



City of Sandy Urbanization Study

Prepared by the City of Sandy
Planning Department

Final Report

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EXECUTIVE SUMMARY

The purpose of this report is to provide the technical analysis required to determine if sufficient land exists in the current Urban Growth Boundary (UGB) to accommodate projected growth to the year 2034.

This report includes data the City can use to update the Goal 9, 10, and 14 factual components of the Sandy Comprehensive Plan, including:

- A population and employment forecast;
- A buildable lands inventory consistent with Goal 9, 10, 14 and OAR 660-024 requirements;
- A housing needs analysis consistent with Goal 10, OAR 660-008, and Goal 14; and
- An economic opportunities analysis consistent with Goal 9 and OAR 660-009.

How much growth is forecasted for Sandy?

Population and employment forecasts provide the foundation for assessing land needs. Table S-1 summarizes population and employment forecasts for the Sandy UGB. The forecast for 2014 to 2034 developed by Clackamas County, projects that the Sandy UGB will grow from 10,908 to 18,980 residents, an increase of 8,072 people at an average annual growth rate of 2.8%. The Goal 14 population safe harbor provides the City (and County) with the authority to adopt an updated forecast. OAR 660-024-0030 (4) allows the City to forecast to a 20-year period “...by assuming that the urban area's share of the forecasted county population ... will be the same as the urban area's current share of county population.”

Table S-1. Population and employment forecasts, Sandy UGB, 2014-2034

Year	Population	Employees	Pop/Emp
2014	10,908	5,044	2.16
2024	14,377	6,648	2.16
2034	18,980	8,763	2.17
Change 2014 to 2034			
Number	8,072	3,719	
Percent	74.0%	73.7%	
AAGR	2.8%	2.8%	

Source: City of Sandy

The employment forecast assumes employment will grow at a rate of 2.8% annually during the 2014 to 2034 period. The employment forecast was developed using the safe harbor in OAR 660-024-0040 (8) (a) (ii), which allows the City to determine employment land needs based on “The population growth rate for the urban area in the adopted 20-year coordinated population forecast...” The ratio of population to employment will remain stable at 2.17 persons per job over the twenty-year period.

How much buildable land does Sandy currently have?

The Sandy Urban Growth Boundary (UGB) currently contains about 2,110 acres of land (Table S-2). It is estimated that about 345 acres of this land contains development constraints resulting in about 1,765 net acres of buildable land.

Table S-2. Total land, gross acres, Sandy UGB, 2014

Zone	Tax Lots	Gross Acres	Constrained Acres	Net Acres	Percent of Total
LDR	1,891	844.7	194.0	650.7	36.9%
MDR	430	249.5	50.3	199.2	11.3%
HDR	564	177.0	27.0	150.0	8.5%
C	331	295.8	25.4	270.4	15.3%
I	68	220.1	29.2	191.0	10.8%
Village C	8	10.7	0.0	10.7	0.6%
Village LDR	583	256.3	17.1	239.2	13.5%
Village MDR	174	47.1	1.6	45.6	2.6%
Village HDR	134	8.9	0.4	8.5	0.5%
Total	4,183	2,110.1	344.8	1,765.3	100.0%

Source: City of Sandy

How many dwelling units will Sandy have?

Sandy will need to provide about 3,180 dwelling units to accommodate growth between 2014 and 2034. Approximately 2,188 dwelling units (68.8 percent) will be single-family types, including single-family detached and attached dwellings, manufactured dwellings, row homes, and condos. Approximately 992 dwelling units (31.2 percent) will be multi-family housing. The density percentage for the residential plan designation is based on the existing land classification breakdown, with 68.8 percent designated Low Density Residential (LDR), 18.9 percent Medium Density Residential (MDR), and 12.3 percent High Density Residential (HDR). The proposed housing mix allows for up to 31.2 percent multi-family and a minimum of 68.8 percent single-family.

How much land will be required for housing?

Table S-3 shows the forecast of needed acreage for the 3,180 dwelling units for the 2014 to 2034 period. Semi-public uses are projected to locate within land designated for residential uses. The results lead to the following findings:

- The current UGB has the capability of supplying 341.3 net acres for residential uses.
- 575.7 net acres are needed to accommodate projected housing needs for the planning period.

Table S-3. Residential land needed for housing, Sandy UGB, 2014-2034

Zones	Percent	Units Needed	Net Acres	ROW Acres	Gross Acres
LDR (SFR density)	52.4%	1,666	395.3	78.4	473.7
LDR (R-1 density)	16.4%	522	80.2	13.4	93.6
MDR	18.9%	601	60.9	10.7	71.6
HDR	12.3%	391	39.3	7.5	46.8
Total	100.0%	3,180	575.7	110.0	685.7

Source: City of Sandy

Table S-4 shows the residential land needed for the projected land capacity deficit. The results show the net and gross residential acres needed.

Table S-4. Residential land needed for housing capacity deficit, Sandy UGB, 2014-2034

Zone	Units Needed	Supply Units	Replacement Units	Unit Surplus (Deficit)	Net Acres	ROW Acres	Gross Acres
LDR (SFR density)	1,666	770	35	(931)	(211.6)	(42.3)	(253.9)
LDR (R-1 density)	522	421	23	(124)	(19.1)	(3.8)	(22.9)
MDR	601	579	19	(41)	(3.7)	(0.7)	(4.5)
HDR	391	632	32	209	13.9	---	13.9
I/C	---	34	34	---	---	---	---
Total	3,180	2,436	143				

Source: City of Sandy

How many employees will Sandy have?

Employment forecasts indicate that Sandy will add 3,719 jobs between 2014 and 2034. About 2,789 employees (75 percent) will be retail/service, 558 employees (15 percent) will be industrial, and 372 employees (10 percent) will be government.

How much land will be required for employment?

Table S-5 shows the forecast of needed net acres for employment growth and existing net acres for employment lands within the Sandy UGB for the 2014 to 2034 period. The results lead to the following findings:

- The Sandy UGB has the capability of supplying 241.1 net acres for employment uses. The growth industry breakdown is 132.0 net acres for retail/service, 91.5 net acres for industrial, and 17.6 net acres for government.
- The Sandy UGB needs 244.1 net acres to accommodate employment uses. The growth industry breakdown is 174.3 net acres for retail/service, 46.5 net acres for industrial, and 23.3 net acres for government.

Table S-5. Employee land need vs. supply, Sandy UGB, 2014-2034

Land Use Type	Employment Growth	Employees per acre	Need Acres	Supply Acres	Employee Lands Surplus (Deficit)	ROW Acres	Total Need
Retail/Service	2,789	16	174.3	132.0	(42.3)	(3.4)	(45.7)
Industrial	558	12	46.5	91.5	45.0	---	45.0
Government	372	16	23.3	17.6	(5.7)	(0.4)	(6.1)
Total	3,719	---	244.1	241.1			

Source: City of Sandy

As detailed in Table S-6, a commercial land deficit of 51.8 gross acres and an industrial land surplus of 45.0 gross acres exist within the current UGB.

Table S-6. Commercial and Industrial need vs. supply, Sandy UGB, 2014-2034

Land Use Type	Need Acres	Supply Acres	ROW Acres	Land Need Surplus (Deficit)
Commercial	197.6	149.6	3.8	(51.8)
Industrial	46.5	91.5	0.0	45.0

Source: City of Sandy

Is there justification for an urban growth boundary expansion?

Table S-7 provides a summary of land needs by land-use type. The results lead to the following findings for Sandy’s existing UGB:

- Land Deficits: 276.8 acres of low density residential land, 4.5 acres of medium density residential land, 45.7 acres of retail/service land, and 6.1 acres of government land.
- Land Surplus: 13.9 acres of high density residential land, and 45.0 acres of industrial land.

Table S-7. Estimate of land needs by gross acres, Sandy UGB, 2014-2034

Land Use Type	Land Need Surplus (deficit)
Low Density Residential	(276.8)
Medium Density Residential	(4.5)
High Density Residential	13.9
Commercial	(51.8)
Industrial	45.0
Total Land Needs	(333.1)

Source: City of Sandy

The results of the 2014 Sandy Urbanization Report indicate the City has a demonstrated need to expand its Urban Growth Boundary.

ORGANIZATION OF REPORT

The purpose of this report is to provide the technical analysis required to determine if sufficient land exists in the current Urban Growth Boundary (UGB) to accommodate projected growth to the year 2034. It includes data the City can use to update the Goal 9, 10, and 14 factual components of the Sandy Comprehensive Plan including the buildable lands inventory.

The report includes the following: (1) population and employment forecasts; (2) a buildable lands inventory; (3) identification of housing needs; (4) identification of land needed for employment, and other uses, and; (5) a detailed analysis to determine how much land the City will need to accommodate projected growth for the planning period from 2014 to 2034.

This Urbanization Study has been conducted using key findings and analysis from the 2009 Urbanization Study prepared by ECONorthwest and adopted by Ordinance No. 2008-11. The current study is intended to be adopted as an amendment to the Comprehensive Plan and will replace the 2009 study.

The remainder of this report is organized as follows:

- **Chapter 1, Population and Employment Forecasts**, presents population and employment forecasts for the Sandy urban growth boundary.
- **Chapter 2, Buildable Land Supply**, describes the supply of residential, commercial, and industrial land available to meet forecast population and employment growth.
- **Chapter 3, Housing Needs Analysis**, presents a housing needs analysis consistent with Goal 10. Included in the housing needs analysis is an evaluation of the public facilities needed to accommodate new growth, and needed housing segments that have specific siting requirements.
- **Chapter 4, Economic Opportunities Analysis**, describes national and state economic factors that may affect Sandy, an overview of Sandy's economy, and an evaluation of the comparative economic advantages of Sandy.

This report also includes six appendices. These appendices are as follows:

- **Appendix A, Clackamas County Population Projection**
- **Appendix B, National Housing Trends**
- **Appendix C, HCS Housing Needs Model**
- **Appendix D, Summary of National and State Economic Trends**
- **Appendix E, Factors Affecting Economic Development in Sandy**
- **Appendix F, Term Definitions**

CHAPTER 1: POPULATION AND EMPLOYMENT FORECASTS

A forecast of expected population growth in Sandy is essential to estimate the demand for buildable land and to assess housing needs. Expected population growth will also influence economic opportunities and employment growth in Sandy, which will have implications for the demand of non-residential land and public services. This study uses the 2014-2034 timeframe for the 20-year planning period. The remainder of this chapter is organized as follows:

- The **population forecast** section presents a “safe harbor” coordinated population forecast for Sandy using the methods described in OAR 660-024-0030(4). This section identifies the methods and assumptions used to develop these forecasts.
- The **employment forecast** section presents a 20-year projection of employment growth for Sandy using OAR 660-024-0040(9)(a)(B). This section also presents sector projections for employment.
- The **summary** section compares population and employment growth for the Sandy UGB. These forecasts are used in the remainder of the *Sandy Urbanization Study*.

Population forecast

Before determining whether the existing urban growth boundary contains sufficient land for the planning period, a coordinated population forecast to the year 2034 is required. OAR 660-024-0030(4) presents a safe harbor for extending Sandy’s existing forecast until 2034. The safe harbor gives the City (and County) authority to adopt an updated forecast. In March of 2013 Clackamas County adopted the Rural Cities Population Coordination for the years 2012 to 2032 (Appendix A). This study contains an average annual growth rate (AAGR) of 2.8 percent for Sandy. Based on this growth rate, a population forecast was developed for the 20 year planning period (Table 1-1).

Table 1-1. City of Sandy ORS 195.034(2) Safe Harbor Population Forecast

Year	Population
2014	10,908
2024	14,377
2034	18,980
Change 2014 to 2034	
Number	8,072
% Growth	74.0%
AAGR	2.8%

Source: City of Sandy; Clackamas County Rural Cities Population Coordination

Employment forecast

OAR 660-024-0040(9)(a)(B) allows the City to determine employment land needs based on “The population growth rate for the urban area in the adopted 20-year coordinated population forecast...” Based on this safe harbor, employment in Sandy can be assumed to grow at 2.8 percent annually (Table 1-2).

Table 1-2. City of Sandy ORS 195.034(2) Safe Harbor Employment Forecast

Year	Employees
2014	5,044
2024	6,648
2034	8,763
Change 2014 to 2034	
Number	3,719
% Growth	73.7%
AAGR	2.8%

Source: City of Sandy; Clackamas County Rural Cities Population Coordination

Projection of employment

To estimate employment growth by land use type for the Sandy UGB, the forecasted number of employees was distributed among retail/service, industrial, and government land use types as shown in Table 1-3. Table 1-3 shows the current distribution of employment by land use type and the distribution projected in 2034. Employment is organized into groupings of industries with similar land needs (e.g., topography, building types, average employment densities, etc.). The sectors included in each land use types include:

- Retail and Services.** Retail Trade; Information; Finance and Insurance; Real Estate and Rental and Leasing; Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services; Private Education Services; Health Care and Social Assistance; Arts, Entertainment, and Recreation; Accommodation and Food Services; and Other Services (except Public Administration).
- Industrial.** Agriculture, Forestry, Fishing, and Hunting; Construction; Manufacturing; Utilities; Wholesale Trade; and Transportation and Warehousing.
- Government.** Public Administration.

Table 1-3. Employment growth by land use type, Sandy UGB, 2014-2034

Land Use Type	2014	2034	% of Total	Growth
Retail/Service	3,106	5,895	75%	2,789
Industrial	742	1,300	15%	558
Government	547	919	10%	372
Total Employment	5,044	8,763	100%	3,719

Source: City of Sandy

Note: 75%, 15%, and 10% percentage of employment assumption by City of Sandy and ECONorthwest from the 2009 Urbanization Report.

Summary

Table 1-4 summarizes the safe harbor population and employment forecasts for the Sandy UGB. During the 20 year planning period, population is expected to increase by 8,072 persons and employment by 3,719 employees.

Table 1-4. Forecast population and employment, Sandy UGB, 2014-2034

Year	Population	Employees	Pop/Emp
2014	10,908	5,044	2.16
2024	14,377	6,648	2.16
2034	18,980	8,763	2.17
Change 2014 to 2034			
Number	8,072	3,719	
Percent	74.0%	73.7%	
AAGR	2.8%	2.8%	

Source: City of Sandy

CHAPTER 2: BUILDABLE LANDS INVENTORY

Definitions

This chapter presents the buildable lands inventory for the City of Sandy. The buildable lands inventory uses assumptions consistent with OAR 660-009 and OAR 660-024. This inventory is based on an analysis of city Geographic Information System and Clackamas County Assessment data. The analysis also used aerial orthophotographs to verify the information. Consistent with the DLCD *Residential Lands Workbook*, as well as applicable administrative rules, all tax lots in the UGB are classified into one of the following categories:

- Buildable Land refers to vacant, partially vacant and redevelopable land in addition to land containing existing structures within the urban growth boundary that are not severely restricted by environmental or other constraints.
- Constrained Land includes parcels with significant physical, environmental or infrastructure limits to development. These constraints include wetlands and designated drainageways, BPA power line easements, slopes greater than 25 percent within the FSH overlay, and setbacks to designated wetlands, drainageways, and slopes.
- Developed Land is already developed land at densities consistent with zoning and contains improvements which make it unlikely to redevelop during the analysis period. Land that is not classified as vacant, partially vacant, undevelopable, or redevelopable is considered developed.
- Partially Vacant Land includes those parcels with buildings or improvements over a portion of the parcel, but with vacant portions large enough to accommodate additional development, based on the size of the lot, zoning designations, and/or value of land and improvements. Residential land must contain at least one-half acre to be considered partially vacant.
- Redevelopable Land includes developed land with a low improvement relative to land value that may be economical to develop for more intensive or different uses.
- Undevelopable Land includes parcels that are designated as parks, open space, public stormwater detention ponds, and other public dedicated land contained in tax lots.
- Vacant Land consists of parcels with limited permanent buildings or improvements. Residential land with improvement values under \$10,000 are considered vacant. Lands equal to or larger than five acres, where less than one-half acre is occupied, are also considered vacant.

The inventory includes all lands within the Sandy Urban Growth Boundary (UGB). Map 2-1 shows plan designations for all lands within the Sandy UGB.

Map 2-1. Comprehensive Plan designation, Sandy UGB, 2015

Comprehensive Plan Map
Sandy, Oregon
Adopted October 20, 1997
Ordinance No. 10-97

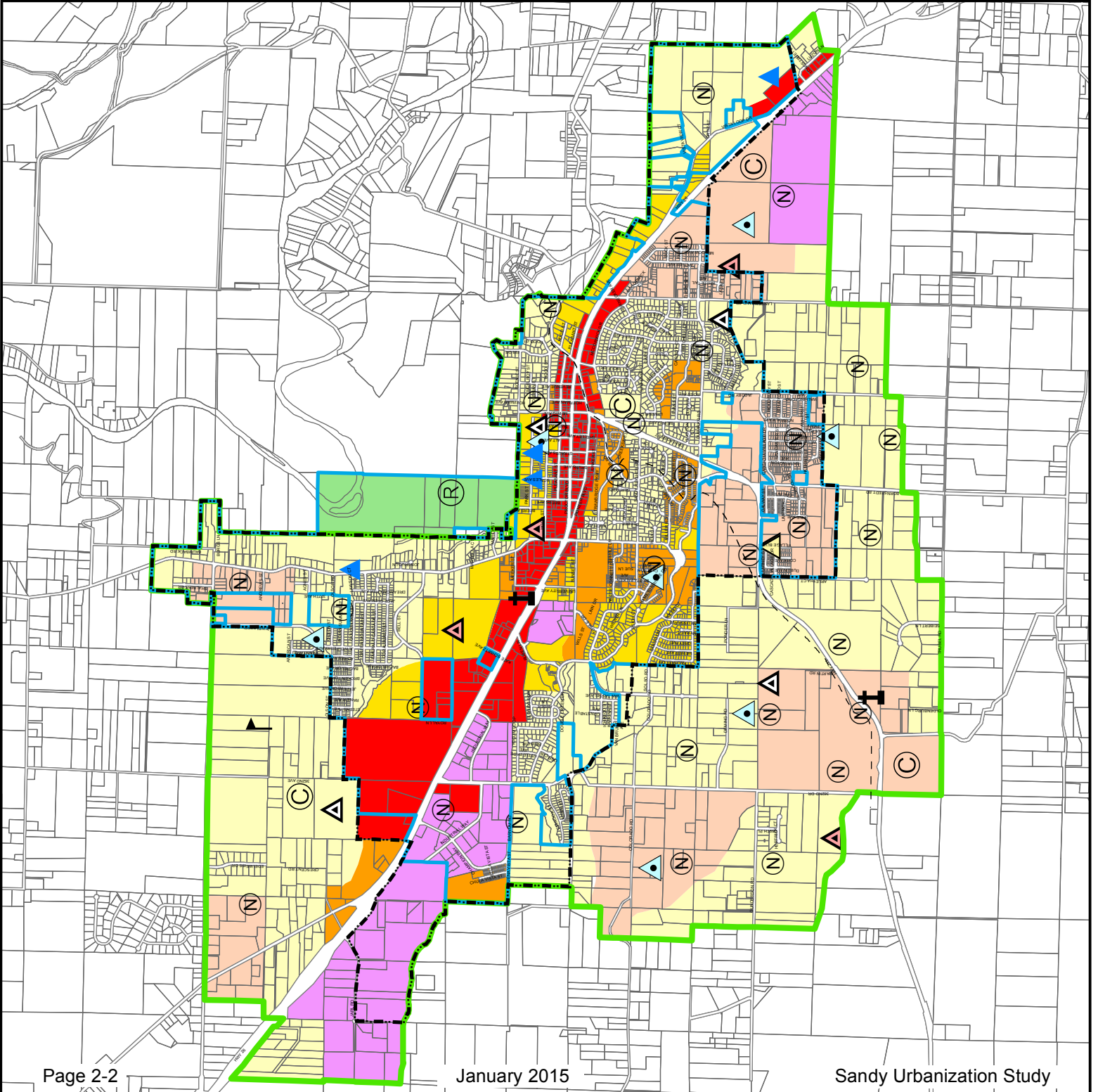


- City Limits
- Urban Growth Boundary
- Urban Reserve Boundary
- Barlow Trail

- Comprehensive Plan Designation**
- Village
 - Low Density Residential
 - Medium Density Residential
 - High Density Residential
 - Commercial
 - Industrial
 - Parks & Open Space

Existing & Proposed Sites
 Locations are approximate

- Elementary School
- Middle School
- High School
- Community College
- View Point
- Neighborhood Park
- Community Park
- Regional Park
- Golf Course
- Cemetery



Results

Land base

According to City GIS data, the Sandy UGB contains about 2,436 acres. Of these acres, 2,110 acres (about 87percent) are contained in tax lots. Acres not in tax lots are primarily in dedicated public right-of-way such as roads and streets.

Table 2-1 summarizes acres by plan designation for lands within the Sandy UGB. This table shows that 73.3 percent of the land in the Sandy UGB is designated for residential use, 15.9 percent for commercial use, and 10.8 percent is designated for industrial uses. Table 2-1 also shows a breakout of the Village plan designation by use. The Village plan designation is a mixed-use designation that incorporates a variety of housing densities with commercial areas.

Table 2-1. Gross acres by plan designations, Sandy UGB, 2014

Zone	Tax Lots	Gross Acres	Constrained Acres	Net Acres	Percent of Total
LDR	1,891	844.7	194.0	650.7	36.9%
MDR	430	249.5	50.3	199.2	11.3%
HDR	564	177.0	27.0	150.0	8.5%
C	331	295.8	25.4	270.4	15.3%
I	68	220.1	29.2	191.0	10.8%
Village C	8	10.7	0.0	10.7	0.6%
Village LDR	583	256.3	17.1	239.2	13.5%
Village MDR	174	47.1	1.6	45.6	2.6%
Village HDR	134	8.9	0.4	8.5	0.5%
Total	4,183	2,110.1	344.8	1,765.3	100.0%

Source: City of Sandy

Table 2-2 shows acres by classification and constraint status for the UGB.

Table 2-2. Gross acres by classification, Sandy UGB, 2014

	Tax Lots	Gross	Constrained	Net
Developed	3,427	1,064.3	90.4	973.9
Partially Vacant	122	339.9	65.1	274.9
Private ROW	62	6.9	0.2	6.8
Undevelopable	63	135.7	93.8	41.9
Vacant	509	563.2	95.4	467.7
Total	4,183	2,110.1	344.8	1,765.3

Source: City of Sandy

Table 2-3 shows platted and tentative platted acres by classification for the Sandy UGB. Platted and tentative platted lots have been assumed to already be reserved for development at approved densities and street layouts. Gross acreage is used to define buildable acreage and net acreage is used to define dwelling appropriations.

Table 2-3. Platted/Tentative Platted Acreage, Sandy UGB, 2014

Zone	Vacant Gross Acres	Vacant Net Acres	Partially Vacant Gross Acres	Net Partially Vacant Acres
LDR (SFR)	7.10	7.10	23.08	10.95
LDR (R-1)	8.98	8.98	0.0	0.0
MDR	9.38	6.53	0.0	0.0
HDR	4.30	4.30	2.45	1.83
Village LDR (SFR)	9.31	7.07	0.0	0.0
Village LDR (R-1)	8.47	5.40	4.81	3.39
Village MDR	7.97	6.30	0.0	0.0
Village HDR	2.45	2.45	0.0	0.0
Total Acreage	57.96	48.13	30.34	16.17

Source: City of Sandy

Vacant buildable land

Vacant buildable land unavailable for development falls into two categories: 1) developed areas of partially vacant tax lots and, 2) areas with physical constraints (areas with steep slopes, waterway buffers, wetlands, or within the Bonneville Power Administration easement). Table 2-4 shows vacant and partially vacant land by plan designation. Map 2-2 shows the location of vacant and partially vacant land by plan designation.

The analysis revealed that vacant tax lots available for development total about 466 acres with about 285 acres in residential zoning designations. The analysis also concluded that about 275 acres of partially vacant property exist in the UGB. These areas are included in the redevelopment analysis below. About 58 acres of vacant residential land has been platted or tentatively platted to contain 517 dwelling units. This is explained further in Chapter 3, Housing Needs Analysis.

The safe harbor approach allows local government to estimate that the 20-year land needs for rights-of-way, schools, and park land will together require an additional amount of land equal to 25 percent of the net buildable acres for residential zoning designations. There is no safe harbor available to estimate the 20-year land needs for rights-of-way for commercial and industrial zoning designations, but it was assumed that school and park land should not be included. Analysis of the industrial/commercial area at Champion Way and Industrial Way revealed that right-of-way consumes approximately 10 percent of the overall area. The additional amount of land for commercial and industrial right-of-way will require an additional amount of land equal to 10 percent of the net buildable acres for commercial and industrial zoning designations.

The additional amount of land added to the inventory for rights-of-way, schools, and park land (ROW acres) totals about 60 acres. As detailed in the table below, the existing UGB contains about 348 net acres of vacant land that is not platted or tentatively platted.

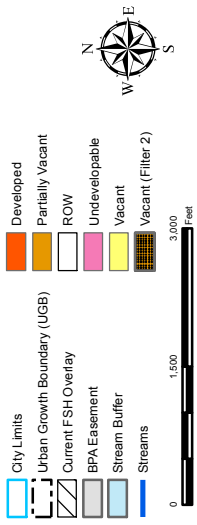
Table 2-4. Vacant and partially vacant land by plan designation, Sandy UGB, 2014

Zone	Developed	Partially Vacant	Undevelopable	Private ROW	Vacant	Gross Platted/Tentative	Refined Total Acres	ROW Acres	Total Acres
LDR	380.2	124.0	19.0	3.5	123.3	16.1	107.2	21.4	85.8
MDR	143.1	10.4	10.1	0.1	35.5	9.4	26.1	5.2	20.9
HDR	96.1	6.4	11.9	0.7	35.0	4.3	30.7	6.1	24.6
C	143.6	8.0	0.0	0.0	118.8	---	118.8	9.5	109.3
I	92.5	41.5	0.0	0.0	57.0	---	57.0	4.6	52.4
Village C	0.7	4.7	0.0	0.0	5.3	---	5.3	0.4	4.9
Village LDR	90.5	73.9	1.0	2.3	70.4	17.8	52.6	10.5	42.1
Village MDR	22.0	5.2	0.0	0.2	18.2	8.0	10.2	2.0	8.2
Village HDR	5.1	0.9	0.0	0.1	2.4	2.5	0.0	0.0	0.0
Total	973.9	274.9	41.9	6.8	465.9	58.0	407.9	59.7	348.2

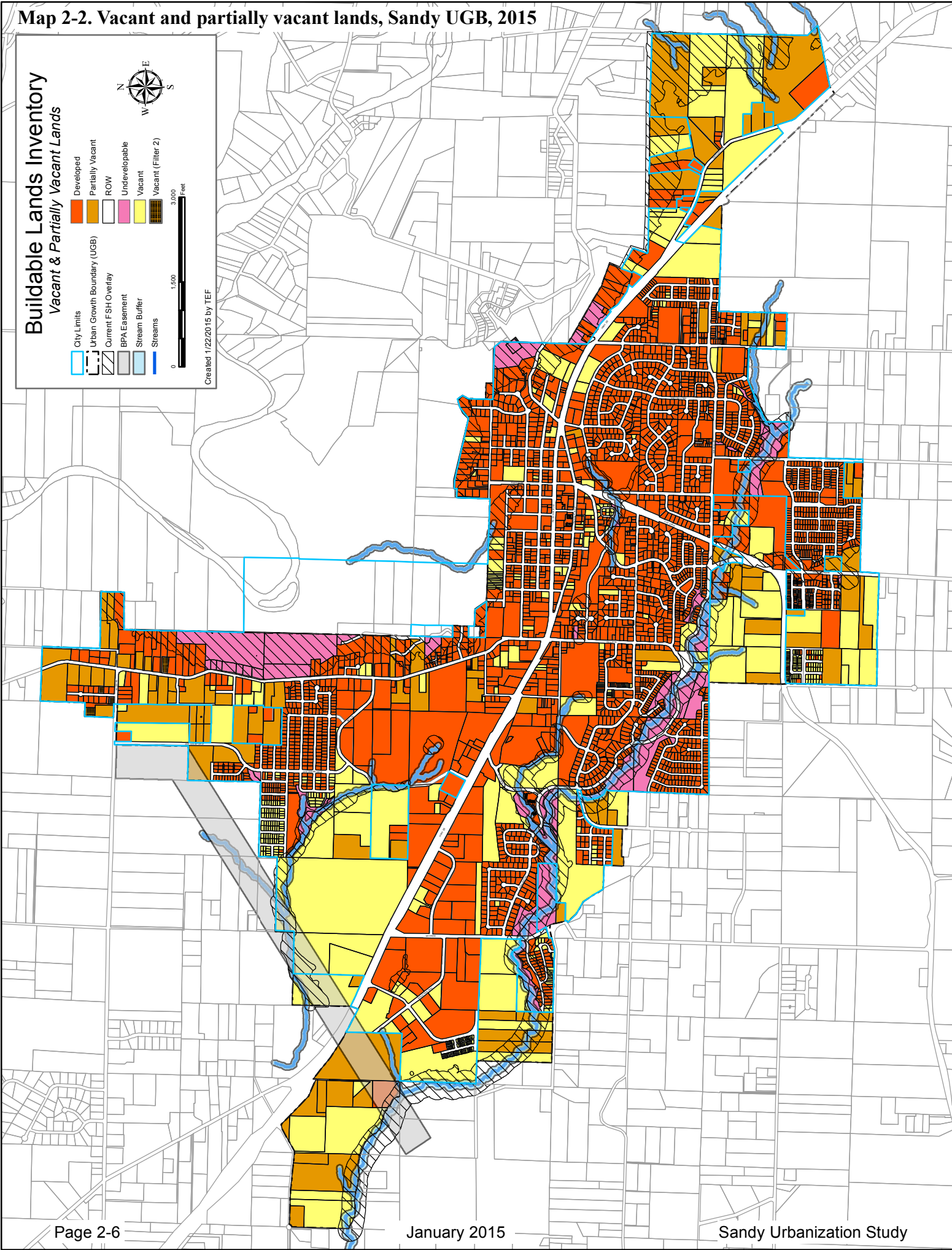
Source: City of Sandy

Map 2-2. Vacant and partially vacant lands, Sandy UGB, 2015

Buildable Lands Inventory Vacant & Partially Vacant Lands



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Redevelopment potential

Redevelopment potential addresses land that is classified as developed or partially vacant that may redevelop during the planning period. Redevelopable property is defined as: *the value of the property's improvements (structures on the property) is worth less than a percentage of the combined value of the improvements plus the land.*

For example, a building valued at \$100,000 located on a property with a land value of \$300,000 would result in the following formula:

$$\$100,000 / (\$100,000 + \$300,000) = 25 \text{ percent improvement to total value ratio}$$

Land defined as having redevelopment potential was divided into one of three categories: unlikely redevelopment potential, moderate redevelopment potential and significant redevelopment potential as detailed below:

- **Unlikely redevelopment potential:** Land with an improvement to total value ratio greater than 50 percent. This land was classified as having no redevelopment potential over the 20 year planning period.
- **Moderate redevelopment potential:** Land with an improvement to total value ratio between 31percent and 50 percent. This land was classified as having 20 percent redevelopment potential over the 20 year planning period.
- **Significant redevelopment potential:** Land with an improvement to total value ratio less than 31percent. This land was classified as having 100 percent redevelopment potential over the 20 year planning period.

As with the vacant land analysis, the redevelopment analysis included removal of platted and tentatively platted acreage and publically dedicated lands for rights-of-way, school, and park land. After this initial redevelopment potential step, land with redevelopment potential was further refined using two additional filters specified below.

FILTER 1: Single Family Homes – Residential properties identified with a moderate or significant redevelopment potential were evaluated further. When a lot has one (1) single family dwelling unit and the lot is not dividable in accordance with the density range in the subject zoning district then the lot is classified as unlikely to develop. For example, a single family dwelling on a 10,000 square foot lot in the SFR zoning district, where the minimum lot size is 7,500 square feet, would be classified as ‘unlikely’ so as long as the improvement value exceeds \$10,000. As defined, land with less than \$10,000 in improvement value is classified as vacant.

FILTER 2: North Bluff Area – The residential area along Bluff Road and north of Bell Street is currently not served by sanitary sewer. Map 2-3 details the location of sanitary sewer lines. Based on contours, sewer service would need to extend from the west, not from the sewer within the Bluff Road right-of-way. Most of the lots in that area are larger lots with existing houses having relatively high improvement values. In 2003, the City attempted to extend sewer to this neighborhood by forming a local improvement district. Due to a low level of interest the district was not formed.

Lots without sanitary sewer are not dividable when the size of the lot is less than two acres in size. If a lot over two acres is divided it is required to meet the density standards of the zoning district in which it is designated. Staff determined that property north of Bell Street and to the east of Bluff Road and to the north of Kelso Road will not acquire sewer service in the 20-year planning period. Subsequently lots north of Bell Street and to the east of Bluff Road and to the north of Kelso Road will not be subdivided. Lots in this area that could have been identified as redevelopable are identified with crosshatch on Map 2-4 as Filter 2. Existing vacant lots of record (four identified) could develop with one dwelling unit and septic service, but otherwise these lots are limited. The three vacant lots to the south of Jonsrud Lane were not included in this analysis as those lots are adjacent to the sanitary sewer line that turns west on Bell Street.

FILTER 3: Strike Price – An analysis was performed on all commercially zoned property and multi-family dwellings (with three or more combined dwelling units). Lots with a market redevelopment ‘strike price’ of less than \$10 per square foot of land are determined to be redevelopable. For example, an improvement value of \$100,000 plus a land value of \$200,000 divided by 43,560 square feet would give a strike price of \$6.89. The lot in this example would be less than \$10 per square foot and would be defined as redevelopable. The strike price analysis defined 76 lots with less than \$10 per square foot; however, 63 of those lots were already defined as redevelopable through the initial redevelopment analysis. The strike price analysis yielded 13 additional lots for redevelopment. *Note on Strike Price Formula: The formula to determine the strike price per square foot was taken from the Metro buildable lands study that evaluated suburban jurisdictions with slightly less than \$10 per square foot redevelopment averages: Milwaukie, Gresham, Wilsonville, and Fairview. For the purposes of the current study, commercial land sales and pending listings for the period 2005 to 2014 were evaluated for the Sandy area. Although the sample size was small the analysis did not reveal a more appropriate strike price value than \$10 per square foot (Table 2-8).*

Tables 2-5 and 2-6 summarize redevelopment potential based on the assumptions and filters as described above and Table 2-7 summarizes the strike price analysis. Map 2-4 shows redevelopable land and Map 2-5 shows additional redevelopment land identified with the strike price analysis.

