Oregon Population Forecast Program

Marion County

Regional Forecast Meeting – September 28, 2016

Presentation by

Population Forecast Program Team

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Agenda

- Population Research Center (PRC)
- Forecast Program overview
  - Forecast regions
  - Schedule
  - Deliverables
  - Forecasting methods and data sources
  - Process for local input
- Demographic and economic trends
- Discussion

Population Research Center (PRC)

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PRC Research areas:

- Oregon Census State Data Center (SDC)
- Demographic Research and Advisory Services
- Demography Instruction
- Oregon Population Estimates Program
- **Oregon Population Forecast Program (OPFP)**

Forecast Program Overview

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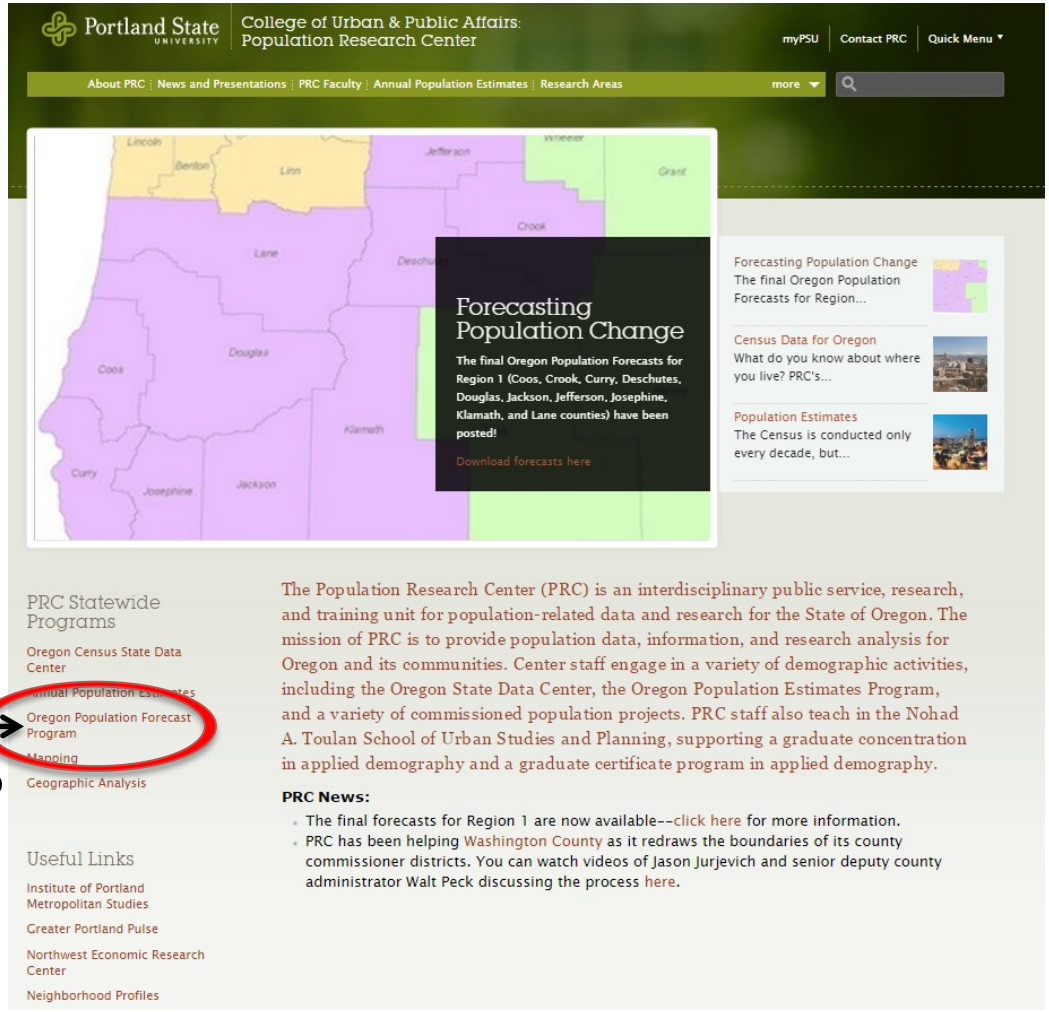
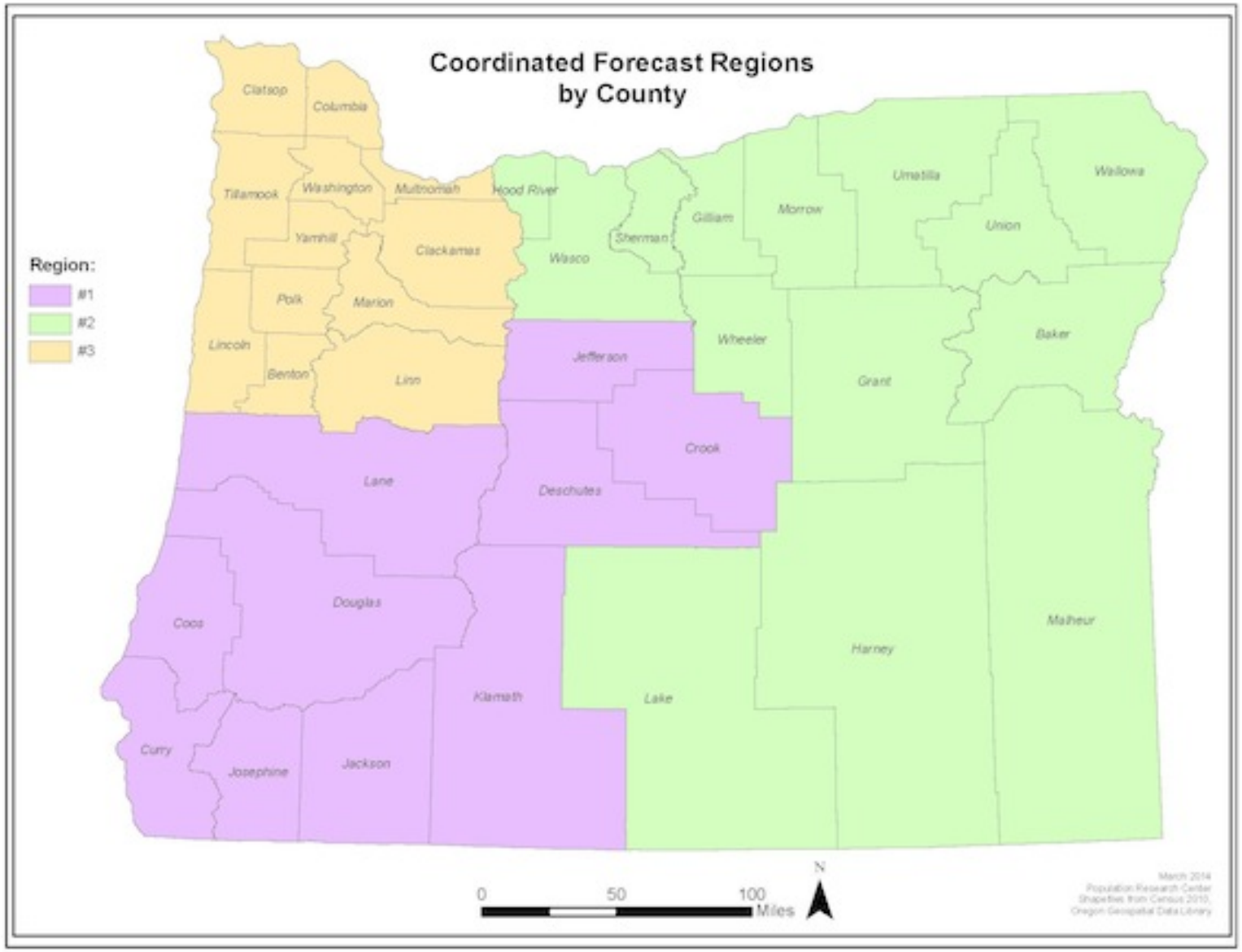
PRC Website:
http://www.pdx.edu/prc

Click here for more information on OPFP



Forecast Program Overview



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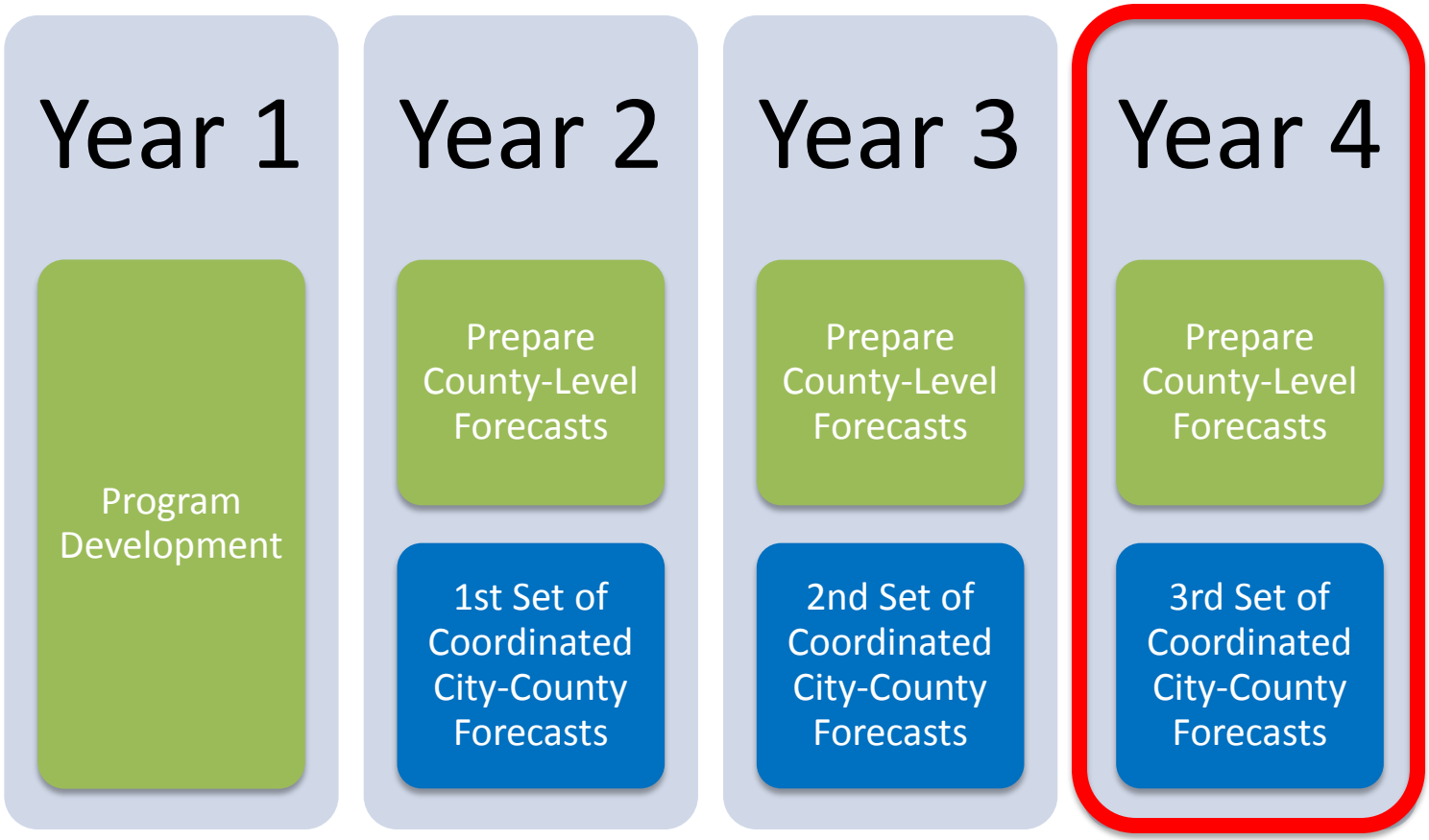
Forecast Program: 4-Year Schedule



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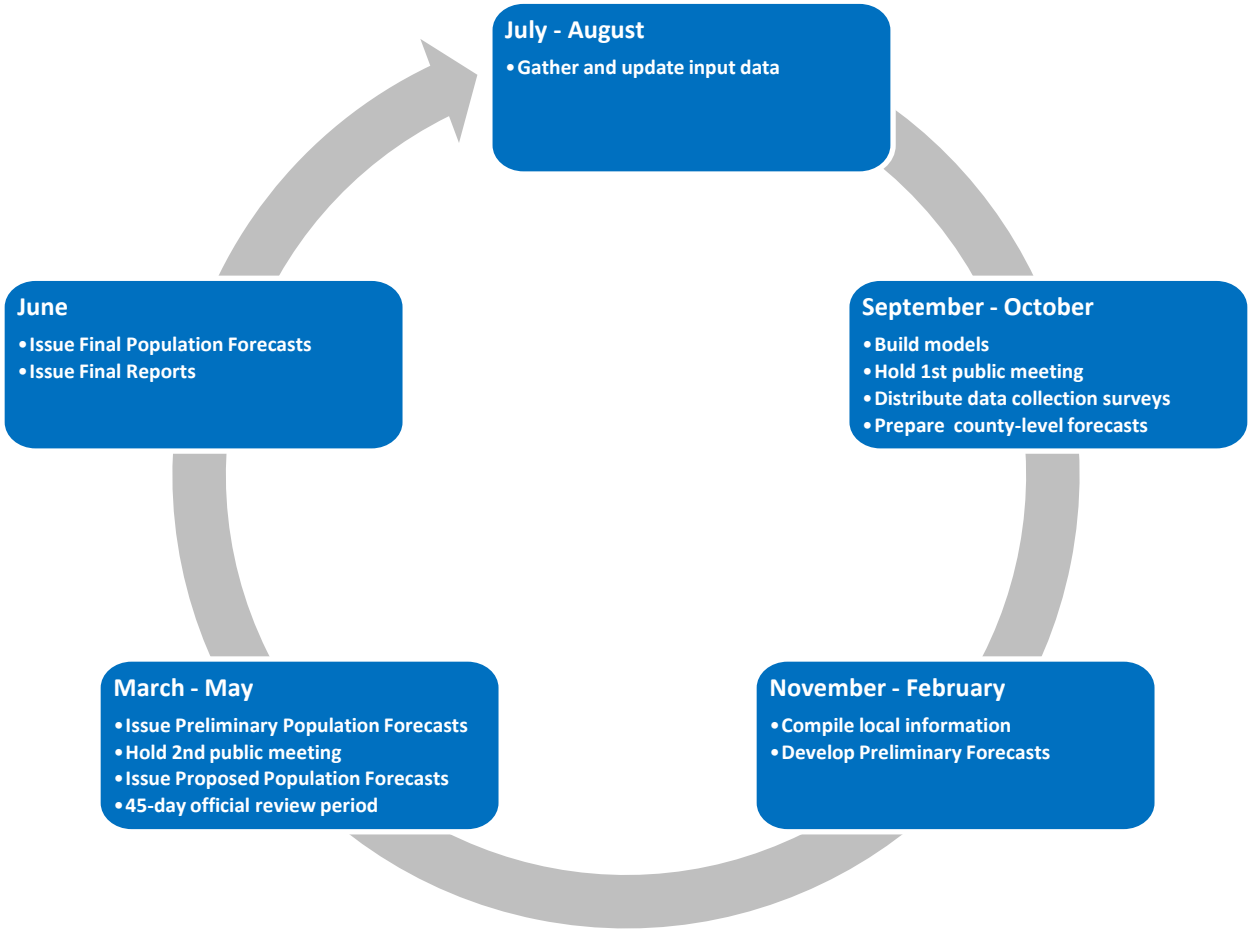
Coordinated Forecast: Annual Schedule



