

## CHAPTER FIVE - POPULATION, EMPLOYMENT & GROWTH

### LAND USE AND TRANSPORTATION

The successful integration of land use planning with transportation planning is an important element in building a livable community. Land use is recognized as a basis for making significant public investment decisions, including those associated with transportation. Transportation is a public service with demand determined by the physical separation of activities - in other words - the arrangement of land uses. Land use policies and transportation policies need to be complementary with one another if they are to work toward a single unified direction. To accomplish this, the community and decision-makers need to have an understanding of the procedures and purposes underlying transportation and land use planning.

The Growth Management Act (GMA) assists in linking land use and transportation planning. This process is also supported by the Benton-Franklin Council of Governments, which certifies local transportation elements for consistency and conformity with the GMA. One of the conformity requirements is to certify transportation elements are consistent with the land use element.

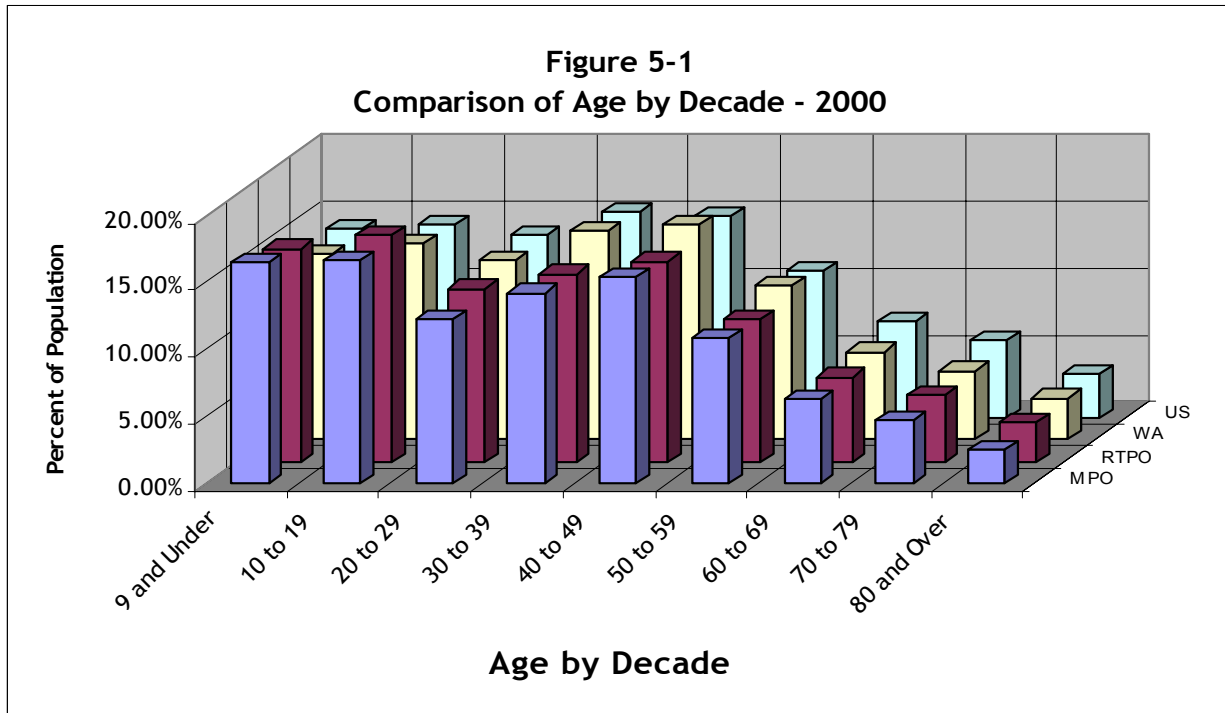
This chapter presents information on current and projected population, housing, and employment conditions in the metropolitan (MPO) and regional (RTPO) areas. Information sources include the 1990 Census, Census 2000, the 2004 Walla Walla/College Place Traffic Circulation Study, the 2005 Tri-Cities Metropolitan Area Traffic Model and the Office of Financial Management.

### DEMOGRAPHICS

Charts based on data from the 1990 Census and Census 2000 supply comparative information on age and income for both the MPO and RTPO areas. The charts are followed by tables which contain the data used as a basis for the charts.

#### *Figure 5-1: Comparison of Age by Decade - 2000*

This chart compares the 2000 population of the MPO and the RTPO areas with the Washington state and the United States by decade. Both the MPO and RTPO have a larger percentage of youth and teenagers than either the state or the nation.



**Table 5-1**

**COMPARISON OF AGE BY DECADE - 2000**

<b>MPO Area Age by Decade - 2000</b>		
<b>Age Cohort</b>	<b>Population</b>	<b>% of Population</b>
Population 0-9	27,555	16.59%
Population 10-19	27,811	16.74%
Population 20-29	20,550	12.37%
Population 30-39	23,743	14.29%
Population 40-49	25,804	15.53%
Population 50-59	18,181	10.94%
Population 60-69	10,499	6.32%
Population 70-79	7,835	4.72%
Population 80+	4,165	2.51%
<b>Total Population</b>	<b>166,143</b>	<b>100%</b>

<b>RTPO Area Age by Decade - 2000</b>		
<b>Age Cohort</b>	<b>Population</b>	<b>% of Population</b>
Population 0-9	39,415	15.96%
Population 10-19	41,818	16.93%
Population 20-29	32,040	12.97%
Population 30-39	34,705	14.05%
Population 40-49	37,090	15.02%
Population 50-59	26,412	10.69%
Population 60-69	15,662	6.34%
Population 70-79	12,451	5.04%
Population 80+	7,409	3.00%
<b>Total Population</b>	<b>247,002</b>	<b>100%</b>

<b>Washington Age by Decade - 2000</b>		
<b>Age Cohort</b>	<b>Population</b>	<b>% of Population</b>
Population 0-9	820,215	13.92%
Population 10-19	862,804	14.64%
Population 20-29	793,837	13.47%
Population 30-39	921,428	15.63%
Population 40-49	945,360	16.04%
Population 50-59	677,254	11.49%
Population 60-69	387,300	6.57%
Population 70-79	303,649	5.15%
Population 80+	182,274	3.09%
<b>Total Population</b>	<b>5,894,121</b>	<b>100%</b>

<b>United States Age by Decade - 2000</b>		
<b>Age Cohort</b>	<b>Population</b>	<b>% of Population</b>
Population 0-9	39,725,303	14.12%
Population 10-19	40,747,962	14.48%
Population 20-29	38,345,337	13.63%
Population 30-39	43,217,052	15.36%
Population 40-49	42,534,267	15.11%
Population 50-59	31,054,785	11.03%
Population 60-69	20,338,992	7.23%
Population 70-79	16,273,254	5.78%
Population 80+	9,184,954	3.26%
<b>Total Population</b>	<b>281,421,906</b>	<b>100%</b>

*Census 2000 Summary File1, Table P12: Sex by Age*

Figure 5-2: MPO Area Comparison of Age by Decade - 1990, 2000

Figure 5-3: RTPA Area Comparison of Age by Decade - 1990, 2000

These two charts compare the 1990 population of the MPO and the RTPA areas with their respective 2000 population by decades. One would expect the population cohorts to remain relatively constant over time, e.g.: the population aged 30 - 39 in 1990 to be comparable to the population aged 40 - 49 in 2000. That is predominately the case, with a variation of 0 percent to 2 percent over intervals by far the norm. An exception is the interval between 10 and 19 (1990) and 20 to 29 (2000) in the MPO, which has a difference of 4 percent.

