CITY OF BEAVERTON

ADDENDUM #3

Western Avenue Employment
Area Master Plan
Solicitation #: 3070-16

DATE: February 26, 2016

TO: All Interested Persons

FROM: Terry L. Muralt, CPPB, Purchasing Agent

The following additions, deletions, corrections and/or clarifications are made to the solicitation documents for this project. Any changes made by this Addendum replace only the portion of the words or paragraphs specifically mentioned herein and the balance of the solicitation document remains the same and in full force. It is the responsibility of the bidders to conform to this Addendum. **All Bidders shall acknowledge receipt of this Addendum on Section 6: Signature Page.** All questions regarding this addendum should be directed to Terry Muralt, Purchasing Agent.

ADDITIONAL INFORMATION:

The City would like to make available 2 additional documents to the Consultants interested in this solicitation. (See attachments)

1. Draft Economic Opportunities Analysis (July 2015)
2. Enterprise Zone 2 Industrial Analysis (2012).

ECONOMIC OPPORTUNITIES ANALYSIS
(OREGON STATEWIDE PLANNING GOAL 9)

July 2015

TABLE OF CONTENTS

I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Beaverton. The report fills the requirements of statewide Planning Goal 9, specifically OAR 660-009, which describes the EOA as:

> *"The economic opportunities analysis must identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends."*

Cities are required to reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within the Urban Growth Boundary. The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. This is intended to be conducted through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into six primary sections:

- **Economic Trends:** Provides an overview of national, state and local economic trends affecting Beaverton, including population projections, employment growth, retail trends and a demographic profile.
- **Target Industries:** Analysis of key industry typologies the City should consider targeted 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 Beaverton's Urban Service Boundary (USB).
- **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

III. EXECUTIVE SUMMARY

The City of Beaverton is a first tier suburb within the Portland-Vancouver metropolitan area. While the City has excellent locational attributes, its land supply has largely been developed in previous business cycles, at densities that reflected market conditions at the time of development. As a result, the City's capacity for future employment growth is largely represented by redevelopment opportunities. This type of development is inherently difficult to achieve, as current improvements typically have significant economic value.

The City of Beaverton has seen strong population growth, although the rate of growth in recent years has been moderated due to supply constraints. The City added 13,674 new residents from 2000 through 2010 (1.7% average annual growth rate, or AAGR), and an additional 3,592 from 2010 through 2014 (1.0% AAGR). Beaverton's population is relatively young and well educated, with an unusually high concentration of residents in the 25 to 34 age cohort. The City also benefits from a strong and market-recognized school district, which increases the area's ability to attract a quality work force.

Performance has varied substantively by industrial sector within the City of Beaverton USB during the recent recession and subsequent recovery period. During the recession, the Manufacturing, Retail, and Construction sectors were hit the hardest, accounting for 55% of net job losses. Health Care and Education were the only two sectors that did not decline during the recession. Across all industries, some have recovered much stronger than others. In addition to Education and Health Care, four other sectors (Professional & Business, Wholesaling, Leisure & Hospitality, and Transportation, Warehousing & Utilities) have recovered fully and have exceeded pre-recession employment levels.

Our analysis included an investigation of how industries are organized with respect to their cross industry linkages. Excluding service industries, we classified all firms with 15 or more employees by their economic function. This covered over three-quarters of all employment in the study area. Industry class was used to aggregate smaller firms. We organized the local economy into six distinct target industry clusters: activewear; media, advertising and film production; software and information technology; high-tech manufacturing; business support and back office operations; and medical device, health care, and biotechnology.

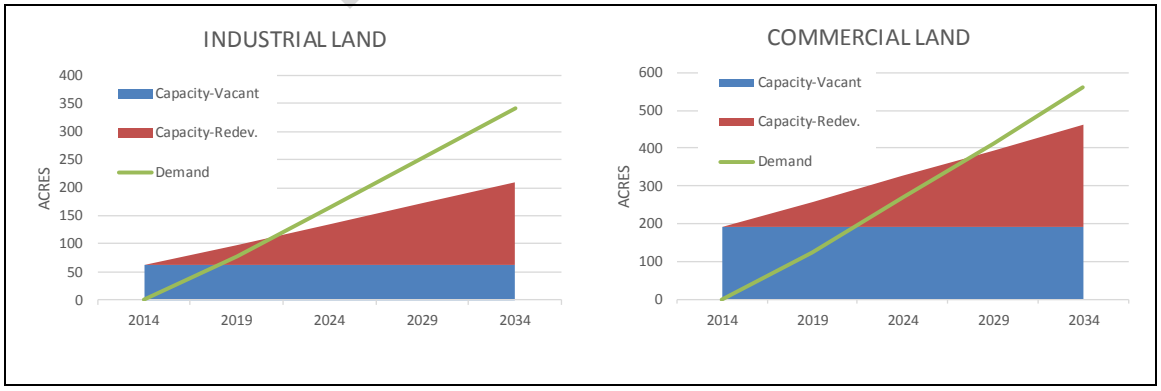
Employment forecasts by industrial sector were converted to projected employment by development typology, converted to square footage of space demand and then translated into associated acreage needs. The resulting forecasted employment land need is for over 900 acres over a twenty year horizon, of which 342 is for industrial uses and 561 for commercial uses.

Category	Five-Year Demand		Twenty-Year Demand	
Building Type	Square Feet	Acres	Square Feet	Acres
Industrial				
Flex	338,087	23.9	1,506,315	106.4
General Manufacturing	355,108	25.1	1,566,181	110.6
Warehouse	403,199	28.5	1,773,318	125.2
Total-Industrial	1,096,393	77.4	4,845,814	342.1
Commercial				
Retail	786,079	53.5	3,513,706	239.0
Office	885,879	50.5	4,029,124	229.8
Institutional	526,493	20.3	2,401,179	92.5
Total- Commercial	2,198,451	124.3	9,944,009	561.2
Overall Total	3,294,845	201.7	14,789,824	903.4

The City of Beaverton's capacity for additional employment growth is affected by a limited supply of vacant property. The remaining capacity is largely associated with likely redevelopment of properties with relatively low current improvement values. These include older structures as well as a significant number of older industrial parks that have the potential to increase their intensity of use over time.

The City's recently completed Buildable Lands Inventory (BLI) shows a total of 392 vacant acres within the City's USB, representing 10.5% of the total inventory of sites zoned for employment uses in the area. The vacant inventory includes a total of 419 parcels with an average size of 0.9 acres. The inventory includes only one vacant parcel greater than 25 acres in size, and one site between 10 and 25 acres in size. The City of Beaverton accounts for 65% of developed acreage, and 58% of vacant acreage within the USB. In terms of vacant land, approximately 11.8% of the land within the USB is undeveloped, compared to 10.6% within the city boundary.

Under the assumed employment growth scenario, the capacity within the USB is insufficient to accommodate the projected aggregate twenty year needs for both commercial and industrial uses. The reconciliation of projected employment needs and available capacity results in a projected shortage of a total of 132 acres of industrial land and 100 acres of commercial property by 2034.



The preceding charts assume that all vacant property is available, and that redevelopment capacity will be consumed over time during the 20-year planning period. As illustrated, the projected capacity shortfall is most pronounced for industrial land, with the current capacity likely to be adequate to meet needs in the

near-term (five-year horizon), but unlikely to meet longer term needs. Commercial capacity can accommodate projected demand for a longer period of time. Redevelopment capacity is not typically counted in determining short-term needs, as existing developed sites are often difficult to develop and not readily available. Taking redevelopment capacity out of the equation results in a short-term supply deficit for industrial land in the USB.

Of the target industries identified, only activewear and apparel and high-tech manufacturing are likely to have highly specific site requirements. For high tech manufacturing, the city's lack of large sites will likely limit potential for this target industry, but even without a major new anchor manufacturer, Beaverton is well positioned to benefit from the expansion of support industries associated with the high tech cluster.

Recommended strategies to foster economic development in the future include support for quality of life issues, as well as more directed economic development actions. It is important to recognize that the community's quality of life is a key economic development advantage, and efforts to retain and improve local attributes are supportive of economic development goals. Strategies to support and accommodate local employment growth include a focus on target industries to maximize efficient utilization of the City's limited capacity over time. While the City has a goal to maintain its current share of regional employment, this will be highly challenging due to the City's capacity constraints.

IV. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local levels that will influence economic conditions in Beaverton over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community. This report's national evaluation has a focus on potential changes in structural socioeconomic conditions both nationally and globally. Our localized analysis considers local growth trends, demographics, and economic performance. The content contained herein is consistent with OAR 660-009-0015(1).

NATIONAL TRENDS

The most commonly used primary metric by which economic prosperity is evaluated is real gross domestic product (GDP) per capita, based on the principle that increased purchasing power of the population translates into greater investment in health care, education, housing, leisure, and many other factors[1]. Interestingly, the U.S. economy has exhibited surprisingly stable real GDP per capita growth with relatively little variability. Spanning over a 100+ year period, only modest and temporary deviations from an average 1.8% growth rate have been exhibited in any given decade[2]. This stability has occurred despite considerable shifts in economic and social conditions—suggesting long-term economic growth has structural underpinnings relating to demographics and investment in physical and human capital (Elwell 2006). In other words, monetary, economic, and fiscal policy may influence growth in relation to potential economic output of a given business cycle, but long-term growth stems out of capital investment, demographic conditions, and global influences.

Considering this preface, this section of our analysis provides a foundation of how these factors can be expected to influence economic conditions on national and local scales during the planning period.

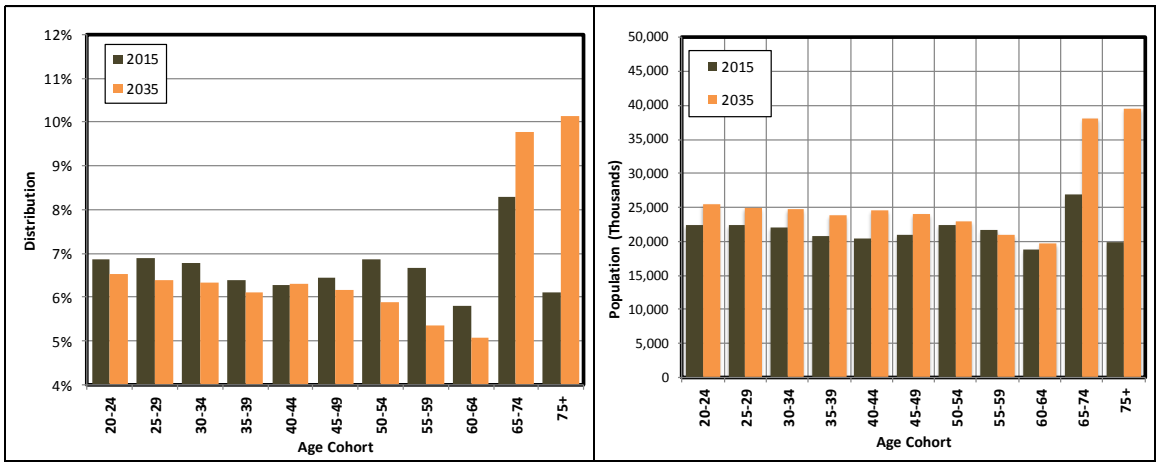
Demographic Factors and Labor Force Participation

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 over will have grown to 21% from 14.5% today. Despite the fact that an increasing number of Boomers expect to work at least part time past age 65, the impact of this demographic shift on the labor force participation rate, and by extension potential output, will be considerable. Such a demographic shift will undoubtedly reduce the size of the workforce considerably over the next 20 years.

1 We acknowledge however that many other factors influence quality of life, such and social and economic equality, crime, environmental factors, etc.

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

FIGURE 4.1: DISTRIBUTION OF THE RESIDENT POPULATION BY AGE, UNITED STATES (2015)



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

Boomers, however, are not the whole story. Labor force participation is also likely to shift within some cohorts. On the positive side, persons aged under 25 years, discouraged in recent years by a dismal labor market, fled to colleges and universities across the country. The enrollment rate for 18-24 year olds increased from 37.3% to 42.0% between 2006 and 2011[3]. They are expected to return with vigor and an enhanced productive capacity from their educational endeavors. However, growth in the labor force participation rate among women in their most productive working years (25-54), a segment that has grown steadily over the last half century, has likely reached its peak. To a lesser degree, labor force growth will also be modestly tempered by changes in people's economic incentives associated with the Affordable Care Act (ACA)[4]. According to the Congressional Budget Office, the ACA will reduce total hours worked by 1.5% to 2.0% through their 2024 estimate.

Over the near-term, an improved economic landscape and positive wage pressure will incentivize a return to the workforce for some workers, narrowing the gap between actual and potential output. However, the aforementioned structural factors will generally limit long-term growth in productive capacity to a rate below that exhibited in previous expansions.

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.

While improved incomes will undoubtedly result in a reduction in poverty in emerging countries accompanied by an increasing global demand for goods and services (some of which are produced in the United States), they will also reduce the competitive labor advantages of those nations. Many who otherwise would choose to immigrate to the U.S. for better opportunities will begin to find those

3 National Center for Education Statistics, Digest of Education Statistics (2013)

4 Congressional Budget Office, The Budget and Economic Outlook: 2014 – 2024 (Feb 2014).

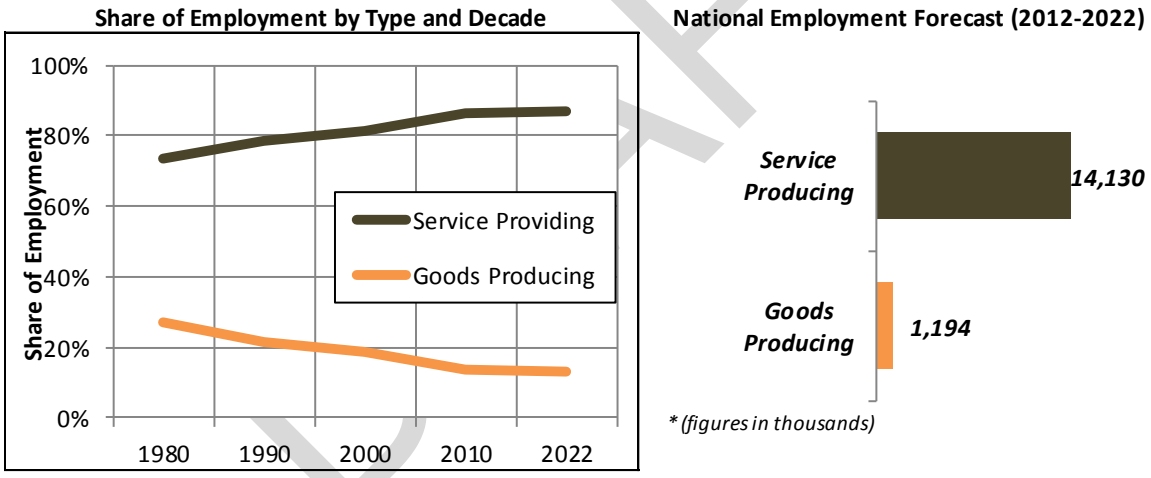
opportunities at home—resulting in lower rates of international migration to the U.S. Over the last 25 years roughly 35% of population growth in the U.S. was derived from international migration[5].

Taken together with domestic demographic trends, the U.S. labor force could be facing the dual impacts of an aging population ***and*** lower migration. One estimate suggests these combined factors could result in a 15% reduction of the domestic labor force by 2060[6]. In this context, future gains in per-capita GDP will be increasingly dependent on gains in productivity, skills, innovation, and technical knowledge. In a way, this shift will favor U.S. economic strengths; provided the United States maintains its competitive advantage in education and innovation.

Shifting Industrial Patterns

The pressure on innovation to drive growth will continue to support the on-going shift in domestic industrial composition. Over the next ten years, service providing industries[7] are expected to account for 92% of non-agricultural wage and salary growth in the United States[8]. This condition will continue the trend of a higher composition of employment in the United States concentrated in service oriented sectors.

FIGURE 4.2: EMPLOYMENT BY TYPE, UNITED STATES



SOURCE: Bureau of Labor Statistics

Reshoring Prospects

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 abroad.

This offshoring trend began to decline over the last decade, with companies facing mounting challenges to their offshore production functions. This has led many economists to speculate on the prospects of a

5 Migration Policy Institute tabulation of data from the United Nations, Department of Economic and Social Affairs (2013).

6 OECD (2014), Shifting Gear: Policy Challenges for the next 50 Years", OECD Economics Department Policy Notes, No. 24 July 2014.

7 The seven service industries are: Professional and Business Services, Education and Health Services, Financial Activities, Trade/Transport/Utilities, Leisure and Hospitality, Financial Activities, Information, and Other Services

8 Bureau of Labor Statistics, Occupational Employment Projections (2012-2022)

pending renaissance of manufacturing activity in America. For example, a recent study by the Massachusetts Institute of Technology found that 33% of surveyed companies were considering moving some production activities back to the U.S.[9]. It is almost certain that some level of reshoring of manufacturing activities is likely to occur over the next few business cycles.

The most commonly cited production challenges are a deterioration of labor cost advantages and increasing times to market. Moreover, many manufacturing processes are exhibiting an increasing reliance on more technically skilled labor—a challenge to foreign production. Other issues such as value chain management, intellectual property rights, and political stability are added concerns (Simchi-Levi 2012).

Domestically, firms looking to reshore are finding labor force availability to be the primary limitation. Further, the regulatory process and costs for getting production facilities up and running are considerably higher. This in particular is a constraint exhibited locally in the context of limited industrial land availability[10].

In the end, reshoring is likely to occur, but will be limited to sectors where it is most advantageous. Firms with low labor force utilization in their production activities that can capitalize on the United States' growing energy advantage will see the biggest shift. Firms with less reliance on foreign demand will also be a factor. Generally, these industries include, (but are not limited to) early value chain products such as metals, glass, chemicals, machinery, plastics, and some technology products.

Global Factors Influencing Growth

In addition to the aforementioned conditions, the following global dynamics are expected to influence economic conditions nationally and locally over the planning period.

- Concurrent with the narrowing of cross-country economic gaps and potential adoption of the Trans-Pacific Partnership, trade linkages between nations are likely to increase, resulting in a rise in global value chain linkages. This will influence global demand for domestic products as well as the balance of trade between the United States and its trading partners.

- Rising global demand is expected to benefit the primary sectors of resource rich countries to the greatest degree. This bodes well for U.S. energy and agricultural markets, provided the U.S. can keep pace with supporting export capacity.

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

Other Factors Influencing Growth

- Increased life expectancy along with demographic shifts will continue to support growth in demand for health care services while placing additional pressure on the transfers of income necessary to support federal obligations for Social Security and Medicare.

9 Simchi-Levi. *Supply Chain Digest*, Massachusetts Institute of Technology 2012.

10 Value of Jobs Coalition, Land Availability Limited Options (2012)

- The impacts of lower international migration could adversely impact innovation in America. Immigrants were twice as likely to start a business compared to domestic residents[11]. This is especially the case in the high-tech sector where 25% of U.S. technology and engineering companies started over the last 20 years had at least one immigrant founder[12].

- Lower domestic energy costs, specifically derived from natural gas, are expected to increase manufacturing competitiveness in some industries. As it exists today, export capacity and Oceanic transport of natural gas is limited, making domestic supply increases largely captive—a condition that is likely to persist for some time given identified reserves. As a result, natural gas is expected to maintain a cost advantage over the planning period. Industries that can capitalize on this shift (and their supply chain derivatives), including power generation, fleet transportation, chemicals, and metals are in the best position to increase cost competitiveness.

- Global Climate Change has the potential to reduce global GDP by as much as 1.5% and almost 6% in Southeast Asia if unmitigated (Elwell 2006).

- The negative impacts of the "Great Recession" will be long lasting on potential output. Over the intermediate-term potential output will grow at a rate below average due to deterioration of skills from the long-term unemployed (those out of work for longer than a year).

OREGON TRENDS

Factors affecting growth in the State of Oregon can be evaluated in the context of broad economic conditions previously discussed. Here, we consider some of these factors, among others. Further, this section draws on some observations explicitly addressed in the Oregon Office of Economic Analysis' (OEA) most recent economic forecasts[13].

Urbanization: Within Oregon, the broader trend of increased urbanization is likely to continue. A larger share of the world's population is living in urban areas and Oregon is no different. The share of Oregon residents living in the Willamette Valley is expected to reach 71% by 2040[14]. While the City of Beaverton has constraints in terms of readily developable residential property, continued pressure from growth is expected to support higher levels of redevelopment and infill over time.

Housing: Oregon should maintain its competitive advantage in housing and cost of living in relation to other west coast markets such as San Francisco and Seattle. While expectations were that housing investment and construction would provide a greater contribution to Oregon's emergence from the Great Recession, the housing market has seen only moderate growth. The sales of existing homes and new construction activity remains well below normal levels, while foreclosures and long-term delinquency rates remain somewhat elevated.

11 Kaufman Index of Entrepreneurial Activity

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

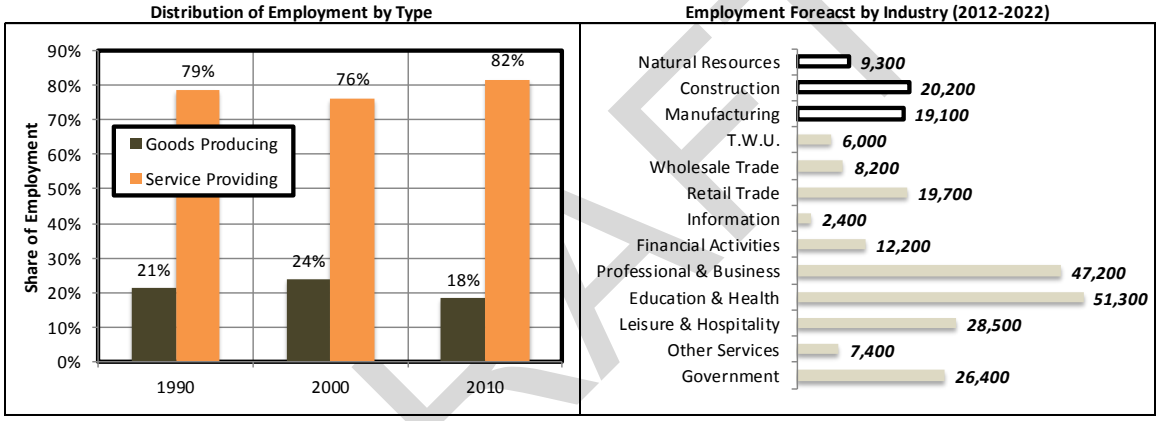
13 Oregon Office of Economic Analysis, "Oregon Economic and Revenue Forecasts (June 2014 and June 2015).

14 Oregon Office of Economic Analysis: Demographic Forecast (2012)

Even as the housing market recovers, new supply entering the market has not kept up with demand and housing affordability is becoming a larger risk to the outlook. Expectations are that new construction will pick up over the next three years, responding to increasing demand, which will alleviate price pressures. However, to the extent that supply does not match demand, home prices and rents increasing significantly faster than income or annual for the typical household is a major concern.

Shifting Industrial Composition: Oregon has experienced a decades-long shift away from natural resource based industries toward more value-added manufacturing activities such as technology, machinery, equipment, and fabricated metals. This trend is expected to continue. More so, Oregon should continue to follow the national trend of growth in service-oriented industries outpacing goods production. The City of Beaverton has been a beneficiary of this trend, as the local economy is strong in many of these sectors.

FIGURE 4.3: 10-YEAR EMPLOYMENT FORECAST BY INDUSTRY SECTOR, STATE OF OREGON (2012-2022)



SOURCE: Oregon Employment Department

Exports: With port capacity and a location along the Pacific Rim, Oregon is well positioned to build global markets and increase exports considerably. Oregon exports are primarily concentrated in computers & electronics, equipment and machinery, and agriculture. China and Canada are Oregon's major trading partners, with Japan, Korea, and Malaysia also accounting for a measurable share. The Portland Metropolitan Area has the highest export intensity in the United States (24.4% of GDP compared to 13.2% nationally). The Portland region has established a strategy to double exports in five years[15]. The City of Beaverton and broader Urban Service Area include major export firms in apparel, information and advanced manufacturing. These sectors are discussed in more detail in the target industries discussion.

FIGURE 4.4: METRO AREA EXPORT VALUE

Country	Export Value (in Millions)
China	$3,381
Canada	$3,142
Malaysia	$1,860
Japan	$1,525
South Korea	$995

Source: U.S. Census Bureau

[15] Brookings Institute. Greater Portland Export Plan (2012)

Green Technology: Among the strategic opportunities Oregon enjoys is leading growth in green energy and technology. The initiative to increase energy efficiency, reduce carbon emissions, and develop alternative means of energy has resulted in increased investment across a range of industries. Oregon has competitive advantage in many of these arenas, including biofuels, wind and wave energy, and solar energy. The extent to which these industries can achieve stabilized competitiveness through scale and/or technological advance will influence local opportunities. Beaverton's strength in advanced manufacturing and high tech are consistent with these types of opportunities.

Other Long-Term Advantages: Oregon holds many other long-term competitive advantages on both a national and global scale, including but not limited to its relatively low electricity costs, strategic economic location on the Pacific Rim and proximity to Vancouver B.C., California, and Asia. Relative to these markets communities in Oregon boast clean water supplies, cost of living advantages, and lower space rents.

Economic Risks

The economic outlook for Oregon is not without risks, particularly over the long-term planning period. Those risks recently identified by the June 2014 OEA forecast include:

Federal Fiscal Policy—On-going effects of the 2013 spending reductions and sequester. Oregon has minimal risk due to low federal presence.