Table 2-5. Redevelopment potential significant lands, Sandy UGB, 2014

Zone	Tax Lots	Gross Acres	Constrain Acres	Net Acres	Gross Platted/Tentative	Refined Total Acres	ROW Acres	Total Acres
LDR	13	67.8	27.3	40.6	23.1	17.5	3.5	14.0
MDR	4	6.5	0.0	6.5	---	6.5	1.3	5.2
HDR	9	9.4	1.1	8.3	2.5	5.8	1.2	4.7
C	36	21.9	0.0	21.9	---	21.9	1.8	20.2
I	8	54.5	16.0	38.4	---	38.4	3.1	35.4
Village C	1	1.5	0.0	1.5	---	1.5	0.1	1.4
Village LDR	18	43.1	3.3	39.8	4.8	35.0	7.0	28.0
Village MDR	3	4.5	0.0	4.5	---	4.5	0.9	3.6
Village HDR	1	0.4	0.4	0.1	---	0.1	0.0	0.0
Total	93	209.7	48.1	161.6	30.3	131.2	18.8	112.4

Source: City of Sandy

Table 2-6. Redevelopment potential moderate lands, Sandy UGB, 2014

Zone	Tax Lots	Gross Acres	Constrain Acres	Net Acres	20% of Acreage	ROW Acres	Total Acres
LDR	26	58.4	8.9	49.5	9.9	2.0	7.9
MDR	6	9.5	2.0	7.5	1.5	0.3	1.2
HDR	6	2.6	0.0	2.6	0.5	0.1	0.4
C	67	20.3	0.0	20.2	4.0	0.3	3.7
I	9	22.2	0.0	22.2	4.4	0.4	4.1
Village C	1	1.9	0.0	1.9	0.4	0.0	0.4
Village LDR	25	33.0	0.9	32.0	6.4	1.3	5.1
Village MDR	3	5.9	1.0	4.9	1.0	0.2	0.8
Village HDR	2	2.6	0.0	2.6	0.5	0.1	0.4
Total	145	156.4	12.8	143.6	28.7	4.7	24.1

Source: City of Sandy

Table 2-7. Strike price, Sandy UGB, 2014

Zone	Total Acres
C	13.7
Village C	0.7
Total	14.4

Source: City of Sandy

Table 2-8. Strike price property comparison, Sandy UGB, 2005-2014

Address	Price	Square Feet	Price Per Square Foot	Comments
38706 Pioneer Blvd.	\$160,000	3,412	\$46.89	---
17500 Strauss Ave.	\$190,000	11,028	\$17.23	---
38687 Proctor Blvd.	\$260,000	6,000	\$43.33	significant remodel after sale
38525 Proctor Blvd.	\$270,000	7,502	\$35.99	---
38676 Pioneer Blvd.	\$270,000	4,846	\$55.72	---
39465 Proctor Blvd.	\$325,000	7,886	\$41.21	---
39750 Pioneer Blvd.	\$325,000	34,320	\$9.47	significant remodel after sale
39110 Proctor Blvd.	\$350,000	4,588	\$76.29	significant remodel after sale
39831 Highway 26	\$360,000	20,256	\$17.77	significant remodel after sale
38530 Pleasant Ave.	\$448,000	10,455	\$42.85	---
17150 University Ave.	\$549,950	41,648	\$13.20	---
Vacant Lots (below)				
24E11AA01600	\$125,000	31,450	\$3.97	vacant lot & no sewer available
39625 Proctor Blvd.	\$245,000	27,639	\$8.86	vacant lot & brownfield restrictions
37115 Highway 26	\$259,000	18,822	\$13.76	vacant lot
37133 Highway 26	\$629,000	56,202	\$11.19	vacant lot
Average	\$317,730	19,070	\$29.18	

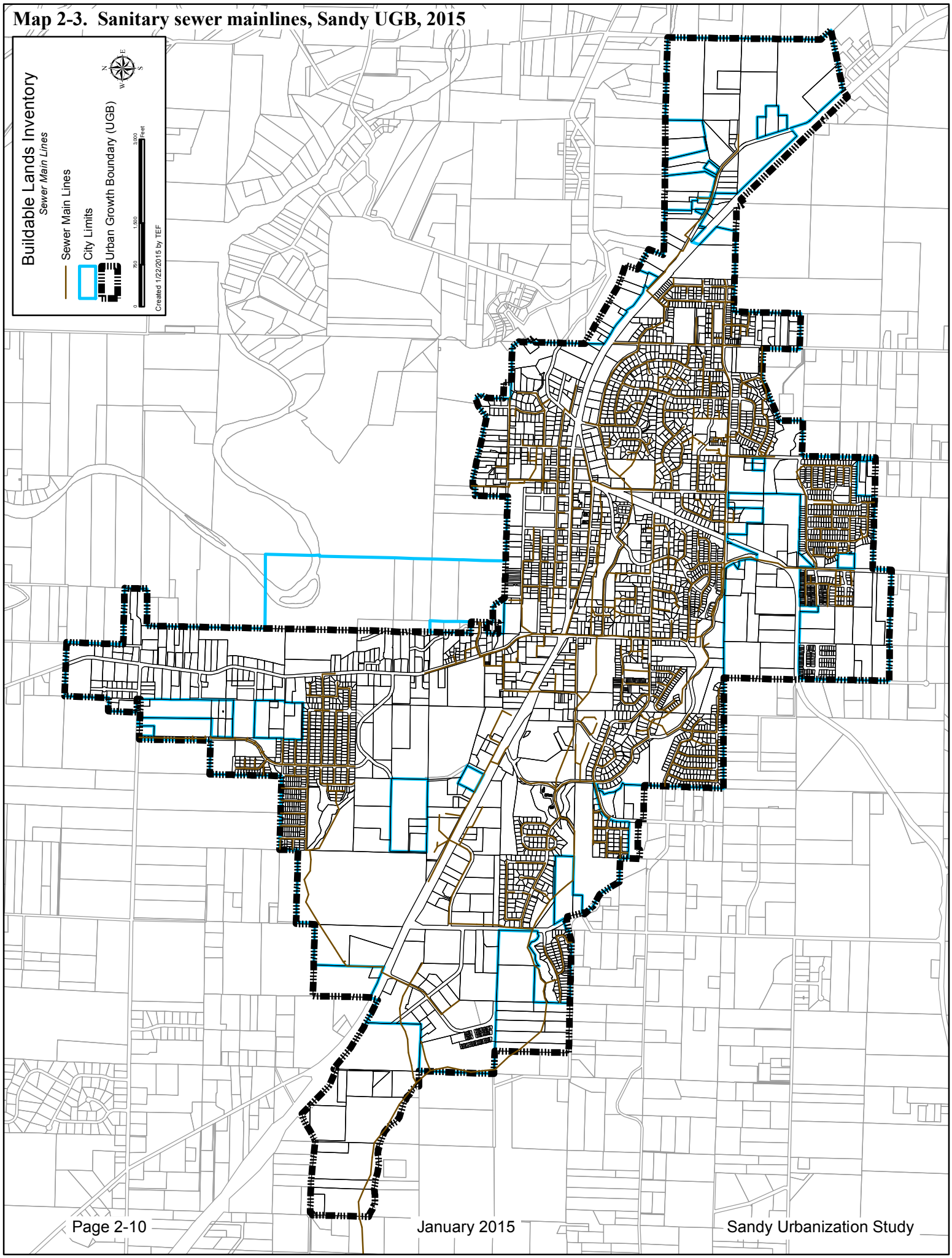
Source: City of Sandy

Map 2-3. Sanitary sewer mainlines, Sandy UGB, 2015

Buildable Lands Inventory
Sewer Main Lines

Sewer Main Lines
City Limits
Urban Growth Boundary (UGB)

Created 1/22/2015 by TEF



Map 2-4. Redevelopment potential, Sandy UGB, 2015

Buildable Lands Inventory
Redevelopment Potential (Additional Filters)

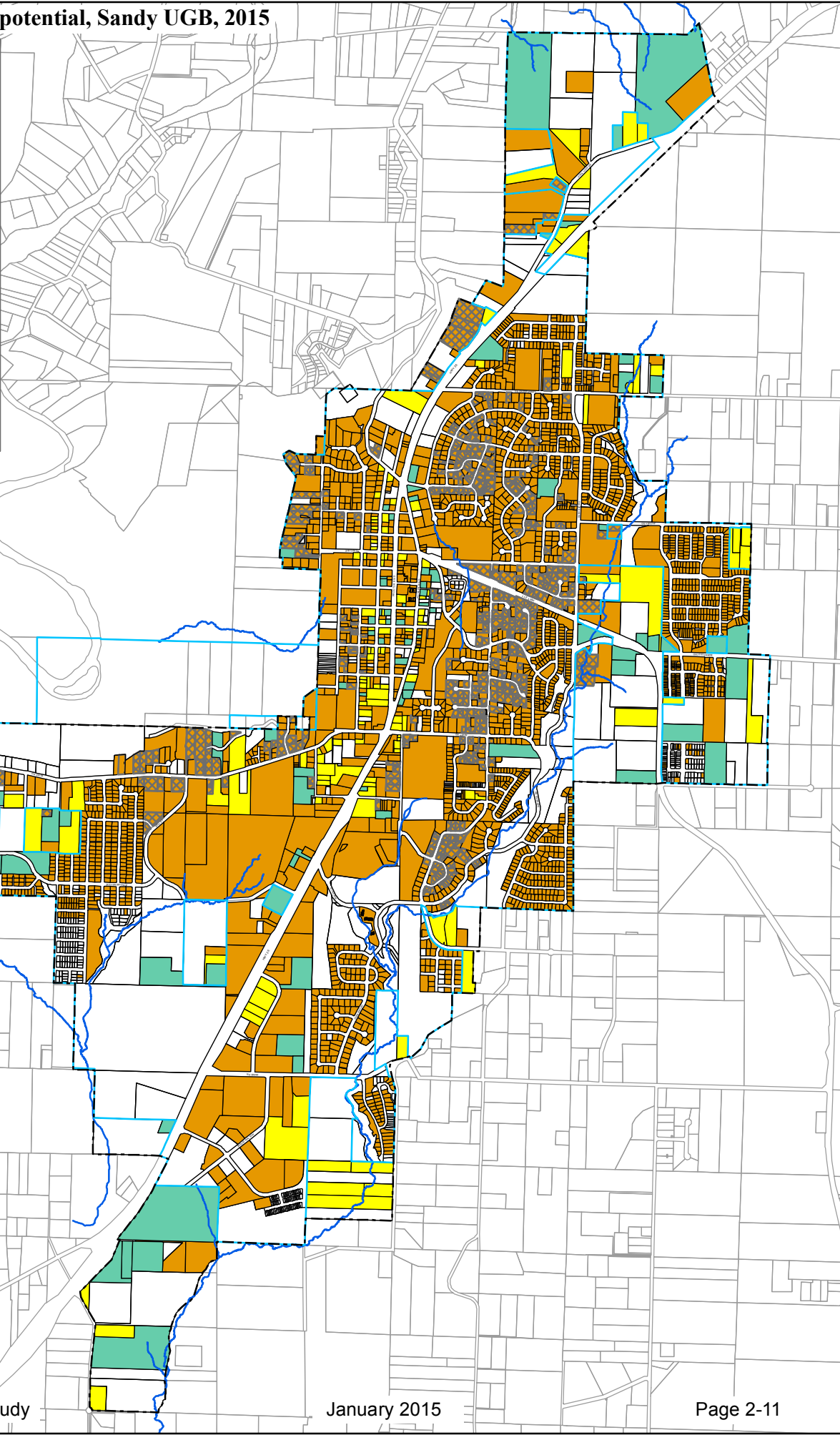
Redevelopment Potential

- Significant Potential
- Moderate Potential
- Unlikely Potential
- Unlikely (Filter 1)
- Unlikely (Filter 2)
- Vacant/Undevelopable

Urban Growth Boundary (UGB)
City Limits
Streams

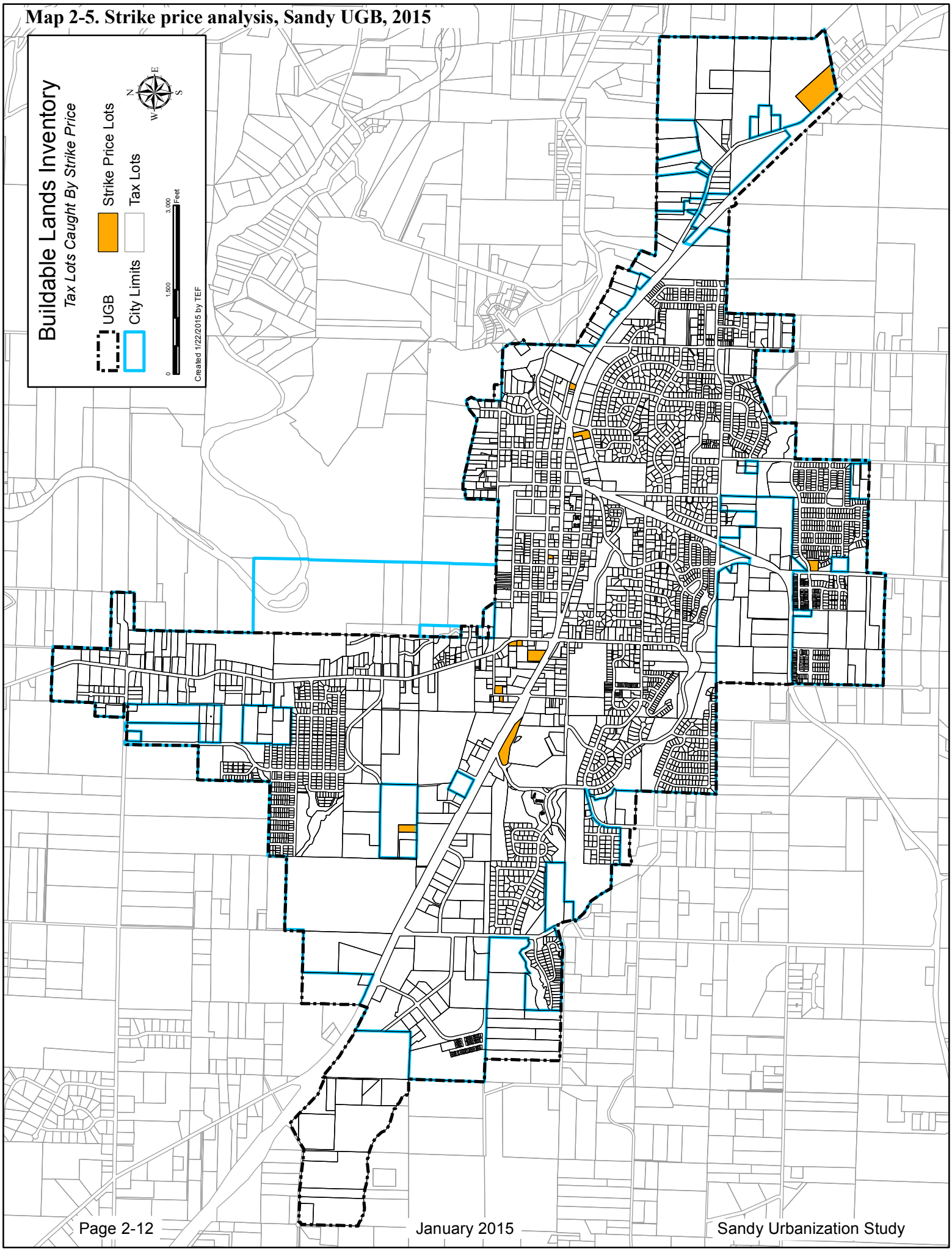
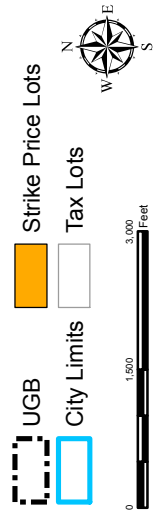
0 1,500 3,000 Feet

Created 1/22/2015 by TEF



Map 2-5. Strike price analysis, Sandy UGB, 2015

Buildable Lands Inventory Tax Lots Caught By Strike Price



CHAPTER 3: HOUSING NEEDS ANALYSIS

This chapter provides the technical analysis to update the Housing (Goal 10) element of the Sandy Comprehensive Plan. Statewide Planning Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies.

At a minimum, local comprehensive plans and policies that address housing must meet the requirements of Goal 10. Goal 10 requires incorporated cities to complete an inventory of buildable residential lands and to encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

Goal 10 defines needed housing types as “housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels.” This definition includes government-assisted housing and mobile home or manufactured dwelling parks as provided in ORS 197.303 and ORS 197.475 to 197.490. For communities with populations greater than 2,500 and counties with populations greater than 15,000, needed housing types include (but are not limited to):

- Attached and detached single family housing and multiple-family housing for both owner and renter occupancy; and
- Manufactured homes on individual lots planned and zoned for single-family residential use.

Sandy meets the population threshold for these statutory requirements; Goal 10 requires all incorporated cities to address housing need in their comprehensive plans. The housing needs analysis in this chapter addresses these housing types.

Methods

In completing the housing needs analysis, the methodology described in the DLCD report, *Planning for Residential Development* (referred to as the “workbook.”) was generally followed. The workbook describes seven steps in conducting a housing needs analysis:

1. Determine the number of new housing units needed in the next 20 years.
2. Identify relevant national, state, and local demographic trends that will affect the 20-year projection of structure type mix.
3. Describe the demographic characteristics of the population, and household trends that relate to demand for different types of housing.
4. Determine the types of housing that are likely to be affordable to the projected households.
5. Estimate the number of additional new units by structure type.

6. Determine the density ranges for all plan designations and the average net density for all structure types.
7. Evaluate unmet housing needs and the housing needs of special populations (Goal 10 needs).

While the housing need analysis presented in this chapter generally follows the methodology described in the *Workbook*, it does not include as much detail as an analysis that would be required under ORS 197.296.¹

The remainder of this chapter is organized into three sections. The first section describes residential development trends in Sandy, the second describes demand for new housing units over the 20-year planning period; and the third addresses housing needs.

Residential housing development trends

An evaluation of recent development trends is useful in developing a better understanding of development trends in the local housing market. This section presents data from a range of sources that document local and regional residential development trends. It starts with a discussion of regional housing development trends and then focuses on development trends in Sandy.

Table 3-1 shows dwelling units approved through building permits issued for new residential construction by type within Sandy. In this 14+ year period (between 2000 and March 2014), about 83 percent of residential dwellings approved were single-family dwellings, less than 1 percent manufactured home dwellings, and over 16 percent multi-family dwellings.

¹ Sandy is not required to examine the needs of special populations; such an analysis is not included in this report.

Table 3-1. Dwelling units approved through building permits issued for new residential construction by type, Sandy, 2000 through March 2014

Year	Single Family	Manufactured Home	Multi-family	Total
2000	150	3	80	233
2001	174	2	42	218
2002	160	1	63	224
2003	123	0	34	157
2004	93	0	35	128
2005	160	0	4	164
2006	193	0	0	193
2007	150	0	33	183
2008	77	0	0	77
2009	46	0	0	46
2010	45	0	4	49
2011	32	4	0	36
2012	32	2	0	34
2013	74	0	6	80
2014 (1st Quarter)	18	0	0	18
Total	1,527	12	301	1,840
Average Annual	107	1	21	129
Percent of Total	83.0%	0.7%	16.4%	100.0%

Source: City of Sandy

The housing mix by type (i.e., percentage of single family, multi-family, and mobile/manufactured home units) is an important variable in any housing needs assessment. Distribution of housing types is influenced by a variety of factors, including the cost of new home construction, economic and employment trends, demographic characteristics, and amount of land zoned to allow different housing types and densities.

Table 3-2 shows housing units by tenure (owner/renter-occupied) in 2010. The decennial census no longer publishes persons per household and occupancy rates by housing unit type. The results show that 63.7 percent of dwelling units are owner occupied, while only 36.3 percent of dwelling units are renter occupied.

Table 3-2. Housing units by tenure, Sandy, 2010

Housing Type	Number	Percent
Occupied housing units	3,567	100.0%
Owner-occupied housing units	2,271	63.7%
Population in owner-occupied housing units	6,176	---
Average household size of owner-occupied units	2.72	---
Renter-occupied housing units	1,296	36.3%
Population in renter-occupied housing units	3,380	---
Average household size of renter-occupied units	2.61	---

Source: U.S. Census 2000

Table 3-3 shows changes in Sandy’s housing mix from 2000 to March 2014 based on 2000 Census data and City of Sandy residential building permit data. Between 2000 and March 2014, Sandy increased its housing stock by 1,840 dwelling units or 89 percent. The mix of housing changed, with single-family dwellings accounting for about a 7 percent greater share in March 2014 than 2000.

Table 3-3. Estimated dwelling units by type, Sandy, 2000 and March 2014

Dwelling Type	2000		Mar. 2014		New DU 2000 - Mar. 2014		
	Number	Percent	Number	Percent	Number	Percent	% Increase
Single Family	1,387	67%	2,914	74%	1,527	83%	110%
Multi-Family	473	23%	774	20%	301	16%	64%
Manufactured	219	10%	231	6%	12	1%	5%
Total Housing Units	2,079	100%	3,919	100%	1,840	100%	89%

Source: U.S. Census 2000; City of Sandy, March 2014

New dwelling units needed, 2014 - 2034

Demand for new units is based on the county coordinated population forecast as required by ORS 195.036 and ORS 197.296. The following sections step through that logic and describe the basis for the assumptions applied to the estimate of demand for new dwelling units.

Population

Table 3-4 shows the forecasted population for Sandy from 2014 to 2034. The coordinated population forecast assumes an average annual growth rate of 2.8 percent for the City of Sandy as presented in Chapter 1 and detailed in Appendix A.

Table 3-4. City of Sandy ORS 195.034(2) Safe Harbor Population Forecast

Year	Population
2014	10,908
2024	14,377
2034	18,980
Change 2014 to 2034	
Number	8,072
% Growth	74.0%
AAGR	2.8%

Source: City of Sandy; Clackamas County Rural Cities Population Coordination

Average household size

The average household size has decreased over the past five decades. The direct impact of decreasing household size on housing demand is that smaller households mean more households. OAR 660-024-040(8)(a) establishes a “safe harbor” assumption for average household size as contained in the most recent census. The 2010 Census indicates the average household size in Sandy is 2.68 persons per household.

Vacancy rates

The current housing vacancy rate is the final variable in the basic housing demand model. Vacancy rates are cyclical and represent the lag between demand and the market’s response to demand in additional dwelling units. OAR 660-024-040(8)(e) establishes a “safe harbor” assumption for the housing vacancy rate as contained in the most recent census. The 2010 Census indicates the housing vacancy rate for Sandy is 94.7 percent.

Forecast of new housing units, 2014-2034

This analysis leads to a forecast of new housing units likely to be built in Sandy for the planning period (Table 3-5). As shown in this table, Sandy will need 3,180 new dwelling units to accommodate population growth between 2014 and 2034. The forecast assumes less than 70 percent of units will be single-family housing types (including single-family detached, single-family attached, and manufactured) and more than 30 percent will be multi-family. The rationale for the household mix is presented in the following sections.

***Note on Replacement Dwelling Units:** The forecast of new units does not include dwellings that will be demolished and replaced. Further analysis indicates that redevelopment of land will result in approximately 143 replacement dwelling units. Of these units, approximately 109 will be located on residential zoned land and 34 on commercial and industrial zoned lands. The calculation included 21 dwelling units on land over five acres that is considered vacant, 91 dwelling units on land defined as having significant redevelopment potential, and 31 dwelling units on land defined as having moderate redevelopment potential. Analysis in this study does not include replacement dwelling units as creating additional demand for residential land,*

rather it is assumed they will be replaced at the same site, or in the case of commercial/industrial land in conjunction with adjacent residential development.

Table 3-5. Demand for new housing units, Sandy UGB, 2000-2034

Year	Occupied Dwellings	Unoccupied Dwellings	Total Dwellings
2000	1,957	110	2,067
2014	3,711	208	3,919
2034	6,723	376	7,099
increase 2014 to 2034	3,012	168	3,180

Source: U.S Census; City of Sandy

Housing needs analysis

The DLCDD Workbook describes four steps in analyzing housing needs:

1. Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix.
2. Describe the demographic characteristics of the population and, if possible, housing trends that relate to demand for different types of housing.
3. Determine the types of housing that are likely to be affordable to the projected households based on household income.
4. Determine the needed density ranges for each plan designation and the average needed net density for all structure types.

Step 1. Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix

The evaluation of housing trends that follows is based on research previously conducted by ECONorthwest as well as new trends affecting housing mix. Previous work by ECONorthwest and conclusions from “*The State of the Nation’s Housing, 2006*”, report from the Joint Center for Housing Studies at Harvard University inform the national, state, and local housing outlook for the next decade. This report summarizes the national housing outlook for the next decade as follows:

“The housing boom came under increasing pressure in 2005. With interest rates rising, builders in many states responded to slower sales and larger inventories by scaling back on production. Meanwhile, the surge in energy costs hit household budgets just as higher interest rates started to crimp the spending of homeowners with adjustable mortgages.”

Nevertheless, the housing sector continues to benefit from solid job and household growth, recovering rental markets, and strong home price appreciation. As long as these positive forces remain in place, the current slowdown should be moderate. Over the longer term, household growth is expected to accelerate from about 12.6 million over the past ten years to 14.6 million over the next ten. When combined with projected income gains and a rising tide of wealth, strengthening demand should lift housing production and investment to new highs.”

This evaluation presents a mixed outlook for housing markets and for homeownership, and points to the significant difficulties low and moderate-income households face in finding affordable housing. The following is a summary of key national housing trends:

- Home prices in many parts of the country have risen considerably faster than household incomes.
- Higher interest rates could greatly impact affordability, bringing home prices under pressure unless employment and income growth are strong enough to offset the increase.
- Despite growing concern over the pace of development, housing construction over the next 10 years is likely to exceed that of the last 10.
- While the short- and medium-term outlook depends on interest rates and the economy, the longer-term prospects for housing rely far more on demographic trends. Baby-boomers are aging into their peak income and wealth years, immigration is increasing, and household growth has been higher than expected. These factors bode well for housing investment over the next decade.
- New housing construction is expected to continue to grow, and will exceed the growth of households. A significant fraction of building activity offsets losses from the existing housing stock, adds to the supply of second homes, and accommodates the greater turnover of units that accompanies a larger household base.
- Because of recession, sagging labor markets, and high demand for homeownership, the demand for rental units has been weak over the past decade. Any imbalances between supply and demand may, however, prove temporary if the economy continues to expand and generate new jobs. Rental demand could surge if interest rates and/or housing prices rise.
- Despite unusually strong income growth in the 1990s, 95 million Americans experience housing cost burdens or live in crowded or inadequate housing.
- Minorities and immigrants play increasingly important roles in housing market demand. Nationally, immigrants have accounted for more than a third of household growth since the 1990s. The minority share of households increased from 17 percent in 1980 to 26 percent in 2000, and is expected to reach 34 percent by 2020.
- Though minority homeownership rates still lag behind those of whites, minorities accounted for two out of every 5 net new home sales between 1994 and 2003.

- Women are becoming a more powerful presence in housing markets. Between 1980 and 2000, the number of households headed by unmarried women increased by almost 10 million. Over the same period, the median contribution of wives' earning to the dual-earner households rose from 30 percent to 37 percent.
- Though the majority of Americans are well housed, nearly a third of U.S. households spend 30 percent or more of their incomes on housing. These challenges are most severe among those in the lowest income brackets. These affordability pressures are unlikely to ease; many of the low wage jobs created by the economy do not pay enough for a household to afford to own or rent even a modest home.

A more detailed summary of national housing trends is presented in Appendix B.

Step 2. Describe the demographic characteristics of the population and, if possible, housing trends that relate to demand for different types of housing

State and regional demographic and housing trends are important in developing a thorough understanding of the dynamics of the Sandy housing market. Sandy exists in a regional economy; trends in the region impact the local housing market. This section documents state and regional demographic and housing trends relevant to Sandy.

Demographic trends

Demographic trends provide a broader context for growth in a region; factors such as age, income, migration and other trends show how communities have grown and shape future growth. To provide context, we compare Sandy with Clackamas County and Oregon where appropriate. Characteristics such as age and ethnicity are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

STATE DEMOGRAPHIC TRENDS

Oregon's *2006-2010 Consolidated Plan* includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide.² The plan concludes that "Oregon's changing population demographics are having a significant impact on its housing market." It identified the following population and demographic trends that influence housing need statewide:

- 11th fastest growing in the United States
- Facing dramatic housing cost increases
- Facing median and adjusted incomes less than those of 1999

² http://www.ohcs.oregon.gov/OHCS/HRS_Consolidated_Plan_5yearplan.shtml

- Growing faster than national rates: 4.0 percent v. 3.3 percent and expecting a non-entitlement growth during this consolidated plan of about 6 percent, 82 percent of which will come from in-migration.
- Increasingly older
- Increasingly diverse
- Increasingly less affluent³

Richard Bjelland, State Housing Analyst at the Housing and Community Services Department of the State of Oregon, analyzed recent demographic changes taking place in Oregon and discussed their implications in a 2006 presentation “Changing Demographics: Impacts to Oregon and the US.” Some of Bjelland’s most significant findings are summarized below:

- Oregon’s minority population is growing quickly. Minorities made up 9.2 percent of the population in 1990 and 16.5 percent of the population in 2000, a 79 percent increase.
- Hispanics and Latinos make up a large share of that population and their growth rate is higher than non-Hispanics/Latinos. The growth rate of Oregon’s non-Hispanic/Latino population between 1990 and 2000 was 15.3 percent compared to 144.3 percent for Hispanics/Latinos.
- The birth rates of Hispanic/Latino residents are higher than non-Hispanic/Latino residents. In 1998, for the US, white non-Hispanic/Latino residents had a birth rate of 12.3 per 1,000, lower than Asians and Pacific Islanders (16.4 per 1,000), black non-Hispanics (18.2 per 1,000) and Hispanic/Latino (24.3 per 1,000).
- The share of resident births and deaths in Oregon shows the implications of that birthrate: Hispanic/Latino residents accounted for 17.4 percent of births but only 1.4 percent of deaths in Oregon for 2001. In addition, Hispanic/Latino Oregonians are younger than non-Hispanic/Latino residents: in 2000, 75.9 percent of Hispanic/Latino residents of Oregon are under age 35, compared to 45.7 percent of non-Hispanic/Latino residents.
- In Oregon, Hispanic/Latino per capita income in 2005 was only 44 percent of white per capita income.
- Hispanic/Latino residents of Oregon become homeowners at younger ages than non-Hispanic/Latino residents. Table 3-6 shows that Hispanic/Latino Oregonians under 45 have higher homeownership rates than non-Hispanic/Latino residents.

³ State of Oregon Consolidated Plan, 2006-2010, pg. 23.

Table 3-6. Oregon homeownership rates by age of householder, 2000

Age of Household	Non-Hispanic/Latino	Hispanic/Latino
25-34	10.2%	25.7%
35-44	20.6%	31.0%
45 and older	68.1%	39.4%

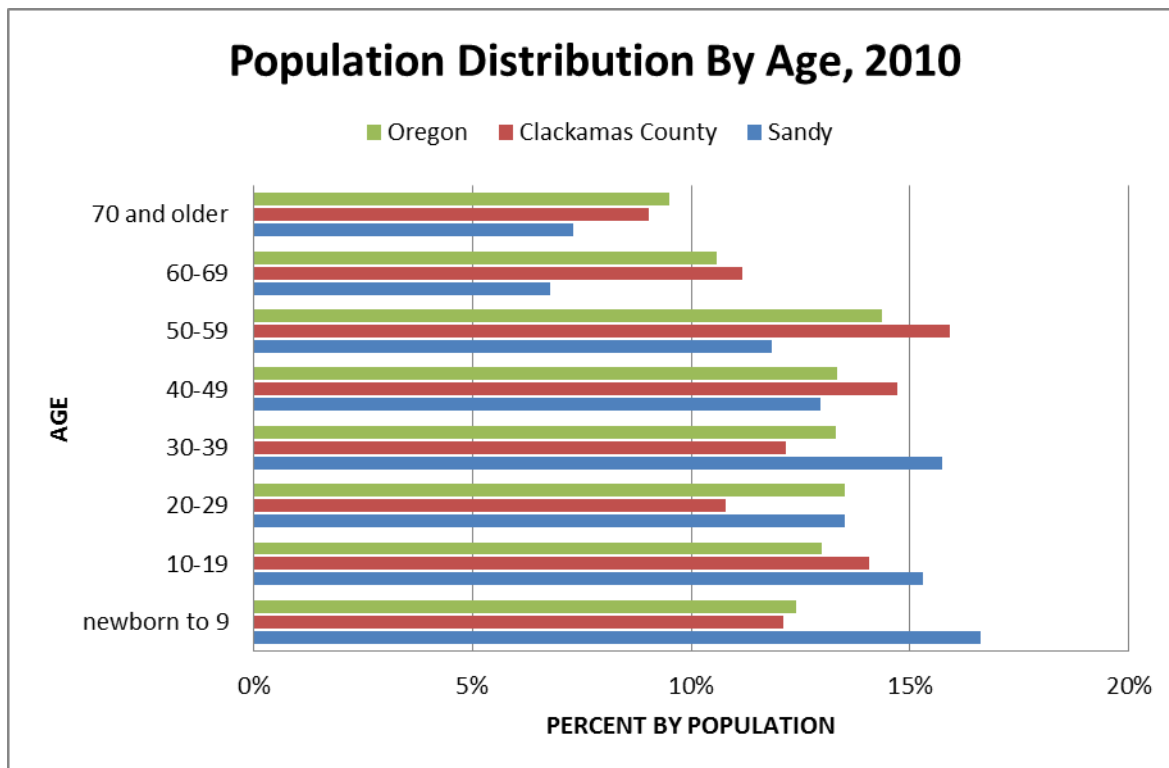
Source: Richard Bjelland, State Housing Analyst at the Housing and Community Services Department of the State of Oregon, "Changing Demographics: Impacts to Oregon and the US" 2006. He obtained his data from US Census 2000.

REGIONAL DEMOGRAPHIC TRENDS

Regional demographic trends largely follow the statewide trends discussed above, but provide additional insight into how demographic trends might affect housing in Sandy.

Figure 3-1 shows the populations of Oregon, Clackamas County, and Sandy by age for 2010. Sandy has a greater proportion of its population less than 40 years old than both Oregon and Clackamas County and fewer residents over 40 years old compared to the County and State averages.

Figure 3-1. Population distribution by age, Oregon Clackamas County, and Sandy, 2010



Source: U.S. Census, 2010

Table 3-7 shows population by age for Sandy for 2000 and 2010. The data shows that Sandy grew by 4,185 people between 2000 and 2010, a 78 percent increase. The age breakdown shows

the City’s population grew in every age group with the fastest growing age groups being newborn to 9 years, 20 to 24 years, 25 to 34 years, and 45 years and over.

Table 3-7. Population by age, Sandy, 2000 and 2010

Age Group	2000		2010		Change		
	Population	Percentage	Population	Percentage	Increase	Percent	Share
newborn to 9	894	16.6%	1,589	16.6%	695	78%	0.0%
10-19	941	17.5%	1,463	15.3%	522	55%	-2.2%
20-24	277	5.1%	566	5.9%	289	104%	0.8%
25-34	764	14.2%	1,522	15.9%	758	99%	1.7%
35-44	922	17.1%	1,301	13.6%	379	41%	-3.5%
45-54	710	13.2%	1,236	12.9%	526	74%	-0.3%
55-64	406	7.5%	916	9.6%	510	126%	2.0%
65+	471	8.7%	977	10.2%	506	107%	1.5%
Total	5,385	100.0%	9,570	100.0%	4,185	78%	---

Source: U.S. Census, 2000 and 2010

The data suggests that population and age trends between Sandy and Clackamas County are somewhat different with Clackamas County attracting people nearing retirement or retirees and families with children and Sandy attracting a greater percentage of families with children.

Between 1990 and 1999, almost 70 percent of Oregon’s total population growth occurred from net migration (in-migration minus out-migration), with the remaining 30 percent from natural increase (births minus deaths).⁴ Migrants to Oregon tend to have many characteristics in common with existing residents, with some differences—recent in-migrants to Oregon are, on average, younger and more educated, and are more likely to hold professional or managerial jobs, compared to Oregon’s existing population. The race and ethnicity of in-migrants generally mirrors Oregon’s established pattern, with one exception: Hispanics make up more than 7 percent of in-migrants but only 3 percent of the state’s population. The number-one reason cited by in-migrants for coming to Oregon was family or friends, followed by quality of life and employment.⁵

Migration is a significant component of population growth in Clackamas County. Seventy-two percent of population growth in Clackamas County between 1990 and 2000 was from in-migration. In May of 2014, The Oregon Employment Department summarized the current Oregon migration outlook as follows:

“Following a dramatic decline in gains from migration during the recessionary years of 2007 to 2009, an increasing number of people have moved to Oregon during the past three years. Net migration increased from 14,027 in 2012 to 23,280 (+66%) in 2013. While net in-migration increased, natural increase stayed roughly the same, at about 12,000. This means net migration gains made up about two-thirds of Oregon’s 2013 population growth. The combination of natural increase and net in-migration (+35,300) led to the largest increase in population since 2008.”

⁴ Portland State University, Population Research Center, 2000. *1990-2000 Components of Population Change*

⁵ State of Oregon, Employment Department, 1999. *1999 Oregon In-migration Study*.

Through 2035, average annual births per 1,000 people are expected to slightly decrease (from 12 to 11), and deaths are projected to slightly increase (from 9 to 10). Thus, at least through 2035, the OEA expects there to be a natural increase in population, but at a slower rate than was normal in the past. Annual net migration gains are expected to hold roughly steady during this time period (at roughly 9 per 1,000 people), and possibly drop as we approach 2035. This means net migration gains will account for most of Oregon's growth in the future.”

Table 3-8 shows the number of persons of Hispanic or Latino origin for Oregon, Clackamas County, and Sandy for 2000 and 2010. Sandy has a smaller share of Hispanic residents than Oregon, but a larger proportion in 2010 than Clackamas County. The Hispanic/Latino population grew quicker in Sandy than in Clackamas County and Oregon from 2000 to 2010. Sandy’s Hispanic/Latino population grew by 302 percent between 2000 and 2010.

Table 3-8. Persons of Hispanic or Latino origin, Oregon, Clackamas County, and Sandy, 2000 and 2010

	Oregon	Clackamas County	Sandy
2000			
Total Population	3,421,399	338,391	5,385
Hispanic or Latino	275,314	16,744	220
Percent Hispanic or Latino	8.0%	4.9%	4.1%
2010			
Total Population	3,831,074	375,992	9,570
Hispanic or Latino	450,062	29,138	884
Percent Hispanic or Latino	11.7%	7.7%	9.2%
Change 2000-2010			
Hispanic or Latino	174,748	12,394	664
Percent Hispanic or Latino	63%	74%	302%

Source: U.S. Census

In conclusion: 1) Sandy residents are generally younger than residents of Clackamas County, even as county-wide age levels are trending older; 2) In-migration throughout Oregon accounts for a greater rate of population growth than natural increase (births minus deaths); and 3) the Hispanic population is growing at a quicker rate in Sandy than in the State or County.

HOUSING TRENDS

Table 3-9 compares permits issued for new single-family dwellings in selected cities in the Greater Portland region between 2006 and 2012. Data was not available beyond 2012. While Sandy has not seen a rebound like Oregon City, Sandy has started to show an increase in single-family dwelling development in 2013 and the first quarter of 2014.

Table 3-9. Permits issued for new single-family dwellings, selected Greater Portland region cities, 2006-2012

City	2006	2007	2008	2009	2010	2011	2012	Total
Portland	1,256	1,205	648	427	435	451	644	5,066
Oregon City	267	237	95	103	109	137	293	1,241
Happy Valley	388	256	95	70	71	151	200	1,231
Gresham	242	305	103	69	76	42	66	903
Sandy	193	149	77	46	45	32	32	574
Troutdale	122	27	31	13	5	4	1	203

Source: www.city-data.com, 2014

SUMMARY OF KEY DEMOGRAPHIC AND HOUSING TRENDS

Sandy has a larger share of young people than Clackamas County as a whole.

- Sandy has a higher percentage than Clackamas County of people under age 30.
- The age structures in Sandy and Clackamas County have experienced similar changes. The fastest growing age groups in both areas were 45 to 64 years, followed by 5 to 17 years. This suggests that both areas are attracting families with school-aged children. However, Clackamas County attracted people over 65 years, while Sandy lost people in that age category.

Migration is an important component of recent growth in Clackamas County and will continue to be a key factor in future population growth.

- In-migration accounted for more than 70 percent of population growth in **Clackamas** County between 1990 and 2006.
- **Sandy's** population was more mobile than the County's as a whole. Only 43 percent of the residents of **Sandy** lived in the same house in 2000 as they did in 1995 compared to 52 percent for all of **Clackamas** County. A greater share of the population in **Sandy** moved within **Clackamas** County during that time period (30 percent) than for **Clackamas** County as a whole (25 percent). A larger share of the population in Sandy lived in a different state in 1995 (13 percent), compared to the County average (10 percent).

Sandy is becoming more ethnically diverse.

- **Sandy's** Hispanic/Latino population grew by 302 percent between 2000 and 2010, compared with 74 percent growth in **Clackamas** County's Hispanic/Latino population during the same period.

Hispanic/Latino residents have younger households.

- The birth rates for Hispanic/Latino residents (1998 data) are 24.3 per 1,000 compared to 12.3 per 1,000 for non-Hispanic/Latino residents.

- Hispanic/Latino residents accounted for 17.4 percent of births and only 1.4 percent of deaths in Oregon in 2001.
- In 2000, 75.9 percent of Hispanic/Latino Oregonians were under age 35 compared to 45.7 percent of non-Hispanic/Latino residents.

Hispanic/Latino residents typically have lower incomes but become homeowners at younger ages than non-Hispanic/Latino residents.

- Per capita income in Oregon in 2005 for Hispanic/Latino residents was only 44 percent of white per capita income.
- 56.7 percent of Hispanic/Latino residents of Oregon under age 45 are homeowners, compared to 30.8 percent of non-Hispanic/Latino residents.

Sandy is part of a complex, interconnected regional housing market.

- Commuting is typical throughout the region: **the majority of Sandy's** workforce lives in **Clackamas** County, meaning most do not reside in the City of **Sandy**.

Housing types are trending towards larger units on smaller lots.

- Between 1994 and 2004 the median size of new single-family dwellings increased 14 percent, from 1,900 sq. ft. to 2,169 sq. ft. nationally and 17 percent in the western region from 1,810 sq. ft. to 2,126 sq. ft. Between 1994 and 2004 the percentage of lots under 7,000 sq. ft. increased 6 percent from 29 percent of lots to 35 percent of lots. A corresponding 6 percent decrease in lots over 11,000 sq. ft. was seen.⁶
- Even when controlling for income and savings, level of education, age, marital status, family size, the housing market in which the unit was located [and other factors], compared to whites both black families and Hispanic/Latino families had significantly lower likelihood of homeownership, lower house values (for owners) and lower rents (for renters).⁷
- Minority households have substantially lower rents than white households.⁸
- Hispanic/Latino households, particularly low-income families, have higher levels of mortgage debt than do white households, although their house values are lower than

⁶ Joint Center for Housing Studies of Harvard University, "The State of the Nation's Housing," 2006.

⁷ Boehm, Thomas P. and Alan M. Schlottmann, "Housing Tenure, Expenditure, and Satisfaction Across Hispanic, African American, and White Households: Evidence from the American Housing Survey." US Department of Housing and Urban Development, February 2006.

⁸ Boehm, Thomas P. and Alan M. Schlottmann, "Housing Tenure, Expenditure, and Satisfaction Across Hispanic, African American, and White Households: Evidence from the American Housing Survey." US Department of Housing and Urban Development, February 2006.

whites. This suggests a substantial difference in borrowing or loan terms for Hispanics/Latinos.⁹

Step 3. Determine the types of housing that are likely to be affordable to the projected households based on household income

Step three of the housing needs assessment results in an estimate of need for housing by income and housing type. This requires some estimate of the income distribution of future households in the community. These estimates are based on HUD section 8 program data for household income and fair market rents.