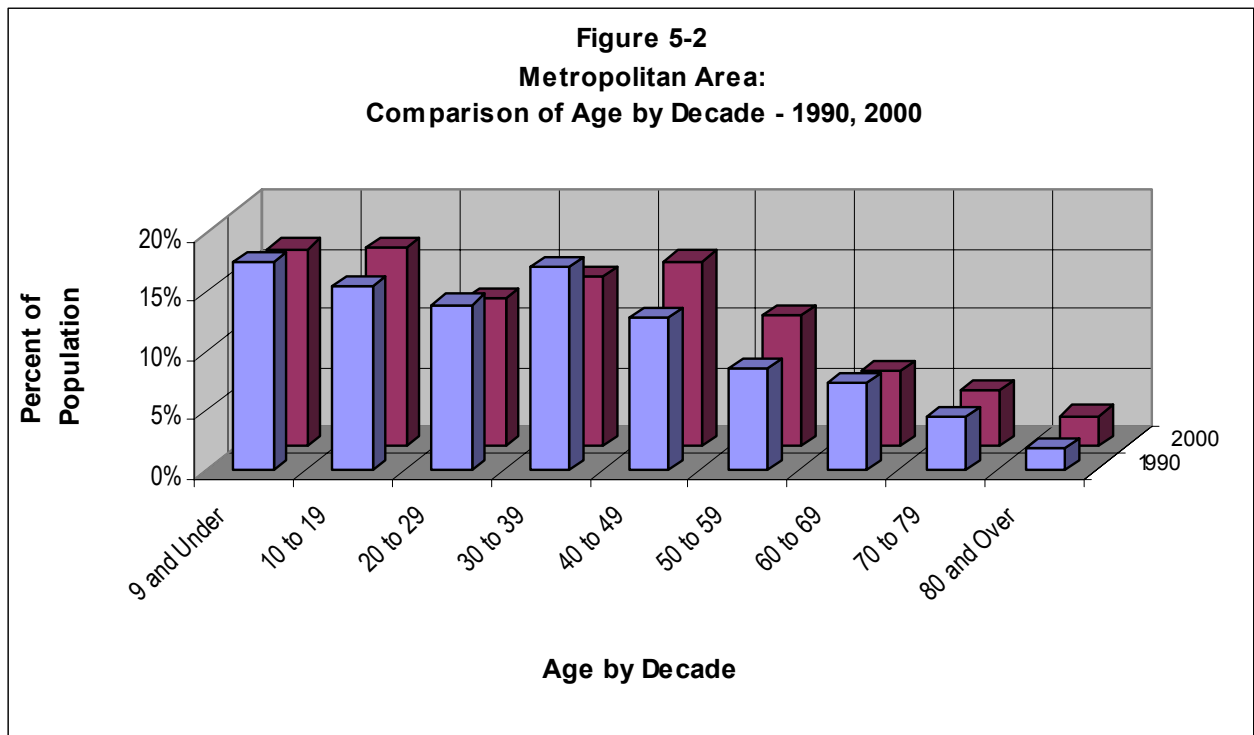


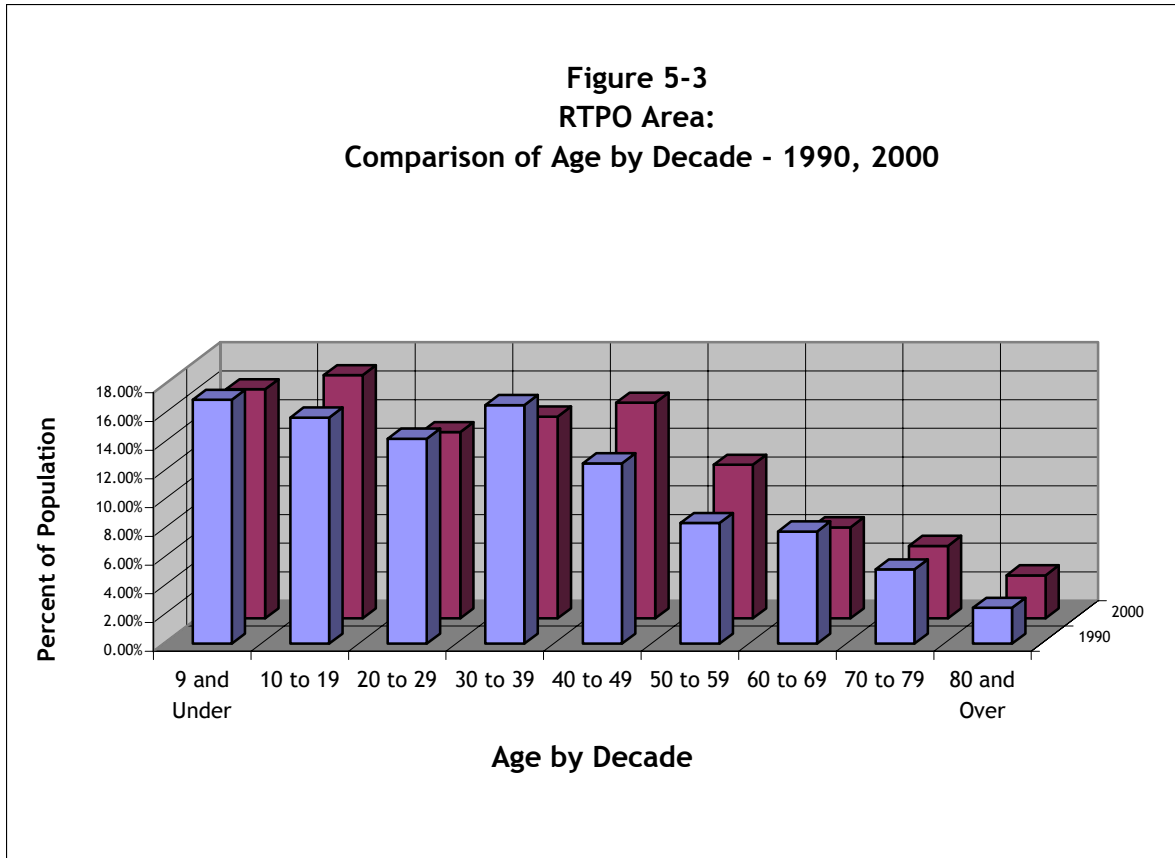
Table 5-2

**METROPOLITAN AREA  
COMPARISON OF AGE BY DECADE - 1990, 2000**

<b>MPO Area Age by Decade - 1990</b>		
Age Cohort	Population	% of Population
Population 0-9	22,836	17.58%
Population 10-19	20,294	15.62%
Population 20-29	18,240	14.04%
Population 30-39	22,290	17.16%
Population 40-49	16,839	12.96%
Population 50-59	11,209	8.63%
Population 60-69	9,723	7.48%
Population 70-79	5,965	4.59%
Population 80+	2,532	1.95%
<b>Total Population</b>	<b>129,928</b>	<b>100%</b>

<b>MPO Area Age by Decade - 2000</b>		
Age Cohort	Population	% of Population
Population 0-9	27,555	16.59%
Population 10-19	27,811	16.74%
Population 20-29	20,550	12.37%
Population 30-39	23,743	14.29%
Population 40-49	25,804	15.53%
Population 50-59	18,181	10.94%
Population 60-69	10,499	6.32%
Population 70-79	7,835	4.72%
Population 80+	4,165	2.51%
<b>Total Population</b>	<b>166,143</b>	<b>100%</b>

*Sources: 1990 Census Summary Tape File 1, Table P011: Age;  
Census 2000 Summary File 1, Table P12: Sex by Age*



**Table 5-3**

**RTPO AREA COMPARISON OF AGE BY DECADE - 1990, 2000**

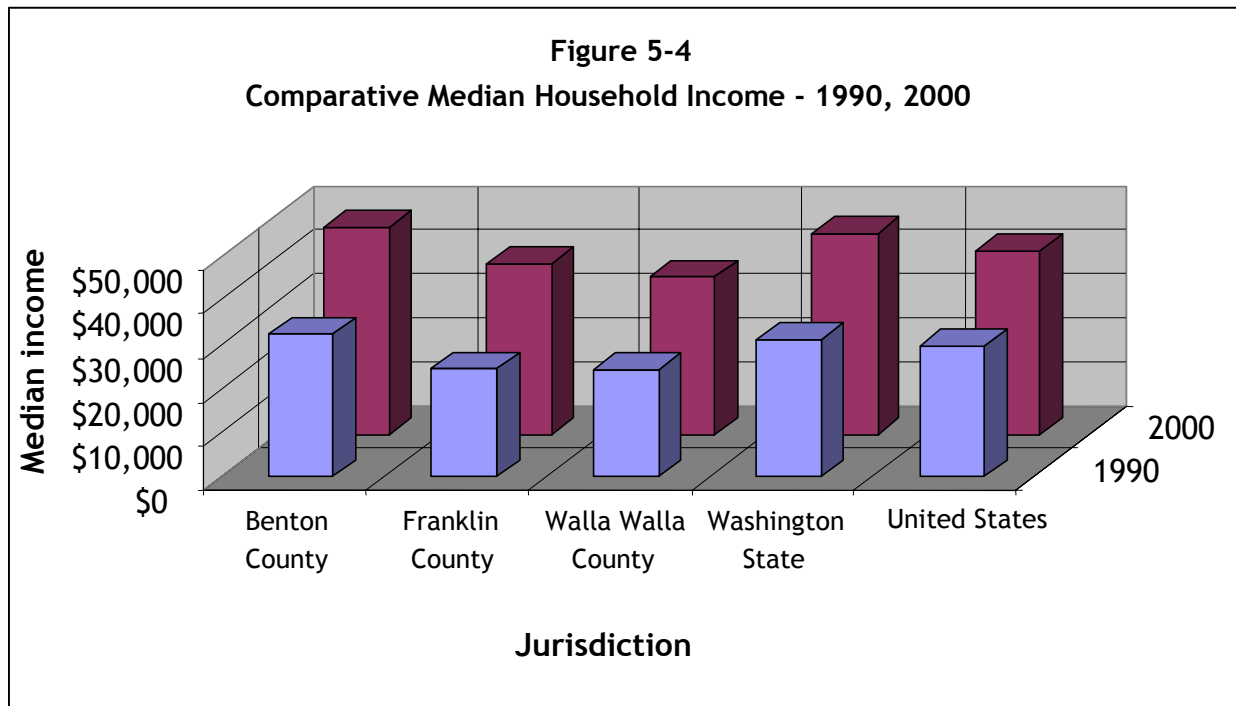
<b>RTPO Area Age by Decade - 1990</b>		
<b>Age Cohort</b>	<b>Population</b>	<b>% of Population</b>
Population 0-9	33,698	16.98%
Population 10-19	31,231	15.74%
Population 20-29	28,331	14.27%
Population 30-39	32,959	16.61%
Population 40-49	24,916	12.55%
Population 50-59	16,660	8.39%
Population 60-69	15,492	7.81%
Population 70-79	10,247	5.16%
Population 80+	4,938	2.49%
<b>Total Population</b>	<b>198,472</b>	<b>100%</b>

RTPO Area Age by Decade - 2000		
Age Cohort	Population	% of Population
Population 0-9	39,415	15.96%
Population 10-19	41,818	16.93%
Population 20-29	32,040	12.97%
Population 30-39	34,705	14.05%
Population 40-49	37,090	15.02%
Population 50-59	26,412	10.69%
Population 60-69	15,662	6.34%
Population 70-79	12,451	5.04%
Population 80+	7,409	3.00%
<b>Total Population</b>	<b>247,002</b>	<b>100%</b>

Sources: 1990 Census Summary Tape File 1, Table P011: Age;  
Census 2000 Summary File 1, Table P12: Sex by Age

Figure 5-4: Comparative Median Household Income - 1990, 2000

This chart shows 1990 and 2000 comparative median income for each county in the RTPO, Washington State and the United States. *Median income* is the amount which divides the income distribution into two equal groups, half having income above that amount, and half having income below that amount. The higher median income in Benton County is probably the effect of the Hanford Reservation and Pacific Northwest National Laboratory.



