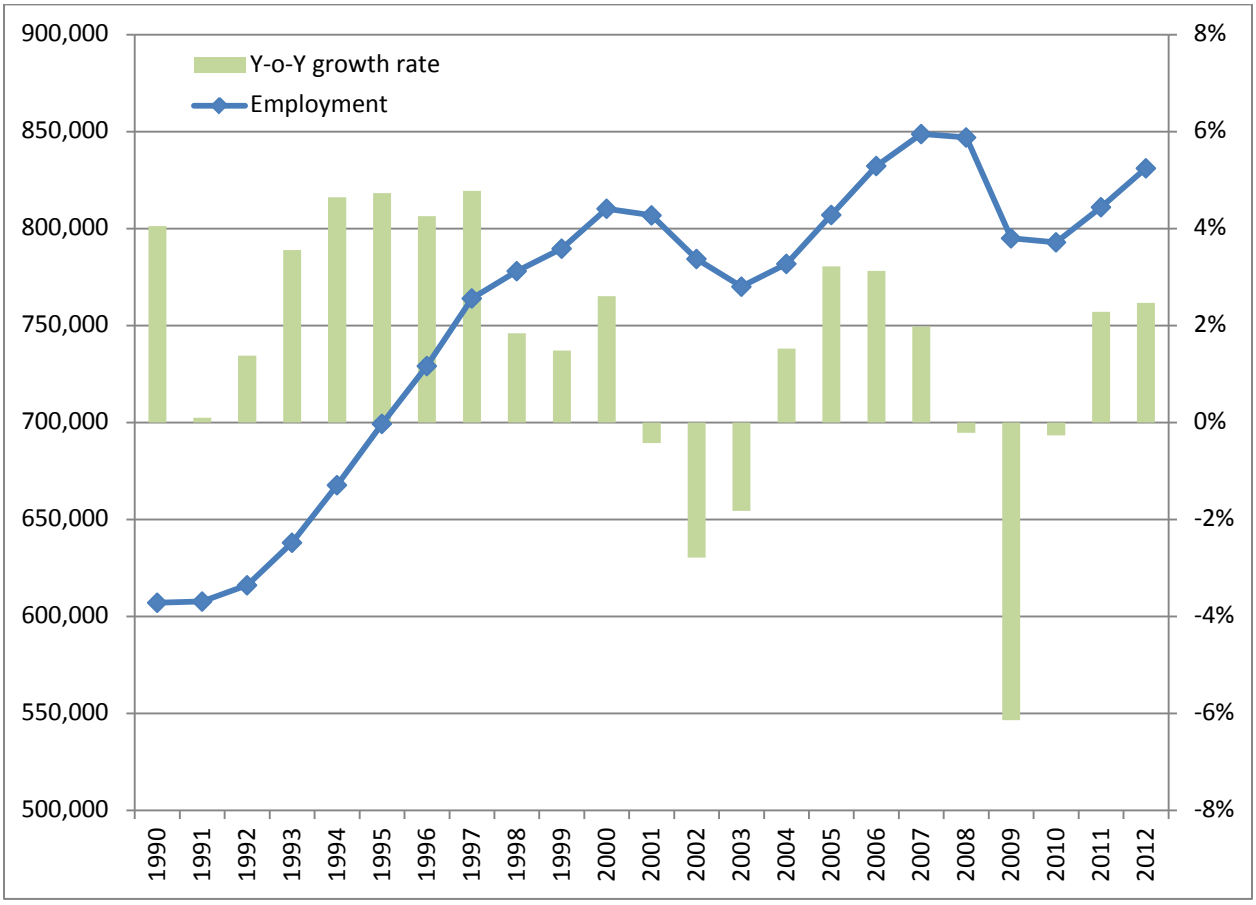
Appendix 8
Employment trends

Introduction
This report is intended to provide additional understanding of the employment trends that have been occurring inside the Metro urban growth boundary from 2006-2012 (the last analysis completed included data through 2006). This report includes information about overall employment levels, employment by sector, and employment location trends.

This analysis is primarily focused on employment trends over the last seven years, and relies on geocoded employment data from the Quarterly Census of Employment and Wages for the years 2006 and 2012.

Overall employment
Tri-county total employment is essentially unchanged from 2006 to 2012. The number of jobs in the region reached a peak in late 2007 to early 2008, just before the Great Recession hit. After hitting a low point in late 2009, the region returned to positive employment growth in 2010, and finally surpassed the pre-recession peak in 2013.

Figure 1: Three county covered employment (1990 to 2012)



Source: OLMIS

Data limitations

The Quarterly Census of Employment and Wages (QCEW) is the best available source of detailed employment data for the region. The confidential disaggregate data from the QCEW program allow for analysis of employment sectors and subareas throughout the region, however, the data set has some limitations that should be kept in mind. QCEW includes all employment that is covered by unemployment insurance, comprising about 99.7 percent of all wage and salary employment. There are some significant exclusions from the program though, including the self-employed, agricultural workers, military, railroad employees and other categories of workers. In addition, participating employers have some flexibility in how they report the location and sector of employment, which may lead to inconsistencies in the data over time. There are two significant potential sources of error related to this issue:

(1) The NAICS code is self-reported, so employers may change their NAICS designation(s) over time for a variety of reasons. Some employers have multiple records at the same address, so that each reporting unit can be assigned the most appropriate NAICS designation. As employers fine-

tune their reporting for unemployment insurance purposes, comparisons over time may show shifts in the regional industry mix that do not represent any real changes in the jobs that people are doing.

(2) Firms that have employees spread across multiple site (for example, a large retail chain) typically report each location as a separate establishment. The multi-establishment reporting may not be consistent across different data sets, and has generally tended toward more detail over time. These inconsistencies may result in geographic shifts in the employment data when there have not been any real changes in where jobs are located.

