6%	464
Professional & Technical Services	467	507	2.1%	63.3%	800	3.4%	828
M.C.E.	235	314	7.5%	86.3%	364	15.8%	421
Administration Services	640	820	6.4%	69.0%	1,188	1.7%	1,208
Education	808	702	-3.5%	83.6%	839	11.7%	937
Health Care	2,308	2,305	0.0%	73.4%	3,139	4.7%	3,285
Leisure & Hospitality	602	586	-0.7%	73.3%	800	7.0%	856
Other Services	249	283	3.2%	68.8%	411	3.1%	424
Government	677	448	-9.8%	100.0%	448	8.6%	486
TOTAL	12,081	12,387	0.6%	74.4%	16,237	4.3%	16,941

Milwaukie UGMA	Covered Employment		'10-'14	Conversion	2014 Total	'14-'15	2015 Base
Industry	2010	2014	AAGR	Rate	Employment	AAGR	Year Employment
Construction	1,371	1,684	5.3%	80.8%	2,083	5.9%	2,205
Manufacturing	5,696	6,244	2.3%	86.6%	7,209	0.4%	7,236
Wholesale Trade	1,713	1,585	-1.9%	82.5%	1,921	4.2%	2,002
Retail Trade	6,382	6,797	1.6%	73.1%	9,294	3.0%	9,570
T.W.U.	451	458	0.4%	61.1%	750	3.5%	776
Information	414	441	1.6%	76.8%	573	22.5%	703
Finance & Insurance	755	690	-2.2%	63.6%	1,083	1.2%	1,096
Real Estate	711	599	-4.2%	29.9%	2,008	1.6%	2,039
Professional & Technical Services	904	1,078	4.5%	63.3%	1,704	3.4%	1,762
M.C.E.	324	427	7.1%	86.3%	495	15.8%	573
Administration Services	1,334	1,366	0.6%	69.0%	1,978	1.7%	2,013
Education	1,560	1,499	-1.0%	83.6%	1,793	11.7%	2,003
Health Care	7,183	6,926	-0.9%	73.4%	9,431	4.7%	9,870
Leisure & Hospitality	2,747	2,785	0.3%	73.3%	3,802	7.0%	4,069
Other Services	1,199	1,324	2.5%	68.8%	1,924	3.1%	1,983
Government	686	448	-10.1%	100.0%	448	8.6%	486
TOTAL	33,430	34,350	0.7%	71.9%	46,496	4.1%	48,386

⁶ The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment

departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

Scenario 1: Safe Harbor Forecast

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods. The most applicable for Milwaukie is 660-024-0040(9)(a)(A), which recommends reliance on the most recent regional forecast published by the Oregon Employment Department. This method applies industry specific growth rates for the Portland Metro Workforce Region (Clackamas County) to the 2015 Milwaukie base. This method results in an average annual growth rate of 1.6%, with total job growth of 6,131 jobs. While this report presents an alternative forecast scenario, we find growth rates in the Safe Harbor Forecast are aligned with those expected in Milwaukie. We recommend that the City of Milwaukie adopts the Safe Harbor forecast.

In recent years, it has been customary for employment forecasts in Economic Opportunities Analyses to consider refill rates in the first five years of the employment forecast. While jobs and companies declined during the Great Recession, by-and-large, the space they occupied did not. Projections with a base year in the post-recession recovery needed to consider that a share of employment growth in the near-term would locate in existing space (refill). In the current environment, real estate vacancies are below market equilibrium. Therefore, refill was not considered in all scenarios presented in this analysis.

SUMMARY OF SAFE HARBOR FORECAST

City of Milwaukie	Safe Harbor Forecast				2015-2035 Growth	
	5-Year Estimates				#	AAGR
Industry	2020	2025	2030	2035		
Construction	1,841	2,099	2,394	2,730	1,116	2.7%
Manufacturing	3,628	3,827	4,038	4,260	821	1.1%
Wholesale Trade	773	816	862	910	177	1.1%
Retail Trade	1,353	1,445	1,544	1,649	383	1.3%
T.W.U.	227	242	258	274	60	1.3%
Information	336	352	368	386	65	0.9%
Finance & Insurance	481	518	559	602	156	1.5%
Real Estate	494	527	562	600	136	1.3%
Professional & Technical Services	928	1,040	1,166	1,307	479	2.3%
M.C.E.	451	484	519	557	136	1.4%
Administration Services	1,339	1,484	1,644	1,822	614	2.1%
Education	989	1,044	1,101	1,162	224	1.1%
Health Care	3,558	3,854	4,174	4,521	1,236	1.6%
Leisure & Hospitality	926	1,001	1,083	1,171	315	1.6%
Other Services	451	481	512	546	122	1.3%
Government	507	529	552	576	89	0.8%
TOTAL	18,283	19,744	21,336	23,073	6,131	1.6%

Milwaukie UGMA	Safe Harbor Forecast				2015-2035 Growth	
	5-Year Estimates				#	AAGR
Industry	2020	2025	2030	2035		
Construction	2,514	2,867	3,270	3,729	1,525	2.7%
Manufacturing	7,634	8,053	8,496	8,963	1,728	1.1%
Wholesale Trade	2,113	2,231	2,355	2,487	485	1.1%
Retail Trade	10,224	10,923	11,670	12,467	2,897	1.3%
T.W.U.	826	879	935	995	219	1.3%
Information	736	771	808	846	143	0.9%
Finance & Insurance	1,182	1,274	1,373	1,480	384	1.5%
Real Estate	2,175	2,319	2,474	2,638	599	1.3%
Professional & Technical Services	1,975	2,215	2,482	2,783	1,021	2.3%
M.C.E.	615	659	707	758	185	1.4%
Administration Services	2,230	2,471	2,738	3,034	1,022	2.1%
Education	2,113	2,230	2,352	2,482	479	1.1%
Health Care	10,690	11,578	12,540	13,582	3,712	1.6%
Leisure & Hospitality	4,401	4,760	5,147	5,567	1,498	1.6%
Other Services	2,113	2,251	2,398	2,555	571	1.3%
Government	507	529	552	576	89	0.8%
TOTAL	52,049	56,010	60,299	64,943	16,556	1.5%

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

Scenario 2: Alternative Forecast

The second forecast scenario is influenced by the research and analysis conducted in the EOA. This scenario formulates an employment growth trajectory based on identified trends, the growth outlook for targeted industries, and input from the project technical advisory committee. Further, the alternative scenario recognizes that the city's policy direction has influence over realized growth in targeted sectors. The following factors informed the forecast:

Location

Milwaukie has a strong regional location in the Portland Metropolitan Area. Its proximity to the Central Eastside and the Central City is an unparalleled asset. New multimodal transit linkages further strengthen this connectivity. With rapidly increasing space costs in the Central City across building development forms, Milwaukie is well positioned to capture spillover growth pressure. On the margin, economic pressures will facilitate a transition away from distribution-oriented uses that located along formerly fundamental regional corridors, and towards an increased capture of service-based industries.

Household Growth

Growth in many sectors, including retail, hospitality, banking, and real estate, is a direct function of population and households in a community. Milwaukie's population base has been stagnating for many years. However, increasing property values will progressively support higher density redevelopment and an overall increase in "rooftops".

Redevelopment Opportunities

Milwaukie has ample strategic redevelopment opportunities and sites suitable to accommodate future growth. These include the catalyst redevelopment sites in downtown Milwaukie³, and the North Milwaukie Industrial area, among others.

Local Policy, Economic Development, and Infrastructure

Milwaukie has an expanding economic development "toolbox" to help facilitate economic growth and successfully attract and support new and expanding businesses. Tools include Urban Renewal, the Clackamas County Strategic Investment Program, and workforce training programs.

Statewide Policy

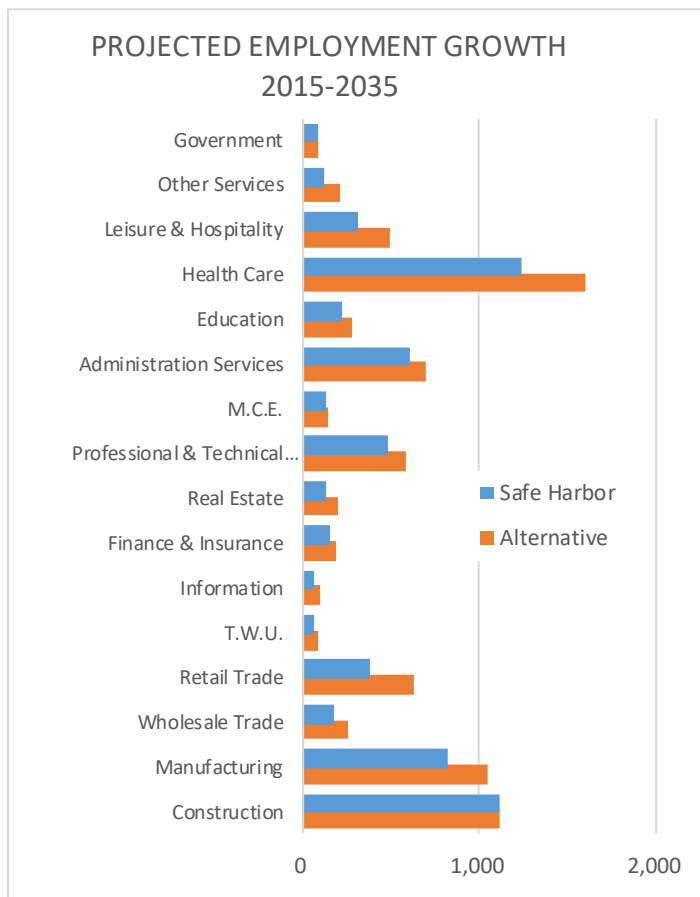
The outcome of statewide policy initiatives will have direct influence over the growth trajectory of some sectors in the economy. The adoption of statewide minimum wage increases will take form in the coming years. This policy is expected to place downward pressure on growth in service industries. The adoption of a proposed gross receipts tax is less certain.

This growth trajectory assumes that Milwaukie's policy direction to support traded sector industries and facilitate opportunities for redevelopment and densification will translate into a higher capture of regional growth on the margin. This scenario therefore assumes that Milwaukie will capture a larger share of UGMA growth over the planning period. Specifically, we assume that Milwaukie will capture 15% of the calculated differential between the UGMA and the City forecast under the Safe Harbor estimates.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

This process yields an average annual growth rate of 1.9%, which is an increase of 7,750 jobs. The largest growth is expected in Health Care (1,607 jobs), Construction (1,116 jobs), and Manufacturing (1,048 jobs).