Deliverables

- Forecasts (50 year horizon, 5-year time intervals)
  - County-level forecasts (5-year age groups)
  - Coordinated UGB-level forecasts (Total population)
- Report containing:
  - Summaries of historic and future demographic trends, assumptions about future growth, and a compilation of information collected from city and county officials and the public
  - Short technical description of methods employed to produce the forecast

Process for Population Forecasts

- Develop demographic models using historic and recent data
- Analyze past and current population trends
  - Reasons for change, continuous or short-term?
- Gather information about existing and planned future housing, and about population change
  - Housing developments
  - Construction of new group quarters facilities
  - New employers
- Make assumptions about future housing and population change
- Revise forecasts on a regular basis

Population Forecast Methods

Primary Models for this Forecast

- Cohort-Component Method
  - Based on age-sex structure
  - Survival rates – Fairly constant over time
  - Fertility – Slightly more variable than survival rates
  - Migration Rates – Subject to greater fluctuation than mortality and fertility and more unpredictable
  - Generally works better for areas with larger populations

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Population Forecast Methods

Primary Models for this Forecast

- Housing Unit Method
  - Generally works better for areas with smaller populations
    - Housing unit growth
    - Housing unit type
    - Persons Per Household (PPH)
    - Occupancy Rates
    - Add Group Quarters Population

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Population Forecast Methods

Other Models/Methods to Consider

- For comparison and to serve as a check
- Ratio Methods
- Trend Extrapolation
- Employment Conversion Model

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Population Forecast Data Sources

Primary Sources:

- U.S. Census Bureau, Decennial Censuses
- Population Research Center (PRC), Oregon Population Estimates Program
- Oregon Health Authority, Center for Health Statistics
- Counties, Assessors Office
- Incorporated cities, Community Development/Planning Department
- Oregon Geospatial Enterprise Office (GEO), Spatial Data Library

Secondary Sources:

- State of Oregon, Office of Economic Analysis
- U.S. Census Bureau, American Community Survey (ACS)
- U.S., Internal Revenue Service
- State of Oregon, Department of Revenue
- Oregon Department of Education
- U.S., Centers for Medicare and Medicaid Services
- State of Oregon, Employment Department

Process for Local Input

- Hold regional meetings
  - Receive input on:
    - Historical and current demographic and economic trends
    - Plans for future growth
  - Receive feed back on Preliminary Forecasts
- Local survey
  - Collect local observations
    - Population composition; recent change
    - Planned housing development plus group quarters facilities
    - Future employers
    - Infrastructure
    - Anything that might promote or hinder population growth
  - Survey will be posted on website and emailed to each jurisdiction
  - Issued in October, 2016
- Official review period for Proposed Forecasts

Marion County

Demographic and Economic Trends

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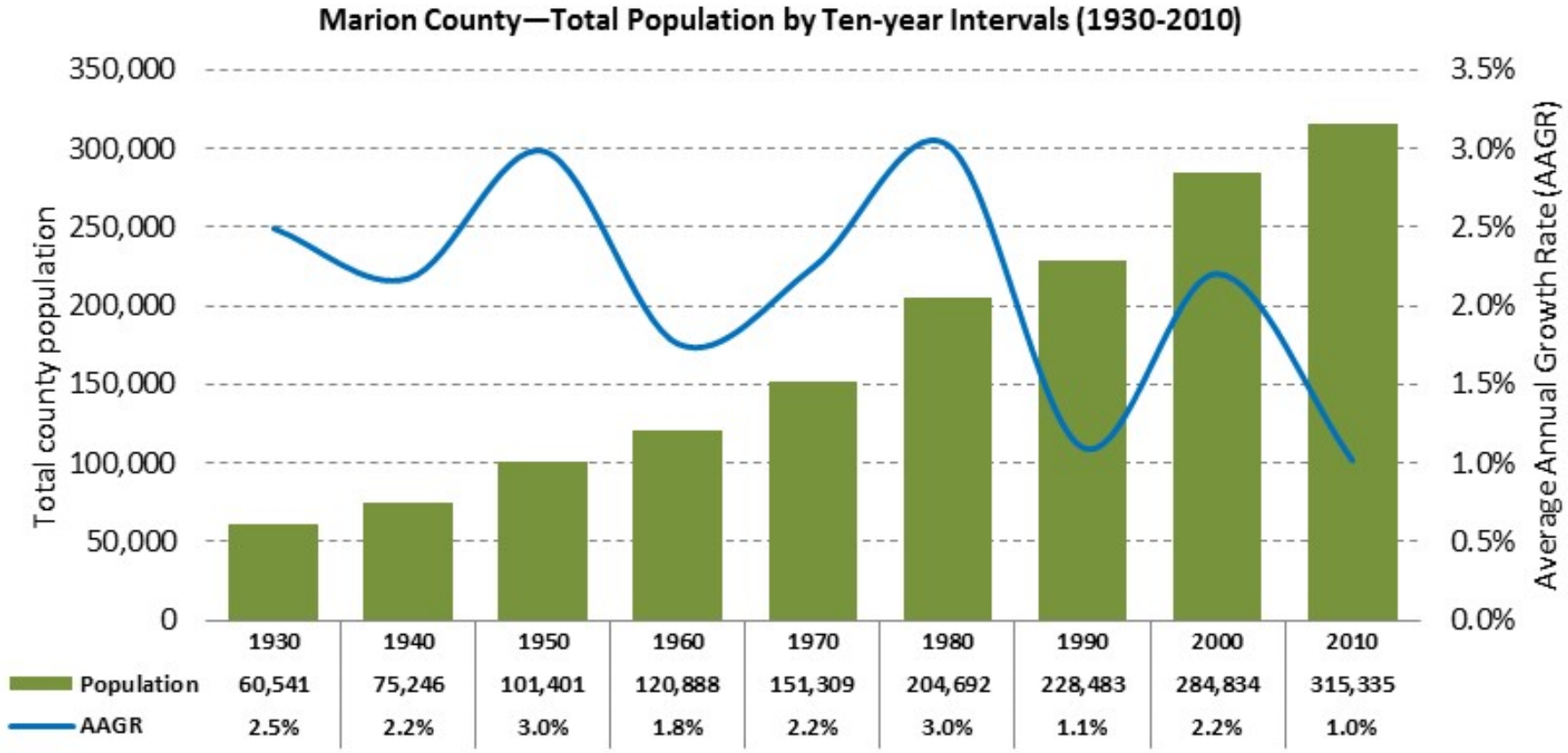

Sources: U.S. Census Bureau, 1930 to 2010 Censuses. Calculated by Population Research Center (PRC).
Note 1: Average annual growth rate is used for simplicity. In actuality the rate is an annualized rate calculated with this formula: [LN(Year1/Year2)/10]
Note 2: The 2000 total population does not reflect Count Question Resolution (CQR) revisions made by the U.S. Census Bureau. Revised total population numbers are used for the "County and Incorporated City Population" table.

Demographic and Economic Trends

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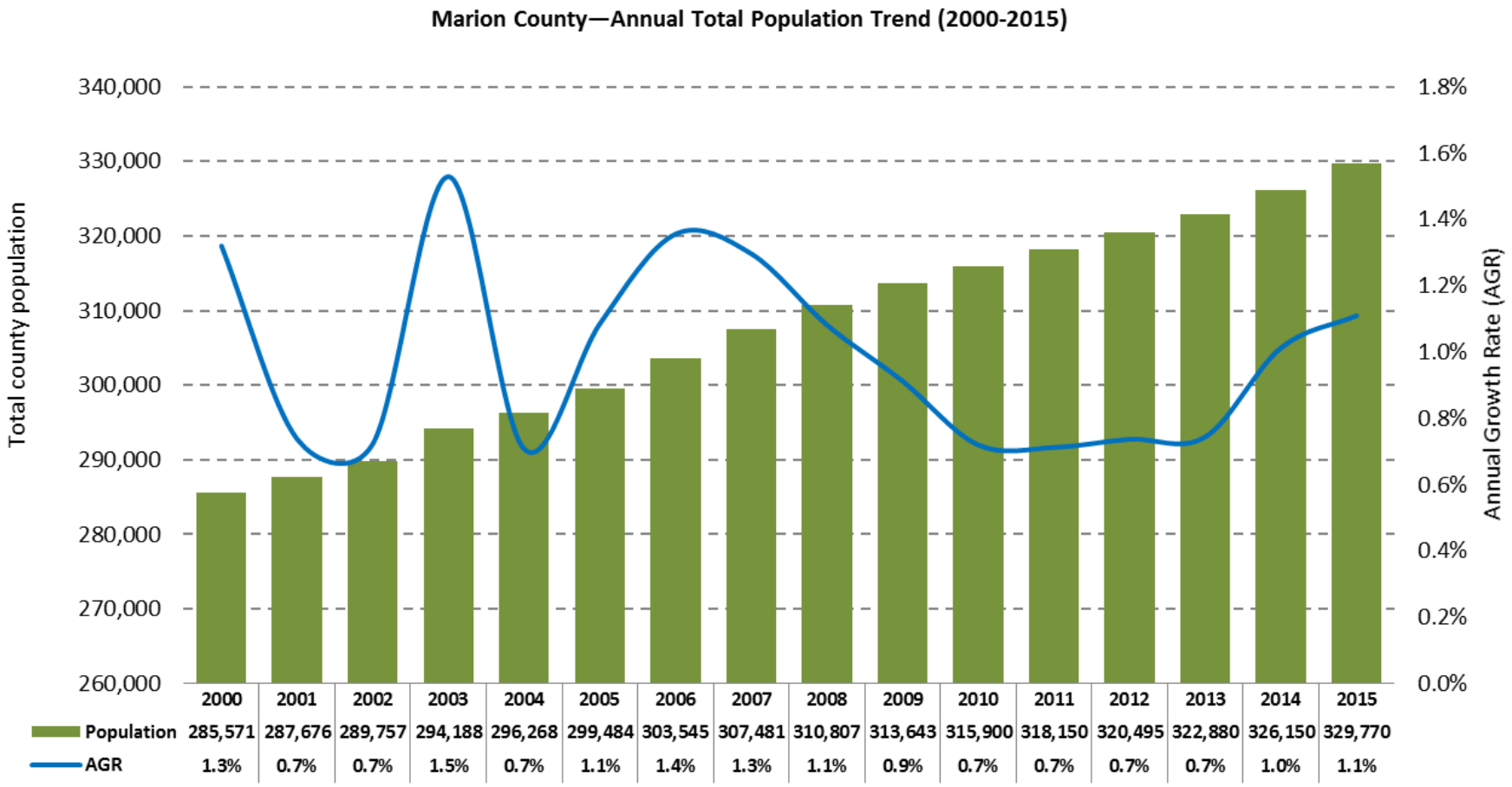

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Population	285,571	287,676	289,757	294,188	296,268	299,484	303,545	307,481	310,807	313,643	315,900	318,150	320,495	322,880	326,150	329,770
AGR	1.3%	0.7%	0.7%	1.5%	0.7%	1.1%	1.4%	1.3%	1.1%	0.9%	0.7%	0.7%	0.7%	0.7%	1.0%	1.1%

Sources: Population Research Center (PRC), July 1st Annual Estimates 2000 to 2015.

Demographic and Economic Trends

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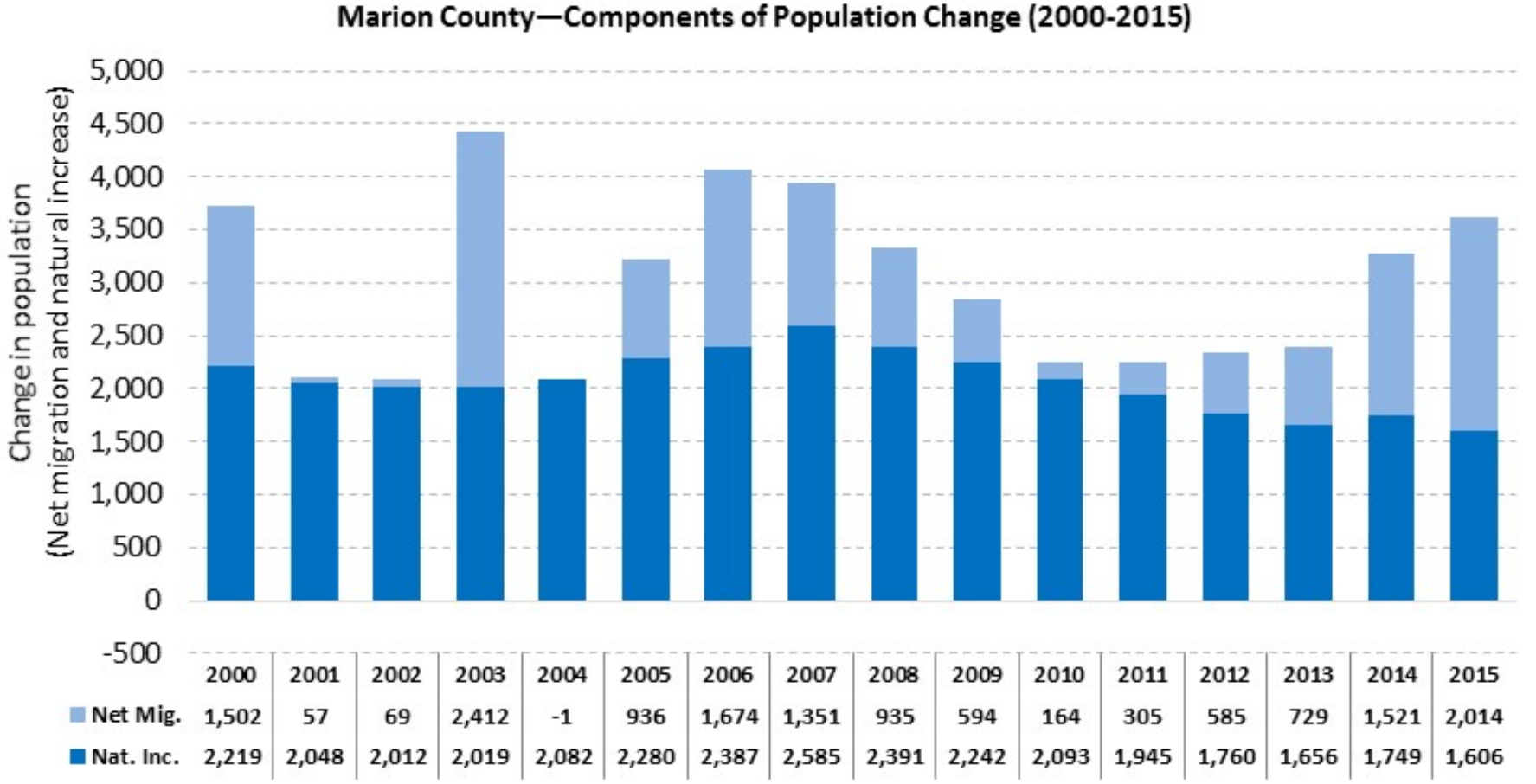