**Table 5-4**  
**COMPARATIVE MEDIAN HOUSEHOLD INCOME - 1990, 2000**

<b>Median Household Income - 1990</b>	
Benton County	\$32,593
Franklin County	\$24,604
Walla Walla County	\$24,414
Washington State	\$31,183
US	\$30,056

<b>Median Household Income - 2000</b>	
Benton County	\$47,044
Franklin County	\$38,991
Walla Walla County	\$35,900
Washington State	\$45,776
US	\$41,994

Sources: 1990 Census Summary Tape File 3, Table P080A: Median Household Income; and Census 2000 Tape File 3, Table P56: Median Household Income

*Figure 5-5: Comparative Household Income - 2000*

This chart shows household income in 2000 for the MPO, RTPO, Washington State and the United States by percent of population.

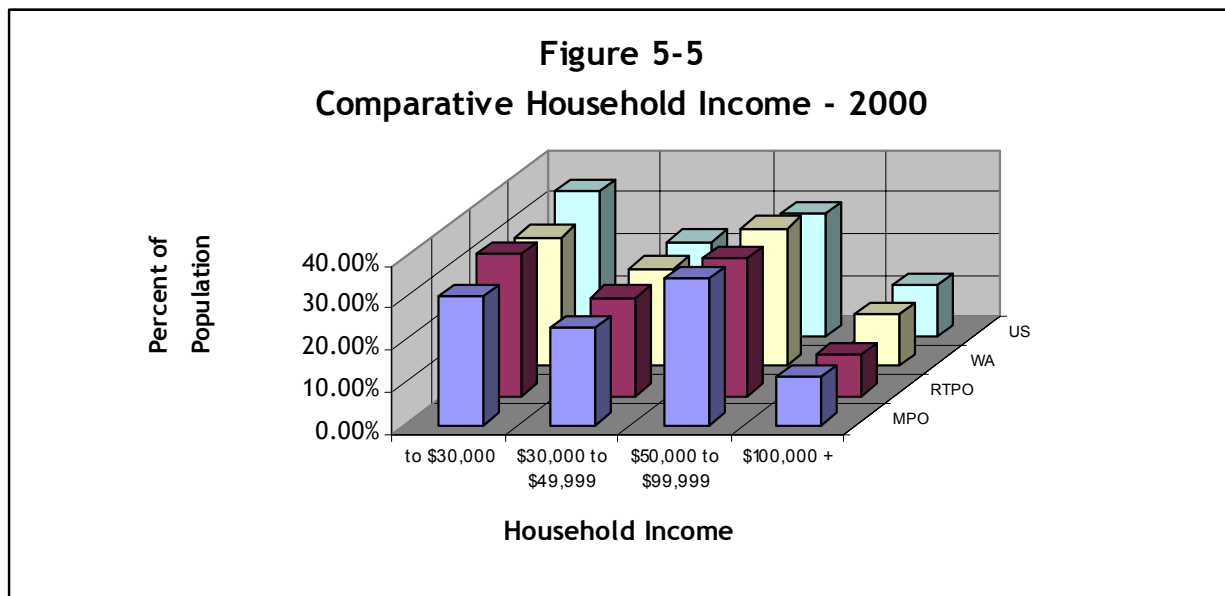


Table 5-5

## COMPARATIVE HOUSEHOLD INCOME - 2000

<b>MPO Area Household Income - 2000</b>		
<b>Household Income</b>	<b>Number of Households</b>	<b>Percentage</b>
To \$30,000	18,592	30.59%
\$30,000 to \$49,000	14,104	23.21%
\$50,000 to \$99,000	21,204	34.89%
\$100,000 and Above	6,876	11.31%
<b>Total</b>	<b>60,776</b>	<b>100%</b>

<b>RTPO Area Household Income - 2000</b>		
<b>Household Income</b>	<b>Number of Households</b>	<b>Percentage</b>
To \$30,000	29,543	33.83%
\$30,000 to \$49,000	20,521	23.50%
\$50,000 to \$99,000	28,678	32.84%
\$100,000 and Above	8,594	9.84%
<b>Total</b>	<b>87,336</b>	<b>100%</b>

<b>Washington Household Income - 2000</b>		
<b>Household Income</b>	<b>Number of Households</b>	<b>Percentage</b>
To \$30,000	702,901	30.93%
\$30,000 to \$49,000	533,005	23.46%
\$50,000 to \$99,000	750,890	33.05%
\$100,000 and Above	285,465	12.56%
<b>Total</b>	<b>2,272,261</b>	<b>100%</b>

<b>United States Household Income - 2000</b>		
<b>Household Income</b>	<b>Number of Households</b>	<b>Percentage</b>
To \$30,000	37,062,230	35.12%
\$30,000 to \$49,000	24,164,504	22.90%
\$50,000 to \$99,000	31,339,849	29.70%
\$100,000 and Above	12,972,539	12.29%
<b>Total</b>	<b>105,539,122</b>	<b>100%</b>

*Census 2000 Summary Tape File 3,  
Table P52: Household Income*

Figure 5-6: MPO Area - Comparative Household Income - 1990, 2000  
 Figure 5-7: RTPA Area - Comparative Household Income - 1990, 2000

These charts compare 1990 and 2000 household income for the MPO and RTPA areas. There is a notable increase in household income between the decades. The percentages in 2000 are reflected in Chart 5 at the state and national level as well. Locally, two factors causing the increase are inflation and a shift to more technical, well-educated employees in the Hanford related employment pool.

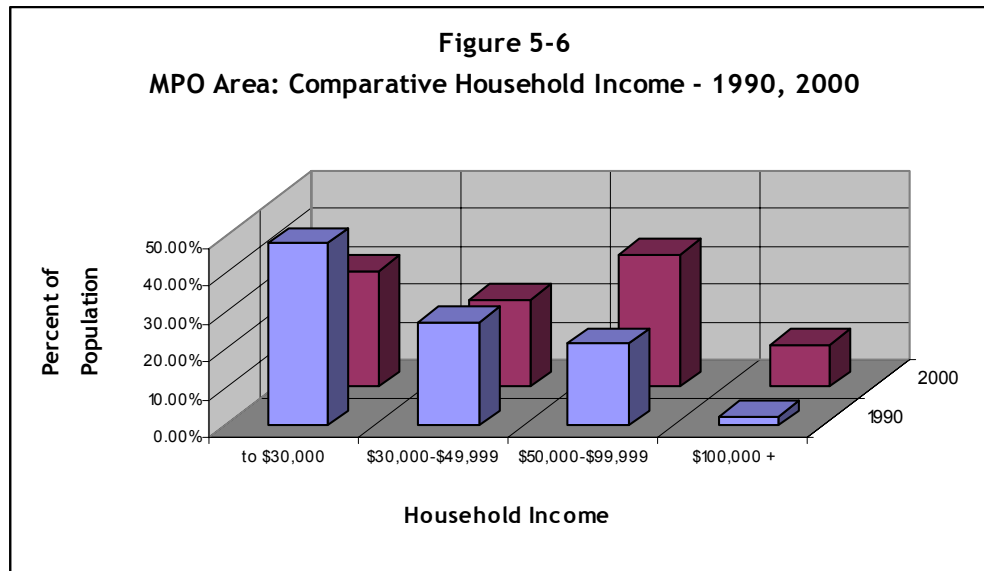


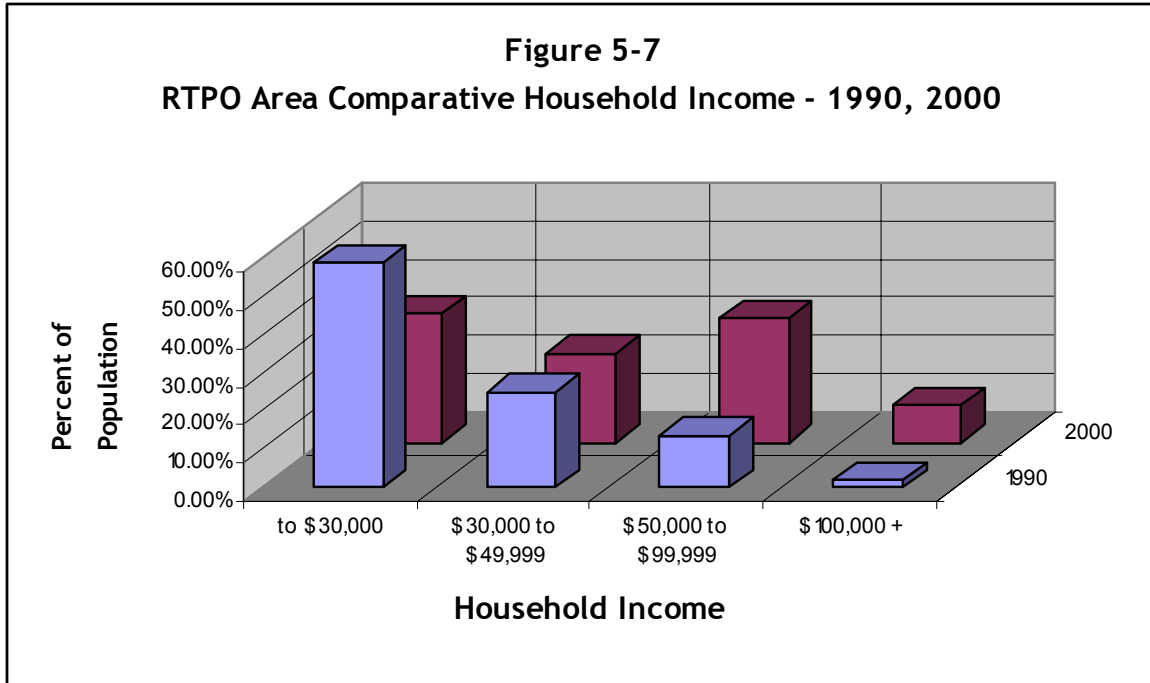
Table 5-6  
 MPO Area Comparative Household Income - 1990, 2000