Housing Market Recovery—In the near-term housing is expected to be a catalyst for growth to achieve acceleration out of recent lackluster economic growth. Rising interest rates, stringent credit, and low inventories threaten the breadth of housing investment.

European Debt—While domestic credit markets are easing, problems in the Eurozone persist, with the threat of financial market contagion not fully abated.

Commodity Prices—While trending downward, commodity prices remain high and any demand driven commodity price inflation would threaten global expansion.

Other Global Spillovers—Political stability in the Middle East, Ukraine, and Israel, viral outbreaks or health crises in West Arica, growth in the Chinese economy, and inflation in emerging markets.

Real Wage Growth—Oregon's growth in real wages has been stagnant for over a decade. Flat wages deteriorate relative purchasing power as well as threaten Oregon's ability to attract the strongest workers.

LOCAL TRENDS

Local economic growth over the planning period will be, in part, functionally representative of demographic and economic trends observed locally and in the region. A review of these conditions provides a useful context for establishing a baseline expectation of future growth in Beaverton. In this section we consider

local demographic and workforce conditions, recent business activity, and the overall performance of the economy in recent years.

Population Growth

During the decade from 2000-2010, the City of Beaverton added over 13,600 new residents at a rate of roughly 1.7% per year. This rate was roughly consistent with the county level trend, and considerably higher than state level trends. In the first four years of the ensuing decade, growth across all three geographies has been more moderate, with the rate of growth in Beaverton decreasing most significantly. This can be attributed to several factors, among them the lackluster recovery of the economy and Beaverton's lack of land/lots for housing expansion. In the current market Beaverton has only 339 vacant single-family lots available for development[16]. The City's current Buildable Lands Inventory shows a total capacity of 950 additional single family units on vacant property, of which 611 are located in the South Cooper Mountain planning area. An additional capacity of 1,258 units is expected on infill/developed land.

FIGURE 4.5: RECENT POPULATION GROWTH TRENDS, OREGON, WASHINGTON COUNTY, AND BEAVERTON

	Census		'00-10		Est.	'10-'14	
	2000	2010	Growth	AAGR	2014	Growth	AAGR
Oregon	3,421,399	3,831,074	409,675	1.1%	3,962,710	131,636	0.8%
Washington County	445,342	529,710	84,368	1.8%	560,465	30,755	1.4%
Beaverton	***76,129***	***89,803***	***13,674***	***1.7%***	***93,395***	***3,592***	***1.0%***

SOURCE: PSU Population Research Center

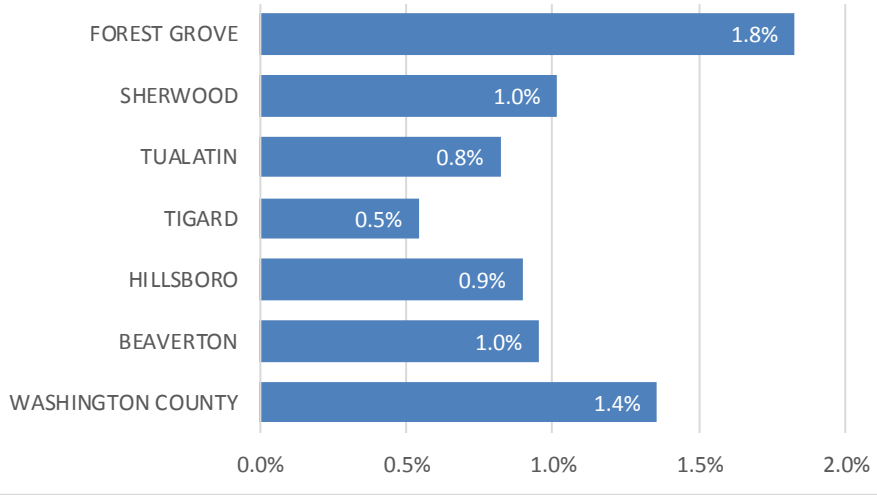
Migration

A look at migration patterns would suggest that Beaverton's relatively slow population growth could be largely attributed to housing supply constraints. Regionally over the last three years (2010-2013), Washington County has been among the fastest growing large counties in the region, accounting for 16% of statewide net-migration[17]. In other words, while growth has slowed to close to the statewide average in Beaverton, Figure 4.5 suggests that a larger share of population is now going to other communities within Washington County. Other incorporated cities in Washington County are also faced with limited housing inventories, including Tigard, Tualatin, Hillsboro and Sherwood.

16 New Home Trends, a proprietary third-party data service.

17 Portland State Population Research Center, Annual Population Estimates (2013)

FIGURE 4.6: AVERAGE ANNUAL POPULATION GROWTH RATE - 2000-2014

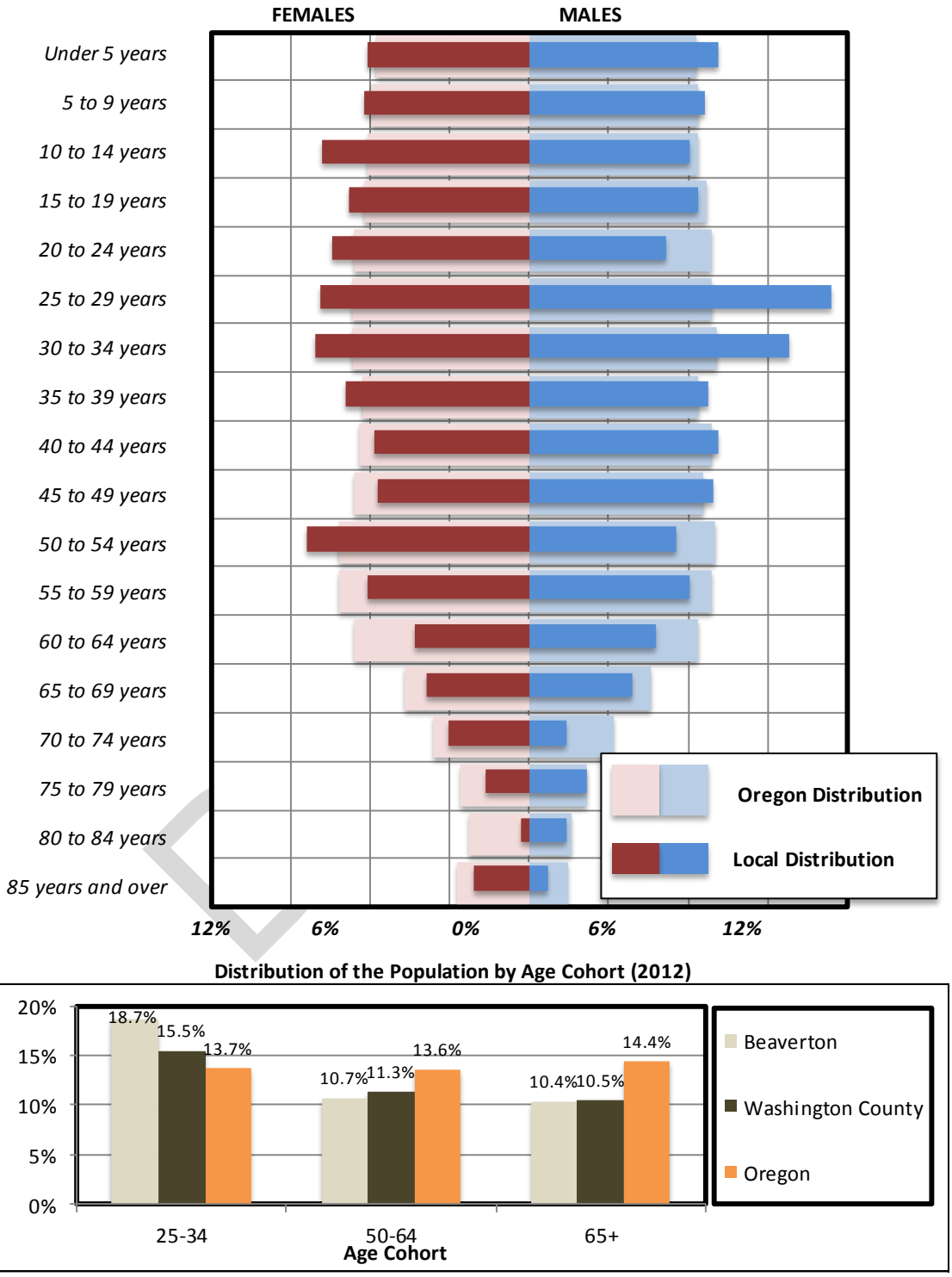


Beaverton's household composition is another factor in this pattern. The average household size in the City in 2010 was 2.37, compared to a Washington County average of 2.6. Households with two or less persons accounted for 70% of new household growth in Beaverton between 2000 and 2010, while representing 58% of new households in Washington County during the same time period. This has led to a faster growth rate in terms of housing units in Beaverton (2.15 AAGR from 2000 through 2010) than in Washington County (1.87% AAGR) during the same period, despite a slightly higher rate of population growth in Washington County.

Population Distribution

Beaverton's population has a generally higher concentration of younger residents relative to the national average. The 25-34 year age cohort accounts for 18.7% of the population compared to only 13.4% nationally. This condition holds true in comparison to state (13.7%) and county (15.5%) levels as well.

FIGURE 4.7: RELATIVE POPULATION DISTRIBUTION, BEAVERTON AGAINST THE OREGON AVERAGE

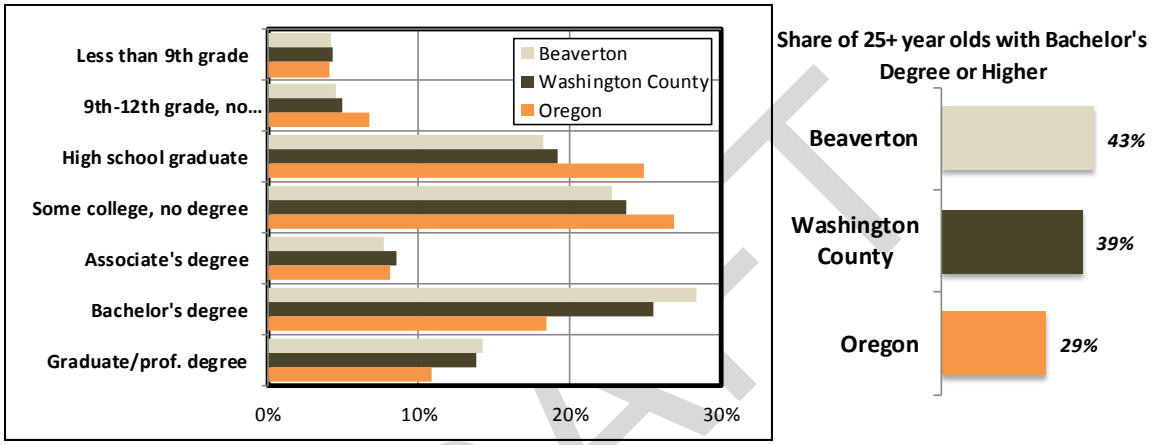


SOURCE: U.S. Census Bureau American Community Survey (2012)

Education

Education is a measure of the collective skills and knowledge of a populace. In theory, populations with greater skills and knowledge should translate into a heightened capacity for innovation. Moreover, the ability of firms to find adequately trained labor is an important factor to economic and productivity growth. Beaverton exhibits above average rates of educational attainment, with 43% of the working age population holding at least a bachelors' degree or higher, a favorable ratio relative to both Washington County (39%) and Oregon (29%) averages.

FIGURE 4.8: EDUCATIONAL ATTAINMENT, UNITED STATES AND CITY OF BEAVERTON (2013)



SOURCE: U.S. Census Bureau, American Community Survey (2013)

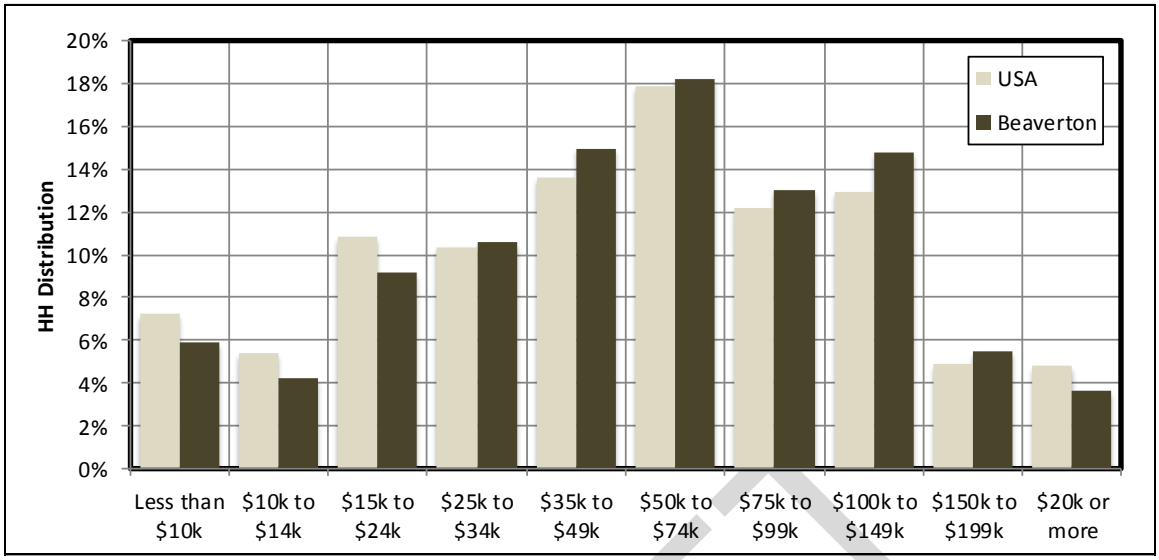
Commute Trends

An important characteristic of the labor force is the extent to which workers are residing locally or commuting from other areas. Rates of "labor force capture" indicate whether the community is an importer or exporter of labor. On average, 77% of employed Beaverton residents commute elsewhere in the region for their jobs. Conversely, roughly 78% of people working in the city live somewhere else and commute into Beaverton for work. This translates into around 22% of local jobs being filled by local residents. This rate could be higher, as it is in Hillsboro and Vancouver (33%).

Income

On net, Beaverton is only slightly more affluent than the national average, with a median household income of $56,107 compared to $53,046 nationally. However, the household distribution locally looks considerably more middle-class, with a smaller share of very low and very high-income households. The share of local households earning between $50,000 and $150,000 in Beaverton is 3% higher than the national average.

FIGURE 4.9: DISTRIBUTION OF HOUSEHOLDS BY INCOME, UNITED STATES AND CITY OF BEAVERTON, (2013)



SOURCE: U.S. Census Bureau, American Community Survey (2013)

Beaverton also maintains a relative wage advantage over state averages, by a margin of roughly 33%. Since the trough of the recession wages in Beaverton have increased at an annual rate of 3.0%, consistent with gains statewide. With overall inflation averaging 2.0% during this period, this translates into average annual real wage growth of 1.0%.

Economic Performance

With most metro areas experiencing the inflection point coming out of the recent recession and entering a slow but steady recovery, we evaluate Beaverton's recovery and which industries are driving local economic expansion as an indicator of local economic strengths and early growth prospects.

Figure 4.10 exhibits industry sector performance in the Beaverton economy during the recent recession (2007-2010) and a two-year recovery period (2010-2012). The x-axis exhibits how an industry performed during the recession, with negative values indicating job losses and positive values indicating job gains. Similarly, the y-axis tracks losses and gains during the two-year recovery (the size of the bubbles indicate the relative size of the sector in terms of employment). By comparing the two axes, we can classify industry sectors into one of four performance quadrants:

Recovery: Industries that lost jobs during the recession but have since recovered some of previous losses. Industries above the indicated red line are those that have at least fully recovered from the recession.

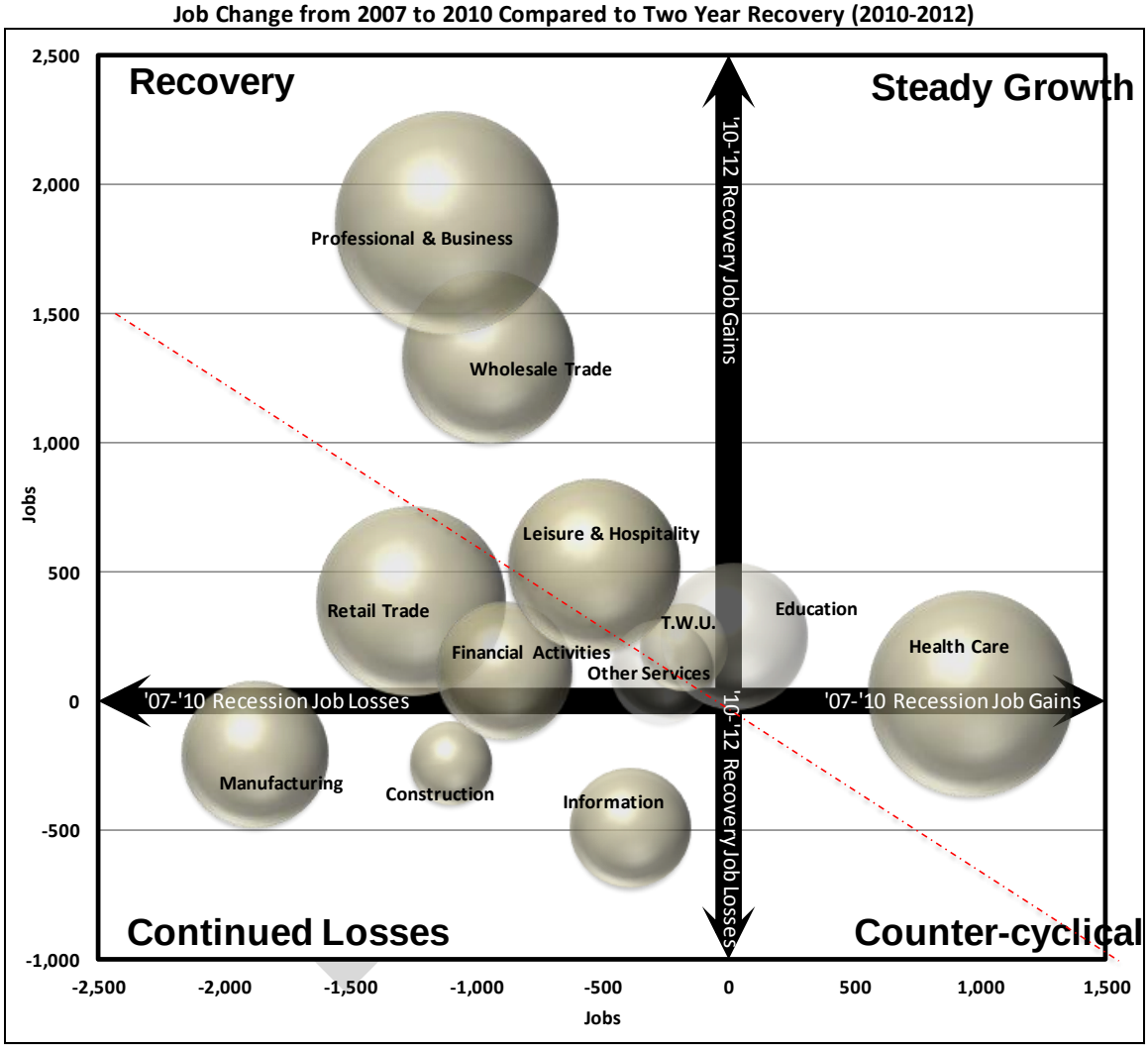
Continued Losses: Industries that lost jobs during the recession and have continued on a downward trend during the recovery.

Counter-Cyclical: Industries that gained jobs during the recession but have since exhibited losses during the recovery. Beaverton did not have any sectors in this quadrant.

Steady Growth: Industries that gained jobs during the recession and have since continued on an upward trend.

FIGURE 4.10: INDUSTRY SECTOR PERFORMANCE, CITY OF BEAVERTON USB, (2012)

Job Change from 2007 to 2010 Compared to Two Year Recovery (2010-2012)



Over the course of the recession and subsequent economic recovery some sectors have clearly outperformed others. During the recession, the Manufacturing, Retail, and Construction sectors were hit the hardest, accounting for 55% of net job losses. Health Care and Education were the only two sectors that did not decline during the recession. Across all industries, some have recovered much stronger than others. In addition to Education and Health Care, four other sectors (Professional & Business, Wholesaling, Leisure & Hospitality, and Transportation, Warehousing & Utilities) have recovered fully and have exceeded pre-recession employment levels. Unfortunately, as of 2012 data (most recent currently available) the Manufacturing, Construction, and Information sectors have failed to regain employment losses during the recovery.

FIGURE 4.11: EMPLOYMENT CHANGE BY INDUSTRY, RECESSION AND RECOVERY, BEAVERTON USB

	Net Emplomen Change	
	'07-'10	'10-'12
Construction	-1,101	-243
Manufacturing	-1,881	-210
Wholesale Trade	-954	1,334
Retail Trade	-1,260	385
T.W.U.	-172	209
Information	-387	-495
Financial Activities	-888	116
Professional & Business	-1,120	1,850
Education	22	248
Health Care	962	26
Leisure & Hospitality	-532	525
Other Services	-260	114
Total	-7,572	3,859

Nike's Long-Term Investment

Perhaps no single-firm will have as much impact on the economic direction of Beaverton than Oregon's largest Fortune 500 headquarters, Nike. Late in 2012, Nike struck a deal with the Oregon Legislature to secure its corporate tax structure over a 30-year term. In return, the company agreed to reinforce its long-term commitment to the state by investing a minimum of $150 million and creating a minimum of 500 jobs. By 2013 Nike had acquired 13 industrial office buildings and planned construction on the first phase of its campus expansion.

Venture Capital

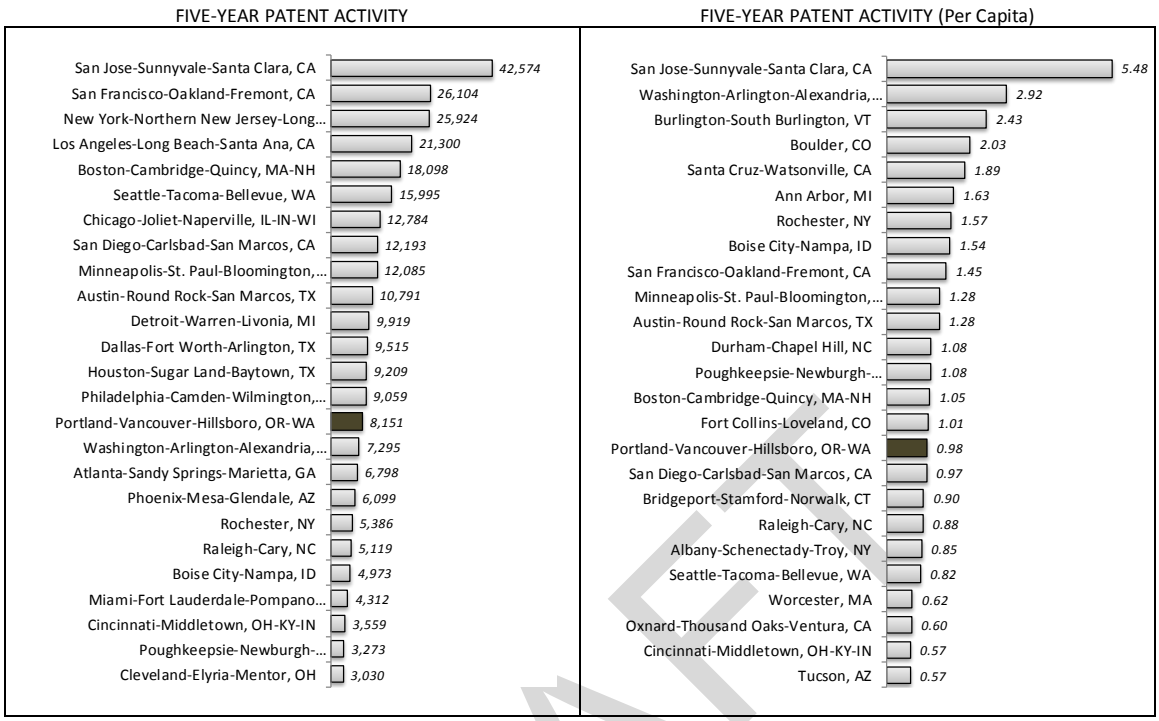
Venture capital is an important mechanism enabling firms to advance new ideas and bring them to market. As related to increasing productivity through innovation, this is especially the case in early stage, angel, and seed funding levels.

Our research found nearly 50 active venture capital funders in Oregon, funding deals ranging from $25,000 seed money to $30+ million later stage deals.

However, Oregon is not a powerhouse in the venture capital world, ranking 22nd in venture capital dollars and 19th in venture capital invested per capita over the last two years. At the Metropolitan Statistical Area (MSA) level, since 2005 the Portland MSA has averaged $10.55 in venture capital (V.C.) investment per $10,000 in GDP[18]. By comparison, Portland ranks 14th among similar MSA's, with V.C. rates 1/7th the size of Austin and 1/4th the rate achieved in Seattle.

[18] Venture Capital Investment compared to the size of the overall economy is another strong indicator of innovation health.