City of Milwaukie	Alternative Forecast					
	5-Year Estimates				2015-2035 Growth	
	2020	2025	2030	2035	#	AAGR
Construction	1,841	2,099	2,394	2,730	1,116	2.7%
Manufacturing	3,675	3,928	4,197	4,486	1,047	1.3%
Wholesale Trade	789	850	916	987	255	1.5%
Retail Trade	1,402	1,551	1,717	1,901	635	2.1%
T.W.U.	234	256	280	306	92	1.8%
Information	344	369	396	425	104	1.4%
Finance & Insurance	487	533	582	636	190	1.8%
Real Estate	508	557	610	669	205	1.9%
Professional & Technical Services	947	1,082	1,238	1,415	587	2.7%
M.C.E.	453	488	526	567	146	1.5%
Administration Services	1,354	1,517	1,699	1,904	696	2.3%
Education	1,000	1,066	1,137	1,213	276	1.3%
Health Care	3,629	4,009	4,429	4,893	1,608	2.0%
Leisure & Hospitality	959	1,074	1,203	1,348	492	2.3%
Other Services	469	519	574	635	211	2.0%
Government	507	529	552	576	90	0.9%
TOTAL	18,598	20,428	22,452	24,691	7,750	1.9%

Milwaukie UGMA	Alternative Forecast					
	5-Year Estimates				2015-2035 Growth	
	2020	2025	2030	2035	#	AAGR
Construction	2,514	2,867	3,270	3,729	1,524	2.7%
Manufacturing	7,733	8,265	8,833	9,440	2,204	1.3%
Wholesale Trade	2,157	2,324	2,503	2,697	696	1.5%
Retail Trade	10,594	11,726	12,980	14,368	4,798	2.1%
T.W.U.	849	929	1,016	1,111	335	1.8%
Information	754	809	868	932	229	1.4%
Finance & Insurance	1,198	1,309	1,431	1,563	467	1.8%
Real Estate	2,235	2,450	2,685	2,943	903	1.9%
Professional & Technical Services	2,015	2,304	2,634	3,012	1,250	2.7%
M.C.E.	617	665	717	772	199	1.5%
Administration Services	2,255	2,526	2,830	3,171	1,158	2.3%
Education	2,136	2,278	2,430	2,591	589	1.3%
Health Care	10,903	12,045	13,306	14,699	4,829	2.0%
Leisure & Hospitality	4,559	5,107	5,721	6,409	2,340	2.3%
Other Services	2,195	2,428	2,687	2,973	990	2.0%
Government	507	529	552	576	90	0.9%
TOTAL	53,221	58,561	64,463	70,987	22,600	1.9%

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

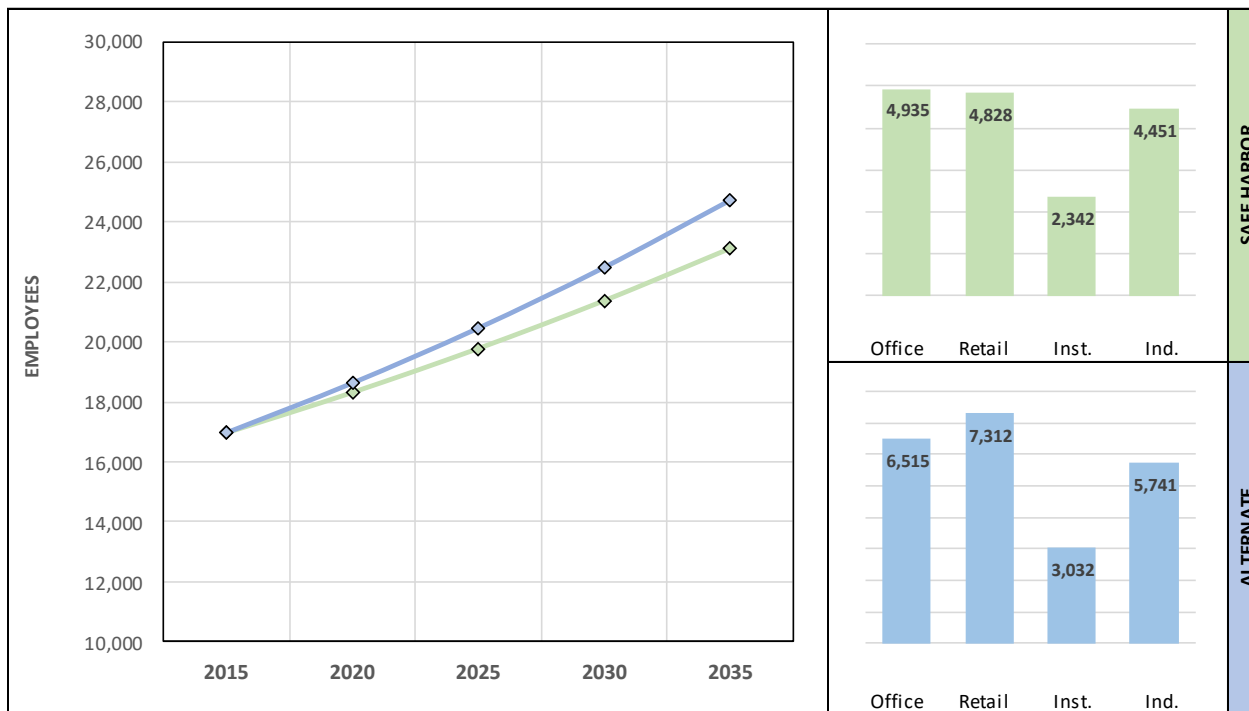
EMPLOYMENT FORECAST AND LAND NEED

Summary of Employment Growth Scenarios

The two forecast scenarios in this analysis range from 1.6% average annual growth to 1.9%. Job growth estimates within the City of Milwaukie range from 6,131 to 7,750 jobs. The summary estimates here consider the rates at which different sectors utilize varying space/land typologies (Office, Retail, Institutional, Industrial). This aggregation was developed consistent with methods outlined in the 2014 Urban Growth Report.

Both the Safe Harbor and Alternative based forecasts assume growth on the margin and will increasingly trend toward service and trade-oriented employment uses.

Metro's TAZ-based forecasts projects an average annual growth rate of 1.2% through 2040, which is significantly lower than both the Safe Harbor or Alternative forecast. The lower forecast reflects Metro's modeling structure, which limits projected growth on the basis of estimated capacity.



The **Safe Harbor** forecast estimates 1.5% average annual growth and the creation of **6,131 jobs**. The majority of job growth will be in service industries requiring office typologies, followed by industrial, and retail.

The **Alternative Forecast** estimates 1.9% average annual growth and the creation of **7,750 jobs**. In this scenario the majority of jobs growth is in production-oriented uses that require industrial space typologies, followed by office, and retail.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

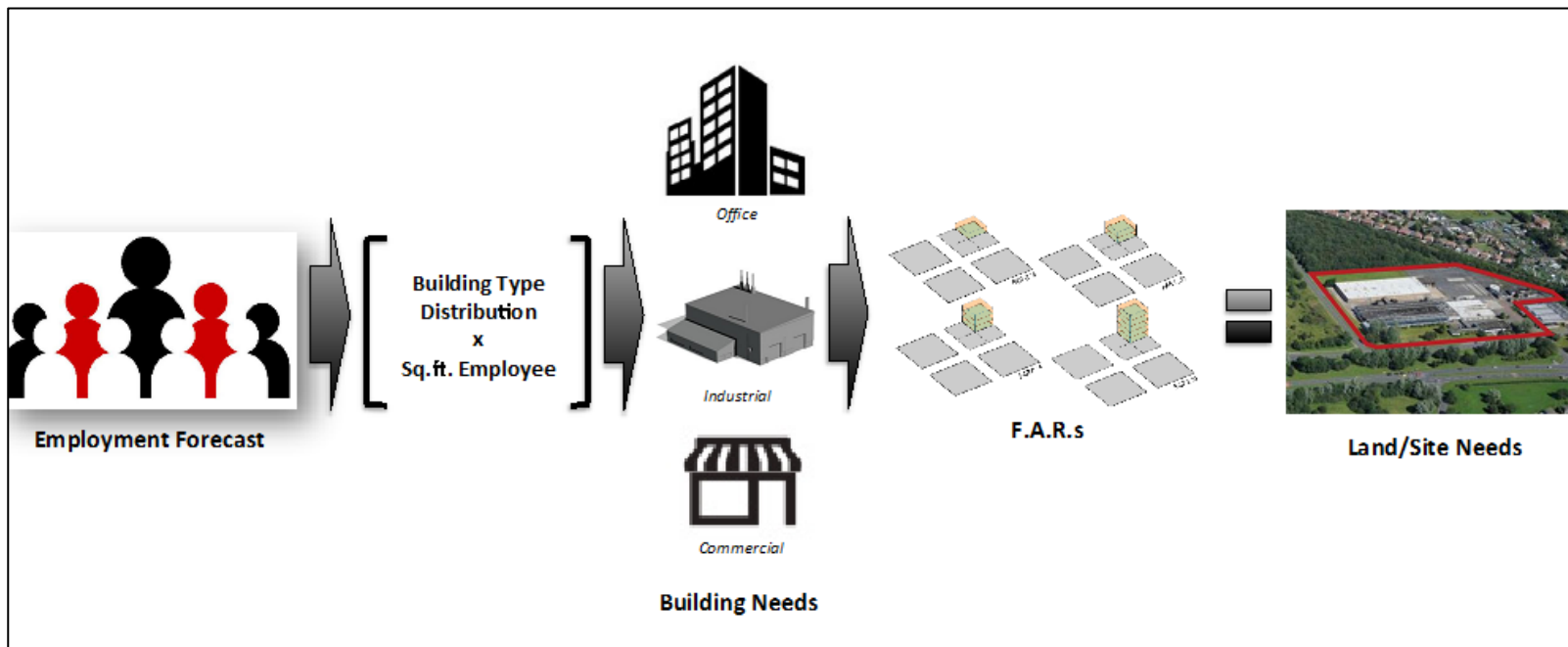
EMPLOYMENT LAND FORECAST

This analytical step in the EOA process translates estimated employment growth into forecasts of land need over the planning period. With slight modifications based on the best available information, our approach closely follows the generally accepted methodology used in Metro’s 2014 Urban Growth Report. This approach is a three-step process; beginning with a conversion of employment forecasts by industry into the building typologies in which those economic activities typically locate. As an

example, insurance agents typically locate in traditional office space. However, a percentage of these firms locate in commercial retail space adjacent to retail anchors. Cross-tabulating this distribution provides an estimate of employment in each typology.

The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for market clearing vacancy we arrive at an estimate of total space demand for each building type.

EMPLOYMENT FORECAST TO LAND DEMAND METHODOLOGY



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

Finally, we can consider the physical characteristics of individual building types and the amount of land they typically require for development. The commonly used site utilization metric is referred to as the “floor area ratio” or FAR. For example, a 25,000 square foot building requires two acres to accommodate its structure setbacks, parking, and necessary yard/storage space would have a FAR of roughly 0.29.

OAR 660-009-0015(2) does not specify a methodology for conducting land need analysis. However, it does specify that, “the economic opportunities analysis must identify the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses.... Industrial or other employment uses with compatible site characteristics may be grouped together into common site categories”. Consistent with administrative rule, this analysis ends with a determination of land need in broad land use categories (Commercial, Industrial, Mixed-Use).

Baseline Land Demand Analysis

To demonstrate the methodological process used and underlying assumptions, this report will develop land need estimates in a step-by-step process, clearly presenting underlying assumptions. For brevity, this process will be presented for the Safe Harbor Forecast scenario at the UGMA only. Final results will show the alternative forecast outcomes.

In this analytical step we allocate employment growth into standard building typologies. The building typology matrix was developed for the 2014 Urban Growth Report, and represents the share of sectoral employment that locates across various building types. Johnson Economics added a category for Data Centers, which varies broadly from

any category in the Metro matrix. Further, retail trade and food services have been removed from the forecast. However, demand for retail space driven by other sectors still exists in this analysis because firms outside of retail trade utilize retail space (beauty salons, banking, couriers, day care, insurance, real estate, etc.).

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

CONVERSION OF EMPLOYMENT FORECAST TO BUILDING TYPOLOGY

Industry	'15-'35 Employment Growth	Building Typology Matrix						
		Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail
Construction	1,525	14%	0%	18%	40%	18%	0%	10%
Manufacturing	1,728	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	485	8%	0%	22%	20%	40%	0%	10%
T.W.U.	2,897	15%	0%	12%	13%	55%	0%	5%
Information	219	20%	0%	20%	30%	0%	20%	10%
Finance & Insurance	143	72%	1%	5%	1%	1%	0%	20%
Real Estate	384	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	599	72%	1%	5%	1%	1%	0%	20%
M.C.E.	1,021	79%	5%	8%	0%	0%	0%	8%
Administration Services	185	72%	1%	5%	1%	1%	0%	20%
Education	1,022	30%	53%	5%	1%	1%	0%	10%
Health Care	479	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	3,712	20%	1%	7%	1%	1%	0%	70%
Other Services	1,498	72%	1%	5%	1%	1%	0%	20%
Government	571	43%	35%	5%	1%	1%	0%	15%
TOTAL	16,467	Employment Growth by Typology						
		Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail
		5,136	1,112	1,758	2,267	2,281	44	3,870

Employment growth estimates by building type are then converted to demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market clearing vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative multi-tenant usage. A 5% rate is used for general industrial and warehouse—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Other uses assume 0% vacancy.