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Net Mig.	1,502	57	69	2,412	-1	936	1,674	1,351	935	594	164	305	585	729	1,521	2,014
Nat. Inc.	2,219	2,048	2,012	2,019	2,082	2,280	2,387	2,585	2,391	2,242	2,093	1,945	1,760	1,656	1,749	1,606

Sources: Population Research Center, July 1st Annual Estimates 2000-2015. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Demographic and Economic Trends

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Marion County and Incorporated Cities—Population and Average Annual Growth Rate (AAGR) (2000-2010 and 2010-2015)

	2000	2010	2015	AAGR (2000-2010)	AAGR (2010-2015)	Share of County 2000	Share of County 2010	Share of County 2015
Marion County	*284,838*	*315,335*	*329,770*	*1.0%*	*0.9%*	*100.0%*	*100.0%*	*100.0%*
Aumsville	3,003	3,584	3,945	1.8%	1.9%	1.1%	1.1%	1.2%
Aurora	655	918	950	3.4%	0.7%	0.2%	0.3%	0.3%
Detroit	262	202	210	-2.6%	0.8%	0.1%	0.1%	0.1%
Donald	625	979	980	4.5%	0.0%	0.2%	0.3%	0.3%
Gates (part)*	429	431	442	0.0%	0.5%	0.2%	0.1%	0.1%
Gervais	2,009	2,464	2,555	2.0%	0.7%	0.7%	0.8%	0.8%
Hubbard	2,483	3,173	3,225	2.5%	0.3%	0.9%	1.0%	1.0%
Idanha (part)*	147	77	78	-6.5%	0.1%	0.1%	0.0%	0.0%
Jefferson	2,487	3,098	3,165	2.2%	0.4%	0.9%	1.0%	1.0%
Keizer	32,203	36,478	36,985	1.2%	0.3%	11.3%	11.6%	11.2%
Mill City (part)*	312	324	299	0.4%	-1.6%	0.1%	0.1%	0.1%
Mt. Angel	3,121	3,286	3,410	0.5%	0.7%	1.1%	1.0%	1.0%
St. Paul	354	421	425	1.7%	0.2%	0.1%	0.1%	0.1%
Salem (part)*	119,040	130,398	135,148	0.9%	0.7%	41.8%	41.4%	41.0%
Scotts Mills	312	357	365	1.3%	0.4%	0.1%	0.1%	0.1%
Silverton	7,414	9,222	9,590	2.2%	0.8%	2.6%	2.9%	2.9%
Stayton	6,816	7,644	7,725	1.1%	0.2%	2.4%	2.4%	2.3%
Sublimity	2,148	2,681	2,755	2.2%	0.5%	0.8%	0.9%	0.8%
Turner	1,199	1,854	1,920	4.4%	0.7%	0.4%	0.6%	0.6%
Woodburn	20,100	24,080	24,670	1.8%	0.5%	7.1%	7.6%	7.5%
Unincorporated	79,719	83,664	90,929	0.5%	1.7%	28.0%	26.5%	27.6%

Sources: U.S. Census Bureau, April 1, 2000 and 2010 Censuses. Population Research Center, July 1, 2015 Annual Intercensal Estimate. Calculated by Population Research Center (PRC).

Note: The 2000 total population reflects Count Question Resolution (CQR) revisions made by the U.S. Census Bureau.

Note: Gates' population in Marion County is 92% of Gates' total population in 2010 and 91% in 2015.

Note: Idanha's population in Marion County is 58% of Idanha's total population in 2010 and 55% in 2015.

Note: Mill City's population in Marion County is 17% of Mill City's total population in 2010 and 16% in 2015.

Note: Salem's population in Marion County is 84% of Salem's total population in 2010 and 2015.

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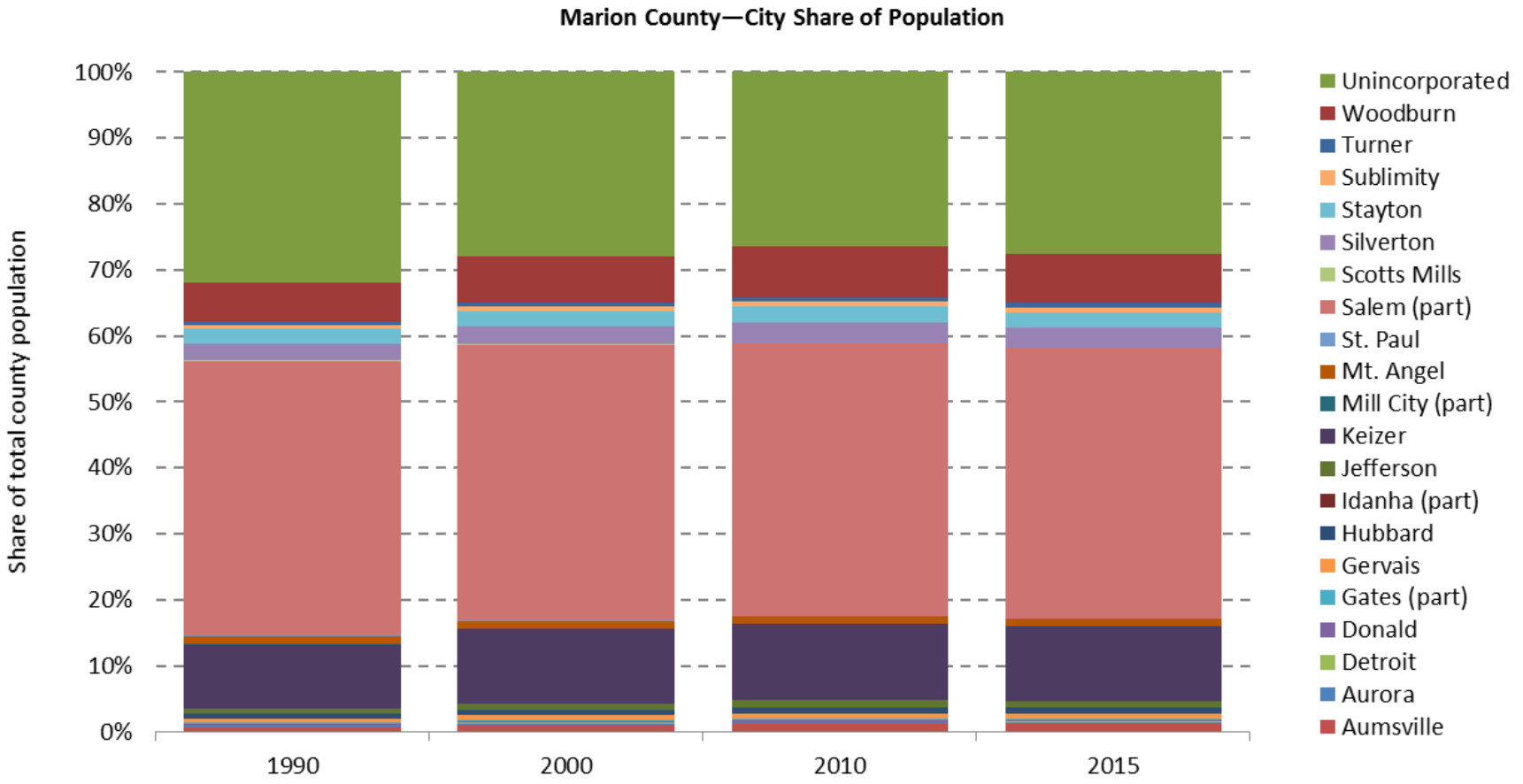

Sources: U.S. Census Bureau, April 1, 1990, 2000, and 2010 Decennial Censuses. Population Research Center, July 1, 2015 Annual Certified Population Estimate. Calculated by Population Research Center (PRC).

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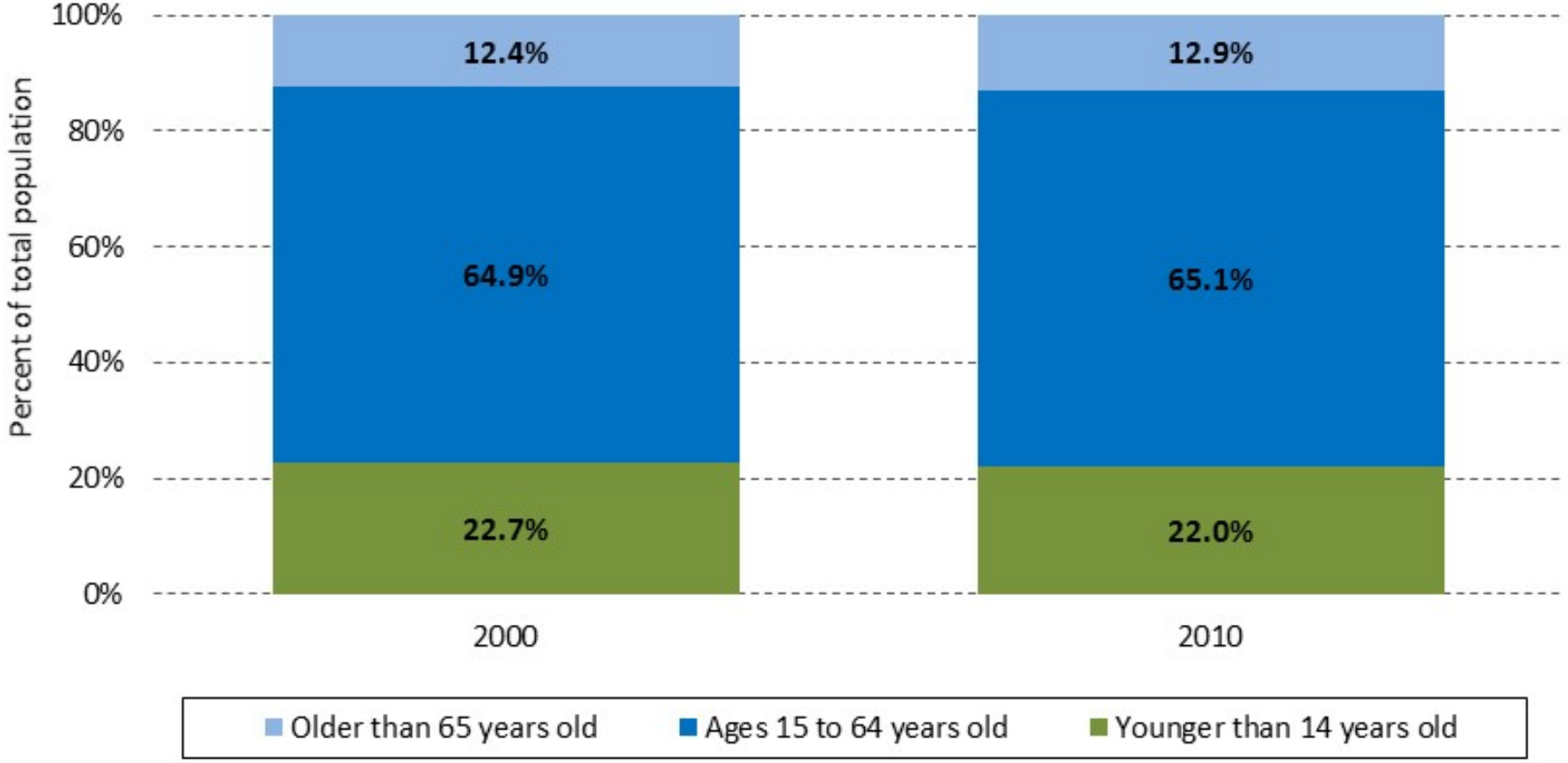