MPO Area Household Income - 1990		
Household Income	Number of Households	Percentage
To \$30,000	23,084	48.23%
\$30,000 to \$49,000	13,194	27.57%
\$50,000 to \$99,000	10,433	21.80%
\$100,000 and Above	1,151	2.40%
<b>Total</b>	<b>47,862</b>	<b>100%</b>

1990 Census Summary Tape File 3, Table P080: Household Income

MPO Area Household Income - 2000		
Household Income	Number of Households	Percentage
To \$30,000	18,592	30.59%
\$30,000 to \$49,000	14,104	23.21%
\$50,000 to \$99,000	21,204	34.89%
\$100,000 and Above	6,876	11.31%
<b>Total</b>	<b>60,776</b>	<b>100%</b>

Census 2000 Summary Tape File 3, Table P52: Household Income



**Table 5-7**

**RTPO Area Comparative Household Income - 1990, 2000**

<b>RTPO Area Household Income - 1990</b>		
Household Income	Number of Households	Percentage
To \$30,000	37,011	59.17%
\$30,000 to \$49,000	19,464	25.20%
\$50,000 to \$99,000	14,059	13.62%
\$100,000 and Above	1,687	2.00%
<b>Total</b>	<b>72,221</b>	<b>100%</b>

<b>RTPO Area Household Income - 2000</b>		
Household Income	Number of Households	Percentage
To \$30,000	29,543	33.83%
\$30,000 to \$49,000	20,521	23.50%
\$50,000 to \$99,000	28,678	32.84%
\$100,000 and Above	8,594	9.84%
<b>Total</b>	<b>87,336</b>	<b>100%</b>

*1990 Census Summary Tape File 3, Table P080: Household Income*  
*Census 2000 Summary Tape File 3, Table P52: Household Income*

*Figure 5-8: Population by Race and Ethnicity - 2000*

The first thing to note about this chart and the associated tables is that, for convenience, apples and oranges have been combined in the same representation. If you scan the tables and perform some simple addition, you realize that more than 100 percent of the population is represented in each table. This is because race and ethnicity are not the same based on census definition.

*Race* is a census self-identification data item in which respondents choose the race or races with which they most closely identify. *Ethnicity* refers to Hispanic/Latino origin. *Hispanic/Latino* is also a self-designation. In 1997, the Federal Office of Management and Budget revised the standards for how the Federal government would collect and present data on race and ethnicity. *Origin* can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.

To compound all of the above, some census respondents included themselves in both categories - as a person of race and as a person of ethnicity - when filling out the form, thus double counting.

What this means is that "Race" and "Hispanic/Latino Origin" are very much apples and oranges, and must be treated as such. This report presents information on each group in the same chart so all racial and ethnic data may be viewed comparatively. Additionally, due to OMB revision, 1990 data is not comparable to 2000 data.

The chart shows the MPO and RTPO areas with a lower percentage of African Americans than the United States and a higher percentage of both Other Races and Hispanic ethnicity than Washington and the United States.

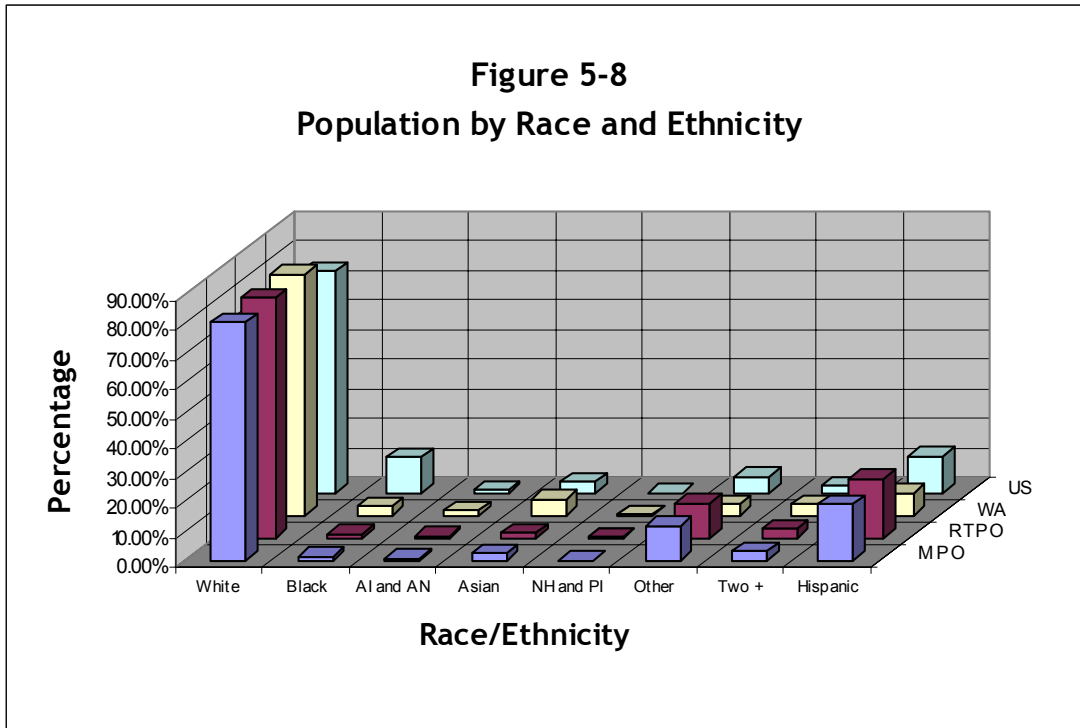


Table 5-8

**POPULATION BY RACE AND ETHNICITY - 2000**

MPO Race and Ethnicity by Percentage - 2000		
Race	Total	Percentage
Total Population	166,143	
White alone	134,093	80.71%
Black or African American alone	2,372	1.43%
American Indian and Alaska Native alone	1,339	0.81%
Asian alone	3,686	2.22%
Native Hawaiian and Other Pacific Islander alone	156	0.09%
Some other race alone	19,527	11.75%
Two or More Races	4,970	2.99%
Hispanic	31,608	19.02%

<b>RTPO Race and Ethnicity by Percentage - 2000</b>		
<b>Race</b>	<b>Total</b>	<b>Percentage</b>
Total Population	247,002	
White alone	200,513	81.18%
Black or African American alone	3,479	1.41%
American Indian and Alaska Native alone	1,992	0.81%
Asian alone	4,548	1.84%
Native Hawaiian and Other Pacific Islander alone	343	0.14%
Some other race alone	28,834	11.67%
Two or More Races	7,293	2.95%
Hispanic	49,492	20.04%

<b>Washington State Race and Ethnicity by Percentage - 2000</b>		
<b>Race</b>	<b>Total</b>	<b>Percentage</b>
Total Population	5,894,121	
White alone	4,821,823	81.81%
Black or African American alone	190,267	3.23%
American Indian and Alaska Native alone	93,301	1.58%
Asian alone	322,335	5.47%
Native Hawaiian and Other Pacific Islander alone	23,953	0.41%
Some other race alone	228,923	3.88%
Two or More Races	213,519	3.62%
Hispanic	441,509	7.49%

<b>United States Race and Ethnicity by Percentage - 2000</b>		
<b>Race</b>	<b>Total</b>	<b>Percentage</b>
Total Population	281,421,906	
White alone	211,460,626	75.14%
Black or African American alone	34,658,190	12.32%
American Indian and Alaska Native alone	2,475,956	0.88%
Asian alone	10,242,998	3.64%
Native Hawaiian and Other Pacific Islander alone	398,835	0.14%
Some other race alone	15,359,073	5.46%
Two or More Races	6,826,228	2.43%
Hispanic	35,305,818	12.55%

*Census 2000 Summary File 1 (SF 1); Table P1 - Total Population*

*Census 2000 Summary File 1 (SF 1); Table P3 - Race*

*Census 2000 Summary File 1 (SF 1); Table P8 - Hispanic or Latino by Race*

## LAND USE

The discussion of current and future land use in the MPO and RTPA areas is based on local comprehensive plans and the land use information generated for two traffic models: The 2004 Walla Walla/College Place Traffic Study Model, and the 2005 Tri-Cities Metropolitan Area Traffic Model.

While there is a traffic model for the Tri-Cities MPO area, no model exists for the entire RTPA area. Use of data from the Walla Walla/College Place Model allows consideration of both urban areas in the RTPA.

A traffic model is constructed with the purposes of forecasting traffic and operating conditions for a transportation network, primarily the street system. The model is based on two primary inputs - current population data and current employment data. A study area is broken up into many smaller areas called "traffic analysis zones" (TAZs), and the relevant housing and employment data input into each TAZ. After data entry, the model is calibrated to replicate existing travel patterns.

Projected increase in population is forecast through increases in single and multi-family housing, and future employment is projected. The future housing and employment data assigned to TAZs and coupled with the traffic model software make it possible to project traffic volumes. This gives planners and engineers the ability to determine the impacts of different roadway or land use scenarios on the road network. Using the projected population and employment increases provided for the model by each jurisdiction, it is possible to discuss urban-area wide changes for those variables.

### Walla Walla/College Place Urban Area

The study area for the 2004 Walla Walla Traffic Study included the Walla Walla/College Place urban area and peripheral areas defined by adjacent 2000 Census tracts, and was divided into 52 TAZs. Forecasts were developed for two horizon years - 2013 and 2023. Planning staff from the Cities of College Place and Walla Walla, and Walla Walla County, worked in conjunction with staff from the Benton-Franklin Council of Governments to develop the population and employment forecasts.