Employment by industry

Total employment in the region was essentially unchanged in 2012 compared to 2006, though the Great Recession did lead to some major changes across industries. Private education recorded the highest growth rate at 25.4 percent over the period, while health and social assistance employers saw the largest net gain in employment, with just over 14,000 jobs added. Construction saw the largest decline, with a loss of around 9,600 jobs, or 20.2 percent of jobs in the industry as of 2006. The loss of construction jobs is indicative of the housing crash that brought residential construction nearly to a halt for several years.

Table 1: Three county employment by sector

General Sector	NAICS	Industry	2006 Emp	2012 Emp	Net Change	% Change	AAGR
		Total	832,364	831,184	-1,180	-0.1 %	0.0 %
Industrial	11, 21	Ag & Mining	10,106	8,907	-1,199	-11.9 %	-2.1 %
	23	Construction	47,607	37,972	-9,635	-20.2 %	-3.7 %
	31-33	Manufacturing	103,959	94,148	-9,811	-9.4 %	-1.6 %
	42	Wholesale	51,500	49,087	-2,413	-4.7 %	-0.8 %
	22, 48-49	Trans, Warehousing & Utilities	31,779	28,197	-3,582	-11.3 %	-2.0 %
Retail	44-45	Retail	86,921	84,475	-2,446	-2.8 %	-0.5 %
Service	51	Information	20,480	19,823	-657	-3.2 %	-0.5 %
	52	Finance & Insurance	38,814	35,131	-3,683	-9.5 %	-1.6 %
	53	Real Estate	15,570	13,322	-2,248	-14.4 %	-2.6 %
	54	Prof, Scientific & Tech Services	43,467	50,392	6,925	15.9 %	2.5 %
	55	Management	20,977	21,944	967	4.6 %	0.8 %
	56	Admin, Support & Waste	52,649	49,009	-3,640	-6.9 %	-1.2 %
	61	Education	14,986	18,787	3,801	25.4 %	3.8 %
	62	Health and Social Assistance	81,282	95,610	14,328	17.6 %	2.7 %
	71	Arts, Enter & Recreation	10,982	11,389	407	3.7 %	0.6 %
	72	Accommodation & Food	65,859	71,513	5,654	8.6 %	1.4 %
	81	Other Services	31,404	32,596	1,192	3.8 %	0.6 %
Gov	Gov	Government	103,736	108,582	4,846	4.7 %	0.8 %

Source: OLMIS

Aggregating to more broad industry groups, shown in Table 2, industrial and retail employment declined from 2006 to 2012 while service and government employment increased. This decline in industrial employment is a continuing trend that was also noted in the 2009 Urban Growth Report. One result of

this shift in the employment mix is a shift in what kinds of employers are occupying land and buildings in the region that are zoned for, or were historically used for, industrial purposes. Many areas in the region with industrial zoning are currently housing more commercial employment than industrial employment. This trend is quite visible in some formerly industrial neighborhoods such as the Central Eastside in Portland, where about two thirds of current employment has a nonindustrial NAICS classification. On the other hand, some of the large industrial parks managed by the Port of Portland, including Swan Island, Rivergate and Troutdale, are split with roughly two thirds of employment in industrial sectors and one third in commercial. Regionally, about half of the employment located in industrially zoned areas has an industrial NAICS designation (as defined in Table 1). Additional data about commercial employment in industrial zones are included at the end of this report.

Table 2: Three county employment by general sector groups

Ownership	General Sector	2006 Emp	2012 Emp	Net Change	% Change	AAGR
Private	Industrial	244,951	218,311	-26,640	-10.9 %	-1.9 %
	Retail	86,921	84,475	-2,446	-2.8 %	-0.5 %
	Service	396,470	419,516	23,046	5.8 %	0.9 %
Public	Gov	103,736	108,582	4,846	4.7 %	0.8 %

Source: OLMIS

UGB employment by subarea

Shifting the focus to the urban growth boundary, the region has been divided into nine subareas in order to examine the spatial distribution of employment in the region. The subareas are depicted in Map 1. These subareas can be aggregated into three broad ring geographies as follows:

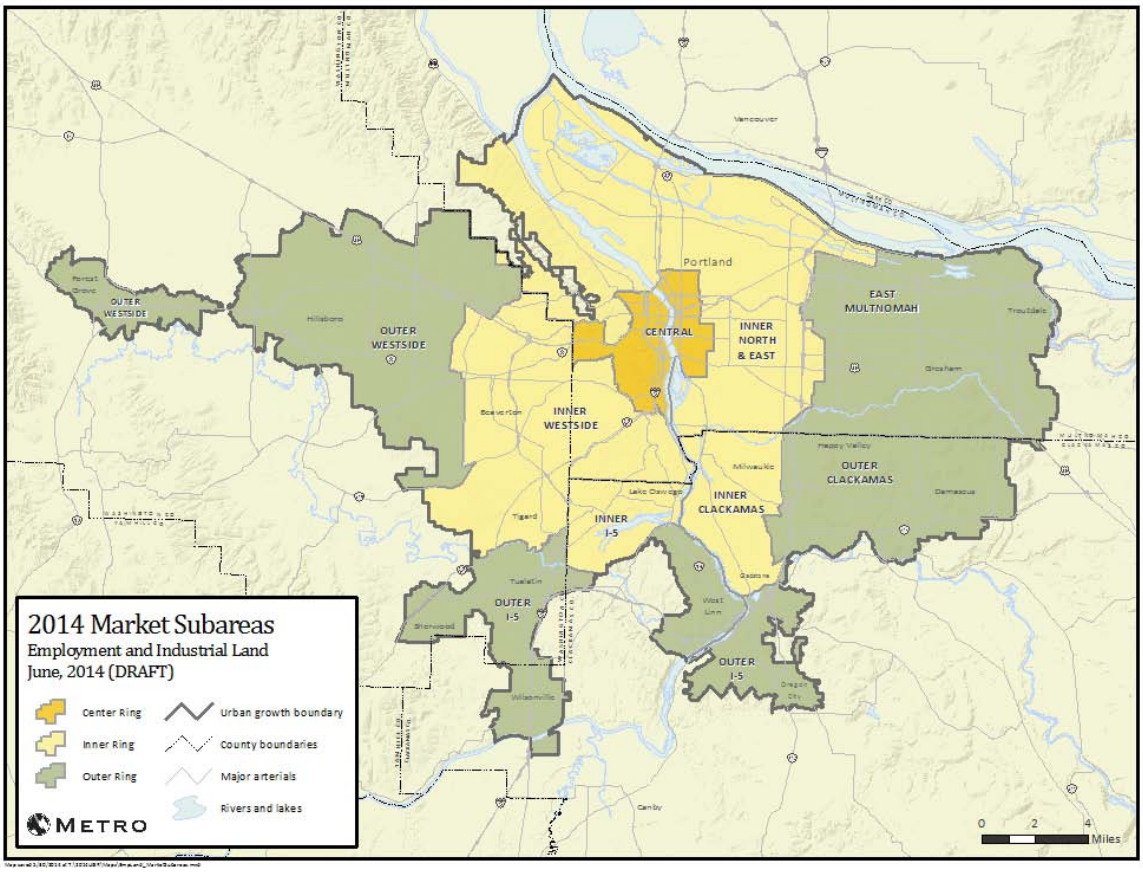
- **Central**: Central
- **Inner ring**: Inner North and Northeast, Inner Clackamas, Inner I-5, Inner Westside
- **Outer ring**: East Multnomah, Outer Clackamas, Outer I-5 / I-205, Outer Westside

The rationale for the subareas derives from the 1) semi-circular ring geometries; 2) market subarea differences within each ring; 3) and 2000 census tract delineations. The ring geometry recognizes relative differences in valuation of real estate and other economic factors with respect to proximity to a central business hub. Furthermore, as distance away from that center increases, the economic valuation and other economic factors are hypothesized to vary. The designation of market subareas for each ring further recognizes the heterogeneity inherent, particularly in real estate development patterns and valuations, within each ring. Delineation of the market subareas was based on grouping of census tracts which loosely seemed to have similar socio-economic characteristics and with the requirement that each subarea had to be contiguous and compact in shape.

The rings are set up so that floor area ratios and square foot per employee assumptions for the urban growth report analysis on future employment land need can be analyzed at more defined geographic precision. This addresses past concerns about the lack of variations in job density and land need

intensity due to the inherent uneven distribution that exists between urban and suburban development trends for industrial and commercial growth inside the UGB.

Map 1: Market subareas used for employment analysis



Employment statistics from the QCEW program get less accurate as we drill down into subarea and sector details due to the limitations discussed previously. The changes described in this section may be due to real shifts in employment or changes in reporting over time, and likely reflect a bit of both.

Figure 2 shows the total number of jobs in 2006 and 2012 by subarea, while Figure 3 includes the total percent change over the time period as well as the average annual growth rate. The central part of the region is still home to a significant number of jobs, but the subarea experienced a loss of about 2,300 jobs, or 1.2 percent, over the period from 2006 to 2012. The Inner I-5 area saw a decline in employment of roughly 2,200 jobs, or 11.0 percent of 2006 employment. Map 2 highlights this as the largest percentage loss of jobs in the region, though the total number of jobs located there is small compared to other subareas. This area was home to many firms involved in real estate and finance, industries that were hit hard by the housing collapse and recession. Many businesses in the area, like mortgage and title companies, contracted or closed over this time period and left the vacancy rate in the Kruse Way

offices at 22.4 percent in 2012. In the southeastern part of the region, the Outer Clackamas and Outer I-5 subareas together lost about 3,400 jobs or 3.2 percent. In contrast, the Outer Westside experienced the greatest increase in employment, gaining about 5,800 jobs, an increase of 5.6 percent. The East Multnomah subarea also gained jobs, increasing employment by 1,800 or 2.7 percent.