Demand for space is then converted to net acres using a standard floor area ratio (FAR) for each development form. Higher ratios for retail and office uses indicate that these uses will locate in station areas or mixed-use space at a higher rate on the margin. These calculations indicate a 20-year need of 880 net-developable acres within the UGMA across all development forms in the Safe Harbor Forecast.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

The combined space and FAR assumptions further provide estimates for job densities, determined on a per net-developable acre basis. Commercial office and retail densities are 50 and 30 jobs per acre, respectively. Industrial uses range from 18 for general industrial to three jobs per acre for warehouse space.

CONVERSION OF BUILDING TYPOLOGY TO LAND NEED

Employment Growth by Typology								Total
Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail		
5,136	1,112	1,758	2,267	2,281	44	3,870	16,467	



	Building Typology							Total
	Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail	
Average sq. ft. per Employee	350	600	990	600	1,850	5,000	500	
Floor Area Ratio (F.A.R.)	0.40	0.35	0.30	0.25	0.35	0.35	0.35	
Implied Employment Density <i>(jobs per net acre)</i>	49.8	25.4	13.2	18.2	8.2	3.0	30.5	18.7



Net Acres by Building Typology								Total
Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail		
113	44	147	131	291	14	140	880	

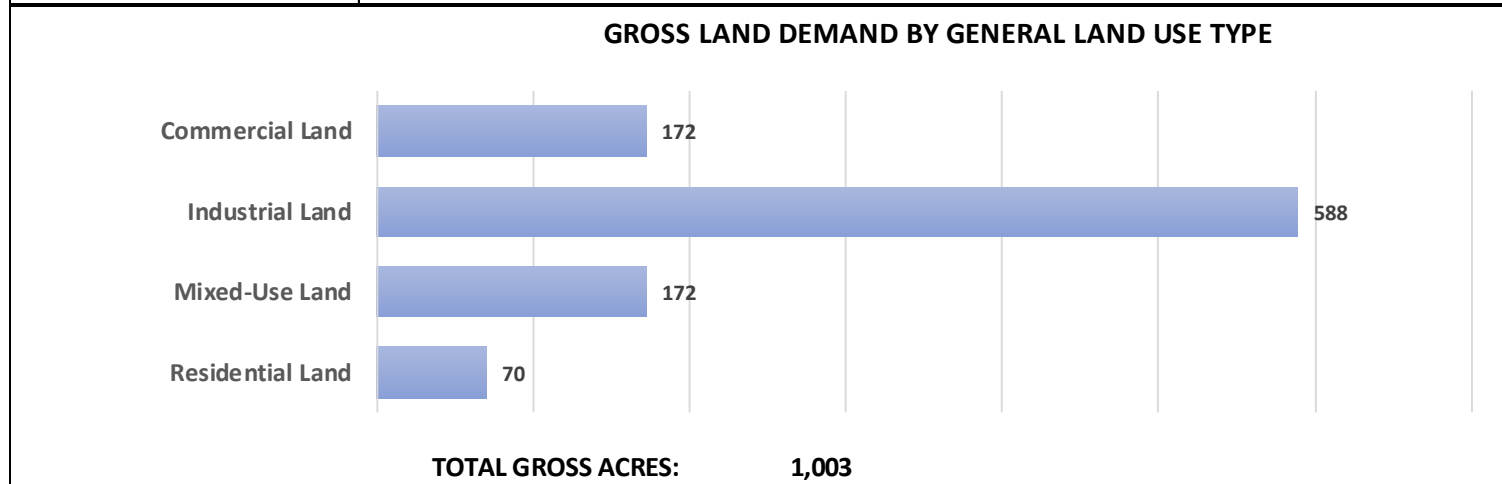
CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

Conversion of net acreage to broad land use categories is achieved via an established matrix of existing employment allocation trends. The final analytical step of this analysis is to adjust demand estimates to account for future infrastructure. The state defines net buildable acres as not including future right-of way, indicating that gross land need is greater than net-buildable⁸. For this analysis, we assume a 15% gross-to-net ratio for commercial, industrial, and mixed-use areas.

These calculations result in a gross land need determination of 1,003 acres over the 20-year planning period for the Safe Harbor Forecast. The greatest land need will be for industrial sites (588 acres), followed by mixed-use and commercial (172 acres each). It is assumed that 70-acres worth of capacity will be absorbed in currently designated residential areas. This reflects a high level of at-home businesses, which are likely to fulfill some residential demand.

	Net Acres						
	Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail
Total Net Acres Demanded	132	46	138	132	271	14	140
Matrix of Land Type Allocation							
Commercial Land	17%	20%	10%	2%	11%	0%	52%
Industrial Land	43%	27%	70%	89%	71%	100%	15%
Mixed-Use Land	29%	33%	14%	6%	12%	0%	26%
Residential Land	11%	19%	6%	3%	5%	0%	8%

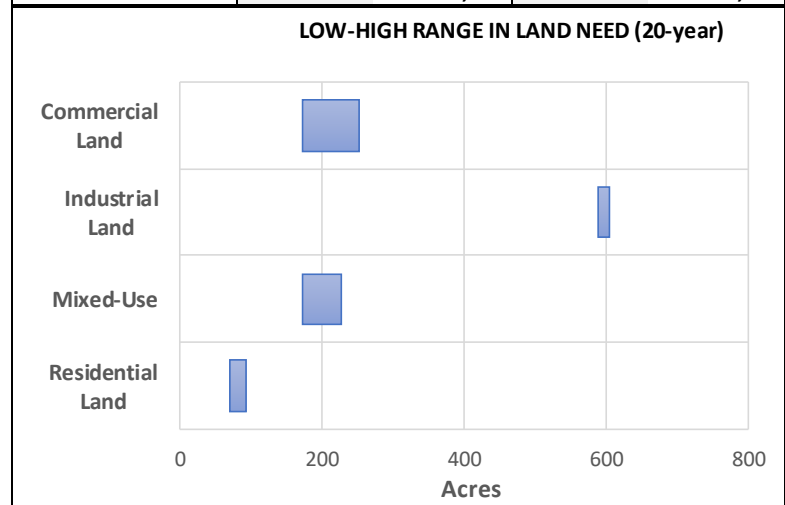


CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

EMPLOYMENT FORECAST AND LAND NEED

Replicating the previously established methodology across both employment forecast scenarios, we calculate short and long-term land need by use type. The greatest land need is established under the Alternative Forecast, which identifies short-term need for 663 acres and long-term need of 2,952 acres. Roughly 195 acres is expected to be absorbed on non-employment land. While a range of forecasts are presented here, the City of Milwaukie is required by statute to adopt a single forecast scenario.

Use Type	Safe Harbor Forecast		Alternative Forecast	
	5-year	20-year	5-year	20-year
Commercial Land	59	172	102	253
Industrial Land	115	588	128	605
Mixed-Use	48	172	78	227
Residential Land	19	70	31	93
TOTAL ACRES	240	1,003	339	1,177



Additional Considerations in Land Demand

Beyond a consideration of gross acreage, there is a significantly broader range of site characteristics that industries would require to accommodate future growth. We summarize some key findings here:

- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. A distance of 10 to 20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require 5 miles or less and generally prefer a direct interstate linkage. Visibility is highly important to most commercial activities and site location along a major commercial arterial is commonly required.
- Railroad access is preferred for most manufacturing activities, with the exception of high-tech. Some users require direct on-site access while others generally make use of a local or regional hub.
- Fiber telecommunications networks are likely to be increasingly required for many commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

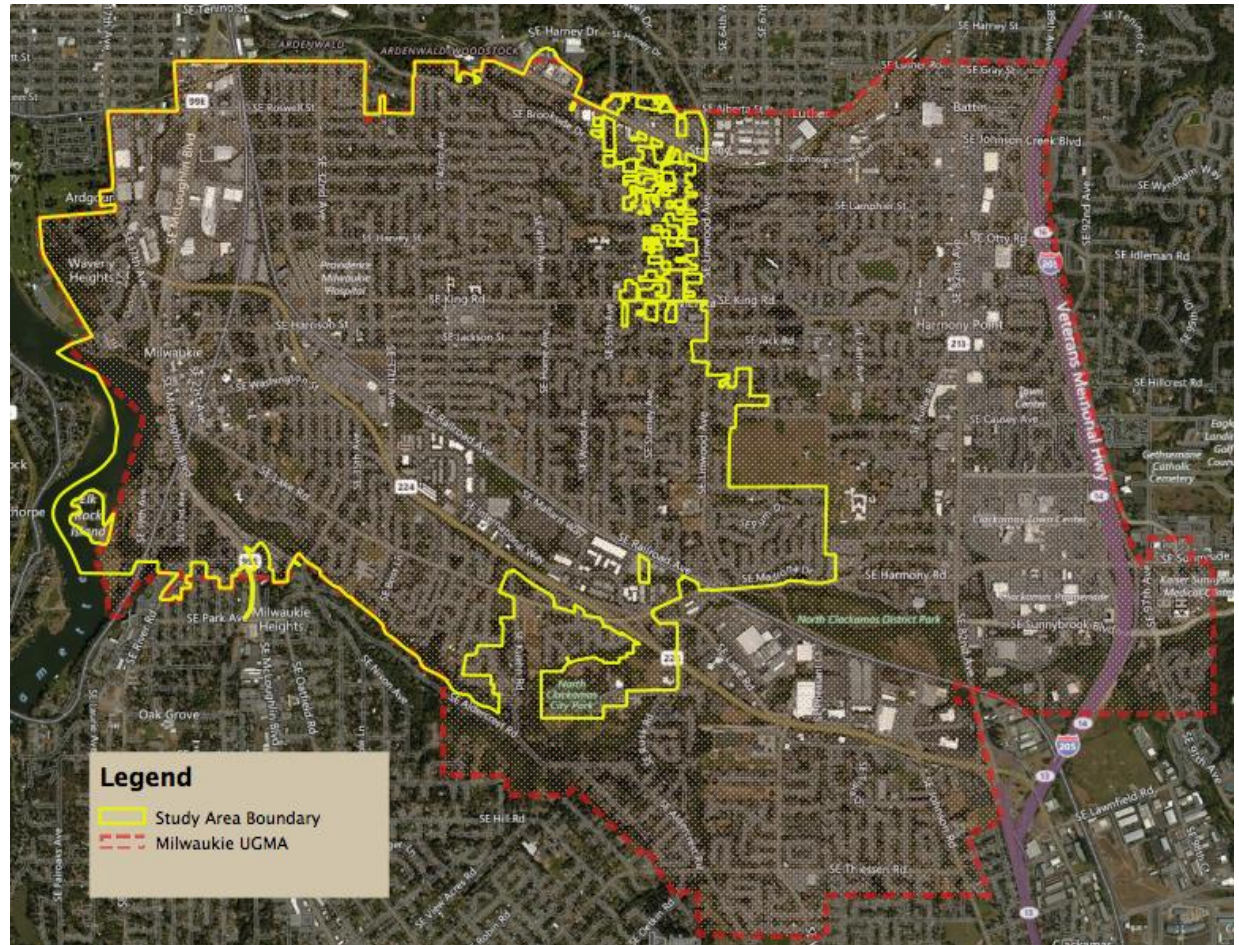
BUILDABLE LAND INVENTORY

VI. BUILDABLE LAND INVENTORY

As part of the 2014 Urban Growth Report (UGR), the City of Milwaukie worked with Metro to develop an inventory of buildable lands in the Urban Growth Boundary (UGB) to inform Metro's regional forecast. This analysis identifies vacant and redevelopable employment land within the City to meet future estimated demand.

For this Economic Opportunities Analysis (EOA), the City provided a geographic information system (GIS) database. The Buildable Lands Inventory (BLI) is developed at the City study area level.

This section of the EOA report presents some underlying assumptions used by Metro and the City in the BLI analysis and interprets findings of the employment lands BLI.



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

OVERVIEW OF TECHNICAL METHODOLOGY

The buildable lands inventory (BLI) is a parcel-based analysis that identifies the capacity within the City to accommodate future employment. The methodology identifies vacant property, environmental and physical constraints, and applies current or future zoning. In addition, the BLI estimates potential redevelopment capacity on currently developed parcels.