FIGURE 4.12: VENTURE CAPITAL BY STATE (2012-2013)[19]

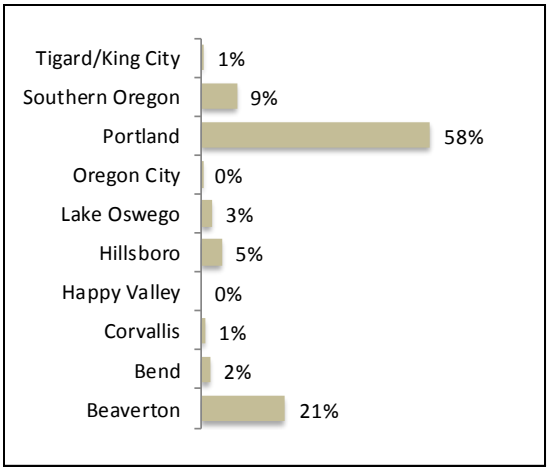


SOURCE: USPTO

We further considered where venture capital in Oregon is going. As it turns out, Beaverton has captured the second largest share of venture capital in Oregon since 2011, with 10 different companies across the software, semiconductor, Energy, and IT services fields capturing nearly $100 million in investment.

While the State of Oregon does not have a competitive advantage in terms of access to venture capital relative to Washington and California, firms in the City of Beaverton have disproportionately benefitted from venture capital investments. Increasing the availability of venture capital is expected to have a significant benefit to local businesses.

FIGURE 4.13: SHARE OF VENTURE CAPITAL BY LOCATION, STATE OF OREGON (2011- CURRENT)



SOURCE: PricewaterhouseCooper

19 United States Patent and Trademarks Office

V. TARGET INDUSTRY ANALYSIS

This report section utilizes a range of analytical tools to assess the economic landscape in Beaverton toward the determination of industry typologies the City should consider targeted economic opportunities over the planning period. Here, we seek to identify industry anchors and clusters of interrelated industries that have assembled spatially in the community. Where possible, we look to identify the sectors that are likely to drive growth in current and subsequent cycles and to identify opportunities for new, emerging, or relocating sectors.

INDUSTRY CLUSTERS DEFINED

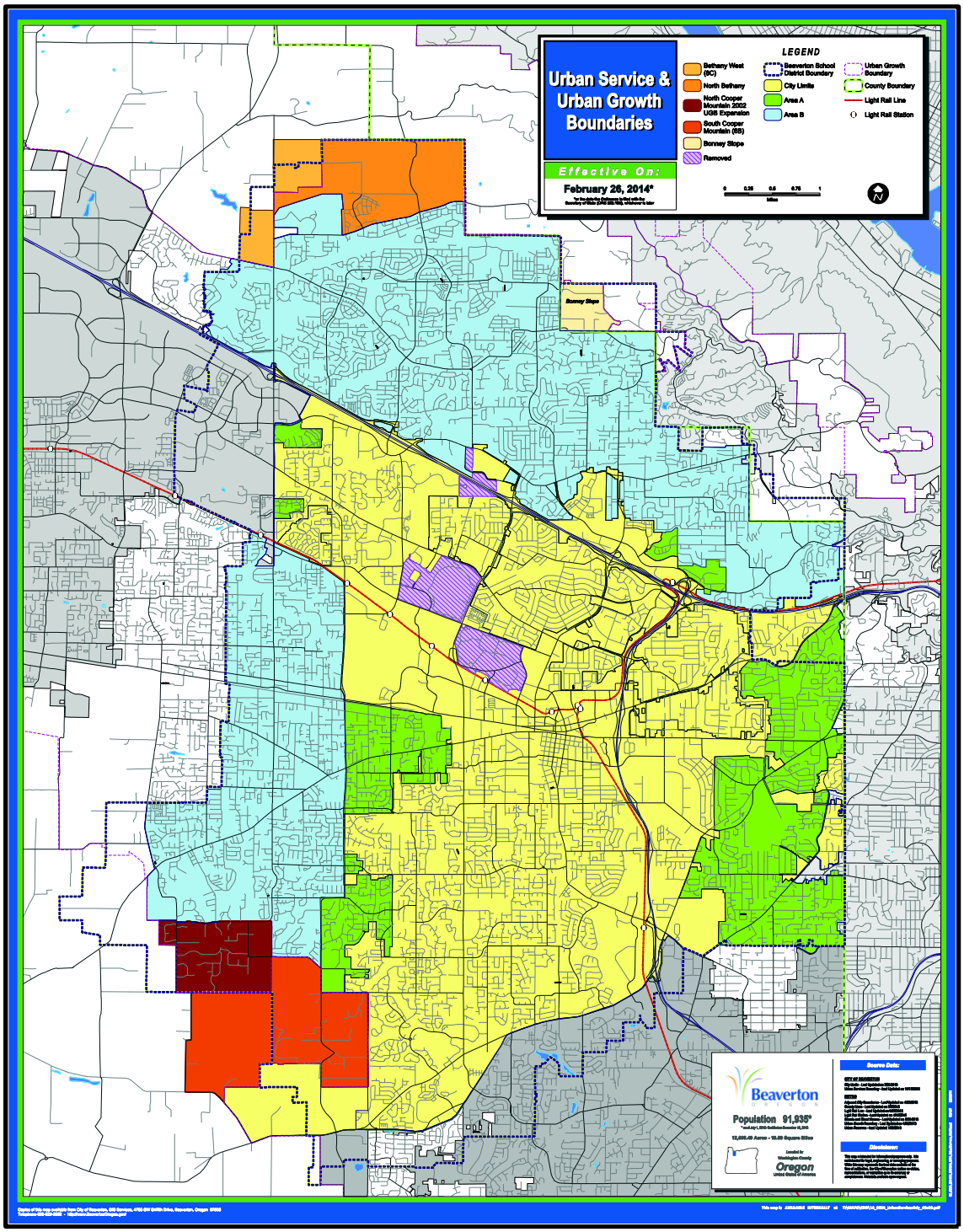
Sound regional economies are best organized around a healthy set of industry clusters—similar and related businesses and industries that are mutually supportive, regionally competitive, attract capital investment, and encourage entrepreneurship. Generally, clusters develop as an agglomeration of businesses 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 find also that a large firm or group of firms can often anchor a local cluster—the most obvious example in Beaverton being the Nike anchored activewear cluster.

While specialization is a critically important factor, it is important for communities to understand that a cluster goes beyond 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, a particular firm or group of firms, among many other factors. In our analysis, we attempt to draw inferences about the organization of Beaverton's clusters across anchor, primary, and ancillary industries, while looking to identify the local characteristics that could encourage growth within this economic ecosystem.

STUDY AREA DEFINED

The City of Beaverton has a unique geography, with highly irregular jurisdictional lines within the Metro UGB. In reality, economics do not conform to jurisdictional lines. As such, through consultation with the City of Beaverton, the study area for this analysis was delineated as the Beaverton Urban Service Boundary (USB). This seemed appropriate in that this delineation ties city services to development and includes unincorporated areas that are critical to the function of the local economy. It is assumed that over time the USB will largely correspond with the jurisdictional boundary.

FIGURE 5.1: BEAVERTON URBAN SERVICE AREA



While the Urban Service Area is viewed as an appropriate study area, it should be noted that it specifically precludes several large employers, each of which has a significant impact on the local economy. As a result, these employers are included in our analysis, as well as clusters. These firms are Nike, Tektronix, Columbia

Sportswear, Electro Scientific Instruments and Leupold and Stevens. The specific areas excluded from the boundary that contain these firms is shown in pink on the preceding map.

DATA SOURCES

Our evaluation of Beaverton industry clusters is constructed from two primary sources of empirical information:

Quarterly Census of Employment and Wages (QCEW)

The QCEW data from the Oregon Employment Department provides covered employment and payroll data for Beaverton firms. The term "covered" refers to employees covered by unemployment insurance. Therefore, it does not consider the self-employed and commissioned workers. This data is geocoded at the firm level and provides information on the number of employees, payroll, and industrial NAICS code firms classify as. The use of this dataset has a number of limitations, the most pronounced of which is misclassification of firms by industry. This is particularly problematic for large firms with multiple reporting units, who often misclassify spatially or within a particular industry classification. Other potential limitations include improperly geocoded data and misclassification in NAICS categories. These impacts generally affect a small sample of firms in a community the size of Beaverton. Where possible, we augment the data based on known factors about major businesses and their operations.

IMPLAN Input-Output Tables

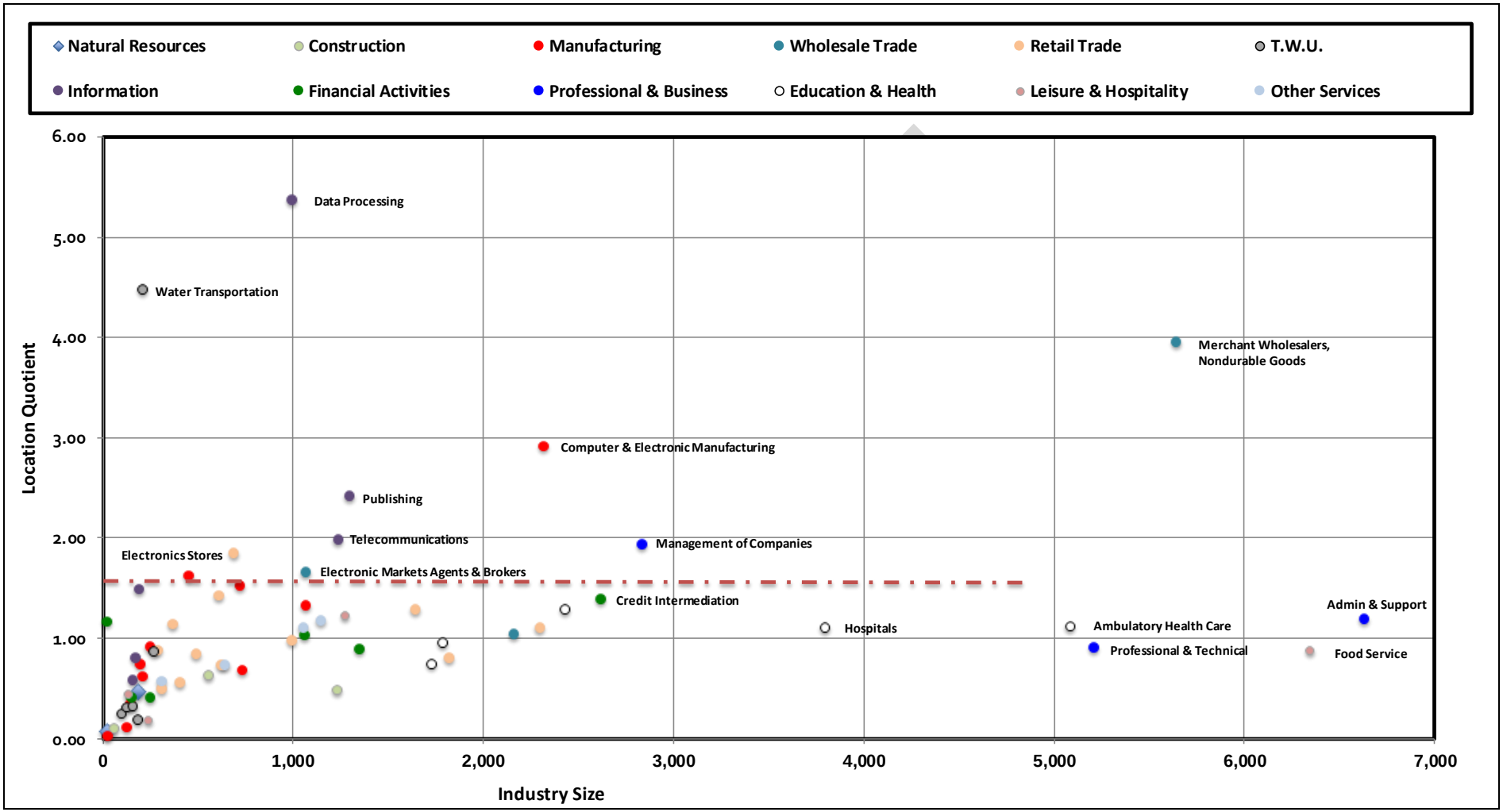
IMPLAN (IMPact for PLANning)[20] datasets are input/output multiplier models that can be used to demonstrate linkages between interrelated industries. Developed by the Forest Service to assist in land and resource management planning, IMPLAN is an economic impact model designed for analyzing the effects of industry activity (employment, income or business revenues) upon all other industries in an economic area. A primary limitation of this data is that we rely on county level data as a proxy for local conditions.

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 geography. For example, a location quotient of 1.50 for widget manufacturing would indicate that the share of employment in widget manufacturing locally was 50% higher than the national average. Generally, 1.50 is a common threshold indicating a relatively high specialization, which is shown as the red dashed line on Figure 5.2). Large industries are also obviously considerable components of the local economy and should also be considered. When we plot these industries graphically by size, specialization, and sector, we can begin to see some patterns in the data.

20 *Minnesota IMPLAN Group (MIG), Stillwater, Minnesota*

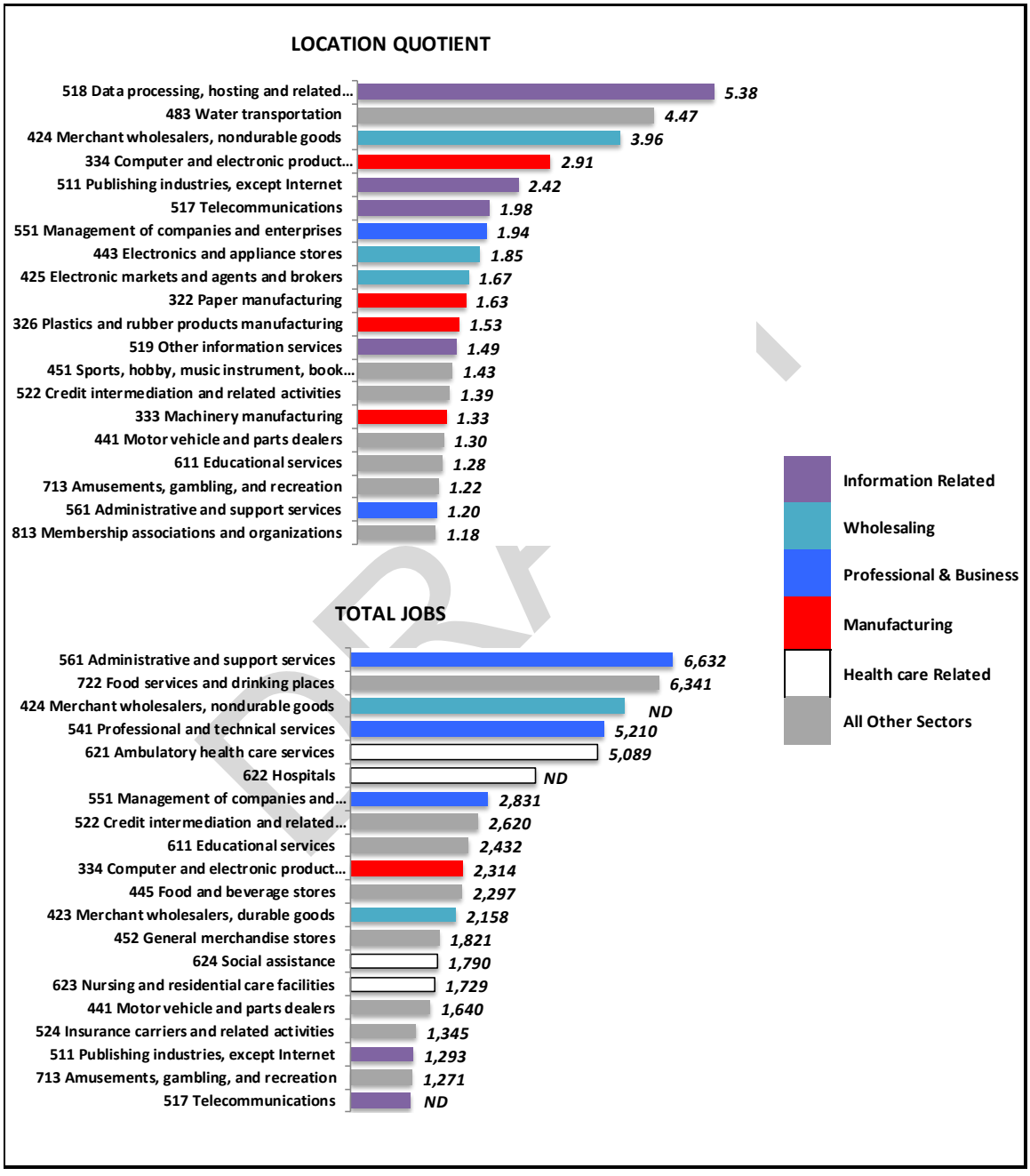
FIGURE 5.2: INDUSTRY SECTOR SPECIALIZATION ANALYSIS, CITY OF BEAVERTON USB, 2012[21]



21 QCEW Data, Annual Average 2012 Data

We see groupings of industries within specific sectors by size and specialization, with outliers that have exceedingly high specialization, are among the largest industries in the local economy, or both. Industries or groups of industries with these features are the best candidates for our cluster anchors.

FIGURE 5.3: INDUSTRY SECTOR SPECIALIZATION DETAIL, CITY OF BEAVERTON USB, 2012[22]



22 QCEW Data, Annual Average 2012 Data

From Figures 5.2 and 5.3 we can derive that that Beaverton economy is highly specialized in a few fundamental sectors. Some key findings:

- The 20 most specialized industries (highest location quotient) account for roughly 45% of employment in the economy. Three out of every four jobs in Beaverton are in the 20 largest industries.

- The Beaverton economy is highly specialized in a few sectors, none more so than the Information sector, which accounts for four of the most specialized, and two of the largest industries in the economy. The information sector includes data processing and management, telecommunications, and software publishing activities.

- Wholesaling activities are also highly concentrated in Beaverton, building upon the durable goods manufacturing base in computers, electronics, and machinery markets. Many of the economy's largest employers such as Nike and IBM classify a considerable share of their employment under merchant wholesaling as well.

- Advanced manufacturing in Beaverton is also among the most specialized sectors. This grouping is driven primarily by computers, paper, machinery, and plastics. Again, these industries have anchors in divisions of large firms including Nike, Tektronix, and ESI, among others.

- Companies conducting professional, technical, and business activities comprise a considerable share of the local economy. All three Professional & Business subsectors are among the largest 7 sectors of the economy and two (Management of Companies, Administrative Support) are among the most specialized. Taken on whole, the Professional & Business sector accounts for nearly one of every five jobs in the economy. This sector is very diverse, including corporate headquarters, advertising and marketing firms, offices of lawyers and accountants, engineering firms, computer programmers, temporary help services, and research and development activities, among others.

- Finally, while the local composition of health care services is roughly on par with expectations given the size of the economy and populace, firms in the Health Care sector account for 20% of the private sector economy.

ECONOMIC DRIVERS

The identification of the unique and shifting economic drivers of a local or regional economy are critical in informing the character and nature of future employment, and by extension 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[23]. 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

23 Measured from the trough of recent recession to 2012, the most recent period available for local employment data.

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.

Generally we can classify industries, groups of industries, or clusters into four groups:

Growing, Outperforming: Industries that are growing locally at a rate faster than the national average. These industries are the true drivers of the expansion and have characteristics locally leading them to be particularly competitive.

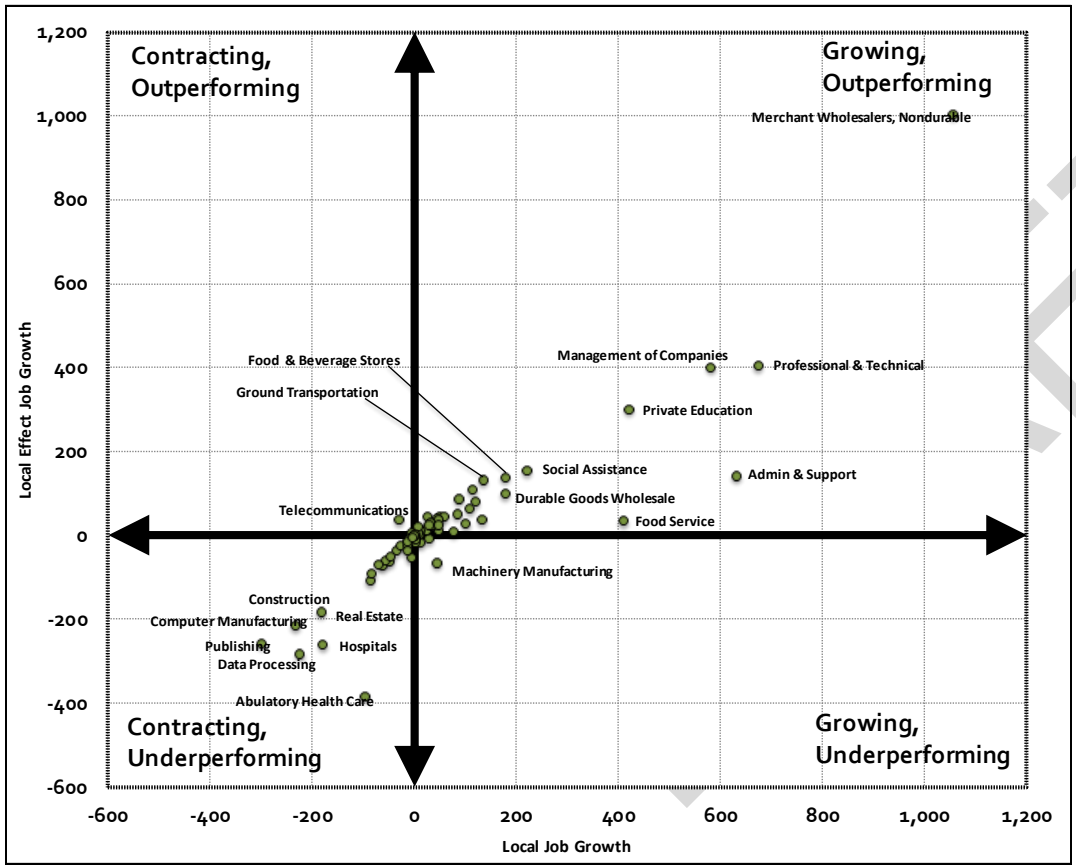
Growing, Underperforming: Industries that are growing locally but slower than the national average. These industries generally have a sound foundation but some local factor is limiting growth.

Contracting, Outperforming: Industries that are declining locally but slower than the national average. These industries have structural issues that are impacting growth industry wide. However, local firms are leveraging some local or regional factor that is making them more competitive than other firms on average.

Contracting, Underperforming: Industries that are declining locally at a rate faster than the national average. These industries have structural issues that are impacting growth industry wide. However, some local or regional factor is making it increasingly tough on local firms. These are industries in the local economy at the great risk.

In association with our knowledge of specialized industrial composition, these metrics help policy makers craft targeted programs and policies to both facilitate the expansion of outperforming industries as well as support those exhibiting risk of deterioration. Beaverton's economic drivers are considered in Figure 5.4:

FIGURE 5.4: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, CITY OF BEAVERTON (2010 – 2012) [24]



	LOCAL EFFECT JOB GROWTH
Merchant wholesalers, nondurable	1,005
Professional and technical services	406
Mgmt. of companies & enterprises	400
Educational services	299
Social assistance	153
Administrative and support services	140
ground passenger transportation	130
Merchant wholesalers, durable	99
Motion picture/sound recording	86
Amusements, gambling, & recreation	80
Credit intermediation & related	64
Nursing and residential care facilities	49
Accommodation	43
Insurance carriers & related activities	43
Securities, commodity contracts, invest.	42
Broadcasting, except Internet	-24
Specialty trade contractors	-36
Waste management/remediation servs.	-38
Heavy & civil engineering construction	-50
Other information services	-53
Machinery manufacturing	-66
Chemical manufacturing	-70
Food manufacturing	-93
Real estate	-109
Construction of buildings	-184
Computer/electronic product man.	-217
Publishing industries, except Internet	-256
Hospitals	-261
Data processing, hosting & related	-283
Ambulatory health care services	-385

24 QCEW Data, Annual Average 2012 Data

From Figure 5.4 we can consider the industries that are both driving the local economic expansion as well as those industries at risk of becoming increasingly less competitive. Some key findings:

- Industries in the local economy are generally following the direction of the national economy. In other words, there are few industries locally running counter cyclical to the national trend. The main deviations locally are in the magnitude of growth in relation to structural trends.

- The leading 15 drivers of the local economy account for nearly all net-new job growth in the economy during the early portion of the expansion cycle. The ***local effect*** of these industries total over 3,000 jobs created since 2010.

- It is evident that Professional & Business Services growth is driving Beaverton's early expansion. Three of the top six driver industries are in this sector. More so, the outlier of exceedingly high nondurable goods wholesaling growth is telling in the context of known expansion at Nike. It's not surprising that industries in Nike's corporate value support chain have exhibited the greatest performance. Other primary economic drivers include private education growth, Ancillary Heath Care (Nursing Homes and Social Assistance), and Leisure/Hospitality (Accommodation, Food Service).

- Most manufacturing industries have exhibited relatively small job shifts on an absolute basis. Computer & Electronic Manufacturing, Chemicals, Machinery, and Food Manufacturing are industries exhibiting poor conditions. Conversely, Electrical Equipment, Nonmetallic Minerals, Plastics, and Paper Manufacturing are exceeding growth expectations.

- Industries that are underperforming include some of the largest industries in the local economy. Some of these sectors are more susceptible to volatility (i.e. Computer Manufacturing, Real Estate, Construction) and others have deviations driven by a particular entity (Hospitals/Health Care.)