Figure 2: Total employment by subarea for 2006 and 2012

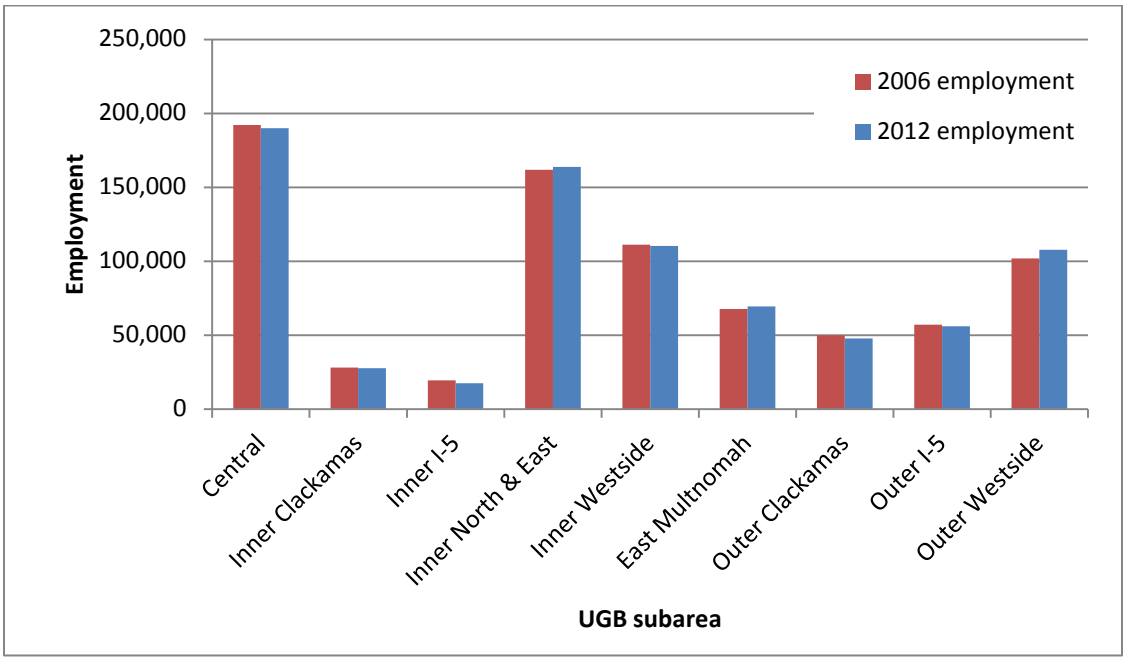
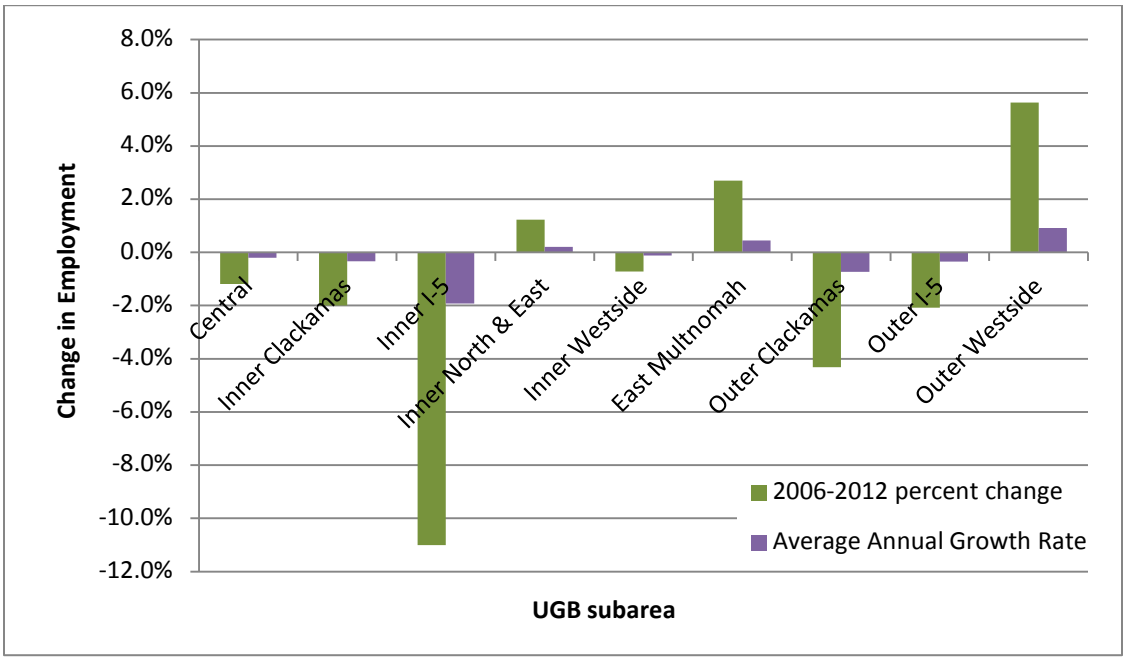
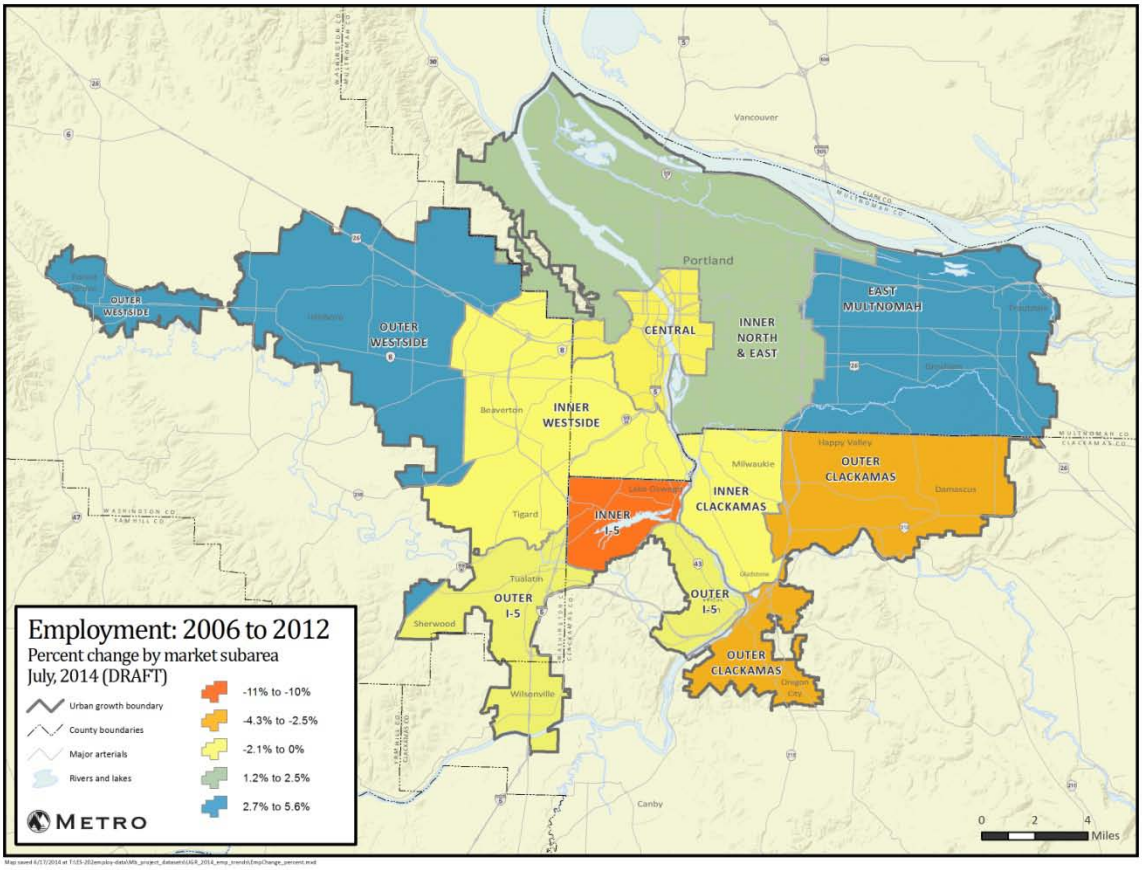