The City of Milwaukie and Metro provided the technical parameters necessary to make these determinations and other adjustments for constraints identified in the following analysis. Definitions for each classification and development status division are presented here.

Methodology Improvement— Vacant Land Definition:

The definition of vacant land used in this analysis and in Metro’s BLI methodology is more stringent than the definition provided in OAR 660-009-0005(14) which classifies vacant employment land as a lot or parcel:

- Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or
- Equal or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.

LAND CLASSIFICATIONS AND DEVELOPMENT STATUS DEFINITIONS

FOR THIS ANALYSIS, THE FOLLOWING DEFINITIONS ARE USED:

VACANT LAND:

- Parcels that are > 95% vacant, or
- Parcels with < 2,000 SF in developed area that comprises less than 10% of total gross acreage.

LAND CLASSIFICATIONS

DEVELOPED LAND (PARCELS):

Parcels that are > 95% developed and do not meet redevelopment criteria.

PARTIALLY VACANT LAND:

Parcels classified in baseline inventory that do not meet criteria as vacant or developed.

POTENTIAL INFILL LAND:

A subset of partially vacant land. Parcels that are partially developed that do not meet redevelopment criteria but have greater than 1.0 acre of vacant unconstrained land.

EXPANSION:

A subset of potential infill. Parcels with infill potential that have been anecdotally identified as being land banked for future expansion by a known entity.

KNOWN DEVELOPMENT:

Parcels that have been anecdotally identified as having development activity underway or commencing in the next 12 months.

DEVELOPMENT STATUS

DEVELOPED LAND (AREA)

Land (acres) on parcels that is developed and is not suitable to meet future employment except through potential redevelopment.

GROSS BUILDABLE LAND:

Gross vacant (or redevelopable) land (acres) on parcels that could potentially meet future employment land need. Constraints have not been removed.

CONSTRAINED LAND:

Land (acres) on parcels that is constrained by slope, right of way, or environmental conditions which make the portion of the parcel undevelopable.

NET UNCONSTRAINED BUILDABLE LAND:

Gross Buildable Land (acres) on parcels that has had constraints removed.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

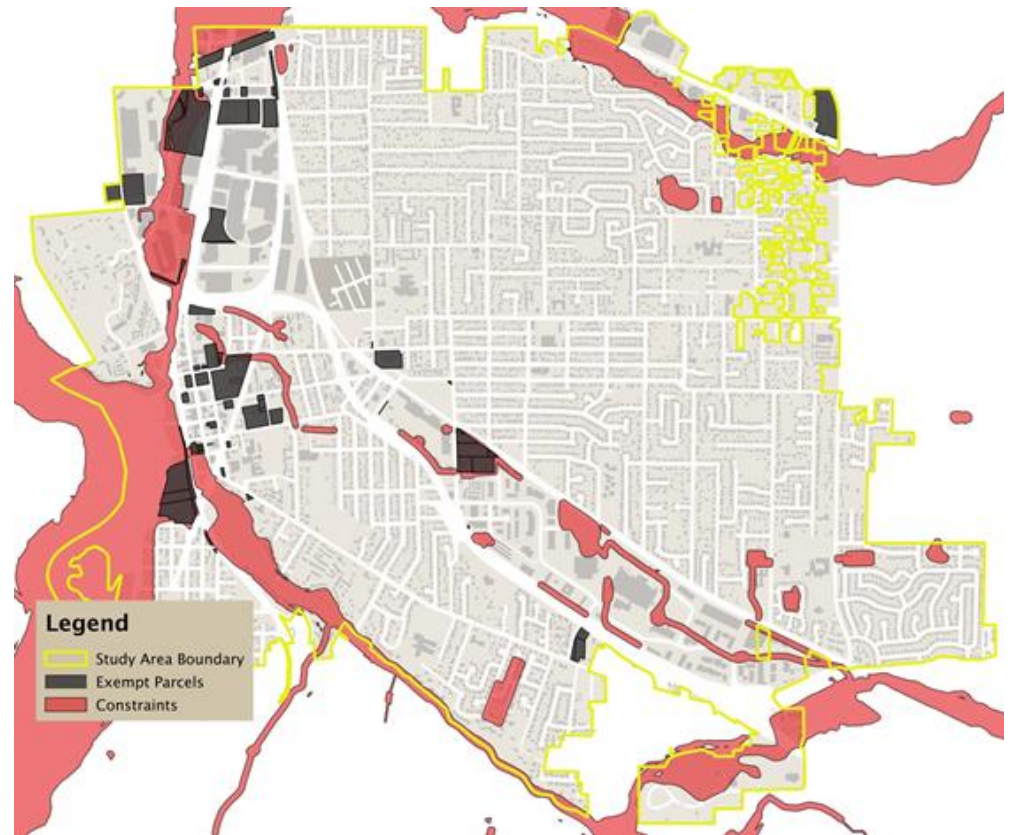
Constraint Assumptions

Parcels with development constraints prohibiting the ability to accommodate employment capacity were adjusted through two filters. First, at the parcel level, parcels were removed based on the following criteria. These parcels are considered “Excluded”.

- *Tax exempt parcels including schools, churches, social organizations and other publicly owned property (excluding the Port of Portland)*
- *Small taxlots (less than 1,000 SF)*
- *Rail properties*
- *Private streets*
- *Parks and open space*

Secondly, land with physical or regulatory constraints limiting the buildability of a site or portion of a site was removed based on the following criteria. This land is considered “Constrained”

- *Floodways (100%), 100-year floodplains, and wetlands*
- *Slopes greater than 7%*
- *Title 3 (Nature in Neighborhoods) and Title 13 (Water Quality and Flood Management) land by Metro RLIS and updated with Milwaukie’s most recent environmental inventory, including the latest SNRO info.*
- *Utility and transportation right of way (ROW)*



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

Comprehensive Plan Designations for Employment Uses—Total Employment Land

The BLI analysis is conducted using Geographic Information Systems (GIS) and utilizes parcel level data in aggregate. The results are aggregated by regional zone classifications from Metro⁷. The BLI of employment land includes the following regional zone classifications:

- *General Commercial (CG)*
- *Neighborhood Commercial (CN)*
- *Industrial Campus (IC)*
- *Heavy Industrial (IH)*
- *Light Industrial (IL)*
- *Mixed Use Commercial & Residential (MUR⁸)*

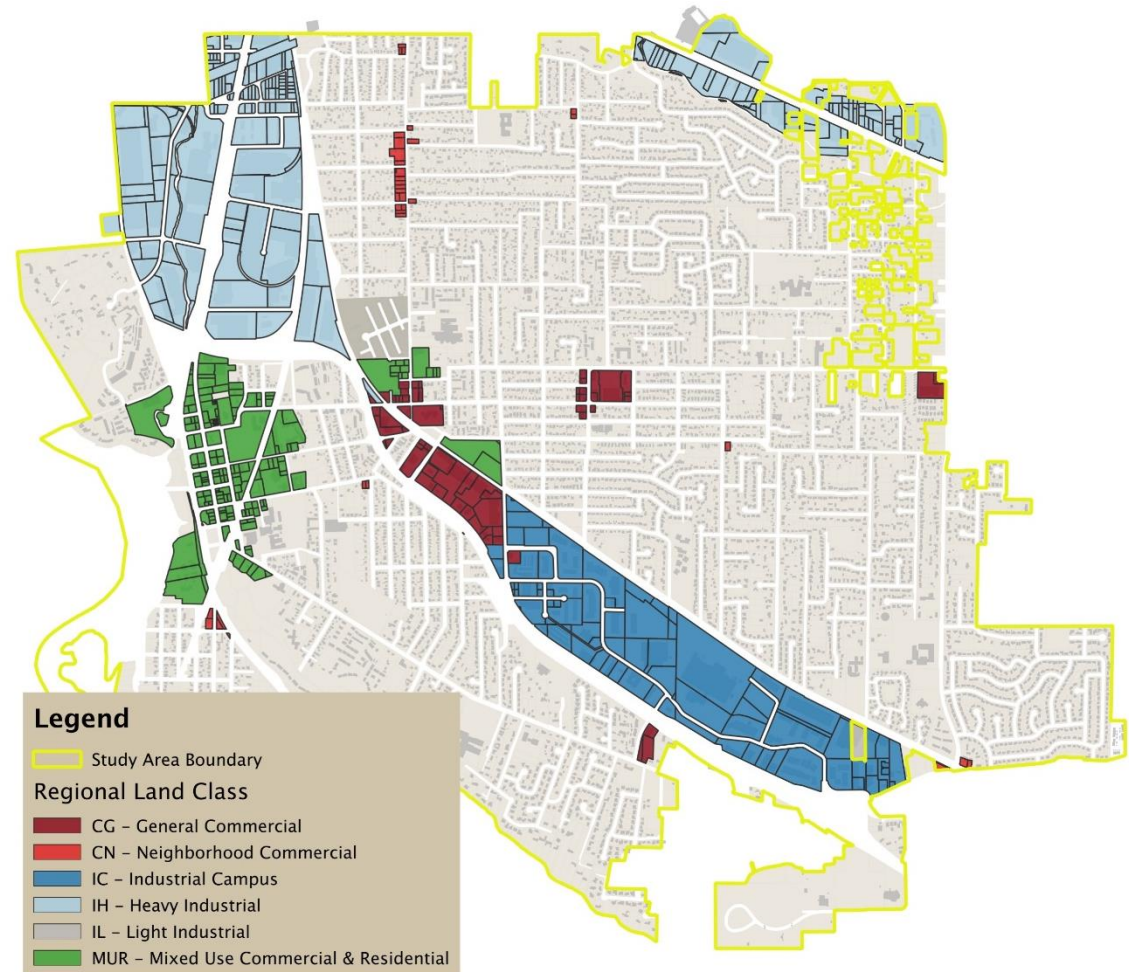
The analysis in this section will report findings across these designations.

Within the study area, Milwaukie has 570 total acres of land in employment designations. Roughly 434 acres of land are industrial, 53 acres are commercial, and 83 acres are mixed-use. Limiting mixed-use to employment uses yields 547 employment acres⁹.

TOTAL EMPLOYMENT ACREAGE BY CURRENT DEVELOPMENT STATUS

Zoning Classification	Total Acres	
(CG) General Commercial	46	
(CN) Neighborhood Commercial	7	
(IC) Industrial Campus	173	
(IH) Heavy Industrial	259	
(IL) Light Industrial	2	
	Total	Employment
(MUR) Mixed-Use Commercial & Residential	83	67
TOTAL OF ALL DESIGNATIONS:	570	547

TOTAL EMPLOYMENT LAND IN STUDY AREA



⁷ Consistent with requirements in OAR 660-009-0015

⁸ MUR designations in Milwaukie include MUR3, MUR7, MUR8, MUR9, and MUR10. They are aggregated in this analysis.