TARGET INDUSTRY LINKAGES AND PROFILES

In addition to the previous metrics, we took a more granular look at the composition of industry sectors and the local businesses that operate within them. This is an essential exercise when forecasting industrial growth, as changes in a particular "foundational" industry are likely to permeate through other related businesses within a cluster. For example, if widget manufacturing is expected to exhibit strong growth, then local firms related to widget manufacturing (i.e. widget wholesaling & distribution, packaging & labeling of widgets, construction & maintenance of widget making machinery, etc.) are also likely to grow.

We find in economic cluster analysis that industries are linked in a variety of ways. Specifically, we have identified five general categories of linkage by which firms and industries agglomerate spatially or are fundamentally interrelated, although others likely exist.

> **Source of Demand:** Firms or populations that support the demand for goods or services within a particular cluster. The "end user" of a good or service. Examples include population centers, foreign markets, or industries that utilize a particular good or service.

Source of Production Inputs: Firms or industries that supply inputs to the production process of another industry. Examples include raw materials, software, equipment, or components for assembly.

Distribution Activity: Firms or industries facilitate the processing, transportation, distribution, or wholesale of goods and services. The intermediary between sourcing or end users. Examples include food packaging and labeling, trucking/distribution, and wholesale trade brokers.

Ancillary/Business Support: Firms or industries that provide services that support the business operations of populations or other businesses in the economy. These firms generally exist in part or on whole due to the presence of other businesses, industries, & clusters. Examples include legal and accounting services, payroll services, and building maintenance.

Unrelated/Labor Pool or Sourcing: Sectors that are unrelated to each other but have agglomerated in the same geography due to a sharing of value chain or labor force. Examples include industries that utilize a common raw material or skill set in the workforce.

Our analysis began with an investigation of how industries are organized with respect to their cross industry linkages. Our process began with an evaluation of input-output linkages using 2012 IMPLAN datasets. This dataset effectively measures the magnitude of typical economic linkage between broad industry classes. However, while a sound approach in theory, this evaluation proved to have considerable limitations. First, for some industries, wholesaling for example, IMPLAN classifications do not drill down below the supersector level. Secondly, the data derived from national and regional inputs does not reflect local business activity. And finally, the data does not consider other factors that influence cluster development, such as physical proximity to an institution or critical piece of infrastructure, the presence of a foundational "anchor", or the influence of shared workforce dynamics.

In other words, the IMPLAN data provides an additional screen, or a theoretical level input to industry linkages, but falls short of fully informing how actual businesses are connected and how clusters are organized at the local level. In the end, IMPLAN was better at measuring the magnitude of aggregate and tertiary impacts such as impacts on real estate, food, and other professional services.

Therefore, building upon this and our specialization and economic driver metrics as a screen, we researched businesses within each sector to define their primary economic function in the context of known linkages.

Excluding service industries such as Leisure, Food Service, Retail, and Personal Care services, we classified all firms with 15 or more employees by their economic function. This covered over three-quarters of all employment in the study area. Industry class was used to aggregate smaller firms. For each business we assigned a "primary" and if applicable a "secondary" cluster designation. We define these categories as follows:

Primary: *The sector or cluster in which a firm's primary business activity is concentrated.*

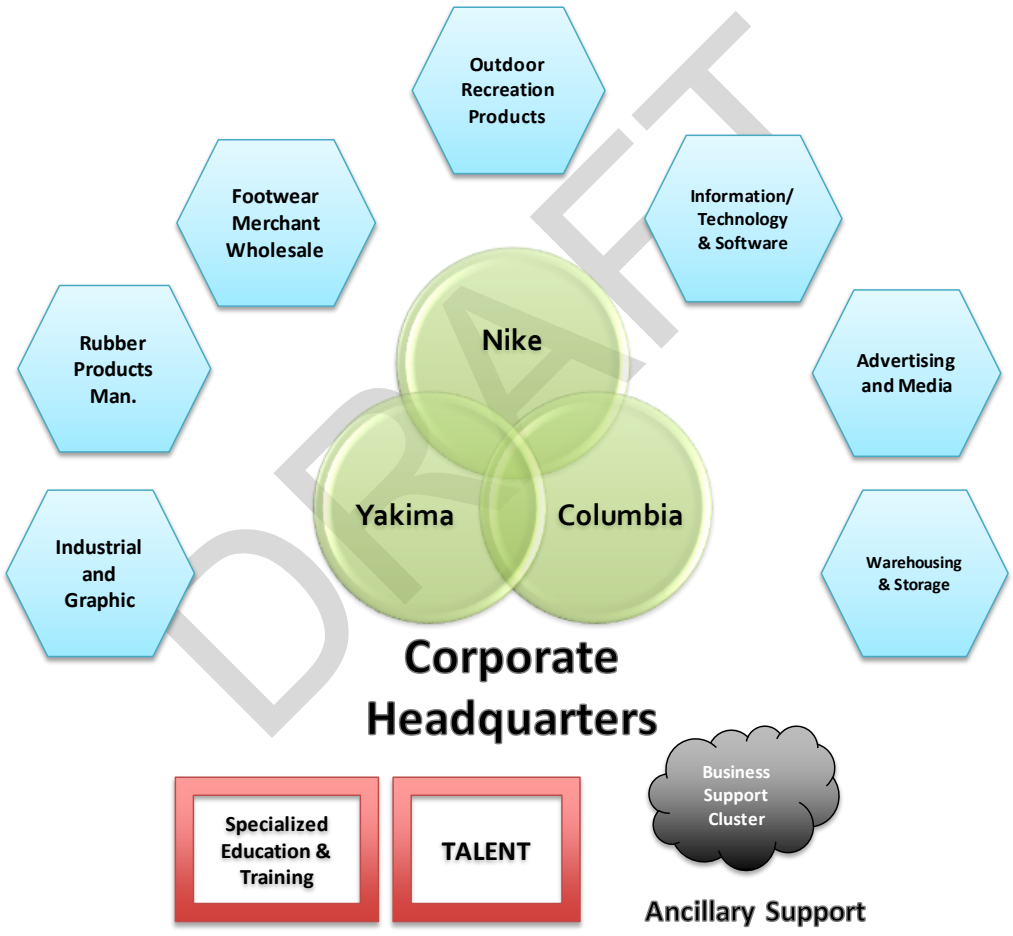
Support/secondary: *A sector or industry that is not directly related to a firm's output, but a linkage exists or the firm supports production or output in some way.*

For example, a large plumbing and HVAC construction contractor would be classified as construction for its primary sector, because the firm's primary business activity is construction. However, if in our research of the firm we found that its business function is the install and maintenance of clean rooms for the region's high-tech industry, its secondary classification would be High-Tech because it serves an essential function in the High-Tech Cluster's production process.

This approach in not without limitations and caveats. The most common limitation we found was businesses with diverse functions that operate across clusters that could be placed into multiple cluster designation. More so, the analysis also bears the inherent subjectivity of human classification and error. Nevertheless, this approach proved to be constructive as it reflected actual business operations and relationships while also allowing us to adjust for the inflexibility of NAICS classifications. All told, we organized the economy into six distinct target industry clusters: We summarize these clusters here followed by detailed profiled of their composition.

Activewear

The activewear cluster in Beaverton is without a doubt organized around the decision of Nike's founders to locate their headquarters in Beaverton/Washington County. Over time, the critical mass of talent permeating through the region has attracted other firms as well, most notably Columbia Sportswear. While anchor firms maintain some manufacturing and warehousing functions locally, the majority of employment is concentrated in knowledge based design, research, global management, and back office functions. Ancillary industries relating to Beaverton's activewear anchors extend into the software/information technology, advertising, media, and more broadly a robust business support sector. The cluster has even spun off a technical training institute for footwear design. The total local employment associated with this cluster was 9,159 in 2012.



ACTIVEWEAR AND OUTDOOR PRODUCTS

Representative Industries

Primary Industries

326 Plastics and Rubber Products Manufacturing
333314 Optical Instrument and Lens Manufacturing
33992 Sporting and Athletic Goods Manufacturing
42434 Footwear Merchant Wholesalers
42391 Sporting and Recreational Goods and Supplies Merchant Wholesalers
5511 Management of Companies and Enterprises

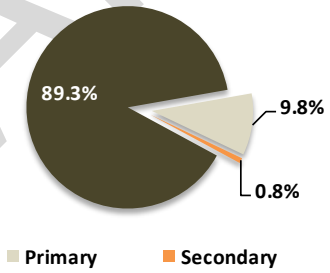
Secondary Industries

4931 Warehousing and Storage
54142 Industrial Design Services
54143 Graphic Design Services
54181 Advertising Agencies

Cluster Overview

The activewear cluster in Beaverton is without a doubt organized around the decision of Nike's founders to locate their headquarters in Beaverton/Washington County. Over time, the critical mass of talent permeating through the region has attracted other firms as well, most notably Columbia Sportswear. While anchor firms maintain some manufacturing and warehousing functions locally, the majority of employment is concentrated in knowledge based design, research, global management, and back office functions. Ancillary industries relating to Beaverton's activewear anchors extend into the software/information technology, advertising, media, and more broadly a robust business support sector. The cluster has even spunoff a technical training institute for footwear design.

Share of Economy



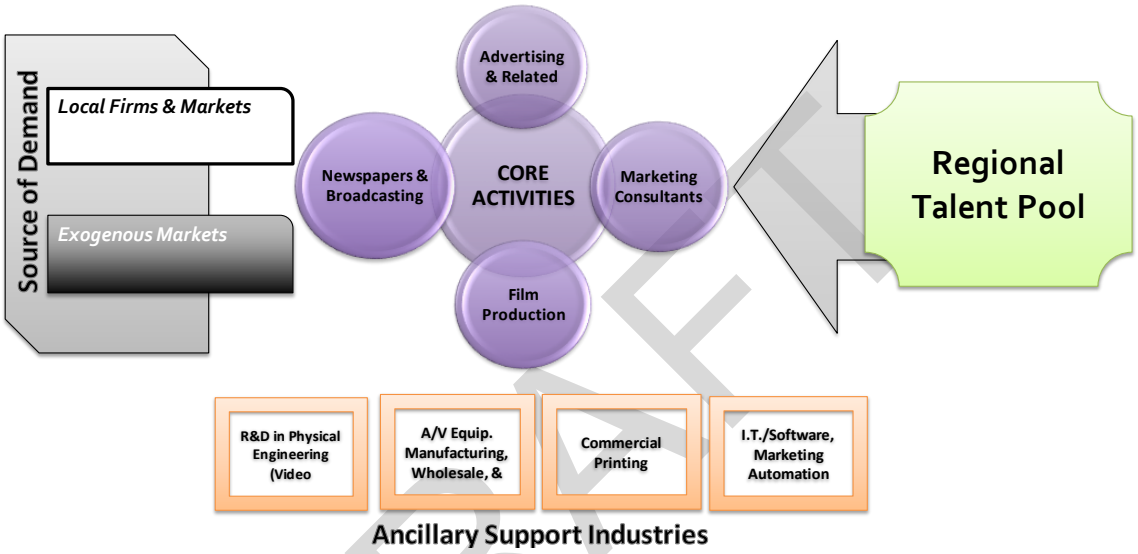
Representative Firms

- Nike
- Columbia Sportswear
- Yakima
- Leupold
- Printing Today
- Pensole

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 9,159

Media, Advertising, and Film Production

The Media, Advertising, and Film Production Cluster is really a subset, ancillary function to a range of local and regional demand sources. However, it has all the elements of an organized and growing, yet young and developing micro-cluster. Among the strengths of this industrial grouping is a regional talent pool born out the interconnectedness of the regionally significant media cluster and the activewear cluster. At the same time - as software, information technology, marketing automation, and data mining, video production, web hosting, etc. become increasingly entwined - Beaverton's strengths in these sectors should facilitate growth opportunities. Total employment associated with this cluster was 1,706 in 2012.



MEDIA, ADVERTISING, AND FIILM PRODUCTION

Representative Industries

Primary Industries

3231 Printing and Related Support Activities
51111 Newspaper Publishers
51112 Periodical Publishers
5121 Motion Picture and Video Industries
51512 Television Broadcasting
5417 Scientific Research and Development Services
5418 Advertising, Public Relations, and Related Services
54191 Marketing Research and Public Opinion Polling

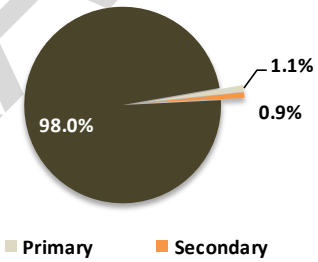
Secondary Industries

33431 Audio and Video Equipment Manufacturing
42511 Business to Business Electronic Markets
51913 Internet Publishing and Broadcasting and Web Search Portals
541613 Marketing Consulting Services
541922 Commercial Photography

Cluster Overview

The Media, Advertising, and Film Production Cluster is really a subset, ancillary function to a range of local and regional demand sources. However, it has all the elements of an organized and growing, yet young and developing micro-cluster. Among the strengths of this industrial grouping is a regional talent pool born out the interconnectedness of the regionally significant media cluster and the activewear cluster. At the same time, as software, information technology, marketing automation, and data mining, video production, web hosting, etc. become increasingly entwined; Beaverton's strengths in these sectors should facilitate growth opportunities.

Share of Economy



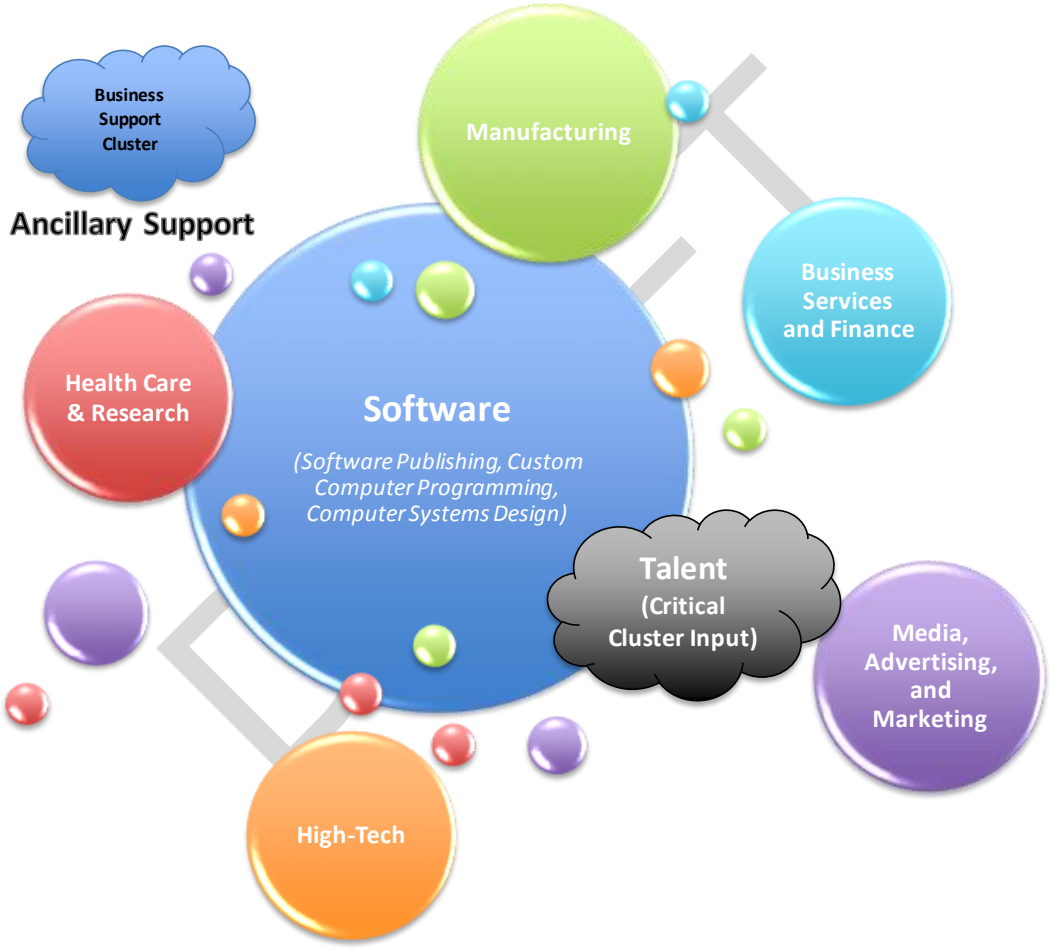
Representative Firms

- Nike
- Audio Precision
- MIlestone Systems
- Quinstreet
- Darkwater Studios
- All Points Media
- Meredith Corp

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 1,706

Software and Information Technology

Software development is technically a subcomponent of the Business Support Cluster. However, while it exists to serve foundational industries, we consider it alone given its size (over 5,500 jobs), growth prospects, and more importantly its agglomeration around talent. As companies across nearly all industries are increasingly reliant on information technology to enhance productivity, software development and information technology will continue to expand. Software is a sector that is attracting the majority of the region's venture capital. The cluster in Beaverton is very diverse, represented both by divisions of large corporations such Nike and IBM, as well as emerging start-ups like Act-on and Digimarc. This cluster accounted for 5,578 jobs in the Beaverton USB in 2012.



INFORMATION TECHNOLOGY AND SOFTWARE

Representative Industries

Primary Industries

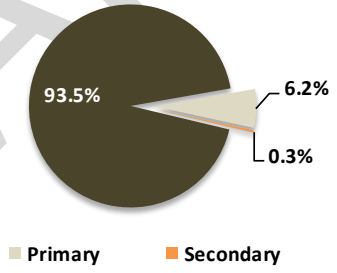
511210 Software Publishers
51821 Data Processing, Hosting, and Related Services
51913 Internet Publishing and Broadcasting and Web Search Portals
5223 Activities Related to Credit Intermediation
541511 Custom Computer Programming Services
541512 Computer Systems Design Services
541513 Computer Facilities Management Services
541519 Other Computer Related Services
5417 Scientific Research and Development Services

Secondary Industries

Cluster Overview

Software development is technically a subcomponent of the Business Support Cluster. However, while it exists to serve foundational industries, we consider it alone given its size (over 5,500 jobs), growth prospects, and more importantly its agglomeration around talent. As companies across nearly all industries are increasingly reliant on information technology to enhance productivity, software development and information technology will continue to expand. Software is a sector that is attracting the majority of the region's venture capital. The cluster in Beaverton is very diverse, represented both by divisions of large corporations such Nike and IBM, as well as emerging start-ups like Act-on and Digimarc.

Share of Economy



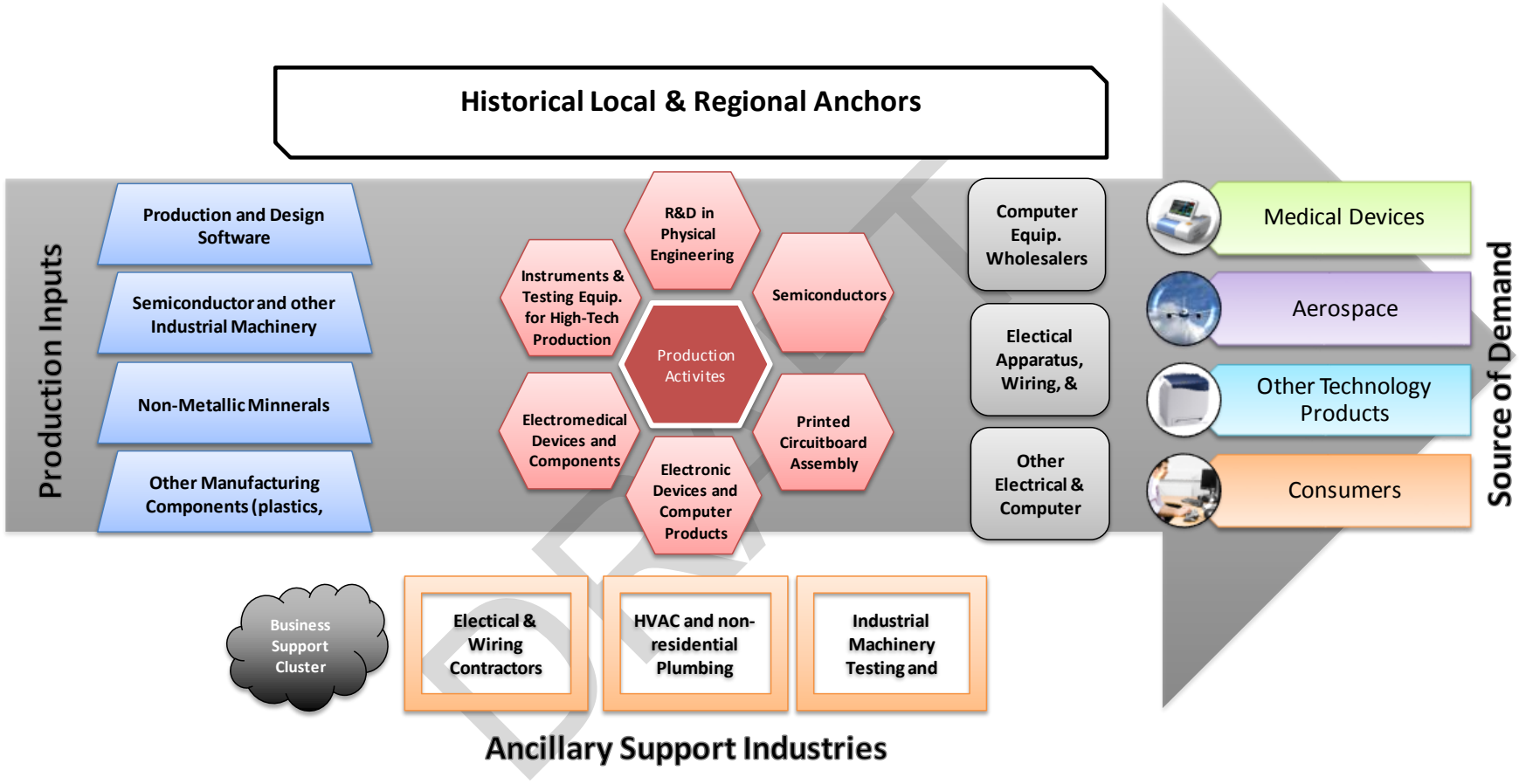
Representative Firms

- Nike
- Arris
- Sage Software
- Transcore
- IBM
- Act-On
- Digimarc

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 5,578

High Tech Manufacturing

Washington County's "Silicon Forest" was born out of early industry sitings of Tektronix and ESI, followed later by Intel. Taken together, the critical mass of talent and spinoffs has facilitated the development of a vertically integrated cluster that touches nearly every corner of the economy. Beaverton is home to many components of the high-tech value chain, including the manufacture of production inputs, raw materials, machinery, components, assembly, logistics, and even the construction and maintenance of facilities capable of high-tech production. A diverse wholesaling industry has developed out of national manufactures siting local outposts to serve the high-tech value chains. Overall employment exceeded 6,500 jobs in this cluster in 2012.


Historical Local & Regional Anchors
Production Inputs
Production and Design Software
Semiconductor and other Industrial Machinery
Non-Metallic Minnerals
Other Manufacturing Components (plastics,
R&D in Physical Engineering
Instruments & Testing Equip. for High-Tech Production
Semiconductors
Production Activites
Electromedical Devices and Components
Printed Circuitboard Assembly
Electronic Devices and Computer Products
Computer Equip. Wholesalers
Electical Apparatus, Wiring, &
Other Electrical & Computer
Medical Devices
Aerospace
Other Technology Products
Consumers
Source of Demand
Business Support Cluster
Electical & Wiring Contractors
HVAC and non-residential Plumbing
Industrial Machinery Testing and
Ancillary Support Industries

HIGH TECH MANUFACTURING

Representative Industries

Primary Industries

3341 Computer and Peripheral Equipment Manufacturing
33431 Audio and Video Equipment Manufacturing
33441 Semiconductor and Other Electronic Component Manufacturing
334515 Instrument Manufacturing for Measuring and Testing Electricity and Electric
3359 Other Electrical Equipment and Component Manufacturing
42343 Computer and Computer Peripheral Equipment and Software Merchant Whc
42369 Other Electronic Parts and Equipment Merchant Wholesalers
327215 Glass Product Manufacturing Made of Purchased Glass

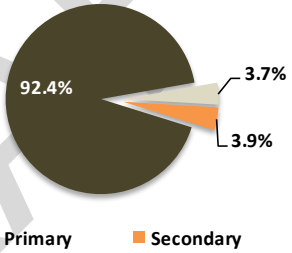
Secondary Industries

23821 Electrical Contractors and Other Wiring Installation Contractors
238220 Plumbing, Heating, and Air-Conditioning Contractors
333242 Semiconductor Machinery Manufacturing
54133 Engineering Services
511210 Software Publishers

Cluster Overview

Washington County's "Silicon Forest" was born out of early industry sitings of Tektronix and ESI, followed later by Intel. Taken together, the critical mass of talent and spinoffs has facilitated the development of a vertically integrated cluster that touches nearly every corner of the economy. Beaverton is home to many components of the high-tech value chain, including the manufacture of production inputs, raw materials, machinery, components, assembly, logistics, and even the construction and maintenance of facilities capable of high-tech production. A diverse wholesaling industry has developed out of national manufactures siting local outposts to serve the high-tech value chains.