Figure 3: Percent change in employment and AAGR by subarea, 2006 to 2012



Map 2: Percent change in employment, 2006 to 2012, mapped by subarea



Industrial employment has declined throughout most of the region, particularly in the inner ring geography. The decline in industrial employment in the UGB of 22,900 jobs was mostly offset by an increase of 21,400 jobs in the service sector, as shown in Table 3. About one-third of the decline in industrial employment can be attributed to lost construction jobs, however all of the industrial sectors lost employment from 2006 to 2012. Geographically, the number of industrial jobs lost was most pronounced in Inner North & East and the Inner Westside, where industrial employment declined by about 15,400 jobs in the two subareas combined.

Table 3: Employment change by general sector and ring geography

Ring Geography	**Central**	**Inner**	**Outer**	**UGB Total**
Employment sector	Net change in employment 2006-2012			
Government	-500	2,600	2,100	4,200
Industrial	-2,500	-16,100	-4,300	-22,900
Retail	-300	-1,200	-900	-2,400
Services	800	13,200	7,300	21,400
Total	-2,300	-1,500	4,200	400
	Percent change 2006-2012			
Government	-1.1 %	11.7 %	6.5 %	4.4 %
Industrial	-11.9 %	-15.4 %	-4.3 %	-10.2 %
Retail	-2.1 %	-3.2 %	-2.7 %	-2.8 %
Services	0.7 %	8.5 %	6.5 %	5.5 %
Total	-1.2 %	-0.5 %	1.5 %	0.0 %

Employment in Title 4 Industrial and Employment Areas

Title 4 (Industrial and Other Employment Areas) of the Urban Growth Management Functional Plans seeks to protect industrial areas from conflicting commercial retail uses. Areas designated under Title 4 (see Map 3) are home to about a third of the region's employment. Table 4 summarizes the shares of employment by sector in Title 4 areas. From 2006 to 2012, there was a slight increase in the share of employment that is industrial. Total employment in areas designated as "Employment" or "Industrial" land increased over the study period while employment in "Regionally Significant Industrial Areas" and undesignated areas declined, as shown in Table 5.