⁹ Consistent with requirements in OAR 660-009-0015

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

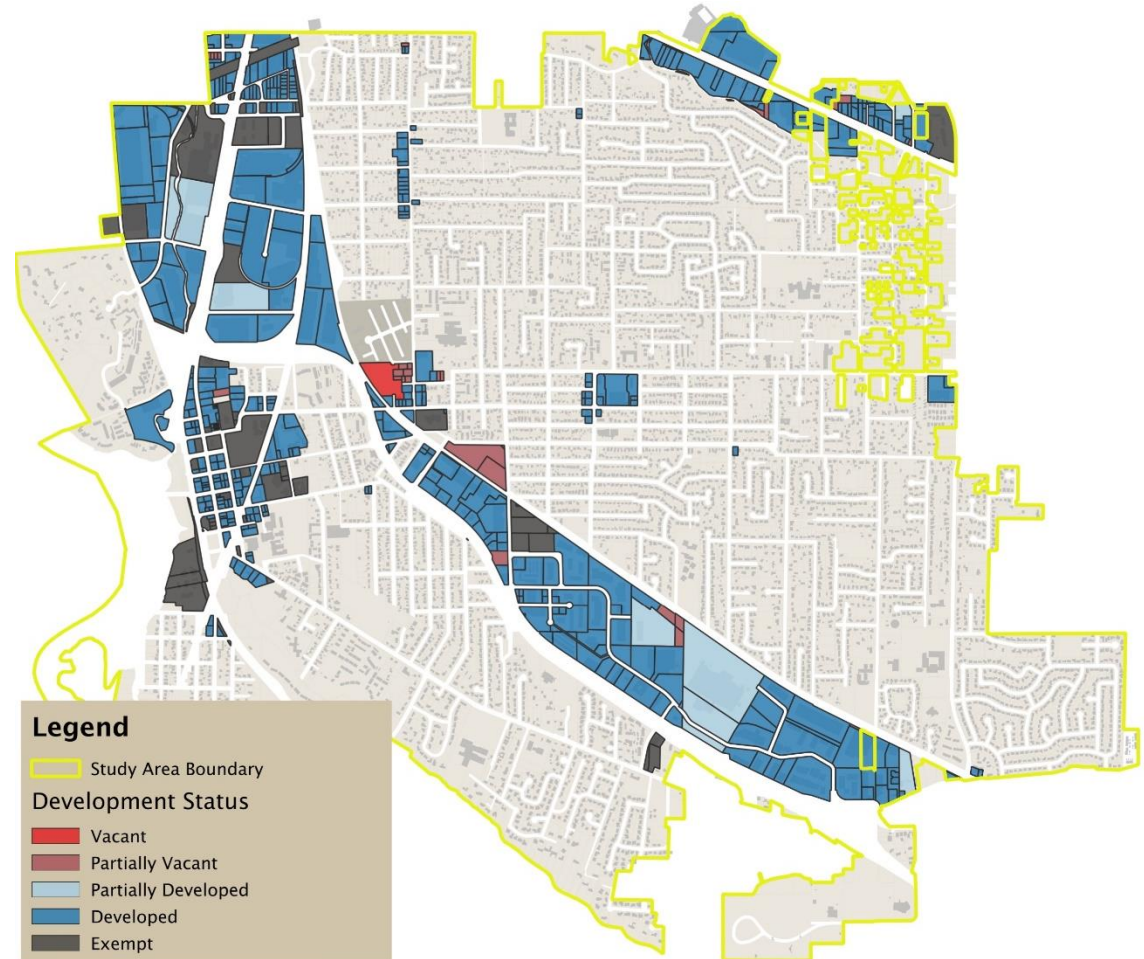
Total Employment Acreage by Current Development Status

Of the 547 acres in employment plan designations (including mixed-use), over 399 gross employment acres are located on “developed” parcels (73%). Remaining lands are classified as either vacant (4.8 acres, 1%) or partially vacant/partially developed (75.8 acres, 14%). Remaining land is “excluded/exempt”.

Partially vacant/partially developed land is not entirely vacant. These lands may have significant existing development, but enough vacant area to potentially accommodate future employment growth on the existing parcel.

Zoning Classification	Developed	Partially Developed	Partially Vacant	Vacant
(CG) General Commercial	41.2	0.0	0.0	0.0
(CN) Neighborhood Commercial	6.3	0.0	0.1	0.0
(IC) Industrial Campus	120.9	40.9	3.3	0.0
(IH) Heavy Industrial	191.1	20.0	2.0	0.0
(IL) Light Industrial	2.3	0.0	0.0	0.0
(MUR) Mixed-Use Commercial & Res.	38.0	0.0	9.5	4.8
TOTAL:	399.8	60.9	14.9	4.8

TOTAL EMPLOYMENT ACRES BY DEVELOPMENT STATUS



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

Redevelopment Methodology

As a part of this analysis, we used the BLI to assess the extent to which properties are plausible candidates for redevelopment. This analysis is based on an assumed threshold strike-price, which is reflective of the market value of the underlying property in a new development scenario. The Real Market Value (RMV) from the assessor’s office is attached to each parcel, and divided by size of the developable property to determine RMV per square foot. This metric is compared to the assumed threshold price for each generalized use category. Properties with RMV/sq. ft. below the threshold value are designated as having redevelopment potential.

We evaluated the redevelopment capacity using multiple strike price assumptions. The baseline strike prices reflect a generalized view of current market conditions. As our analysis indicates a shortage of supply to meet projected demand, we evaluated adjusted strike prices for selected zoning classifications with a likely upward shift in pricing over time. While the adjusted numbers are speculative, they help to assess the marginal impact of an expected shifting price environment over time. In general, land values are highly sensitive to shifts in achievable pricing, assuming other factors such as construction costs stay relatively constant. Higher supportable land values increase the likelihood of redevelopment.

Threshold rates used in this analysis are highly generalized, but allow for the identification of parcels that have the potential to redevelop with a higher intensity use. Identification of a parcel as having redevelopment potential indicates a higher likelihood of redevelopment, and the potential to provide additional capacity to meet future need. In this analysis, we further added a qualitative clarifier to indicate parcels with a “higher likelihood” of redevelopment. Such parcels were identified as having a RMV/sq. ft. greater than 20% below the assumed threshold.

Threshold Assumptions:

Generalized Use Code	Minimum Size	Strike Price/SF	
		Baseline	Adjusted
Industrial	1.0 acre	\$5	
<i>M</i>			\$8
<i>M/TSA</i>			\$8
Campus Industrial	1.0 acre	\$7	
<i>BI</i>			\$10
Commercial	0.25 acres	\$12	
<i>C-CS</i>			\$15
<i>C-G</i>			\$15
<i>C-L</i>			\$15
<i>C-N</i>			\$15
Commercial (corridors/town centers)	0.25 acres	\$15	\$15
Mixed-Use	0.25 acres	\$12	
<i>DMU</i>			\$20
<i>GMU</i>			\$20
<i>NMU</i>			\$18

Data Limitation—Assessor’s Real Market Value:

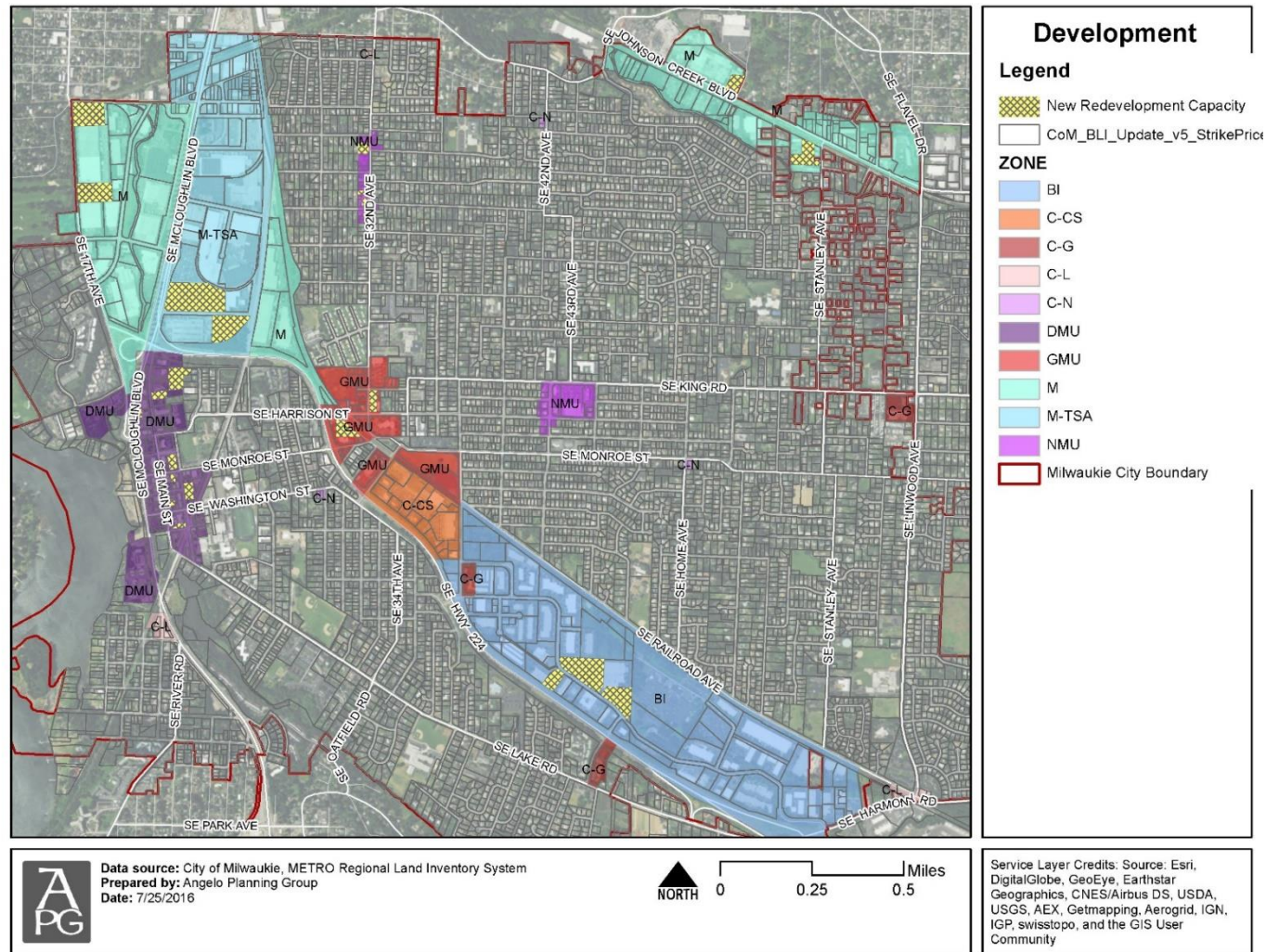
Real market values utilized in this analysis to determine underlying property values are provided by the Assessor’s office. This is the most reliable source for area wide analysis. However, in past works we have observed a high degree of volatility between reported RMV and the value that land is transacting at in the market. Also, technical issues arise when a single improvement exists across multiple tax lots—where a disproportionate share of the improvement is allocated to a particular parcel, making it “seem” more or less redevelopable than it actually is.

While this approach is consistent with best practices and generally accurate, at the parcel level it may yield counterintuitive results. Future iterations of this inventory may “override” clearly anomalous classifications.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

The marginal shift assumed strike prices categorized several new sites as potentially redevelopable. As shown in the map below, new sites were identified in each of the major employment concentrations within the City of Milwaukie.



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

BUILDABLE LAND INVENTORY

FINAL BUILDABLE LAND ESTIMATES

Across all land classifications, we find roughly 32.3 acres of net-unconstrained buildable acres of employment land in the City of Milwaukie. Under the baseline assumptions, an additional 11.3 acres of employment land is defined as “potentially redevelopable property”. When the adjusted strike prices are used, the overall inventory of potentially redevelopable land increases to 42.4 acres within the City of Milwaukie. The overall inventory of land to meet employment requirements within the City of Milwaukie is estimated at 43.6 acres under the baseline assumptions, increasing to 74.7 acres with higher strike prices.

When the study area is expanded to include the broader UGMA, the total capacity is 103.2 to 134.2 acres, of which between 60% and 77% is vacant. The inventory includes very little commercial property, and is largely concentrated in industrial and mixed use designations.

A map of properties in the study area identified as vacant and redevelopable are on the following pages.