Share of Economy



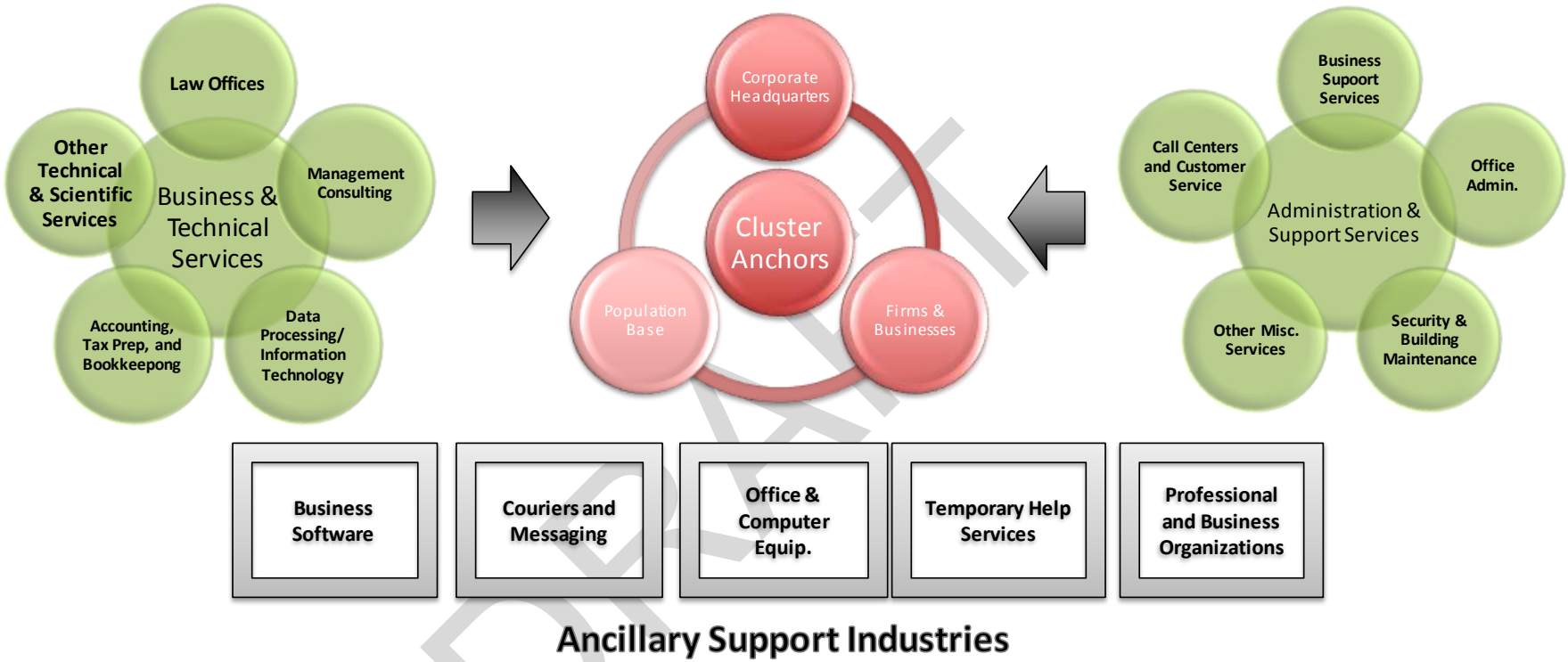
Representative Firms

- Tektronix
- Biamp Systems
- IBM
- ESI
- Micro Power Electronics
- Tosoh Quartz
- Maxtek Components

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 6,502

Business Support and Back Office Operations

Firms in the Business Support and Back Office Services Cluster serve both a growing economic and population base. This cluster of businesses includes firms that serve both specialized sectors and the broad business community. In some cases this localized agglomerations of the cluster can be anchored around the corporate or management headquarters of large campuses or a particular real estate concentration with locational advantages. The primary components of the cluster include legal, payroll, management consulting, and accounting services. The cluster also includes back office customer service and call services as well as activities relating to the service, maintenance, and operation of buildings. Staffing and temporary help services comprise a significant share of the cluster. Finally, we also include business and professional organizations and labor unions in this category. These activities and related functions make up roughly 20% of the economy, accounting for over 18,000 jobs in 2012.


Law Offices
Other Technical & Scientific Services
Management Consulting
Business & Technical Services
Accounting, Tax Prep, and Bookkeepong
Data Processing/ Information Technology
Corporate Headquarters
Cluster Anchors
Population Base
Firms & Businesses
Business Supoort Services
Call Centers and Customer Service
Office Admin.
Administration & Support Services
Other Misc. Services
Security & Building Maintenance
Business Software
Couriers and Messaging
Office & Computer Equip.
Temporary Help Services
Professional and Business Organizations
Ancillary Support Industries

BUSINESS SUPPORT AND BACK OFFICE OPERATIONS

Representative Industries

Primary Industries

51821 Data Processing, Hosting, and Related Services
51913 Internet Publishing and Broadcasting and Web Search Portals
5411 Legal Services
5412 Accounting, Tax Preparation, Bookkeeping, and Payroll Services
5416 Management, Scientific, and Technical Consulting Services
551 Management of Companies and Enterprises
56132 Temporary Help Services
56142 Telephone Call Centers
5617 Services to Buildings and Dwellings
8139 Business, Professional, Labor, Political, and Similar Organizations

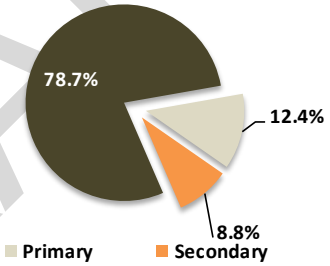
Secondary Industries

54138 Testing Laboratories
54151 Computer Systems Design and Related Services
56199 All Other Support Services
5112 Software Publishers

Cluster Overview

Firms in the Business Support and Back Office Services Cluster serve both a growing economic and population base. This cluster of businesses includes firms that serve both specialized sectors and the broad business community. In some cases this localized agglomerations of the cluster can be anchored around the corporate or management headquarters of large campuses or a particular real estate concentration with locational advantages. The primary components of the cluster include legal, payroll, management consulting, and accounting services. The cluster also includes back office customer service and call services as well as activities relating to the service, maintenance, and operation of buildings. Staffing and temporary help services comprise a significant share of the cluster. Finally, we also include business and professional organizations and labor unions in this

Share of Economy



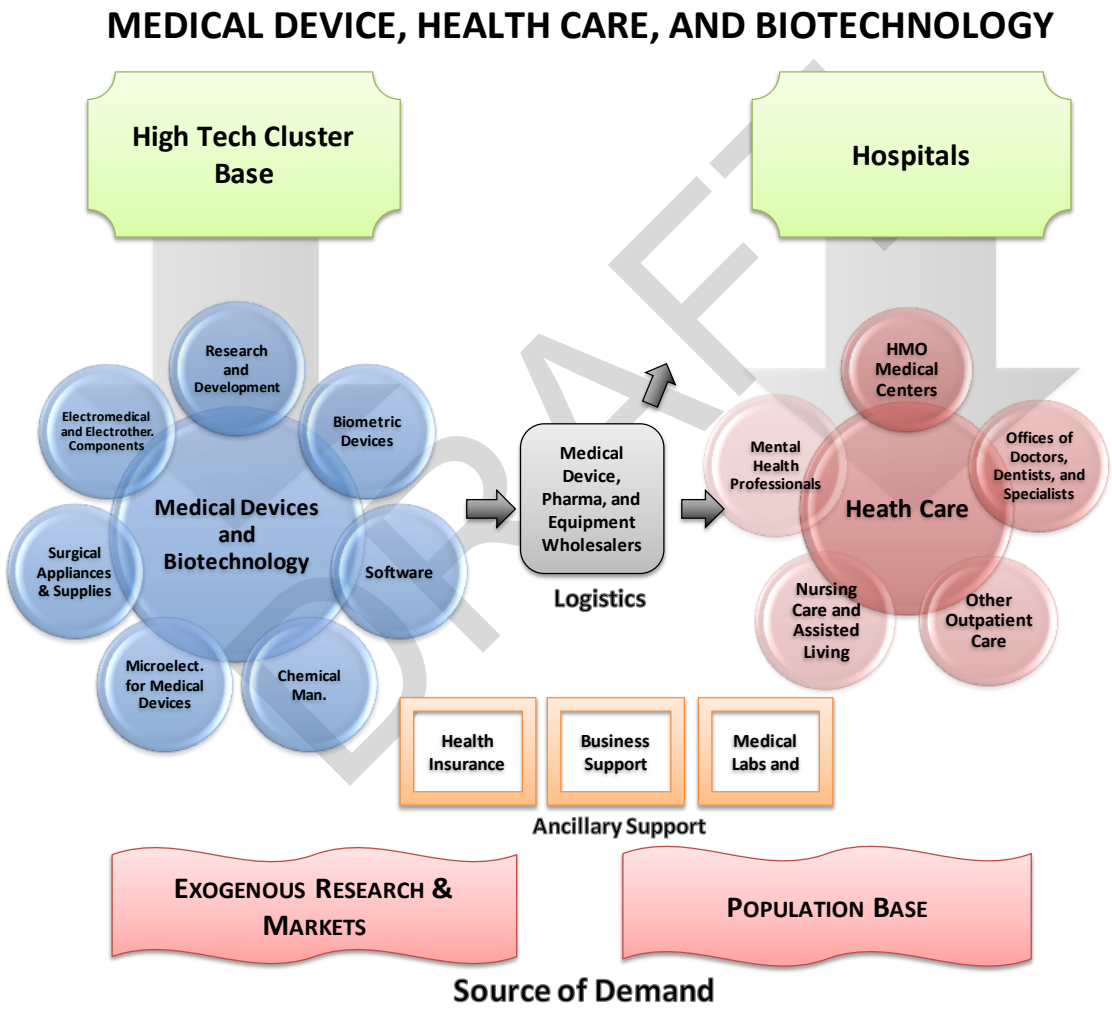
Representative Firms

- Linktech
- VItal Marketing
- Express Employment
- Stream International
- Anesthesiologists Associated
- Corbin Consulting
- Stantec

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 18,251

Medical Device, Health Care, and Biotechnology

The Health Care and Medical Device Cluster in Beaverton is linked through workforce and value chain dynamics, however, the two "sides" are grounded from different fundamentals. The medical device element is really a subcomponent of Beaverton's high-tech cluster—with many of the products and components of that grouping serving a medical application. Other activities that are an extension of serving both local and exogenous markets include the manufacture of surgical tool, biometric devices, research and development, and software. At the same time, the local health care sector, grounded local institutional hospitals is driven more by the regional and local population base. These activities include health practitioners, mental health professional, and a growing nursing and residential care market.



MEDICAL DEVICE, HEALTH CARE, AND BIOTECHNOLOGY

Representative Industries

Primary Industries*

32541 Pharmaceutical and Medicine Manufacturing
339116 Dental Laboratories
42345 Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesale
54138 Testing Laboratories
54171 Research and Development in the Physical, Engineering, and Life Sciences
621 Ambulatory Health Care Services
622 Hospitals
623 Nursing and Residential Care Facilities

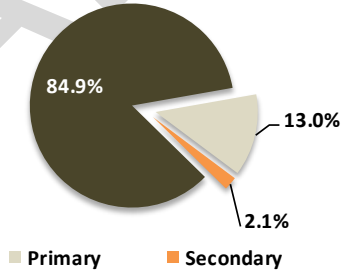
Secondary Industries

334111 Electronic Computer Manufacturing
334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing
334510 Electromedical and Electrotherapeutic Apparatus Manufacturing
33911 Medical Equipment and Supplies Manufacturing
524114 Direct Health and Medical Insurance Carriers
541513 Computer Facilities Management Services

Cluster Overview

The Health Care and Medical Device Cluster in Beaverton is linked through workforce and value chain dynamics, however, the two "sides" are grounded from different fundamentals. The medical device element is really a subcomponent of Beaverton's high-tech cluster—with many of the products and components of that grouping serving a medical application. Other activities that are an extension of serving both local and exogenous markets include the manufacture of surgical tool, biometric devices, research and development, and software. At the same time, the local health care sector, grounded local institutional hospitals is driven more by the regional and local population base. These activities include health practitioners, mental health professional, and a growing nursing and residential care market.

Share of Economy



Representative Firms

- **Biomerieux**
- **ZRT Labs**
- **Kaiser**
- **Metropolitian Pediatrics**
- **Quest Diagnostics**
- **Providence St. Vincent**
- **Intel-GE Care**

TOTAL JOBS ASSOCIATED WITH CLUSTER (2012): 12,962

* To prevent double counting of "primary industries", the manufacture of medical devices in this profile is included as a "secondary industry" because it has been previously accounted for in the high tech cluster.

Other Important Sectors of Note

In addition to industries that have formed dynamic and interrelated clusters, these industries have a considerable presence, but cannot be classified into a particular cluster.

Telecommunications

Over 1,000 jobs in this sector are driven by a handful of large service providers, including Comcast and XO Communications.

Other Wholesale Activities

In this analysis we tend to allocate wholesaling activity across different sectors to the particular industries or clusters it serves. However, it should be noted that in many markets the critical mass of these activities could develop a Wholesale and Distribution cluster in and of itself. This does not appear to be the case in Beaverton, but we highlight that Beaverton does have a presence in other wholesaling sectors serving the food processing, office, and construction sectors, among others.

Paper

Beaverton is still home to large-scale paper manufacturing, warehousing, and wholesaling activities, grounded in the historic presence of regionally significant companies. Firms such as International Paper, Standard Bag Manufacturing, and Alliance Packaging are local players in a sector directly accounting for about 400 local employees.

Retail, Leisure & Household Activities

Firms that can be classified in this grouping are those generally driven by the disposable income of local households and employees. These activities include retail trade, food services, leisure and recreation, and personal care services. Taken together our classification of these firms account for over a quarter of local employment, or about 18,000 jobs.

VI. FORECAST OF EMPLOYMENT AND LAND NEED

CITY OF BEAVERTON EMPLOYMENT FORECASTS

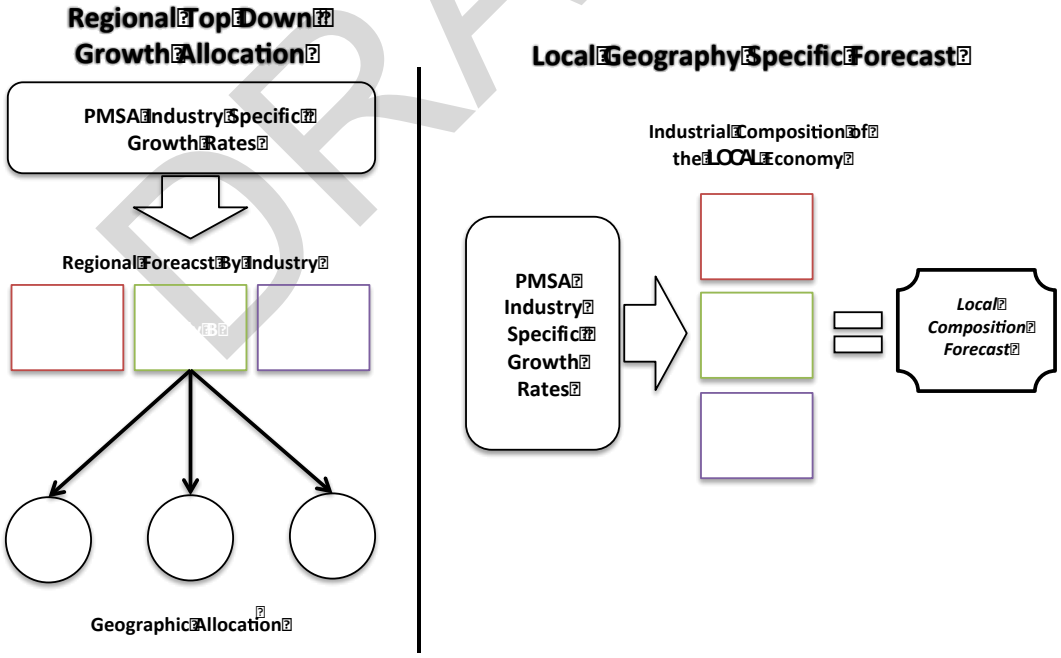
Building upon our assessment of economic trends and conditions, and identification of economic opportunities and targeted clusters, a series of employment forecasts was generated over the planning period (2015-2035). We have broken these forecasts into two categories, baseline and alternative forecasts. The baseline forecasts generally rely on third-party growth estimates at the sector level. The alternative forecasts reflect more opportunity driven scenarios that reflect trends among local industries, foundational firms, and the city's economic development policy direction.

Baseline Forecast:

Scenario I

The first forecast relies on regional growth rates outlined in the 2014 Draft Metro Urban Growth Report. In that analysis, growth forecasts were developed at the industry sector level for the entire Portland-Vancouver-Beaverton PMSA and then allocated down (top down approach) to unique geographies. Scenario I in this report relies on these macro variable based growth rates, but applies them to the specific industrial composition of the local economy.

FIGURE 6.01: OVERVIEW OF BASELINE EMPLOYMENT FORECAST APPROACH



Scenario II

Scenario II in this analysis uses the same local concentration approach as Scenario I. However, this scenario uses industry sector level forecasts from the Oregon Employment Department for Washington and Multnomah Counties. These forecasts are produced for the entire area, including areas outside of the UGB. However, we apply them only to the inside of the UGB base. Because the urban economic base is likely to grow at a faster rate than outside of the metro area, this forecast is likely to be conservative.

Forecast Results

The two forecasts vary significantly with respect to the magnitude of growth anticipated, with the Metro UGR estimate anticipating average annual growth at 1.0%, while the Oregon Employment Department's anticipated growth rates for the local industry mix is 1.4%. In addition, the distribution of growth across industries is also substantially different.

- The PMSA forecast (Scenario I) anticipates negligible growth in the manufacturing sector compared to a 0.7% expansion for Washington and Multnomah Counties forecasted by the Oregon Employment Department (Scenario II).

- The state forecasts are much more bullish on population serving industries than the PMSA forecasts. Growth rates for Finance, Real Estate, Professional Services, Education & Health, Leisure, and Retail, are all measurably higher in the Scenario II forecasts.

- Taken together, the forecast would represent an increase in the employment base of roughly 21% and 32% in Scenarios I and II, respectively.

- The Scenario II is the preferred scenario, and will be used in reconciling capacity relative to projected demand.

The UGR's breakout of growth by subarea shifts allocations by Transportation Analysis Zone (TAZ) based on capacity. As the Beaverton area's employment land is largely developed, this approach will tend to redistribute marginal growth to areas with more readily available capacity.

FIGURE 6.02: BASELINE GROWTH FORECASTS, CITY OF BEAVERTON (2014-2034)

SCENARIO 1	Forecast Year					'14-'34 Growth	
Industry	**2014**	**2019**	**2024**	**2029**	**2034**	**Jobs**	**AAGR**
Construction	2,049	2,202	2,367	2,543	2,733	684	1.5%
Manufacturing	6,412	6,496	6,582	6,668	6,756	344	0.3%
Wholesale Trade	3,801	4,063	4,342	4,641	4,961	1,160	1.3%
Retail Trade	10,971	11,341	11,723	12,118	12,527	1,556	0.7%
T.W.U.	2,331	2,473	2,623	2,782	2,951	620	1.2%
Information	4,251	4,490	4,742	5,008	5,289	1,038	1.1%
Finance & Insurance	3,986	4,104	4,225	4,350	4,479	493	0.6%
Real Estate & Rental Leasing	1,274	1,299	1,325	1,351	1,378	104	0.4%
Professional & Technical Servic	5,314	5,674	6,059	6,470	6,908	1,594	1.3%
Management of Companies	8,809	9,407	10,045	10,727	11,455	2,646	1.3%
Administration & Waste	7,022	7,499	8,007	8,551	9,131	2,109	1.3%
Education	6,205	6,466	6,739	7,022	7,318	1,113	0.8%
Health Care	13,046	13,725	14,439	15,191	15,982	2,936	1.0%
Arts, Entertainment, & Recreatic	2,315	2,404	2,496	2,592	2,692	377	0.8%
Accomodation & Food	6,933	7,199	7,476	7,763	8,061	1,128	0.8%
Other Services	2,937	3,076	3,222	3,375	3,535	598	0.9%
Public Administration	825	860	896	933	973	148	0.8%
TOTAL:	**88,481**	**92,777**	**97,308**	**102,086**	**107,127**	**18,646**	**1.0%**
SCENARIO 2	Forecast Year					'14-'34 Growth	
Industry	**2014**	**2019**	**2024**	**2029**	**2034**	**Jobs**	**AAGR**
Construction	2,049	2,289	2,558	2,857	3,192	1,143	2.2%
Manufacturing	6,412	6,626	6,846	7,074	7,310	898	0.7%
Wholesale Trade	3,801	4,032	4,277	4,537	4,813	1,012	1.2%
Retail Trade	10,971	11,508	12,072	12,663	13,283	2,312	1.0%
T.W.U.	2,331	2,415	2,502	2,593	2,686	355	0.7%
Information	4,251	4,479	4,720	4,973	5,240	989	1.1%
Finance & Insurance	3,986	4,177	4,378	4,588	4,808	822	0.9%
Real Estate & Rental Leasing	1,274	1,350	1,431	1,516	1,607	333	1.2%
Professional & Technical Servic	5,314	5,859	6,461	7,124	7,855	2,541	2.0%
Management of Companies	8,809	9,530	10,310	11,154	12,068	3,259	1.6%
Administration & Waste	7,022	7,765	8,588	9,497	10,502	3,480	2.0%
Education	6,205	6,575	6,966	7,381	7,821	1,616	1.2%
Health Care	13,046	14,320	15,719	17,254	18,939	5,893	1.9%
Arts, Entertainment, & Recreatic	2,315	2,458	2,610	2,771	2,942	627	1.2%
Accomodation & Food	6,933	7,462	8,032	8,646	9,306	2,373	1.5%
Other Services	2,937	3,128	3,332	3,548	3,779	842	1.3%
Public Administration	825	860	896	935	974	149	0.8%
TOTAL:	**88,481**	**94,835**	**101,697**	**109,111**	**117,126**	**28,645**	**1.4%**

The estimates in the preceding analysis are useful in creating a baseline understanding of macroeconomic growth prospects. They are common and broadly accepted approaches when looking at large geographic regions. After all, this approach is similar to the methodology used to produce the employment forecasts in Metro's Urban Growth Report and estimates for state budgeting purposes. However, forecasts grounded in broad based economic variables do not account for the realities of local businesses and trends among evolving industries. Industries continually evolve and new opportunities arise. Just ten years ago data centers barely existed in the Northwest, e-commerce business models such as Amazon were still being questioned as viable, social media was in its infancy, commercial aerial drones didn't exist, and the first smart phones were just being designed. Five years ago app development wasn't even an industry and most macro forecasts had the information sector (includes software publishing) declining or exhibiting flat growth. Any long-term forecast is wrought with uncertainty, and subject to inherent error.

The extent to which a forecast reflects discrete information about companies and industries can reduce error bands while providing value-added direction on how policy can influence outcomes.

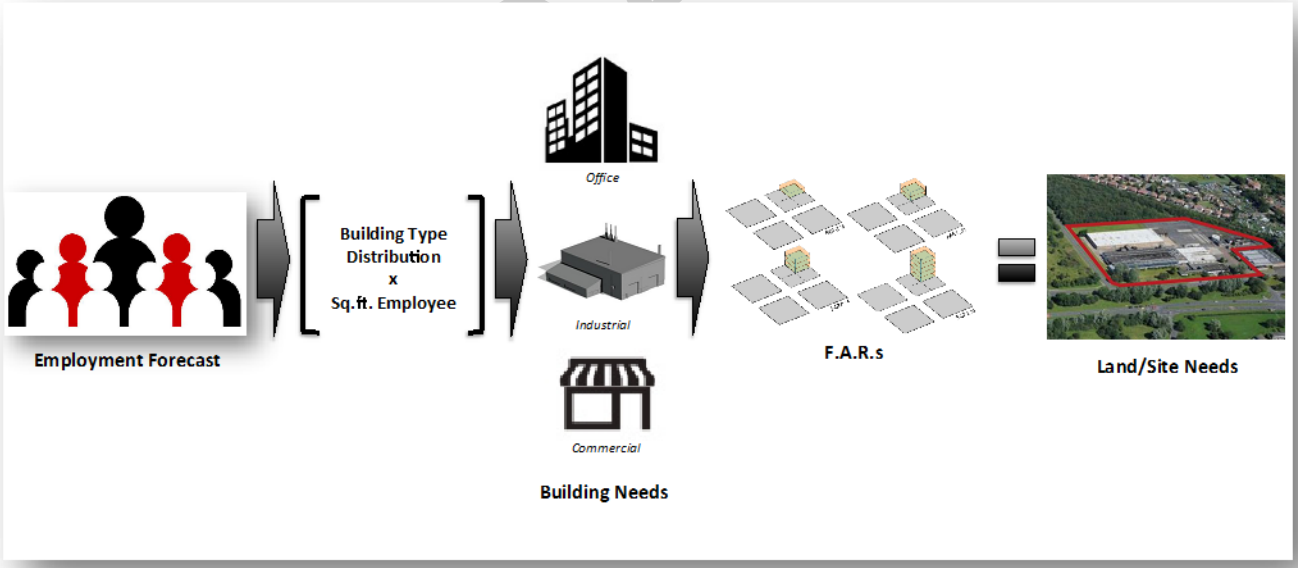
EMPLOYMENT LAND FORECAST

The next analytical step in our analysis is to convert projections of employment into forecasts of land demand over the planning period. The generally accepted methodology for this conversion begins by allocating employment by sector into a distribution of building typologies those economic activities usually locate in. As an example, insurance agents typically locate in traditional office space, usually along commercial corridors. 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.