Map 3: Title 4, Industrial and Other Employment Areas Map

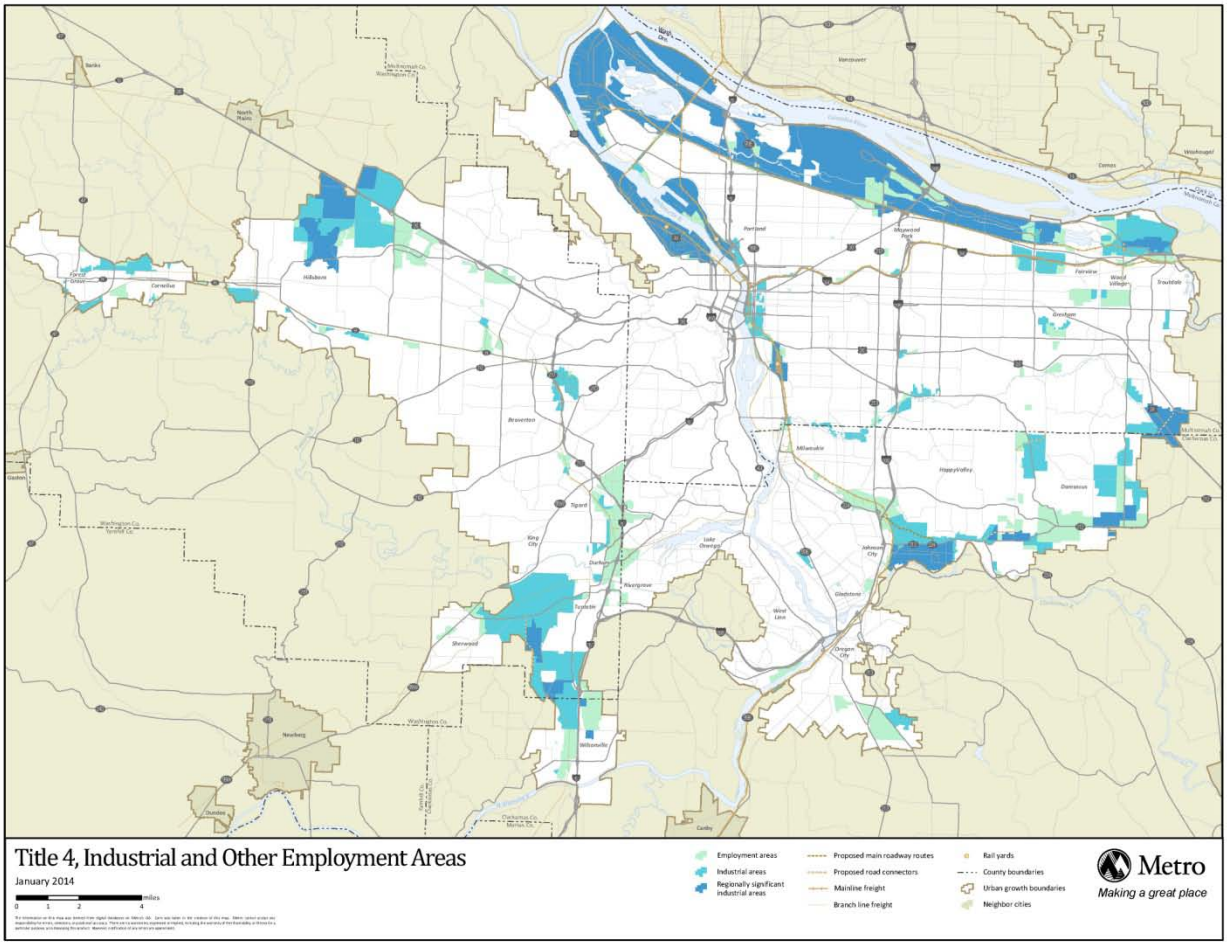


Table 4: Employment by sector in Title 4 areas

	Share of employment in Title 4 designated areas	
Sector	**2006**	**2012**
Government	11.5 %	14.9 %
Industrial	68.1 %	72.5 %
Retail	17.3 %	17.5 %
Services	17.8 %	19.4 %
Grand Total	31.3 %	32.2 %

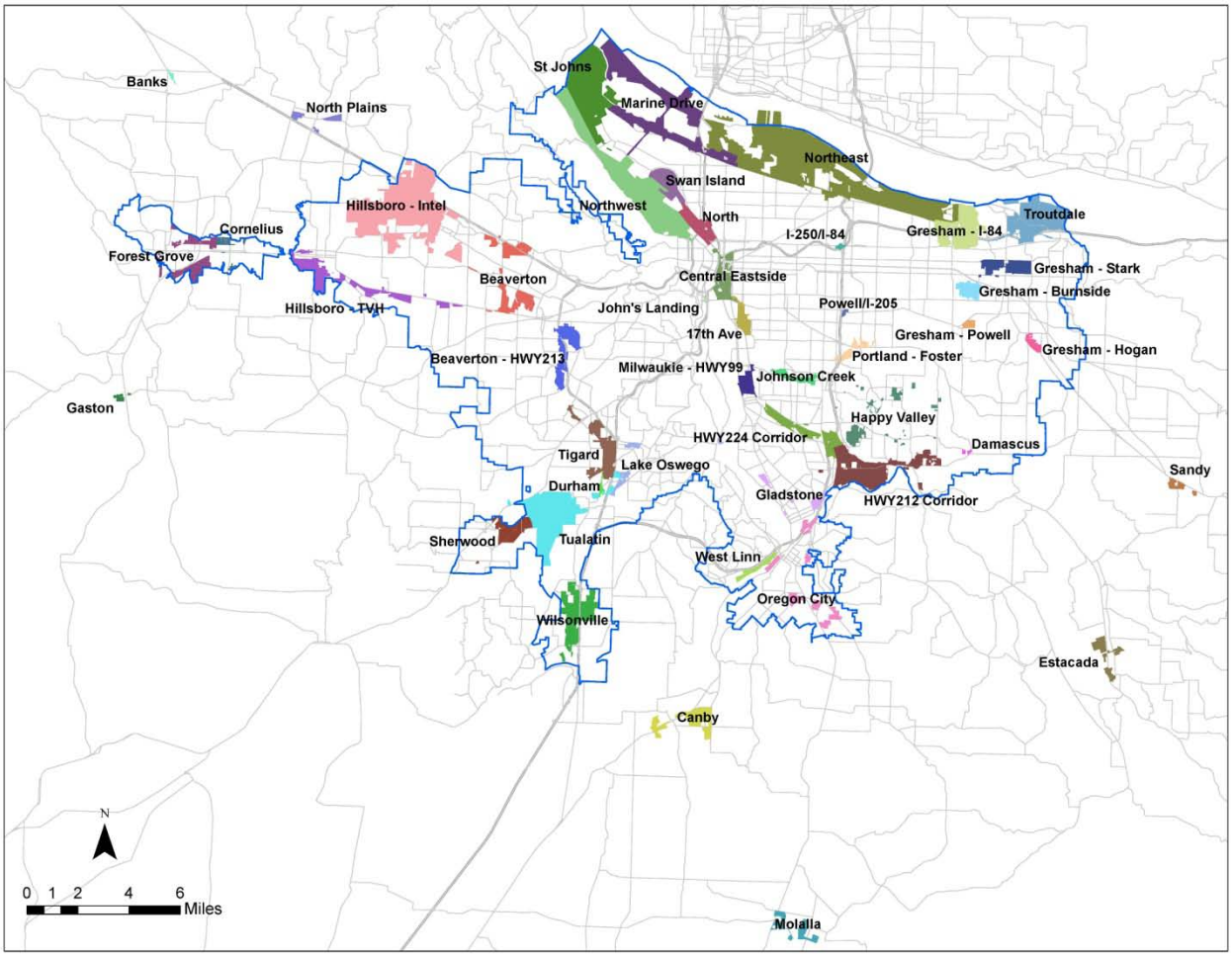
Table 5: Employment changes in Title 4 areas (2006 - 2012)

Title 4 designation	Employment	Industrial	RSIA	Non-Title 4	UGB Total
2012 employment	95,200	83,500	75,800	536,700	791,200
2012 employment share	12.0 %	10.6 %	9.6 %	67.8 %	100.0 %
Net change 2006-2012	3,300	6,600	-2,700	-6800	400
% change 2006-2012	3.61 %	8.55 %	-3.46 %	-1.25 %	0.0 %
Annualized growth 2006-2012	0.59 %	1.38 %	-0.59 %	-0.21 %	0.01 %