Zoning Classification	Baseline			Adjusted		
	Vacant	Redev.	Total	Vacant	Redev.	Total
CITY OF MILWAUKIE						
COMMERCIAL						
C-CS	0.5	0.0	0.5	0.5	0.0	0.5
C-L	0.0	0.1	0.1	0.0	0.1	0.1
INDUSTRIAL						
BI	10.2	8.8	19.0	10.2	17.1	27.3
M	3.6	1.4	5.0	3.6	10.6	14.2
M-TSA	7.5	1.0	8.5	7.5	11.2	18.7
MIXED-USE						
DMU	1.8	0.0	1.8	1.8	1.8	3.6
GMU	7.5	0.0	7.5	7.5	1.0	8.5
NMU	0.9	0.0	0.9	0.9	0.6	1.5
R-1-B	0.3	0.0	0.3	0.3	0.0	0.3
TOTAL CITY	32.3	11.3	43.6	32.3	42.4	74.7
Commercial	0.5	0.1	0.6	0.5	0.1	0.6
Industrial	21.3	11.2	32.5	21.3	38.9	60.2
Mixed-Use	10.5	0.0	10.5	10.5	3.4	13.9
CLACKAMAS COUNTY						
COMMERCIAL						
C2	0.2	0.4	0.6	0.2	0.4	0.6
C3	0.0	2.9	2.9	0.0	2.9	2.9
INDUSTRIAL						
GI	12.5	4.0	16.5	12.5	4.0	16.5
LI	0.4	4.5	4.9	0.4	4.5	4.9
MIXED-USE						
CC	15.6	0.0	15.6	15.6	0.0	15.6
OC	2.3	0.0	2.3	2.3	0.0	2.3
PMU2	0.5	0.0	0.5	0.5	0.0	0.5
RCC	2.5	0.0	2.5	2.5	0.0	2.5
RTL	2.7	0.0	2.7	2.7	0.0	2.7
SCMU	10.8	0.0	10.8	10.8	0.0	10.8
TOTAL UGMA	79.8	23.4	103.2	79.8	54.4	134.2
Commercial	0.7	3.4	4.1	0.7	3.4	4.1
Industrial	34.2	19.8	54.0	34.2	47.4	81.6
Mixed-Use	44.9	0.2	45.1	44.9	3.6	48.5

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECONCILIATION OF PROJECTED NEED AND CAPACITY

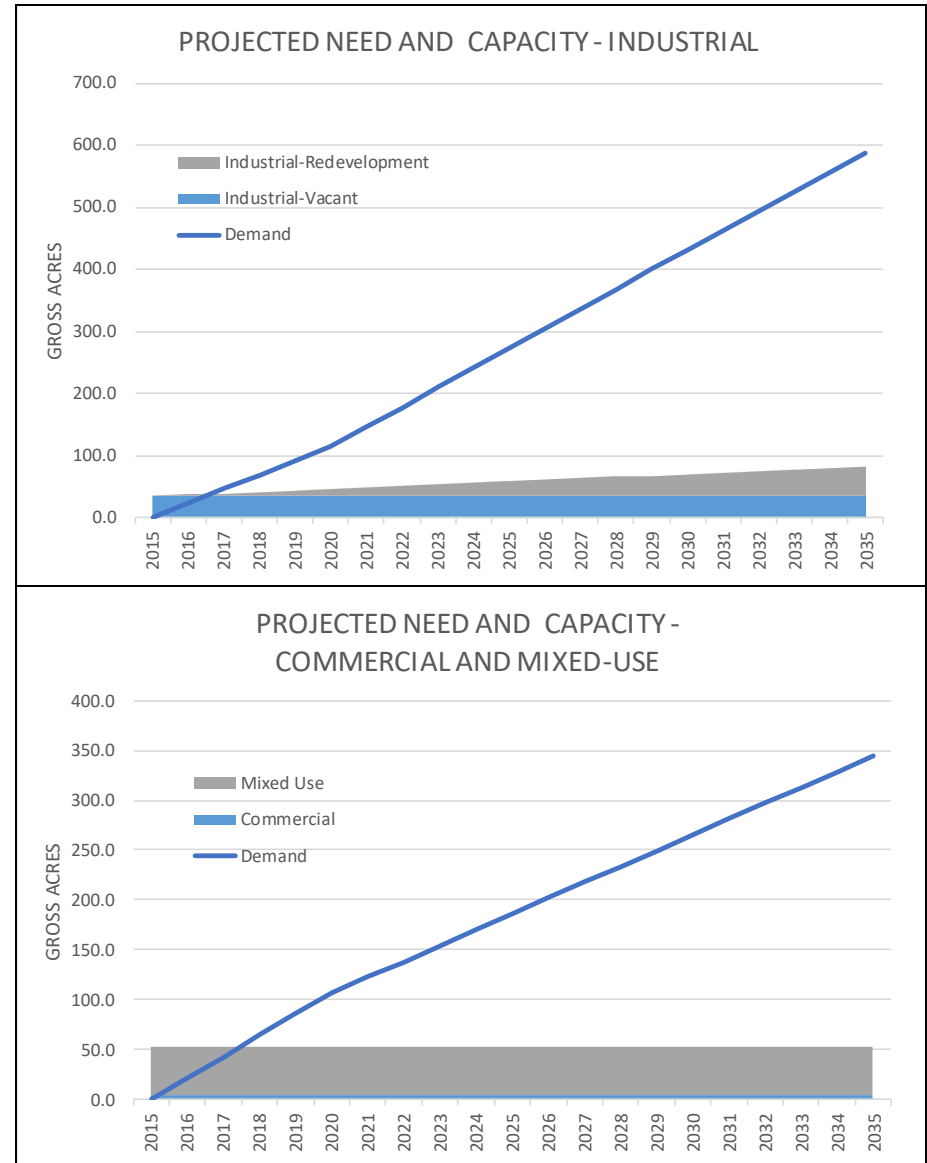
VII. RECONCILIATION

The last step of the analysis is to compare the long-term demand for industrial and commercial land from the land need forecast with the existing supply of industrial and commercial acreage as identified through the Buildable Lands Inventory (BLI). The purpose of the reconciliation is to assess whether the City of Milwaukie has an adequate supply of suitable employment land to satisfy economic expansion demands over the short-term (5 years) and long-term (20-years). The reconciliation serves as a basis to determine whether employment forecasts can be accommodated, and to develop policy measures that increase the available employment land supply and/or intensity of marginal development.

In this section we compared the existing supply of buildable industrial and commercial acreage over the planning period for the assumed growth scenario. **It is important to remember that the different categories of employment land are not (necessarily) substitutable.** For instance, a shortage of 10 acres of commercial land, and a surplus of 10 acres of industrial land do not cancel each other. In addition, employment land is not fungible in terms of size and attributes. The demand for sites is from firms, each of which have space needs and site requirements. While the results of this type of analysis are often presented in terms of aggregate demand and supply, this approach understates the actual need.

For the purposes of this analysis, we use the Safe Harbor scenario for our employment forecast. These forecasts reflect historic and recent trends, and are most consistent with previously used forecasts as well as Metro’s current urban growth report.

Under the assumed employment growth scenario, capacity within the UGMA is insufficient to accommodate the projected aggregate twenty



CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECONCILIATION OF PROJECTED NEED AND CAPACITY

year needs for both commercial and industrial uses. In addition, the current capacity is insufficient to meet the short-term (5-year) requirements for either major category.

The preceding charts assume that all vacant property is available, and that redevelopment capacity will be realized over the planning horizon. Redevelopment capacity is often not counted when determining short-term needs, as this property is often difficult to develop and not readily available.

For all major land uses categories, extensive redevelopment assumptions are required to expand capacity. Redevelopment is difficult to project, and subject to a number of variables, including owner disposition, lease restrictions, and market factors.

Employment Land Need Conclusion

The reconciliation of projected employment needs and available capacity results in a projected shortage of a total of 507 acres of industrial land, 292 acres of commercial and mixed-use property by 2035. This indicated shortage is likely understated, as the aggregate capacity will be an imperfect match to the profile of projected demand. In other words, the full capacity will be realized only if the profile of that capacity is equal to demand. Current capacity within the City is heavily weighted towards redevelopment and/or intensification of uses. While this represents a significant asset in terms of capacity, its availability to the market is inherently difficult to forecast.

The findings of need do not reflect any allocation of capacity met through the intensification of use within existing properties. As demand exceeds supply, we would expect that prices will rise in real terms (adjusted for inflation), which provides economic incentive for a greater intensification of uses; in most cases, greater employment density. In addition, marginal

trends in space utilization have shown a general movement towards higher employee per square foot ratios.

The conclusions reflect a 36% expansion of employment in the City of Milwaukie, with only 13% of the City's employment lands vacant or potentially redevelopable.

VIII. RECOMMENDATIONS

The preceding analysis has several key conclusions with respect to the projected need for employment land in the City of Milwaukie’s UGMA as well as its capacity to meet that need.

The City’s primary challenge in attracting and retaining new growth is a limited inventory of vacant and developable sites. There are virtually no vacant sites or greenfield opportunities within the study area. As a result, realizing the demand projections will require significant intensification of developed employment areas, as well as extensive redevelopment.

The City of Milwaukie and the broader UGMA is projected to be supply constrained over the next twenty years, as the projected demand for employment land and capacity exceeds the available inventory. Many of the jurisdictions’ major employment concentrations have been developed for decades, often at relatively low intensities. While the use pattern does not represent the current highest and best use development forms, the considerable value of existing improvements make redevelopment difficult to achieve.

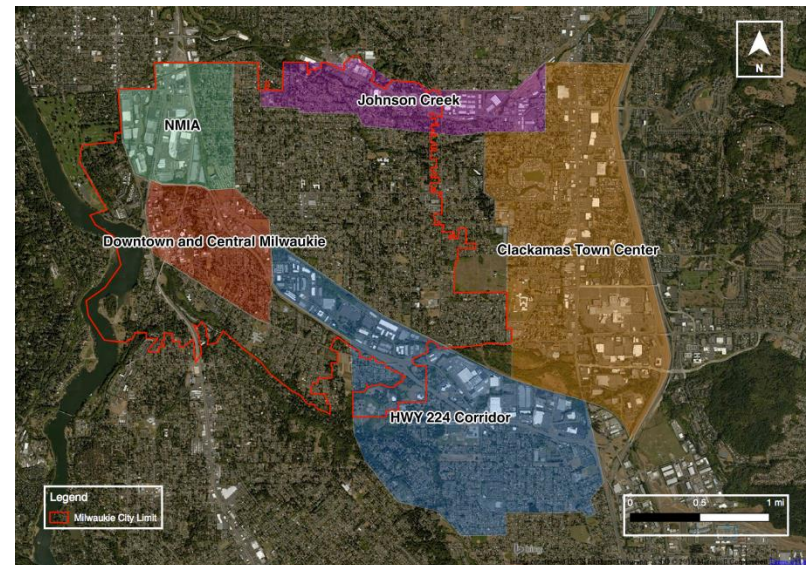
The City’s extensive inventory of built space does offer a marketing advantage for firms that are price sensitive in terms of space, as this space can be made available at rates well below what would be necessary to support new construction.

The City’s policies should actively encourage redevelopment and/or reinvestment in established business and industrial parks, with an objective of intensifying the usage of these economic resources over time. This may include active intervention to encourage new development for targeted industries and/or in desired development forms.

Employment concentrations within the City have distinct attributes, and the appropriate strategic approach will vary by district. We have defined five districts with the City and UGMA.

- North Milwaukie Industrial Area (NMIA)
- Johnson Creek Boulevard
- Highway 224 Corridor
- Central Milwaukie (Downtown)
- Clackamas Regional Center

The following map outlines the geographic scope of these districts.