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

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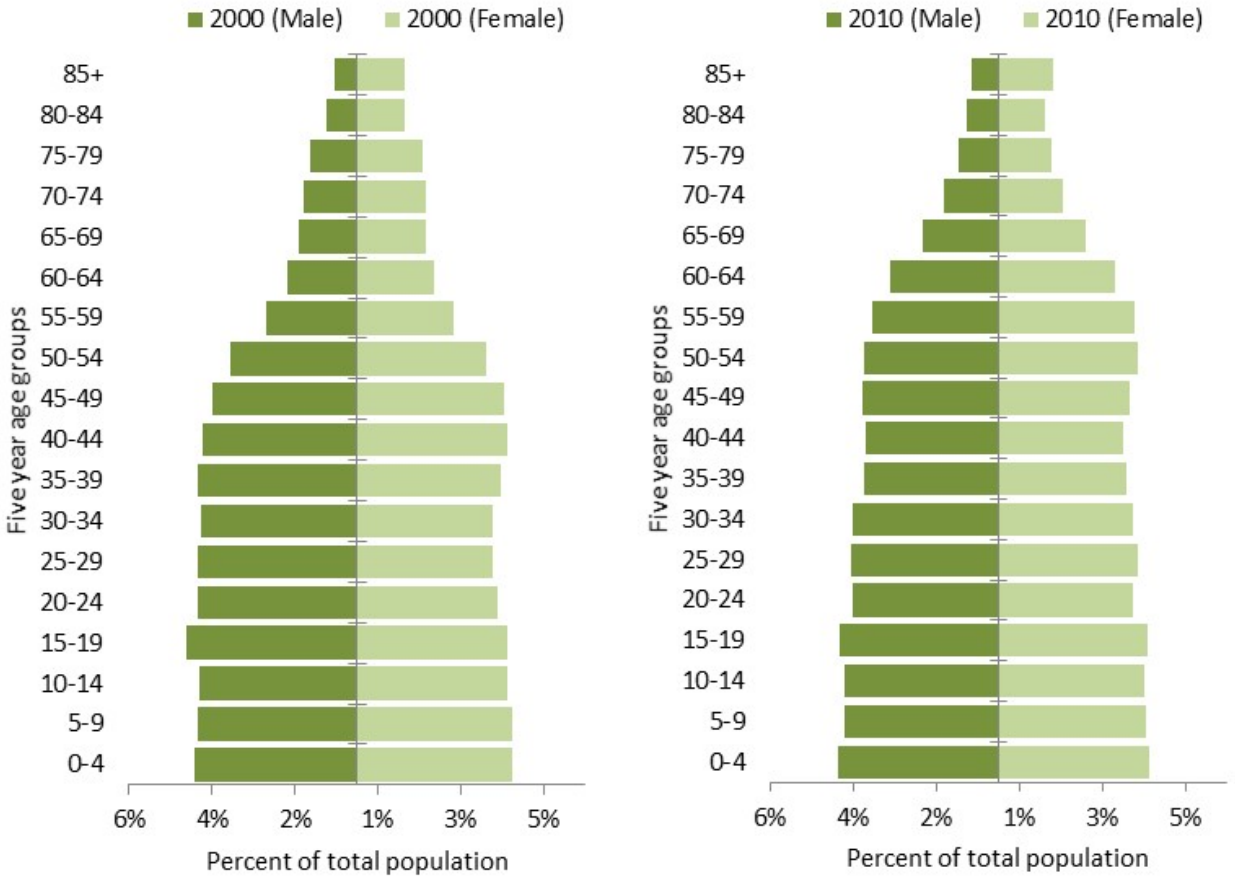
Marion County—Age Structure of the Population (2000 and 2010)



Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

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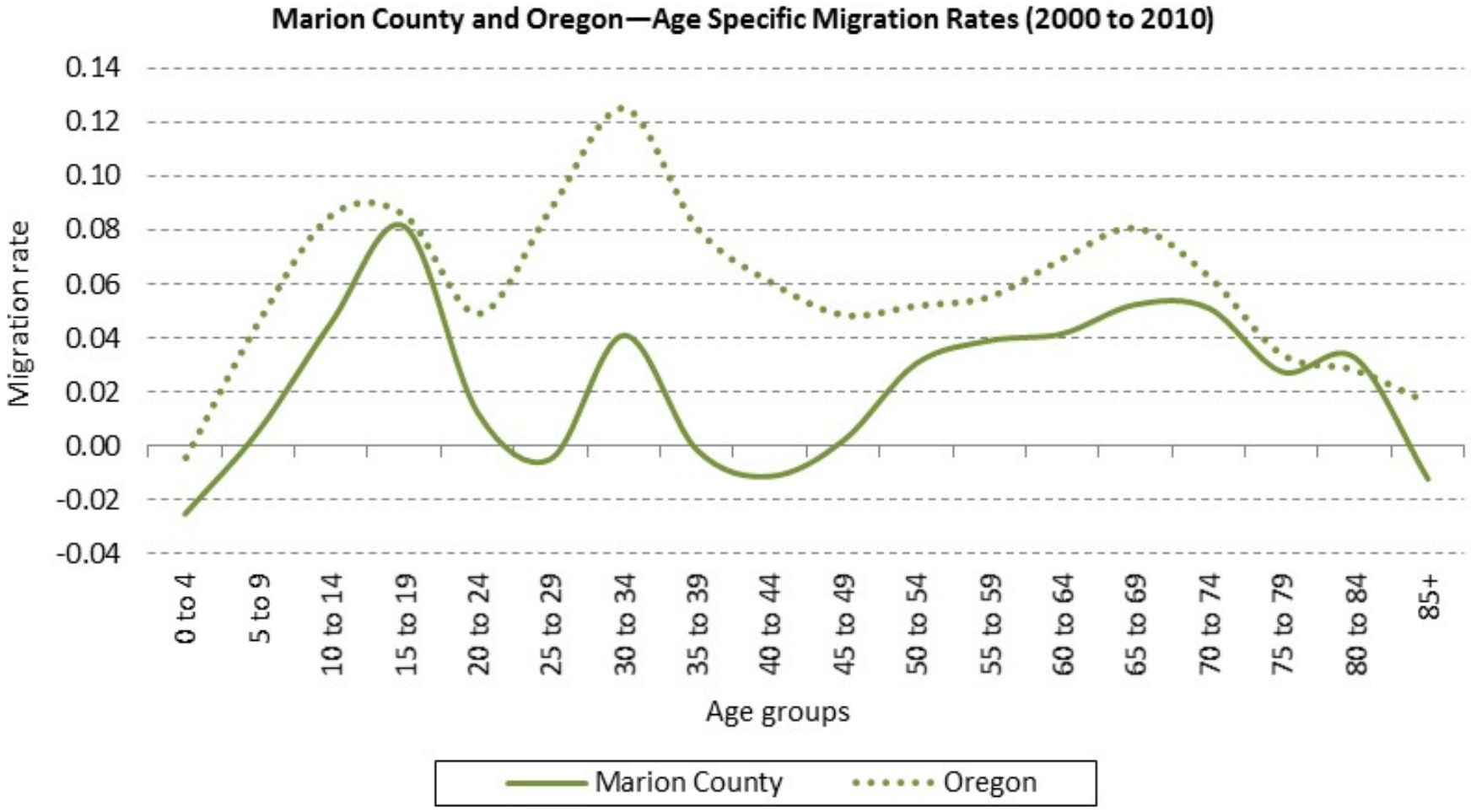

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

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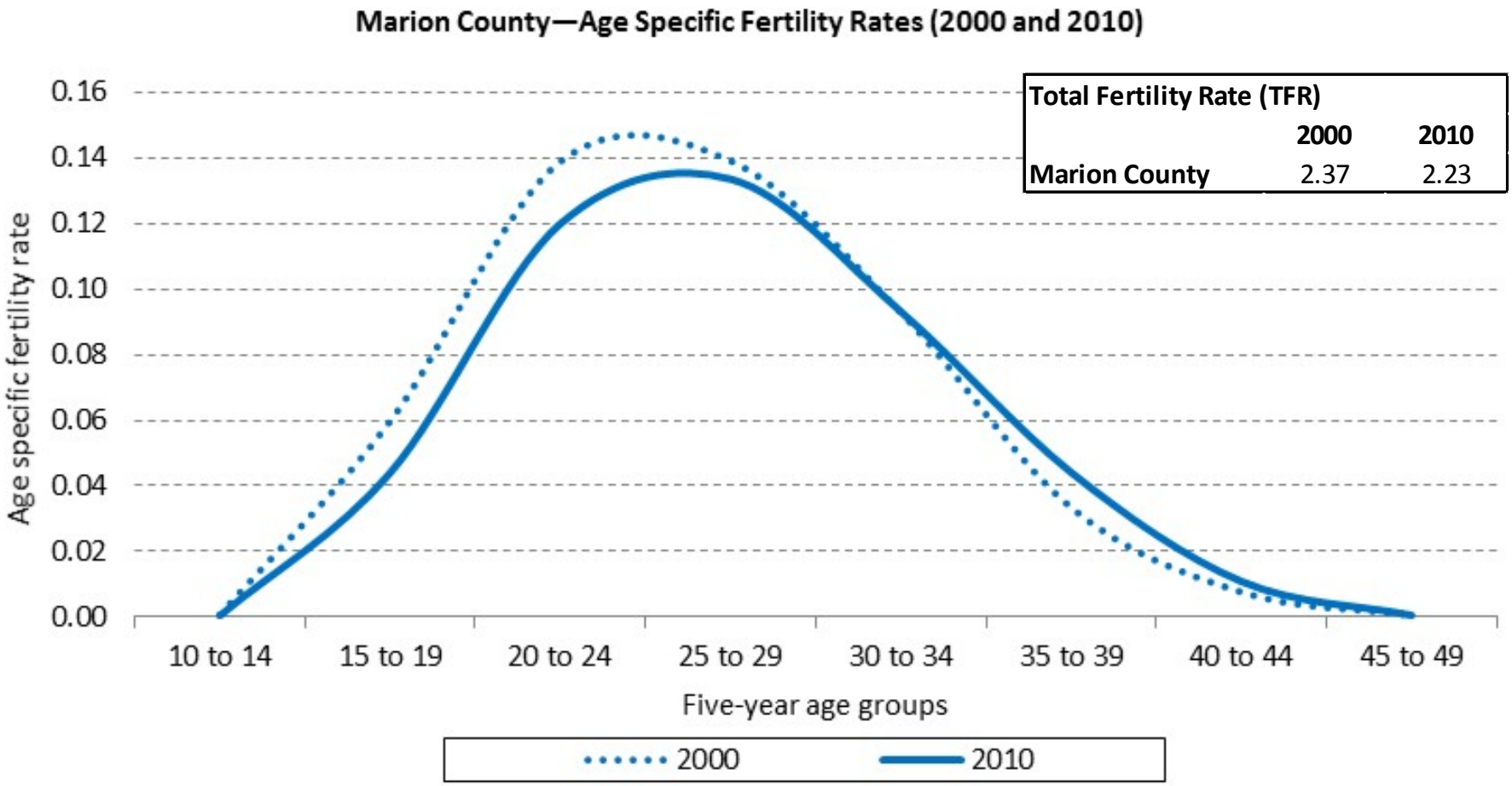

Sources: U.S. Census Bureau, 2000 and 2010 Censuses . Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Demographic and Economic Trends

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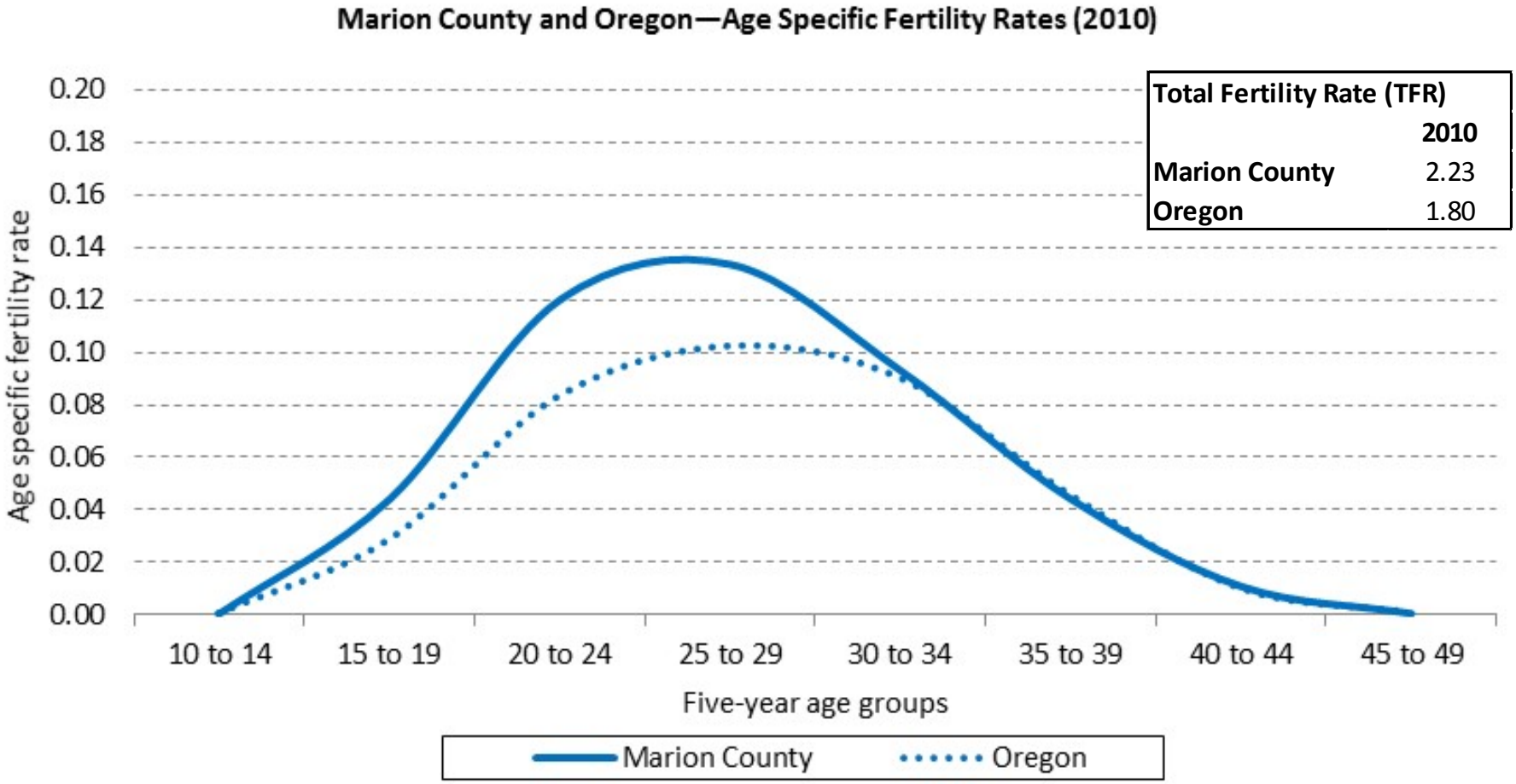

Sources: U.S. Census Bureau, 2010 Census. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