Land Use was forecast in 15 different categories. Two categories - Single Family and Multi Family Dwellings - were used to forecast population increases in the model. The population of the study area is forecasted to reach 58,352 by the year 2023, for a total increase in population of 14,271 over the 2003 population of 44,081.

For six of those categories, including industrial/manufacturing, retail, FIRESG (Finance, Insurance, Real Estate, Service, Government) regional retail, airport and office, base year data and projected growth were calculated in employees. These categories supply the data for our discussion of land use in the Walla Walla area. Employment in these categories was estimated to be 13,927 in 2003.

For the six categories, forecasts predict an increase in number of employees to 17,539 in the year 2013, and growth is expected to reach 20,109 by the year 2023. This reflects an increase of 6,182 employees over the twenty-year period. Through the twenty-year planning

horizon it was assumed that population and employment would increase at about 1.4 percent and 1.9 percent, respectively.

Please note that this discussion of employment represents only the above categories. Growth in schools, assisted living facilities, hotels/motels, and the prison expansion are built into the model, but measured in other ways.

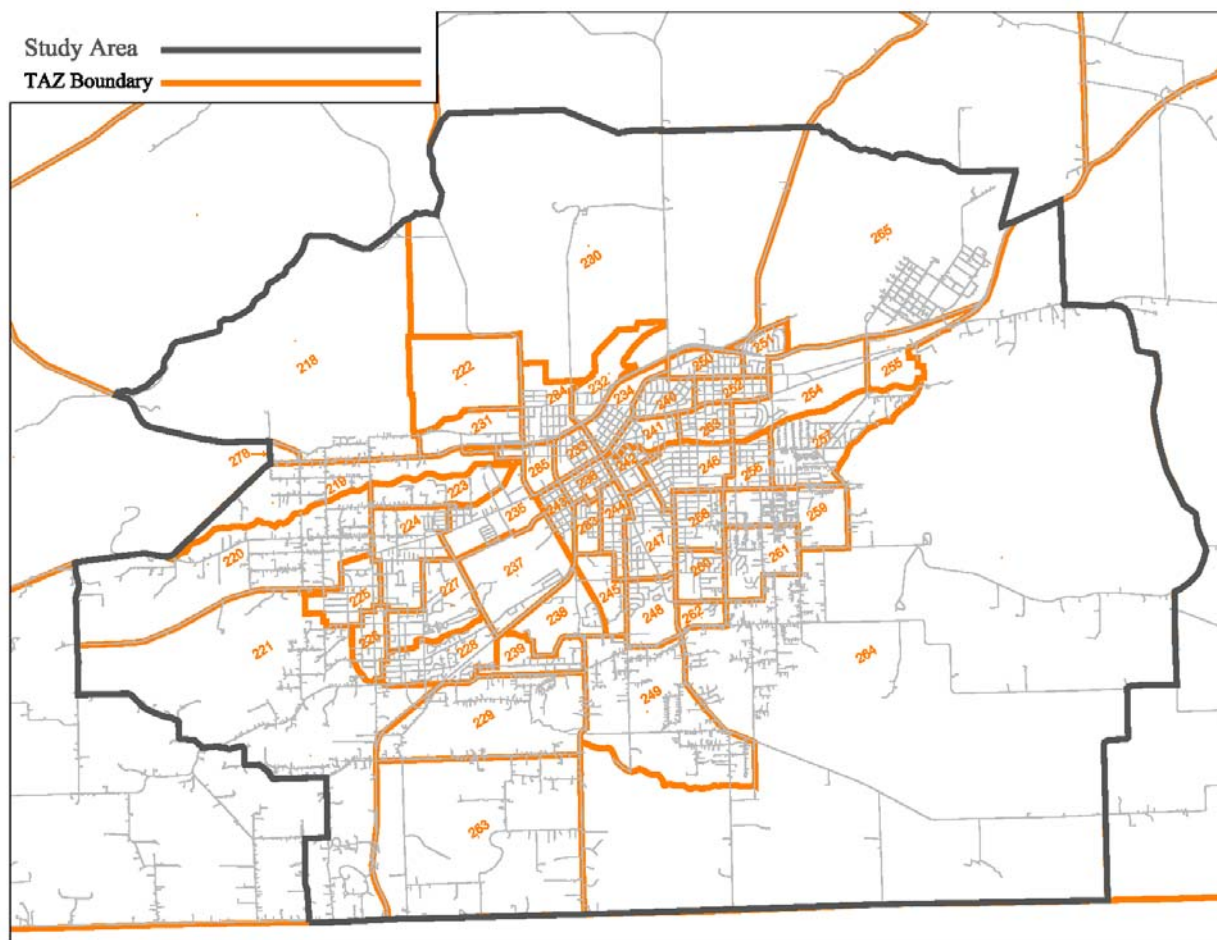
### ***Current (2003) Population and Land Use***

#### ***Current Population***

The Walla Walla/College Place model has 52 TAZs. While each TAZ has some population, the range is from 13 residents to 2,397, with nine containing at least 1,500 residents. Those nine TAZs contain more than one-third of the urban area population.

Of the nine zones, three are in College Place. Those TAZs (224, 227 and 228) are located on the eastern edge of the city along Myra Road and adjacent to Walla Walla. Of the six in Walla Walla, five zones (240, 244, 246, 247 and 253) are in the core of the city and the remaining zone (257) is on the eastern edge. Figure 5-9 shows the Walla Walla/College Place Traffic Model TAZ structure.

***Figure 5-9: Walla Walla/College Place Traffic Model TAZ Structure***



### *Current Land Use*

Land Use was forecast in 15 different categories in the Walla Walla/College Place Study. Six of those categories - industrial/manufacturing, retail, FIRESG (Finance, Insurance, Real Estate, Service, Government) regional retail, airport and office - were measured in employees. As stated above, employment in these six categories in the urban area was estimated at 13,927 in 2003.

The Industrial/Manufacturing category accounted for 3,803 employees or about 27 percent of the total. Four zones located in the west central area of Walla Walla (231, 233, 235 and 242) contain 55 per cent of that total.

The Retail category contained 3,918 employees, or about 28 percent of the area total. Significant numbers of retail employees were found in five zones (229, 235, 238, 241 and 254), which held 2,059 or about 53 percent of the total. These zones are scattered throughout Walla Walla, from the south central edge of the City (229), then west central (235 and 238) and north east from there (241) to the eastern fringe (254) of the city.

The FIRESG category contained 5,216 employees, or about 37 percent of the total. Four zones (236, 240, 241 and 257) contain 2,238 or 43 percent of the total. Three zones (236, 240 and 241) are adjacent to each other in central Walla Walla, while zone 257 is on the east edge of the city.

Regional Retail has 860 employees or 6 percent of the total. A single zone, 235, on the western edge of Walla Walla in the vicinity of the Blue Mountain Mall, contained 48 percent of that total.

Both the Offices (102) and Airport (28) categories contained a very small number of employees.

### *Future Population and Land Use*

#### *Future Population*

The projections for the model area show a population increase from 44,080 in the year 2003 to 51,163 by the year 2013. The population is projected to reach 58,352 by the year 2023, for a total increase in population of 14,272 over the twenty-year period. The projections reflect an increase of 4,872 single-family homes and 617 multi-family dwellings over the twenty-year period.

The cumulative population forecasts for population growth show specific areas that are likely to have substantial growth. Population increases are projected to be largest in Walla Walla County on the western fringe of College Place (TAZs 220 and 221), on the eastern edge of College Place (224, 227), south of Isaacs Avenue in eastern Walla Walla (254), and in the southeast area of the study area (264).

### *Future Land Use*

Recall that employment in 2003 in these areas was estimated to be 13,927. Forecasts reflect an increase in the number of employees to 17,539 in the year 2013 and growth is expected to reach 20,109 by the year 2023. This reflects an increase of 6,182 employees over the twenty-year period. Through the twenty-year planning horizon it was assumed that employment would increase at about 1.9 percent annually.

The Industrial/Manufacturing category grew to 5,122 employees or about 29 percent of the total in 2013, and 6,220 employees, or about 31 percent of the 2023 total. TAZs 235, 254 and 265 all experienced notable growth by both 2013 and 2023. TAZ 235 is the sole zone with a significant amount of employment in 2003 which experienced notable growth in subsequent decades. Zone 235 is in west Walla Walla along Rose Street and Myra Road, Zone 254 is in east Walla Walla north of Isaacs Avenue, while zone 265 is in the eastern urban area encompassing the airport and port properties.

The Retail category grew to 5,608 employees (32 percent of the total) in 2013 and 6,668 employees (33 percent of the 2023 total). The increase in Retail employment occurs primarily in three zones, and mostly from 2003-2013. Zones 227 and 230, which had virtually no retail employees in 2003, and Zone 254 received 68 percent of the 1,690 employee increase between 2003 and 2013. Zone 227 is west of Myra Road in east College Place adjacent to the Walla Walla City limits, while zone 230 is north of Rees Avenue on the north edge of the urban area in Walla Walla County.

Employment in the FIRESEG category was projected to grow a total of 1 percent over each decade, no substantial change occurred in this area.

Regional Retail experienced growth in only zone 235, the Blue Mountain Mall area.

Offices experienced some increase. All projected 2003-2013 growth (248 employees) occurred in zone 230 on the north edge of the urban area in Walla Walla County, and all projected 2013-2023 growth (499 employees) occurred in zone 237 east of Myra Road in west Walla Walla.

Employment growth (by TAZ) is anticipated to be largest in the western areas of College Place (221), west of Myra Road (227), north of Rees Avenue (230), along Rose Street in the Blue Mountain Mall vicinity (235), east of Myra Road (237), north of Isaacs Avenue (254), expansion of the State Penitentiary (222), and at the port properties in the airport vicinity (265).