A typical standard used to determine housing affordability is a household should pay no more than 30 percent of its total monthly household income for housing, including utilities. According to the U.S. Census, 1,764 households in Sandy—about 47.4 percent—paid more than 30 percent of their income for housing in 2010.

One way of exploring the issue of financial need is to review wage rates and housing affordability. Table 3-10 shows an analysis of affordable housing wage and rent gap for households in Sandy at different percentages of median family income (MFI). The data are for a typical family of four. The results indicate that a household must earn \$14.13 an hour to afford a two-bedroom unit according to HUD's market rate rent estimate.

⁹ Boehm, Thomas P. and Alan M. Schlottmann, "Housing Tenure, Expenditure, and Satisfaction Across Hispanic, African American, and White Households: Evidence from the American Housing Survey." US Department of Housing and Urban Development, February 2006.

Table 3-10. Analysis of affordable housing wage and rent gap by HUD income categories, Clackamas County, 2007

Value	Minimum Wage	30% MFI	50% MFI	80% MFI	100% MFI	120% MFI
Annual Hours	2086	2086	2086	2086	2086	2086
Derived Hourly Wage	\$7.80	\$9.18	\$15.29	\$24.47	\$30.58	\$36.70
Annual Wage at Minimum Wage	\$16,271	\$19,140	\$31,900	\$51,040	\$63,800	\$76,560
Annual Affordable Rent	\$4,881	\$5,742	\$9,570	\$15,312	\$19,140	\$22,968
Monthly Affordable Rent	\$407	\$479	\$798	\$1,276	\$1,595	\$1,914
HUD Fair Market Rent (2 bedroom)	\$737	\$737	\$737	\$737	\$737	\$737
Is HUD Fair Market Rent Higher Than The Monthly Affordable Rent	Yes	Yes	No	No	No	No
Rent Paid Monthly OVER 30 % of Income	\$330	\$259	n/a	n/a	n/a	n/a
Rent Paid Annually OVER 30% of Income	\$3,963	\$3,102	n/a	n/a	n/a	n/a
Percentage of Income Paid OVER 30% of Income for Rent	24%	16%	n/a	n/a	n/a	n/a
Total Spent on Housing	54%	46%	28%	17%	14%	12%
For this area what would the "Affordable Housing Wage" be?	\$14.13	\$14.13	\$14.13	\$14.13	\$14.13	\$14.13
The Affordable Housing Wage Gap IS:	\$6.33	\$4.96	n/a	n/a	n/a	n/a

Source: HUD, Oregon office; analysis by ECONorthwest
MFI: Median family income; MFI for the region in 2007 was \$63,800

The total amount a household spends on housing is referred to as cost burden. Total housing expenses are generally defined to include payments and interest or rent, utilities, and insurance. HUD guidelines indicate that households paying more than 30 percent of their income on housing experience “cost burden” and households paying more than 50 percent of their income on housing experience “severe cost burden.” Using cost burden as an indicator is consistent with the Goal 10 requirement of providing housing that is affordable to all households in a community.

Table 3-11 shows housing costs as a percent of income by tenure for Sandy households in 2010. The data show that about 47.4 percent of Sandy households experienced cost burden in 2010. The rate was higher for renters (58.6 percent) than for homeowners (40.0 percent).

A larger share of Sandy’s residents were cost burdened compared to Clackamas County. 39.5 percent of Clackamas County residents were cost burdened, compared to 47.4 percent of Sandy’s households. The share of homeowner households cost burdened in Clackamas County was lower than Sandy, 36.1 percent compared to 40.0 percent in Sandy. Sandy also had a larger share of renter households experiencing cost burden than Clackamas County, 58.6 percent compared to 47.3 percent in Clackamas County.

Frequency of cost burden was greater in Sandy than Oregon, with 39.4 percent of Oregon’s households experiencing cost burden compared to 47.4 percent in Sandy. Sandy had a larger share of homeowner households experiencing cost burden than the state average, 40.0 percent compared to the Oregon average of 32.9 percent. Sandy also had a larger share of renter households experiencing cost burden than Oregon, 58.6 percent compared to 50.0 percent in Oregon.

Table 3-11. Housing cost as a percentage of household income, Sandy, 2010

Percent of Income	Owners		Renters		Total	
	Percent	Number	Percent	Number	Percent	Number
Less than 20%	31.5%	704	18.2%	270	26.2%	974
20% - 29%	28.5%	637	21.8%	323	25.8%	960
30% or more	40.0%	894	58.6%	870	47.4%	1,764
Total	100.0%	2,235	100.0%	1,484	100.0%	3,719
Cost Burden	40.0%	894	58.6%	870	47.4%	1,784
No Cash	0.0%	0	1.4%	21	0.6%	21

Source: 2010 Census

Table 3-12 shows a rough estimate of affordable housing cost and units by income levels for Sandy in 2000. Several points should be kept in mind when interpreting this data:

- Because all of the affordability guidelines are based on median family income, they provide a rough estimate of financial need and may mask other barriers to affordable housing such as move-in costs, competition for housing from higher income households, and availability of suitable units. They also ignore other important factors such as accumulated assets, purchasing housing as an investment, and the effect of down payments and interest rates on housing affordability.
- Households compete for housing in the marketplace. In other words, affordable housing units are not necessarily available to low income households. For example, if an area has a total of 50 dwelling units that are affordable to households earning 30 percent of median family income, 50 percent of those units may already be occupied by households that earn more than 30 percent of median family income.

The data in Table 3-12 indicate that in 2000:

- About 15 percent of Sandy households could not afford a studio apartment according to HUD's estimate of \$563 fair market rent.
- Nearly one-third of Sandy households could not afford a two-bedroom apartment according to HUD's estimate of \$702 fair market rent.
- A household earning a median family income (\$53,700) could afford a home valued up to \$161,100.

A brief comparison of affordability in Sandy to Clackamas County shows that Sandy has a smaller share of households that are unable to afford the fair market rent for a studio apartment. Sandy has a larger share of households that are unable to afford a two-bedroom apartment.

Table 3-12. Rough estimate of housing affordability, Sandy, 2000

Income Level	Number of HH	Percent	Affordable Monthly Housing Cost	Crude Estimate of Affordable Purchase Owner-Occupied Unit	Est. Number of Owner Units	Est. Number of Renter Units	Surplus (Deficit)	Notes
Less than \$10,000	118	6.1%	\$0 to \$250	\$0 to \$25,000	100	69	50	
\$10,000 to \$14,999	124	6.4%	\$250 to \$375	\$25,000 to \$37,000	23	62	(39)	
\$15,000 to \$24,999	263	13.5%	\$375 to \$625	\$37,500 to \$62,500	72	139	(52)	2000 HUD FMR Studio: \$463; 1 bdrm: \$569
\$25,000 to \$34,999	235	12.1%	\$625 to \$875	\$62,500 to \$87,500	65	201	31	HUD FMR 2 bdrm:\$702
\$35,000 to \$49,999	409	21.0%	\$875 to \$1,250	\$87,500 to \$125,000	115	96	(198)	HUD FMR 3 bdrm:\$976; 4 bdrm: \$1,060
\$50,000 to \$74,999	468	24.0%	\$1,250 to \$1,875	\$125,000 to \$187,500	646	31	208	
Clackamas County 2000 MFI:	\$53,700		\$1,343	\$161,100				
\$75,000 to \$99,999	182	9.3%	\$1,875 to \$2,450	\$187,500 to \$245,000	215	8	41	
\$100,000 to \$149,999	99	5.1%	\$2,450 to \$3,750	\$245,000 to \$375,000	65	0	(34)	
\$150,000 or more	50	2.6%	more than \$3,750	more than \$375,000	42	0	(8)	
Total	1,948	100.0%			1,342	606	0	

Source: U.S. Census, 2000, U.S. Department of Housing and Urban Development, and Oregon Housing & Community Services. *Housing Strategies Workbook: Your Guide to Local Affordable Housing Initiatives*, 1993
 Notes FMR- Fair Market Rent and MFI – Median Family Income

As a final step in the housing affordability analysis, a rough correlation of income with needed housing types was performed as defined by ORS 195.303. This analysis is also consistent with guidance provided in the Workbook.¹⁰ Table 3-13 shows the evaluation for market segments, incomes, and financially attainable housing products. HUD income guidelines for the market segments and census data for the income distribution were also used. The table provides an estimate of financially attainable housing types by income and tenure. Households in the upper-middle and high-income segments will be able to afford new housing. The data shown in Table 3-13 suggest that in 2007, Sandy had a need for nearly 634 low-income housing units (units for households with incomes less than \$31,900).

¹⁰ Specifically, Step 4, page 29 and the figure on page D-11.

Table 3-13. Financially attainable housing type by income range, Sandy, 2007

Market Segment by Income	Income Range	Number of households	Percent of Households	Financially Attainable Products		
				Owner Occupied	Renter Occupied	
High (120% or more of MFI)	\$76,560 or more	676	29%	All housing types: higher prices	All housing types: higher prices	↑ Primarily new housing Primarily used housing ↓
Upper Middle (80% - 120% of MFI)	\$51,040 to \$76,560	536	23%	All housing types: lower values	All housing types: lower values	
Lower Middle (50% - 80% of MFI)	\$31,900 to \$51,040	474	20%	Manufactured on lots; single-family attached; duplexes	Single-family attached; detached; manufactured on lots; apartments	
Lower (30% - 50% of MFI)	\$19,140 to \$31,900	321	14%	Manufactured in parks	Apartments; manufactured in parks; duplexes	
Very Low (Less than 30% of MFI)	Less than \$19,140	313	14%	None	Apartments; new and used government assisted housing	

Source: 2007 income distribution from Oregon Prospector (www.oregonprosepector.com); 2007 Median Family Income from HUD (\$63,800); Estimates by ECONorthwest

Changes in housing cost, 2000-2014

Table 3-14 shows median housing sales price in Sandy, Clackamas County, and selected cities in the Greater Portland region for 2000 and 2014. Housing in Sandy costs less than the County median sales price and most other cities as detailed in Table 3-14. The median price of a single-family home in Sandy increased from \$147,500 in 2000 to \$232,440 in 2014, an increase of \$84,940 or 58 percent over the 14-year period.

Table 3-14. Median sales price for single-family dwellings, Sandy, Clackamas County, and selected cities, 2000 and 2014

Median Sales Price	2000	2014	Change 2000-2014		
			Amount	Percent	AAGR
Lake Oswego	\$282,750	\$477,500	\$194,750	69%	3.8%
Happy Valley	\$216,750	\$392,730	\$175,980	81%	4.3%
Clackamas County	\$185,000	\$307,025	\$122,025	66%	3.7%
Damascus	\$212,900	\$305,000	\$92,100	43%	2.6%
Sandy	\$147,500	\$232,440	\$84,940	58%	3.3%
Gresham	\$164,500	\$230,000	\$65,500	40%	2.4%

Source: Metro RLIS 2000 data; Zillow 2014 data

The comparatively low housing costs in Sandy present a comparative advantage for attracting businesses that are considering locating in the Greater Portland region and do not need direct access to interstate highways.

Government and Nonprofit Assisted Housing

Governmental agencies and nonprofit organizations offer a range of housing assistance. Government programs that assist low-income households in renting or purchasing a home include:

- **Section 8 voucher system** allows very low-income families (including elderly and disabled) to choose where they want to live by providing rental certificates that limit tenants' rent to 30 percent of their monthly income. The program is administered by local housing authorities; HUD pays participating landlords the difference between market rent, as determined by HUD, and what the family is able to pay. Qualified Section 8 participants may use their vouchers to pay rent or participate in lease-to-own or homeownership programs.
- **Public housing** is government provided low cost housing in multi-unit complexes that are available to low-income, mostly elderly or disabled, residents. Managed by local housing authorities, typically require tenants to pay no more than 30 percent of their monthly income for rent.
- **HUD landlord subsidies** give funds directly to apartment owners, who lower the rents they charge low-income tenants. Some units are designed for senior citizens or people with disabilities, others for families and individuals.
- **Section 202** provides housing for low-income senior citizens and often includes services such as meals, transportation, and accommodations for the disabled. Programs are sponsored on a complex-by-complex basis by non-profit organizations or consumer cooperatives.

- **Subsidized mortgage** programs are state-sponsored programs that reduce the interest rate for homes purchased within the state to qualified low-income first-time homebuyers. Other programs that offer low interest rate loans include:
 - **Rural Housing Section 502 Direct Loans** are loans that are directly funded by the government. These loans are available for low- and very low-income families to obtain homeownership in eligible rural areas. Family adjusted income must be below 80 percent of the area median income. Applicants may obtain 100 percent financing to purchase an existing dwelling, purchase a site and construct a dwelling, or purchase newly constructed dwellings.
 - **Rural Housing Guaranteed Loans** are loans funded by approved lenders and guaranteed by the U.S. Dept. of Agriculture. Family adjusted income must be below 115 percent of the area median income. Applicants may obtain 100 percent financing to purchase an existing dwelling or purchase newly constructed dwellings.
 - **Veteran’s Affairs loans** are home loans offered to eligible veterans, some military personnel, and certain surviving spouses. The VA can guarantee part of a loan from a private lender, and can issue loans for building, repairing, and improving homes, loans for refinancing existing loans, and special grants for retrofitting a home to accommodate a disability.
- **Other homeownership assistance** include a variety of down payment assistance programs run by states, counties, cities, business organizations, and non-profit organizations for low-income families. To be eligible the buyer must qualify for a mortgage with a lender, complete a certified home ownership education program and, in most cases, have some money from their own resources as the match for the down payment assistance.

Nonprofit organizations provide a wide variety of housing assistance to low-income households and individuals. Nonprofits provide assistance with renting or purchasing housing, as well as services (such as emergency food, low-cost medical services, or transportation assistance). The types of housing assistance that nonprofits provide vary by community and may include:

- **Homeless shelters/temporary housing programs** that serve the temporarily or long-term homeless population and may be run by non-profit organizations, churches, or cities.
- **Rentals with services** may serve special low-income populations, such as the disabled, elderly, chronically homeless, or ex-offender populations, with housing and associated services, such as meals, assistance finding employment, and alcohol or drug treatment programs.
- **Below market rent rentals** units may be developed as part of a city or county’s requirement for developers to rent a certain percentage of units in new development at below market rate prices affordable to lower income renters, and are also developed by non-profit organizations. To be eligible to rent these types of units, a household must

meet specific income requirements and units rented through programs may be subject to resale restrictions.

- **Lease-to-own** programs allow qualified buyers to select a home and lease it, usually from a non-profit organization, then purchase the home and assume the mortgage at the end of the lease term. These programs often lock in the purchase price when the participant begins the lease, and most only allow the participant to lease the home for a limited time.
- **Sweat equity programs** requires the homebuyer's participation in the construction of the housing. The sweat equity and labor contributions by the homebuyers and volunteers significantly reduce the cost of the housing. Sweat equity programs may be run by non-profit organizations such as Habitat for Humanity International, and may be the recipient of HUD SHOP grants, which are provided to national and regional nonprofit organizations that have experience in providing self-help housing to purchase land and make improvements on infrastructure.

Step 4: Determine the needed density ranges for each plan designation and the average needed net density for all structure types

As described in the DLCD Workbook, this step results in an estimate of the needed net density range for each plan designation, based on the types of structures that are allowed, and on an estimate of the density at which each structure type is likely to develop based on development trends and local policies. Allowed structure types are the same as the needed housing types identified in ORS 197.303 and include:

- Single-family detached units – includes stick-built single-family detached units and manufactured homes on individual lots
- Manufactured – includes manufactured or mobile homes in mobile home parks. Manufactured homes on individual lots are treated as single-family detached dwellings.
- Single-family attached dwellings – includes owner-occupied condominiums, townhomes, row houses and other single-family attached units
- Multifamily – includes duplex, tri-plex, four-plex, and apartment buildings with five or more units.

The density and mix analysis does not include an estimate of needed government-assisted housing. ORS 197.303 requires cities to plan for government assisted housing. Government assisted housing can be any of the types listed above. Because the City allows government assisted housing in all of its residential designations, and government assisted housing is similar in character as other housing (with the exception of government subsidies), the City finds that it is not necessary to develop separate density estimates for these housing types.

Table 3-15 shows the total gross acres and net acres available by buildable lands classification for the 2014 to 2034 period.

Table 3-15. Gross and net acres by buildable lands classification, Sandy UGB, 2014

Residential Land Type	Gross Acres	Platted Acres	ROW Acres	Net Acres
Vacant	284.8	58.0	45.2	181.6
Significant Redevelopment	99.7	30.3	13.9	55.5
Moderate Redevelopment	19.9	0.0	4.0	15.9
Total Supply	404.4	88.3	63.1	253.0

Source: City of Sandy

The analysis in this chapter shows land need in gross acres and net acres.¹¹ Net acres are the amount of land needed for housing, not including public infrastructure (e.g., roads) or services (e.g., schools or parks). Gross acres are the estimated amount of land needed for housing inclusive of public infrastructure and services.

The forecast results in an average residential density of 5.52 dwelling units per net residential acre for future development. Table 3-16 presents the target net density by housing type for the planning period. These density numbers are based on a set of assumptions as discussed below.

Table 3-16. Needed net density by housing type, Sandy, 2014-2034

Housing Type	Density (DU/net acre)	Average Lot Size (sq. ft.)
Single-family detached	5.5	7,920
Single-family attached	10.0	4,356
Manufactured in parks	8.0	5,445
Multi-family	13.0	3,351

Source: City of Sandy

- City of Sandy National homeownership trends increased during the 2000’s to nearly 70 percent. The homeownership rate in Sandy in 2000 was lower at 69 percent. It is the policy of the City to provide homeownership opportunities to Sandy residents.
- The City assumes the 2010 Census tenure split of 63.7 percent owner-occupied and 36.3 percent renter-occupied units. This figure is lower than the 2000 Census which reported that 69 percent of dwellings were owner-occupied, but higher than the HCS model output which predicts a 62 percent ownership rate.

¹¹ This analysis uses the net-to-gross acre “safe harbor” assumption defined in OAR 660-024-0040 (9): “As a safe harbor during periodic review or other legislative review of the UGB, a local government may estimate that the 20-year land needs for streets and roads, parks and school facilities will together require an additional amount of land equal to 25 percent of the net buildable acres determined for residential land needs under section (4) of this rule. For purposes of this rule, a “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land, after excluding present and future rights-of-way, restricted hazard areas, public open spaces and restricted resource protection areas.”

- The housing mix in March 2014 was 74 percent single-family, 20 percent multi-family and 6 percent manufactured housing. The housing mix in 2000 was 67 percent single-family, 23 percent multi-family and 10 percent manufactured homes. See Table 3-3 for more information. The HCS Housing Needs Model predicts a need for about 75 percent single-family dwellings (Appendix C).
- Ten percent of the single-family housing need is for single-family attached dwellings. Single-family attached dwellings can be considered an affordable housing type. In fact, the Metropolitan Housing Rule (OAR 660-007-0030(1)) includes single-family attached as part of the 50 percent multi-family housing mix.¹² If this definition were applied to Sandy, the housing mix would be 65 percent single-family and 35 percent multi-family.
- The number of needed new units estimated for the 2014-2034 period is 3,180 as detailed in Table 3-5 above. The land need estimates in this study are built from the safe harbor coordinated population projection, the safe harbor average household size, and vacancy rates from the 2010 Census.
- The average density of all housing types between 1998 and 2006 was 6.9 dwellings per gross residential acre. Low-density residential averaged 5.4 dwellings per gross acre, medium-density averaged 6.8 dwellings per gross acre, high-density residential average 9.6 dwellings per gross acre, and the Village designation averaged 7.9 dwellings per gross acre.
- Assumed densities are based on historical densities, local land use policies, and market factors. Average lot sizes are derived from the net density assumptions (e.g., 43,560 sq. ft. per acre divided by net density equals average lot size in sq. ft.).
- Topography, lot configurations, and other factors typically reduce land use efficiency. The assumed average densities account for land use inefficiencies.
- The housing needs analysis identified a need for all housing types at all income levels including, lower cost housing affordable to households earning less than 80 percent of the area median income as well as housing affordable to households earning more than 120 percent of the area median income.
- Output from the HCS housing needs model resulted in the following needed housing mix: 64 percent single-family detached, 10 percent single-family attached, 1 percent manufactured in parks, and 25 percent multi-family (all types). *Note: single-family attached units assume a density of 10 dwelling units per net acre—a density that is more typical of multi-family housing types.*
- Density is anticipated to decrease from historical averages as the Sandy Development Code has been modified to include lower density ranges.
- The Development Code was amended in 2009 to create minimum lot sizes for the Single Family Residential (SFR) and Low Density Residential (R-1) zoning districts that

¹² Specifically, OAR 660-007(1) states “Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances.”

comprise the Low Density Residential (LDR) Plan Designation. Since that time, six residential subdivisions have been platted or tentatively platted in accordance with these amendments. Table 3-17 shows the density analysis for subdivisions approved since 2009.

- The proposed housing mix allows for up to 31.2 percent multi-family and a minimum of 68.8 percent single-family. This housing mix allows for a greater share of multi-family dwellings than is currently provided in Sandy which as of March 2014 was 20 percent.

Due to the relatively small sample size since adoption of minimum lot sizes, the density analysis as explained above and the mix from the HCS housing needs model was used instead.

Table 3-17. Density for approved subdivisions, Sandy, 2009 through March 2014

Subdivision	Zone	Dwelling Units	Acres	Per Acre Average	Density Average
Sleepy Hollow I	LDR (SFR)	35	7.3	4.8	4.4
Sleepy Hollow II	LDR (SFR)	5	1.2	4.0	4.4
Jones Ridge	LDR (R-1)	10	1.8	5.7	6.5
Pioneer Meadow	HDR	29	2.5	11.8	15.0
Tickle Creek Terrace	MDR	15	1.6	9.5	11.0
Sandy Bluff Annex 4	LDR (SFR)	7	1.2	5.7	4.4

Source: City of Sandy

- The needed housing mix and density results in an overall average needed density of 5.52 dwellings per net acre.

In summary, it is assumed that net densities will decrease during the planning period in order to meet the identified needs for medium and higher income households.¹³ Based on the findings above, the City identifies the following needed density ranges by plan designation:

Plan Designation	Needed Density Range
Low-Density Residential (SFR)	3 to 5.8 DU/Net Acre
Low-Density Residential (R-1)	5 to 8 DU/Net Acre
Medium Density Residential	8 to 14 DU/Net Acre
High Density Residential	10 to 20 DU/Net Acre
Village	3 to 20 DU/Net Acre

To determine needed gross acres, the housing needs analysis used the safe harbor assumption defined in OAR 660-024-0040(9):

“As a safe harbor during periodic review or other legislative review of the UGB, a local government may estimate that the 20-year land needs for streets and roads, parks and school facilities will together require an additional amount of land equal to 25 percent of the net buildable acres determined for residential land needs...”

¹³ Because the analysis of historical densities is in gross acres, it is not possible to determine the amount of this decrease.

Dwelling unit and land deficiency, 2014 - 2034

Supply for needed dwelling units and needed land is based on comparing the existing land supply to the land demand for the planning period. The following sections step through that logic and describe the deficiency for dwelling units and land in the Sandy UGB.

Existing dwelling unit capacity

The final step in the housing needs analysis is to allocate housing needs by plan designation to determine the number of needed housing units and gross acres required to meet identified housing needs for the 20-year period. It also provides an estimate of the net acres required in each zone to accommodate needed housing units. Table 3-18 shows net acres by Comprehensive Plan designation and by buildable lands classification.

Table 3-18. Net acres by Comprehensive Plan designation and by buildable lands classification, Sandy UGB, March 2014

Zone	Net Vacant Acres	Significant Redevelopment Acres	Moderate Redevelopment Acres	Total Net Acres
LDR	85.8	14.0	7.9	107.7
MDR	20.9	5.2	1.2	27.3
HDR	24.6	4.7	0.4	29.7
Village LDR	42.1	28.0	5.1	75.2
Village MDR	8.2	3.6	0.8	12.6
Village HDR	0.0	0.0	0.4	0.5
Total	181.6	55.5	15.9	253.0

Source: City of Sandy

Sandy will need to accommodate 3,180 dwelling units for the planning period. Table 3-18 shows that existing residential land within the UGB that is not platted or tentatively platted can supply 253.0 net acres. There is an additional 88.3 net acres of platted or tentatively platted land that is planned to accommodate an additional 621 dwelling units. Table 3-19 provides the total number of housing units that can be provided on the 341.3 acres of land, including 2,197 new dwelling units and 143 replacement dwelling units. As explained earlier in this chapter, approximately 109 replacement dwelling units are located on residential zoned land, while 34 replacement dwelling units are located on commercial and industrial zoned lands. Replacement units are not counted as fulfilling demand for residential dwelling units as they are assumed to replace existing dwellings at the same site, or in the case of commercial/industrial land in conjunction with adjacent residential development.

In addition, this analysis assumes that 34 additional dwelling units will be constructed in the mixed-use downtown Central Business District (C-1). The C-1 zoning district currently contains 10 mixed-use dwelling units and it is anticipated an additional 34 units will be constructed from 2014 to 2034 to offset the number of dwelling units removed from employment lands.

Table 3-19. Dwelling units accommodated on residential lands, Sandy UGB, 2014-2034

Zone	Platted/ Tentative Vacant	Platted/ Tentative Redevelop- ment	Vacant	Significant Redevelop- ment	Moderate Redevelop- ment	Total
LDR	143	50	378	62	35	668
MDR	56	0	230	57	13	356
HDR	102	29	368	70	6	575
Village LDR	82	25	206	174	32	519
Village MDR	84	0	90	40	9	223
Village HDR	50	0	0	1	6	57
Total Dwellings	517	104	1,272	403	101	2,398

Source: City of Sandy

Dwelling Unit Calculations:

- 2,255 (new dwelling unit capacity) + 143 (replacement dwelling units) = 2,398 *dwelling unit capacity in residential land classifications*
- 2,398 (dwelling unit capacity on residential land) – 143 (replacement dwelling units) + 34 (new C-1 mixed-use dwelling units) + 4 (vacant lots identified by Filter 2) = 2,293 *dwelling unit capacity in all land classifications*
- 3,180 (needed dwelling units) – 2,293 (dwelling unit capacity in all land classifications) = ***minimum of 887 additional dwelling units needed***

The 3,180 needed dwelling units require approximately 685.7 gross residential acres. The density percentage for the residential plan designation is based on the existing land classification breakdown, with 68.8 percent designated Low Density Residential (LDR), 18.9 percent Medium Density Residential (MDR), and 12.3 percent High Density Residential (HDR). This analysis combines non-Village and Village Plan Designations together as density requirements are the same.

Table 3-20. Residential land needed for housing, Sandy UGB, 2014-2034

Zones	Percent	Units Needed	Net Acres	ROW Acres	Gross Acres
LDR (SFR density)	52.4%	1,666	395.3	78.4	473.7
LDR (R-1 density)	16.4%	522	80.2	13.4	93.6
MDR	18.9%	601	60.9	10.7	71.6
HDR	12.3%	391	39.3	7.5	46.8
Total	100.0%	3,180	575.7	110.0	685.7

Source: City of Sandy

Table 3-21 details the amount of residential land needed to accommodate the identified housing capacity deficit. Table 3-21 includes the 143 replacement dwelling units that add to the deficit and the 34 mixed-use dwelling units in the C-1 zoning district that reduce the overall deficit, as explained above. Based on the housing mix of 68.8 percent single-family and 31.2 percent multi-family within the land classifications at the identified percentages, the deficit of 1,055 dwelling units in the LDR land classification, the deficit of 41 dwelling units in the MDR land classification, and the surplus of 209 dwelling units in the HDR land classification requires an additional 281.3 gross acres to accommodate residential land needs (Table 3-21). The acreage deficit is a portion of the required 685.7 acres identified in Table 3-20.

Based on the above analysis, the existing residential land within the UGB can only supply the needed land for 2,293 dwelling units. As detailed in Table 3-21, the dwelling unit shortage of 1,096 dwelling units need an additional 281.3 gross acres of land. Because land classifications are separate from one another the LDR and MDR lands require an additional 209 dwelling units above the minimum 887 additional dwelling units needed.

Table 3-21. Residential land needed for housing capacity deficit, Sandy UGB, 2014-2034

Zones	Units Needed	Supply Units*	Replacement Units	Unit Surplus (Deficit)	Net Acres	ROW Acres	Gross Acres
LDR (SFR density)	1,666	770	35	(931)	(211.6)	(42.3)	(253.9)
LDR (R-1 density)	522	421	23	(124)	(19.1)	(3.8)	(22.9)
MDR	601	579	19	(41)	(3.7)	(0.7)	(4.5)
HDR	391	632	32	209	13.9	---	13.9
I/C	---	34	34	---	---	---	---
Total	3,180	2,436	143				

Source: City of Sandy

Note: *The supply units include the four dwelling units on vacant lots that were identified by Filter 2.

Based on the housing needs analysis, the following assumptions were made for housing by plan designation and type:

- 68.8 percent of housing will be single-family (including manufactured, condos and townhomes) and 31.2 percent multi-family. This proportion is consistent with the findings in this chapter.
- 52.4 percent of needed dwelling units will locate in the Single Family Residential zoning district within the LDR Plan Designation which allows single-family detached, single-family manufactured outright, and single-family attached or duplexes with an approved minor conditional use permit.
- 16.4 percent of needed dwelling units will locate in the Low Density Residential zoning district within the LDR Plan Designation which allows single-family detached, single-family attached, single-family manufactured (on individual lots and in manufactured home parks), row houses, and duplexes outright.
- 18.9 percent of needed dwelling units will locate in the Medium Density Residential Plan Designation which allows single-family detached, single-family attached, single-

family manufactured (on individual lots and in manufactured home parks), row houses, duplexes, and multi-family outright.

- 12.3 percent of needed dwelling units will locate in the High Density Residential Plan Designation which allows single-family detached (in conjunction with a planned development), single-family attached, manufactured home parks, row houses, duplexes, multi-family, boarding houses, and residential facilities.
- A portion of the land within the Urban Reserve Boundary has the Village designation. The Village designation allows all housing types allowed in the R-1, R-2, and R-3 zones, including single-family detached, single-family attached, row homes, manufactured homes in parks, duplexes, and multi-family dwellings. The percentage of land designated with the Village designation will be determined during the future UGB expansion process.

Summary

The conclusions of the housing needs analysis for Sandy for the 2014 to 2034 planning period include the following:

- 3,180 new dwelling units will be needed for the planning period in a range of housing types including: single-family attached and detached, manufactured homes, duplexes, multi-family, and government assisted housing.
- Housing is needed to accommodate a range of income-levels, especially those types affordable to low-income households.
- The housing mix is 68.8 percent single-family (including manufactured, condos and townhomes) and 31.2 percent multi-family with 63.7 percent owner-occupied and 36.3 percent renter occupied.
- Housing development will result in an average density of 5.52 dwellings per net buildable acre.
- The safe harbor approach allows local government to estimate that the 20-year land needs for rights-of-way, schools, and park land will together require an additional amount of land equal to 25 percent of the net buildable acres for residential zoning designations.
- The existing UGB contains 341.3 net acres of residentially designated land.
- To accommodate projected housing for the planning period 575.7 net acres or 685.7 gross acres of residentially designated land are needed.
- The current Sandy UGB contains a gross acre deficit of 276.8 acres of low density residential land, a deficit of 4.5 acres of medium density residential land, and a surplus of 13.9 acres of high density residential land to accommodate housing and other public land needs for the 2014 to 2034 period.

CHAPTER 4: ECONOMIC OPPORTUNITIES ANALYSIS

This chapter presents an economic opportunity analysis (EOA) for the City of Sandy consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). Chapter 1 included a 20-year forecast of employment for Sandy and this chapter forecasts the demand for employment land. This chapter is intended to provide a summary of technical information that helps determine whether the City has an adequate inventory of employment lands within its urban growth boundary (UGB) to accommodate employment growth over a 20-year planning period. Appendices D and E provide the technical analysis that is summarized in this chapter. The following components are considered in this chapter:

- A review of national, state, and local economic trends to identify the categories of industrial and commercial uses that can reasonably be expected to locate in the planning area,
- A survey of the expansion plans of major employers,
- Identification of site requirements for industrial and commercial uses that might expand or locate in the planning area, and
- An inventory of buildable land available for industrial and other employment uses in the long-term (20 years) and short-term (1 year).

The assessment of community economic development potential must also consider the planning area's economic advantages and disadvantages of attracting new or expanded development. Relevant economic advantages and disadvantages include:

- Location, size and buying power of markets;
- Availability of transportation facilities for access and freight mobility;
- Public facilities and public services;
- Labor market factors;
- Access to suppliers and utilities;
- Necessary support services;
- Limits on development due to federal and state environmental protection laws; and
- Educational and technical training programs.

OAR 660-009-0025 requires plans to address the long-term supply of land (20 years), short-term supply of serviceable sites (1 years), and sites for uses with special siting requirements.

Framework for economic development in Oregon

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to 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; identify the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities with a population over 2,500 are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.
3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025)*. Cities and counties must adopt measures adequate to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementing measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

In summary, this report is an Economic Opportunities Analysis, the first key element required by Goal 9. This EOA also includes an employment forecast that leads to identification of needed development sites, and an inventory of commercial and industrial land in Sandy.

Economic context for growth in Sandy

This section summarizes national, state, regional, county, and local trends affecting economic growth in Sandy. Each heading in this section represents a key trend that will affect Sandy's economy and economic development potential. A more detailed analysis of economic trends is presented in Appendix D.

Population growth and in-migration

Population growth in Oregon tends to follow economic cycles. Historically, Oregon's economy is more cyclical than the nation's, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. This pattern is shown in Table 4-1, which shows changes in population over the 1980-2010 period for the U.S., Oregon, Portland-Vancouver-Hillsboro MSA¹⁴, Clackamas County, and Sandy.

Over the 1980 to 2010 period, the Greater Portland region grew at a faster rate than Oregon at an average annual rate of 1.7 percent, adding 884,467 residents over the 30-year period. Sandy grew by an average of 4.1 percent annually and added 6,665 residents over the 30-year period.

Table 4-1. Population in the U.S., Oregon, Portland-Vancouver-Hillsboro MSA, Clackamas County, and Sandy, 1980-2010

	Population				Change 1980 - 2010		
	1980	1990	2000	2010	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	308,745,538	82,199,733	36%	1.0%
Oregon	2,639,915	2,842,321	3,421,399	3,831,074	1,191,159	45%	1.2%
Portland-Vancouver-Hillsboro MSA	1,341,542	1,523,741	1,927,881	2,226,009	884,467	66%	1.7%
Clackamas County	241,911	278,850	338,391	375,992	134,081	55%	1.5%
Sandy	2,905	4,152	5,385	9,570	6,665	229%	4.1%

Source: U.S. Census

Note: The Greater Portland region (Portland-Vancouver-Hillsboro MSA) includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington

Migration is the largest component of population growth in Oregon. According to information from the Portland State University Population Research Center, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) of more than 595,000 people during the period 1990-2006, which accounted for 70 percent of Oregon's population growth over the period. The share of population growth from in-migration was higher during the 1990's (73 percent of population growth) than for the 2000-2006 period (65 percent of population growth). In-migration accounted for 52 percent of growth in the Oregon portion of the Portland MSA between 2000 and 2006, with nearly 69,657 people moving to the Region during the period. In Clackamas County, in-migration accounted for 71 percent of population growth (20,454 people) during the six-year period. The Oregon Employment Department, as published in May of 2014 summarized the current Oregon migration outlook as follows:

“Following a dramatic decline in gains from migration during the recessionary years of 2007 to 2009, an increasing number of people have moved to Oregon during the past three years. Net migration increased from 14,027 in 2012 to 23,280 (+66%) in 2013. While net in-migration increased, natural increase stayed roughly the same, at about 12,000. This means net migration gains made up about two-thirds of Oregon's 2013

¹⁴ This report refers to the Portland-Vancouver-Hillsboro MSA as either the Greater Portland region or the Portland MSA.

population growth. The combination of natural increase and net in-migration (+35,300) led to the largest increase in population since 2008.

Through 2035, average annual births per 1,000 people are expected to slightly decrease (from 12 to 11), and deaths are projected to slightly increase (from 9 to 10). Thus, at least through 2035, the OEA expects there to be a natural increase in population, but at a slower rate than was normal in the past. Annual net migration gains are expected to hold roughly steady during this time period (at roughly 9 per 1,000 people), and possibly drop as we approach 2035. This means net migration gains will account for most of Oregon's growth in the future.”

Population growth trends and in-migration in the Greater Portland region and Clackamas County are likely to affect Sandy’s population and employment growth over the next 20-years. Sandy’s population has historically grown faster than the Greater Portland region or Clackamas County. Sandy’s population is likely to continue growing at a similar rate or faster than the regional growth rates.

Aging population

The number of people age 65 and older in the U.S. will double by 2050, while the number of people under age 65 will only grow by 12 percent.¹⁵ The economic effects of this demographic change include a slowing of the growth of the labor force, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.

The Oregon Department of Employment expects the retirement of the baby-boomers will result in almost twice as many job openings resulting from retirements compared to openings resulting from creation of new jobs. The sectors with the most employment and the largest share of employees 55 years or older include: Education Services; Real Estate; Transportation and Warehousing; Health Care and Social Assistance; Public Administration; and Agriculture, Forestry, Fishing, and Hunting. The State expects little or no growth in Manufacturing employment over the next decade but expects that retirements will create demand for employees in Manufacturing.¹⁶

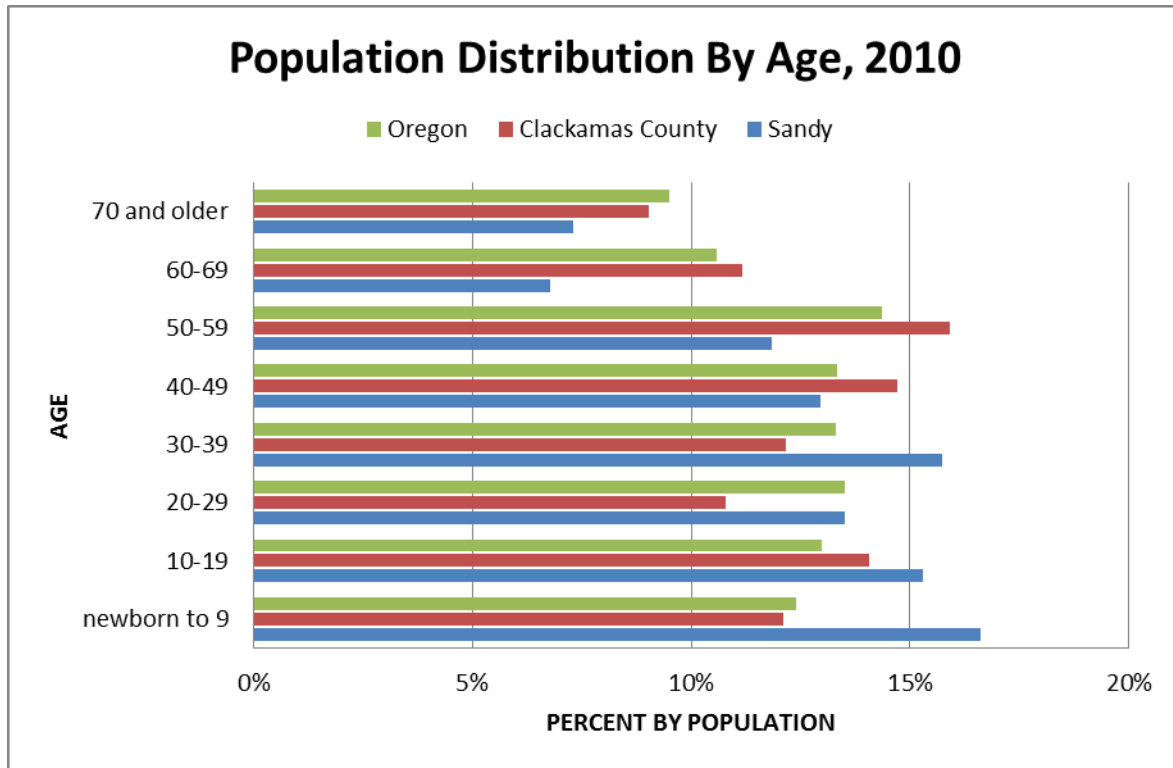
Sandy will be affected by the aging and retirement of the baby-boomers. Figure 4-1 shows the populations of Oregon, Clackamas County, and Sandy by age for 2010. Sandy has a greater proportion of its population less than 40 years old than Oregon and Clackamas County, especially residents under 19 years. Sandy has fewer residents over 40 compared to the County and State averages. The fact that Sandy had a smaller share of residents over 50-years old may mean that Sandy will be impacted by the expected wave of retirements less than other cities in the Greater Portland region. However, population mobility may result in further demographic

¹⁵ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2006, *The 2006 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 1; Congressional Budget Office, 2006, *The Budget and Economic Outlook: Fiscal Years 2007 to 2016*, January; and Congressional Budget Office, 2005, *The Long-Term Budget Outlook*, December.