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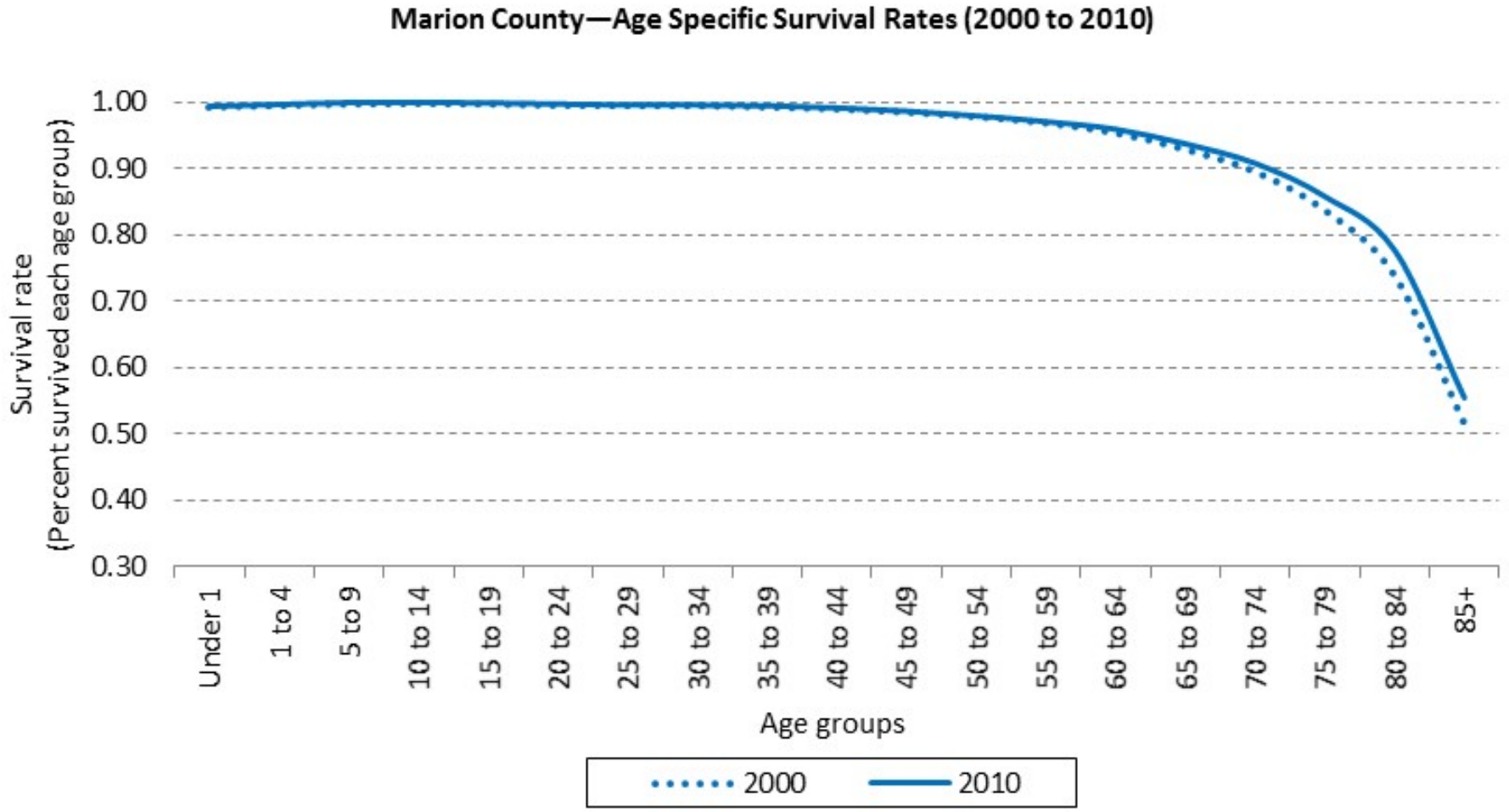

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

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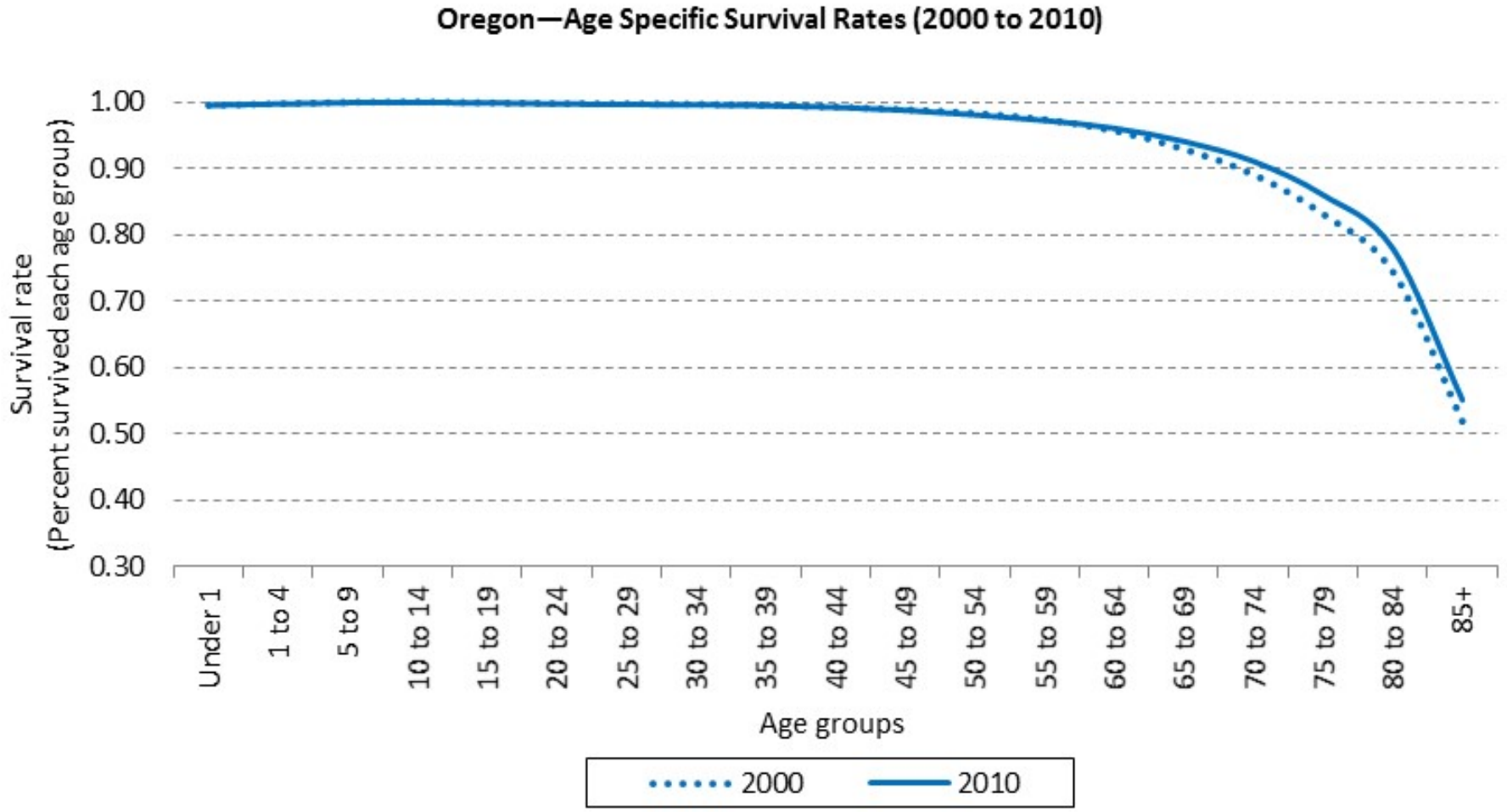

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

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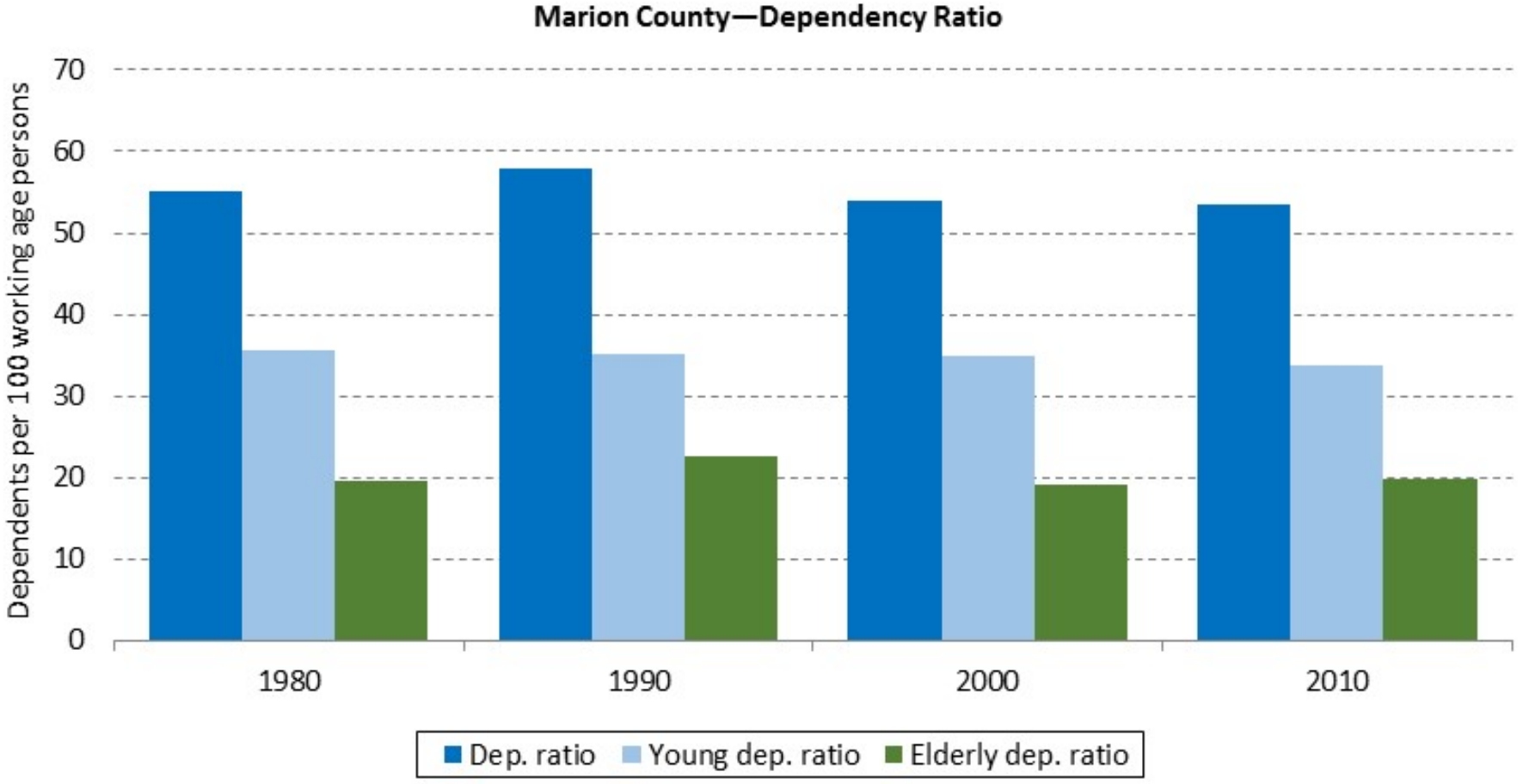

Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses. Calculated by Population Research Center (PRC).
Note: Dependency Ratio = {[(Population Age 0-14) + (Population Age 65 or older)] / (Population Age 15-64)} x 100

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Marion County—Hispanic or Latino and Race (2000 and 2010)

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	*284,834*	*100.0%*	*315,335*	*100.0%*	*30,501*	*10.7%*
Hispanic or Latino	48,714	17.1%	76,594	24.3%	27,880	57.2%
Not Hispanic or Latino	236,120	82.9%	238,741	75.7%	2,621	1.1%
White alone	217,880	76.5%	216,758	68.7%	-1,122	-0.5%
Black or African American alone	2,274	0.8%	2,906	0.9%	632	27.8%
American Indian and Alaska Native alone	3,326	1.2%	3,290	1.0%	-36	-1.1%
Asian alone	4,905	1.7%	5,790	1.8%	885	18.0%
Native Hawaiian and Other Pacific Islander alone	967	0.3%	2,254	0.7%	1,287	133.1%
Some Other Race alone	337	0.1%	411	0.1%	74	22.0%
Two or More Races	6,431	2.3%	7,332	2.3%	901	14.0%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Demographic and Economic Trends

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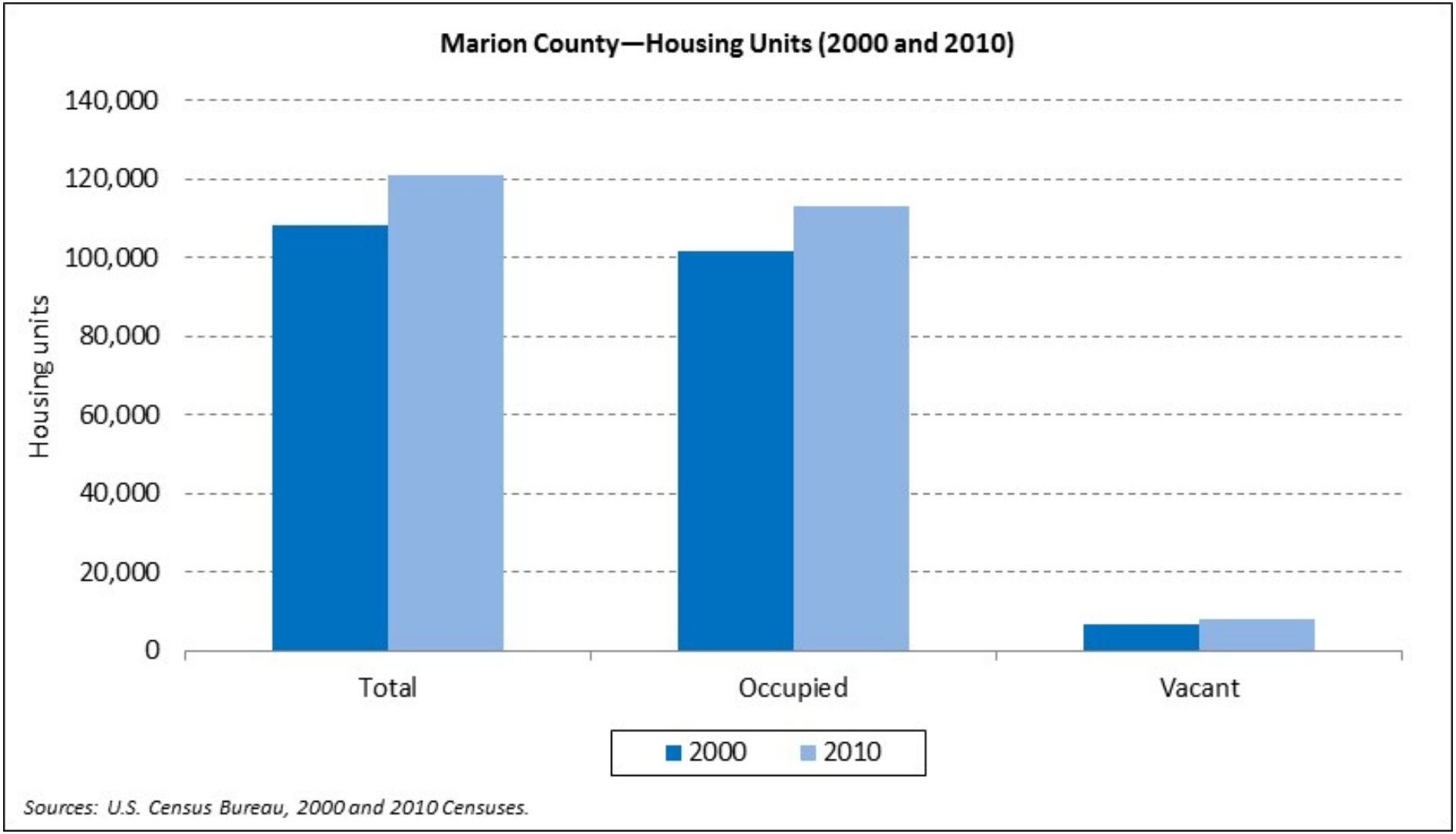