### **Tri-Cities Metropolitan Area**

Data developed for the 2005 Tri-Cities Metropolitan Area Traffic Model (TCTM) is the basis for the discussion of population and employment change in the Tri-Cities area. The Benton-Franklin Council of Governments developed the TCTM, but all data inputs - meaning location and magnitude of all population and employment growth - was generated by the planning staff of each participating jurisdiction. The TCTM has 13 various land uses distributed through 220 TAZs encompassing the Metropolitan Area.

As with the Walla Walla/College Place Model, population increase is quantified through growth in housing units. The following discussion of population growth/location is based on housing projections, while the discussion of employment growth/location is based on the eight employee-tabulated categories listed below.

Eight land use categories are evaluated based on number of employees. These include: Industrial and Manufacturing, Retail, FIRESG (Finance, Insurance, Real Estate, Services and Government), Regional Mall, Airport, Hanford Office, Pacific Northwest National Laboratory (PNNL) and Offices Lacking Heavy Client Traffic.

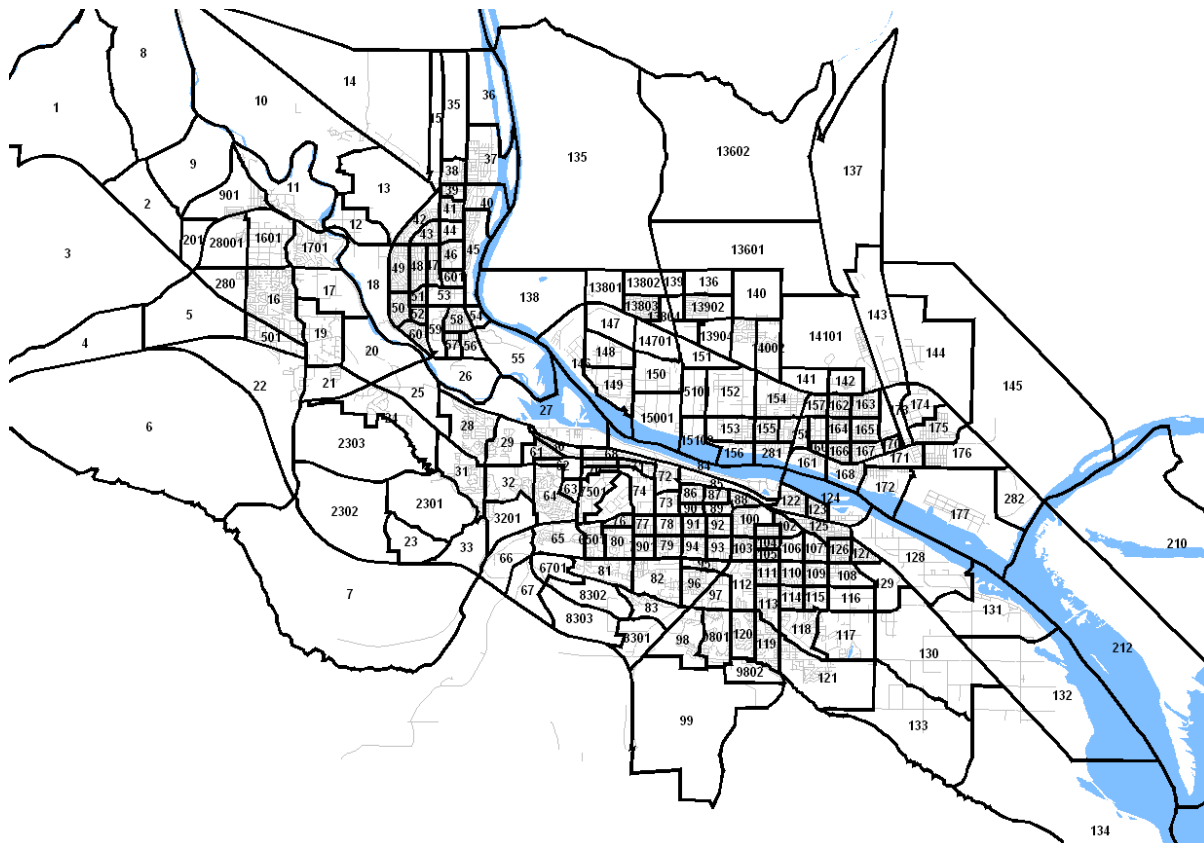
Land Use categories not measured in employees, and their unit of measure include: Single Family Dwellings (dwelling units), Multi-Family Dwellings (dwelling units), Schools (number of students), Hotels and Motels (number of rooms) and Assisted Living and Nursing Facilities (number of rooms).

Current (2005) population and employment data will be reviewed, followed by a look at the data developed for 2015 and 2025. A summary of the three data sets closes this section.

Figure 5-10 shows the TAZ structure for the Tri-Cities Metropolitan Area Traffic Model and should be referenced for the remaining discussion.

Appendix E contains all land use data generated for the Model and may be referred to for more specific information.

*Figure 5-10: Tri-Cities Metropolitan Area Traffic Model TAZ Structure*



## ***Current (2005) Population and Land Use***

### *Population*

As stated above, the TCTM has 220 TAZs and an estimated 2005 population of 192,382. While most TAZs have some population, 17 zones with at least 2,000 residents contain about one-fourth of the urban area population.

Zone 64 in Kennewick is the most populated zone (4,188 persons) in the metro area. It is part of a cluster of five adjacent zones (along with Zone 28, 29, 31 and 32 all in Richland) bounded approximately by Columbia Park Trail, Columbia Center Boulevard, Clearwater Avenue and Badger Mountain which represent one of the largest population centers in the Tri-Cities.

From the group of 17 zones, two are in West Richland (901 and 16), two are in central (44) and north (37) Richland and one is in Kennewick (106). Six zones are in Pasco, three (147, 13803 and 13902) are in north central Pasco flanking Road 68 and three (163, 167 and 175) are in east Pasco east of 14<sup>th</sup> Avenue.

### *Current Land Use*

As mention above, the TCTM contains 13 land use categories, with eight of them evaluated based on number of employees. These include: Industrial and Manufacturing, Retail, FIRESG (Finance, Insurance, Real Estate, Services and Government), Regional Mall, Airport, Hanford Office, PNNL and Offices Lacking Heavy Client Traffic.

Five of those categories - Industrial and Manufacturing, Retail, FIRESG, Hanford Office and PNNL - contain 95 percent of employment to be considered in this analysis. The TCTM shows a total of 63,547 metropolitan area employees in the eight land use categories in 2005.

The *Industrial and Manufacturing* (LU 3) (I&M) category has 12,700 employees, or 20 percent of the total employees represented in the eight categories. Eight TAZs contain 7,736 employees, or 61 percent of all I&M employees.

Zones with high industrial/manufacturing employment are located predominately on the periphery of the metropolitan area. Zone 143 in east Pasco tops all zones in this category with 1,910 employees. Pasco contains two additional significant TAZs in this category: Zone 137 just north of Zone 143 and Zone 177 encompassing much of the Port of Pasco. Three zones (34, 13 and 14) are on the northwest of the metropolitan area. Zones 13 and 14 are in northwest Richland while Zone 34 is the Hanford Reservation. One zone, 124, is in northeast Kennewick along the Columbia River. The final zone, 132, is Port of Kennewick land along the Columbia River in the southeast corner of the urban area.

*Retail* (LU 4) as a land use category contained 15,335 (24 percent of the 2005 total) employees. Nine Retail TAZs contained 5,223, or 34 percent of all retail employees.

The top two zones in the retail category (64 and 63), and six in total, are located in Kennewick. Zones 64 and 63 are on the west side of Columbia Center Boulevard including the mall. TAZ 70 is also on Columbia Center Boulevard, but on the east side. Of the three other Kennewick zones, Zone 98 is in the south central area, Zone 93 is in the center of town and Zone 125 is in downtown old Kennewick. Two zones are in Richland: Zone 59 is north of Aaron

Drive along Wellsian Way and Zone 55 is the Columbia Point area between George Washington Way/SR 240 and the Columbia River.

*FIRESG* (LU 5) is an acronym for “Finance, Insurance, Real Estate, Services and Government”. As a land use, this category contained 15,415 employees, or 24 percent of the 2005 total of land uses being discussed. Ten TAZs contain 7,020 employees, or 46 percent of that total.

Six of the top ten zones in this category are in Richland. Zone 53 in central Richland adjacent to Lee Boulevard, is the area with the highest number of *FIRESG* employees. Zones 4601, 46 and 59 are in the same core Richland area as TAZ 53. TAZ 13 is Port of Benton property by Richland airport in the northwest area of the city next to Hanford, while zone 27 is south of the Yakima River and adjacent to the Columbia River.

Two zones are in Pasco: 15501 in the center of the city and 165, on the east side. Zones 107 and 125 in Kennewick are near the old downtown.

The remaining land uses - Regional Mall, Airport, Hanford Office, PNNL, and Offices Lacking Heavy Client Traffic - are very specific, often localized in a single TAZ.

The *Regional Mall* (LU 6) category is located in TAZ 62 in Kennewick, the site of the Columbia Center Mall. This category contains 1,300 employees, or 2.0 percent of the urban area total.

The *Airport* (LU 7) category has employees in three zones: Zone 141 in Pasco, site of the Tri-Cities airport; Zone 13, location of the Port of Benton airport in Richland; and Zone 75, the site of Vista Field in Kennewick. The three sites combine for a total of 337 employees, or .05 percent of the total.

The *Hanford* (LU 9) category refers to the Department of Energy (DOE) environmental cleanup mission at the Hanford Reservation. At Hanford, DOE-Richland (RL) and DOE-Office of River Protection (ORP) rely on contractors to carry out project requirements for cleaning up the legacy of nearly five decades of support to the nation's defense. DOE-RL manages diverse and large-scale environmental remediation challenges, while DOE-ORP oversees tank farm operations, waste feed delivery, construction and commissioning of the Waste Treatment Plant and disposal of vitrified tank waste.