One of the city’s strengths in terms of economic development is the unique nature of these districts, and the range of location options they offer. Each district is summarized in the following sections, followed by general as well as district-specific recommendations

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

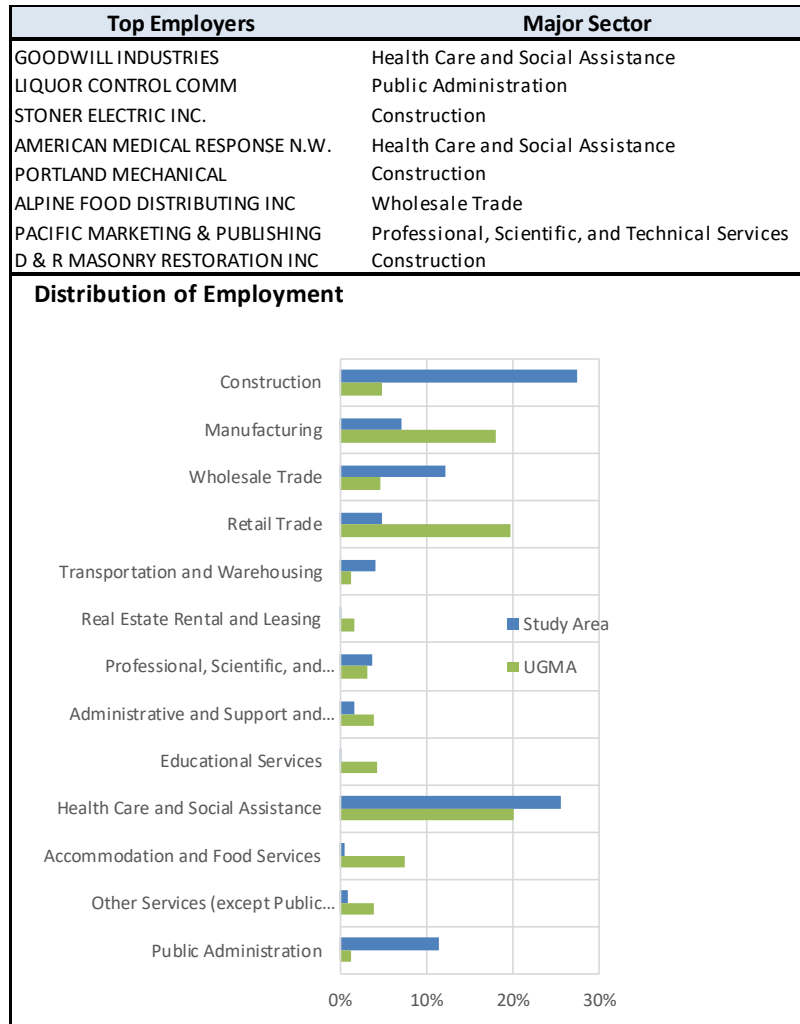
RECOMMENDATIONS

NORTH MILWAUKIE INDUSTRIAL AREA

The North Milwaukie Industrial Area is expected to see the greatest level of market pressure for redevelopment. The area is immediately south of the Max Orange Line’s SE Tacoma/Johnson Creek station, which provides outstanding transit links. The existing building stock is dated, with a combination of distribution buildings, obsolete retail structures, yard space, and limited office developments. The area houses a diverse mix of businesses, including major employers such as Goodwill Industries, the Oregon Liquor Control Commission and Stoner Electric.

The area accounts for 6% of employment within the UGMA, with 49% of public administration, 31% of construction, 17% of transportation & warehousing, and 15% of wholesale trade. While no longer a strong site for regional distribution, the area remains a local distribution hub.

STRENGTHS	
▪	Diverse mix of affordable space, with some large spaces
▪	Good local access via Highway 99E and Highway 224
▪	Excellent transit access
▪	Visibility from Highway 99E
▪	Opportunity sites (ODOT)
▪	EB-5 Targeted Employment Area, Enterprise Zone, NMTC Eligible
WEAKNESSES	
▪	Freight movement conflicts
▪	Parking limited for flex buildings
▪	Obsolete and aging structures
OPPORTUNITIES	
▪	High potential for redevelopment, with physical improvements depreciated
▪	Potential for mixed-use that leverages transit investment
▪	Appeal to businesses displaced from Central Eastside
▪	Makers market users, models such as NW Flex Space
THREATS	
▪	Displacement of current businesses
▪	Potential for increase in conflict with greater intensity
▪	Loss of competitive price advantage



SOURCE: QCEW Data and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECOMMENDATIONS

JOHNSON CREEK BOULEVARD

The Johnson Creek Boulevard corridor houses a range of businesses, which are largely industrial in nature. The area lacks in accessibility to the west for truck traffic, but has a full interchange with I-205 to the east. Major employers in the area include Precision Castparts, Dennis’ Seven Dees, and Cross Point NW.

The area is a major manufacturing center, accounting for 17% of the manufacturing and construction employment in the UGMA. The area offers relatively cheap space as well as lower land values for yard space, making it highly attractive for construction and manufacturing firms.

STRENGTHS

- Diverse mix of affordable space
- Regional accessibility to the east
- Proximate to workforce
- Springwater Trail access
- Tax advantage vis-à-vis Portland, which is immediately north
- EB-5 Targeted Employment Area, Enterprise Zone

WEAKNESSES

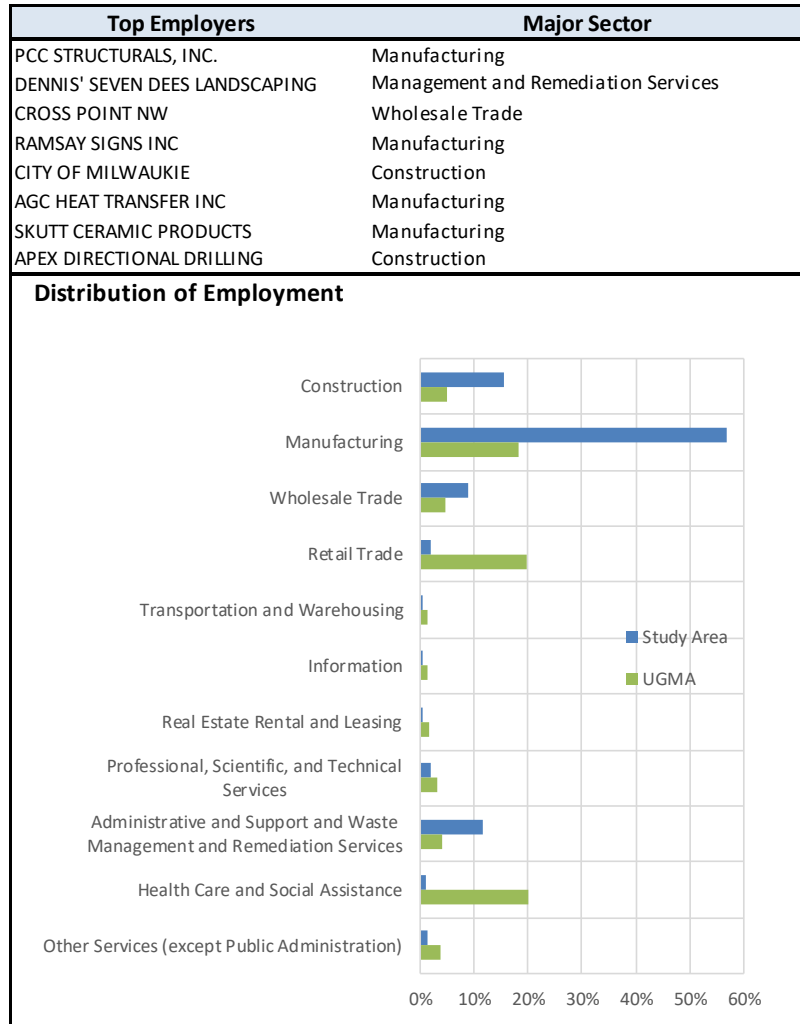
- Difficult access to the west
- Limited capacity on Johnson Creek Boulevard
- Obsolete and aging structures
- Floodplain issues with Johnson Creek

OPPORTUNITIES

- Potential for limited redevelopment, although achievable lease rates are low
- Low cost space option, with an ability to house industries that are less concerned with curb appeal
- Better control of Johnson Creek could increase site utilization

THREATS

- Neighborhood conflicts with industry



SOURCE: QCEW Data and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

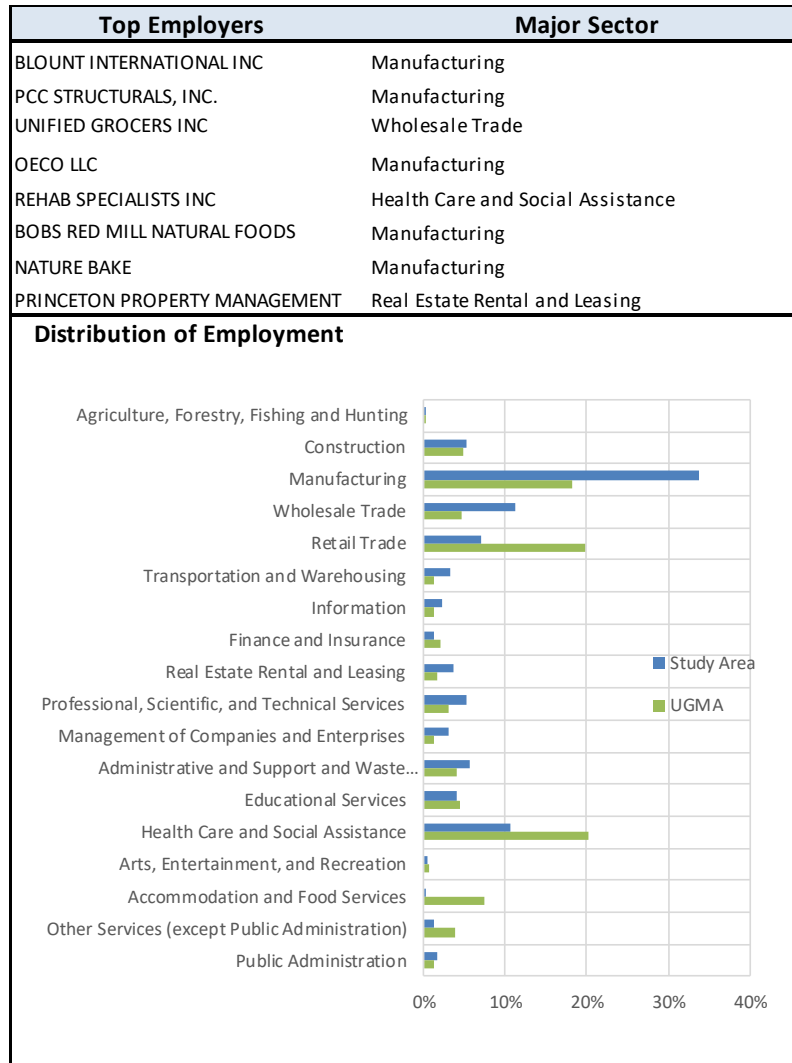
RECOMMENDATIONS

HIGHWAY 224 CORRIDOR

The Highway 224 Corridor represents one of the City’s major employment concentrations, accounting for 26% of all employment in the UGMA. Major employers include Blount International, Unified Grocers and OECO. The employment base is quite diverse, led by manufacturing wholesale trade, and health care. Other areas of concentration include transportation & warehousing, management of companies, real estate, information and professional services.

This area enjoys strong regional access via Highway 224, which links Highway 99E with Interstate 205. As a result, it is the only area outside of downtown Milwaukie and the North Milwaukie Industrial Area that has the potential for Class A office space development. Sites in the area are impacted by a creek running north of Highway 224.

STRENGTHS	
▪	Diverse mix of affordable space, although rent levels are higher in this district
▪	Regional accessibility via Highway 224, I-205 and Highway 99E
▪	Good visibility from Highway 224
▪	Proximate to a large workforce
▪	Home to several major and growing businesses
▪	Tax advantage vis-à-vis Portland
▪	EB-5 Targeted Employment Area, Enterprise Zone
WEAKNESSES	
▪	Transit access within area is limited
▪	As use patterns change in flex space, parking is inadequate
▪	Floodplain issues
▪	Limited room for expansion of existing businesses
OPPORTUNITIES	
▪	Intensification of uses likely over time
▪	Potential capacity in surface parking with active management
▪	Suburban Class A office locations fronting Highway 224
THREATS	
▪	Parking limitations will conflict with intensification trend



SOURCE: QCEW Data and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECOMMENDATIONS

CENTRAL MILWAUKIE

Downtown Milwaukie is the historic core of the City, while Central Milwaukie is the commercial services hub. It accounts for 6% of the employment base in the UGMA, with a concentration in food services, educational services information, and management of companies. Milwaukie’s downtown core has the potential to both accommodate a significant amount of incremental employment, as well as to serve as an amenity that will increase the attractiveness of the City for employers and residents. The City has done extensive planning on downtown opportunities and in central Milwaukie, and should continue to pursue development in the district that increases the marketability of the community. In the short-term, while mixed-use is encouraged, this may be weighted more towards residential development, which capitalizes on the recent completion of the Orange Line. The addition of more residents will support greater levels of urban amenities such as restaurants and retail, which in turn increases the attractiveness of the area for businesses.