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Demographic and Economic Trends

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Marion and Incorporated Cities—Persons Per Household (PPH), Occupancy Rate, Percent Group Quarters, and Percent Seasonal Housing (2000 and 2010)

	Persons Per Household (PPH)		Occupancy Rate		Percent Seasonal Housing		Percent Group Quarters	
	2000	2010	2000	2010	2000	2010	2000	2010
Marion County	*2.7*	*2.7*	*94.0%*	*93.4%*	*0.7%*	*0.9%*	*3.7%*	*3.3%*
Aumsville city	3.1	3.0	93.8%	96.0%	0.3%	0.1%	0.0%	0.0%
Aurora city	2.6	2.7	95.4%	96.3%	0.4%	0.0%	0.0%	0.0%
Detroit city	2.2	2.1	31.1%	26.1%	64.0%	73.1%	0.0%	0.0%
Donald city	3.0	2.8	85.6%	93.3%	0.8%	0.0%	0.0%	0.0%
Gates city (part)	2.3	2.1	79.3%	89.8%	1.7%	0.4%	0.0%	0.0%
Gervais city	4.4	4.2	94.8%	92.2%	0.2%	0.3%	1.3%	0.2%
Hubbard city	3.3	3.3	94.2%	95.6%	0.6%	0.3%	0.0%	0.0%
Idanha city (part)	2.6	2.2	84.8%	74.5%	1.5%	14.9%	0.0%	0.0%
Jefferson city	3.0	2.9	92.3%	94.5%	0.1%	0.4%	0.0%	0.2%
Keizer city	2.6	2.6	94.8%	94.9%	0.2%	0.3%	0.9%	1.0%
Mill city (part)	2.9	2.7	79.7%	85.3%	3.8%	2.8%	0.0%	0.0%
Mount Angel city	2.8	2.6	94.2%	94.0%	0.1%	0.5%	6.8%	6.2%
Salem city (part)	2.5	2.5	94.2%	93.4%	0.3%	0.3%	7.0%	6.6%
Scotts Mills city	2.9	2.7	99.1%	94.9%	0.0%	0.0%	0.0%	0.0%
Silverton city	2.7	2.6	94.5%	93.9%	0.5%	0.5%	1.1%	0.8%
St. Paul city	2.9	2.9	96.1%	97.4%	0.8%	0.0%	0.0%	0.0%
Stayton city	2.7	2.6	94.9%	94.5%	0.1%	0.2%	0.1%	0.2%
Sublimity city	2.7	2.3	96.5%	93.1%	0.6%	0.4%	14.8%	7.8%
Turner city	2.4	2.6	94.1%	92.4%	0.6%	0.1%	0.3%	0.0%
Woodburn city	3.1	3.2	91.9%	91.1%	0.5%	0.6%	2.8%	0.7%
Unincorporated	2.8	2.8	94.2%	93.4%	0.6%	0.7%	4.2%	3.8%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

Note: Percent Seasonal Housing is the proportion of total housing units in 2000 and 2010 that are identified as vacant "for seasonal, recreational, or occasional use."

Demographic and Economic Trends

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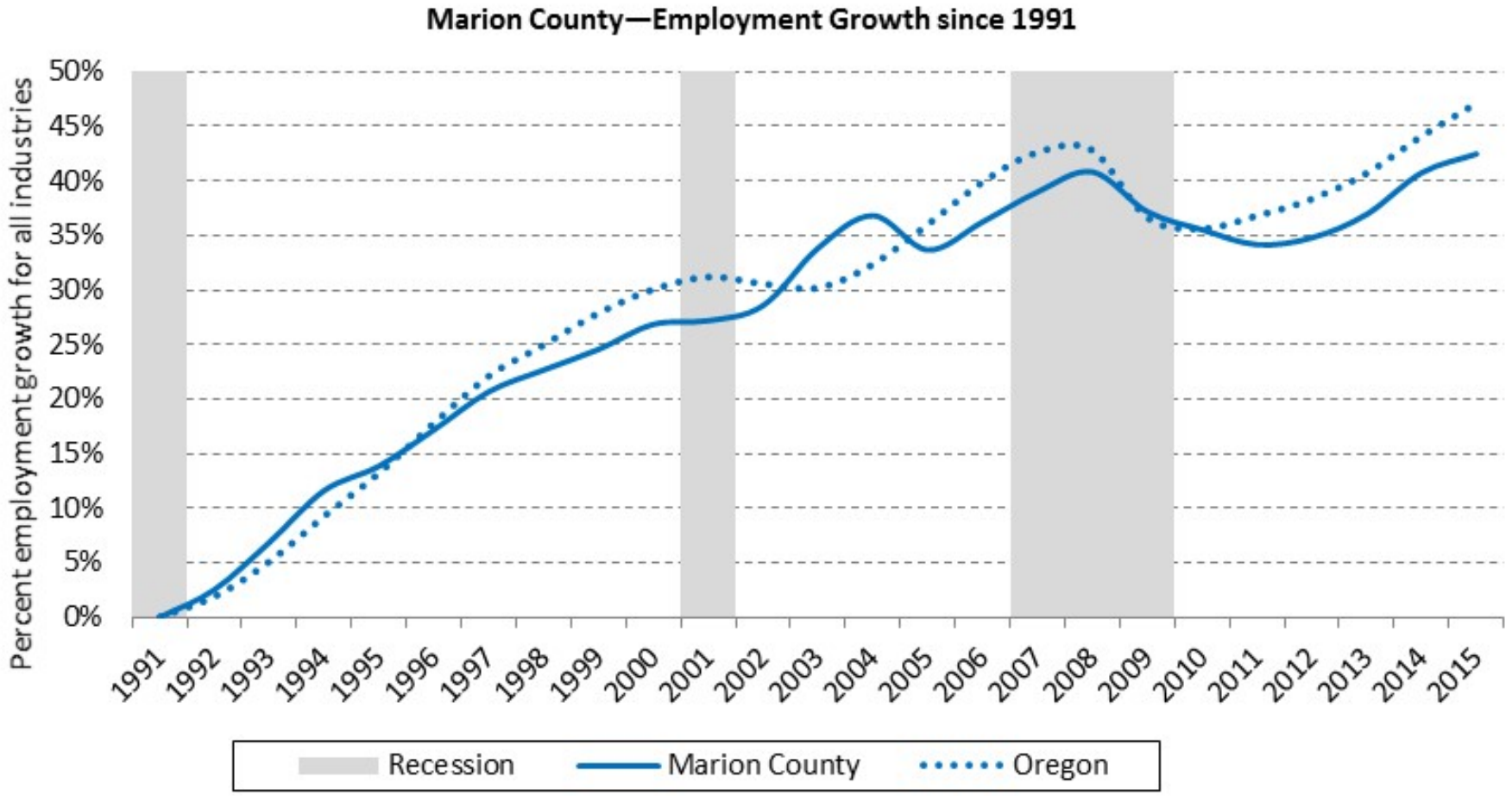

Source: U.S. Census Bureau. 2015. Quarterly Workforce Indicators (QWI) Data. Longitudinal-Employer Household Dynamics Program. http://ledextract.ces.census.gov/. Calculated by Population Research Center (PRC).

Demographic and Economic Trends

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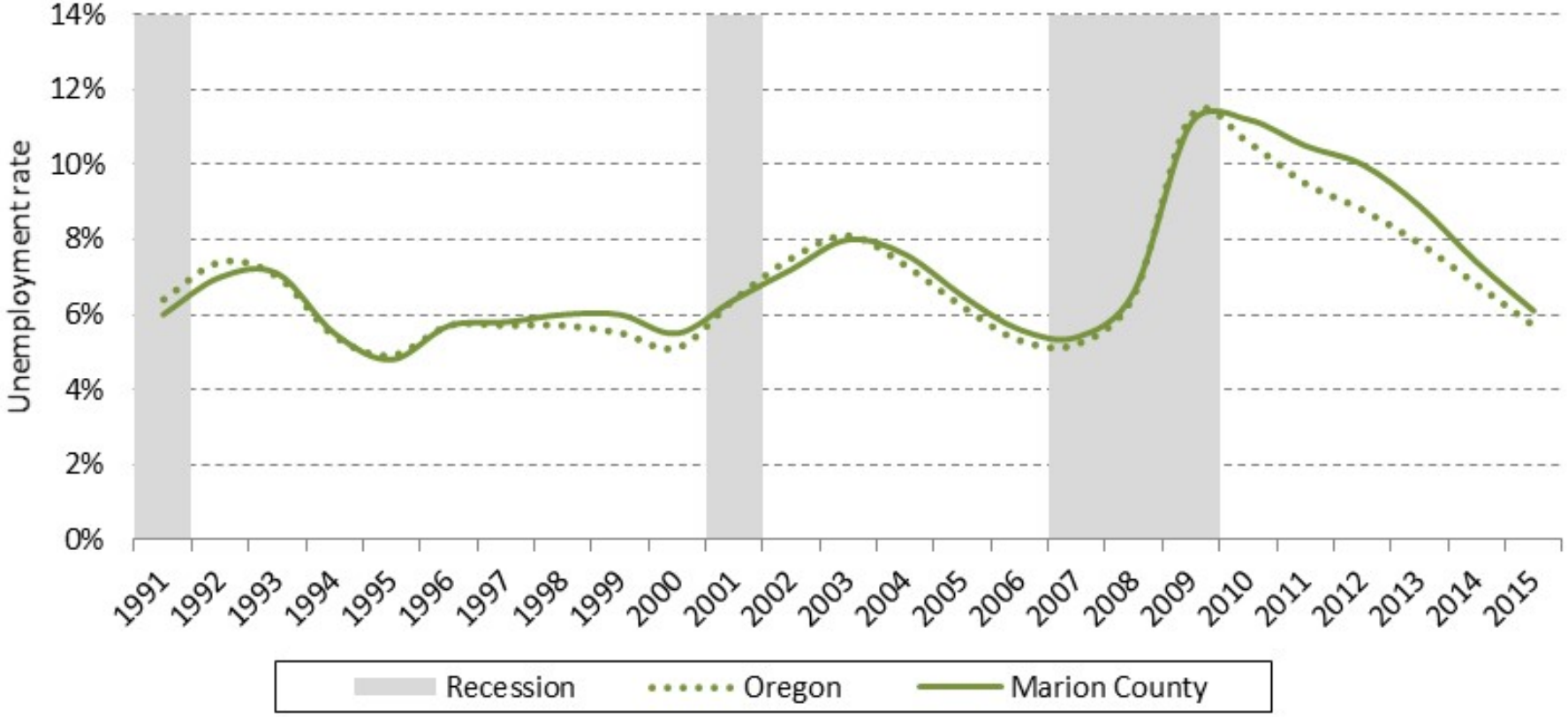

Source: Oregon Employment Department. Local Area Unemployment Statistics (LAUS).
https://www.qualityinfo.org/ed-uesti/?at=1&t1=4101000000~unemprate~y~2000~2015.
Note: The rate represents the percent of the labor force seeking work but not employed.

Demographic and Economic Trends

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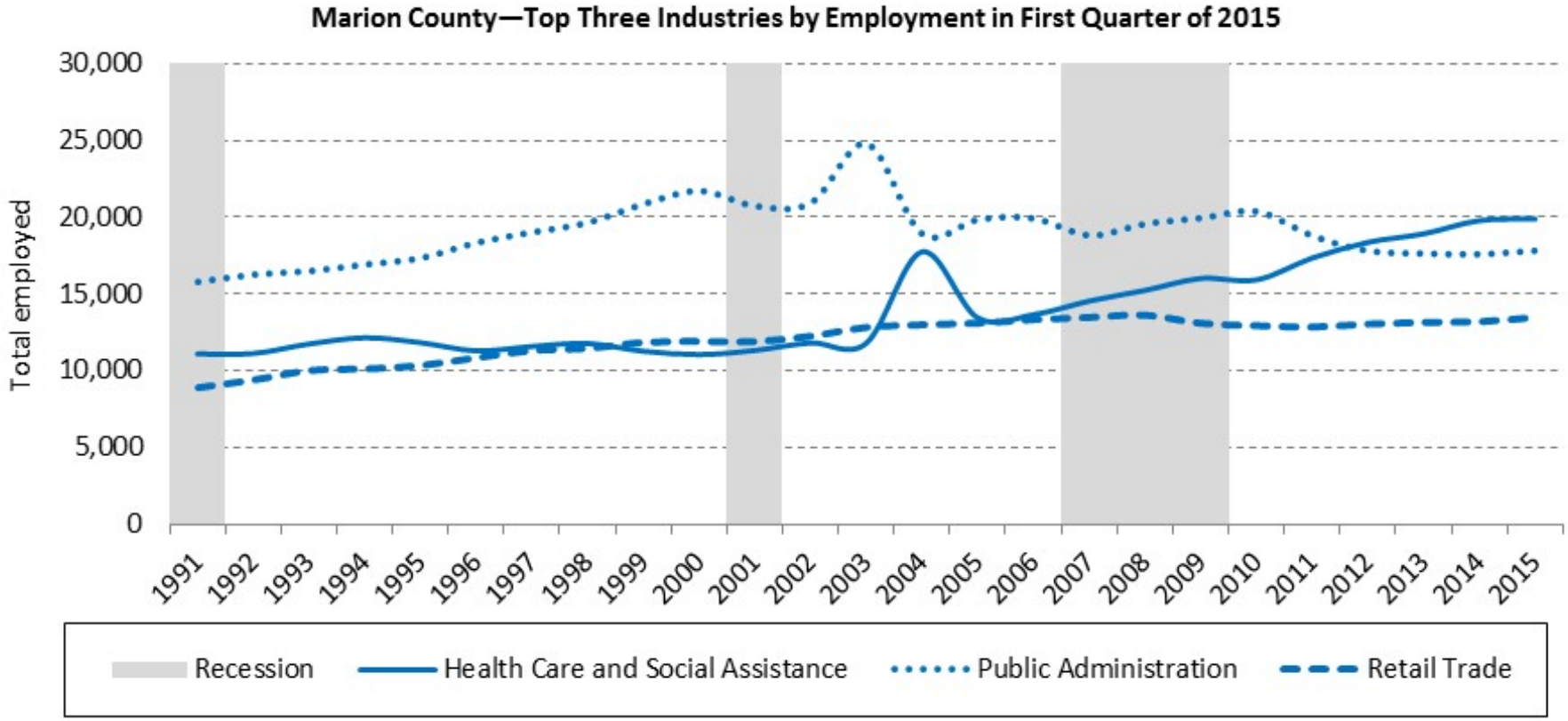