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

FIGURE 6.03: EMPLOYMENT FORECAST TO LAND DEMAND METHODOLOGY



Baseline Land Demand Analysis

Similar to how baseline employment forecasts followed assumptions in the Urban Growth Report, we maintain that trend here. Specifically, the UGR outlined assumptions a distribution of employment by sector into six building typologies, provided general assumptions about square feet per employee for these typologies, and indicated a series of Floor Area Ratios (FARs) to complete the conversion process. However, we note several limitations and caveats here:

- The baseline distribution matrix includes six typologies:
    - Traditional Office (commercial)
    - Institutional (commercial)
    - Flex/Business Park (industrial)
    - General Industrial (industrial)
    - Warehouse (industrial)
    - Retail (commercial)

  These development typologies do not include broad diversity within individual sectors. In reality there is considerable difference between many development forms within these categories.

- The designation of an entire typology into a land class is limiting. In reality some of these typologies cross over land categories, particularly industries in institutional uses that locate on both commercial and industrial land.

As outlined in the following series of tables, employment growth by industrial classification was allocated to general building typology for both scenarios, under both a five-year as well as a twenty-year planning horizon.

FIGURE 6.04: BASELINE LAND DEMAND FORECASTS

SCENARIO 1	Five-Year Forecast						20-Year Forecast					
Industry	Flex	General Manuf.	Warehouse/ Distribution	Retail	Office	Institutional	Flex	General Manuf.	Warehouse/ Distribution	Retail	Office	Institutional
Construction	28	61	28	15	21	0	123	274	123	68	96	0
Manufacturing	20	51	7	0	7	0	83	206	28	0	28	0
Wholesale Trade	58	52	105	26	21	0	255	232	464	116	93	0
Retail Trade	22	0	44	281	18	4	93	0	187	1,182	78	16
T.W.U.	17	18	78	7	21	0	74	81	341	31	93	0
Information	60	95	0	24	60	0	259	415	0	104	259	0
Finance & Insurance	6	1	1	24	85	1	25	5	5	99	355	5
Real Estate & Rental Leasing	1	0	0	5	18	0	5	1	1	21	75	1
Professional & Technical Services	18	4	4	72	259	4	80	16	16	319	1,148	16
Management of Companies	48	0	0	48	472	30	212	0	0	212	2,090	132
Administration & Waste	24	5	5	95	343	5	105	21	21	422	1,518	21
Education	13	3	3	26	78	138	56	11	11	111	334	590
Health Care	14	0	0	102	204	360	59	0	0	440	881	1,556
Arts, Entertainment, & Recreation	9	0	0	49	31	0	38	0	0	207	132	0
Accomodation & Food	19	3	3	186	53	3	79	11	11	790	226	11
Other Services	7	1	1	28	100	1	30	6	6	120	431	6
Public Administration	2	0	0	5	15	12	7	1	1	22	63	52
TOTAL:	**364**	**295**	**278**	**994**	**1,808**	**558**	**1,583**	**1,281**	**1,215**	**4,263**	**7,899**	**2,406**
	INDUSTRIAL			COMMERCIAL			INDUSTRIAL			COMMERCIAL		

SCENARIO 2	Five-Year Forecast						20-Year Forecast					
Industry	Flex	General Manuf.	Warehouse/ Distribution	Retail	Office	Institutional	Flex	General Manuf.	Warehouse/ Distribution	Retail	Office	Institutional
Construction	43	96	43	24	34	0	206	457	206	114	160	0
Manufacturing	51	128	17	0	17	0	216	539	72	0	72	0
Wholesale Trade	51	46	92	23	18	0	223	202	405	101	81	0
Retail Trade	32	0	64	408	27	5	139	0	277	1,757	116	23
T.W.U.	10	11	46	4	13	0	43	46	196	18	53	0
Information	57	91	0	23	57	0	247	396	0	99	247	0
Finance & Insurance	10	2	2	38	138	2	41	8	8	164	592	8
Real Estate & Rental Leasing	4	1	1	15	55	1	17	3	3	67	239	3
Professional & Technical Services	27	5	5	109	393	5	127	25	25	508	1,830	25
Management of Companies	58	0	0	58	570	36	261	0	0	261	2,574	163
Administration & Waste	37	7	7	149	535	7	174	35	35	696	2,506	35
Education	18	4	4	37	111	196	81	16	16	162	485	857
Health Care	25	0	0	191	382	675	118	0	0	884	1,768	3,123
Arts, Entertainment, & Recreation	14	0	0	79	50	0	63	0	0	345	219	0
Accomodation & Food	37	5	5	371	106	5	166	24	24	1,661	475	24
Other Services	10	2	2	38	138	2	42	8	8	168	606	8
Public Administration	2	0	0	5	15	12	7	1	1	22	64	52
TOTAL:	**487**	**399**	**290**	**1,572**	**2,658**	**948**	**2,169**	**1,762**	**1,277**	**7,027**	**12,087**	**4,322**
	INDUSTRIAL			COMMERCIAL			INDUSTRIAL			COMMERCIAL		

FIGURE 6.05: PROJECTED SPACE DEMAND BY BUILDING TYPOLOGY, FIVE AND TWENTY YEAR PLANNING HORIZONS

	SCENARIO 1	5-Year Forecast				20-Year Forecast			
	Building Type	Employment Growth	SF/ Employee	Stablized Occupancy	Projected Demand (SF)	Employment Growth	SF/ Employee	Stablized Occupancy	Projected Demand (SF)
INDUSTRIAL	Flex	364	625	90%	252,674	1,583	625	90%	1,099,254
	General Man	295	800	90%	262,030	1,281	800	90%	1,138,264
	Warehouse	278	1250	90%	386,054	1,215	1250	90%	1,687,337
	Total Industrial:	***937***	***866***		***900,758***	***4,078***	***866***		***3,924,856***
COMMERCIAL	Retail	994	450	90%	496,803	4,263	450	90%	2,131,728
	Office	1,808	300	90%	602,648	7,899	300	90%	2,632,945
	Institutional	558	500	90%	309,967	2,406	500	90%	1,336,426
	Total Commercial:	***3,359***	***378***		***1,409,418***	***14,568***	***377***		***6,101,099***

	SCENARIO 2	5-Year Forecast				20-Year Forecast			
	Building Type	Employment Growth	SF/ Employee	Stablized Occupancy	Projected Demand (SF)	Employment Growth	SF/ Employee	Stablized Occupancy	Projected Demand (SF)
INDUSTRIAL	Flex	487	625	90%	338,087	2,169	625	90%	1,506,315
	General Man	399	800	90%	355,108	1,762	800	90%	1,566,181
	Warehouse	290	1250	90%	403,199	1,277	1250	90%	1,773,318
	Total Industrial:	***1,177***	***839***		***1,096,393***	***5,208***	***837***		***4,845,814***
COMMERCIAL	Retail	1,572	450	90%	786,079	7,027	450	90%	3,513,706
	Office	2,658	300	90%	885,879	12,087	300	90%	4,029,124
	Institutional	948	500	90%	526,493	4,322	500	90%	2,401,179
	Total Commercial:	***5,177***	***382***		***2,198,451***	***23,437***	***382***		***9,944,009***

FIGURE 6.06: PROJECTED LAND DEMAND BY BUILDING TYPOLOGY, FIVE AND TWENTY YEAR PLANNING HORIZONS

	SCENARIO 1	5-Year Forecast			20-Year Forecast		
	Building Type	Space Demand (SF)	Average F.A.R.	Projected Demand (Acres)	Space Demand (SF)	Average F.A.R.	Projected Demand (Acres)
INDUSTRIAL	Flex	252,674	0.33	17.8	1,099,254	0.33	77.6
	General Man	262,030	0.33	18.5	1,138,264	0.33	80.4
	Warehouse	386,054	0.33	27.3	1,687,337	0.33	119.1
	Total Industrial:	***900,758***	***3.08***	***63.6***	***3,924,856***	***3.08***	***277.1***
COMMERCIAL	Retail	496,803	0.34	33.8	2,131,728	0.34	145.0
	Office	602,648	0.40	34.4	2,632,945	0.40	150.2
	Institutional	309,967	0.60	11.9	1,336,426	0.60	51.5
	Total Commercial:	***1,409,418***	***2.48***	***80.1***	***6,101,099***	***2.47***	***346.6***

	SCENARIO 2	5-Year Forecast			20-Year Forecast		
	Building Type	Space Demand (SF)	Average F.A.R.	Projected Demand (Acres)	Space Demand (SF)	Average F.A.R.	Projected Demand (Acres)
INDUSTRIAL	Flex	338,087	0.33	23.9	1,506,315	0.33	106.4
	General Man	355,108	0.33	25.1	1,566,181	0.33	110.6
	Warehouse	403,199	0.33	28.5	1,773,318	0.33	125.2
	Total Industrial:	***1,096,393***	***3.08***	***77.4***	***4,845,814***	***3.08***	***342.1***
COMMERCIAL	Retail	786,079	0.34	53.5	3,513,706	0.34	239.0
	Office	885,879	0.40	50.5	4,029,124	0.40	229.8
	Institutional	526,493	0.60	20.3	2,401,179	0.60	92.5
	Total Commercial:	***2,198,451***	***2.46***	***124.3***	***9,944,009***	***2.46***	***561.2***

In Figure 6.04, the five and twenty year employment forecasts by sector is converted to employment by development typology. Figure 6.05 then converts employment growth by development typology into square foot of demand based on an assumed average square foot per employee and assuming a 90% stabilized occupancy rate. This yields projected short-term (5-year) and long-term (20-year) demand projections by building type under both prospective growth scenarios. The forecast is then translated into land need, expressed in acreage (Figure 6.06). This is based on assumed Floor Area Ratios (FAR) by product type.

The demand projections indicate the following needs over the five- and twenty-year horizons:

FIGURE 6.07: SUMMARY OF FORECASTED EMPLOYMENT NEED, CITY OF BEAVERTON USB

Category	Five-Year Demand		Twenty-Year Demand	
Building Type	Square Feet	Acres	Square Feet	Acres
Industrial				
Flex	338,087	23.9	1,506,315	106.4
General Manufacturing	355,108	25.1	1,566,181	110.6
Warehouse	403,199	28.5	1,773,318	125.2
Total-Industrial	1,096,393	77.4	4,845,814	342.1
Commercial				
Retail	786,079	53.5	3,513,706	239.0
Office	885,879	50.5	4,029,124	229.8
Institutional	526,493	20.3	2,401,179	92.5
Total- Commercial	2,198,451	124.3	9,944,009	561.2
Overall Total	3,294,845	201.7	14,789,824	903.4

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:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 15%.

- 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.

- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology.

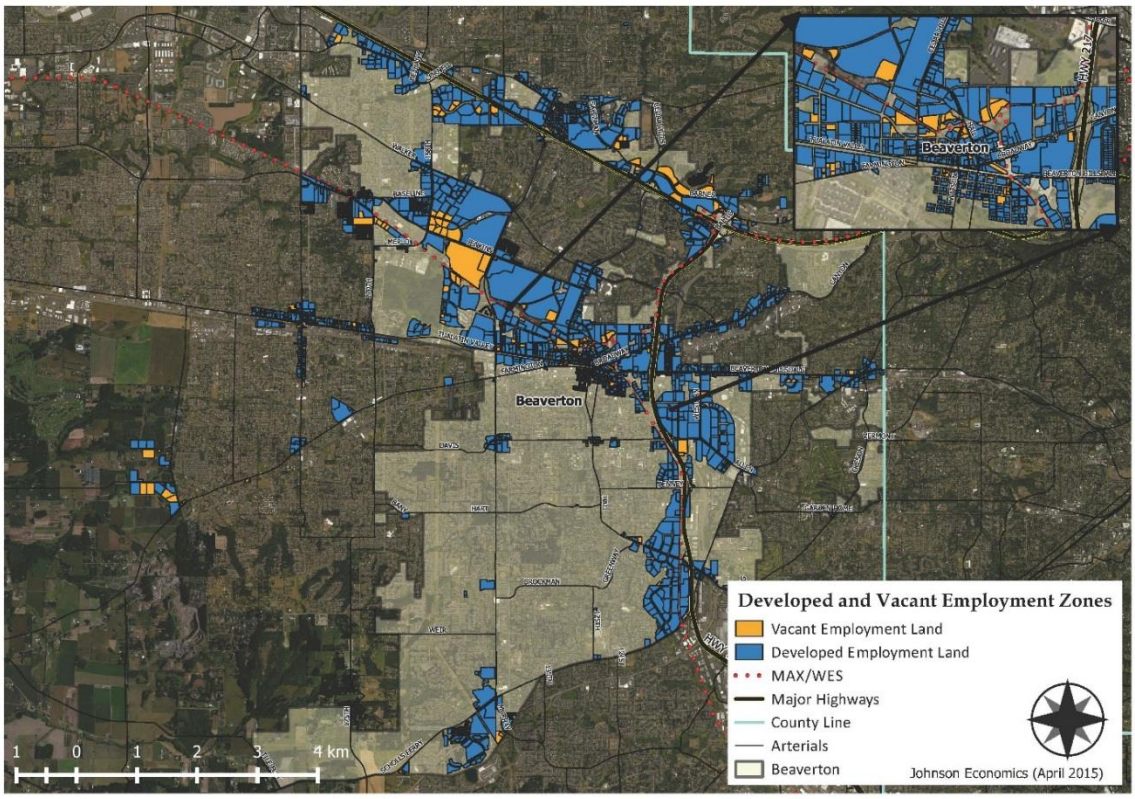
- Fiber telecommunications networks are likely to be increasingly required in site selection criteria for many commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

VII. BUILDABLE LAND INVENTORY

The City of Beaverton completed a buildable lands inventory within its Urban Service Boundary (USB) during the first quarter of 2015, documenting the city's vacant and developable land supply. This section summarizes the inventory and associated capacity to accommodate employment growth.

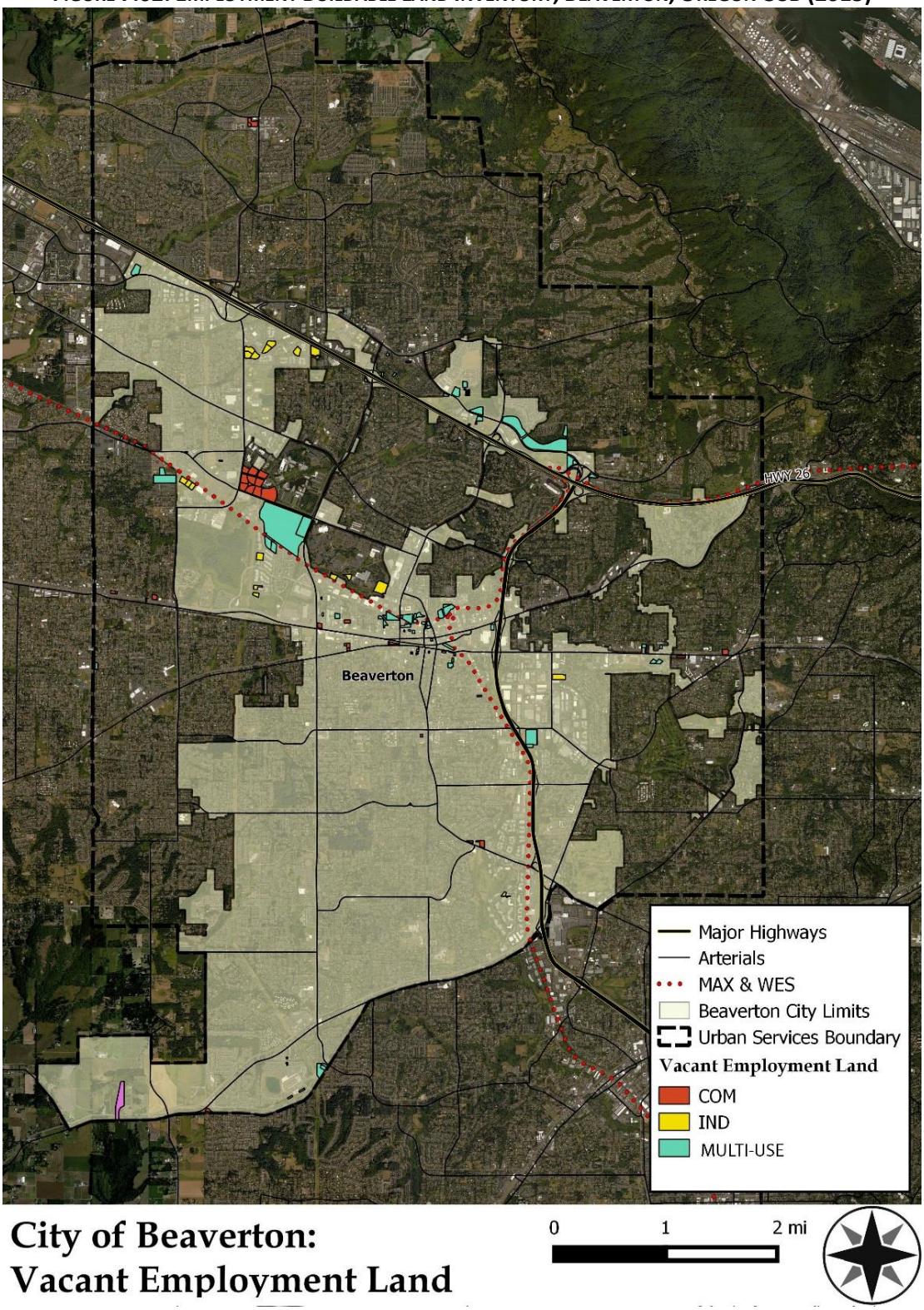
The City of Beaverton's capacity for additional employment growth is represented by a limited supply of vacant property, most notably near Nike and Highway 26, as well as development sites within downtown Beaverton. The remaining capacity is largely associated with likely redevelopment of properties with relatively low current improvement values. These include older structures as well as a significant level of older industrial parks that have the potential to increase their intensity of use over time.

FIGURE 7.01: DEVELOPED AND VACANT EMPLOYMENT PROPERTY, CITY OF BEAVERTON USB



Vacant and developable property typically represents the primary capacity of a jurisdiction for new employment. Within the city's USB, vacant and developable property that can accommodate employment uses are currently quite limited. The following map shows the identified vacant parcels by generalized zoning designation. These designations reflect categories developed by Metro to standardize zoning across multiple jurisdictions. The multi-use designation reflects zones that allow employment and residential uses.

FIGURE 7.02: EMPLOYMENT BUILDABLE LAND INVENTORY, BEAVERTON, OREGON USB (2015)



Source: City of Beaverton, Johnson Economics

The City's recently completed Buildable Lands Inventory (BLI) shows a total of 392 vacant acres within the City's Urban Service Boundary, representing 10.5% of the total inventory of sites zoned for employment uses in the area. The vacant inventory includes a total of 419 parcels, reflecting an average parcel size of 0.9 acres. The inventory includes only one vacant parcel greater than 25 acres in size, and one site between 10 and 25 acres in size.

As part of our analysis, we used the BLI information to assess the extent to which properties would be plausible candidates for redevelopment. This analysis was based on an assumed threshold price, which would be reflective of the market value of the underlying property under a new development scenarios. The Real Market Value (RMV) per square foot of developable property was compared to this assumed threshold price, and properties in which the RMV was below the threshold price were designated as having redevelopment potential. The assumed threshold land values were assumed as follows:

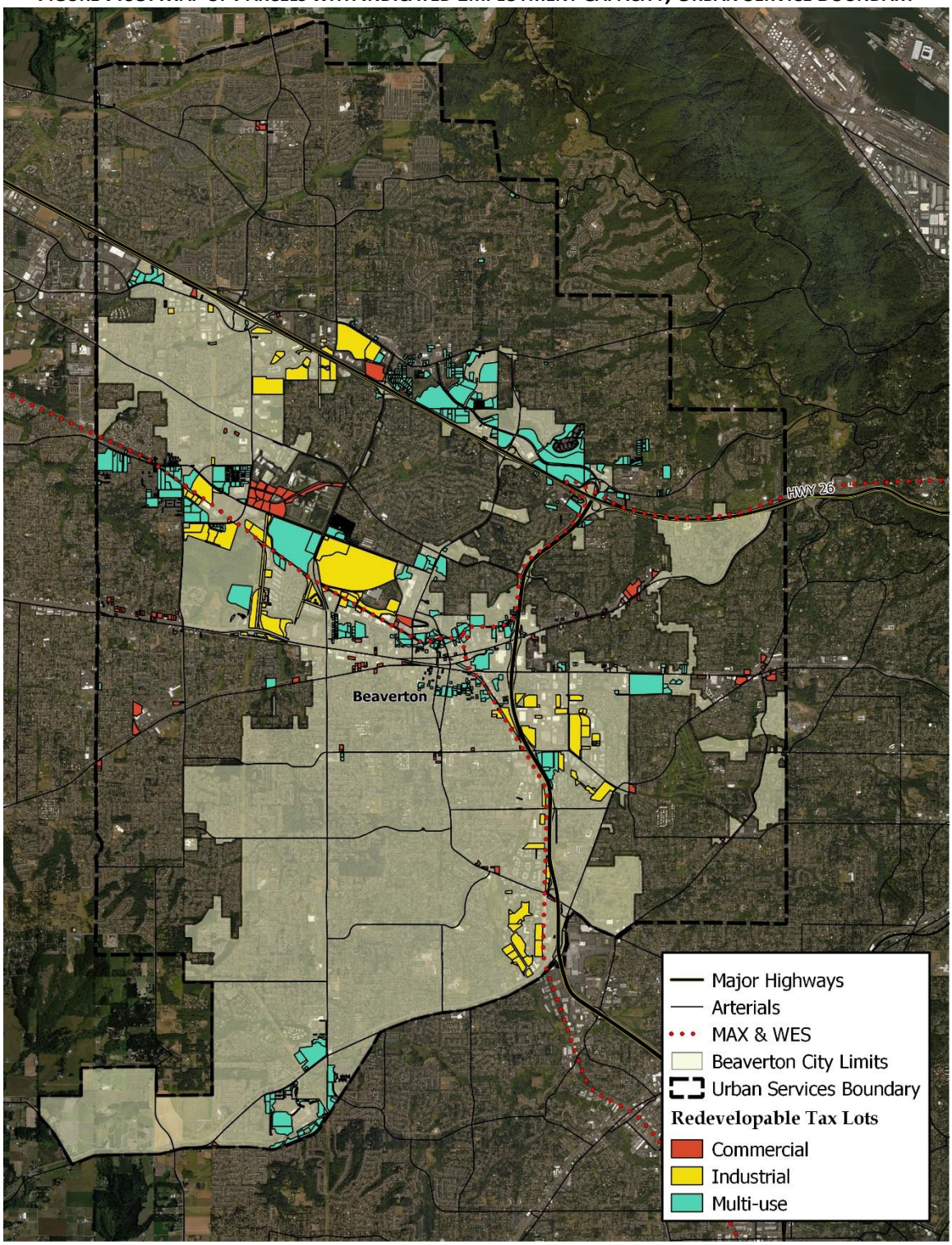
General Use	Generalized Categories	Threshold Price
Commercial	MUR, CC, CG, CN	$20 PSF
Office Commercial	CO	$15 PSF
Industrial	IL, IO	$8 PSF

The threshold rates are highly generalized, but allow for the identification of parcels that have the potential to redevelop with a higher intensity of use. Identification of a parcel as having redevelopment potential indicates a higher likelihood of redevelopment, and that these sites have the potential to provide additional capacity to meet future needs. Redevelopment is inherently more challenging than green-field development, and this potential capacity should be discounted vis-à-vis capacity in vacant sites.

This analysis yielded an additional 839 acres that would be considered to be potentially redevelopable within the USB, of which 602 acres are within the City of Beaverton. For purposes of this analysis, we discounted the capacity of the redevelopment acreage by half to reflect the loss of existing improvements at redevelopment, as well as the likelihood that non-economic reasons will keep these sites from redeveloping over the planning horizon.

Parcels identified as having redevelopment potential in addition to vacant sites are outlined in the following map:

FIGURE 7.03: MAP OF PARCELS WITH INDICATED EMPLOYMENT CAPACITY, URBAN SERVICE BOUNDARY



The preceding maps include commercial property adjacent to the Nike Campus that is not technically in the city's USB, and which is currently being developed.