¹⁶ Oregon Employment Department Workforce Analysis Section, *Will Oregon Have Enough Workers?*, 2007

changes in Sandy over the planning period, making it difficult to predict the impact of retirements on Sandy’s labor force.

Figure 4-1. Population distribution by age, Oregon, Clackamas County, and Sandy, 2010



Source: U.S. Census, 2010

Table 4-2 shows population by age for Sandy for 2000 and 2010. The data shows that Sandy grew by 4,185 people between 2000 and 2010, which is a 78 percent increase. The age breakdown shows that the City experienced an increase in population for every age group. The fastest growing age groups were aged newborn to 9, 20 to 24 years, 25 to 34 years, and 45 years and over.

Table 4-2. Population by age, Sandy, 2000 and 2010

Age Group	2000		2010		Change		
	Population	Percentage	Population	Percentage	Increase	Percent	Share
newborn to 9	894	16.6%	1,589	16.6%	695	78%	0.0%
10-19	941	17.5%	1,463	15.3%	522	55%	-2.2%
20-24	277	5.1%	566	5.9%	289	104%	0.8%
25-34	764	14.2%	1,522	15.9%	758	99%	1.7%
35-44	922	17.1%	1,301	13.6%	379	41%	-3.5%
45-54	710	13.2%	1,236	12.9%	526	74%	-0.3%
55-64	406	7.5%	916	9.6%	510	126%	2.0%
65+	471	8.7%	977	10.2%	506	107%	1.5%
Total	5,385	100.0%	9,570	100.0%	4,185	78%	---

Source: U.S. Census, 2000 and 2010

The data suggests that Clackamas County is attracting people nearing retirement or retirees and families with children. The age distribution in Figure 4-2 suggests that Sandy is attracting families with children, indicating that Sandy's population and age trends are somewhat different from the projections for the county as a whole.

Lower household income and housing costs

Household income has historically been higher in the Greater Portland region compared to the State. The median household income in Sandy in 1999 was approximately \$42,115, which was slightly higher than Oregon's median household income of \$40,916 and the Portland MSA median household income of \$40,146.¹⁷ Sandy's median household income was about 81 percent of Clackamas County's median household income of \$52,080.

Although Sandy's median household income was lower than the County average, housing costs in Sandy have also been below County averages. Table 3-14 shows housing median sales prices in Sandy, Clackamas County, and selected cities for 2000 and 2014. The median sales price in Sandy was \$232,440 in 2014, compared to the Clackamas County median of \$307,025. Housing prices were lower in Sandy than Damascus, Clackamas County, Happy Valley, and Lake Oswego.

Commuting patterns

Commuting plays an important role in Sandy's economy. Figure E-1 shows where residents of Sandy who are employed worked in 2010. Figure E-1 shows that about 87.5 percent of residents of Sandy who are employed leave Sandy and about 12.5 percent of residents of Sandy who are employed work in Sandy. Figure E-2 shows where employees in Sandy came from in 2010. Figure E-2 shows that about 82.4 percent of employees in Sandy live outside of Sandy and

¹⁷ The Portland MSA includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington.

commute to Sandy for work. This analysis also shows that only about 17.6 percent of employees in Sandy live in Sandy.¹⁸

Table 4-3 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Clackamas County, and Sandy. Residents of Sandy generally spent more time commuting to work than residents of Clackamas County or Oregon.

Table 4-3. Commuting time to work in minutes for residents 16 years and older, Oregon, Clackamas County and Sandy, 2012

Commute Time	Sandy	Clackamas County	Oregon
Less than 10 minutes	11.2%	12.7%	17.1%
10 to 14 minutes	8.9%	11.4%	17.0%
15 to 19 minutes	6.9%	12.4%	16.5%
20 to 24 minutes	14.3%	14.6%	14.8%
25 to 29 minutes	6.7%	8.2%	6.1%
30 to 34 minutes	13.9%	16.0%	11.9%
35 to 44 minutes	14.1%	9.3%	5.4%
45 to 59 minutes	13.2%	8.7%	5.7%
60 or more minutes	11.1%	6.7%	5.4%
Mean travel time to work (minutes)	31.4 mins.	26.6 mins.	22.4 mins.

Source: U.S. Census 2008-2012 Estimate

Nearly half of Sandy’s workforce (52.3 percent) commutes for 30 minutes or more, with about 24.4 percent of residents commuting 45 minutes or longer. In comparison, about 15.4 percent of Clackamas County residents and 11.1 percent of Oregon residents commuted 45 minutes or longer.¹⁹

The implication of this data is that most people working in Sandy commute to Sandy. This commuting pattern gives Sandy access to the labor force in the Greater Portland region. The commuting pattern also creates demand for automotive transportation, both within Sandy and roads connecting Sandy to the Greater Portland region.

Shifts in employment

Over the past few decades, employment in the U.S. has shifted from manufacturing and resource-intensive industries to service-oriented sectors of the economy. Increased worker productivity and the international outsourcing of routine tasks have led to declines in employment in the major goods-producing industries.

¹⁸ US Census Bureau, LED Origin-Destination Data Base (2010)

¹⁹ U.S. Census, 2008-2012

In the 1970s Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry²⁰ and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments²¹). As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service industries increased from its 1970s average of 19 percent to 30 percent in 2000, while employment in Manufacturing declined from an average of 18 percent in the 1970s to an average of 12 percent in 2000.²²

Employment in the portion of the Greater Portland region located in Oregon and Clackamas County have followed similar trends as changes in national and state employment. Between 1980 and 2000, employment in the portion of the Greater Portland region located in Oregon grew by 363,837 jobs (75 percent) and employment in Clackamas County grew by 70,954 jobs (114 percent).²³ Services and Retail Trade accounted for more than 60 percent of new jobs over the twenty-year period in both regions. Growth in Services continued between 2001 and 2006, led by Health and Social Assistance, with more than 10,000 jobs in the Greater Portland region over the six-year period.

Manufacturing continues to be an important source of employment in Clackamas County and the Greater Portland region. The Manufacturing industries that have grown the most in both Clackamas County and the Greater Portland region are Rubber & Miscellaneous Plastic Products and Transportation Equipment.

Table 4-4 shows covered employment by sector and industry within the Sandy Urban Growth Boundary (UGB) for 2012. Table 4-4 shows that Sandy had 301 establishments with 3,082 covered workers in 2012. The sectors with the largest level of employment in 2012 were Retail Trade, Accommodations and Food Services, and, Health Care and Social Services. Together these sectors accounted for 1,536 jobs or 50 percent of covered employment in Sandy.

²⁰ SIC 24

²¹ SIC 35, 36, 38

²² Covered Employment database from the Oregon Employment Department

²³ Covered Employment database from the Oregon Employment Department

Table 4-4. Covered employment in Sandy UGB by sector and industry, 2012

Sector/Industry	Establishments	Employees	Payroll	Average Pay/Emp.
Agriculture, Forestry, Fishing and Hunting	N/A	N/A	N/A	N/A
Construction	32	136	\$7,506,974	\$55,198
Manufacturing	17	241	\$9,751,977	\$40,465
Wholesale Trade	12	18	\$838,959	\$46,609
Retail Trade	40	734	\$20,815,032	\$28,358
Transportation, Warehouse and Utilities	9	114	\$3,055,788	\$26,805
Information	N/A	N/A	N/A	N/A
Finance and Insurance	12	77	\$2,852,643	\$37,047
Real Estate and Rental and Leasing	17	30	\$460,477	\$15,349
Professional, Scientific, and Technical Services	20	58	\$2,430,019	\$41,897
Management of Companies and Enterprises	N/A	N/A	N/A	N/A
Administrative and Support and Waste Management and Remediation Services	8	20	\$330,356	\$16,518
Educational Services	8	278	\$9,969,033	\$35,860
Health Care and Social Assistance	25	307	\$10,123,736	\$32,976
Arts, Entertainment, and Recreation	N/A	N/A	N/A	N/A
Accommodation and Food Services	50	495	\$7,449,442	\$15,049
Other Services (except Public Administration)	36	228	\$5,314,307	\$23,308
Public Administration	3	99	\$4,982,294	\$50,326
Others not elsewhere classified	N/A	N/A	N/A	N/A
Total	301	3,082	\$98,259,516	\$31,882

Source: Confidential Quarterly Census of Employment and Workforce (QCEW) data provided by the Oregon Employment Department.

The average pay for covered employees in 2012 was \$31,882, compared with the County average of \$45,278 and the State average of \$45,008. The sectors with the highest average pay per employee were Construction, Public Administration, and Wholesale Trade. The sectors with the lowest average pay per employee were Accommodation and Food Services, Real Estate, and Support Services.

Pay per employee in Sandy in 2012 was about \$13,126 lower than the State average for covered employment, while household income in Sandy was about \$5,400 higher than the State average in 2012. This discrepancy suggests that Sandy has a substantial amount of employment not included in the covered employment summary, such as sole proprietors. This discrepancy also suggests that residents leaving Sandy for employment earn a higher average income than the average worker in Sandy.

The composition of Sandy's economy is different, but related to the composition of the Greater Portland region's economy. A large percentage of covered employment in Sandy is in Service sectors, mostly in Retail Trade and Accommodations and Food Services. Compared to the Greater Portland region, a smaller share of covered employment in Sandy is in Manufacturing.

Since residents of Sandy and workers of firms located in Sandy are willing to commute within the Greater Portland region, as discussed earlier in this chapter, the composition of Sandy’s workforce is not likely to have a large impact on the types of businesses that choose to locate or expand in Sandy. Future shifts in employment in Sandy will be impacted by Sandy’s comparative advantages (discussed later in this chapter), rather than the availability of qualified workers.

Outlook for growth in Sandy

Sandy is growing. Since 1980, Sandy’s population has grown faster than Clackamas County. From 1980 to 2010, Sandy added 6,665 residents or a 229 percent growth rate, compared to Clackamas County adding 134,081 residents or a 55 percent growth rate over the same period. Table 4-5 shows the population forecast and employment forecast for Sandy from 2014 to 2034. Sandy’s population and employment are forecast to grow at 2.8 percent annually over the twenty-year period.

Table 4-5. Forecast population and employment, Sandy UGB, 2014-2034

Year	Population	Employees	Pop/Emp
2014	10,908	5,044	2.16
2024	14,377	6,648	2.16
2034	18,980	8,763	2.17
Change 2014 to 2034			
Number	8,072	3,719	
Percent	74.0%	73.7%	
AAGR	2.8%	2.8%	

Source: City of Sandy

The Oregon Employment Department’s forecast for employment by industry between 2012 and 2022 for Clackamas County predicts a higher rate of growth for Clackamas (16 percent increase in jobs) than the State average (15 percent). The forecast projects the creation of 22,620 new jobs in Clackamas County over the ten-year period. The sectors that are expected to lead employment growth in Clackamas County are Trade, Transportation and Utilities, Professional and Business Services, and Education and Health Services. Together, these sectors are expected to add 11,140 jobs or 49 percent of the employment growth in Clackamas County between 2012 and 2022 (Table D-8).

Factors affecting future economic development

Economic development opportunities in Sandy will be affected by local conditions as well as the national, state, and regional economic conditions that were addressed in the previous section and Appendix D. Factors affecting future economic development in Sandy include its location and proximity to Portland, access to transportation facilities, availability of public facilities, quality and availability of labor, housing cost and availability, and quality of life. Economic conditions in Sandy relative to these conditions in other portions of the Clackamas County and

the Greater Portland region form Sandy's comparative advantage for economic development. Sandy's comparative advantages have implications for the types of firms most likely to locate and expand in Sandy.

There is little that Sandy can do to influence national and regional conditions that affect economic development. Sandy can influence local factors that affect economic development. The review of local factors described in Appendix E forms a basis for developing economic development implementation strategies for Sandy.

This section includes a summary of Sandy's comparative advantages and discusses the implications for the firms most likely to locate in Sandy. Appendix E presents a full review of comparative advantages in Sandy.

Comparative advantage in Sandy

The mix of productive factors present in Sandy, relative to other communities in Oregon, is the foundation of the City's comparative advantage. Sandy's primary comparative advantages include: the City's location along Highway 26; its proximity to Portland's workforce, markets, and amenities; the comparatively low cost of housing; the City's proximity to Mt. Hood and Mt. Hood National Forest; and the beauty of the areas surrounding Sandy. These factors make Sandy attractive to residents and businesses that want a high quality of life where they live and work. Sandy's main disadvantage is the City's distance from an interstate highway, which is likely to discourage businesses that need direct access to an interstate (e.g. distribution centers) from locating in Sandy.

The previous section discusses industries that have shown growth and business activity in Sandy over the past few years. These industries are indicative of businesses that might locate or expand in Sandy. The characteristics of Sandy will affect the types of businesses most likely to locate in Sandy for the following reasons:

- Sandy's access to the markets and workforce of the Greater Portland region, natural beauty, comparatively inexpensive housing, and access to a comparatively rural lifestyle may make Sandy attractive to **professional service businesses** that need access to educated workers and want a high quality of life. These types of businesses could include corporate headquarters, software design, engineering, research, and other professional services.
- Sandy's proximity to Portland, comparatively rural setting, the beauty of the surrounding area, and the aging population in the Greater Portland region may make Sandy an appealing location for **retirement facilities**, such as active retirement communities, assisted living facilities, or traditional nursing homes.
- Sandy's location along Highway 26 and proximity to Mt. Hood and the Mt. Hood National Forest make Sandy attractive to firms that provide **services** to tourists, such as hotels and motels, restaurants, specialty retail, and other services for tourists. These industries are likely to grow if tourism increases.

- Sandy’s access to the markets and workforce of the Greater Portland region, location along Highway 26, and high quality of life may make Sandy attractive to **small scale manufacturing firms** (e.g., firms with less than 50 employees). Examples include high-tech electronics, recreational equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing. Sandy is less attractive for medium and large firms because the City is comparatively far from an interstate highway and does not have rail transport.

Cities exist in an economic hierarchy in which larger cities offer a wider range of goods and services than smaller cities. The location of a community relative to larger cities, as well as its absolute size, affects the mix of goods and services that can be supported by a small city. Sandy’s small size compared to Portland or Gresham has implications for the types of retail and service firms most likely to locate in Sandy:

- Population growth and tourism will drive development of small and specialty retail and other services for tourists in Sandy.
- Sandy will continue to be the location for regional institutions such as City of Sandy government offices, the Oregon Trail School District, and most likely the U.S. Forest Service for Mt. Hood National Forest.

Demand for commercial and industrial land in Sandy

To provide for an adequate supply of commercial and industrial sites consistent with plan policies, an estimate of the amount of commercial and industrial land that will be needed over the 20-year planning period is required. Chapter 2 presented a forecast of total employment growth in Sandy for the 2014 to 2034 period. The forecast was developed according to the safe harbor presented in OAR 660-024-0040(9)(a)(B) which allows the City to determine employment land needs based on, *“The population growth rate for the urban area in the adopted 20-year coordinated population forecast...”* Based on this safe harbor, employment in Sandy is assumed to grow at 2.8 percent annually. Table 4-6 shows the employment forecast developed in Chapter 2. Between 2014 and 2034, Sandy is projected to add 3,719 jobs, the majority in Retail and Services.

Table 4-6. Employment growth by land use type, Sandy UGB, 2014-2034

Land Use Type	2014	2034	% of Total	Growth
Retail/Service	3,106	5,895	75%	2,789
Industrial	742	1,300	15%	558
Government	547	919	10%	372
Total Employment	5,044	8,763	100%	3,719

Source: City of Sandy

Note: The 75 percent, 15 percent, and 10 percent employment assumptions were made by the City of Sandy and ECONorthwest from the 2009 Urbanization Report

Potential growth industries

The discussion of potential growth industries in Sandy should address two questions: (1) Which industries are Sandy most likely to attract, and (2) Which industries best meet Sandy's economic objectives? Desirable types of industries that Sandy wants to attract have high-wage, stable jobs with benefits and non-polluting industries. The following industries meet these criteria:

Retail and Service. The State's forecast for nonfarm employment growth for 2004 to 2014 (Table D-8) projects that more than two-thirds of employment growth in Region 15, Clackamas County, will be in Retail and Services. Sandy may attract the following industries:

- Population growth in Sandy will drive demand for some types of retail, and services such as personal financial, professional, and medical services. Population growth will also drive growth in local government, specifically in education.
- Growth in tourism from visitors to Mt. Hood and the Mt. Hood National Forest will drive demand for services for tourists, such as specialty retail, lodging, and a variety of restaurants.
- Sandy may be attractive for firms engaged in professional, scientific and technical services, such as corporate headquarters, software design, engineering, research, and other professional services.
- Sandy may attract services for retirees, such as active retirement communities, assisted living facilities, or traditional nursing homes.

Industrial. The State's forecast for nonfarm employment growth for 2004 to 2014 (Table D-8) projects that growth in industrial sectors will account for the almost one-quarter of employment growth in Region 15, Clackamas County. Sandy has comparative advantages, such as location near natural resources and proximity to Portland that may contribute to the growth in employment in the following industries:

- Sandy should be attractive for firms engaged in a range of specialty manufacturing, including recreational equipment, high-tech electronics and equipment, industrial equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing.

Government. The State's forecast for nonfarm employment growth for 2004 to 2014 (Table D-8) projects that growth in government will account for the smallest amount of employment growth in Region 15, Clackamas County. Sandy may see employment growth in government for the following reasons:

- Sandy will continue to be the location for regional institutions such as the City of Sandy government offices, the Oregon Trail School District, and most likely the U.S. Forest Service for Mt. Hood National Forest.

Site needs

This section identifies the site requirements of firms that are likely to locate in Sandy. In general, all firms need sites that are relatively flat, free of natural or regulatory constraints, have good transportation access, and adequate public services. The exact amount, quality, and relative importance of these factors vary among different types of firms.

The next set of assumptions needed to estimate non-residential land need is employees per acre. This variable is defined as the number of employees per acre on non-residential land that is developed to accommodate employment growth. There are few empirical studies regarding the number of employees per acre, and these studies report a wide range of results. Ultimately the employees per acre assumptions reflect a judgment about average densities and typically reflect a desire for increased density of development. The employees per acre assumptions used in this analysis are based on guidelines in the Industrial and Other Employment Lands Analysis Guidebook from the Department of Land Conservation and Development and as contained within the 2009 Urbanization Study. The assumption used for the employees per acre is as follows:

Retail and Service: 16 employees per acre

Industrial: 12 employees per acre

Government: 16 employees per acre

Table 4-7 summarizes the lot sizes typically needed for firms in selected industries. The emphasis in Table 4-7 is on new large firms that have the most potential to generate employment growth. For example, while the number of convenience stores in the region is likely to grow, the site needs for these stores was not included in Table 4-7 because they are unlikely to generate substantial employment growth. Large food stores, which are typically 50,000 to 100,000 sq. ft. in size, are more likely to generate substantial employment growth in the region, and these stores require sites of 5 to 10 acres.

Table 4-7. Typical lot size requirements for firms in selected industries

Industry	Lot Size (Acres)
Manufacturing	
Printing & Publishing	5 - 10
Stone, Clay and Glass	10 - 20
Fabricated Metals	10 - 20
Industry Machinery	10 - 20
Electronics - Fab Plants	50 - 100
Electronics - Other	10 - 30
Transportation Equipment	10 - 30
Transportation & Wholesale Trade	
Trucking and Warehousing	varies
Retail Trade	
General Merchandise and Food Stores	5 - 10
Eating and Drinking Places	0.5 - 5
Fire & Services	
Non-Depository Institutions	1 - 5
Business Services	1 - 5
Health Services	1 - 10
Engineering & Management	1 - 5

Source: 2009 Urbanization Study

More specific site needs and locational factors for firms in potential growth industries include a range of issues. Table 4-8 summarizes these issues and how they pertain to development in Sandy.

Table 4-8. Summary of site characteristics

Characteristic	Description	Comments
Flat sites	Flat topography (slopes with grades below 10%) is needed by almost all firms in every industry except for small Office and Commercial firms that could be accommodated in small structures built on sloped sites. Flat sites are particularly important for Industrial firms in manufacturing, trucking, and warehousing, since these firms strongly prefer to locate all of their production activity on one level with loading dock access for heavy trucks.	Most of Sandy's industrial and commercial sites are located in relatively flat areas.
Parcel configuration and parking	Large Industrial and Commercial firms that require on-site parking or truck access are attracted to sites that offer adequate flexibility in site circulation and building layout. Parking ratios of 0.5 to 2 spaces per 1,000 square feet for Industrial and 2 to 3 spaces per 1,000 square feet for Commercial are typical ratios for these firms. In general rectangular sites are preferred, with a parcel width of at least 200 feet and length that is at least two times the width for build-to-suit sites. Parcel width of at least 400 feet is desired for flexible industrial/business park developments and the largest Commercial users.	Availability of larger parcels should not be a long-term issue for Sandy. Parking does not appear to be a problem.
Soil type	Soil stability and ground vibration characteristics are fairly important considerations for some highly specialized manufacturing processes, such as microchip fabrications. Otherwise soil types are not very important for Commercial, Office, or Industrial firms—provided that drainage is not a major issue.	Soils are generally suitable for development.
Road transportation	All firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers. Access to an adequate highway and arterial roadway network is needed for all industries. Close proximity to a highway or arterial roadway is critical for firms that generate a large volume of truck or auto trips or firms that rely on visibility from passing traffic to help generate business. This need for proximity explains much of the highway strip development prevalent in urban areas today.	Sandy is located at the intersection of Highways 211 and 26, less than 15 miles from Interstate 84, and about 17 miles from I-205. Congestion on Highway 26 and overall transportation connectivity within the County is an issue that may slow future growth.
Rail transportation	Rail access can be very important to certain types of heavy industries. The region has good rail access to many industrial sites.	Residents and businesses in Sandy can access rail transportation at the Port of Portland, which provides access to container and bulk commodities shipping via ship, rail access, and numerous warehouses.

Air transportation	Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services.	Sandy is located about 25 miles away from the Portland International Airport. The airport provides passenger and freight service.
Transit	Transit access is most important for businesses in Health Services, which has a high density of jobs and consumer activity, and serves segments of the population without access to an automobile.	Transit in Sandy includes the Sandy Area Metro (SAM) transit service, the SAM, which makes stops within Sandy and continues as an express service to the Gresham Transit Center (about 10 miles from Sandy). There, passengers can transfer to Portland busses and the light rail line connecting Gresham to downtown Portland.
Labor force	Firms are looking at reducing their workforce risk, that is, employers want to be assured of an adequate labor pool with the skills and qualities most attractive to that industry. Communities can address this concern with adequate education and training of its populace. Firms also review turnover rates, productivity levels, types and amount of skilled workers for their industry in the area, management recruitment, and other labor force issues in a potential site area.	Businesses in Sandy have access to the labor force in parts of Multnomah County and Clackamas County, including eastern parts of the Portland UGB. Employers needing highly skilled employees may recruit from the Greater Portland region.
Pedestrian and bicycle facilities	The ability for workers to access amenities and support services such as retail, banking, and recreation areas by foot or bike is increasingly important to employers, particularly those with high-wage professional jobs. The need for safe and efficient bicycle and pedestrian networks will prove their importance over time as support services and neighborhoods are developed adjacent to employment centers.	The City of Sandy strives to provide a street grid system that provides easy pedestrian and bicycle access to most areas of town. In addition, the City encourages bike lanes and multi-use paths for bicycles.
Amenities	According to the International Economic Development Council ²⁴ , attracting and retaining skilled workers requires that firms seek out places offering a high quality of life that is vibrant and exciting for a wide range of people and lifestyles.	Sandy has easy access to Highways 26 and 211, which provide easy automotive access between Sandy and surrounding areas. Residents of Sandy have easy access to urban and rural amenities and recreation opportunities in nearby Mt. Hood National Forest and Portland.

²⁴ International Economic Development Council. "Economic Development Reference Guide," <http://www.iedconline.org/hotlinks/SiteSel.html>. 10/25/02.

Fiber optics and telephone	Most if not all industries expect access to multiple phone lines, a full range of telecommunication services, and high-speed internet communications.	Sandy has access to high-speed telecommunication facilities.
Potable water	Potable water needs range from domestic levels to 1,000,000 gallons or more per day for some manufacturing firms. However, emerging technologies are allowing manufacturers to rely on recycled water with limited on-site water storage and filter treatment. The demand for water for fire suppression also varies widely.	The City has sufficient water sources to meet demand until at least the year 2050.
Power requirements	Electricity power requirements range from redundant (uninterrupted, multi-sourced supply) 115 kva to 230 kva. Average daily power demand (as measured in kilowatt hours) generally ranges from approximately 5,000 kwh for small business service operations to 30,000 kwh for very large manufacturing operations. The highest power requirements are associated with manufacturing firms, particularly fabricated metal and electronics. For comparison, the typical household requires 2,500 kwh per day.	Sandy has access to a sufficient power supply to accommodate most commercial and industrial users.
Land use buffers	Industrial areas have operational characteristics that do not blend as well with residential land uses as they do with Office and Commercial areas. Generally, as the function of industrial use intensifies (e.g., heavy manufacturing) so too does the importance of buffering to mitigate impacts of noise, odors, traffic, and 24-hour 7-day week operations. Adequate buffers may consist of vegetation, landscaped swales, roadways, and public use parks/recreation areas. Depending upon the industrial use and site topography, site buffers range from approximately 50 to 100 feet. Selected commercial office, retail, lodging and mixed-use (e.g., apartments or office over retail) activities are becoming acceptable adjacent uses to light industrial areas.	The Sandy Development Code contains moderate requirements to provide buffers and screening between uses.

Source: ECONorthwest, City of Sandy

In summary, there is a wide range of site requirements for firms in industries with potential for growth in Sandy. While firms in all industries rely on efficient transportation access and basic water, sewer and power infrastructure, they have varying need for parcel size, slope, configuration, and buffer treatments. Transit, pedestrian and bicycle access are needed for commuting, recreation and access to support amenities.

Table 4-9 shows site needs by site size and major employment use. The estimate of needed sites builds off of the 20-year employment forecast. Employees and employers are distributed in ratios similar to those in the 2009 Urbanization Study. The distribution assumes that Sandy will continue to attract similar types of employers in the future as exist in the City today. It also assumes that the average number of employees per firm (9.9) will continue into the future.

Table 4-9 estimates that Sandy will need up to 244.1 gross acres and between 99 to 178 sites. The majority of the sites will be 5 acres or smaller.

Table 4-9. Comparison of vacant and needed sites for employment, Sandy UGB, 2014-2034

Size of Firm	Est. Gross Acres Needed	Average Site Size	Total Sites Needed	Vacant Sites in Inventory	Redevelopment Sites	Total Sites in Inventory	Surplus (Deficit)
100+	40	20-50 ac	1	1	1	2	1
50-99	60	5-20 ac	6-9	7	2	9	0-3
25-49	45	2-5 ac	13-20	3	8	11	(2-9)
10-24	45	1-2 ac	23-40	10	3	13	(10-27)
1-9	54.1	< 1 ac	56-108	30	45	75	19 to (33)
Total	244.1	---	99-178	51	59	110	11 to (68)

Source: City of Sandy

The identified site needs shown in Table 4-9 do not distinguish sites by comprehensive plan designation. It is reasonable to assume that industrial uses will primarily locate in industrial zones with a small fraction locating in commercial zones. Retail and service uses and government uses could locate in commercial zones, mixed-use zones, and in some instances industrial zones. *Note: The site needs shown in Table 4-9 are based on local demand for sites and do not include sites for industries of statewide significance. The results show Sandy has a surplus of sites over 5 acres and a deficit of sites less than five acres.*

Employment land demand

Supply for needed employment land is based on comparing the existing land supply to the land demand for the planning period. The following sections step through that logic and describe the deficiency of employment land in the Sandy UGB.

Existing employment land

The Sandy UGB currently has a land capacity of 246.1 net acres in commercial and industrial plan designations. The Commercial (C) designation is comprised of the General Commercial (C-2) and Central Business District (C-1), while the Village C designation is only comprised of Village Commercial (C-3). The Industrial (I) designation is comprised of all three industrial designations (I-1, I-2, and I-3). The commercial designations contain a total of 154.3 net acres and the industrial designation contains 91.8 net acres (Table 4-10).

Table 4-10. Net acres by Comprehensive Plan designation and by buildable lands classification, Sandy UGB, March 2014

Zone	Vacant Acres	Significant Redevelopment Acres	Moderate Redevelopment Acres	Strike Price Acres	Total Net Acres
C	109.3	20.2	3.7	13.7	146.9
I	52.4	35.4	4.0	---	91.8
Village C	4.9	1.4	0.4	0.7	7.4
Total	166.6	57.0	8.1	14.4	246.1

Source: City of Sandy

Code amendments in December 2013 modified permitted and conditional use sections in the C-2 and I-1 zoning districts to make the two districts the same as each other in regards to use. Since the calculations in Table 4-10 above did not take this code amendment into account an adjustment was necessary to more accurately reflect the total net commercial and industrial acreage. Table 4-11 contains the adjusted net acres for Commercial and Industrial Plan Designations. The adjustment breakdown for the I-1 land matches the 75 percent, 15 percent, and 10 percent employment assumptions that were used throughout this study. The adjustment breakdown for the C-2 land is predominately retail, service, and government as the historic trend in Sandy within the commercial zone has not included much industrial development.

Adjustment Calculations:

- 11.8 acres (total I-1 land): 8.8 acres (75 percent for retail and service), 1.8 acres (15 percent for industrial), and 1.2 (10 percent for government) = 10.0 acres removed from the Industrial designation and added to the Commercial designation
- 146.9 acres (total C-2 land): 132.2 acres (90 percent for retail and service & government) and 14.7 acres (10 percent for industrial) = 14.7 acres removed from the Commercial designation and added to the Industrial designation

Table 4-11. Adjustment to net acres by Comprehensive Plan designation and by buildable lands classification, Sandy UGB, March 2014

Zone	Vacant Acres	Significant Redevelopment Acres	Moderate Redevelopment Acres	Strike Price Acres	I-1 Adjustment	C-2 Adjustment	Total Acres
C	109.3	20.2	3.7	13.7	10.0	-14.7	142.2
I	52.4	35.4	4.0	---	-10.0	14.7	96.5
Village C	4.9	1.4	0.4	0.7	---	---	7.4
Total	166.6	57.0	8.1	14.4	---	---	246.1

Source: City of Sandy

The modified numbers in Table 4-11 indicate there are 149.6 net acres of commercial land and 96.5 acres of industrial land for the 2014 to 2034 period. As explained in Table 4-5 above, the employment forecast developed in Chapter 2 projects that Sandy will add about 3,719 jobs in the planning period, the majority of which will be in Retail and Service.

Table 4-12 presents needed net acres and supply net acres for the planning period. The analysis projects a net acre deficit of commercial lands and a net acre surplus of industrial lands, including right-of-way needs.

Table 4-12. Employment land need vs. supply, Sandy UGB, 2014-2034

Land Use Type	Employment Growth	Employees per acre	Need Acres	Supply Acres	Employee Lands Surplus (Deficit)	ROW Acres	Total Need
Retail/Service	2,789	16	174.3	132.0	(42.3)	(3.4)	(45.7)
Industrial	558	12	46.5	91.5	45.0	---	45.0
Government	372	16	23.3	17.6	(5.7)	(0.4)	(6.1)
Total	3,719	---	244.1	241.1			

Source: City of Sandy

Summary

The conclusions of the economic opportunities analysis for Sandy for the 2014 to 2034 planning period include the following:

- 3,719 employees are projected to be accommodated during the planning period.
- A sector mix of 75 percent retail/service, 15 percent industrial, and 10 percent government will continue for the planning period.
- An employee per net acre rate of 16 employees for retail/service, 12 employees for industrial and 16 employees for government is assumed.
- The estimate for the 20-year land needs for rights-of-way will require an additional amount of land equal to 10 percent of the net buildable acres. There is no safe harbor available to estimate the 20-year land needs for rights-of-way for commercial and industrial zoning designations, but it was assumed that school and park land should not be included. Analysis of the industrial/commercial area at Champion Way and Industrial Way revealed that right-of-way consumes approximately 10 percent of the overall area.
- The current UGB contains a deficit of 51.8 acres of commercial land and a surplus of 45.0 acres of industrial land for the planning period (Table 4-13).

Table 4-13. Commercial and Industrial need vs. supply, Sandy UGB, 2014-2034

Land Use Type	Need Acres	Supply Acres	ROW Acres	Land Need Surplus (Deficit)
Commercial	197.6	149.6	3.8	(51.8)
Industrial	46.5	91.5	0.0	45.0

Source: City of Sandy

APPENDIX A: CLACKAMAS COUNTY RURAL CITIES POPULATION COORDINATION

NOTE ON WHAT IS CONTAINED IN APPENDIX A: The first 37 pages of the Clackamas County Rural Cities Population Coordination study are contained within this Urbanization Study. Appendices A through F from the Clackamas County Rural Cities Population Coordination are not contained in this study. To find those appendices refer to the population coordination document as published by Clackamas County.

NOTE ON PAGE NUMBERING FOR APPENDIX A: The page numbering for Appendix A has two sets of page numbers. Each page has a number that corresponds to page numbering that matches the remainder of this Urbanization Study (example: A-10) and each page also has a number that corresponds to the page numbering as found in the Clackamas County document (example: -10-). The Clackamas County page number is located at the center of the page, while the Urbanization Study page number is located at the outside edge of the page.



**Clackamas County
Rural Cities Population Coordination
Background Report and Forecasts**

Final: March 12, 2013

Prepared by: Clackamas County Planning & Zoning Division, in coordination with the cities of Barlow, Canby, Estacada, Molalla and Sandy and with contributions from the Metro data resource center.

This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views of policies of the State of Oregon.

EXECUTIVE SUMMARY

State law requires that forecasts be managed by a “coordinating body” that establishes and maintains a 20-year population forecast for the entire area within its boundary (ORS 195.036). Metro is the coordinating body for the urban areas of Clackamas County, Washington County, and Multnomah County within the Metro boundary. Clackamas County is the coordinating body for the rural area of the County (the area outside the Metro boundary), including the five rural-area cities. To date, the County has not coordinated forecasts for its rural cities.

Clackamas County has five rural cities: Barlow, Canby, Estacada, Molalla and Sandy. Combined, these cities comprise less than 10% of the county’s total population. Several of these cities have been growing very rapidly, however. Between 2000 and 2010, the cities of Canby, Molalla and Sandy captured 25% of the County’s total population growth.

- Canby increased by 3,039 people (8% of County growth).
- Molalla increased by 2,374 people (6% of County growth).
- Sandy increased by 4,065 people (11% of County growth).

Barlow and Estacada posted slower growth over the last decade:

- Barlow has and will continue to have very limited growth due primarily to the fact that there is not sewer service available in the city and the city is largely built-out.
- Estacada posted slow growth over the last decade but recent permit activity and interest by developers indicated this city should experience stronger growth in the future.

As a result of recent trends, Canby, Estacada, Molalla and Sandy have been working hard to position themselves to attract more economic and population growth moving into the future by undertaking such activities as creating urban renewal districts, downtown redevelopment plans and economic marketing strategies, and preparing industrial land to be “shovel-ready” for development. These cities also continue to provide a more affordable housing alternative than in the urban cities (inside the Metro UGB).

Strong growth is expected to continue in these cities (with the exception of Barlow, for reasons noted in the report and in Appendix A). The table below summarizes the 20-year coordinated population projections that have resulted from the collaborative efforts of the county, Metro and the five rural cities. Each of the rural cities was provided several opportunities to review and provide feedback on these forecasts and this report in general.

These projections were completed to be consistent with OAR 660-024-0030 and meet the statutory requirements of ORS 195.025 and ORS 195.036 and will be presented to the Board of County of Commissioners for adoption into Clackamas County’s Comprehensive Plan in March 2013.

City	2012 population	2032 population	Net growth 2012-2032	Avg. Annual Growth Rate (AAGR) 2012-2032
Barlow	136	146	10	0.4%
Canby	16,820	26,730	9,910	2.3%
Estacada	2,845	4,345	1,500	2.1%
Molalla	8,532	12,760	4,228	2.0%
Sandy	10,322	17,960	7,628	2.8%

Source: US Census, Metro, Clackamas County

INTRODUCTION

In January 2012, Clackamas County’s Planning Division received a grant to complete a coordinated population forecast for its rural cities, per ORS 195.036.¹ The goal of the Rural Cities Population Coordination project is to establish coordinated population forecasts for rural unincorporated Clackamas County and its five rural cities: Barlow, Canby, Estacada, Molalla and Sandy. These forecasts will be appropriate for and useful to each city as they continue to plan for urban development within their jurisdictions.

This report summarizes the project; reviews the historic demographic trends and current conditions in Clackamas County and its rural cities; and presents the 20-year forecast for each of the rural cities that are proposed for adoption by the county in March 2013.

Evaluating past demographic trends provides clues about what the forecast will look like and helps determine the realm of likely possibilities. Past trends explain the dynamics of population growth particular to local areas. Relating recent and historical population change to events that influenced the change serves as a gauge for what might realistically occur in a given area over the long term.

The forecasts in this report draw on household and employment forecasts developed by the Metropolitan Service District, Metro, but focuses on the unincorporated areas and jurisdictions beyond the Metro boundary, the rural area of Clackamas County. It utilizes the “control total” forecasts developed by Metro as well as allocations to the rural areas of the county and attempts to show how the final forecasts resulting from this process are reasonable in light of historic growth trends in the cities and commensurate with analyses completed by individual cities.