Employment levels are, and will be, largely determined through federal budget levels, varying contractor approaches to the mission and completion of various mission tasks. Currently this land use is estimated to contain 13,531 employees, or 21 percent of the model area employment.

The Hanford category is contained in eight zones, all in Richland except Zone 34, which is in Benton County on the northwest shoulder of Richland.

*PNNL* (LU 10) category is in three TAZs - 34, 35 and 36 - within Richland. PNNL is the Pacific Northwest National Laboratory, a DOE research lab. Operating out of the DOE Office of Science, PNNL is an internationally known science and technology research and development center. It currently holds 3,844 employees, or 6 percent of the total.

The *Offices Lacking Heavy Client Traffic* (LU 11) land use is scattered over 29 zones, but the category contains only 1,085 employees, less than 2 percent of the total.

### ***Future Population and Employment***

The TCTM also required population and employment forecasts for 2015 and 2025. The next two sections will examine those data sets.

#### ***Future Population and Employment - 2015***

The TCTM forecasts a 2015 population of 235,095 in the TCTM model. This represents an increase of 22 percent over 2005. Generally, the zones with large populations in 2015 are the same areas as in 2005, with one exception.

Pasco forecasts a 2015 population of 3,226 in TAZ 140 (in the north central part of town), while the population in 2005 was estimated at 561, an increase of nearly 2,700. While the increase in TAZ 140 was the most pronounced, two zones in Kennewick, TAZ 98 and TAZ 82 both in the south central area of town, are also forecast to grow markedly.

As mention above, the TCTM contains 13 land use categories, with eight of them evaluated based on number of employees.

Five of those categories - Industrial and Manufacturing, Retail, FIRESG and Hanford contain 96 percent of 2015 employment to be considered in this analysis.

The TCTM shows an estimated 72,270 metropolitan area employees in the eight land use categories, 8,723 (14 percent) greater than the 2005 total.

The *Industrial and Manufacturing* (I&M) category has 16,692 employees in 2015, or 23 percent of the total employees represented in the eight categories. The total shows an estimated increase of 3,992 employees (31 percent) between 2005 and 2015.

Zones with high industrial/manufacturing employment in 2015 are consistent with those in 2005 with one exception: TAZ 8301 in south central Kennewick is forecast to increase from 80 to 1,005 employees over the decade, an increase of more than 11 times the 2005 total. Employment in Zone 177 in Pasco will increase over 300 employees (almost 49 percent) and in Zone 143 in Pasco will increase by 400 employees or 21 percent over 2005, while Zone 14 in Richland is forecast to increase by 33 percent from 723 to 1,095 employees.

*Retail* as a land use category contained 18,941 (26 percent of the 2015 total) employees. This represents an increase of 3,606 (23 percent) during the decade. The TAZs with highest employment in this category were almost identical to those in 2005 save Zone 20 in south central Richland south of the Yakima River. TAZ 20 is forecast to grow from 295 employees in 2005 to 966 employees (an increase of over 300 percent), which makes it the Zone with highest number of retail employees in 2015.

*FIRESG* (LU 5) is an acronym for “Finance, Insurance, Real Estate, Services and Government”. As a land use, this category contained 21,120 employees, or 29 percent of the 2015 total of land uses being discussed. The 2015 total represents an increase of 5,705 (37 percent) over 2005.

Several of the top zones in this category are in Richland. Zone 4601 in Richland was projected to have the highest number of FIRESG employees with 2,192, an increase of 1,345 over its

2005 total. Other notable increases in Richland were TAZs 46 and 36. TAZ 8301 in south central Kennewick added 750 employees to a 2005 total of zero.

The *Regional Mall* category is projected to contain 1,495 employees, an increase of 195 workers. This represents two percent of 2015 employment.

Employment in the *Airport* land use category is expected to increase by 13 persons.

The *Hanford Office* category is forecast to have 6,608 employees in 2015 or 9 percent of the employees in the categories discussed. This represents a 51 percent decrease from the 2005 total.

As the clean-up mission is completed at Hanford - both the environmental remediation and vitrification plant construction, employment levels are expected to decrease over time.

The *PNNL* category was projected to be at 5,677 employees, 8 percent of the total employees and a 48 percent increase over its 2005 total.

The *Offices Lacking Heavy Client Traffic* land use had 1,387 employees, two percent of the total number of employees and an increase of 302 persons, or 28 percent over 2005.

#### *Future Population and Employment - 2025*

It is important to be aware that BFCG and jurisdictional staff involved in the data development for the traffic model used their best professional judgment in these population and employment estimates. However, when projections are made for more than ten years in the future, those estimates are increasingly less well grounded in fact. Still, the following paragraphs represent a best guess based on the data in the model.

The TCTM model estimates the 2025 population of the metropolitan area to be 276,307, an increase of 18 percent from 2015. Substantial growth is predicted in three zones and several others will experience notable growth. TAZ 901 in northwest West Richland and TAZs 8302 and 8303 in south central Kennewick are expected to experience a marked increase in residents. Other zones forecast to experience notable population increases are 21 in southwest Richland, 2301 in southwest Richland/Benton County, 201 and 28001 in western West Richland, and 139 in north central Pasco.

#### *Future Land Use - 2025*

As mention above, the TCTM contains 13 land use categories, with eight of them evaluated based on number of employees. Five of those categories - Industrial and Manufacturing, Retail, FIRESG, Hanford Office and PNNL - contain 95 percent of employment to be considered in this analysis for 2025. The TCTM shows an estimated 82,617 metropolitan area employees, an increase of 10,347 (14 percent) in the eight land use categories.

The *Industrial and Manufacturing* (I&M) category has 20,096 employees in 2025, or 24 percent of the total employees represented in the eight categories. That total shows an estimated increase of 3,404 employees (20 percent) between 2015 and 2025.

Zones with high industrial/manufacturing employment in 2025 are consistent with those in 2015; no new industrial/manufacturing zones were identified. TAZs 143 (Kennewick), 14 (Richland) and 177 (Pasco) experienced the most notable projected increases in employees.

*Retail* as a land use category contained 21,389 (26 percent of the 2025 total) employees. This represents an increase of 2,448 (13 percent) during the decade. The TAZs with highest employment in this category were identical to those in 2015. Zone 20 in south central Richland was the only TAZ forecast to have substantial growth between 2015 and 2025.

*FIRESG* contained 24,643 employees, or 30 percent of the 2025 total of land uses being discussed. This represents an increase of 3,523 (17 percent) over the 2015 total. As with several other categories of land use, the list of TAZs with most employees in 2015 is very similar to those leading the list in 2025. The zones with the largest increase in FIRESG employees were 15 and 34, both in Richland.

The *Regional Mall* category is projected to contain 1,700 employees, or two percent of the total employees in the land uses being reviewed. This represents an increase of 205 workers or 13 percent.

Employment in the *Airport* land use category is expected to increase by 40 persons to 390, a growth of 11 percent. This represents .5 percent of employment being reviewed.

The *Hanford Office* category is forecast to have 5,208 employees in 2025. This represents a 21 percent decrease (1,400 employees) from the 2005 total of 8,526. This represents four percent of the 2025 employment in the land uses analyzed.

The *PNNL* category projected to be at 7,380 employees, a 30 percent increase over 2015. This is nine percent of the total employment for the land uses under consideration.

The *Offices Lacking Heavy Client Traffic* land use had 1,810 employees, an increase of 423 persons, or 30 percent over 2005. This is two percent of total employment for the land uses reviewed.

### *Summary*

The review of population and employment data in the text above discusses forecast changes in select aspects of the Tri-Cities metropolitan area.

As was mentioned earlier, all population and employment projections for the traffic model were generated by the planning staff of each jurisdiction involved, with input provided by BFCG staff.

The Washington State Office of Financial Management (OFM) develops high, middle and low range county-level population estimates to be used for purposes of growth management planning. The latest estimates are from 2002. It was decided that population projections for the Tri-Cities Traffic Model would be based on the OFM high range for Benton and Franklin Counties.

Population is forecast to grow from 192,382 to 276,307 between 2005 and 2025, an increase of 83,925, or 44 percent. That is an annual growth rate of 1.9 percent, entirely reasonable given the history of population growth in the Tri-Cities.

Estimation of employment data was impacted by the inevitability of completion and the uncertainty of funding for the work on the Hanford Reservation. The trades persons and engineers at work on the multiple remediation, decommissioning and waste treatment projects in the area are bound to eventually come to some sort of closure, but budgetary decisions and technological challenges will influence the timing of the drawdown in employment. Employment changes at Hanford will be partially offset by forecast increases at PNNL.

Charts and data tables which summarize the employment portion of this chapter are discussed below.

*Figure 5-11: Land Use as a Percent of Employment*

Figure 5-11 shows land use as a percent of employment for the years 2005, 2015 and 2025. The associated Table 5-9 (also a companion to Figure 5-12 below) shows the data used to develop the chart. They show the Industrial and Manufacturing and FIRESEG categories growing, becoming larger components of the Tri-City employment mix as the workforce at Hanford declines.