The following tables summarize the BLI for employment uses in the City of Beaverton's urban services boundary, as well as in the current city limits:

FIGURE 7.04: EMPLOYMENT BUILDABLE LAND INVENTORY, BY GENERALIZED ZONE
URBAN SERVICE BOUNDARY (2015)

URBAN SERVICES BOUNDARY	Zoning Code								
	MUR	CC	CG	CN	CO	IC	IL	IO	Total
Developed Acreage	1,495.3	370.8	221.6	56.5	41.3	173.9	572.8	376.2	3,308.4
Vacant Acreage	280.2	37.1	9.3	2.4	1.8	0.2	13.7	47.1	392.0
Parcels									
Developed	2,832	285	168	98	93	43	148	106	3,773
Vacant	323	39	16	5	4	2	11	19	419
Avg. Parcel Size									
Developed	0.5	1.3	1.3	0.6	0.4	4.0	3.9	3.5	0.9
Vacant	0.9	1.0	0.6	0.5	0.5	0.1	1.2	2.5	0.9
Vacant Parcel Distribution by Size									
< 1 acres	270	25	15	5	3	2	7	2	329
1-5 acres	44	14	1	0	1	0	4	15	79
6-10 acres	7	0	0	0	0	0	0	2	9
11-25 acres	1	0	0	0	0	0	0	0	1
25 + acres	1	0	0	0	0	0	0	0	1
Redevelopment Capacity									
Threshold Price Assumption:	$20	$20	$20	$20	$15	$8	$8	$8	
Potential Redevelopable Acres:	448.2	46.5	39.1	5.8	2.1	48.1	216.3	33.3	839

SOURCE: City of Beaverton's Buildable Lands Inventory

FIGURE 7.05: EMPLOYMENT BUILDABLE LAND INVENTORY, BY GENERALIZED ZONE
CITY OF BEAVERTON, OREGON (2015)

CITY OF BEAVERTON	Zoning Code								
	MUR	CC	CG	CN	CO	IC	IL	IO	Total
Developed Acreage	1,047.6	0.0	178.4	56.5	0.6	173.9	303.6	376.2	2,136.8
Vacant Acreage	161.8	0.0	8.9	2.4	0.0	0.2	5.3	47.1	225.7
Parcels									
Developed	1,566	0	112	98	1	43	105	106	2,031
Vacant	243	0	15	5	0	2	7	19	291
Avg. Parcel Size									
Developed	0.7	0.0	1.6	0.6	0.6	4.0	2.9	3.5	1.1
Vacant	0.7	0.0	0.6	0.5	0.0	0.1	0.8	2.5	0.8
Vacant Parcel Distribution by Size									
< 1 acres	219	0	14	5	0	2	5	2	247
1-5 acres	18	0	1	0	0	0	2	15	36
6-10 acres	5	0	0	0	0	0	0	2	7
11-25 acres	0	0	0	0	0	0	0	0	0
25 + acres	1	0	0	0	0	0	0	0	1
Redevelopment Capacity									
Threshold Price Assumption:	$20	$20	$20	$20	$15	$8	$8	$8	
Potential Redevelopable Acres:	239.8	0.0	25.6	5.8	0.0	49.5	175.5	106.0	602

SOURCE: City of Beaverton's Buildable Lands Inventory

The City of Beaverton accounts for 65% of developed acreage, and 58% of vacant acreage within the USB.

FIGURE 7.06: CAPACITY, USB AND CITY

	USB	CITY	% USB
Developed Acreage	3,308.4	2,136.8	65%
Vacant Acreage	392.0	225.7	58%
Vacant Parcel Distribution by Size			
< 1 acres	329	247	75%
1-5 acres	79	36	46%
6-10 acres	9	7	78%
11-25 acres	1	0	0%
25 + acres	1	1	100%
Potential Redevelopable Acres:	839	602	72%

Both the USB and city's inventory are somewhat unusual in that the remaining capacity is weighted more towards redevelopment than vacant property. In terms of vacant land, the USB has approximately 11.8% of its land that is undeveloped, while the ratio within Beaverton is 10.6%. As a result, future economic growth is largely dependent upon a significant level of redevelopment and/or intensification of uses on already developed sites.

VIII. RECONCILIATION OF NEED AND CAPACITY

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 (1) to assess whether the City of Beaverton 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 are supportable, as well as information to develop policy measures to increase the available employment land supply and/or increase the intensity of marginal development.

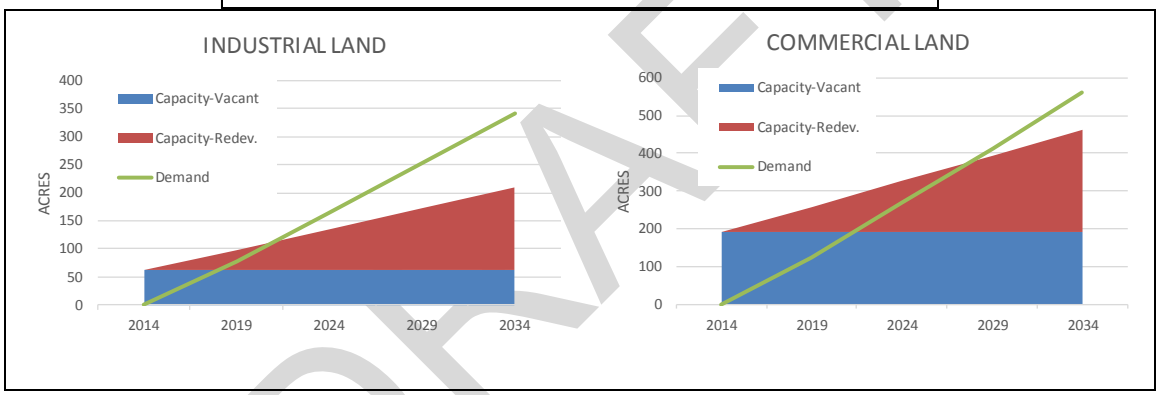
In this section we compared the existing supply of buildable industrial and commercial acreage over the planning period for the assumed growth scenario. **It is important to remember that the different categories of employment land are not (necessarily) substitutable.** For instance, a shortage of 10 acres of commercial land, and a surplus of 10 acres of industrial land do not cancel each other.

For the purposes of this analysis, we use what has previously been referred to as Scenario 2 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.

Figure 8.1 shows the findings of land need for commercial, industrial and institutional uses based on the employment growth scenario. Institutional uses include hospitals, assisted living and other care facilities, post-secondary education facilities, etc. Under the assumed employment growth scenario, the capacity within the USB is insufficient to accommodate the projected aggregate twenty year needs for both commercial and industrial uses.

FIGURE 8.1: RECONCILIATION OF PROJECTED 5- AND 20-YEAR LAND NEED AND EXISTING SUPPLY

	Land Demand (acres)		Vacant	Redev.
	5-Year	20-Year	Acres	Capacity
Industrial				
Flex	23.9	106.4		
General Manufacturing	25.1	110.6		
Warehouse	28.5	125.2		
Total	77.4	342.1	61.1	148.9
Commercial				
Retail	53.5	239.0		
Office	50.5	229.8		
Institutional	20.3	92.5		
	124.3	561.2	190.8	270.9



The preceding charts assume that all vacant property is available, and that redevelopment capacity will be realized over time during the planning horizon. As illustrated, the projected capacity shortfall is most pronounced for industrial land, with the current capacity likely to be adequate to meet needs over a five year horizon, but unlikely to meet longer term needs. Commercial capacity can accommodate projected demand for a longer period of time. Redevelopment capacity is often not counted in determining short-term needs, as this property is often difficult to develop and not readily available. Excluding redevelopment capacity indicates a short-term supply shortage for industrial space in the USB.

For both major land uses, extensive redevelopment assumptions are required to expand capacity. Redevelopment is difficult to project, and subject to a number of property specific variables. These include owner disposition, lease restrictions, and market factors.

Of the target industries identified, only activewear and apparel and high-tech manufacturing are likely to have highly specific site requirements. Much of the existing capacity within and proximate to the USB is on sites adjacent to Nike's campus, and currently under control by Nike. For high tech manufacturing, the city's lack of large sites will likely limit potential for this target industry, but even without a major new

anchor manufacturer, Beaverton is well positioned to benefit from the expansion of support industries associated with this cluster.

Employment Land Need Conclusion

The reconciliation of projected employment needs and available capacity results in a projected shortage of a total of 132 acres of industrial land and 100 acres of commercial property by 2034. This 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 identical to what is demanded. 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.

IX. RECOMMENDATIONS

The preceding analysis has several key conclusions with respect to the projected need for employment land in the City of Beaverton's USB, as well as capacity to meet that need.

- The City of Beaverton strengths include an outstanding resident workforce as well as a highly regarded school district. The local work force is relatively young and well educated, compared to the State of Oregon as a whole as well as Washington County. The Beaverton School District is highly marketable within the region, supporting a continued ability to attract a quality work force. In addition, it has access to the Highway 26, Highway 217 and Interstate 5 corridors, while Tri-Met's MAX line and WES commuter rail provides reliable connections to downtown Portland, as well major employers throughout Washington and Clackamas Counties.

- The City has significant strength and potential for growth in several key industries. Identified target industry clusters include: activewear; media, advertising and film production; software and information technology; high-tech manufacturing; business support and back office operations; and medical device, health care, and biotechnology.

- Beaverton'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 vitality of the downtown core is important for more than accommodating additional employment, as a desirable downtown district can serve as a significant amenity for firms as well as residents. The City has done extensive planning on downtown opportunities, and should continue to pursue development in the district that increases the marketability of the community. In the short-term, this may be weighted more towards residential development, which is typical in this type of district. 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. Municipal investments in the area such as new facilities can help to catalyze a positive investment cycle when market conditions are still evolving, through increasing visibility and activity levels in the district. The City's Central Beaverton Urban Renewal Area (URA) provides a tool for intervention to support public policy objectives in the area.

- The City's primary challenge in attracting and retaining new growth is a limited inventory of vacant and developable sites. Many of the jurisdiction's 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 still considerable value of the 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.

- Over the next twenty years, employment in the USB is expected to grow at an average annual rate of 1.4%, reflecting a net increase of 28,645 jobs. This is expected to require 342 acres of industrial land, and 561 acres of commercial land to accommodate this growth.

- Vacant and developable acreage within the city and USB is insufficient to accommodate this projected growth. For industrial demand, current vacant land supply is insufficient to meet short-term (5-year) needs, while vacant commercial capacity is consumed in less than ten years.

- The City's ability to accommodate employment needs will be heavily reliant upon redevelopment of properties, as almost 90% of employment land has already been developed. Due to age and quality of construction, the existing inventory of space has suffered competitively vis-à-vis space in neighboring jurisdictions, which have experienced higher occupancy and lease rates.

- 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 City can encourage targeted development through mechanisms such as a relaxation of fees and an expedited review process. In addition, the City can work to limit potential conflicting and competitive uses that may discourage targeted conversions and investments.

The City's 2010 EOA included a series of recommended guiding principles. These have been reorganized and modified in the following table:

BROAD CATEGORY Guiding Principle	Description
LOCAL QUALITY OF LIFE	
Local Economic Opportunities	Actively encourage a range of local employment opportunities with the City, with a focus on targeted industries as well as related support industries.
Cultural Diversity	Embrace and build on Beaverton's existing diversity for comparative economic advantage, quality of life, and civic buzz. Celebrate cultural distinction together with varied in-city options for resident employment, neighborhood living, and community gathering.
Educational Excellence	Maintain and enhance Beaverton's edge of a highly educated adult work force. Create seamless links to network local K-12 and regional higher education 100% in synch with work force requirements posed by existing and prospective employers. Coordinate with groups such as OTBC and PCC to provide supportive workforce training opportunities.
Urban Character	Reshape Beaverton as the most vibrant of the Portland metro region's first tier suburbs. Offer multiple live, work and recreation options including but not limited to a compact, walkable, 24/7 downtown attracting young families as well as established households and urban singles.
Community Branding	Brand Beaverton as the go to place for high wage jobs benefitting city residents, entrepreneurial creativity, and business-community partnerships.

BROAD CATEGORY Guiding Principle	Description
ECONOMIC DEVELOPMENT	
Strong Job Growth	Aim for a growth scenario that at least maintains Beaverton's current share of regional employment and a strong jobs-housing balance with emphasis on higher wage employment options. Maintaining the historic share of regional growth will be highly challenging due to the City's capacity constraints.
Maintain and Improve the Local Business Environment	Work to maintain Beaverton as a community with: efficient, responsive, supportive and effective local government; strong educational options; varied and quality housing opportunities; extensive commercial amenities; and transportation infrastructure supporting worker commutes as well as the movement of goods.
Business Retention and Assistance	Provide support for local businesses along their entire growth path. Actively reach out to local businesses to assess current and anticipated needs, and work to assure that to the extent possible there are local options to accommodate those needs.
Economic Resilience	Prioritize rapid recycling of vacant and underutilized properties offering demonstrated development interest and employment potential. Potential strategies may include a waiver or reduction off fees for re-tenanting of existing spaces.
Actively Support Target Industries	Provide support for targeted industries, as well as their specific needs. Organize regular outreach to industry representatives. Utilize available incentive programs.
Incentives Toolkit	Expand and apply tools ranging from one-to-one business services to downtown urban renewal to community-wide infrastructure investment for targeted economic development. Utilize the City's tool and programs towards this end, including the Beaverton Urban Renewal Area, Enterprise Zone, Workforce Assistance Program, Downtown Improvement Program, and the Beaverton Brownfields Program.
Establish and Monitor Metrics to Track Performance	Monitor annual employment growth as data is available, and track progress by industry and market share against established jurisdictional goals. Set City capital improvement thresholds and regularly monitor performance for return on investment – measured in terms of added jobs and payroll for Beaverton residents, added City revenues versus costs, and net added community benefit.

BROAD CATEGORY Guiding Principle	Description
CAPACITY	

Growing Up, Not Out	Recognizing Beaverton's constrained land resources and existing commitment to the Region 2040 Growth Concept, coordinate with Metro and local jurisdictions seeking to focus regional industrial and commercial development within the existing UGB whenever possible. Cooperate with options for large site, traded sector investment not accommodated within the existing UGB but clearly benefitting the entire metro region.
Encourage the Utilization of the City's Employment Capacity	Encourage redevelopment and intensification of uses in developed areas, including the central city as well as the city's extensive inventory of flex space industrial/business parks. Evaluate the regulatory environment to minimize the impact of uses that can conflict with or negatively impact targeted industries. Continue to work towards transitioning brownfield sites into viable redevelopment sites to support local employment demands.
Redevelopment	Accommodate the majority of net added employment via redevelopment of existing industrial and commercial sites rather than greenfield development. Cluster retail to facilitate redevelopment of underutilized commercial sites for Class A multi-level office/service, business park and flex space development. Assure just-in-time capacity for supportive transportation and utility infrastructure.

Beaverton Enterprise Zone 2 Industrial Analysis

September 2012

Prepared by

9220 SW Barbur Boulevard
Portland, Oregon 97219
503.636.1659
www.marketekinc.com

With Appreciation

This report was prepared in collaboration with the City of Beaverton Community and Economic Development staff: Alma Flores, Amy Koski and Katie Lantz

Contents

Introduction

Project Goal: To create an accurate and *realistic* picture of the competitiveness of Beaverton's Enterprise (E) Zone 2 as an industrial location.

Background

The City of Beaverton submitted an application for the State's Enterprise Zone Program in June 2012. Effective July 1, 2012, the City's application was approved. There are six zone areas that make up the Beaverton Enterprise Zone highlighted below. Enterprise Zone 2 was selected as phase one of the industry analysis that will be conducted for each of the other zone areas in the future.

Enterprise Zone Area 1 - Located north of Tualatin Valley Hwy and west of Murray Blvd, the area includes access to light rail and nearly 20 acres of redevelopable land.

Enterprise Zone Area 2 - Situated east Hwy 217 and south of Beaverton-Hillsdale Hwy, this industrial park offers a variety of existing industrial and flex space as well as vacant and redevelopable land.

Enterprise Zone Area 3 - Includes an area east of Hwy 217 just south of Denney Rd with convenient transportation and a parcel of vacant land.

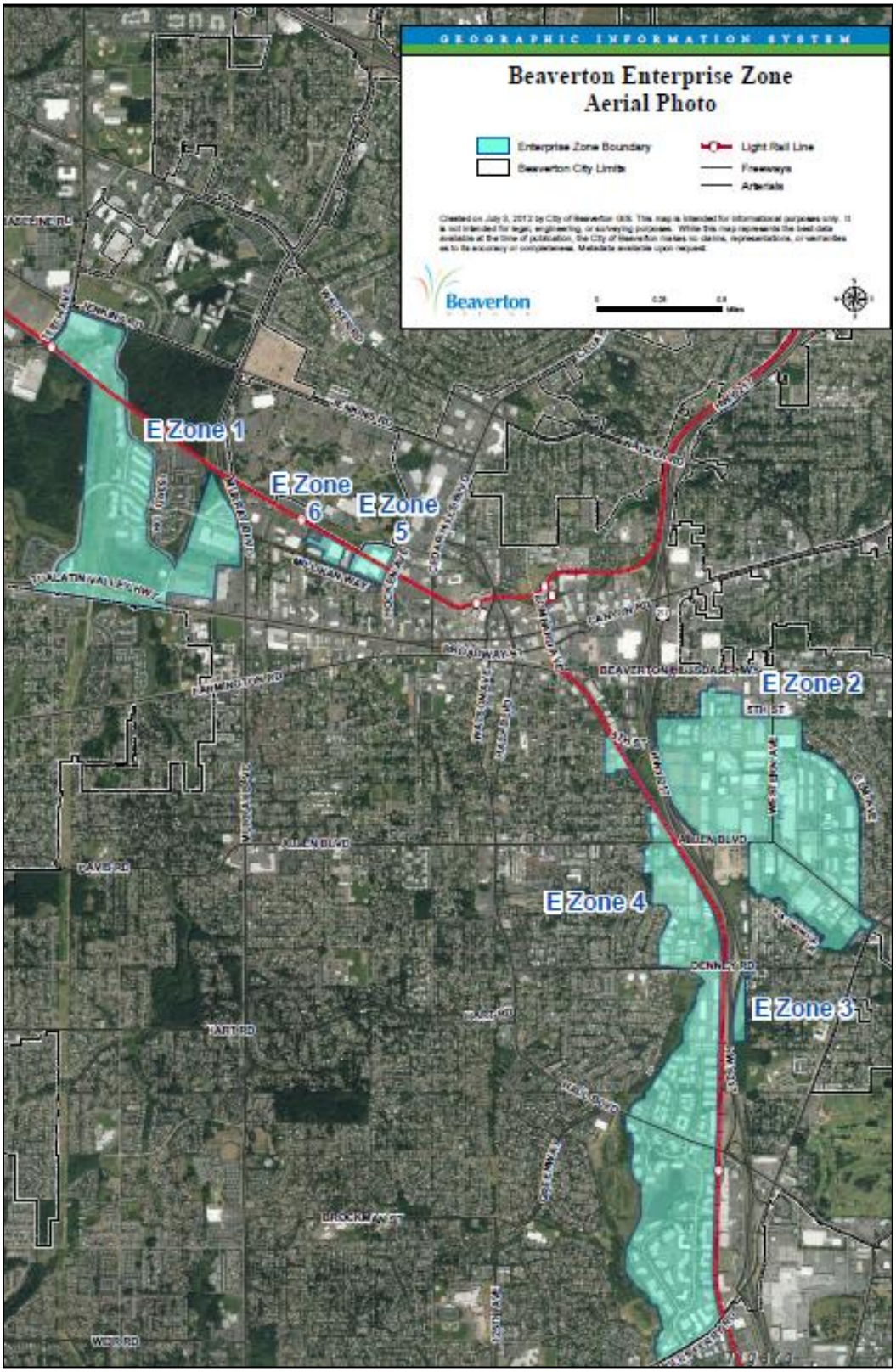
Enterprise Zone Area 4 - The largest area within the Beaverton Enterprise Zone, Zone Area 4 runs along Hwy 217 on the east from 5th St to Scholls Ferry Rd. More than six acres of vacant or redevelopable land are available and two vacant building are within the boundary.

Enterprise Zone Area 5 - Located at Millikan Way and Hocken Ave, this area includes a vacant building with more than five acres.

Enterprise Zone Area 6 - Adjacent to Zone Area 5, this parcel is next to light rail.

The map that follows portrays the six areas.

Map 1. Beaverton Enterprise Zones



Source: City of Beaverton

Methodology

As Beaverton's industrial expansion efforts in Enterprise Zone (E Zone) 2 will be implemented over time, the study considers broad next steps for the short term (18 months) and longer term. Project research included:

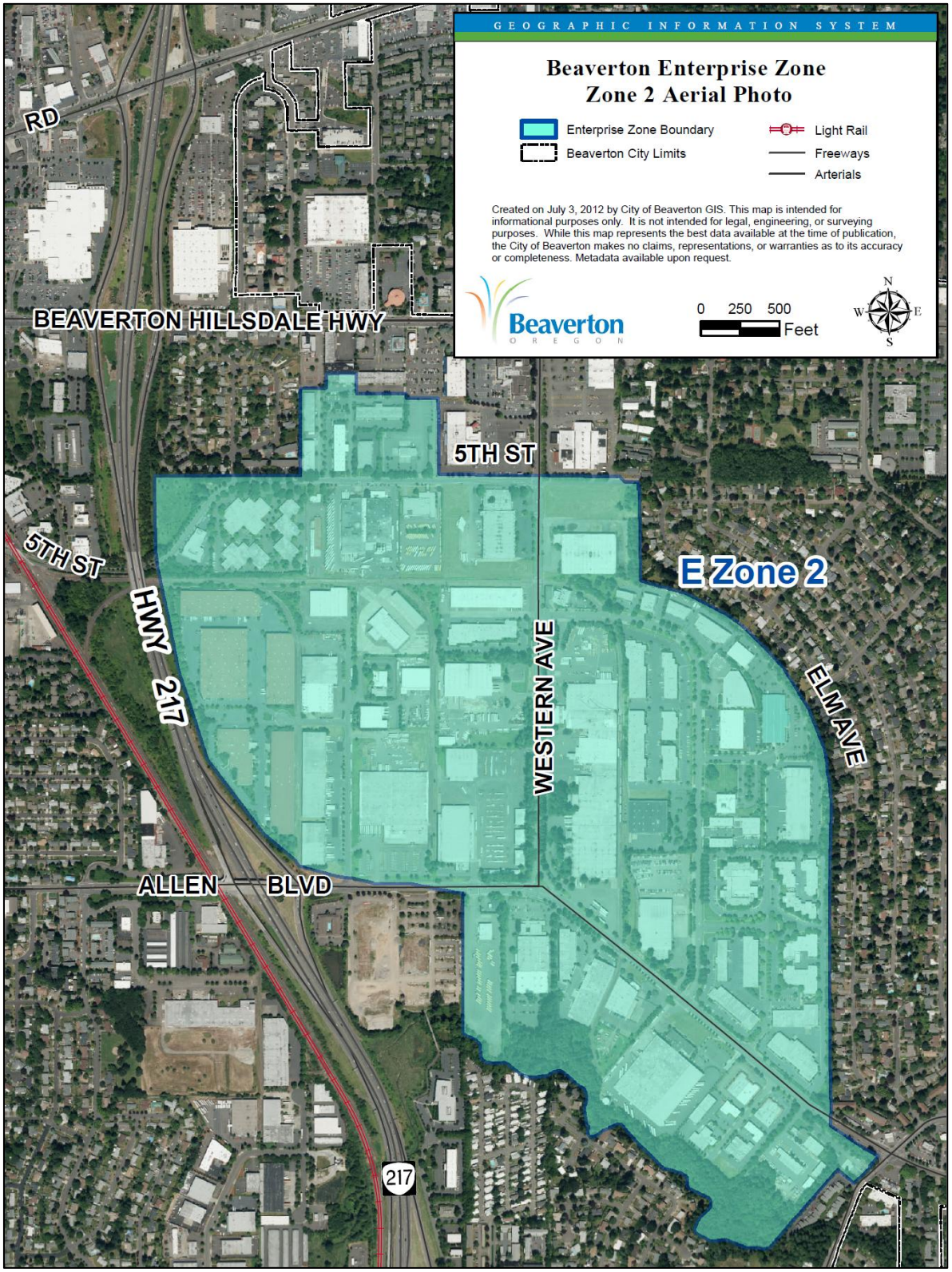
- Overview of metro Portland industrial market;
- Inventory of existing space and businesses by type and top vacancies;
- Recent and anticipated or proposed investment activity;
- Review of City of Beaverton's *Economic Development Strategy* (2011) and *Target Industry Report* (2010);
- Interviews with Business Oregon representatives; and
- Site visits to E Zone 2 and major industrial vacancies.

Overview of E Zone 2

Enterprise Zone 2 includes 374.36 acres of land roughly bounded by 5th Street, Elm Avenue and Highway 217 (Map 2). The zone has a total assessed value of $189.2 million and constitutes 34 percent of the total value of Beaverton's six Enterprise Zones.

Industrial growth in E Zone 2 began with manufacturing on 5th Street and Western Avenue in the 1960s and 1970s when key sites such as the Riviera and Leonetti buildings were developed. Several large anchor companies including Weyerhaeuser, International Paper (IP) and Chrysler also located in E Zone 2 on Allen Boulevard during this time. IP remains today. The Allen and Highway 217 area continued to expand with construction of the 217 Distribution Center in the 1980s and the Gallo building in the 1990s. Also at that time, Arctic Drive developed as a business park with flex space and has grown to be a popular location for new industrial businesses.

Map 2. Beaverton Enterprise Zone 2



Source: City of Beaverton

Metro Portland Industrial Market

According to Portland State University's summer 2012 *Center for Real Estate Quarterly Report*, the metro Portland industrial market experienced seven straight quarters of declining vacancy rates and nine straight quarters of positive net absorption Cushman & Wakefield's 2nd quarter 2012 *Industrial Snapshot* shows Portland metro vacancy rates at 7.4 percent, down 1.2 percentage points from last year.

Net absorption is projected to be 3.3 million square feet in 2012, above recent years but still well below the metro area's 5.0 million square feet per year pre-recession absorption rate. Most of the new construction in the pipeline is build to suit, with very little speculative development. Shovel ready industrial land is in very limited supply and redevelopment of existing properties may occur as the market tightens.

Of 22 submarkets, the City of Beaverton is tied with Camas, WA for the 2nd largest vacancy rate at 13.3 percent. Beaverton lease rates are generally in line with metro averages ($0.45/SF manufacturing and $0.42/SF warehouse/distribution), with the exception of flex space which is priced higher at $0.74/SF compared to $0.66/SF metro wide.

Existing Conditions

This section provides an overview of Enterprise Zone 2, including its existing business base and inventory of space, transportation accessibility and properties for sale or lease.