This report is organized into the following sections:

Background Report	Section I:	Background and Context (Clackamas County setting; data sources and methodology; population growth assumptions)
	Section II:	Demographic Trends (General overview of State and Clackamas County; characteristics of the rural area cities including historic population growth, current conditions, building permits, etc.)
Forecast	Section III:	Methodology and Factors Affecting Population Growth (regional and local)
	Section IV:	Forecasts (State and Metro forecasts; countywide; inside & outside Metro boundary; draft cities’ forecasts)
Appendices	Appendix A:	Information considered in assessment of city forecasts
	Appendix B:	Documentation of coordination with rural cities
	Appendix C:	Summary of Metro forecasting methodology
	Appendix D:	Maps of TAZ groups and city boundaries
	Appendix E:	Supporting data and additional demographic tables
	Appendix F:	Excerpts from Statewide Economic & Demographic Reports

¹ The urban cities in Clackamas County are part of Metro (the Metropolitan Service District), which is responsible for coordinating population forecasts within its boundary.

BACKGROUND REPORT

SECTION I: BACKGROUND AND CONTEXT

Background of Population Forecasts

Local governments in Oregon have developed and adopted population forecasts for planning purposes since the inception of the statewide planning program in the late 1970's. The forecasts are used to determine the size of Urban Growth Boundaries (UGBs), guide capital improvement planning, and meet other planning requirements. For example, State laws require cities with populations greater than 25,000 to plan for sufficient buildable lands inside their urban growth boundaries for housing needed to accommodate population growth (ORS 197.295 – 197.296) and for industrial and commercial development to support economic growth (ORS 197.712).

To achieve consistency through the forecasting process and results, the Oregon legislature designated the state Office of Economic Analysis (OEA), a division of the Department of Administrative Services, as the primary forecasting agency for the state. The OEA prepares population and employment forecasts for the state and each county. The most recently adopted OEA forecast was completed in 2004 but a draft of the current (2012) forecast was released for review in late 2012.

State law requires that forecasts be managed by a “coordinating body” that establishes and maintains a 20-year population forecast for the entire area within its boundary (ORS 195.036). Metro is the coordinating body for the urban areas of Clackamas County, Washington County, and Multnomah County within the Metro boundary. Clackamas County is the coordinating body for the rural area of the County (the area outside the Metro boundary), including the five rural-area cities. To date, the County has not coordinated forecasts for its rural cities. Because Metro is currently coordinating regional households forecasts that include planning areas beyond the Metro boundary in its model, Clackamas County has the opportunity to use forecasts developed by this agency as a basis for its rural cities’ population coordination.

Data Sources

Information in this population report is based on data obtained from a number of sources, including:

- **Metro**

As the metropolitan region’s planning agency, Metro (<http://www.oregonmetro.gov/>) provides the technical analysis to produce population and employment forecasts for the Portland-Vancouver metropolitan region, including Multnomah County, Washington County, Clackamas County in Oregon and Clark County in Washington. The agency manages “an integrated land use and transportation model” called Metroscope. These data also are integral to a regional economic/population model and the “travel demand model.”

Metroscope comprises the databases to forecast changes in population, household and employment, and these forecasts “result in an equilibrium growth allocation which balances residential or employment capacity against regional population or employment growth trends.”

Data from the Metroscope and many of the assumptions going into Metroscope were provided to the local jurisdictions (cities and counties) for review prior to the completion of the 2025 and 2035 forecasts.

- **Oregon Office of Economic Analysis (OEA)**

OEA (<http://www.oea.das.state.or.us/DAS/OEA/demographic.shtml>) provides long-term population forecasts and historic population trends on a county-wide level. These data were used to compare with Metro forecasts.

- **Rural cities**

The cities in Clackamas County’s rural area provided data from past population studies and projections (completed by individual cities), with estimates of buildable lands and capacity for various land uses. The cities were also asked to provide information about current conditions and any known future conditions or changes that could positively or negatively affect population growth into the future (see Appendix A).

- **Portland State University, Population Research Center (PRC)**

Annual population estimates for cities and counties of Oregon are prepared by the Population Research Center at Portland State University (<http://pdx.edu/prc/>) as part of its Population Estimates Program. Data on State income tax returns, births, deaths, Medicare, school enrollment, and city annexations, and information about changes in housing stock and group quarters population are utilized in developing the population estimates. Population estimates for Clackamas County, its cities and its unincorporated area from 2000 to 2011 are used in this study to help to understand growth trends throughout the county.

- **US Census**

The decennial census (<http://www.census.gov/>) is the only source of data collected for small areas across the nation. The 2000 Census and 2010 Census data were used to obtain the population by age and sex, of those residing in the County’s cities and unincorporated areas. Historic data from past decennial census was used to look at longer term growth trends.

Clackamas County Setting

Clackamas County, Oregon is located within the northwest tier of the state and is the third-most populated population county in the state with 375,922 residents after Multnomah County (735,334 residents) and Washington County (529,710 residents).² The County land area is approximately 1,880 square miles, about half of which is in National forest lands located in the eastern and southern reaches of the county.

Regional land use and transportation planning for the urban areas of these three counties is overseen and managed by the Metropolitan Service District, Metro. The Metro Board and elected officials of participating jurisdictions set policy direction for long range planning, coordinate population forecasts for the region, and agree on a range of services for the urban area. Metro also maintains the “Metro Boundary” and the metro area’s Urban Growth Boundary (UGB) which delineate the lands for urban development from rural areas.

Clackamas County’s densely populated urban area is focused in the northwest quadrant of the county; the urban area, with about 72% of the county’s population, has nine cities, portions of three cities shared with other counties, and a sizeable population in unincorporated communities. The rural area supports five cities, unincorporated resort communities near Mt. Hood, and a rural population involved in farming and forestry.

² 2010 US Census

Table 1 lists the populations of the cities and unincorporated areas in Clackamas County by location either inside the Metro UGB (urban area) or outside the Metro UGB (rural area). As noted earlier, the area outside the Metro UGB (rural area) will be the focus of this report.

Table 1. 2010 Population for Clackamas County Cities and Unincorporated Areas

	2010 Population*	Percent of Total Population
RURAL AREA		
Barlow	135	0.04%
Canby	15,830	4.20%
Estacada	2,730	0.72%
Molalla	8,110	2.15%
Sandy	9,655	2.56%
Total Rural Cities	36,460	9.68%
Rural Unincorporated Area**	68,345	18.14%
Total Rural Area Population	104,805	27.82%
URBAN AREA		
Damascus	10,540	2.80%
Gladstone	11,495	3.05%
Happy Valley	14,100	3.74%
Johnson City	565	0.15%
Lake Oswego	34,067	9.04%
Milwaukie	20,290	5.39%
Oregon City	31,995	8.49%
West Linn	25,150	6.67%
Wilsonville	17,385	4.61%
Rivergrove***	258	0.07%
Portland***	744	0.20%
Tualatin***	2,869	0.76%
Total Urban Cities	169,458	44.98%
Urban Unincorporated Area**	102,517	27.21%
Total Urban Area Population	271,975	72.18%
Total County Population	376,780	

* July 1, 2010 revised Estimates, prepared by Population Research Center, PSU, March 2012. Numbers may differ slightly from 2010 Census numbers due to methodology and estimate dates (US Census reports April 1, 2010).

** Estimated population of unincorporated areas based on Census data (CCD and Census Tract) and from Metro's allocation of households to Transportation Analysis Zones (TAZ).

*** Includes only the portions of these cities that are within Clackamas County.

SECTION II: HISTORIC DEMOGRAPHIC TRENDS

Historic Population Growth

Table 2 (next page) shows the population of the State of Oregon, Clackamas County and the county's rural cities for the decades from 1960 to 2010. During this 50-year period, the nation's population increased by 72%, the State of Oregon's population increased by 117% and Clackamas County's population by 233%.

Population changes by decade largely reflect the expansion and contraction of the US economy during those fifty years. Oregon's population increase in the 1960's and 1970's outpaced that of the nation growing by 18% and 26% respectively, compared to 13% and 11% for the nation. Clackamas County itself experienced significant increases, posting a 47% increase in the 1960's and 46% increase in the 1970's.

The recession of the 1980's slowed Oregon's growth to 8%, lagging behind the 10% growth in the United States; although Clackamas County's growth managed a higher rate of 15%. During the 1990's, the population of Oregon and Clackamas County increased at higher rates (20% and 21% respectively) than the nation's. From 2000 to 2010, the rates of population increase for Oregon and Clackamas County (12% and 11% respectively) were again higher than the rate for the nation, but this decade's growth was significantly less than that experienced during the boom years of the 1990's.

A recent report from the state Office of Economic Analysis³ provides a perspective of how the economy affects the state's population, in particular how changes in the economy affect migration. The protracted recession starting in about 2007 has greatly decreased the share that migration plays in population change:

Oregon's economic condition heavily influences the state's population growth. Its economy determines the ability to retain local work force as well as attract job seekers from national and international labor market. As Oregon's total fertility rate remains below the replacement level and deaths continue to rise due to ageing population, long-term growth comes mainly from net in-migration. Working-age adults come to Oregon as long as we have favorable economic and employment environments. During the 1980s, which included a major recession and a net loss of population, net migration contributed to 22 percent of the population change. On the other extreme, net migration accounted for 73 percent of the population change during the booming economy of 1990s. This share of migration to population change declined to 56 percent in 2002 and it was further down to 32 percent in 2010. (p. 9)

³ Oregon Economic and Revenue Forecast" June 2012. Volume XXXII, No. 1. Release Date: May 22, 2012 (See Appendix F)

Table 2. Population Change by Decade, 1960 to 2010. State of Oregon, Clackamas County and Rural Cities

	1960	1970	1980	1990	2000	2010										
		10-yr change	1980	10-yr change	10-yr change	10-yr change										
		% Change	1980	10-yr change	10-yr change	10-yr change										
		% Change	1980	10-yr change	10-yr change	% Change										
OREGON	1,768,687	2,091,533	322,846	18%	2,633,105	541,572	26%	2,842,337	209,232	8%	3,421,437	579,100	20%	3,831,074	409,637	12%
		Avg Annual Rate:		1.69%			2.33%			0.77%			1.87%			1.14%
Clackamas County																
	113,038	166,088	53,050	47%	241,919	75,831	46%	278,850	36,931	15%	338,387	59,537	21%	375,992	37,605	11%
		Avg Annual Rate:		3.92%			3.83%			1.43%			1.95%			1.06%
Barlow																
	85	105	20	24%	105	-	0%	115	10	10%	140	25	22%	135	(5)	-4%
		Avg Annual Rate:		2.14%			0.00%			0.91%			1.99%			-0.36%
Canby																
	2,178	3,813	1,635	75%	7,659	3,846	101%	9,115	1,456	19%	12,790	3,675	40%	15,829	3,039	24%
		Avg Annual Rate:		5.76%			7.22%			1.76%			3.45%			2.15%
Estacada																
	957	1,164	207	22%	1,419	255	22%	1,983	564	40%	2,475	492	25%	2,695	220	9%
		Avg Annual Rate:		1.98%			2.00%			3.40%			2.24%			0.86%
Molalla																
	1,501	2,005	504	34%	2,992	987	49%	3,683	691	23%	5,734	2,051	56%	8,108	2,374	41%
		Avg Annual Rate:		2.94%			4.08%			2.10%			4.53%			3.53%
Sandy																
	1,147	1,554	407	35%	2,862	1,308	84%	4,210	1,348	47%	5,505	1,295	31%	9,570	4,065	74%
		Avg Annual Rate:		3.08%			6.30%			3.93%			2.72%			5.69%

Source: US Census

Rural Area Population Changes (2000 to 2010)

Table 3 focuses on the 2000 to 2010 demographic trends of Clackamas County’s rural area, covering the five cities and unincorporated communities. The table shows the population growth and percentage of change for the last decade.

Table 3. Population Changes, 2000-2010. Clackamas County Rural Cities

Jurisdiction	Year 2000	% of County 2000	Population Change 2000 to 2010			Year 2010	% of County 2010
			Amount	Percent	AAGR		
Oregon	3,421,437		409,637	12%	1.14%	3,831,074	
Clackamas County	338,387		37,605	11%	1.06%	375,992	
Barlow	140	0.04%	-5	-3.6%	-0.36%	135	0.04%
Canby	12,790	3.78%	3,039	23.8%	2.15%	15,829	4.21%
Estacada	2,371	0.70%	324	13.7%	1.29%	2,695	0.72%
Molalla	5,734	1.69%	2,374	41.4%	3.53%	8,108	2.16%
Sandy	5,505	1.63%	4,065	73.8%	5.69%	9,570	2.55%
Rural Uninc.*	65,185	19.26%	3,051	4.7%	0.46%	68,236	18.15%
Total Rural Area	91,725	27.11%	12,848	14.0%	1.32%	104,573	27.81%

* The rural unincorporated population for 2000 was estimated as 40% of the County’s total unincorporated population. The 40% figure was Metro’s allocation to rural unincorporated areas in 2010 and accounted for the incorporation of Damascus in 2004. Source: US Census

At 375,992, the 2010 population of Clackamas County was 11.1% higher than the 2000 population. The County’s average annual growth rate in this decade was 1.06%, slightly lower than the State’s rate of 1.14%. Even with this lower rate, Clackamas County retained close to 10% of the State population between 2000 and 2010 (9.9% and 9.8% respectively), although the county’s population as a percentage of the Portland-Vancouver-Hillsboro MSA population decreased slightly between 2000 and 2010 (17.55% in 2000 and 16.89% in 2010).

Because of the small population base for the rural cities, the percent of population change over the 2000 to 2010 time period is higher than the population change for the county as a whole. Still, the cities of Canby, Molalla and Sandy all increased their share of the total population in the county, meaning that these cities are growing faster than the county in real terms. The portion in Estacada dropped slightly during this period.

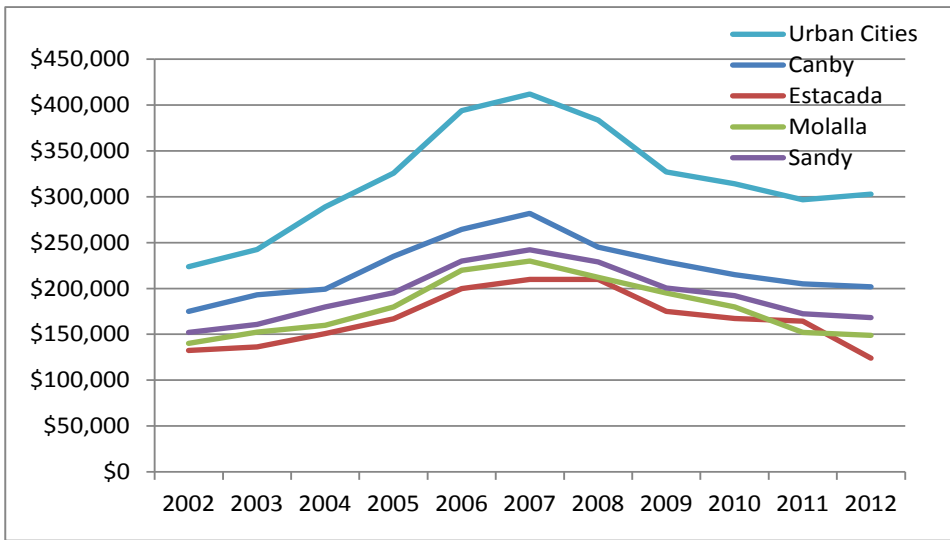
- The total population of the five rural cities was 7.9% of County population in 2000, and their population increased to 9.7% of the County’s 2010 population.
- The cities of Canby, Molalla and Sandy captured 25% of the County’s total population growth (37,605 persons) between 2000 and 2010.
 - The City of Canby increased population by 3,039 (8% of County growth), the City of Molalla by 2,374 (6% of County growth) and the City of Sandy by 4,065 (11% of County growth).
 - The population of these three cities increased from 7.1% of the County’s population in 2000 to 8.9% of the County’s population in 2010.

Population increases due to annexations to the cities were low and were not a contributing factor to the high growth rates. From March 2002 through March 2012, Estacada gained 50 residents, Canby 41 residents and Molalla 3 residents through annexation.⁴

A more likely contributing factor in this high growth is the fact that the five rural cities have consistently provided less expensive housing than in the Metro area, particularly during the housing boom years when home prices were appreciating at unprecedented rates.

As shown in Figure 1, median home sales prices in the five rural cities were substantially lower than those of the county’s urban area cities from 2002 to 2012 (see Appendix E for details).

**Figure 1. Median Home Sales Price 2002-2012.
Clackamas County’s Urban and Rural Cities**



Note: For context only, some sales not verified
Source: Clackamas County Tax Assessor

The population for the rural unincorporated area is an estimate drawn from several sources, including Metro’s 2010 household allocation, population figures from OEA (“Population for Oregon’s Counties and Incorporated Places, 1990-2010” which included the population of the unincorporated area), and population by 2010 Census tracts. The low average annual increase in population, 0.46%, in the unincorporated areas reflects several factors, including land use regulations which restrict residential development on lands zoned for farm and forest uses, as well as the downturn in the economy during this decade.

⁴ Per Population Research Center at Portland State University

Building Permits

Annual building permit activity for the rural area cities provides a good illustration of the effects of the housing boom in the early 2000s and the economic downturn 2008.

**Table 4. Single Family Building Permits, 2000 to 2011
Clackamas County Rural Area Cities**

Year	Canby	Estacada	Molalla	Sandy	TOTAL by Year
2000	96	0	43	150	289
2001	132	5	40	176	353
2002	143	2	42	162	349
2003	97	2	70	123	292
2004	110	9	148	93	360
2005	121	12	99	162	394
2006	197	7	82	193	479
2007	79	46	55	149	329
2008	15	13	27	77	132
2009	4	5	16	46	71
2010	4	47	15	45	111
2011	7	17	14	32	70
TOTAL by City	1,005	165	651	1,408	3,229

Source: US Census

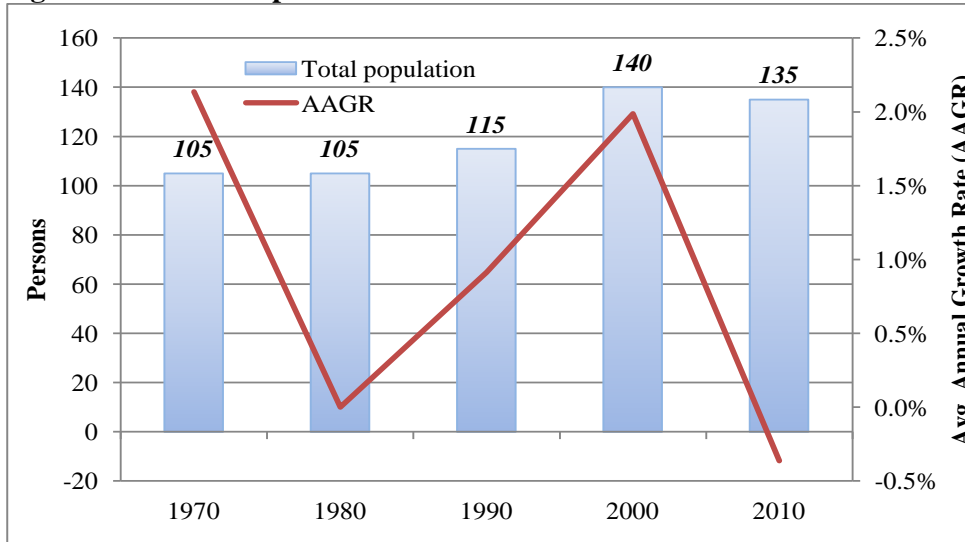
The cities of Canby, Molalla and Sandy had strong years from 2000 through 2007, and Estacada had its largest number of permits issued in 2007. Combined, the cities averaged 355 single family building permits each year during this period. With the downturn in the economy in 2007, the number of building permits dropped; combined, the cities averaged only 96 single family permits each year for 2008 through 2011.

Characteristics of the Rural Cities

Barlow

Barlow is a small city with approximately 135 residents, located about 25 miles south of Portland, just south of the City of Canby. According to the US Census the entire city encompasses approximately 0.1 square miles of land. Barlow is a stable community, growing by only 30 to 35 residents since 1970. The last decade (2000 to 2010) posted a slight loss in population, from 140 to 135. The median age of residents in Barlow was similar to that of the County (38.1 years versus 40.6 years old countywide) but households were larger, with an average of 3.07 persons per households versus 2.56 countywide.

Figure 2. Historic Population Growth - Barlow



Source: US Census, Clackamas County

Growth in Barlow has been and will continue to be greatly limited due to the fact that the city has no sewer system – all the properties have septic systems for sewage disposal. Because of the space needed to fit a home and septic system, it is generally not feasible to develop “urban” sized lots without a sewer system.

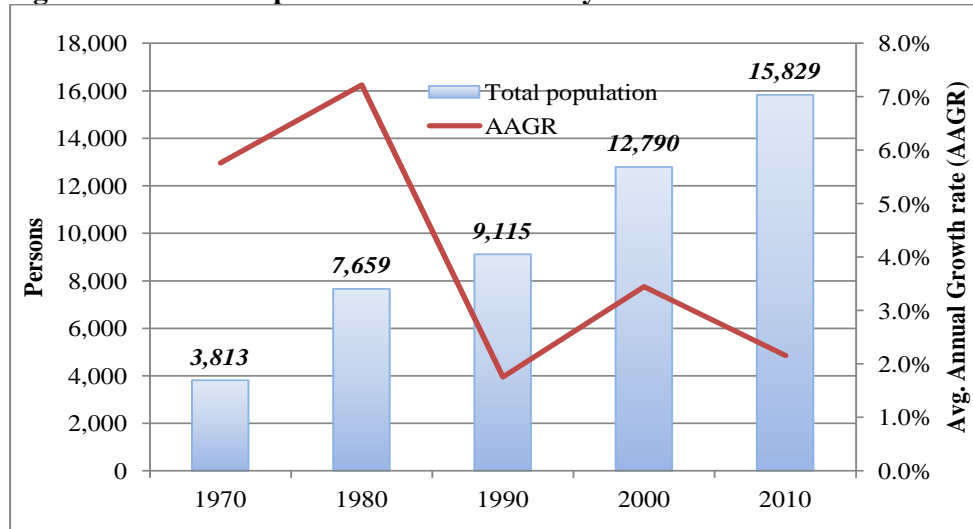
Canby

Canby is a rapidly growing community of approximately 15,830 residents, located 25 miles south of Portland and 30 miles north of Salem. With State Highway 99E running through town, it offers businesses excellent highway access, ample utilities, and a plentiful supply of shovel-ready land. Canby offers residents urban development within close proximity to highly valued farmland, orchards and a thriving nursery industry.

Canby has consistently been one of the fastest growing rural cities in Clackamas County. Population growth averaged 4.0% over the last 50 years and 2.8% annually over the last 20 years. Despite the drop in the growth rate, the actual increase in population has remained fairly consistent over that time period and even *increased* over the last 20 years. From 1970 to 2010, the city’s population grew at an average of 273 persons per year. Over the last two decades (1990-2010) actual population growth averaged slightly higher, at 336 persons per year.

Residential development last decade peaked in 2006, with an average of 128 new residential building permits issued each year. The city saw a steep decline in residential building permits after 2006, with 79 permits issued in 2007 and an average of only 8 permits issued annually from 2008 to 2011.

Figure 3. Historic Population Growth - Canby



Source: US Census, Clackamas County

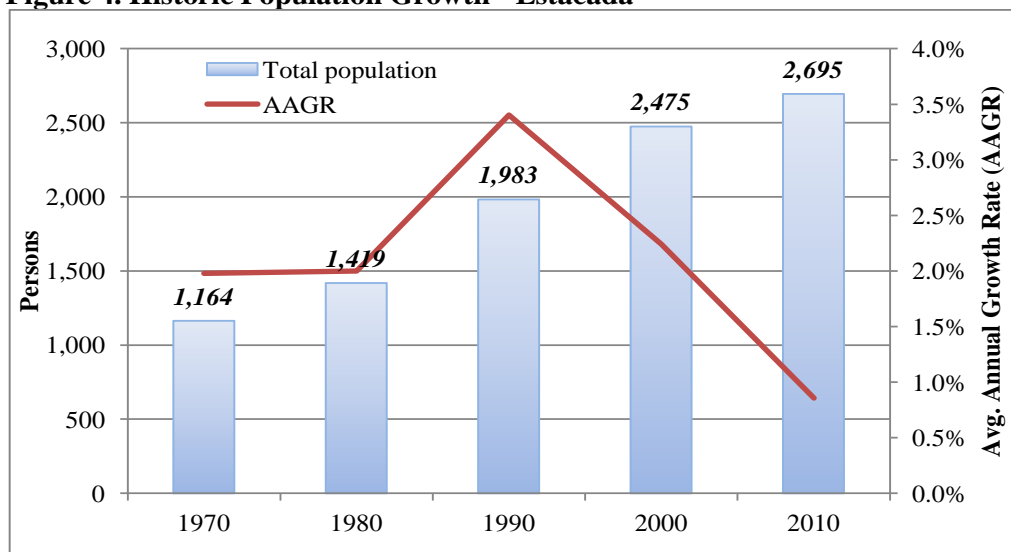
Canby’s households are generally younger and larger households than those county-wide, with an average age of 35.7 years versus 40.6 years old countywide and an average household size 2.78 persons, versus 2.56 countywide.

Estacada

Estacada is a rural community of approximately 2,600 residents situated about 30 miles southeast of Portland and is known as the “gateway to the Clackamas River.” Historically, the primary base for Estacada’s economy has been lumber. As the timber industry declined in the recent past, the economy of the city became depressed; however, in recent years an arts community has been emerging and a limited amount of new industrial development and businesses have also been locating in the city. In 2009, Estacada’s UGB was expanded by 130 acres to accommodate more industrial growth in the northwest corner of the city, along Highway 224.

Population growth has been moderate in Estacada, averaging only 2.1% over the last 50 years. In the last 20 years growth has dropped to an average of 1.5% annually, representing an increase of approximately 36 persons per year. Similarly, new residential growth has been slow, even through the housing boom. Based on building permit data, residential development peaked in 2007 and 2010, with 46 and 47 residential permits issues those years, respectively. The rest of the 2000’s decade saw an average of only 7 building permits issued per year. Interestingly, most of the residential permits issued in the last decade have been post-2008, an indication that perhaps population growth may see a recovery over the slow rates posted in the past two decades.

Figure 4. Historic Population Growth - Estacada



Source: US Census, Clackamas County

Population in Estacada is also comprised of younger households – the average age in 2010 was 35.7 years, versus 40.6 years countywide. Average household size is the same as the county (2.56 persons per household).

Molalla

Molalla is a rural community of approximately 8,100 residents located about 30 miles southeast of Portland. Like Estacada, Molalla’s economy was hurt by the decline in the timber industry, which remained the mainstay of the community’s economy until the 1980s. In recent years, the city has been making efforts to diversify its economic base with new manufacturing and commercial investments and creating an Enterprise Zone to encourage more economic development.

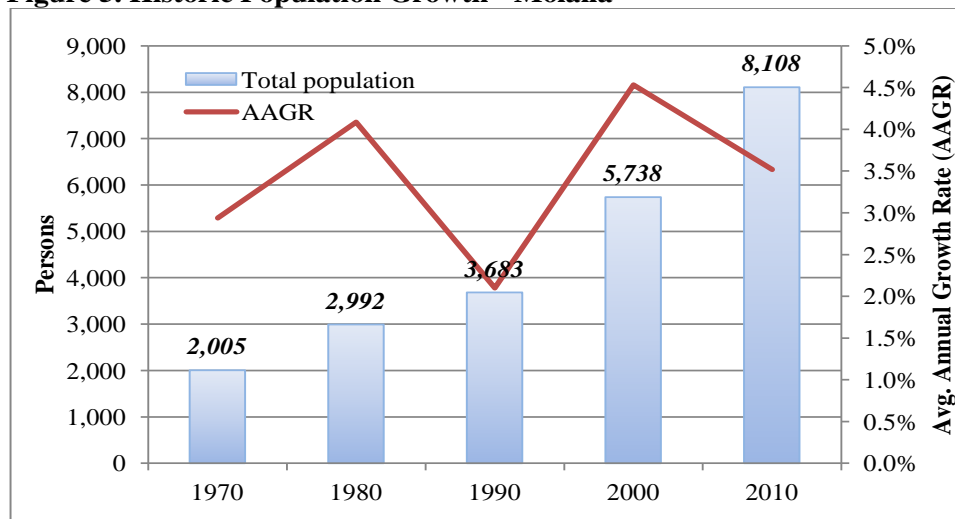
Tourism is playing an increasing role in the city’s economy as well. Molalla is the gateway to the Molalla River Recreation Corridor, attracting thousands of visitors year-round for sightseeing, fishing, hunting, kayaking, rafting, swimming, picnicking, camping, hiking, mountain biking and horseback riding.

Despite recent economic difficulties, Molalla remains an attractive location to reside, near these recreational activities, and it has largely become a bedroom community to the Portland area.

Population growth has been strong in Molalla, averaging 4.0% annually over the last 20 years, slightly higher than the 50 year average of 3.4% annual growth. The population increased steadily from 1970 to 2000, averaging approximately 70 persons per year. Population increases jumped from 1990-2010, averaging around 200 persons per year. Based on building permit data (Table 4), this jump in population growth may be largely due to the housing boom from 2000 to 2007, with an average of 72 new permits issued each year. In the latter part of the last decade, building activity declined dramatically, with an average of only 18 new permits issued annually from 2008 to 2010.

Molalla also has a low supply of developable residential land, however, which could be exacerbating this slowdown. Based on a buildable lands inventory (BLI) completed in 2007-2008 only 71 acres of buildable residential land remains in the city's UGB.⁵

Figure 5. Historic Population Growth - Molalla



Source: US Census, Clackamas County

On average, households in Molalla are much younger (31.4 year old versus 40.6 years old) and slightly larger than those in the region (2.82 persons per household versus 2.56).

Sandy

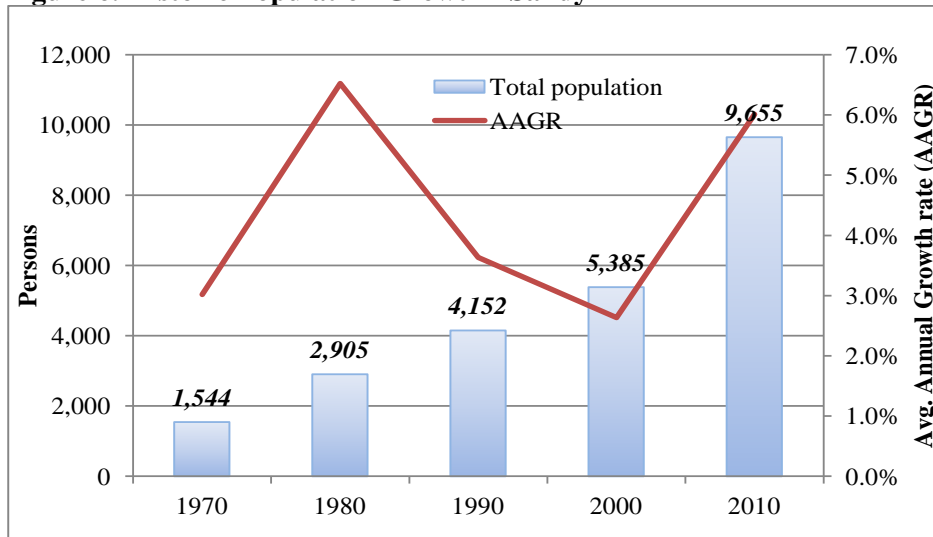
The City of Sandy has a population of approximately 9,570 and is located east of Portland in the Mt. Hood corridor, approximately 35 minutes to Portland International Airport and 45 minutes to downtown Portland. Sandy has developed a small but diverse business base, including many stores and services for visitors to the Mt. Hood Recreation Area. Sandy is an attractive location to reside because it offers good access to outdoor recreation as well as to the more urban amenities in the metro area while offering relatively inexpensive land for development.

Sandy has consistently been one of the fastest growing rural cities in Clackamas County. Population growth averaged 4.4% annually over the last 70 years and 4.3% annually over the last 20 years.

Population increased steadily, averaging approximately 128 persons per year from 1970 to 2000. Population increase spiked from 2000-2010, averaging over 400 persons per year. Based on building permit data (Table 4), some of this jump in population growth can be attributed to the housing boom from 2000 to 2007, with an average of 151 new permits issued each year. In recent years, building activity has declined dramatically, with an average of only 41 new permits issued annually since 2008. Even so, 41 new households/homes per year would still result in population growth roughly equivalent to the historic growth; the fact that this is occurring in a recession could indicate the city is poised to resume rapid growth as the housing recovery continues to take hold.

⁵ The findings of this inventory have not been verified by county staff; the actual acreage may be different.

Figure 6. Historic Population Growth - Sandy



Source: US Census, Clackamas County

Rural Unincorporated Clackamas County

The remaining portion of rural Clackamas County consists of unincorporated rural communities and other large unincorporated areas with rural residential zoning (large lots) and natural resource land (farm and forest lands). Development in rural Clackamas County is limited because of the large amount of natural resource lands, on which new homes are allowed only under certain situations. Still, residential development in the unincorporated area is possible under a few processes that require approval either by the State or by Clackamas County.

Under State Ballot Measure 49 (“Measure 49”) residential development of 3 to 10 houses may be approved by the State Department of Land Conservation and Development (DLCD) for private property owners in some rural areas that may otherwise have been restricted because of the underlying farm or forest zoning. DLCD notes in its description of the process that “If claim property is currently zoned for resource use (farm, forest or mixed farm/forest), Measure 49 places some limits on how the proposed development must be located to protect and preserve that resource use.” Other development restrictions apply to prime farmland and water restricted areas under this measure.

In total, 1,145 new dwellings will be allowed in Clackamas County’s rural unincorporated area based on Measure 49 claims alone.

Other situations require approval by Clackamas County, including the following: building in the limited areas zoned Rural Residential; building in the areas zoned for resort communities (associated with the recreational and tourist centers near Mt. Hood); having a residence approved as a “non-farm” dwelling on a pre-existing small lot; or having a residence approved as part of a farm management plan.

As noted in Table 3, the rural unincorporated area of Clackamas County grew very slowly over the last decade. According to the county’s best estimate, this area grew at a rate of 0.46% annually from 2000 to 2010, gaining only approximately 3,050 persons. It is expected that the urban areas (both inside and outside the Portland Metro UGB) have and will continue to capture the majority of the new growth in the county simply because they have a greater amount of land available for development.

SUMMARY

Clackamas County's rural cities offer a small snapshot of the great diversity among the different areas of the county. Each has its own unique circumstances and its own attractors for potential new residents and for potentially retaining the young families that seem to be attracted to these communities. Over the last several decades several of these cities have been very successful at attracting people to live outside the Portland metro area. Some of this success has been due to offering less expensive housing than in the metro area while offering relatively easy access both to the metro area and to recreational amenities in the rural area. The cities are all continuing to plan for and to capture new growth of both households and employment.

The information described in the above background report and found in Appendices A and E, were all taken into consideration when assessing future population forecasts.

FORECASTS

SECTION III: METHODOLOGY AND FACTORS AFFECTING POPULATION GROWTH

Regional Trends

The State's current presentation of the economic forecast⁶ provides a summary of current conditions and outlook for the state. The assessment is that the State has been coming out of the recession of the mid 2007-2010 period, but that the pace of improvement "remains slower than what we have become accustomed to in past economic recoveries, and has not been shared across all communities." (p. 6)

The outlook is that Oregon will not recover all of the jobs it has lost until the end of 2014 (p.6), and even with that cautious prediction, the assessment is that "ongoing production slowdown among some of Oregon's largest trading partners in Asia" is a downside risk to the recovery (p.7).

As a sign of slow to modest economic gain, the ratio of net migration-to-population change will increase gradually and is expected to reach 70 percent by the end of this report's forecast horizon [2010 to 2020]. Although the economy and employment situation in Oregon look stagnant at this time, the migration situation is not expected to replicate the early 1980s pattern of negative net migration. Potential Oregon out-migrants have no better place to go since other states are also in the same boat in terms of economy and employment. (p.8)

Age structure and its change affect employment, state revenue, and expenditure. Demographics are the major budget drivers, which are modified by policy choices on service delivery. Growth in many age groups will show the effects of the baby-boom and their echo generations during the period of 2010-2020. It will also reflect demographics impacted by the depression era birth cohort combined with diminished migration of the working age population and elderly retirees. (p.8-9)

Overall, the elderly population over age 65 will increase rapidly whereas population groups under age 65 will experience slower growth in the coming decade. (p.9)

See Appendix F for more excerpts from of the Economic and Revenue Forecast.

Local Trends

Clackamas County and its rural cities are affected by national, statewide and regional trends but also have their own unique set of circumstances. As discussed in the Background Report, several of these cities are suffering from a loss of economic base (Estacada and Molalla) due to the decline in the timber industry which had historically driven these city's economies. These cities, along with Sandy and Canby appear to be committed to attempts at figuring out how to generate greater economic development and diversity, from taking advantage of their locations to attract visitor dollars and tourist businesses to expanding their industrial areas to attract a larger base of employers, to encouraging retail establishments to locate in their jurisdictions to quell the leakage of dollars out of the cities because of lack of choice for consumers. To the extent these cities' are successful in these endeavors, greater population growth or sustained high population growth (depending on the city) could easily occur.

⁶ **Oregon Economic and Revenue Forecast** June 2012. Volume XXXII, No. 1. Release Date: May 22, 2012
Prepared by: Office of Economic Analysis, DAS (See Appendix F)

As noted in the Background Report, several of the county's rural cities have experience rapid population growth over the last one to two decades. Some of this growth has been driven by the substantial discount housing prices offered in these areas when compared to the county's urban area cities. With the steep decline in housing prices over the last four-five years, housing has become more attainable in the metro urban area and not as many households may be making the decision to move farther out to the rural cities. The extent and speed at which the housing prices recover will also have a sizeable effect on the rural city growth in the future.

Methodology

As noted previously, Metro is completing household and employment forecasts for the region, including both the urban and rural areas of Clackamas County. In general, regional population and household growth is projected as components of population by birth, death and migration. For employment, an employment-population ratio is the approach used to create the alternative growth paths from the base case assumptions. More specific details about Metro forecasting, models and assumptions can be found in Appendix C.

Metro and the participating jurisdictions have reviewed and refined the forecasts for more than a year and Metro adopted the 2025 and 2035 forecasts for the region in November 2012. Within these forecasts are "control totals" for the basic sub-areas in the region. The "control totals" pertinent to this project are those for the urban/rural split within the county, namely a control total for the area within the Metro boundary and a control total for each county area outside the Metro boundary. For carrying out this population coordination project, the "control total" for households and employment was held constant for the Clackamas County area outside the Metro boundary. Within that control total, forecasts for some of the individual cities were adjusted during this review, as warranted, to best represent the specific plans that have been completed for the cities and where growth in rural areas is most likely to be able to locate.

Geographic Differences in Data

The household and employment data sets described above are integral to Metro's "travel demand model," which displays the region divided into 2,162 Transportation Analysis Zones (TAZ). Each TAZ has allocations of the current and forecasted households and employment figures.

For the rural area of Clackamas County (its area outside the Metro boundary), there are 88 TAZ sub-areas that distribute the future population and employment into the rural cities and the rural, unincorporated area. Overall, the boundaries of the several TAZ units that contain a rural city cover a larger area than the city boundaries alone. Each rural city will include a "TAZ group", or a number of TAZ's that include both land inside a city's UGB and some rural land outside the city's UGB. Maps showing TAZ boundaries with respect to the county's five rural cities are found in Appendix D.