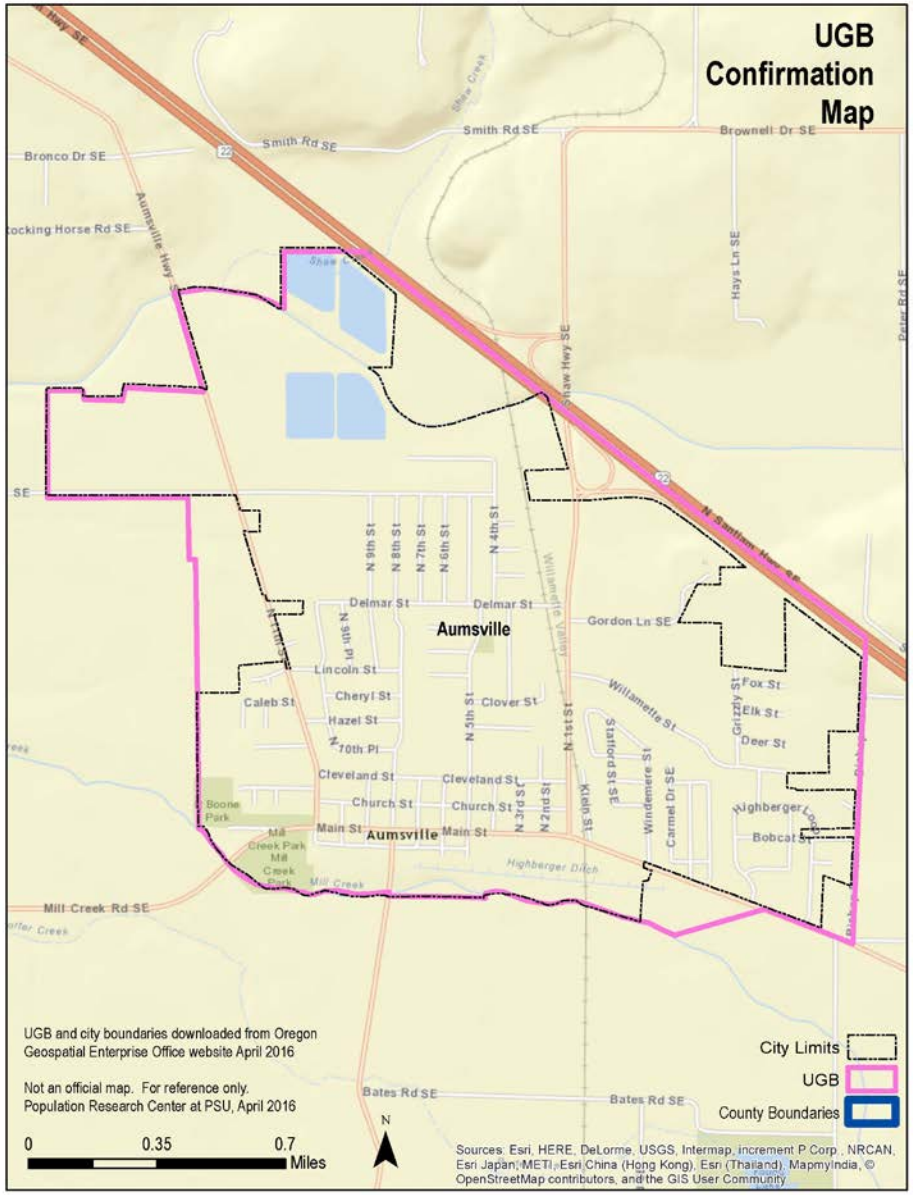
Source: U.S. Census Bureau. 2015. Quarterly Workforce Indicators (QWI) Data. Longitudinal-Employer Household Dynamics Program. http://ledextract.ces.census.gov/. Calculated by Population Research Center (PRC).
Note: The quarterly employment data used in this chart is not seasonally adjusted.