Size, Zoning and Character

E Zone 2 is situated east of Highway 217 and south of Beaverton-Hillsdale Highway. It is an industrial area offering a variety of industrial and flex space as well as a modest amount of vacant and developable land. E Zone 2 includes 374.14 acres and has a total assessed value of $189.2 million, which makes up 34 percent of both total land and total value of Beaverton's six Enterprise Zones. No land is certified industrial.

Zoning

- Office Industrial (OI) zones constitute 91.2 acres or 24.3 percent of land in E Zone 2. The Office Industrial District is intended to provide areas of office, light manufacturing, and limited retail and service uses in an "employment activity center" concept.

- Industrial (I) zoned land makes up 282.94 acres or 75.6 percent of total land in E Zone 2. The Industrial District is intended to provide sites for manufacturing, distribution, industrial uses, and uses requiring processing, fabrication and storage, including outdoor storage areas, heavy equipment and other uses not compatible in an Office Industrial area.

Building Inventory

- E Zone 2 includes 3.65 million square feet of space in 84 buildings. The vacancy rate is 18.0 percent, or 656,420 square feet. Nearly half of the vacant space (47.2 percent or 308,724 square feet) is in single-occupant buildings and the remaining 347,696 square feet is in multi-occupant buildings (Table 1).

- E Zone 2 has eight buildings with over 100,000 square feet of space. The largest single-occupant building houses Fulfillment Corporation with 169,000 square feet, followed by two International Paper buildings of 167,000 square feet and 155,000 square feet (Table 2).

Table 1. Enterprise Zone 2 Building Inventory, Summer 2012

	Space	
	Square Footage	Percent
Total Space (84 buildings)	3,646,400	100.0%
Occupied Space	2,989,980	82.0%
Vacant Space	656,420	18.0%
Vacancy in single-occupant buildings (5 buildings)	308,724	8.5%
Vacancy in multi-occupant buildings (21 buildings)	347,696	9.5%

Source: CoStar, City of Beaverton

Table 2. Enterprise Zone 2 Top Ten Largest Buildings, Summer 2012

Address	Firm Name	Building Type	Square Footage
10605 SW Allen Blvd	Multiple occupants	Wholesale Trade	180,000
11065 SW 11th St	Fulfillment Corporation	Professional Services	169,000
5570 SW Western Ave	International Paper	Industrial	167,000
5500 SW Western Ave	International Paper	Industrial	155,500
10975 SW 11th St	Multiple occupants	Industrial	150,000
5805 SW 107th Ave	Multiple occupants	Wholesale Trade	125,000
5800 SW Western Ave	International Paper	Industrial	123,000
10750 SW 5th ST	Bimbo Bakeries, Inc.	Industrial	109,916
5150 SW Western Ave	Vacant	Vacant	98,000
10950 SW 11th St	Multiple occupants	Professional Services	94,803

Source: CoStar, City of Beaverton

Buildable Lands

- The City of Beaverton's Buildable Lands Inventory identifies six vacant parcels (totaling 8.3 acres), one vacant building on redevelopable land and one redevelopable parcel. The majority of parcels are less than one acre. In consultation with City staff, two prime sites were identified for future redevelopment on Western Avenue. They include vacant properties adjacent to dilapidated buildings and appear as #1 and #2 in Table 8. Constraints to development may include infrastructure improvements, Brownfield issues, and accessibility.

E Zone 2 Distribution/Warehouse Space

Mix of Land Uses: Retail, Recreation Space in Office Industrial Zones

Business Park Space on Arctic Drive

Derelict Properties with Adjacent Vacant Acreage on Western Avenue

Representative Real Estate Product Available

Transportation

E Zone 2 is adjacent to Highway 217 providing very good vehicular and truck access and is also served by rail, managed by Pacific & Western. Nearly a dozen buildings are rail-served.

- E Zone 2 is easily accessed by two Highway 217 ramps: Beaverton-Hillsdale Highway (Hwy 10) to the north and Allen Boulevard to the south which also serves as the freight corridor. Western Avenue bisects the zone providing north-south access from Highway 10 and Allen Blvd. It serves primarily as a business route/freight corridor. Fifth Street also provides east-west access to the east side of Highway 217. Two other roads within the zone exist mainly to provide business access: 107th off of Allen Blvd, a cul-de-sac to the prime distribution/warehouse area and Arctic Drive, the spine of the business park sub-district.

- Average daily traffic (ADT) on SW Western Avenue south of Beaverton-Hillsdale Highway is 8,901 (2009);the ADT count at SW Allen Boulevard just west of Western Avenue is 19,002 (2010).

Public Development Activity

There has been no significant City investment in E Zone 2 over the last five years. Planned or proposed new development anticipated within the area over the next three years and in the longer term includes:

- Project 6082 – Arctic Drive to 107th Avenue Utility Improvements: Replace or rehabilitate 3,750 feet of existing 8- and 12-inch sanitary sewer pipe that serves the industrial area east of Highway 217 and north of Allen Boulevard. Install an additional 24-inch storm drain pipe on 11th Street west of 107th Street.

- Project 8106 – Little People's Park Storm Detention Pond Enhancement: Improve connections to the wetland/floodplain, remove invasive species, grade, and plant approximately 2-3 acres of existing and degraded wetland area adjacent to Beaverton Creek at Little People's Park. A viewing area and/or platform and boardwalk are proposed in an effort to provide access for the community from the adjacent improved park area.

Business Base

- E Zone 2 is home to 249 businesses, the largest share of which are industrial (22.9 percent), followed by professional services (20.1 percent) and wholesale trade (18.9%). In terms of space, the largest concentration is industrial (1.3 million square feet or 40.0 percent). Nearly a quarter of space is wholesale trade companies (814,618 square feet or 24.4 percent) (Table 3).

- The fifteen largest employers in E Zone 2 are provided in Table 5. The top two – International Paper and Bimbo Bakeries, Inc. – are both manufacturing companies employing 300 persons. Five other businesses provide over 100 jobs; three are manufacturing companies, one is a wholesaler and one is in information.

- E Zone 2 businesses in Beaverton's target industry clusters include ten electronic manufacturers, eight software companies and three scientific and medical instrument companies, three food processors and three sporting goods businesses (Table 5).

Table 3. Enterprise Zone 2 Inventory of Existing Businesses, Summer 2012

Business Category	Businesses		Space	
	Number	% of Total	Square Feet	% of Total
Industrial	49	21.3%	1,335,960	40.0%
Wholesale Trade	39	17.0%	814,618	24.4%
Professional Services	49	21.3%	587,695	17.6%
Institutional & Government	39	17.0%	245,898	7.4%
Information & Software	13	5.7%	120,683	3.6%
Retail Trade	14	6.1%	51,886	1.5%
Other Services	12	5.1%	180,936	5.5%
Unclassified Businesses	15	6.5%	------	-----
Total	230	100.0%	3,337,676	100%

Source: City of Beaverton

Table 4. Enterprise Zone 2 Top Fifteen Largest Employers, Summer 2012

Firm	Business Type	Employees
International Paper	Paper Related Manufacturing	300
Bimbo Bakeries, Inc.	Food Manufacturing	300
Platt Electric Supply, Inc.	Wholesale Trade	170
Vanguard EMS, Inc.	Metal, Machinery and Computer Product Manufacturing	165
GPS, Inc.	Metal, Machinery and Computer Product Manufacturing	150
EPIQ Class Action & Claims	Information	130
Graphic Products, Inc.	Manufacturing	110
Fred Shearer & Sons, Inc.	Wholesale Trade	65
Fulfillment Corporation	Professional Services	55
Stanley Steamer International	Administrative & Waste Management	50
5th Street Station	Transportation, Warehousing & Utilities	50
Comp View, Inc.	Manufacturing	50
Pentagon Electronic Mfg	Metal, Machinery and Computer Product Manufacturing	45
Audio Precision, Inc.	Metal, Machinery and Computer Product Manufacturing	40
TT&L Sheet Metal, Inc.	Construction	40

Source: Census of Employment and Wages ES-202

In 2010 and 2011 the City of Beaverton identified five target markets to focus its business retention, expansion, and recruitment efforts. These industry clusters showed potential for growth opportunities based on an industry sectors location quotient, which is calculated as the ratio between the local economy and the national economy. The City of Beaverton's strengths lie in the Electronic Manufacturing, Software, Scientific and Medical Instrumentation manufacturing, Food Processing, and Sporting Goods and Apparel sectors. Within E Zone 2 the target market industries are represented across all five sectors with the greatest concentration in Electronic Manufacturing and Software.

Table 5. Enterprise Zone 2 Businesses within Beaverton's Target Industry Clusters, Summer 2012

Beaverton Target Industry	Number of Businesses
Electronic Manufacturing	10
Software	8
Scientific & Medical Instrumentation	3
Food Processing	3
Sporting Goods	3
Total	27

Source: City of Beaverton

Available Properties

- There is 656,420 square feet of vacant space in Enterprise Zone 2. Of the available space, nearly two-thirds is 25,000 square feet or more (eight vacancies totaling 423,721 square feet). There are fifteen vacancies between 5,000 and 24,999 square feet, providing 32.3 percent of the inventory. Small properties (under 5,000 square feet), make up only 3.1 percent of vacant space (Table 6).

- In terms of building type, a quarter of vacancy is in buildings where the predominant use is professional services (93,162 square feet or 26.8 percent of total vacancy in multi-unit buildings). Over one-fifth is in industrial buildings (76,157 square feet) and 18.8 percent is buildings with other services (65,446 square feet) (Table 7).

- The two largest vacancies are 5150 SW Western Ave and 5051 SW Western Ave. Together they offer 178,000 square feet of leasable Class C warehouse space. Lease rates are from $3.84 to $7.80 per square foot triple net for industrial space and $11.64 per square foot for office space (Table 8).

- Map 3 shows locations for top vacancies, which are concentrated along Western Avenue, SW Arctic Drive and SW 107th Avenue.

Table 6. Enterprise Zone 2 Vacant Space by Size of Vacancy, Summer 2012

Size Range of Vacancy	# of Vacancies	Space (Sq. Ft.)	Percent of Total
1 SF to 4,999 SF	6	20,411	3.1%
5,000 SF to 24,999 SF	15	212,288	32.3%
25,000 SF or more	8	423,721	64.6%
Total	29	656,420	100.0%

Source: CoStar, City of Beaverton

Table 7. Enterprise Zone 2 Vacant Space by Building Type for Multi-Occupant Buildings, Summer 2012

Building Type	Space (Sq. Ft.)	Percent of Total
Professional Services	93,162	26.8%
Industrial	76,157	21.9%
Other Service	65,446	18.8%
Institutional & Government	60,831	17.5%
Wholesale Trade	47,220	13.6%
Information & Software	4,880	1.4%
Total	347,696	100.0%

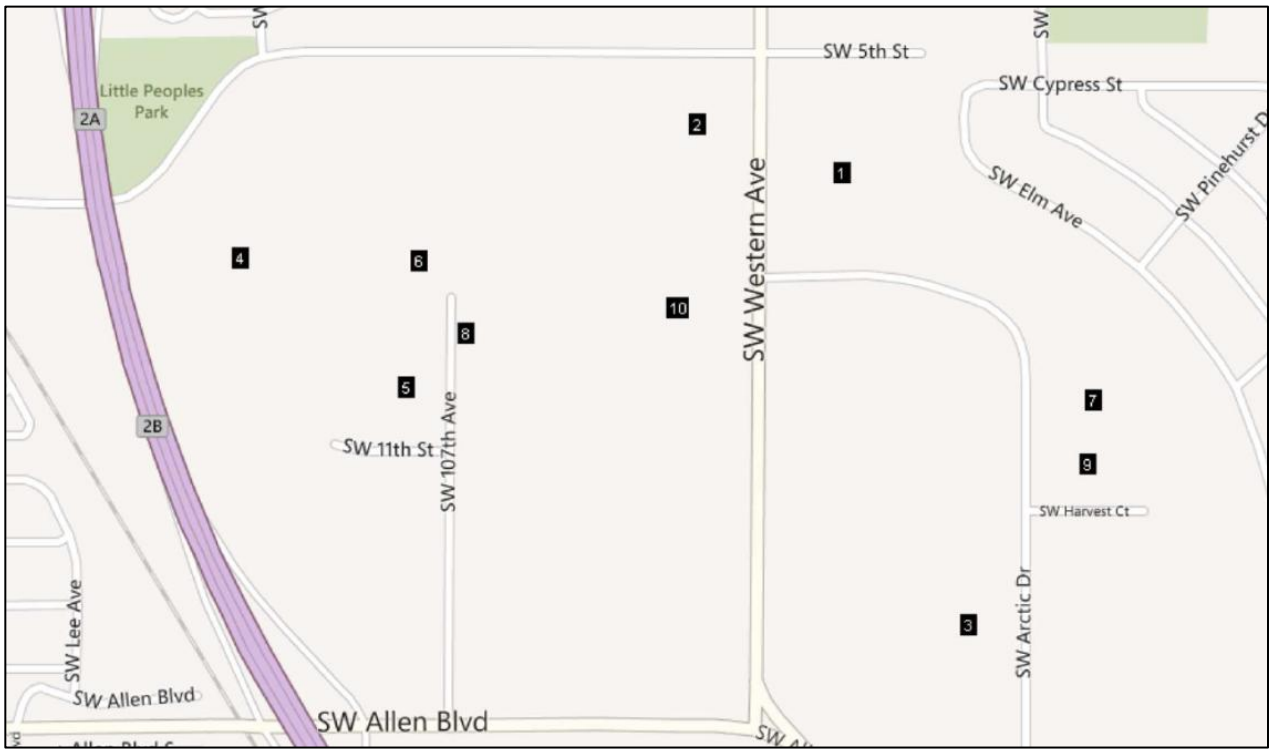
Source: CoStar, City of Beaverton

Table 8. Enterprise Zone 2 Top Ten Largest Vacancies, Summer 2012

Address		Building Type	Square Footage	For Lease/Sale	Building Year	Price/SF	Adjoining Vacant Acreage
1	5150 SW Western Ave	Class C Warehouse	98,000	Lease	1968	$3.84/nnn/$ 11.64 ofc (whse)	3.38
2	5051 SW Western Ave	Class C Warehouse	80,000	Lease	1968	$3.84-$7.80/nnn	2.63
3	5825 SW Arctic Dr	Class B Warehouse	57,247	Lease	1992	$5.28/nnn	
4	11035 SW 11th Ave	Class C Distribution	49,770	Lease	1978	$4.56/nnn	
5	5555 107th Ave	Class B Industrial	40,227	Lease	1968	Varied	
6	5335 SW 107th Ave	Class C Industrial	39,534	Sale	1973	$3.72/nnn	
7	5500 SW Arctic Dr	Class C Warehouse	37,000	Lease	1980	Withheld	
8	5350 SW 107th Ave	Class C Industrial	33,943	Sale			
9	5600 SW Arctic Dr	Class B Warehouse	25,000	Lease	1997	$4.80/nnn/$ 8.40 ofc (whse)	
10	5465 SW Western Ave	Class B R&D Building	24,509	Lease	1980	$4.68-$7.80/nnn	

Source: CoStar, City of Beaverton

Map 3. Enterprise Zone 2 Top Ten Largest Vacancies, Summer 2012



Source: CoStar, City of Beaverton

Assessment

Successful industrial districts of any size have a healthy business climate, a large pool of qualified labor to draw from, unconstrained land types, appropriate infrastructure, and a proactive marketing program with key amenities and characteristics to attract prospects. Marketek assessed Enterprise Zone 2 to identify assets and challenges for growing its industrial base, summarized below.

Table 9. Enterprise Zone 2 Competitive Assessment

Feature	Rating	Comments
Location	Asset	Situated east Hwy 217 and south of Beaverton-Hillsdale Hwy. Quick access to Hwy 26 or I-5 corridor.
Land use/zoning	Neutral	374 acres total with good balance of allowable land uses: 283 acres of Industrial and 91 acres of Office-Industrial. Decent separation of distribution and business park space. However, significant infiltration of non-employment uses is occurring, namely recreation/event facilities and is a concern.
Transportation access/system (rail, roads, transit)	Asset	Rail-served. East-west arterial access to Hwy 217 from Allen Blvd and Beaverton-Hillsdale/Hwy 10. 5th Street provides secondary access to downtown area. Western Avenue is only major north-south arterial and freight corridor. One drawback is 107th Avenue is dead-end and truck left turns from Allen are a challenge.
Curb appeal/image	Neutral	Varies within the area. No unified identity. Arctic Circle is newer business park/flex space. Other areas dated. Key entry at Western and 5th is negatively impacted by derelict buildings.
Infrastructure (telecom, utilities, etc.)	Neutral	No concerns noted.
Real estate product overall	Neutral	Highly varied industrial/flex space product and areas/pockets of development. Much of this industrial area was built over 30 years ago.
Available space	Challenge	18% vacancy rate in EZ2; 13.3% in Beaverton's industrial product overall; 7.4% in metro Portland. Lease rates are generally in line with metro Portland averages with some flex space priced higher. Half of vacant space is multi-occupant flex space buildings. Available product dominated by smaller space. Five of the 10 largest vacancies are Class C.

Table 9. Enterprise Zone 2 Competitive Assessment (continued)

Feature	Rating	Comments
Land/sites available	Challenge	Highly limited. No sites > 5 acres. Possible Brownfield constraints. Further analysis needed.
Marketability	Neutral	Improving with EZ designation. Quality anchors could be assets (from IP to Vanguard).
Developer/business owner activity	Asset	Ongoing implementation of City's EZ Communications Plan has raised awareness of enterprise zone designation and helped generate 3 leads in EZ2 alone. The sale of Center 217 for $23.3 million by Kansas City Life Insurance is noted by brokers as one of the larger real estate transactions of 2012.
Suitability for target industries: • Software/Info • Scientific/Medical • Electrical Equipment • Sporting Goods & Apparel • Food Processing	Neutral	Electronic manufacturing and software clusters exist, together with large food processing anchor. Possible links can be made to businesses incubated at Open Technology Business Center.

Industrial Development Potential

Enterprise Zone 2 has significant industrial development potential for a wide range of companies interested in traditional warehouse/distribution space, flex industrial or an office-oriented environment. However, with only eight acres of vacant land on six separate parcels, there is little opportunity for new construction. In the short term, economic development efforts should focus on filling the >650,000 square feet of vacant building space and actively pursuing the redevelopment and development potential of the derelict buildings and vacant land. . Regarding E Zone 2's ability to capture companies within the City's target industrial sectors, additional research needs to be undertaken to match properties to opportunities as well as understand possible constraints to development.

As noted in Table 5, the zone is home to 27 companies representing one of five target industries. To effectively focus E Zone 2 industrial development efforts on specific targets, the City will need to: further evaluate existing available properties for those best suited to targets; talk with target companies already existing in the zone to identify opportunities for complementary/supplier niches as well as gain testimonials about the advantages of their location; and conduct significant outreach to target companies, leveraging regional and state partner relations and developing effective marketing messages/campaigns.

Table 10 below provides a snapshot of the typical characteristics and location requirements for Beaverton's target industries, as identified by the City's Target Industry Study. Food processing was not initially included on the list and ideally, needs to be further delineated by sub-sector for appropriate targeting.

Table 10. Enterprise Zone 2 Industrial Target Characteristics

Target Industry	Avg. Jobs	Avg. Wage	Building Type	Avg. Sq. Ft.	Top Priorities
Scientific & Medical Instruments	170	$67,941	Light Mfg	32,510	Access to intermediate manufacturing products, Technically skilled workforce, Labor costs & reliability
Research & Development	32	$85,298	Light Mfg/ Lab	14,935	Proximity to markets & airport, Access to business/prof. services, Professional and technically skilled workforce, Investment in higher skilled education, Built space costs
Software & Information Services	17	$87,208	Office	5,136	Telecom services, Access to business/prof. services, Technically skilled workforce, Availability of built space, Education and quality of life
Electrical Equipment	63	$55,210	Light Mfg	31,478	Cost of transporting goods, Access to intermediate manufacturing products, Labor costs & reliability, Built space costs
Sporting Goods & Apparel	25	$33,700	Office	7,457	Proximity to markets, Executive/ professional/technical workforce, Built space availability & cost, Quality of life

Source: Target Industry Analysis, 2010, Applied Economics/Chabin Concepts

Next Steps for Enterprise Zone 2

As part of the E Zone 2 market assessment, a focus group discussion was held with Jill Miles, Business Oregon National Recruitment Officer and Chad Freeman, Business Oregon Regional Development Officer together with members of the City's Economic Development Department. The discussion sought to gather feedback on existing conditions, market potential and best bets for successful business development both short term and long term. That meeting together with project research and consultant/staff observations framed the recommendations provided below.

General Comments from Business Oregon

Business Oregon representatives complimented the City on the recent creation of both the Enterprise Zone and the Urban Renewal District and noted that these are both important tools for promoting Beaverton as a strong business location within the region. They will pay dividends over time, not necessarily in the immediate future. In reality, however, these tools/incentives put the City 'toe to toe' with most other communities in the metro area. Regarding the $1 million minimum investment requirement of Beaverton's Enterprise Zone(s), it was noted that ideally, there would be no investment floor associated with the enterprise zone incentive. Beaverton should consider altering the requirement.

With regard to marketing E Zone 2, Beaverton should work to distinguish itself from other metro Portland communities in two general ways: 1. A highly accessible location within the Portland metropolitan region; close to I-5 and Highway 26 with less congestion; and 2. Beaverton promises and delivers fast permitting and business regulatory process. These are important messages for attracting software/information industry companies as well as Beaverton's central/'bridging' location between Hillsboro and Portland. The overall marketing message should demonstrate that "Beaverton Makes It Happen" incorporating business testimonials about the City's responsiveness to their needs.

Lastly, a critical recommendation from Business Oregon was to retain E Zone 2's railroad right of way under all circumstances. It is an important long term asset even if it is not fully utilized at present. Top themes communicated by Business Oregon are highlighted in Table 11.

Table 11. Top Recommendations by Business Oregon

- Make business retention and expansion the #1 strategy. Devote most of your staff time and department resources with established companies that will provide the greatest job growth.
- Carefully define Beaverton and E Zone 2's niche to overcome the challenge of very limited newer industrial product and vacant land and be willing to tackle possible land constraints such as Brownfields redevelopment.,
- Promote Beaverton's economic development brand as Predictability in Permitting, together with incentives, quality workforce, etc. Get specific and promote a number of days for permit approvals.

Short Term

Short term actions (the next 12 – 18 months) for E Zone 2 to fulfill its market potential are noted below. They are not in order of priority.

1. Prominently feature an E Zone 2 page on the City's Economic Development website to include key assets, properties available, advantages of enterprise zone, top business anchors and other features.
2. Prepare an industrial marketing factsheet for E Zone 2 to promote its location and assets within the region.
3. Prepare a database of existing properties and link to a map of the E Zone 2 area and post to the Economic Development website. (e.g. thinkyubacity)
4. Create a series of target industry handouts for marketing and promotion.
5. As part of the target marketing, map the key target industry companies/clusters such as Software/Information that are already located in E Zone 2, as part of a marketing package for a campaign. Identify prime available properties suitable to these industry targets.
6. Develop and maintain the organizational infrastructure to conduct business retention and expansion services as a top priority of the Economic Development Department.
7. Organize and host an E Zone 2 property and business owner brown bag lunch (at a location within the zone) to share information on the enterprise zone and gather information about issues and opportunities related to doing business in this location. Incorporate a similar annual event into the City's ongoing business retention/expansion program.
8. Further analyze land constraints to E Zone2 development and formulate a strategy to address the most critical challenges (e.g. Brownfields, infrastructure, code issues, etc).

Long Term

Longer term actions address steps for the 18 months – 3 year timeframe, but should be initiated sooner as time permits.

1. Inventory, evaluate and prioritize Brownfield sites/areas to open up other properties in E Zone 2 for develop and to enable the City to respond with tools as quickly as possible as prospect interest is in generated in the sites.
2. To promote the Gallo site as well as locations near Bimbo, prepare a Food Processing Target Industry Strategy. Clarify what sectors of this large complex industry Beaverton will focus on. Develop and tell the story of Bimbo and Reser's Beaverton locations and their success: Why Beaverton?, key market advantages, access to raw materials/products (water, etc). Seek opportunities to target businesses in their supply chain to augment their locations and expand this cluster. Include the Port of Portland and Department of Agriculture in strategy development and implementation.
3. Prepare a Western and 5th industrial node redevelopment strategy. E Zone 2's marketability is negatively affected by the poor condition/appearance of properties at the SE and SW corners of 5th and Western, its gateway from Beaverton-Hillsdale Highway. These are prime redevelopment sites for E Zone 2 and in need of significant clean up/revamping. A redevelopment strategy needs to be developed and implemented to capitalize on these prime sites. As part of that consider focusing the area on a target industry cluster such as food processing.
4. Revisit E Zone 2's zoning classifications and consider refining to discourage the location of retail/recreation and non-industrial/employment uses.
5. Inventory available warehouse/distribution space and identify the types of companies that are most suitable to each (e.g., selected industries/targets like back office won't be concerned with the clear height of older warehouse product. Food processing, on the other hand has racks and need greater heights.
6. Call on Business Oregon as a strong and willing partner especially as it relates to Business Attraction.
7. Focus business *attraction* resources on selected target industries with the greatest potential for E Zone 2 location, based on further property/site evaluation and development. E.g., Participate selectively in Business Oregon Outbound Program ($1,000 + travel). E.g., Attend the Food Processing Trade Show. Business Oregon will begin sharing marketing and trade show opportunities with Beaverton for future collaboration.