STRENGTHS

- Existing buildings provide for affordable space
- Regional accessibility via Highway 224 and Highway 99E
- Orange Line light rail stop
- Good visibility from Highway 99E
- Several opportunity sites in downtown
- Two major redevelopment sites (Murphy and McFarland) in central
- Farmer’s Market, First Friday
- Riverfront Park
- EB-5 Targeted Employment Area, NMTC Eligible

WEAKNESSES

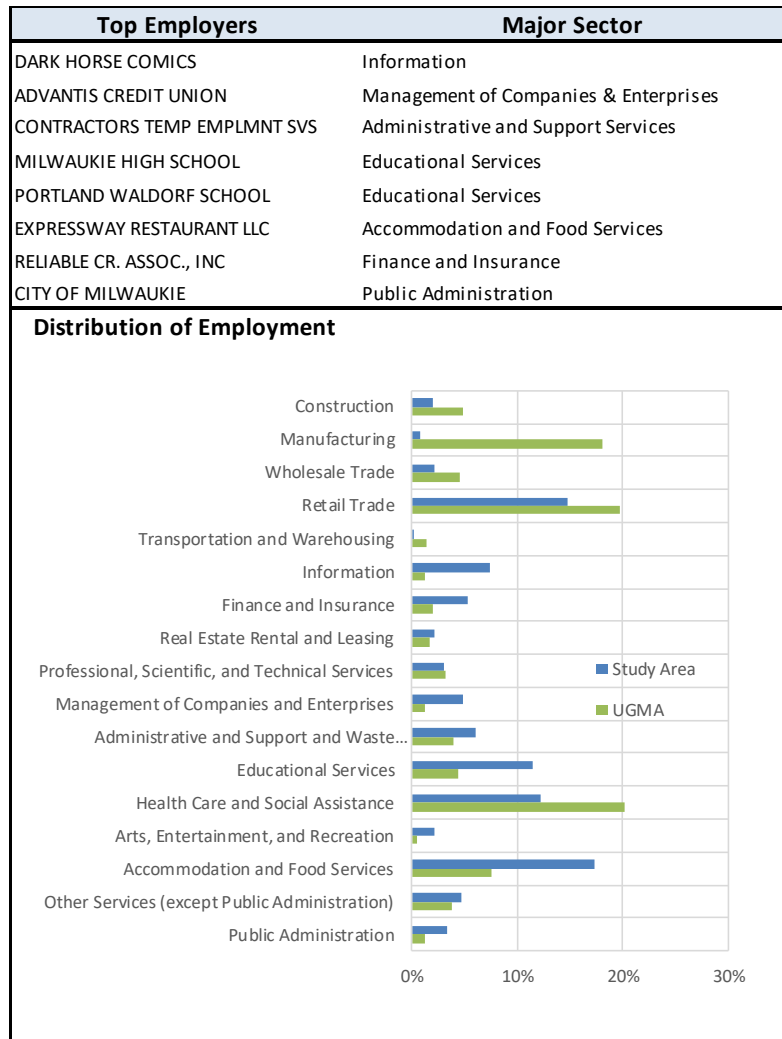
- Truck access to businesses
- Kellogg Creek Plant

OPPORTUNITIES

- Increase residential density in area with mixed-use development
- Need parking management in downtown
- Many redevelopment sites
- New urban renewal area
- Expanded enterprise zone

THREATS

- Code doesn’t work well mixing retail and manufacturing
- Limited parking may limit growth potential



SOURCE: QCEW Data and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

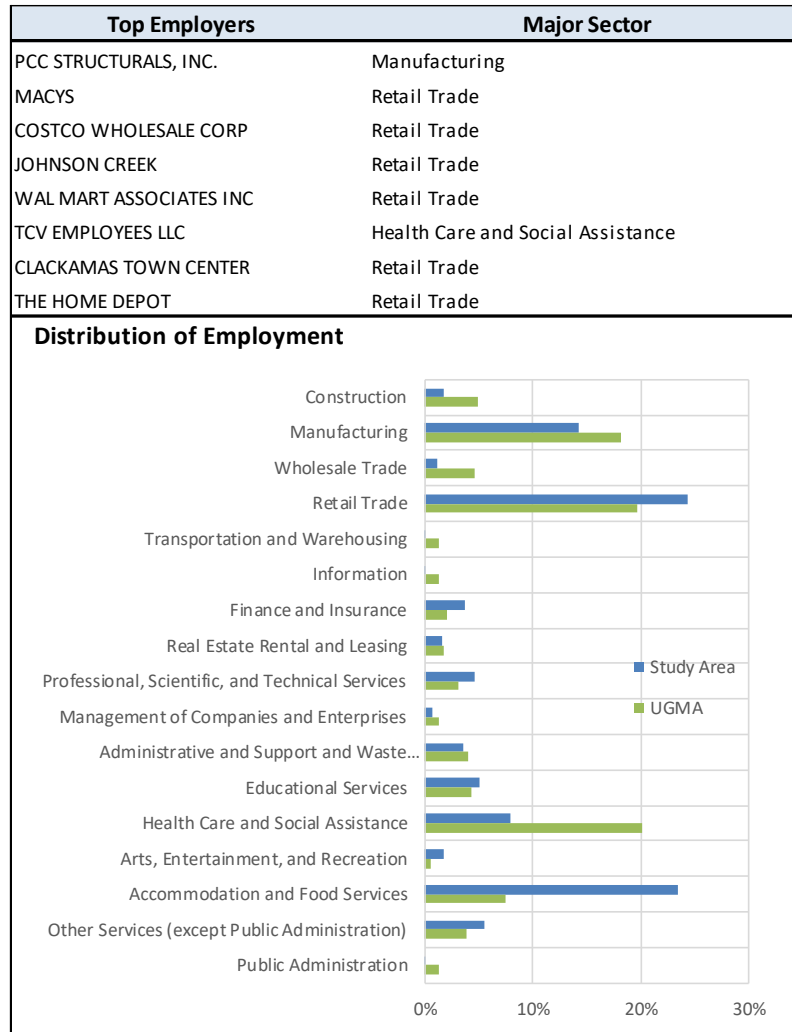
RECOMMENDATIONS

CLACKAMAS REGIONAL CENTER

The Clackamas Regional Center area is within the UGMA, but currently not within the City of Milwaukie. The area accounts for 20% of employment within the UGMA, with retail trade, accommodation and food service, and manufacturing the largest major employment sectors. Employment is concentrated along 82nd Avenue and Sunnyside Road, two major commercial service corridors. The area includes Clackamas Town Center and the Clackamas Promenade, two major regional retail center.

While located outside of the City, Clackamas Regional Center serves many of the retail needs of residents.

STRENGTHS	
▪	Regional auto and truck access, via I-205, Highway 224, Sunnyside Road and SE 82nd
▪	Light rail access
▪	Established regional retail hub, as well as Class A office concentration
WEAKNESSES	
▪	Congestion
▪	Relatively high land prices for prime sites
OPPORTUNITIES	
▪	Greater level of vacant land and redevelopable sites
▪	Access to high income areas to east



SOURCE: QCEW Data and Johnson Economics

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECOMMENDATIONS

SPECIFIC RECOMMENDATIONS

The City of Milwaukie’s strengths include a close-in location as one of the Portland metropolitan area’s first tier suburbs, strong local and regional access, public transit linkages, and an exceptionally strong existing local employment base. The City’s primary challenge in attracting and retaining new growth is a limited inventory of vacant and developable sites. The City’s extensive inventory of built space does offer a marketing advantage for firms that are price sensitive in terms of space.

The City has significant strength and potential for growth in several key industries. Identified target industry clusters are as follows:

- ***Food Processing and Storage***
- ***Metals, Machinery, & Transportation Equipment***
- ***Health Services and Continuing Care***
- ***Warehouse & Distribution***
- ***Business, Professional and Information Services***
- ***Maker Manufacturing & Amenity Retail/Hospitality***

Each of these businesses has a current presence in the local economy, demonstrating the local economy’s ability to attract and support these business types.

Over the next twenty years, employment in the urban services boundary is expected to grow at an average annual rate of between 1.5% and 1.9%, reflecting a net increase of 16,500 to 22,600 jobs. Employment within the current City boundaries is expected to grow from between 6,100 to 7,750 during that period.

The projected employment growth is expected to require a range of space types, including office, retail, and industrial space. This is expected to

require between 588 and 605 acres of industrial land, and between 1,003 and 1,177 acres of employment land overall to accommodate this growth.

**PROJECTED LAND DEMAND BY SPACE TYPE
CITY OF MILWAUKIE, 2015-2035**

Use Type	Safe Harbor Forecast		Alternative Forecast	
	5-year	20-year	5-year	20-year
Commercial Land	59	172	102	253
Industrial Land	115	588	128	605
Mixed-Use	48	172	78	227
Residential Land	19	70	31	93
TOTAL ACRES	240	1,003	339	1,177

Vacant and developable acreage within the city and UGMA is insufficient to accommodate this projected growth. The City’s ability to accommodate employment needs will be heavily reliant upon the redevelopment of properties, which is a focus of our strategic recommendations. The City’s policies should actively encourage redevelopment and/or reinvestment in established business and industrial parks, with an objective of intensifying the usage of these economic resources over time. This may include active intervention to encourage new development for targeted industries and/or in desired development forms.

The following table outlines recommended goals and policies to maximize the City’s limited employment capacity.

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECOMMENDATIONS

SUMMARY OF RECOMMENDED GOALS AND POLICIES

Goal and Associated Policies	North Milwaukie Industrial Area	Johnson Creek Boulevard	Highway 224 Corridor	Central Milwaukie
Provide an Adequate Supply of Sites and/or Space to Accommodate Projected Employment Needs				
Evaluate current zoning and entitlements, to ensure that they are supportive of desired development outcomes	★	★	★	★
Pursue the development of higher-intensity use of employment land in areas with planned or existing enhanced transportation connectivity, access to transit, and utility infrastructure.	★			★
Support additional investment in existing employment areas, including programs supporting adaptive reuse.	★	★	★	★
Utilize financing tools to promote employment capacity, such as tax incentives, tax increment financing, and available state and federal programs or grants	★	★	★	★
Actively work with property owners and their representatives to ensure that development and redevelopment sites are known, and matched with available resources	★	★	★	★
Encourage mixed-use development forms where appropriate to increase intensity of development	★			★
Evaluate parking management programs to potentially free up developable property	★		★	★
Evaluate wetland mitigation to increase developable land inventory		★	★	

CITY OF MILWAUKIE: ECONOMIC OPPORTUNITIES ANALYSIS

RECOMMENDATIONS

SUMMARY OF RECOMMENDED GOALS AND POLICIES

Goal and Associated Policies	North Milwaukie Industrial Area	Johnson Creek Boulevard	Highway 224 Corridor	Central Milwaukie
Maintain a Business Environment Supportive of Retaining and Attracting Targeted Employment				
Maintain and periodically update a list of targeted industries, with an emphasis on key traded sector industries providing relatively high wages	★	★	★	★
Implement an outreach strategy to determine how the City can assist existing businesses	★	★	★	★
Continue to improve development review processes and regulations to provide a review system that is timely, nimble and predictable	★	★	★	★
Encourage collaboration between local K-12 schools, vocational schools, colleges, and employers to facilitate access to career development, workforce programs, and other educational opportunities	★	★	★	★
Leverage program and resource partnerships with local, regional, and statewide stakeholders, including governments, economic development and business organizations, and major employers to attract and retain employment and investment.	★	★	★	★
Encourage the maintenance and development of workforce housing within the City of Milwaukie	★	★	★	★
Facilitate the development of a marketing plan to attract businesses within the identified target industry business sectors	★	★	★	★
Partner with business owners and property owners to support ongoing development of Downtown				★
Encourage self-help methods and programs for business districts, such as support for and formation of business associations and self assessment districts for economic improvement	★	★	★	★
Provide Infrastructure Needed to Support Economic Development				
Maintain and expand high-quality public facilities and services to serve existing and future employment	★	★	★	★
Actively seek to maintain to the extent practical rail infrastructure serving industrial areas, such as rail spurs	★			
Develop safe, well-connected, and efficient transportation facilities that improve access to employment areas while facilitating freight movement requirements	★	★	★	★