Metro's projections were first grouped into these "TAZ groups" for each city then an assumption was made about how much of the projected growth will occur within the city's UGB. Because of the land use restrictions that limit new residential development, described in the Background Report, it is reasonable to expect that the vast majority of the new growth within the "TAZ groups" will actually happen within the cities. This analysis assumed that 90% of the projected household growth in each "TAZ group" will occur within that group's rural city UGB. All of the cities that participated in this project felt this assumption was reasonable.

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Once the “TAZ group” forecast was allocated down to the UGB level, it was compared with historic growth in cities, projections previously done for the cities, and other information provided by the cities to assess the reasonableness of the forecast. The next step in the analysis was to look at projected growth in TAZs in the immediate vicinity of each city’s TAZ group along with zoning in that area to assess whether the growth projected for these areas was more likely to occur in the nearby city because of restrictive rural zoning in the TAZ. These pieces of information were the basis for determining if adjustments needed to be made to the forecast for each city. All the proposed forecasts and adjustments were reviewed by the individual cities’ representatives.

ORS 195.036 requires the coordinated population forecast be a 20-year forecast so the last step in the process is to extrapolate the 2012 to 2032 population forecast from the agreed-upon 2035 forecast. This was done simply by assuming an even distribution of growth from 2010 to 2035 (the timeframe of the Metro forecast).

Small Area Forecasts

When assessing forecasts, and particularly forecasts for small areas, it is important to keep in mind that there is uncertainty involved, the degree of which increases the smaller the area. In general, forecasts have a degree of uncertainty simply because all forecasting requires making *assumptions* about the future. Small area forecasts are even less certain because:

- Small areas start from a small base. A small change in the absolute number of population or housing in a small city produces a large percentage change. For example, a new subdivision of 200 homes inside the Portland Urban Growth Boundary has an effect on total population of 0.02%. That same subdivision in Molalla would increase the community’s housing stock by nearly 7%—and population by a similar percentage.
- Especially for small cities in areas that can have high growth potential (e.g., because they are near to concentrations of demand in neighboring metropolitan areas, or because they have high amenity value for recreation or retirement), there is ample evidence of very high growth rates in the short-term; there are also a few cases of high growth rates sustained over 10 to 30 years. However, growth rates for small cities tend to decrease over time because the population base increases.
- Public policy makes a difference. Cities can affect the rate of growth through infrastructure, land supply, incentives and other policies. Such policies generally do not have an impact on growth rates in a region, but may cause shifts of population and employment among cities. In fact, population forecasts are often viewed as “self-fulfilling prophecies.” In many respects they are intended to be; local governments create land use, transportation, and infrastructure plans to accommodate the growth forecast. Those planning documents represent a series of policy decisions—and influence public investments for infrastructure and services. Thus, how much population a local government (particularly cities) chooses to accommodate is also a policy decision.

Because of these and other limitations and uncertainties, this report attempts to assess not only historic and projected growth rates for Clackamas County’s rural cities, but also factors in actual growth (number of people or households annually) and local knowledge of factors that would positively or negatively affect population growth in the cities.

SECTION IV: FORECASTS

Regional and Countywide forecasts

Table 5 shows Metro's household and job allocations for 2010 and forecasts for 2025 and 2035 for Clackamas County. The data are grouped as totals "within the Metro UGB" and those "outside the Metro UGB" the rural cities and rural unincorporated area.

2010 Allocations

Household estimates developed for the regional travel demand model showed that the rural area of Clackamas County had 39,837 households, 27.4% of the total 145,421 households in Clackamas County. In the rural area outside the Metro boundary, the 2010 allocation has 14,812 households within the TAZ groups of the five rural cities; and the majority of rural area housing, 25,025 households, in unincorporated areas. The household estimate in the rural cities' area compares well with the 2010 Census data which counted 13,177 occupied housing units in the five cities.

The 2010 job estimates developed for the regional travel demand model showed that just over 9% of the jobs (12,883) in Clackamas County are in the TAZ groups of the rural cities, and that an additional 7.1% of jobs (9,759) are in the rural unincorporated area.

2025 and 2035 Forecasts

The first forecast produced by Metro for the jurisdictions to review was for the period from 2010 to 2025. For the County as a whole, this forecast projected a 1.7% average annual growth rate (AAGR), equating to 41,294 new households by 2025. Metro further estimated that 68.0% of the new households (27,506 dwellings) would go inside the Metro urban growth boundary (UGB). The highest average annual rate of growth, 2.2%, was attributed to the rural cities, which are the subject of this report. A total of 6,408 new households were projected for the TAZ groups of the rural cities (see Table 5).

Interestingly, the rural, unincorporated area, with a forecasted AAGR in households of 1.5% (7,380 households), is expected to support more new development than the rural cities. While a small portion of this can be attributed to urban reserve areas (estimated at approximately 1,000 households), this amount of projected new household growth may not be supported in the remainder of the rural areas because of the zoning regulations that protect farm and forest lands from general residential development.

The 2035 Gamma Forecast was next released for review. For the County as a whole, this forecast projected growth to slow to a 0.9% average annual growth rate (AAGR), equating to only 16,696 new households between 2025 and 2035. Metro further estimates that only 44% of this growth would occur inside the Metro urban growth boundary (UGB).

The 2035 Gamma Forecast exposed some changes in expected growth patterns in the region and especially in Clackamas County. Metro has indicated that a primary reason for higher-than expected growth in some of Clackamas County's rural areas in both the 2025 and the 2035 Gamma Forecast is that the supply of residential land for single-family homes is dwindling in the metro area UGB, which, when combined with the assumption that the metro area UGB will not expand substantially in Clackamas County during the forecast period, drives the price of homes in the metro area higher, thus diverting household growth to the rural areas, which have historically provided less expensive housing stock.

Table 5. Number of Households and Jobs in Clackamas County 2010 Existing and 2025 and 2035 Metro-Generated Forecasts

HOUSEHOLDS	YEAR 2010		Forecasted Change 2010-2025		YEAR 2025		Forecasted Change 2025-2035		YEAR 2035	
	Households	% of County Total	Amount	AAGR	Households	% of County Total	Amount	AAGR	Households	% of County Total
Households Inside Metro UGB										
Urban cities	70,236	50.0%	23,636	2.0%	93,872	51.6%	5,188	0.5%	99,060	49.9%
Unincorporated urban area	25,270	18.0%	3,870	1.0%	29,140	16.0%	2,113	0.7%	31,253	15.7%
Total Households Inside Metro UGB	95,506	68.0%	27,506	1.7%	123,012	67.7%	7,301	0.6%	130,313	65.7%
Households Outside Metro UGB										
Rural cities*	16,322	11.6%	6,408	2.2%	22,730	12.5%	3,087	1.3%	25,817	13.0%
Rural unincorporated areas	28,641	20.4%	7,380	1.5%	36,021	19.8%	6,308	1.6%	42,329	21.3%
Total Households Outside Metro UGB	44,963	32.0%	13,788	1.8%	58,751	32.3%	9,395	1.5%	68,146	34.3%
Total Households in Clackamas County	140,469	100.0%	41,294	1.7%	181,763	100.0%	16,696	0.9%	198,459	100.0%

* Based on TAZ group boundaries (not city boundaries). Does not include any adjustments made to city projections during the county-city coordinated process.

Source: Metro, Clackamas County

Because of the projected changing growth patterns, uncertainty about timing of changes, and the fact that it appears that the projections in the 2035 Gamma Forecast were in some cases intended to fix issues with the initial 2025 forecast, the remainder of this report will look at the 2035 forecast as an endpoint and assess the reasonableness of that forecast given each city’s historic growth as well as other factors, described previously and in Appendix A. The rural cities’ forecasts for 2012 to 2032 will then be extrapolated from the 2035 Gamma Forecast.

OEA versus Metro Forecast

On a countywide level, Metro’s 2035 forecast compares reasonably to those completed or being completed by the State’s Office of Economic Analysis (OEA). Metro’s 2035 forecast is lower than the forecast completed by OEA in 2004, prior to the recession but is nearly identical (<1% difference) to the 2012 draft long-range forecast that was recently distributed to the counties for review.⁷

Table 6. Metro 2035 Gamma Forecast versus OEA Long-Range Forecast. Clackamas County

	2010 est.	2035 forecast	2010-2035 Growth	2010-2035 AAGR
OEA forecast (adopted 2004)	391,536	576,231	184,695	1.56%
Metro forecast*	362,129	511,627	149,498	1.39%

*Households are converted to population for comparison purposes assuming 2.58 persons per household (Clackamas County average per US Census).

Rural County and Cities Draft Forecasts

The County has agreed to accept the forecast of 23,182 new households (2010 to 2035) as the “control total” for rural Clackamas County (outside the Metro UGB) for the purposes of this coordinated population forecast process. This control total includes households in the rural cities as well unincorporated rural communities and other unincorporated rural areas in the county. In accepting this control total for the rural areas, any adjustments that are found to be necessary to individual city forecasts, or elsewhere, need to be made within this total.

In general, growth allocations in Metro’s 2035 Gamma Forecast appear a bit generous in the rural unincorporated areas (projecting 13,688 new households) and slightly low in some of the rural cities. One reason Metro’s forecast may be low in some of the rural cities is that it does not assume that the cities will expand their urban growth boundaries (UGBs) and, therefore, if land supply is limited, so too is the forecast. Fortunately, the rural cities have the ability to expand their UGB’s if there is a need identified based on projected growth and existing supply.

Individual city forecasts, analysis of those forecasts and a description of any changes made to the Metro forecast follow in the next section. Several of the rural cities have completed transportation system plans or land-use related plans. These plans, combined with historic population growth data and individual knowledge of localized factors affecting population growth (see Appendix A), provide the basis for evaluating Metro household and forecasts. Projected growth for each city is also analyzed in the context of historic growth.

⁷ The final 2012 OEA forecast is expected in February 2013 and will be incorporated into this report if time allows.

Individual plans completed for the cities used varying timeframes for forecasts. To compare these values with Metro’s 2010 allocation and 2025 and 2035 forecasts, the city forecasts were adjusted using each study’s average annual growth rate to determine the 2010 and 2035 values, as applicable.

BARLOW

The Metro 2035 Gamma Forecast projects growth of only 5 new households between 2010 and 2035 in the TAZ group⁸ that includes the city of Barlow. Assuming the City of Barlow captures 90% of this new growth this projection results in a total population of 148 people in the city in 2035.⁹

Table 7. Historic and Projected Population Growth. City of Barlow

Year	Population	AAGR	Avg. annual increase
1960	85		
1970	105	2.1%	2
1980	105	0.0%	0
1990	115	0.9%	1
2000	140	2.0%	3
2010	135	-0.4%	-1
2035	148	0.4%	0.5

Source: US Census & Metro & Clackamas County

Analysis of City of Barlow Forecast: The 2035 Metro Gamma Forecast indicates the population of the city will remain relatively steady, as it has over the last several decades. Given the fact that growth opportunities in Barlow are very limited, mainly due to the lack of a sewer system, this forecast seems reasonable.

No adjustments were made to this forecasted growth were made, nor were any requested by city representatives. Extrapolating from this forecast for the 20-year planning horizon of 2012-2032 specified for this project yields the following for the City of Barlow:

2012 population: 136

2032 population: 146

⁸ Includes TAZ#: 848

⁹ Note: As mentioned in the “Methodology” section, Metro forecasts are by TAZ area, which are larger than the city itself; however because of development limitations on rural lands in Clackamas County, it is assumed that 90% of the new growth projected in the city’s TAZ group will actually occur within the city. Households are converted to population using each city’s average household size as reported in the 2010 US Census.

CANBY

The Metro 2035 Gamma Forecast projected 4,951 new households between 2010 and 2035 in the TAZ group that includes the city of Canby.

Table 8. Metro Gamma Forecast Households 2010 to 2035. Canby TAZ Group¹⁰

2010 Existing	2035 Projection	Household Change
6,628	11,579	4,951

Assuming the City of Canby captures 90% of this new growth, this projection results in a total of 4,456 new households in the city between 2010 and 2035 resulting in a total of approximately 10,150 households, or 28,220 people in the city in 2035.⁷

The growth forecast suggested by Metro is compared to historic growth below. As suggested by this comparison, the forecast for approximately 28,220 people in Canby by 2035 is within the range of growth rates seen in the city over the last several decades but does represent an increase in the average number of new people annually in the city over the last two decades.

Table 9. Historic and Projected Growth. City of Canby

Year	Population	AAGR	Avg. annual increase
1960	2,178	---	---
1970	3,813	5.8%	164
1980	7,659	7.2%	385
1990	9,115	1.8%	146
2000	12,790	3.4%	368
2010	15,829	2.2%	304
2035	28,220	2.3%	495

Source: US Census & Metro & Clackamas County

Table 10 provides a comparison of the City’s forecasts for households and jobs found in the City’s Transportation System Plan (December 2010), with Metro’s forecasts for household and jobs. Projected jobs growth is shown in the table for context;¹¹ to the extent that strong (or weak) jobs growth occurs, so could population growth. It should be noted that both the forecasts found in Canby’s TSP are “buildout” forecasts, in which the city assumes it will be fully built out by 2030, and are therefore not necessarily market driven and are limited by supply of buildable lands within the current UGB.

¹⁰ Includes TAZ#: 843,844,847,846,845

¹¹ This report makes no attempt to assess or reconcile economic forecasts from the 2035 Metro Gamma Forecast with the city’s forecasts. Employment forecasts are presented for context only.

Table 10.

City of Canby	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Households (UGB) <i>2010 City TSP (1)</i>	6,337	5,245	2.4%	11,582
Households in City of Canby <i>Metro Regional Forecast/ Coordinated Forecast</i>	5,694*	4,456	2.4%	10,150
Jobs				
Jobs (UGB) <i>2010 City TSP (1)</i>	4,185	2,201	3.4%	9,688
Jobs in TAZ group <i>Metro's Regional Forecast</i>	5,592	3,490	2.0%	9,082

*Per 2010 US Census

(1) **City of Canby Transportation System Plan. December 2010.** (DKS & Associates)

Canby's TSP forecasted 4,403 new households between 2009 and 2030. Based on this forecast, an average annual increase of 210 households was calculated and used to estimate 2010 and 2035 households.

Canby's TSP forecasted 4,623 new jobs between 2009 and 2030. Based on this forecast, an average annual increase of 220 jobs was calculated and used to estimate 2010 and 2035 jobs.

Analysis of City of Canby Forecast: The 2035 Metro Gamma Forecast indicates stronger population growth than the city has historically seen in terms of actual numbers of people per year. However, both Metro and the city's consultant for their Transportation System Plan (TSP) are projecting very strong employment growth in the city over the forecast period. This strong economic growth would, in turn, support strong and even increased population growth.

Supporting this expectation of strong economic and population growth are several factors: The city is being very pro-active about positioning themselves to attract new business investments and jobs:

- A downtown retail study and marketing materials were recently completed
- The Urban Renewal District plans to invest in infrastructure and offers an SDC reimbursement incentive program for job creation and new construction
- Created a Strategic Investment Zone 15 year property tax abatement for investments over \$25 million
- There is currently low reported vacancy in commercial and industrial
- There is a team studying business recruitment & retention and marketing of industrial employment opportunities
- The city has 200+ acres of shovel-ready industrial land

The city has also expressed the willingness and ability to accommodate this level of growth.

Given all these factors and the fact that Canby offers an attractive and accessible location for both employers and residents at a price advantage over nearby urban areas, county staff feels that Canby is positioned well to achieve the level of growth projected in the 2035 Gamma Forecast.

No adjustments were made to the growth forecasted in the 2035 Gamma Forecast, nor were any requested by city representatives. Extrapolating from this forecast for the 20-year planning horizon of 2012-2032 specified for this project yields the following for the City of Canby:

2012 population: 16,820

2032 population: 26,730

ESTACADA

The Metro 2035 Gamma Forecast projected 924 new households between 2010 and 2035 in the TAZ group that includes the city of Estacada.

Table 11. Metro Gamma Forecast Households 2010 to 2035. Estacada TAZ Group¹²

2010 Existing	2035 Projection	Household Change
1,658	2,582	924

Assuming the City of Estacada captures 90% of this new growth, this projection results in a total of 832 new households in the city between 2010 and 2035 representing a total of approximately 1,886 households, or 4,820 people in the city in 2035.⁷

The growth forecast suggested by Metro is compared to historic growth below. As suggested by this comparison, the forecast for approximately 4,820 people in Estacada by 2035 is within the range of growth rates seen in the city over the last several decades, but represents a sizeable increase over the highest average number of new people annually in the city.

Table 12. Historic and Projected Growth. City of Estacada

Year	Population	AAGR	Avg. annual increase
1960	957		
1970	1,164	2.0%	21
1980	1,419	2.0%	26
1990	1,983	3.4%	56
2000	2,475	2.2%	49
2010	2,695	0.9%	22
2035	4,820	2.4%	85

Source: US Census & Metro & Clackamas County

The only population forecast recently completed for the City of Estacada is found in the “Final Economic Opportunity Analysis (EOA) Report” (2009). The forecast in the EOA, however, was completed using the “safe harbor” methodology described in OAR 660-024-0030(4) and ORS 195.034(B), which simply extrapolates a city’s future population based on its proportion of the county’s total population and is not trend or market based. As such this forecast is not necessarily a good

¹² Includes TAZ#: 840,841,842

comparison. Projected jobs growth for the Estacada/Eagle Creek area (as defined in the EOA) is shown in the table for context.

Table 13.

City of Estacada	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Households (2,538 persons/DU) <i>2010 City EOA (1)</i>	1,082	507	1.5%	1,589
Households in City of Estacada <i>Coordinated Forecast</i>	1,055*	832	2.4%	1,886
Jobs				
Jobs (Estacada/Eagle Creek area) <i>2010 City EOA (1)</i>	1,619	2,593	3.9%	4,212
Jobs in TAZ group <i>Metro's Regional Forecast</i>	1,427	1,682	3.2%	3,109

*Per 2010 US Census

(1) **City of Estacada Final Economic Opportunity Analysis (EOA) Report.** June 14, 2009. (Cogen Owens Cogan, LLC; Marketek Inc.) Estacada's EOA forecasted population using "safe harbor" through 2029. Based on this forecast, an average annual increase of 51.5 persons was calculated and used to estimate 2010 and 2035 population and households. Based on the employment forecast found in this report, an average annual increase of 103 jobs in the "Estacada/Eagle Creek Area" was calculated and used to estimate 2010 and 2035 employment. Note different geographies.

Analysis of City of Estacada Forecast: The 2035 Metro Gamma Forecast indicates stronger population growth than the city has historically seen in terms of actual numbers of people per year and average annual growth rates. Like Canby (previously discussed), Estacada is proactively trying to position itself for both economic and residential growth.

- The city recently added 130 acres of industrial land to its UGB, which is expected to be available for development as early as next year. The recent success of the existing industrial park leads the city to be optimistic about this new industrial area will successfully attracting new employers and jobs.
- The city also created an Urban Renewal District in its downtown area and has identified improvements that will be completed as is possible.
- Both the city's EOA and Metro are forecasting very strong economic growth in Estacada between 2010 and 2035. This growth would support stronger population growth than Estacada has seen in recent years.

In addition, city staff stated that they had approved several large residential subdivisions in the last 7-8 years, some of which were put on hold when the housing market took a negative turn. However, a bank has purchased several of these subdivisions and has started constructing new homes – at a rate of around 40 per year. Furthermore, Estacada is the only of the rural cities that did not see a decline in residential building permits in the post-2008 housing crash (see Table 4). The city appears poised to quickly accommodate residential growth as demand warrants.

No adjustments were made to the growth forecasted in the 2035 Gamma Forecast, nor were any requested by city representatives. Extrapolating from this forecast for the 20-year planning horizon of 2012-2032 specified for this project yields the following for the City of Estacada:

2012 population: 2,845

2032 population: 4,345

MOLALLA

The Metro Gamma Forecast projected 1,516 new households between 2010 and 2035 in the TAZ group that includes the city of Molalla.

Table 14. Metro Gamma Forecast Households 2010 to 2035. Molalla TAZ Group¹³

2010 Existing	2035 Projection	Household Change
3,743	5,259	1,516

Assuming the City of Molalla captures 90% of this new growth, this projection results in a total of 1,366 new households in the city between 2010 and 2035 resulting in a total of approximately 4,240 households, or 11,960 people, in the city in 2035.⁷

The growth forecast suggested by Metro is compared to historic growth below. As suggested by this comparison, the forecast for approximately 11,960 people in Molalla by 2035 is lower than growth rates seen in the city over the last several decades and represents a sizeable decrease over the average number of new people annually in the city over the last two decades.

Table 15. Historic and Projected Growth, City of Molalla

Year	Population	AAGR	Avg. annual increase
1960	1,501		
1970	2,005	2.9%	50
1980	2,992	4.1%	99
1990	3,683	2.1%	69
2000	5,738	4.5%	206
2010	8,108	3.5%	237
2035	11,960	1.6%	154

Source: US Census & Metro & Clackamas County

An economic profile for the City of Molalla was completed in 2005. That study’s forecasted population and jobs growth is listed in the table below for comparison with the 2035 Metro Gamma Forecast for Molalla. As shown, the 2035 Metro Gammas Forecast is lower than that study’s forecast both in terms of average annual growth rate and actual household growth. The employment forecast found in the city’s economic report is high because it is a “policy” forecast, based on the city’s objective to improve

¹³ Includes TAZ#: 849,850,851,852,853. Note: Upon further review, TAZ 849 (located along on the west side of Hwy 213) was included in Molalla’s TAZ group and therefore, numbers reported in this draft will differ from the first review draft (released for city review in September 2012).

its housing/jobs balance to “regain its status as a somewhat independent economic region rather than a bedroom community.”

Table 16.

City of Molalla	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Dwelling Units (UGB) <i>2005 City Economic Profile (1)</i>	2,579	1,817	2.5%	4,396
Households in City of Molalla <i>Metro Regional Forecast</i>	2,874*	1,366	1.6%	4,240
Jobs				
Jobs (UGB) <i>2005 City Economic Profile (1)</i>	3,215	4,670	3.7%	7,885
Jobs in TAZ group <i>Metro's Regional Forecast</i>	2,683	2,166	2.4%	4,849

*Per 2010 US Census

(1) **City of Molalla, Economic Profile Memorandum** (Feb. 16, 2005)

Data from Metro Regional Data Book, 2002, Oregon Population Research Center, E. D. Hovee & Company.

Molalla’s Economic Profile report forecasted 1,598 new households between 2003 and 2025. Based on this forecast, an average annual increase of 72.6 households was used to estimate 2010 and 2035 households.

Molalla’s Economic Profile report forecasted 4,110 new jobs between 2003 and 2025. Based on this forecast, an average annual increase of 186.8 households was used to estimate 2010 and 2035 households.

Analysis of City of Molalla Forecast: The 2035 Metro Gamma Forecast indicates weaker population growth than the city has seen over the last two decades in terms of actual number of people per year, as well as the average annual rate of growth. There is nothing to indicate to county staff that growth in Molalla would slow substantially in the future compared with historic growth (on average) with the exception of the fact that a buildable lands inventory completed in 2008 found a very limited supply of buildable residential land in the city’s UGB. However, as mentioned previously, this forecast analysis assumes that a rural city could possibly expand its UGB if it is deemed necessary to accommodate 20 years of growth. Thus, it appears that Molalla’s forecast was held artificially low because of the lack of developable residential land in the city.

Like the other rural cities, Molalla has been proactively seeking to attract more business investment to increase its economic base, including working with county economic development staff to identify and market industrial sites in the city, planning for changes in the downtown area, creating both an Urban Renewal District and an Enterprise Zone and working on improvements to make exiting industrial areas more buildable.

City representatives also report not only are there several developers expressing interest in subdividing and developing their properties with single family homes but there has been a recent uptick in single family home development (as evidenced by permits). Molalla remains an attractive place to live at a lower cost than the urban areas to the north.

An assessment of the TAZs immediately adjacent to the TAZ group that includes Molalla was completed, looking at projected growth and zoning in those areas. This assessment indicated that the amount of household growth allocated to three of these TAZs would not likely occur in that location, because of zoning restrictions on residential development. Therefore, it would be reasonable to expect that a portion of this growth allocated to these areas would actually occur in the city because of the limited availability of developable land in the rural, and particularly natural resource zones.

Adjustments to Molalla Forecast:

Based on the conclusion that the 2035 Gamma Forecast for the city was too low and the forecast to several rural areas near the city was too high given existing zoning, the following revisions were made to the 2035 Gamma Forecast (See Appendix D for map of TAZ locations).

Table 17. Forecast Revisions - Molalla

TAZ #	2035 Gamma Forecast Household Growth 2010-2035	Net Household Change	Adjusted Household Growth 2012-2035
Molalla TAZ Group (849,850,851,852,853)	1,516	507	2,023
918	83	(66)	17
920	334	(267)	67
921	248	(174)	74
Total	2,181	0	2,181

Source: Metro, Clackamas County

The resulting increase in growth in the City of Molalla is shown in the Tables 18 and 19, below. As shown, this forecast is more on-par with historic growth over the last two decades. These adjustments have been reviewed by city representatives.

Table 18. Revised Forecast – 2010 to 2035

City of Molalla	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Dwelling Units (UGB) <i>2005 City Economic Profile (1)</i>	2,579	1,817	2.5%	4,396
Households in City of Molalla <i>Coordinated Forecast</i>	2,874*	1,876	2.0%	4,750

Source: Metro, Clackamas County

Table 19. Historic and Projected Growth, City of Molalla

Year	Population	AAGR	Avg. annual increase
1960	1,501		
1970	2,005	2.9%	50
1980	2,992	4.1%	99
1990	3,683	2.1%	69
2000	5,738	4.5%	206
2010	8,108	3.5%	237
2035(revised)	13,400	2.0%	212

Source: US Census & Metro & Clackamas County

Extrapolating from this forecast for the 20-year planning horizon of 2012-2032 specified for this project yields the following for the City of Molalla:

2012 population: 8,532

2032 population: 12,760

SANDY

The Metro 2035 Gamma Forecast projected 2,310 new households between 2010 and 2035 in the TAZ group that includes the City of Sandy.

Table 20. Metro Gamma Forecast Households 2010 to 2035. Sandy TAZ Group¹⁴

2010 Existing	2035 Projection	Household Change
4,325	6,635	2,310

Assuming the City of Sandy captures 90% of this new growth, this projection results in a total of 2,079 new households in the city between 2010 and 2035 resulting in a total of approximately 5,682 households, or 15,230 people, in the city in 2035.⁵

The growth forecast suggested by Metro is compared to historic growth below. As suggested by this comparison, the forecast for approximately 15,230 people in Sandy by 2035 represents a lower than growth rates seen in the city over the last several decades and represents a 48% decrease from the average number of new people annually in the city during the last decade but a 74% increase of average growth for the previous three decades.

¹⁴ Includes TAZ#: 834,835,836,837,838,839

Table 21. Historic and Projected Population Growth, City of Sandy.

Year	Population	AAGR	Avg. annual increase
1960	1,147		
1970	1,544	3.0%	40
1980	2,905	6.5%	136
1990	4,152	3.6%	125
2000	5,385	2.6%	123
2010	9,570	6.0%	427
2035	15,230	1.9%	226

Source: US Census & Metro & Clackamas County

The most recent population forecast recently completed for the City of Sandy is found in the “City of Sandy, Urbanization Study” (2009). The forecast in the Urbanization Study, however, was completed using the “safe harbor” methodology described in OAR 660-024-0030(4) and ORS 195.034(B), which simply extrapolates a city’s future population based on its proportion of the county’s total population and is not trend or market based. As such this forecast is not necessarily a good comparison but is shown in the table below. Projected jobs growth is shown in the table for context.

Table 22.

City of Sandy	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Households (UGB) <i>2009 City Urbanization Study (1)</i>	3,741	1,445	1.3%	5,186
Households in City of Sandy <i>Metro’s Regional Forecast</i>	3,603	2,079	1.8%	5,682
Jobs				
Jobs (UGB) <i>2010 City TSP (2)</i>	4,490	2,035	1.5%	6,525
Jobs in TAZ group <i>Metro’s Regional Forecast</i>	3,181	3,449	3.0%	6,630

*Per 2010 US Census

(1) City of Sandy, Urbanization Study, January 2009. (ECONorthwest). This study forecasted 1,214 new households between 2008 and 2029. Based on this forecast, an average annual increase of 57.8 households was calculated and used to estimate 2010 and 2035 households. Note: In this study, the forecast for 2010 was 8,170 persons, 1,400 less than the Census reported for 2010.

(2) Sandy Transportation System Plan, April 2009. (Technical Memo #1, Plans Goals & Policies, page 15; and, Technical Memo #2, Existing Conditions and Future Needs). Sandy’s TSP (Fig. 4-1) forecasted 1,709 new jobs between 2008 and 2029. Based on this forecast, an average annual increase of 81.4 jobs was calculated and used to estimate 2010 and 2035 jobs.

Analysis of Sandy’s forecast:

Representatives from the City of Sandy indicated in an email dated 07/31/2012 that they believe they can and will continue to accommodate high population growth. Individual factors cited include:

- Strong historic population growth
- An attractive location with relatively inexpensive land for development
- A diverse economic base
- Infrastructure available or capacity of expand to accommodate more population growth
- Recent investments, including a new \$100 million state-of-the-art high school
- A willingness to consider expanding into the city’s existing urban reserve

(See Appendices A and B for more details)

County staff agrees that Sandy probably can and will attract higher population growth than is indicated by the 2035 Gamma Forecast. Furthermore, the Gamma Forecast projects a relatively large number of new households in the Government Camp area and other areas past Sandy on Hwy 26. Due to rural zoning in those areas, it is not likely the nearly 2,000 new households forecast by Metro for the area could actually be accommodated. It follows logically that these households, which would be inclined to move to this area, would actually end up in City of Sandy, where much more substantial residential development can occur.

Adjustments to Sandy Forecast:

The following adjustments were made to the 2035 Gamma Forecast. An initial adjustment of 1,000 households from TAZ #961 (which includes the Village at Mt Hood and Government Camp) was made, per the county’s and city’s request in September, 2012, and are reflected in forecasts and TAZ distributions adopted by Metro in November, 2012.

At the request of the city, further assessment was completed and an additional 330 households were re-allocated from TAZ #s 961 and 960, as noted below. (See Appendix D for map of TAZ locations)

Table 23. Revisions to Forecast - Sandy

TAZ #	2035 Gamma Forecast Household Growth 2010-2035	Initial Adjustment (Sept. 2012)		Second Adjustment (Jan. 2013)	
		Net Household Change	Adjusted Household Growth 2012-2035	Net Household Change	Adjusted Household Growth 2012-2035
Sandy TAZ Group (834,835,836,837,839)	2,310	1,000	3,310	330	3,640
961	2,249	(1,000)	1,249	(250)	999
960	400	0	400	(80)	320
Total	4,959	0	4,959	0	4,959

Source: Metro, Clackamas County

The resulting increase in growth in the City of Sandy is shown in the two tables below. As shown, this forecast is more on-par with historic growth rates and growth over the last decade. These revisions have been reviewed by city representatives.

Table 24. Revised 2035 Forecast - Sandy

City of Sandy	2010	Projected Growth 2010 - 2035	AAGR 2010-2035	2035
Households				
Households (UGB) <i>2009 City Urbanization Study</i>	3,741	1,445	1.3%	5,186
Households in City of Sandy <i>Coordinated Forecast</i>	3,606	3,521	2.8%	7,127

Table 25. Historic and Projected Growth, City of Sandy

Year	Population	AAGR	Avg. annual increase
1960	1,147	---	---
1970	1,544	3.0%	40
1980	2,905	6.5%	136
1990	4,152	3.6%	125
2000	5,385	2.6%	123
2010	9,570	6.0%	427
2035(revised)	19,100	2.8%	381

Source: US Census & Metro & Clackamas County

Extrapolating from this forecast for the 20-year planning horizon of 2012-2032 specified for this project yields the following for the City of Sandy:

2012 population: 10,322

2032 population: 17,960

Summary

The following is a summary of the 20-year coordinated population projections that result from this analysis and the collaborative efforts of the county, metro and the five rural cities in Clackamas County.

Table 26. Summary of 2012-2032 Projections by City

City	2012 population	2032 population	Net growth 2012-2032	AAGR 2012-2032
Barlow	136	146	10	0.4%
Canby	16,820	26,730	9,910	2.3%
Estacada	2,845	4,345	1,500	2.1%
Molalla	8,532	12,760	4,228	2.0%
Sandy	10,322	17,960	7,628	2.8%

Source: US Census, Metro, Clackamas County

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APPENDIX B: SUMMARY OF NATIONAL HOUSING TRENDS

The first step in a housing needs assessment is to identify relevant national, state, and local demographic and economic trends and factors that affect local housing markets. This appendix summarizes trends in national housing markets.

The evaluation of housing trends that follows is based on previous research conducted by ECONorthwest for other housing needs studies as well as new research to update the evaluation of trends that may affect housing mix.

Overview

Previous work by ECO and conclusions from The State of the Nation's Housing, 2006 report from the Joint Center for Housing Studies of Harvard University inform the national, state, and local housing outlook for the next decade. The Joint Center for Housing Studies of Harvard University's The State of the Nation's Housing, 2006 report summarizes the national housing outlook for the next decade as follows:

“The housing boom came under increasing pressure in 2005. With interest rates rising, builders in many states responded to slower sales and larger inventories by scaling back on production. Meanwhile, the surge in energy costs hit household budgets just as higher interest rates started to crimp the spending of homeowners with adjustable mortgages.

Nevertheless, the housing sector continues to benefit from solid job and household growth, recovering rental markets, and strong home price appreciation. As long as these positive forces remain in place, the current slowdown should be moderate. Over the longer term, household growth is expected to accelerate from about 12.6 million over the past ten years to 14.6 million over the next ten. When combined with projected income gains and a rising tide of wealth, strengthening demand should lift housing production and investment to new highs. But with the economy generating so many low-wage jobs and land use restrictions driving up housing costs, today's widespread affordability problems will also intensify.”

This evaluation presents a mixed outlook for housing markets and for homeownership, and points to the significant difficulties low-income and moderate-income households face in finding affordable housing. The following sections describe specific trends in more detail.

Long run trends in home ownership and demand

Aside from modest pullbacks in starts and sales, the recent housing boom lasted for 13 consecutive years (1992-2005). By comparison, the next-longest expansion since 1970 with no significant drop in starts lasted just five years. In addition to the record-setting length of this expansion, this is also the first time in postwar history when the housing sector did not lead the economy into recession. While strength in early 2005 pushed most national housing indicators

into record territory, the market began to soften and sales slowed in many areas in the latter half of 2005. After 12 successive years of increases, the national homeownership rate slipped to 68.9 percent in 2005.

The Joint Center for Housing Studies concludes that the housing boom of the past 13 years established a momentum that should keep homeownership rates headed higher. If conditions that favor homeownership continue and the momentum persists, as many as 11.0 million more households will join the homeowner ranks between 2000 and 2010. While further homeownership gains are likely during this decade, they are not assured. Additional increases depend, in part, on finding ways to ease the difficulties faced by low and moderate income households in purchasing a home. It also rests on whether the conditions that have led to homeownership growth can be sustained.

While averaging more than 1.9 million units annually since 2000, housing starts and manufactured home placements appeared to have been roughly in line with household demand. In 2005, with sales slowing, but building activity steady despite widespread pullbacks, the inventory of both new and existing homes was much higher than in recent years. Nevertheless, according to the Joint Center for Housing Studies, the over 5-month supply of homes on the market in March 2006 was still less than a 6-month supply, and it would have to stay at these high levels for a year or more to create anywhere near a buyer's market.

The Joint Center for Housing Studies indicates that demand for new homes could total as many as 20 million units nationally between 2005 and 2015. The vast majority of these homes will be built in lower-density areas where cheaper land is in greater supply. People and jobs have been moving away from central business districts (CBDs) for more than a century: the number of the country's largest metropolitan areas with more than half of their households living at least 10 miles from the CBD has more than tripled from 13 in 1970 to 46 in 2000; in six metropolitan areas more than a fifth of households live at least 30 miles out.

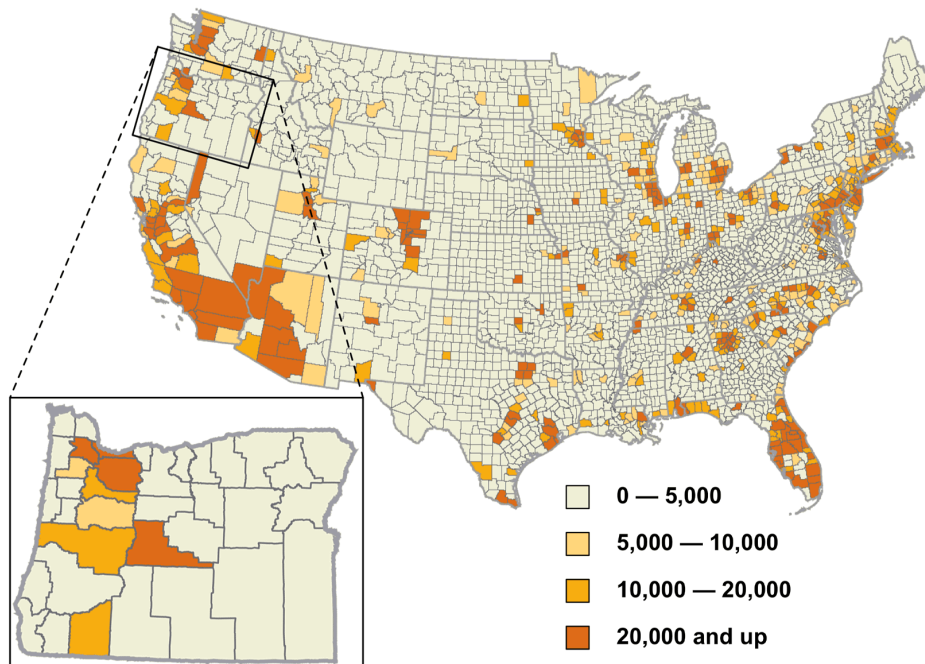
The Joint Center for Housing Studies also indicates that demand for higher density housing types exists among certain demographics. They conclude that because of persistent income disparities, as well as the movement of the echo boomers into young adulthood, housing demand may shift away from single-family detached homes toward more affordable multi-family apartments, town homes, and manufactured homes. Supply-side considerations, however, outweigh these demographic forces.

Recent trends in home ownership and demand

In 2005, many households took advantage of rising yet still attractive interest rates to participate in hot markets in the Northeast and West. While the national homeownership rate decreased slightly, rates in some regions and among some groups continued to increase. Households of all ages, races, and ethnicities participated in the home-buying boom. Because of strong activity in the early part of the year, house prices, residential investment, and home sales all set records in 2005. Regionally, using housing permits issued as a proxy for new home ownership, Clackamas County is among the more robust housing markets in the nation and in

Oregon, issuing between 20,000 or more building permits over the 1994-2003 period (Figure B-1).