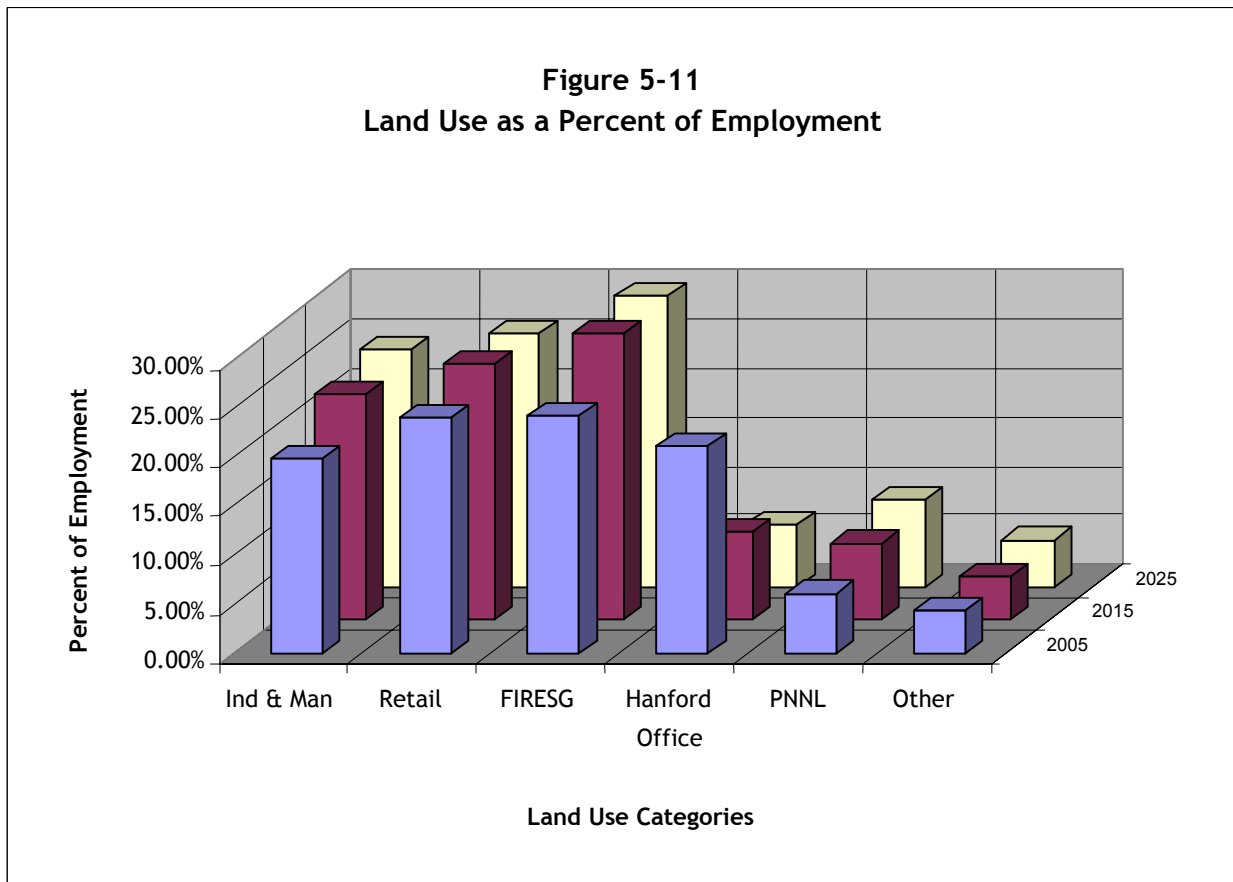
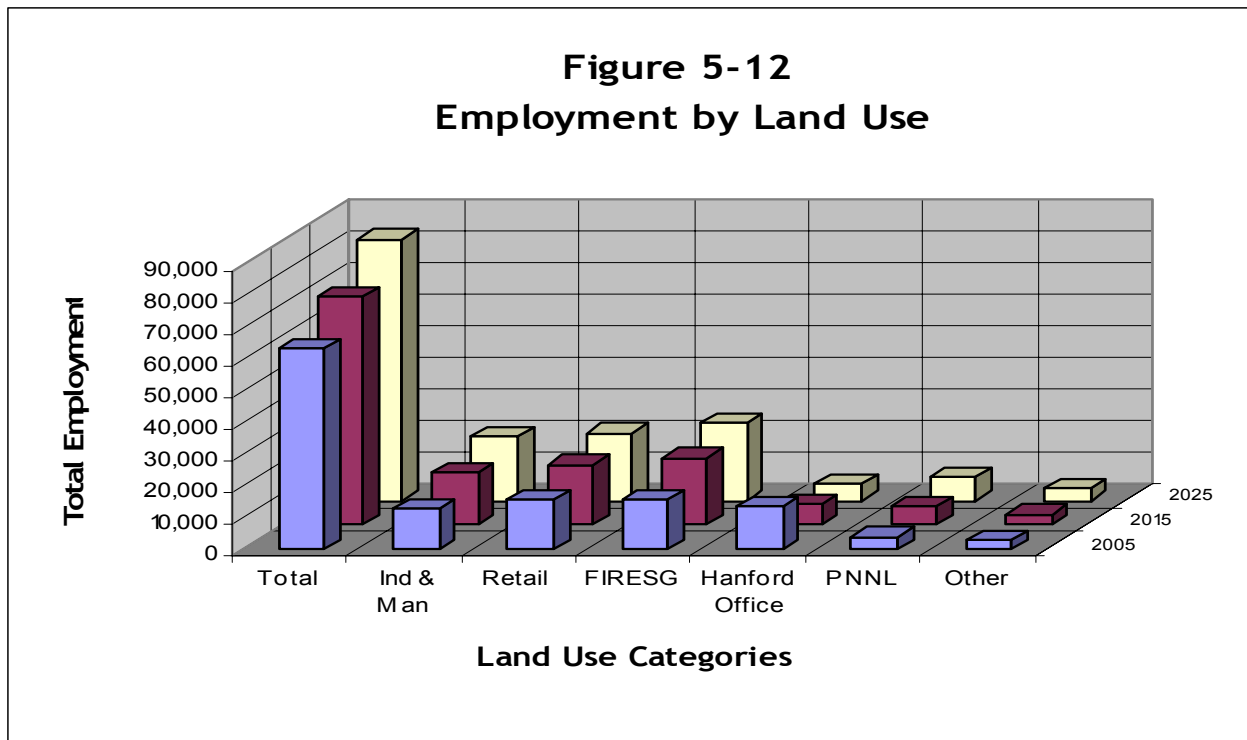


Table 5-9

LAND USE AS A PERCENT OF EMPLOYMENT									
	Ind & Man	Retail	FIRESG	Reg. Mall	Airport	Hanford	PNNL	Office	Total
2005 Employment	12,700	15,335	15,415	1,300	337	13,531	3,844	1,085	63,547
% of Total Employment	19.99%	24.13%	24.26%	2.05%	0.53%	21.29%	6.05%	1.71%	100.00%
2015 Employment	16,692	18,941	21,120	1,495	350	6,608	5,677	1,387	72,270
% of Total Employment	23.10%	26.21%	29.22%	2.07%	0.48%	9.14%	7.86%	1.92%	100%
2025 Employment	20,096	21,389	24,643	1,700	390	5,208	7,380	1,810	82,617
% of Total Employment	24.32%	25.89%	29.83%	2.06%	0.47%	6.30%	8.93%	2.19%	100.00%

Figure 5-12: Employment by Land Use

Though employing numbers instead of percentages, Figure 5-12 is much the same as the preceding figure, with the addition of information on total employment for each year. The chart shows healthy growth in projected employment through the period of workforce contraction at Hanford.



*Table 5-10: Forecast Change in Employment*

Table 5-10 shows the projected net change and percentage of change in employment over the twenty year time frame of the transportation model for each land use discussed.

**Table 5-10**

Forecast Change in Select Areas of Employment in the Tri-Cities Metropolitan Area								
	Ind & Man	Retail	FIRESG	Mall	Airport	Han. Off.	PNNL	Off.: Light Traffic
2005 Employment	12,700	15,335	15,415	1,300	337	13,531	3,844	1,085
2025 Employment	20,096	21,389	24,643	1,700	390	5,208	7,380	1,810
Net Change: 2005-2025	7,396	6,054	9,228	400	53	-8,323	3,536	725
% Change: 2005-2025	58.24%	39.48%	59.86%	30.77%	15.73%	-61.51%	91.99%	66.81%

## REGIONAL POPULATION PROJECTIONS

The opening section of this chapter contained 1990 and 2000 census data for both the Tri-Cities Metropolitan Area and the three-county Regional Transportation Planning Organization area. Population and employment data generated for traffic models covering the Walla Walla and Tri-Cities urban areas was presented. Region-wide population growth has not been discussed.

Population projection is a complex undertaking incorporating births, deaths, and in- and out-migration just to begin. An area's perceived livability, the regional and national economies, even weather influence population growth as well. As uncertain as the process is, two sets of county-level population projections are presented here.

The State Office of Financial Management generates county level population projections for growth management planning purposes which estimate three ranges of growth 20 years into the future. Table 5-11 shows the intermediate and high range estimates for the three-county RTPO area.

The high range estimates were used as a guideline in the development of population data for the Tri-Cities Traffic Model.

Table 5-11: OFM GMA Population Estimates for Benton, Franklin and Walla Walla Counties

**Table 5-11**

<b>OFM GMA Population Estimates for Benton, Franklin and Walla Walla Counties</b>						
	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>
<b>Intermediate Series</b>						
Benton County	142,475	151,522	161,236	169,528	177,388	184,818
Franklin County	49,347	52,642	56,392	60,216	64,687	68,997
Walla Walla County	55,180	57,475	60,030	62,398	64,856	67,158
<b>Total</b>	<b>247,002</b>	<b>261,639</b>	<b>277,658</b>	<b>292,142</b>	<b>306,931</b>	<b>320,973</b>
<b>High Series</b>						
Benton County	142,475	164,553	180,423	195,296	210,205	225,108
Franklin County	49,347	55,919	61,552	67,487	74,390	81,365
Walla Walla County	55,180	61,872	66,153	70,354	74,779	79,146
<b>Total</b>	<b>247,002</b>	<b>282,344</b>	<b>308,128</b>	<b>333,137</b>	<b>359,374</b>	<b>385,619</b>

RTPO staff did not develop detailed population projections for individual member jurisdictions.

**CHAPTER FIVE**  
**POPULATION, EMPLOYMENT & GROWTH**

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