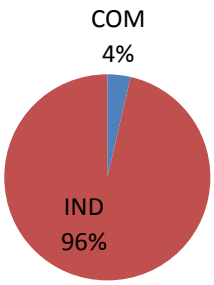
Commercial and industrial mix in industrial zones

Commercial employment in industrial zones is a common phenomenon and one that is not necessarily negative as some commercial uses may serve the needs of industrial employees or firms. This mix of employment uses in industrial zones is the rationale behind making some of the industrial redevelopment supply in the 2014 buildable land inventory available to meet forecast commercial employment demand (see demand analysis in Appendix 6). The following pie charts depict the share of industrial and commercial employment in various industrial zones in the three-county area for the year 2010 (depicted in Map 4).

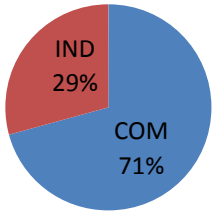
Map 4: Industrial zones in the three-county area



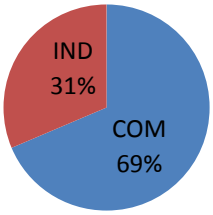
Banks
10 ac



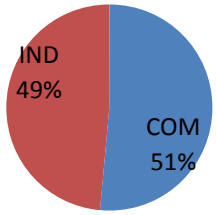
Beaverton - HWY 213
523 ac



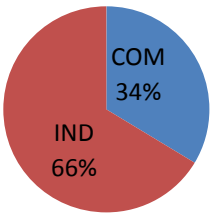
Beaverton
702 ac



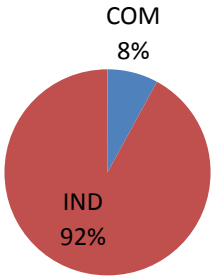
Canby
186 ac



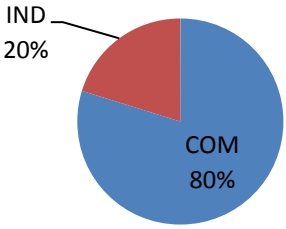
Cornelius
84 ac



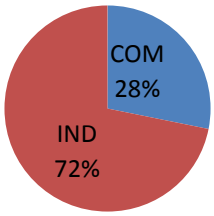
Damascus
9 ac



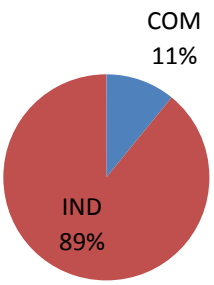
Durham
40 ac



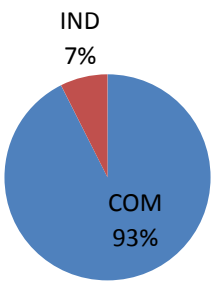
Estacada
5 ac



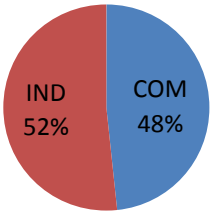
Forest Grove
400 ac



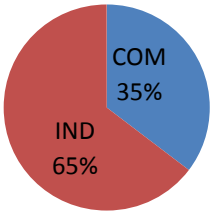
Gaston
36 ac



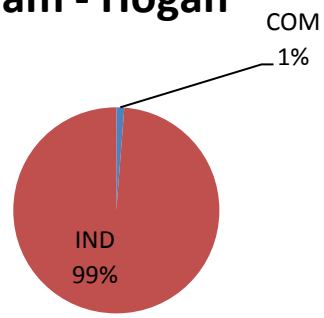
Gladstone
104 ac



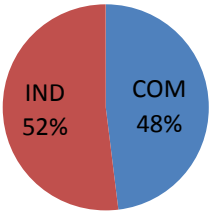
Gresham - Burnside
269 ac



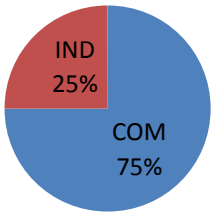
Gresham - Hogan
60 ac



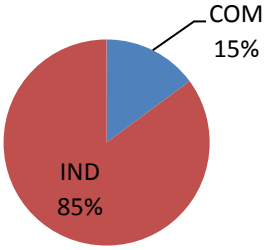
Gresham - I-84
685 ac



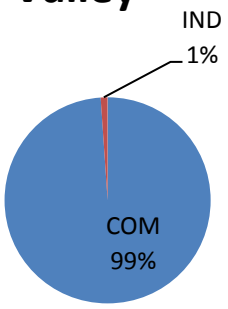
Gresham - Powell
16 ac



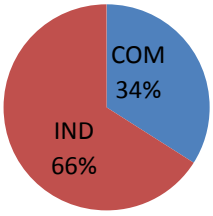
Gresham - Stark
196 ac



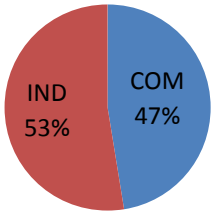
Happy Valley
440 ac



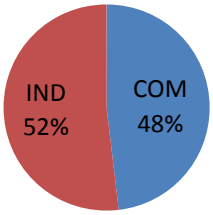
Hillsboro - Intel
2635 ac



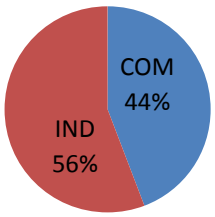
Hillsboro - TVH
838 ac



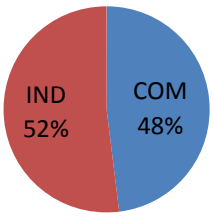
HWY212 Corridor
1060 ac



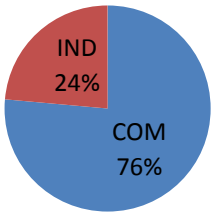
HWY224 Corridor
405 ac