Figure B-1. Housing permits issued by county, U.S., 1994-2003



Source: Census Bureau, Construction Statistics, Building Permits by County. As cited in *The State of The Nation's Housing, 2005*, The Joint Center for Housing Studies of Harvard University, p. 9

Demographic trends in home ownership

According to the Joint Center for Housing Studies, immigration will play a key role in accelerating household growth over the next 10 years. Between 1991 and 2003, the minority share of first-time homebuyers increased from 22 percent to 35 percent, of new homebuyers from 13 percent to 24 percent, and of home remodelers from 12 percent to 19 percent. The children of immigrants who arrived in the 1980s and 1990s now account for 21 percent of children between the ages of 1 and 10, and 15 percent of those between the ages of 11 and 20. Members of this generation will probably earn more than their parents becoming an even greater source of housing demand in the coming decades.

The Joint Center for Housing Studies suggests that an aging population, and of baby boomers in particular, will drive changes in the age distribution of households in all age groups over 55 years. Baby boomers, however, do not appear to be in a rush to downsize. While more than half of the oldest boomers (aged 45 to 54 in 2000) moved during the 1990s, they typically traded up to newer homes with more amenities. Second home demand among upper-income homebuyers of all ages also continues to grow.

People prefer to remain in their community as they age.²⁵ The challenges that seniors face as they age in continuing to live in their community include: changes in healthcare needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.²⁶ Not all of these issues can be addressed through housing or land-use policies. Communities can address some of these issues through adopting policies that:

- Diversify housing stock to allow development of smaller, easier to maintain houses in single-family zones, such as single story townhouses, condominiums, and apartments.
- Allow commercial uses in residential zones, such as neighborhood markets.
- Allow a mixture of housing densities and structure types in single-family zones, such as single-family detached, single-family attached, condominiums, and apartments.
- Promote the development of group housing for seniors that are unable or choose not to continue living in a private house. These facilities could include retirement communities for active seniors, assisted living facilities, or nursing homes.
- Design public facilities that can be used by seniors with limited mobility. For example, design and maintain sidewalks so that they can be used by people in wheel chairs or using walkers.

Home rental trends

Over the longer term, the Joint Center for Housing studies expects rental housing demand to grow by 1.8 million households by 2015 even if the national homeownership rate continues to increase. Minorities will be responsible for nearly all of this increased demand, although demographics will also play a role. Growth in young adult households will increase demand for moderately priced rentals, in part because echo boomers will reach their mid-20s after 2010. Meanwhile, growth among those between the ages of 45 and 64 will lift demand for higher-end rentals. Given current trends in home prices and interest rates, conditions will become increasingly favorable for rental markets in the coming years.

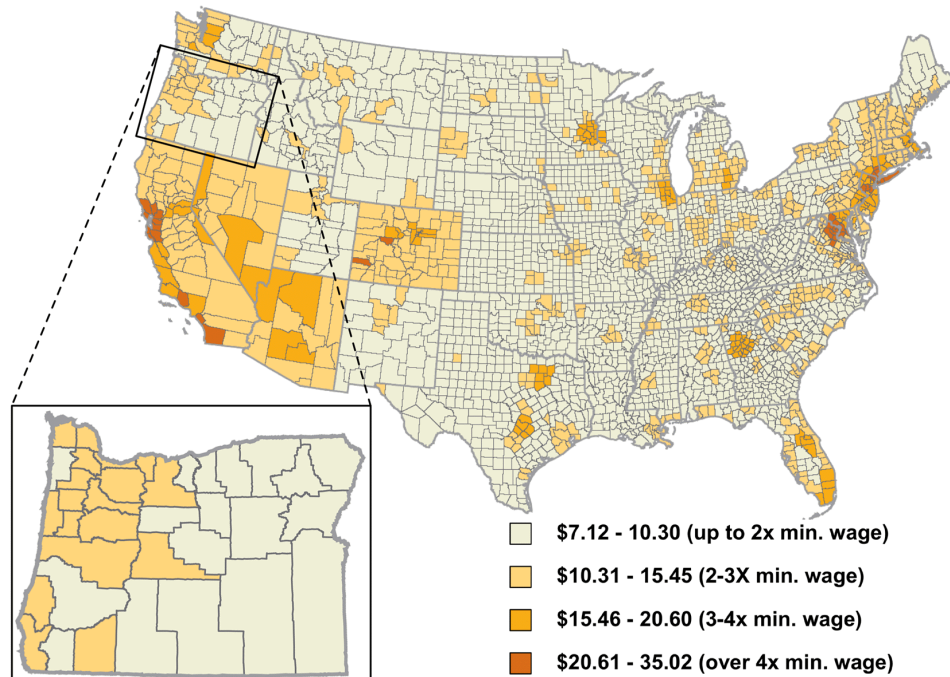
Despite only modest increases in rents in recent years, growing shares of low- and moderate-wage workers, as well as seniors with fixed incomes, can no longer afford to rent even a modest two-bedroom apartment anywhere in the country. In 2006, one in three American households spent more than 30 percent of income on housing, and more than one in seven spent upwards of 50 percent. The national trend towards increased rent to income ratios is mirrored regionally in that a salary of two to three times minimum wage is needed to afford rents in Clackamas County (Figure B-2).

²⁵ A survey conducted by the AARP indicates that 90% of people 50 years and older want to stay in their current home and community as they age. See <http://www.aarp.org/research>.

²⁶ “Aging in Place: A toolkit for Local Governments” by M. Scott Ball.

According to the Joint Center for Housing Studies, these statistics understate the true magnitude of the affordability problem because they do not capture the tradeoffs people make to hold down their housing costs. For example, these figures exclude the 2.5 million households that live in crowded or structurally inadequate housing units. They also exclude the growing number of households that move to locations distant from work where they can afford to pay for housing, but must spend more for transportation to work. Among households in the lowest expenditure quartile, those living in affordable housing spend an average of \$100 more on transportation per month than those who are severely housing cost-burdened. With total average monthly outlays of only \$1,000, these extra travel costs amount to 10 percent of the entire household budget.

Figure B-2. Hourly wages needed to afford rent by county, U.S., 2004



Source: HUD's Fair Market Rents for 2004, based on methodology developed by the National Low Income Housing Coalition. As cited in *The State of The Nation's Housing, 2005*, The Joint Center for Housing Studies of Harvard University, p. 4
 Notes: Federal minimum wage in 2004 was \$5.15 per hour. Hourly wage needed to afford the Fair Market Rent on a modest 2-bedroom unit assumes paying 30% of income on housing and working 40 hours a week for 52 weeks a year.

Trends in housing affordability

The record breaking housing prices, residential investment, and home sales of 2005 mentioned earlier, although indicative of strong housing demand nationally, have negative implications for lower income populations and first time home buyers. Higher short-term interest rates made it more difficult for first-time buyers to break into the market. Subprime loans may help many low-income buyers access credit, but their special terms and higher rates put some of the buyers at risk of foreclosure. The concentration of subprime loans in low-income minority neighborhoods puts some of these communities at risk of widespread foreclosure. With low-wage jobs increasing and wages for those jobs stagnating, affordability problems will persist

even as strong fundamentals lift the trajectory of residential investment. While the Harvard report presents a relatively optimistic outlook for housing markets and for homeownership, it points to the significant difficulties low- and moderate-income households face in finding affordable housing, and preserving the affordable units that do exist.

Trends in Housing Characteristics

The U.S Bureau of Census Characteristics of New Housing Report presents data that show trends in the characteristics of new housing for the nation, state, and local areas. Several trends in the characteristics of housing are evident from the New Housing Report:

- Larger single-family units on smaller lots. Between 1994 and 2005 the median size of new single-family dwellings increased 17 percent, from 1,900 sq. ft. to 2,227 sq. ft. nationally and 24 percent in the western region from 1,810 sq. ft. to 2,236 sq. ft. Moreover, the percentage of units under 1,200 sq. ft. nationally decreased from 5 percent in 1999 to 4 percent in 2005. The percentage of units greater than 3,000 sq. ft. increased from 16 percent in 1999 to 23 percent of new single-family homes sold in 2005. In addition to larger homes, a move towards smaller lot sizes is seen nationally. Between 1994 and 2005 the percentage of lots under 7,000 sq. ft. increased 4 percent from 29 percent of lots to 33 percent of lots. A corresponding 8 percent decrease in lots over 11,000 sq. ft. was seen.
- Larger multi-family units. Between 1994 and 2005, the median size of new multi-family dwelling units increased. The percentage of multi-family units with more than 1,200 sq. ft. increased from 11 percent to 36 percent in the western region and from 11 percent to 43 percent nationally. Moreover, the percentage of units with less than 600 sq. ft. decreased from 6 percent to 2 percent in the western region and from 4 percent to 1 percent nationally.
- More household amenities. Between 1994 and 2005 the percentage of single-family units built with amenities such as central air conditioning, fireplaces, 2 or more car garages, or 2 or more baths all increased. The same trend in increased amenities was seen in multiple family units.

A clear linkage exists between demographic characteristics and housing choice. This is more typically referred to as the linkage between life-cycle and housing choice and is documented in detail in several publications. Analysis of data from the Public Use Microsample (PUMS) in the 2000 Census describes the relationship between selected demographic characteristics and housing choice. Key relationships identified through this data include:

- Homeownership rates increase as income increases;
- Homeownership rates increase as age increases;
- Choice of single-family detached housing types increases as income increases;

- Renters are much more likely to choose multi-family housing types than single-family;
and
- Income is a stronger determinate of tenure and housing type choice for all age categories.

APPENDIX C: HCS HOUSING NEEDS MODEL

The purpose of the housing needs analysis is to determine whether Sandy has sufficient land within the Sandy Urban Growth Boundary (UGB) to accommodate expected housing needs for the next twenty-years. This appendix provides an overview of the HCS model and the results from ECO's preliminary model runs.

The HCS Model

In 2009, ECONorthwest used the HCS Housing Needs Model to address ORS 197.296 requirements. This appendix has two sections:

- **Detailed methodology** provides a complete description of the methodology for the development of the model.
- **Preliminary results** provide a summary of the key output from the preliminary model runs.

Detailed methodology²⁷

Background and assumptions in the model

ECONorthwest used the HCS Housing Needs Model to address ORS 197.296 requirements. The model considers the current and projected demographics, existing housing inventory, and regional tenure choices, to arrive at the number of needed housing units by tenure, price point, and housing type.

The methodology that the model uses to calculate housing needs is driven by the demographics of the study area rather than past trends in housing production. In other words, the model assumes that people with similar demographic characteristics will make similar housing choices. The model uses demographic data in conjunction with current regional housing tenure data to calculate the housing needs for that study area. The model was designed to use census data as a major input.

Two demographic variables—age of head of household and household income—demonstrated significantly stronger correlation with housing tenure than other variables (including household size); they were consequently selected as the primary demographic variables for the model. In addition, the model uses household income as the key variable in determining the affordability component of housing needs.

²⁷ This section summarizes the methodological description that accompanies the HCS Housing Needs Model. That document (A Housing and Land Needs Analysis Methodology and Model, Richard Bjelland, State Housing Analyst, OHCS) is available online at: http://www.ohcs.oregon.gov/OHCS/PPR_HousingNeedsModel.shtml.

The model assumes that the demographic and income structure of a study area will not significantly change over the planning period, though it does account for growth in population. The model also assumes that housing need for a study area can be derived from the actual cohort tenure data of a larger regional area. While the local supply of rental versus ownership housing may not represent housing need for that locality, it is assumed that on a larger regional basis, need and supply are in balance. The model compares local level data to regional data as one method of deriving need.

A major assumption in the model is that housing need is defined by cohort tenure choices and is equivalent to the actual cohort tenure data found within a large regional area. While the local supply of rental versus ownership housing may not be in equilibrium with tenure need in some markets, it is assumed that on a larger regional basis it is in equilibrium. The initial version of the model used all of Oregon as the regional area for parameter calculation and assignment.

The model defined that larger regions are different for some communities than for others because significantly different housing choices are made in urban communities than in rural communities. To account for these differences in choice, three versions of the model are available—Version U for communities that are either urban, college oriented, or resort oriented; Version M for rural communities between the size of 6,750 and 22,500; and Version S for rural communities under 6,750 in population. The analysis in this document is based on Version U.

The model examines housing and land needs for two time periods: current and future. In this case, the current housing needs are calculated for 2006 and the future needs are estimated for 2026. The model has an additional module to estimate buildable land needs that was not used in this analysis.

Current Housing Status Analysis

The model first calculated the total number of housing units needed for the planning period using population estimates, number of people in group quarters, number of occupied housing units and/or number of households, average household size, and desired vacancy rate for the study area. Price points for rental and ownership units were determined as follows:

- For rental units, housing costs were assumed to take no more than 30 percent of the household's income. Utilities were not included in rent.
- For owned units, three price points were selected. The model assumes that home owners will pay between 2.5 and 3 times their annual income for ownership units; thus, 2.5 times annual income was used as a low estimate and 3 times annual income as a high estimate. The average historical interest rate was used to arrive at a third ownership price range.

The next step in the model accounts for the fact that some households choose to live in a unit at a lower price point than they might be able to afford. This removes a unit from the supply of units at the lower price point. The model adjusts for these choices with an estimate of the percent of households that will choose to rent or buy a home at a lower price point than they might otherwise be able to afford. The model refers to this as an *out factor*. The user of the model estimates the out factor appropriate for the study area.

Recipients of tenant-based subsidies (such as Section 8 vouchers) require an additional off-setting variable: an estimate of the number of units which are rented to households that can only afford those units because they receive tenant-based subsidies. These households tend to occupy units in the lower price points.

The last step in the current housing status portion of the model requires the user to develop data on their current housing inventory for input into the *current inventory of dwelling units* template. The existing inventory of units must be categorized into the five housing types established for the model. Each of these housing types can be owner or renter occupied.

The five classifications of dwelling units are:

- Single-family units—either site built or manufactured single-family dwellings on their own lot
- Manufactured dwelling park unit—a single-family dwelling unit located in a rental park
- Duplex unit—a two-family dwelling unit located on its own lot
- Tri-plex or Quad-plex unit—a three or four-family dwelling unit
- 5+ Multi-family unit—dwelling units in buildings with 5 or more units per building

Future housing status analysis

In order to determine the future housing needs for a projected population, users of the model must estimate the demographic composition of that population and make some assumptions regarding their housing type choices by price point. These assumptions include future age-income cohort percentages and future out factors. Once the user has completed the Current Inventory of Dwelling Units template and the Housing Units Planned allocation, the model calculates the number of new units needed by price point, tenure, and housing type to bring the market into balance with the projected need at the end of the planning period. The model summarizes the new needs by housing type, which can then be used by the community to drive their land use planning and housing policy decisions.

Model output

This section presents summary tables from a model run ECO completed. This model assumes that the future housing mix will be approximately 75 percent single-family housing types (including single-family detached, single-family attached, and manufactured homes) and 25 percent multi-family housing types (including duplexes, tri- and quad-plex, and five or more units).

The following tables summarize the output from the model run. The numbers in parentheses denote a *deficit* of units.

Table C-1 shows current housing needs in Sandy based on 2007 data input. The results suggest that Sandy has a surplus of units in the lowest price categories as well as in some of the mid-price categories. The results also show a current deficit of units at the higher price points.

Table C-1. Current housing needs, Sandy, 2007

Rental				Ownership			
Rent	Current Supply/ (Deficit)	% of Need Met	Cumulative Units Needed	Price	Current Supply/ (Deficit)	% of Need Met	Cumulative Units Needed
0 - 199	3	103.4%	3	<56.7k	201	247.5%	201
200 - 429	(5)	97.3%	(3)	56.7k<85k	(150)	49.2%	52
430 - 664	(71)	80.4%	(73)	85k<113.3k	(115)	62.0%	(63)
665 - 909	86	134.9%	12	113.3k<141.7k	274	172.6%	211
910 - 1149	(126)	48.3%	(114)	141.7k<212.5k	175	127.0%	386
1150+	(26)	78.9%	(140)	212.5k+	(267)	49.8%	119

Source: HCS Housing Needs Model Run

Table C-2 shows projected housing needs for Sandy for the 2009-2029 period. The model output shows Sandy will need a total of 1,577 dwelling units over the 20-year planning period.²⁸ The model forecasts a tenure split of about 56 percent owner-occupied dwellings and 44 percent renter-occupied dwellings. Thus, the model predicts a much lower ownership rate than the 69 percent observed in the 2000 Census.

With respect to housing type mix, the model predicts the City will need about 74 percent single-family housing types (including single-family detached, single-family attached, and manufactured dwellings on lots), and 26 percent multi-family housing types (duplexes, tri- and quad-plexes, and structures with 5 or more dwellings). The model predicts a surplus of 83 manufactured dwelling units in parks.

²⁸ Note that this figure is significantly higher than the needed units calculated by ECONorthwest in 2009. ECO was unable to determine how the HCS model calculated future unit needs. To be conservative, the land needs estimates in this study are built from the ECO estimate of needed units.

Table C-2. Future housing needs, Sandy, 2009-2029

Rent	Needed Units	Single Family Units	Manufactured Dwelling Park Units	Duplex Units	Tri-Quadplex Units	5+ Multi-Family Units	Total Units
New Rental Units Needed							
0 - 194	(48)	13	(6)	5	(10)	(50)	(48)
195 - 422	(108)	4	(30)	18	(25)	(75)	(108)
423 - 655	(191)	(54)	(72)	27	(16)	(76)	(191)
656 - 897	(23)	(73)	(35)	50	17	18	(23)
898 - 1132	(232)	(187)	0	(11)	10	(44)	(232)
1133 +	(78)	(91)	0	3	7	3	(78)
Totals	(680)	(388)	(143)	92	(17)	(224)	(680)
Percentage	---	57.1%	21.0%	-13.5%	2.5%	32.9%	100.0%
New Ownership Units Needed							
<61k	142	(11)	190	(37)	0	0	142
61k<93.1k	(279)	(228)	29	(80)	0	0	(279)
93.1k<125k	(265)	(213)	2	(54)	0	0	(265)
125k<156.7k	110	157	5	(52)	0	0	110
156.7k<236.3k	(107)	(78)	0	(29)	0	0	(107)
236.3k+	(498)	(498)	0	0	0	0	(498)
Totals	(897)	(871)	226	(252)	0	0	(897)
Percentage	---	97.1%	-25.2%	28.1%	0.0%	0.0%	100.0%
Total New Rental and Ownership Units							
Totals	(1,577)	(1,259)	83	(160)	(17)	(224)	(1,577)
Percent of Total Units	---	79.8%	-5.3%	10.1%	1.1%	14.2%	100.0%

Source: HCS Housing Needs Model

Note: Price points are in 1999 dollars and are not adjusted for inflation.

APPENDIX D: SUMMARY OF NATIONAL AND STATE ECONOMIC TRENDS

This appendix summarizes national, state, regional, county, and local trends affecting Sandy. It presents a socioeconomic profile of Sandy (relative to the Greater Portland region, Clackamas County and Oregon) and describes trends that will influence the potential for economic growth in Sandy. This chapter covers recent and current economic conditions in the City, and forecasts from the State Employment Department for employment growth in Clackamas County. This appendix meets the intent of OAR 660-009-0015(1).

National conditions

Economic development in Sandy over the next 20 years will occur in the context of long-term national trends. The most important of these trends includes:

- **The aging of the baby boomer generation, accompanied by increases in life expectancy.** The number of people age 65 and older will double by 2050, while the number of people under age 65 will grow only 12 percent. The economic effects of this demographic change include a slowing growth of the labor force, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.²⁹
- **The growing importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. In addition, the percentage of high school graduates that attend college will increase.³⁰
- **Continued growth in global trade and the globalization of business activity.** With increased global trade, both exports and imports rise. Faced with increasing domestic and international competition, firms will seek to reduce costs and some production processes will be outsourced offshore.³¹
- **Innovation in electronics and communication technology, and its application to production.** Advancements in communication and manufacturing technology increase

²⁹ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2006, *The 2006 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 1; Congressional Budget Office, 2006, *The Budget and Economic Outlook: Fiscal Years 2007 to 2016*, January; and Congressional Budget Office, 2005, *The Long-Term Budget Outlook*, December.

³⁰ Daniel E. Hecker, "Occupational Employment Projections to 2014," *Monthly Labor Review* 128: 11, November, pp. 70-101.

³¹ Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69.

worker productivity. There will be growth in the production of both services and goods, but the economy's emphasis on services will increasingly dominate.³²

- **Continued shift of employment from manufacturing and resource-intensive industries to the service-oriented sectors of the economy.** Increased worker productivity and the international outsourcing of routine tasks lead to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in professional and business services, healthcare and social assistance, and other service industries. Construction employment will also grow.³³
- **The combination of rising energy costs, strong energy demand, and requirements to reduce emissions and increase use of renewable fuels.** Output from the most energy-intensive industries will decline, but growth in the population and in the economy will increase the total amount of energy demanded. Energy sources will diversify and the energy efficiency of automobiles, appliances, and production processes will increase.³⁴
- **Continued westward and southward migration of the U.S. population.** Although there are some exceptions at the state level, a 2006 U.S. Census report documents an ongoing pattern of interstate population movement from the Northeast and Midwest to the South and West.³⁵
- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. Increases in the population and in household incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.³⁶

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2001 following the collapse of Internet stocks and the attacks of September 11. The resulting recession caused Oregon's employment in the Information Technology and high-tech

³² Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69.

³³ Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69; and Daniel E. Hecker, "Occupational Employment Projections to 2014," *Monthly Labor Review* 128: 11, November, pp. 70-101.

³⁴ Energy Information Administration, 2006, *Annual Energy Outlook 2006 with Projections to 2030*, U.S. Department of Energy, DOE/EIA-0383(2006), February.

³⁵ Marc J. Perry, 2006, *Domestic Net Migration in the United States: 2000 to 2004*, Washington, DC, Current Population Reports, P25-1135, U.S. Census Bureau.

³⁶ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

Manufacturing industries to decline. Employment in these industries has partially recovered, however, and they will continue to play a significant role in the national, state, and local economy over the long-term. This report takes a long-term perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-term national business cycles on employment or economic activity.

State Trends

State and regional trends will also affect economic development in Sandy over the next 20 years.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration from other states, especially California and Washington. According to information from the Portland State University Population Research Center, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2006. Oregon had more than 595,000 more in-migrants than out-migrants during the period 1990-2006, accounting for 70 percent of Oregon's population growth over the period. The share of population growth from in-migration was higher during the 1900's (73 percent of population growth) than for the 2000-2006 period (65 percent of population growth).
- **Tightening of labor market as a result of retiring workers.** As the baby boomers reach retirement age over the next two decades, the State may have a scarcity of qualified workers. In the next decade, the State projects that there will be almost twice as many job openings resulting from retirements compared to openings resulting from creation of new jobs. The sectors with the most employment and the largest share of employees 55 years or older include: Education Services; Real Estate; Transportation and Warehousing; Health Care and Social Assistance; Public Administration; and Agriculture, Forestry, Fishing, and Hunting. The State expects little or no growth in Manufacturing employment over the next decade, but expects that retirements will create demand for employees in Manufacturing.³⁷
- **Concentration of population and employment in the Willamette Valley.** Nearly 70 percent of Oregon's population lives in the Willamette Valley. About 10 percent of Oregon's population lives in Southern Oregon and 8 percent lives in Central Oregon. Employment growth generally follows the same trend as population growth. Employment growth varies between regions even more, however, as employment reacts more quickly to changing economic conditions. Total employment increased in each of the state's regions over the period 1970-2004 but over 70 percent of Oregon's employment was located in the Willamette Valley over the period 1970-2004.
- **Shift from natural resource-based to high-tech industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and

³⁷ Oregon Employment Department Workforce Analysis Section, *Will Oregon Have Enough Workers?*, 2007

concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments).

- **Change in the type of industries in Oregon.** As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service industries increased from its 1970s average of 19 percent to 30 percent in 2000, while employment in Manufacturing declined from an average of 18 percent in the 1970s to an average of 12 percent in 2000.
- **Continued lack of diversity in the State Economy.** While the transition from Lumber and Wood Products manufacturing to high-tech manufacturing has increased the diversity of employment within Oregon, it has not significantly improved Oregon's diversity relative to the national economy. Oregon's relative diversity has historically ranked low among states. Oregon ranked 35th in diversity (1st = most diversified) based on Gross State Product data for 1963–1986, and 32nd based on data for the 1977–1996 period.³⁸ An analysis from 2007 ranked Oregon 31st.³⁹ These rankings suggest that Oregon is still heavily dependent on a limited number of industries. Relatively low economic diversity increases the risk of economic volatility as measured by changes in output or employment.

The changing composition of employment has not affected all regions of Oregon evenly. Growth in high-tech and Services employment has been concentrated in urban areas of the Willamette Valley. The brunt of the decline in Lumber & Wood Products employment was felt in rural Oregon, where these jobs represented a larger share of total employment and an even larger share of high-paying jobs than in urban areas.

Overview of economic conditions in the Greater Portland region, Clackamas County and Sandy

Future economic growth in Sandy will be affected in part by demographic and economic trends in the City and surrounding region. A review of historical demographic and economic trends provides a context for establishing a reasonable expectation of future growth in Sandy. In addition, the relationship between demographic and economic indicators such as population and employment can help form judgments about future trends and resulting economic conditions. This section addresses the following trends in Sandy: personal income, employment, and business activity.

³⁸ LeBre, Jon. 1999. "Diversification and the Oregon Economy: An Update." *Oregon Labor Trends*. February.

³⁹ CFED, 2007, The Development Report Card for the States, <http://www.cfed.org>.

Population characteristics

Population growth in Oregon tends to follow economic cycles. Historically, Oregon’s economy is more cyclical than the nation’s, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. Oregon grew more rapidly than the U.S. in the 1990s (which was generally an expansionary period) but lagged behind the U.S. in the 1980s. Oregon’s slow growth in the 1980s was primarily due to the nationwide recession early in the decade.

Oregon’s population growth regained momentum beginning in 1987, growing at annual rates of between 1.4 percent and 2.9 percent between 1988 and 1996. Population growth for Oregon slowed in 1997, to 1.1 percent statewide, the slowest rate since 1987. Between 2000 and 2005 the rate of population growth in Oregon increased slightly to 1.2 percent annually.

Table D-1 shows population over the 1980-2010 period for the U.S., Oregon, Portland-Vancouver-Hillsboro MSA⁴⁰, Clackamas County, and Sandy. Over the 1980 to 2010 period, the Greater Portland region grew at a faster rate than Oregon at an average annual rate of 1.7 percent, adding 884,467 residents over the 30-year period. Clackamas County grew at an average annual rate of 1.5 percent, adding 134,081 residents over the 30-year period. Sandy grew by an average of 4.1 percent annually and added 6,665 residents over the 30-year period.

Table D-1. Population in the U.S., Oregon, Portland-Vancouver-Hillsboro MSA, Clackamas County, and Sandy, 1980-2010

	Population				Change 1980 - 2010		
	1980	1990	2000	2010	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	308,745,538	82,199,733	36%	1.0%
Oregon	2,639,915	2,842,321	3,421,399	3,831,074	1,191,159	45%	1.2%
Portland-Vancouver-Hillsboro MSA	1,341,542	1,523,741	1,927,881	2,226,009	884,467	66%	1.7%
Clackamas County	241,911	278,850	338,391	375,992	134,081	55%	1.5%
Sandy	2,905	4,152	5,385	9,570	6,665	229%	4.1%

Source: U.S. Census

Note: The Greater Portland region (Portland-Vancouver-Hillsboro MSA) includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington

Oregon’s population is also related to economic conditions in other states—most notably, in California. During downturns in California’s economy, people leave the state for opportunities in Oregon and elsewhere. As California’s economy recovers, the population exodus tapers off. Such interstate migration is a major source of population change.

⁴⁰ This report refers to the Portland-Vancouver-Hillsboro MSA as either the Greater Portland region or the Portland MSA.

According to a U.S. Census study, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2004.⁴¹ According to information from the Portland State University Population Research Center, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) of more than 595,000 people during the period 1990-2006, which accounted for 70 percent of Oregon's population growth over the period. The share of population growth from in-migration was higher during the 1900's (73 percent of population growth) than for the 2000-2006 period (65 percent of population growth). The Oregon Employment Department, as published in May of 2014 summarized the current Oregon migration outlook as follows:

“Following a dramatic decline in gains from migration during the recessionary years of 2007 to 2009, an increasing number of people have moved to Oregon during the past three years. Net migration increased from 14,027 in 2012 to 23,280 (+66%) in 2013. While net in-migration increased, natural increase stayed roughly the same, at about 12,000. This means net migration gains made up about two-thirds of Oregon's 2013 population growth. The combination of natural increase and net in-migration (+35,300) led to the largest increase in population since 2008.

Through 2035, average annual births per 1,000 people are expected to slightly decrease (from 12 to 11), and deaths are projected to slightly increase (from 9 to 10). Thus, at least through 2035, the OEA expects there to be a natural increase in population, but at a slower rate than was normal in the past. Annual net migration gains are expected to hold roughly steady during this time period (at roughly 9 per 1,000 people), and possibly drop as we approach 2035. This means net migration gains will account for most of Oregon's growth in the future.”

The Oregon Department of Motor Vehicles collects data on out-of-state driver licenses surrendered by applicants for Oregon licenses. These data provide an indicator of the source of Oregon's in-migration. During the period 1999-2005, over 30 percent of surrendered licenses were from California and approximately 17 percent were from Washington. All other states each accounted for less than 5 percent of the surrendered licenses.⁴² The DMV also collects data on Oregon driver licenses surrendered in other states. These data indicate that Washington and California are the top destinations for Oregon's out-migrants.⁴³

The *1999 Oregon In-migration Study* found that migrants to Oregon tend to have the same characteristics as existing residents, with some differences—recent in-migrants to Oregon are, on average, younger and more educated, and are more likely to hold professional or managerial jobs, compared to Oregon's existing population. The race and ethnicity of in-migrants generally mirrors Oregon's established pattern, with one exception: Hispanics make up more than 7 percent of in-migrants but only 3 percent of the state's population. The number-one reason cited

⁴¹ Marc J. Perry, 2006, *Domestic Net Migration in the United States: 2000 to 2004*, Washington, DC, Current Population Reports, P25-1135, U.S. Census Bureau.

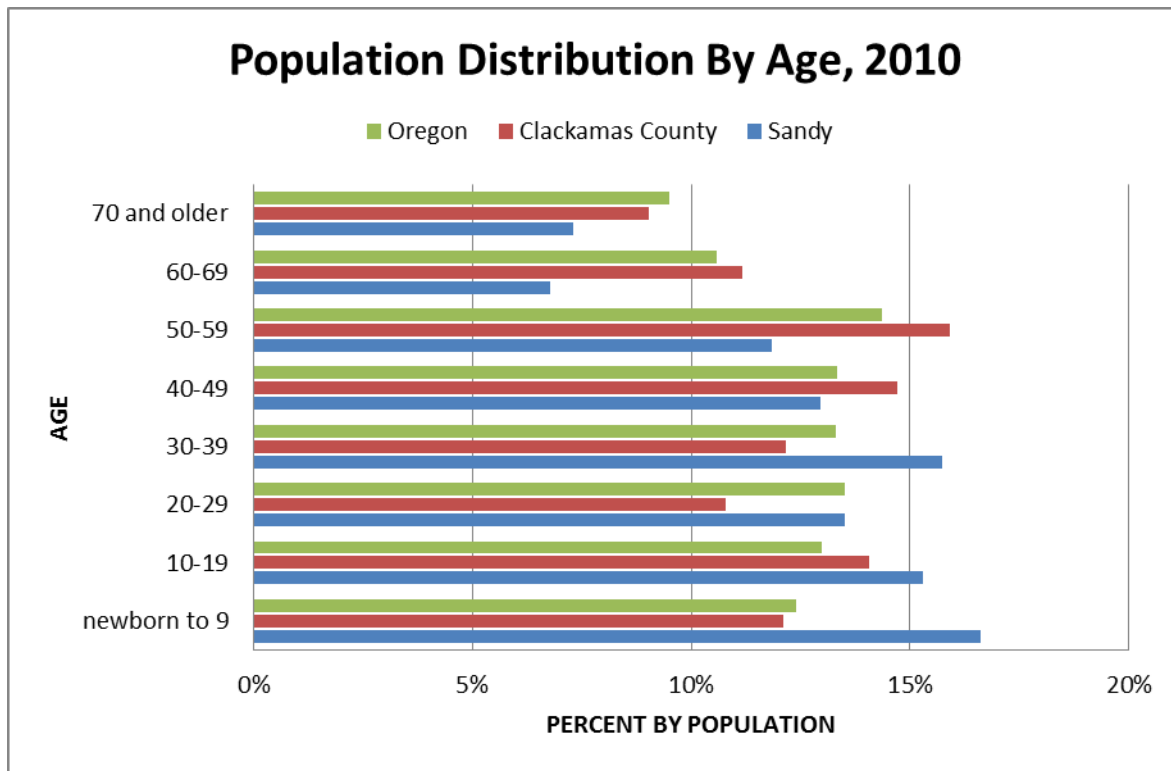
⁴² See Oregon Department of Motor Vehicles, “Driver Issuance Statistics,” http://www.oregon.gov/ODOT/DMV/news/driver_stats.shtml, accessed May 25, 2006.

⁴³ For a discussion of the DMV data, see Ayre, A, 2004, *People Moved to Oregon Despite Recession*, Oregon Employment Department, July.

by in-migrants for coming to Oregon was family or friends, followed by quality of life and employment.⁴⁴

Figure D-1 shows the populations of Oregon, Clackamas County, and Sandy by age for 2010. Sandy has a greater proportion of its population less than 40 years old than Oregon and Clackamas County, especially residents under 19 years. Sandy has fewer residents for every age group over 40 compared to the County and State averages.

Figure D-1. Population distribution by age, Oregon, Clackamas County, and Sandy, 2010



Source: U.S. Census, 2010

Table D-2 shows population by age for Sandy for 2000 and 2010. The data shows that Sandy grew by 4,185 people between 2000 and 2010, which is a 78 percent increase. The age breakdown shows that the City experienced an increase in population for every age group. The fastest growing age groups were aged newborn to 9, 20 to 24 years, 25 to 34 years, and 45 years and over.

⁴⁴ State of Oregon, Employment Department. 1999. *1999 Oregon In-migration Study*.

Table D-2. Population by age, Sandy, 2000 and 2010

Age Group	2000		2010		Change		
	Population	Percentage	Population	Percentage	Increase	Percent	Share
newborn to 9	894	16.6%	1,589	16.6%	695	78%	0.0%
10-19	941	17.5%	1,463	15.3%	522	55%	-2.2%
20-24	277	5.1%	566	5.9%	289	104%	0.8%
25-34	764	14.2%	1,522	15.9%	758	99%	1.7%
35-44	922	17.1%	1,301	13.6%	379	41%	-3.5%
45-54	710	13.2%	1,236	12.9%	526	74%	-0.3%
55-64	406	7.5%	916	9.6%	510	126%	2.0%
65+	471	8.7%	977	10.2%	506	107%	1.5%
Total	5,385	100.0%	9,570	100.0%	4,185	78%	---

Source: U.S. Census, 2000 and 2010

The data suggests that Clackamas County is attracting people nearing retirement or retirees and families with children. The age distribution in Table D-2 suggests that Sandy is attracting families with children, indicating that Sandy's population and age trends are somewhat different from the projections for the county as a whole.

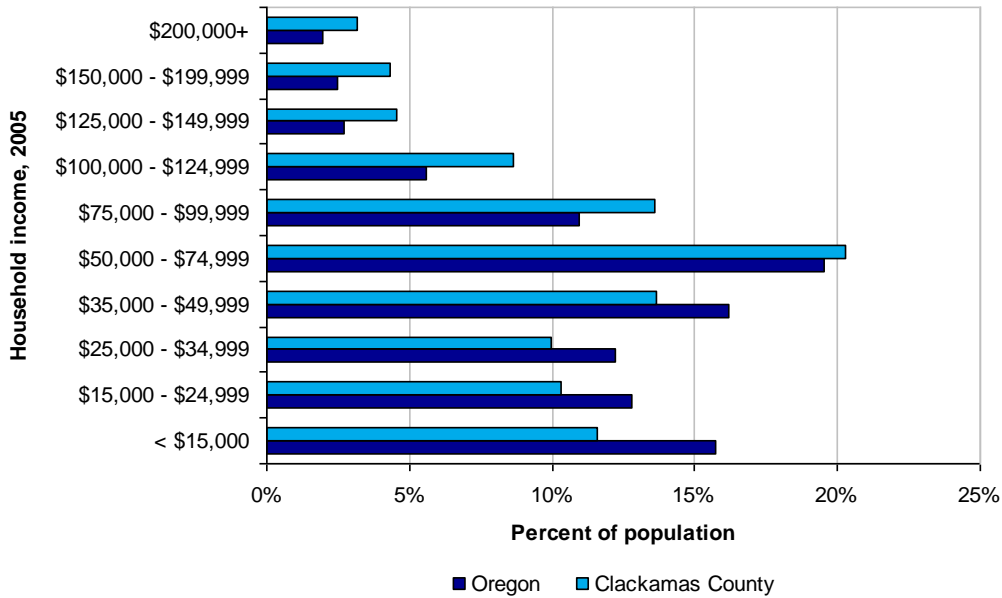
Personal income

Household income has historically been higher in the Greater Portland region compared to the State. The median household income in Sandy in 1999 was approximately \$42,115, which was slightly higher than Oregon's median household income of \$40,916 and the Portland MSA median household income of \$40,146.⁴⁵ Sandy's median household income was about 81 percent of Clackamas County's median household income of \$52,080.

In 2005, the median household income in Clackamas County was \$54,480, compared to the State average of \$42,944. Figure D-2 shows the distribution of household income for Oregon and Clackamas County in 2005. Figure D-2 shows that household income was higher in Clackamas County than in Oregon. A larger share of households in Clackamas County had income of more than \$50,000 than in Oregon, 58 percent of households in Clackamas County compared to 47 percent in Oregon.

⁴⁵ The Portland MSA includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington.

Figure D-2. Distribution of household income, Oregon and Clackamas County, 2005

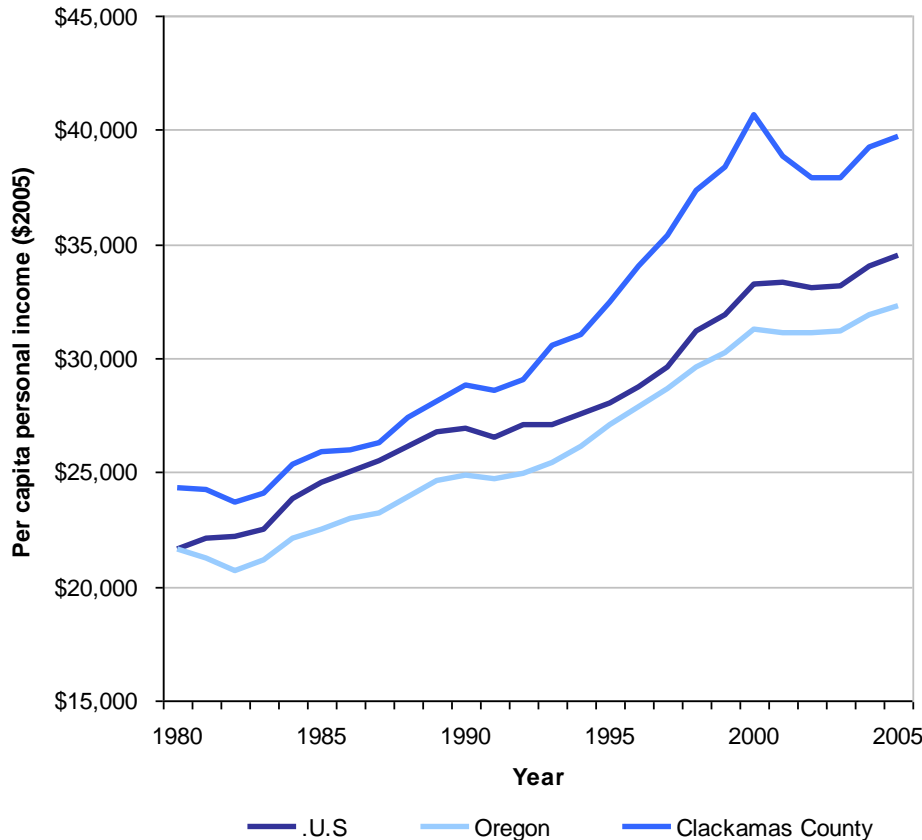


Source: U.S. Census American Community Survey, 2005; ECONorthwest

Figure D-3 shows the change in per capita personal income for the U.S., Oregon, and Clackamas County between 1980 and 2005 (in constant 2005 dollars). Oregon’s per capita personal income was consistently lower than the U.S. average between 1980 and 2005. While the gap between the Oregon and U.S. average narrowed in the mid-1990s, it widened again starting in the late 1990s through 2003.

Clackamas County’s personal income over the 25-year period has been consistently higher than the U.S. or Oregon’s personal income. In 2005, per capita personal income in Clackamas County was approximately 123 percent of Oregon’s per capita personal income and 115 percent of the U.S. per capita income. The gap between per capita income in Clackamas County compared to Oregon widened in the 1990s but started to narrow after the per capita income in the County dropped during the recession between 2001 and 2004. During the 25-year period, Clackamas County’s per capita personal income grew by 61 percent, while personal income grew by 67 percent in Oregon and 63 percent nationally during the same period.

Figure D-3. Per capita personal income in the U.S., Oregon, and Clackamas County, 1980-2005, (\$2005)



Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

In summary, income has historically been higher in the Greater Portland region, especially in Clackamas County, than the State average. In 2005, household income in Clackamas County was 127 percent of the State average. Household income in Sandy in 1999 was higher than the State’s median income but below Clackamas County’s median income.

Employment

According to census data, the majority of residents in Sandy work in the Greater Portland region. This section includes a review of employment trends in both Clackamas County and the Greater Portland region, as well as a summary of employment trends in Sandy.

Tables D-3 through D-5 present data from the Oregon Employment Department that show changes in covered employment⁴⁶ for Clackamas County and the portion of the Portland MSA

⁴⁶ Covered employment refers to jobs covered by unemployment insurance, which includes most wage and salary jobs but does not include sole proprietors, seasonal farm workers, and other classes of employees.

located in Oregon⁴⁷ for 1980 to 2006. The changes in sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2006. The analysis is divided in this way because of changes in industry and sector classification that made it difficult to compare information about employment collected after 2001 with information collected prior to 2000.

Employment data in this section is summarized by *sector*, each of which includes several individual *industries*. For example, the Retail Trade sector includes General Merchandise Stores, Motor Vehicle and Parts Dealers, Food and Beverage Stores, and other retail industries.

Table D-3 shows the changes in covered employment by sector in Clackamas County between 1980 and 2010. Employment in the County grew by 120 percent over the thirty-year period, adding 74,702 jobs. Every sector added jobs during this period. While Manufacturing grew by 528 jobs the composition of the manufacturing industry changed during the 30-year period.

Table D-3. Covered employment in Clackamas County, 1980-2010

Sector	1980	1990	2000	2010	Change from 1980 to 2010		
					Difference	Percent	AAGR
Agriculture, Forestry and Fishing	1,483	3,751	5,658	4,053	2,570	173%	3.4%
Mining	76	54	80	n/a	n/a	n/a	n/a
Construction	3,653	5,026	9,397	8,305	4,652	127%	2.8%
Manufacturing	15,031	15,572	18,079	15,559	528	4%	0.1%
Trans., Comm., and Utilities	1,905	3,227	5,128	6,374	4,469	235%	4.1%
Wholesale Trade	4,144	8,850	11,288	10,305	6,161	149%	3.1%
Retail Trade	12,697	21,813	27,659	16,322	3,625	29%	0.8%
Finance, Insurance and Real Estate	2,605	3,863	8,226	6,908	4,303	165%	3.3%
Services	9,313	17,519	31,296	51,951	42,638	458%	5.9%
Non-classifiable/all others	8	64	94	58	50	625%	6.8%
Government	11,188	12,529	16,152	16,970	5,782	52%	1.4%
Total	62,103	92,268	133,057	136,805	74,702	120%	2.7%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by City of Sandy.

Table D-4 shows the changes in covered employment by sector in the Oregon portion of the Portland MSA between 1980 and 2010. Employment in Oregon grew by 75 percent over the thirty-year period, adding 363,837 jobs. Most sectors added jobs during this period except for Mining, Manufacturing, Retail Trade, and Non-classifiable. Like Clackamas County, the composition of the manufacturing industry changed during the 30-year period.

⁴⁷ The portion of the Portland MSA located in Oregon includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties. The portion of the Portland MSA that is not included in these summaries are Clark and Skamania Counties in Washington.

Table D-4. Covered employment in the Oregon portion of the Portland MSA, 1980-2010

Sector	1980	1990	2000	2010	Change from 1980 to 2010		
					Difference	Percent	AAGR
Agriculture, Forestry and Fishing	6,369	12,522	17,788	11,663	5,294	83%	2.0%
Mining	534	563	613	397	(137)	-26%	-1.0%
Construction	23,420	29,614	45,338	36,001	12,581	54%	1.4%
Manufacturing	108,320	107,006	128,275	94,918	(13,402)	-12%	-0.4%
Trans., Comm., and Utilities	1,835	37,868	48,651	48,349	46,514	2,535%	11.5%
Wholesale Trade	44,580	52,567	63,101	47,455	2,875	6%	0.2%
Retail Trade	90,989	114,435	148,565	85,920	(5,069)	-6%	-0.2%
Finance, Insurance and Real Estate	37,086	41,525	54,404	49,559	12,473	34%	1.0%
Services	96,427	158,727	240,178	341,214	244,787	254%	4.3%
Nonclassifiable/all others	547	293	466	276	(271)	-50%	-2.3%
Government	75,132	82,501	101,697	117,139	42,007	56%	1.5%
Total	485,239	637,621	849,076	832,891	363,837	75%	1.8%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by City of Sandy.

Note: The Oregon Portion of the Portland MSA includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties.

More than two-thirds of employment growth in the Greater Portland region has been in service sectors since 1980, accounting for more than 244,700 new jobs.

Table D-5 shows covered employment by sector and industry within the Sandy Urban Growth Boundary (UGB) for 2012. The data in Table D-5 is based on confidential records for individual employers provided to the Oregon Employment Department. Table D-5 does not report employment in sectors where there were fewer than three firms or where one firm accounts for greater than 80 percent of employment in order to maintain the confidentiality of individual employers.

Table D-5 shows that Sandy had 301 establishments with 3,082 covered workers in 2012. The sectors with the largest level of employment in 2005 were Retail Trade, Accommodations and Food Services, and Health Care and Social Services. Together these sectors accounted for 1,536 jobs or 50 percent of covered employment in Sandy.

The average pay for covered employees in 2012 was \$31,882, compared with the County average of \$45,278 and the State average of \$45,008. The sectors with the highest average pay per employee were Construction, Public Administration, and Wholesale Trade. The sectors with the lowest average pay per employee were Accommodation and Food Services, Real Estate, and Support Services.

Pay per employee in Sandy in 2012 was about \$13,126 lower than the State average for covered employment, while household income in Sandy was about \$5,400 higher than the State average in 2012. This discrepancy suggests that Sandy has a substantial amount of employment not included in the covered employment summary, such as sole proprietors. This discrepancy also suggests that residents leaving Sandy for employment earn a higher average income than the average worker in Sandy.

Table D-5. Covered employment in Sandy UGB by sector and industry, 2012

Sector/Industry	Establishments	Employees	Payroll	Average Pay/Emp.
Agriculture, Forestry, Fishing and Hunting	N/A	N/A	N/A	N/A
Construction	32	136	\$7,506,974	\$55,198
Manufacturing	17	241	\$9,751,977	\$40,465
Wholesale Trade	12	18	\$838,959	\$46,609
Retail Trade	40	734	\$20,815,032	\$28,358
Transportation, Warehouse and Utilities	9	114	\$3,055,788	\$26,805
Information	N/A	N/A	N/A	N/A
Finance and Insurance	12	77	\$2,852,643	\$37,047
Real Estate and Rental and Leasing	17	30	\$460,477	\$15,349
Professional, Scientific, and Technical Services	20	58	\$2,430,019	\$41,897
Management of Companies and Enterprises	N/A	N/A	N/A	N/A
Administrative and Support and Waste Management and Remediation Services	8	20	\$330,356	\$16,518
Educational Services	8	278	\$9,969,033	\$35,860
Health Care and Social Assistance	25	307	\$10,123,736	\$32,976
Arts, Entertainment, and Recreation	N/A	N/A	N/A	N/A
Accommodation and Food Services	50	495	\$7,449,442	\$15,049
Other Services (except Public Administration)	36	228	\$5,314,307	\$23,308
Public Administration	3	99	\$4,982,294	\$50,326
Others not elsewhere classified	N/A	N/A	N/A	N/A
Total	301	3,082	\$98,259,516	\$31,882

Source: Confidential Quarterly Census of Employment and Workforce (QCEW) data provided by the Oregon Employment Department.

The composition of Sandy’s economy is different (but related to) the composition of the Greater Portland region’s economy. A large percentage of covered employment in Sandy is in Service sectors, mostly in Retail Trade and Accommodations and Food Services. Compared to the Greater Portland region, a smaller share of covered employment in Sandy is in Manufacturing.

Since residents of Sandy and workers of firms located in Sandy are willing to commute within the Greater Portland region, as discussed earlier in this chapter, the composition of Sandy’s workforce is not likely to have a large impact on the types of businesses that choose to locate or expand in Sandy. Future shifts in employment in Sandy will be impacted by Sandy’s comparative advantages (discussed later in this chapter), rather than the availability of qualified workers.

Business activity

The Goal 9 administrative rule (specifically, OAR 660-009-0015(2)) suggests that local governments take into consideration expansion plans of major employers when determining the site requirements of major employers. City of Sandy staff interviewed six major employers in

Sandy ⁴⁸ about their plans for the next twenty years, including: their plans for adding employees, plans for expanding their facilities, whether they would need to purchase land for expansion, whether they have plans to move their facilities outside of Sandy, and whether there are infrastructure deficiencies that affect their ability to continue operations in Sandy.

Of the employers interviewed, four firms/organizations have facility expansion plans and three plan to add employees over the next 20 years. Three employers do not have enough data to predict if they will add employees. The City of Sandy and Konell Construction expect to purchase land for future expansion. The plans of the firms/organizations interviewed are summarized in Table D-6.

Table D-6. Employment and expansion plans of major employers, Sandy, 2014

Firm or Organization Name	Add Jobs	Expand Facilities	Purchase Land for Expansion
AEC, Inc.	Yes	No	No
City of Sandy	Unknown	Yes	Yes
Konell Construction	Yes	Yes	Yes
Mt. Hood Cleaners	Unknown	No	No
U.S. Forest Service	Unknown	No	No
U.S. Metal Works	Yes	Yes	No

Source: City of Sandy

The following is a list of the major employers interviewed, and their responses regarding firm expansion plans.

- **AEC, Inc. (85 employees):** AEC, Inc. is looking to add additional employees, but is not sure the number of employees they plan to add yet. They have no plans to expand their facilities and have no plans to purchase additional land.
- **City of Sandy (79 employees):** The City of Sandy does not know how many employees they plan to add. The organization does plan to expand facilities and purchase land for a larger community center.
- **Konell Construction and Demolition (60+ employees):** Konell Construction plans to add an additional 4 positions within the next two years. They plan to expand their facilities and purchase additional land adjacent to their current property.
- **Mount Hood Cleaners and Window Coverings (75 employees):** Mount Hood Cleaners does not know how many employees they plan to add. They have no plans to expand their facilities and have no plans to purchase additional land.
- **US Forest Service (88+ employees):** The Forest Service has no plans to hire new employees and has no plans to expand their office space. The Forest Service is currently reviewing their lease renewal for their facility at 16400 Champion Way.

⁴⁸ Note: City of Sandy also contacted the Oregon Trail School District, but was unable to interview them for 2014 statistics.

- **U.S. Metal Works (35 employees):** U.S. Metal Works is looking to add additional employees, but are not sure the number of employees they plan to add yet. They plan to expand their facilities, but not purchase additional land.

Based on the 2009 Urbanization Study the following organization was also interviewed by ECONorthwest. The following information is from 2007:

- **Oregon Trail School District (430+ employees):** Oregon Trail School District plans to add about 10 employees within the next two years. They are also planning to construct a new high school a few blocks from the site of the current high school, which would become operational no earlier than 2011. The School District currently owns about 120 acres of land outside of the Sandy City limits that is used for conservation and timber education; part of that land could eventually be sold to a conservation organization.

Outlook for growth in Sandy

Since 1980, Sandy’s population has grown faster than Clackamas County. From 1980 to 2010, Sandy added 6,665 residents or 229 percent growth, compared to Clackamas County adding 134,081 residents or 55 percent growth over the same period. Table D-7 shows the population forecast and employment forecast for Sandy from 2014 to 2034. Sandy’s population and employment are forecast to grow at 2.8 percent annually over the twenty-year period.

Table D-7. Population and employment forecasts, Sandy UGB, 2014-2034

Year	Population	Employees	Pop/Emp
2014	10,908	5,044	2.16
2024	14,377	6,648	2.16
2034	18,980	8,763	2.17
Change 2014 to 2034			
Number	8,072	3,719	
Percent	74.0%	73.7%	
AAGR	2.8%	2.8%	

Source: City of Sandy

Table D-8 shows the Oregon Employment Department’s forecast for employment by industry between 2012 and 2022. The projections indicate a higher rate of growth for Clackamas County (16 percent increase in jobs) than the State average (15 percent). The forecast projects the creation of 22,620 new jobs in Clackamas County over the ten-year period. The sectors that are expected to lead employment growth in Clackamas County are Trade, Transportation and Utilities, Professional and Business Services, and Education and Health Services. Together, these sectors are expected to add 11,140 jobs or 49 percent of the employment growth in Clackamas County between 2012 and 2022.

Table D-8. Nonfarm employment forecast by industry in Region 15 (Clackamas County), 2012-2022

Sector/Industry	2012	2022	Change	%Change
Total private	125,530	146,700	21,170	17%
Natural resources and mining	4,340	5,330	990	23%
Mining and logging	140	150	10	7%
Construction	8,750	11,380	2,630	30%
Construction of buildings	1,740	2,320	580	33%
Heavy and civil engineering construction	1,070	1,260	190	18%
Specialty trade contractors	5,940	7,800	1,860	31%
Manufacturing	16,550	18,420	1,870	11%
Durable goods	13,610	15,080	1,470	11%
Primary metal manufacturing	2,180	2,500	320	15%
Computer and electronic product manufacturing	3,090	3,110	20	1%
Nondurable goods	2,940	3,340	400	14%
Trade, transportation, and utilities	31,410	35,540	4,130	13%
Wholesale trade	10,210	11,380	1,170	11%
Retail trade	17,050	19,460	2,410	14%
Transportation, warehousing, and utilities	4,150	4,700	500	13%
Information	2,060	2,260	200	10%
Financial activities	8,600	9,910	1,310	15%
Finance and insurance	5,250	6,100	850	16%
Real estate and rental and leasing	3,350	3,810	460	14%
Professional and business services	15,940	19,660	3,720	23%
Professional and technical services	7,170	9,010	1,840	26%
Architectural and engineering services	1,050	1,240	190	18%
Computer systems design and related services	1,770	2,210	440	25%
Management of companies and enterprises	1,530	1,760	230	15%
Administrative and waste services	7,240	8,890	1,650	23%
Private educational and health services	19,050	22,340	3,290	17%
Private educational services	2,180	2,550	370	17%
Health care and social assistance	16,870	19,790	2,920	17%
Ambulatory health care services	6,510	7,920	1,410	22%
Hospitals	4,090	4,460	370	9%
Nursing and residential care facilities	4,330	4,990	660	15%
Social assistance	1,940	2,420	480	25%
Leisure and hospitality	13,440	15,720	2,280	17%
Arts, entertainment, and recreation	1,990	2,280	290	15%
Accommodation and food services	11,450	13,440	1,990	17%
Accommodation	1,150	1,210	60	5%
Food services and drinking places	10,300	12,230	1,930	19%
Other services	5,410	6,140	730	13%
Government	16,470	17,920	1,450	9%
Federal government	1,260	1,190	(70)	-6%
State government	2,290	2,470	180	8%
Local government	12,920	14,260	1,340	10%
Total payroll employment	141,990	164,610	22,620	16%

Source: Oregon Employment Department - Employment Projections by Industry 2012-2022

APPENDIX E: FACTORS AFFECTING FUTURE ECONOMIC DEVELOPMENT

Economic development opportunities in Sandy will be affected by local conditions as well as the national and regional economic conditions that were addressed in Appendix D. Sandy shares the general characteristics and advantages of the Greater Portland region, Oregon, and the Pacific Northwest as a whole, such as proximity to I-5 and the recreational amenities of the Oregon Coast, and Cascade Mountains. Economic conditions in Sandy relative to conditions in the Greater Portland region and Oregon form Sandy's comparative advantage for economic development, which has implications for the types of firms most likely to locate and expand in Sandy.

This appendix begins with a description of comparative advantage and why it is relevant for this Economic Opportunity Analysis. The appendix then reviews local factors affecting economic development in Sandy and any advantages, opportunities, disadvantages, or constraints these factors may present. This appendix meets the intent of OAR 660-009-0015(4).

What is comparative advantage?

Each economic region has different combinations of productive factors: land (and natural resources), labor (including technological expertise), and capital (investments in infrastructure, technology, and public services). While all areas have these factors to some degree, the mix and condition of these factors vary. The mix and condition of productive factors may allow firms in a region to produce goods and services more cheaply, or to generate more revenue, than firms in other regions.

By affecting the cost of production and marketing, comparative advantages affect the pattern of economic development in a region relative to other regions. Goal 9 and OAR 660-009-0015(4) recognizes this by requiring plans to include an analysis of the relative supply and cost of factors of production. An analysis of comparative advantage depends on the geographic areas being compared. Economic conditions in Sandy will be largely shaped by national and regional economic conditions affecting the Greater Portland region and Oregon. This appendix focuses on the comparative advantages of Sandy relative to the Greater Portland region, as well as Clackamas County.

Location, size, and buying power

Sandy is a community of over 10,000 people, located southeast of Portland, near the Mt. Hood National Forest. Sandy's location has played a role in the City's growth and will continue to have implications for economic development in the City.

- Sandy's location provides opportunities for multiple forms of transportation. Sandy is located on Highways 26 and 211 and is less than 15 miles from Interstate-84, which connects Portland with Boise, Idaho. The City has a public transportation network

connecting to the Gresham Transit Center and the light rail line, and is located about 25 miles from the Portland International Airport.

- Sandy has access to workers and markets of the Greater Portland region. Sandy is located approximately 23 miles from Portland, and 12 miles from Gresham. Sandy's proximity to these cities gives Sandy access to the labor force, employment opportunities, and markets of these cities. It also provides workers in Sandy opportunities to live in an urban area outside of Sandy.
- Sandy's location provides access to outdoor and urban recreation and amenities. Sandy is relatively close to the Mt. Hood National Forest and Mt. Hood, which provide opportunities for outdoor recreation. Residents of Sandy have easy access to urban cultural amenities and shopping opportunities in the City of Portland.

Sandy's location provides both advantages and disadvantages. Sandy has easy access to Highways 26 and 211, which provide easy automotive access between Sandy and surrounding areas. Residents of Sandy have easy access to urban and rural amenities and recreation. However, Sandy's location away from Interstate 84 and Interstate 205 are a disadvantage for attracting businesses that need to be close to an interstate.

Transportation

A number of transportation options are available in Sandy, including State highways, access to Interstate Highways, and public transportation connections to the Gresham Transit Center and light rail line.

Sandy has excellent automotive access. Sandy is located at the intersections of Highways 211 and 26, and less than 15 miles from Interstate 84, which links Portland to Boise, Idaho. Sandy is about 17 miles from Interstate 205, which connects to Interstate 5 and gives access north to Washington and south to Oregon and California.

Highway 26 connects Sandy to the City of Portland to the northwest (23 miles from Sandy) and to Mt. Hood National Forest to the east, as well as further southeast to Central Oregon. Highway 211 connects Sandy to Woodburn and areas south of Portland along Interstate 5. Highways 26 and 211 and their connections to the Portland area link Sandy to domestic markets in the United States and international markets via west coast ports.

Congestion on Highway 26 and overall transportation connectivity within the County is an issue that may slow future growth, according to economic development professionals interviewed for this analysis.

Other transportation opportunities in Sandy include the Sandy Area Metro transit service, which makes stops within Sandy and continues as an express service to the Gresham Transit Center (about 10 miles from Sandy). There, passengers can transfer to Portland busses and the light rail line that connects Gresham to downtown Portland. Sandy also has access to the Portland International Airport.

Table E-1 shows a comparison of the means of transportation to work for residents 16 years and older for Oregon, Clackamas County, and Sandy. Residents of Sandy generally use a car, truck, or van for transportation to and from work, but also carpool at a higher rate than residents of Clackamas County or Oregon.

Table E-1. Means of transportation to work for residents 16 years and older, Oregon, Clackamas County, and Sandy, 2012

Means of Transportation	Sandy	Clackamas County	Oregon
Car, truck, or van	91.5%	85.8%	82.1%
Drove alone	76.6%	76.6%	71.7%
Carpooled	14.9%	9.2%	10.4%
In 2-person carpool	9.6%	7.5%	8.3%
In 3-person carpool	1.8%	1.1%	1.3%
In 4-or-more person carpool	3.6%	0.6%	0.8%
Workers per vehicle	1.1%	1.1%	1.1%
Public transportation (excluding taxicab)	1.8%	2.8%	4.2%
Walked	2.8%	2.2%	4.1%
Bicycle	0.0%	0.4%	2.3%
Taxicab, motorcycle, or other means	0.9%	1.0%	1.0%
Worked at home	3.1%	7.9%	6.3%

Source: U.S. Census 2008-2012 Estimate

Labor force

The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available, but the quality, skills, and experience of available workers. This section examines the availability of workers in Sandy.

The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and the unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Data from the Oregon Employment Department shows that unemployment through July 2014 in Clackamas County was 6.1 percent, in the Portland-Vancouver-Hillsboro MSA was also 6.1 percent, and in Oregon was slightly higher at 6.9 percent.

Table E-2 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Clackamas County, and Sandy. Residents of Sandy generally spent more time commuting to work than residents of Clackamas County or Oregon.

Table E-2. Commuting time to work in minutes for residents 16 years and older, Oregon, Clackamas County, and Sandy, 2012

Commute Time	Sandy	Clackamas County	Oregon
Less than 10 minutes	11.2%	12.7%	17.1%
10 to 14 minutes	8.9%	11.4%	17.0%
15 to 19 minutes	6.9%	12.4%	16.5%
20 to 24 minutes	14.3%	14.6%	14.8%
25 to 29 minutes	6.7%	8.2%	6.1%
30 to 34 minutes	13.9%	16.0%	11.9%
35 to 44 minutes	14.1%	9.3%	5.4%
45 to 59 minutes	13.2%	8.7%	5.7%
60 or more minutes	11.1%	6.7%	5.4%
Mean travel time to work (minutes)	31.4 mins.	26.6 mins.	22.4 mins.

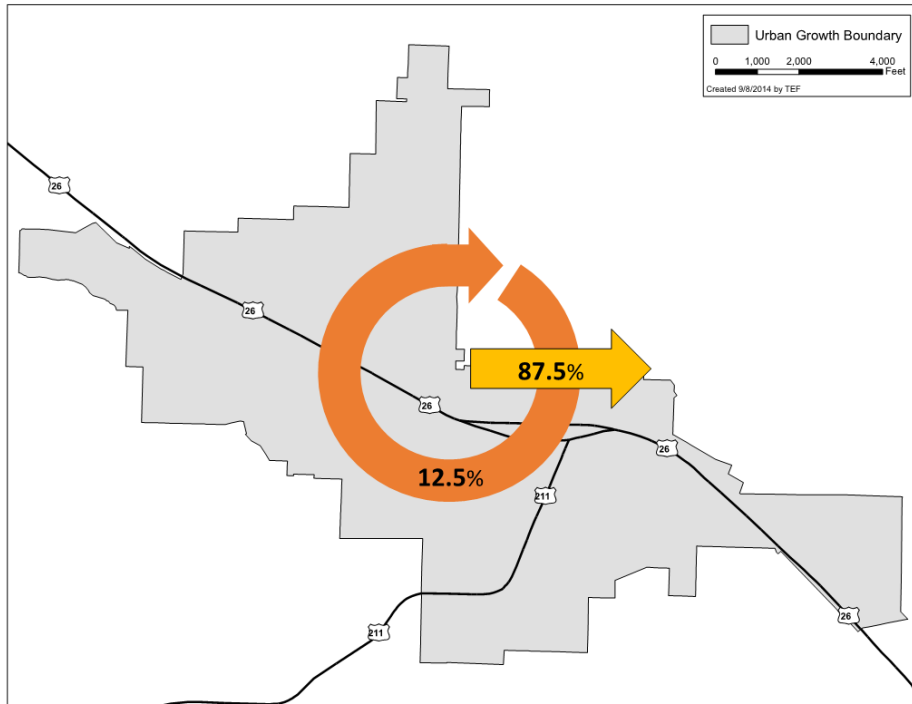
Source: U.S. Census 2008-2012 Estimate

Figure E-1 shows where residents of Sandy who are employed worked in 2010. Figure E-1 shows that about 87.5 percent of residents of Sandy who are employed leave Sandy and about 12.5 percent of residents of Sandy who are employed work in Sandy.

Figure E-2 shows where employees in Sandy came from in 2010. Figure E-2 shows that about 82.4 percent of people employed in Sandy live outside of Sandy and commute to Sandy for work. This analysis also shows that only about 17.6 percent of people who are employed in Sandy live in Sandy.

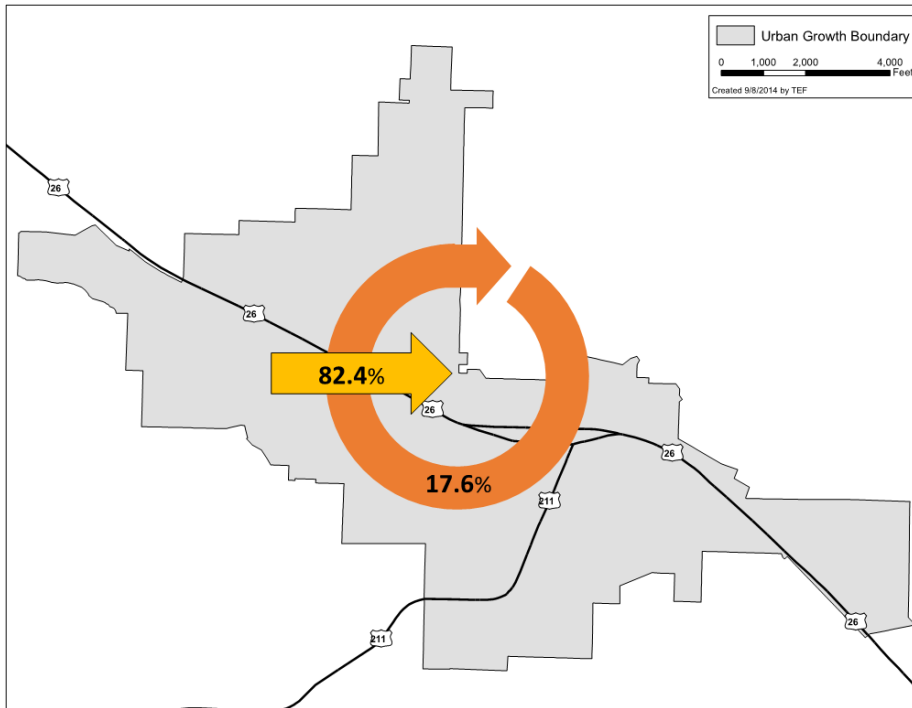
The implication of the data presented in this section is that a majority of Sandy's workforce lives outside of Sandy and do not reside in the city of Sandy. Residents of Sandy are more likely to work outside of Sandy than work in Sandy. This analysis shows that businesses in Sandy have access to the labor force in areas outside the city of Sandy. This data also reveals that Sandy is a commuter town for people seeking employment in the Greater Portland region and the Mt. Hood recreational area.

Figure E-1. Places where residents in Sandy were employed, 2010



Source: U.S. Census Bureau, LED Origin-Destination Data Base (2010)

Figure E-2. Places where employees in Sandy are from, 2010



Source: U.S. Census Bureau, LED Origin-Destination Data Base (2010)

Housing

Housing is an important factor for economic development strategy because it affects the type of residents and employers who may be attracted to a region. Housing and economic development strategies should consider the availability of affordable housing for all income levels and the impact of housing prices on workforce availability and attractiveness of the community. Housing choices includes choices about location and the type of housing. When making location decisions, households may consider many factors: costs, views, neighborhood characteristics, quality of schools, tax rates, commute times, and other quality of life issues. Housing type is defined by many attributes, the most important of which are structure type (e.g., single-family, multi-family) and size, lot size, quality and age, and price.

Table E-3 shows median housing sales price for single-family dwellings in Sandy, Clackamas County, and selected cities in the Greater Portland region for 2000 and 2014. Housing in Sandy cost less than the County average and most of the other cities shown in Table E-3. The median price of a single-family home in Sandy increased from \$147,500 in 2000 to \$232,440 in 2014, an increase of \$84,940 or 58 percent over the 14-year period.

Table E-3. Median sales price for single-family dwellings, Sandy, Clackamas County, and selected cities, 2000 and 2014

Average Sales Price	2000	2014	Change 2000-2014		
			Amount	Percent	AAGR
Lake Oswego	\$282,750	\$477,500	\$194,750	69%	3.8%
Happy Valley	\$216,750	\$392,730	\$175,980	81%	4.3%
Clackamas County	\$185,000	\$307,025	\$122,025	66%	3.7%
Damascus	\$212,900	\$305,000	\$92,100	43%	2.6%
Sandy	\$147,500	\$232,440	\$84,940	58%	3.3%
Gresham	\$164,500	\$230,000	\$65,500	40%	2.4%

Source: Metro RLIS 2000 data; Zillow 2014 data

The comparatively low housing costs in Sandy present a comparative advantage for attracting businesses that are considering locating in the Greater Portland region and do not need direct access to interstate highways.

Public services

Public policy

Public policy support for economic development includes policies that local governments have to support economic activity, such as economic development policies and local tax policies. This section discusses broad economic development policies from Sandy’s comprehensive plan and compares property tax rates between Oregon, Clackamas County and Sandy.

Sandy's Comprehensive Plan includes a number of policies designed to encourage and manage economic development, including both commercial and industrial development, including:

- Concentrating **commercial uses** to several areas: the west end of Sandy on the north side of Highway 26, which is designed to accommodate large scale commercial uses; a new commercial area east of downtown and south of Highway 26; a general commercial district on the east end of town that would focus on accommodating tourism businesses; downtown Sandy; and various village commercial districts which would serve neighborhoods with retail and office for local use.
- Encouraging commercial uses which relate to **tourism** in a potentially master-planned commercial district east of downtown on Highway 26.
- Promoting **downtown** development in the scale and character of a traditional downtown business district, allowing a mix of uses downtown, promoting higher residential and commercial density in the downtown, and creating an attractive downtown with public spaces, gateways on either end, and transit and bicycle access.
- Promoting **commercial development in village areas** that will serve uses oriented to the village, including small-scale professional office, retail, and mixed-use development.
- Encouraging a diversity of small industries and businesses by protecting designated **industrial land**, working with other jurisdictions to promote economic development, promoting performance standards to reduce wastewater and water use and maintain air quality, and encourage a jobs-housing balance in Sandy.

Property taxes

The property tax rate in a jurisdiction can affect the location decisions of households and businesses. Table E-4 shows the average property tax rates per \$1,000 assessed value for selected cities in Clackamas County in 2013. Table E-4 shows the property tax rate in Sandy is in the lower half of cities in Clackamas County.

Table E-4. Property Tax Rate, per \$1,000 of assessed value, selected cities in Clackamas County, 2013

City	Tax Rate (per \$1,000 assessed value)
Gladstone	\$17.00 - \$20.71
Lake Oswego	\$17.17 - \$19.27
Milwaukie	\$18.95
Wilsonville	\$16.27 - \$18.70
West Linn	\$16.13 - \$18.58
Oregon City	\$17.71 - \$18.18
Damascus	\$15.29 - \$17.98
Sandy	\$17.40
Canby	\$17.09
Happy Valley	\$15.64 - \$16.93
Estacada	\$15.96
Molalla	\$15.26

Source: Clackamas County Assessor

Water

Sandy’s drinking water currently comes from three sources: Brownell Springs, Alder Creek and wholesale purchases from the Portland Water Bureau.

Brownell Springs was the City of Sandy’s sole source of drinking water until 1977. Brownell Springs is a groundwater spring located on City-owned property on the north face of Lenhart Butte, the springs produce between 360,000 and 500,000 gallons of water per day. Because it is a groundwater source the water is not filtered but is disinfected with chlorine. Brownell Springs produced about 32 percent of the City’s total water supply in calendar year 2013.

Alder Creek, a tributary of the Sandy River, has been the primary source for the municipal water supply since 1977. The total capacity of the treatment plant, transmission piping and pump stations was expanded in 2001 to 2.6 MGD (million gallons per day), which is the maximum amount of water available to the City under its water rights on Alder Creek.

In 2014, the City began purchasing water from the City of Portland’s Bull Run supply. Currently, this source provides 500,000 gallons per day and is capable of producing up to 3.0 MGD and ultimately 10 MGD. This additional source of drinking water is expected to meet current and future demands for the City of Sandy until at least the year 2050.

The City also holds a permit to withdraw up to 25 cubic feet per second (16 million gallons of water per day) from the Salmon River near the Mt. Hood National Forest Boundary, an amount which was limited to 16.3 cubic feet per second (10.5 million gallons per day) under the Marmot Dam Decommissioning Project agreement. The time allotted to develop this source has been extended by the Oregon Water Resources Department to the year 2060.

Wastewater

The City of Sandy provides wastewater treatment to businesses and residents of Sandy served by the sanitary sewer system. The wastewater treatment plant was expanded in 1998, and has a capacity of 1.25 million gallons per day during dry weather and up to 4 million gallons per day during wet weather. The system involves an activated sludge process, effluent filtration, and ultraviolet light disinfection. From November 1st through April 30th treated effluent is discharged to Tickle Creek, a tributary of the Clackamas River, and between May 1st and October 31st treated wastewater is pumped to Iseli Nursery and used for irrigation of ornamental nursery stock.

Stormwater

The City requires all new development (and re-development) to treat and detain the difference in stormwater runoff between the pre-development and post-development conditions for 2, 5, 10, and 25 year storm events. Current stormwater policy is to treat and detain runoff where it originates instead of relying on regional stormwater facilities. Reduction or elimination of impervious surfaces associated with existing and new development is encouraged.

Currently the City's stormwater program does not require a DEQ permit. Once DEQ recognizes the City as having a population greater than 10,000 a DEQ Municipal SS4 permit may be required with attendant permitting, monitoring and mitigation responsibilities.

APPENDIX F: TERM DEFINITIONS

Actual Housing Mix and Actual Net Density – The housing mix and density that has actually been developed in the community in the last five years or since the last periodic review, whichever is greater.

Adequate Land Supply – Land within an urban growth boundary (UGB) that adequately accommodates land needs up to 20 years.

Attached Single-Family Housing – Common-wall dwellings or rowhouses where each dwelling unit occupies a separate lot.

Available Land – Designated land that is suitable and offered for sale or lease by the property owner, or is available for future on-site expansion by existing tenants.

Buildable Land – Refers to vacant, partially vacant and redevelopable land in addition to land containing existing structures within the urban growth boundary that are not severely restricted by environmental or other constraints.

Detached Single-Family Housing – A housing unit that is free standing and separate from other housing units.

Developed Land – Land already developed at densities consistent with zoning and contains improvements which make it unlikely to redevelop during the analysis period. Land that is not classified as vacant, partially vacant, undevelopable, or redevelopable is considered developed.

Constrained Land – Land with significant physical, environmental or infrastructure limits to development. These constraints include wetlands and designated drainageways, BPA power line easements, slopes greater than 25 percent within the FSH overlay, and setbacks to designated wetlands, drainageways, and slopes.

Employees per Acre – A measure of employment density.

Employment Land – Land designated to accommodate industrial and commercial uses.

Floodplain – Area adjoining a stream that is subject to inundation by flood. Consists of: (a) Floodway fringe: the area outside the floodway; and (b) Floodway: channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than 2.5 inches.

Gross Acre – An acre of vacant land before it has been allotted for public right-of-way, parkland or school development.

Housing Needs Projection – Refers to a local determination, justified in the plan, of the mix of housing types and densities that will be: (a) Commensurate with the financial capabilities of present and future area residents of all income levels during the planning period; (b) Consistent with any adopted regional housing standards, state statutes and Land Conservation and Development Commission administrative rules; and (c) Consistent with Goal 14 requirements.

Locational Factors – Include but are not limited to: proximity to raw materials, supplies, labor and services, markets or educational institutions; access to transportation facilities; and workforce (e.g., skill level, education, age distribution).

Multi-Family Housing – Attached housing where each dwelling unit is not located on a separate lot.

Needed Housing Mix – The percentage of each housing type estimated to be needed over the next 20-years, based on the housing needs analysis.

Net Vacant Acre – Vacant land after allotments for public right-of-way or other public dedicated lands.

Partially Vacant Land – Land with buildings or improvements over a portion of the parcel, but with vacant portions large enough to accommodate additional development, based on the size of the lot, zoning designations, and/or value of land and improvements. Residential land must contain at least one-half acre to be considered partially vacant.

Public and Semi-Public Land – Land designated for hospitals, schools, government buildings or improvements, churches, and other tax exempt institutions. These lands are classified as vacant, developed, or undevelopable using the same analysis as for private lands.

Redevelopable Land – Land with a low improvement relative to land value that may be economical to develop for more intensive or different uses.

Residential Land – Land designated to accommodate a range of housing types.

Safe Harbor – A standard procedure that complies with state or local law.

Suitable – Land designated for industrial or other employment use that provides, or can be expected to provide, the appropriate characteristics for the proposed use or category of use.

Undevelopable Land – Land designated as parks, open space, public stormwater detention ponds, and other public dedicated land contained in tax lots.

Urban Growth Boundary (UGB) – In Oregon, a land use planning line to control urban expansion onto farm and forest lands.

Vacant Land – Land with limited permanent buildings or improvements. Residential land with improvement values under \$10,000 are considered vacant. Lands equal to or larger than five acres, where less than one-half acre is occupied, are also considered vacant.