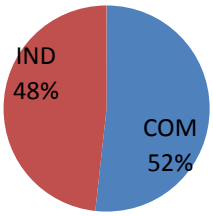
Johnson Creek
685 ac



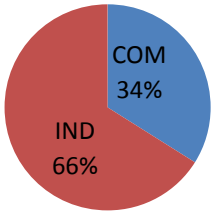
Lake Oswego
168 ac



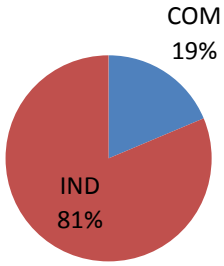
Milwaukie
200 ac



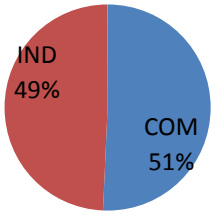
Molalla
10 ac



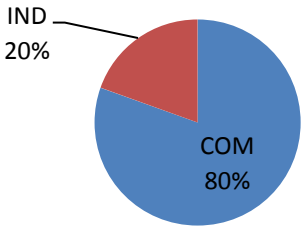
North Plains
53 ac



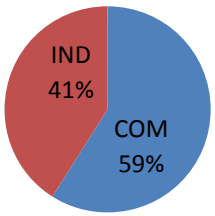
Portland - Northeast
4893 ac



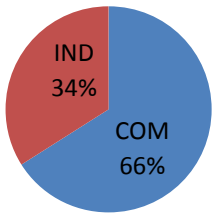
Oregon City
296 ac



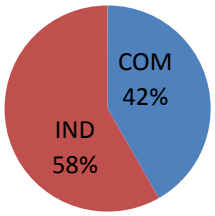
Portland - 17th Ave
249 ac



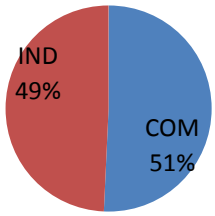
Portland - Central Eastside
285ac



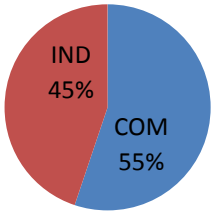
Portland - Foster
178 ac



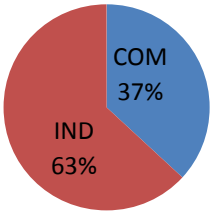
Portland - I-205/I-84
17 ac



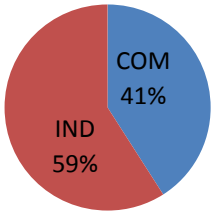
Portland - John's Landing
2 ac



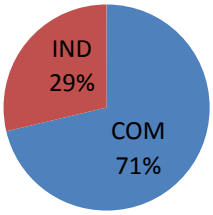
Portland - Northwest
4893 ac



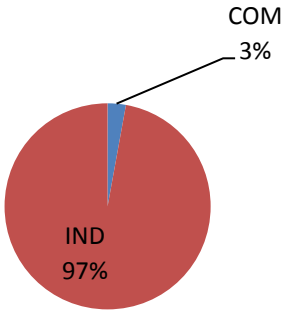
Portland - Marine Drive
1928 ac



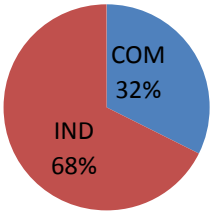
Portland - North
313 ac



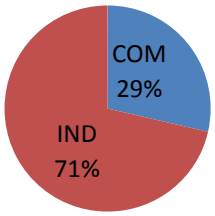
Portland - Powell/205
18 ac



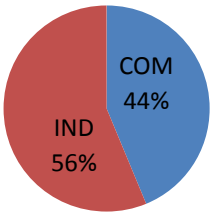
Portland - Swan Island
440 ac



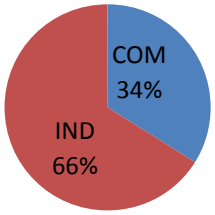
Sandy
87 ac



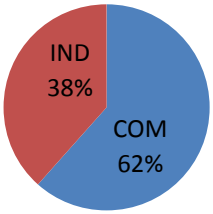
Sherwood
285 ac



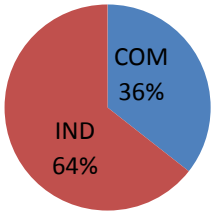
Portland - St Johns
1847 ac



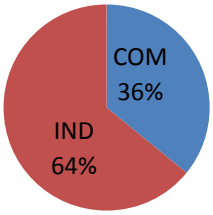
Tigard
647 ac



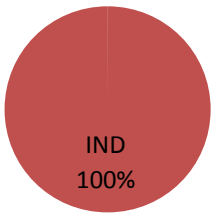
Troutdale
792 ac



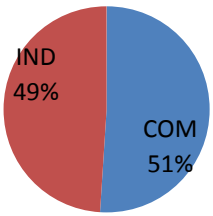
Tualatin
1391 ac



West Linn
126 ac



Wilsonville
939 ac



References/Links

Amy Vander Vliet. April 7, 2014. "2013 Year in Review: Portland Metro (Finally) Makes a Complete Jobs Recovery" (http://www.olmis.org/olmisj/ArticleReader?itemid=00008619).

Quarterly Census of Employment and Wages: Frequently Asked Questions (http://www.bls.gov/cew/cewfaq.htm)

Culverwell, Wendy. May 5, 2012. "Momentum gathers for Kruse Way" (http://www.bizjournals.com/portland/blog/2012/05/momentum-gathers-for-kruse-way.html)

Aggregate Covered Employment and Wages data available from OLMIS at http://www.qualityinfo.org/olmisj/CEP