Local Input and Additional Information

- Questions?
- Discussion time

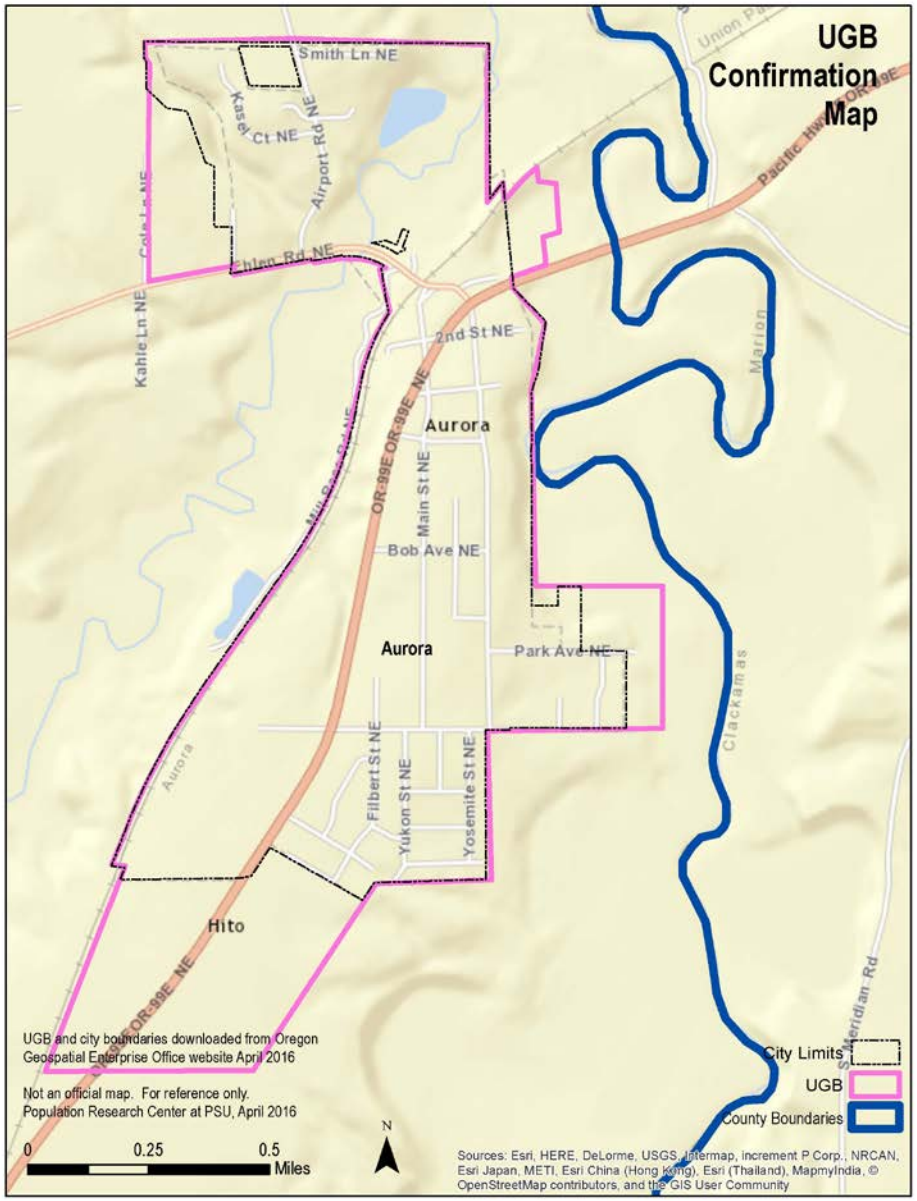
Marion County UGBs

AUMSVILLE



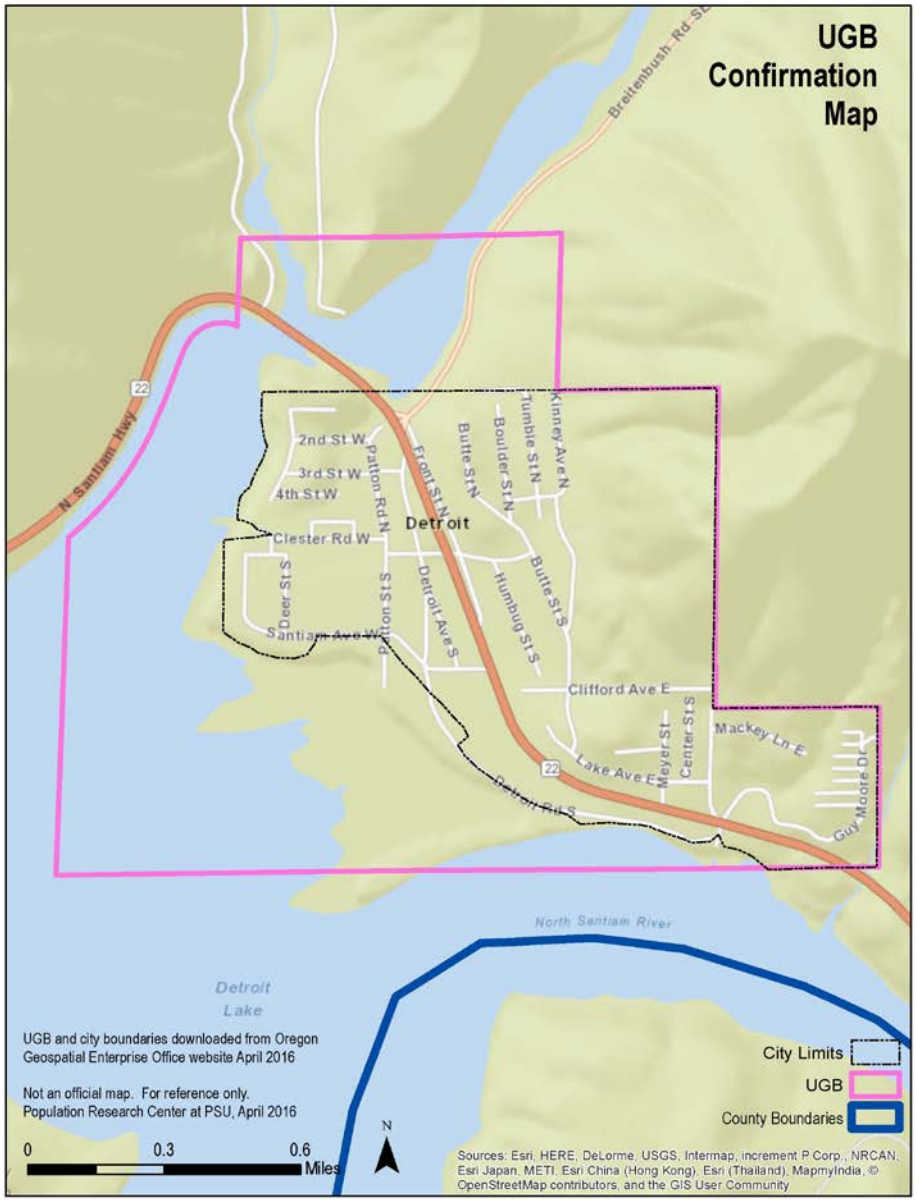
Confirmed by City

AURORA



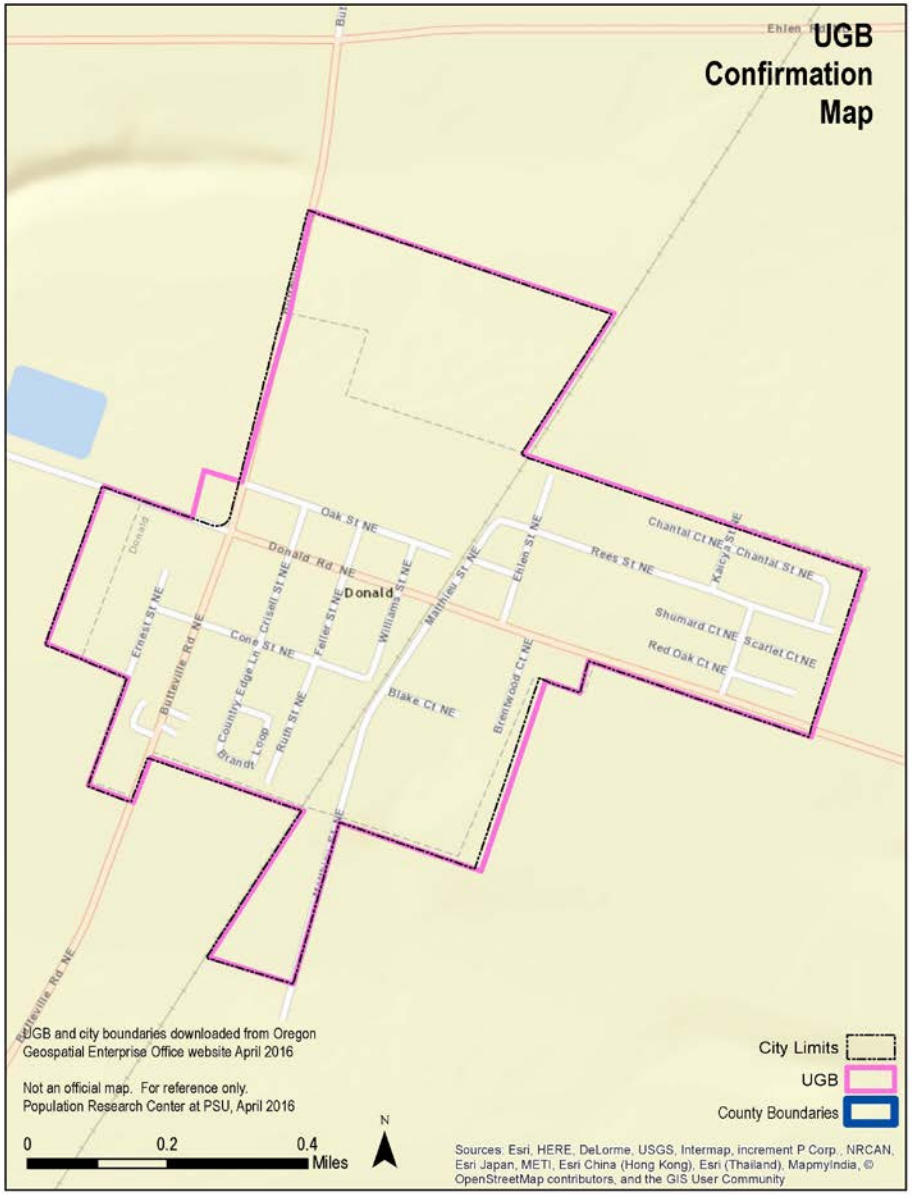
Confirmed by City

DETROIT



Confirmed by City

DONALD

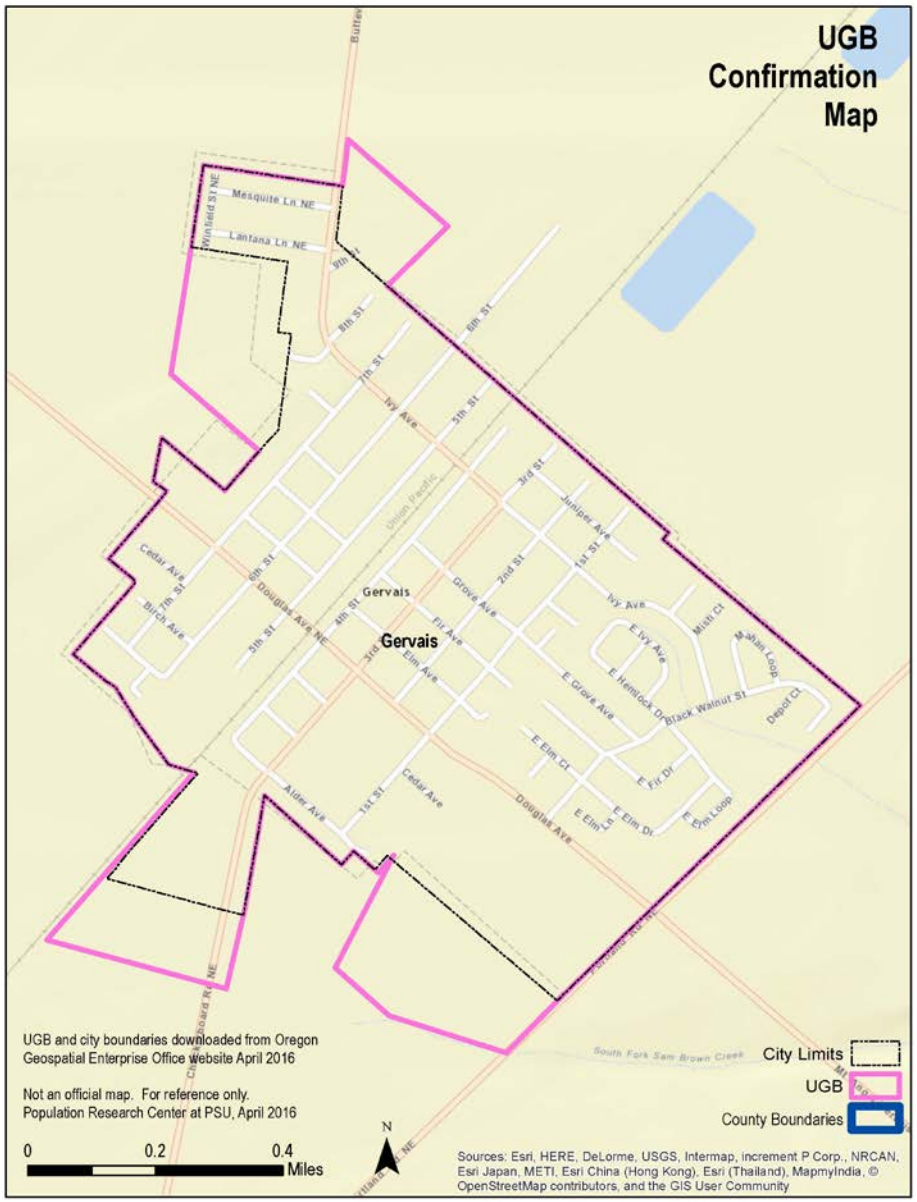


Confirmed by City

GATES

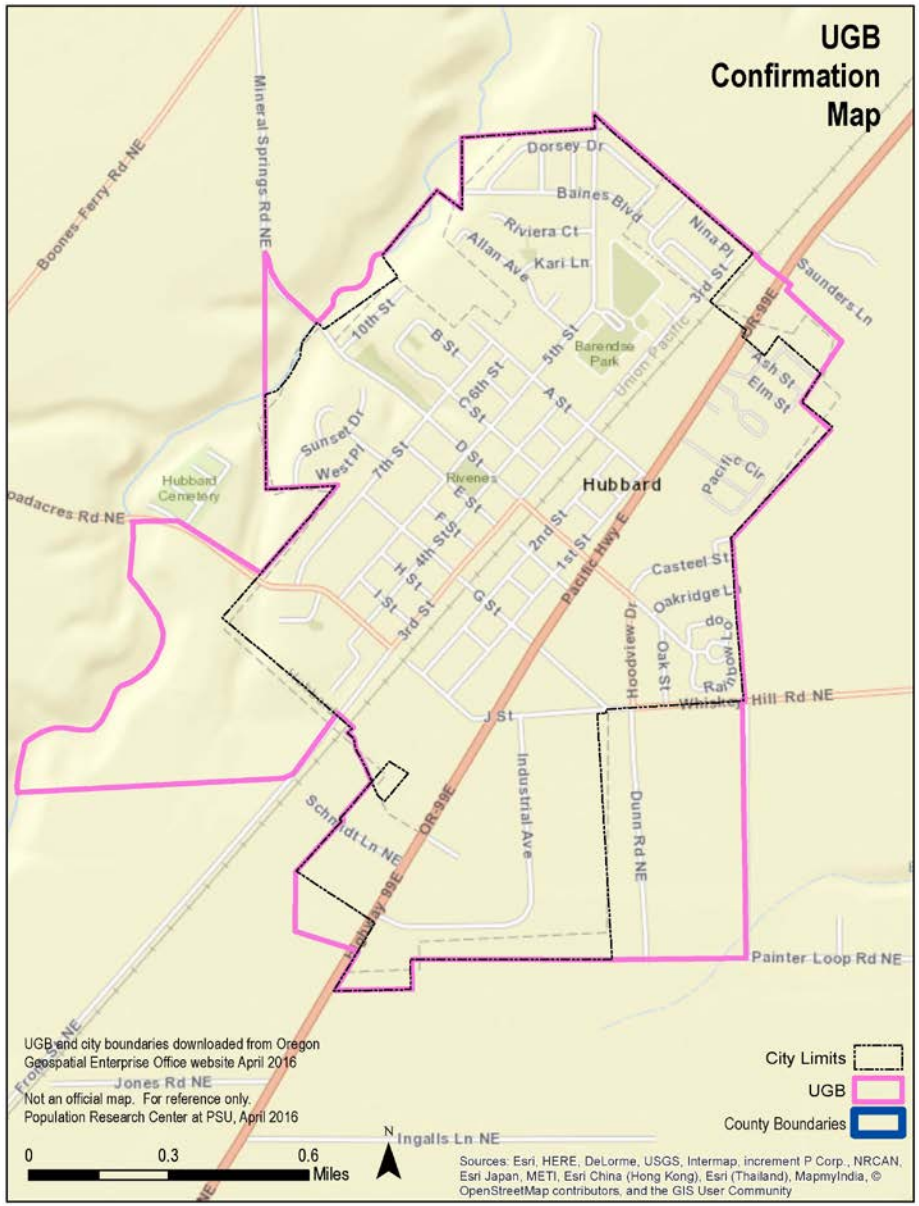
Confirmed by City

GERVAIS



Confirmed by City

HUBBARD



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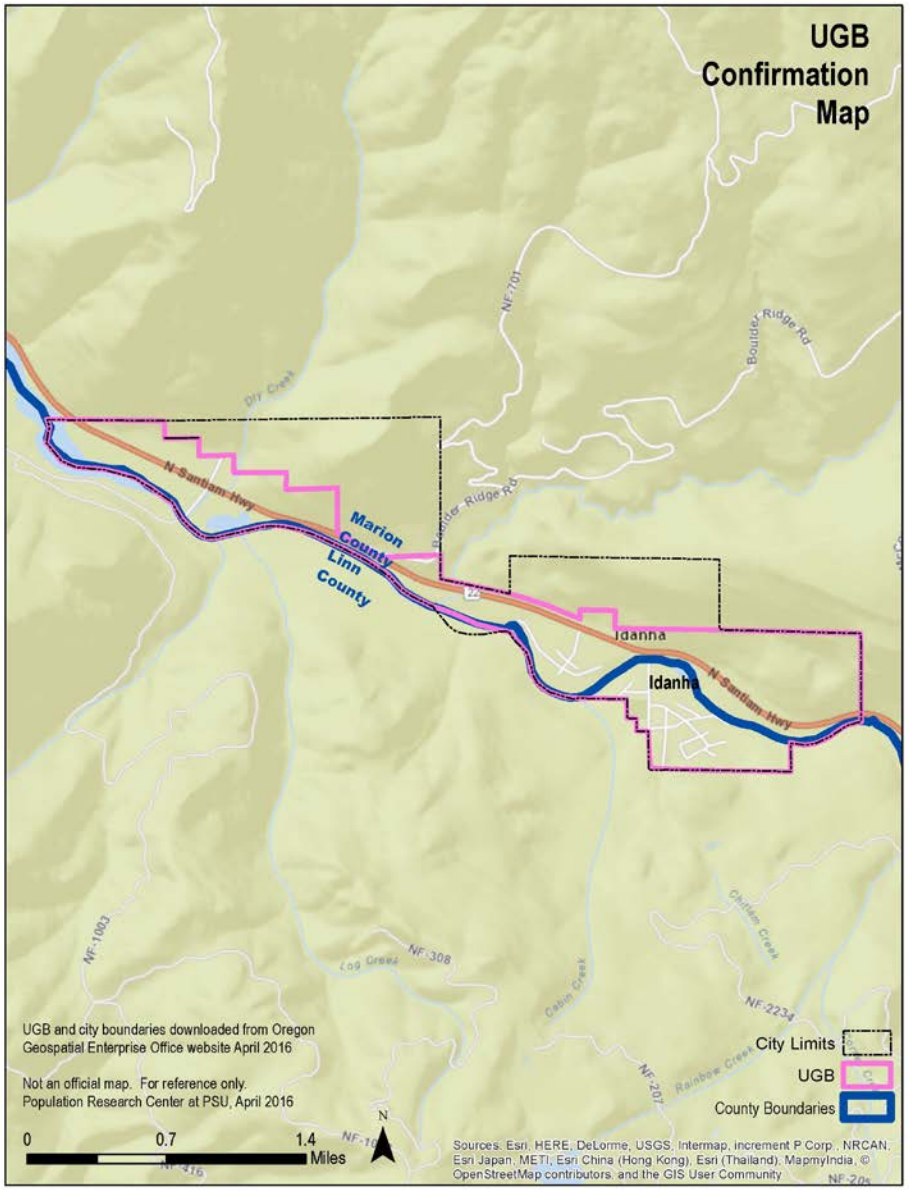

Confirmed by City

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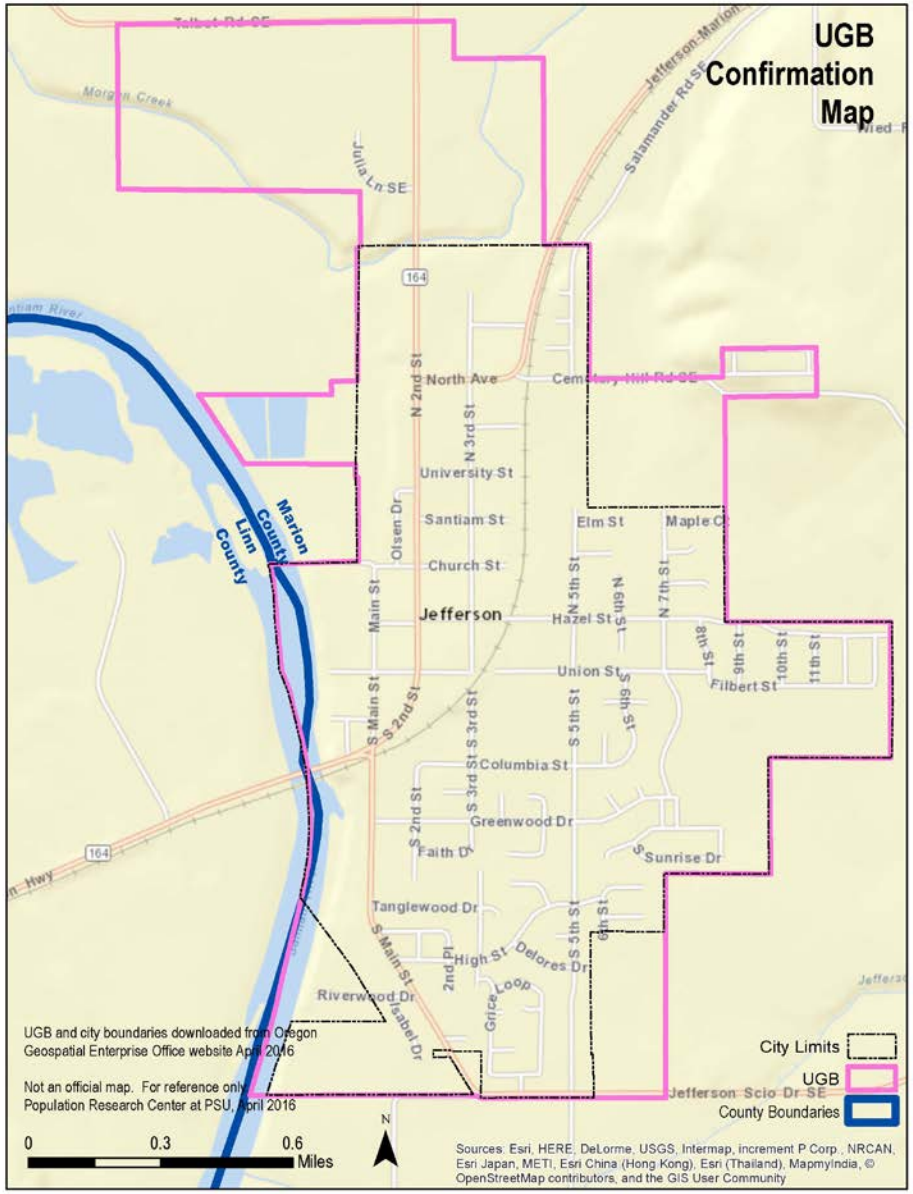

Confirmed by City

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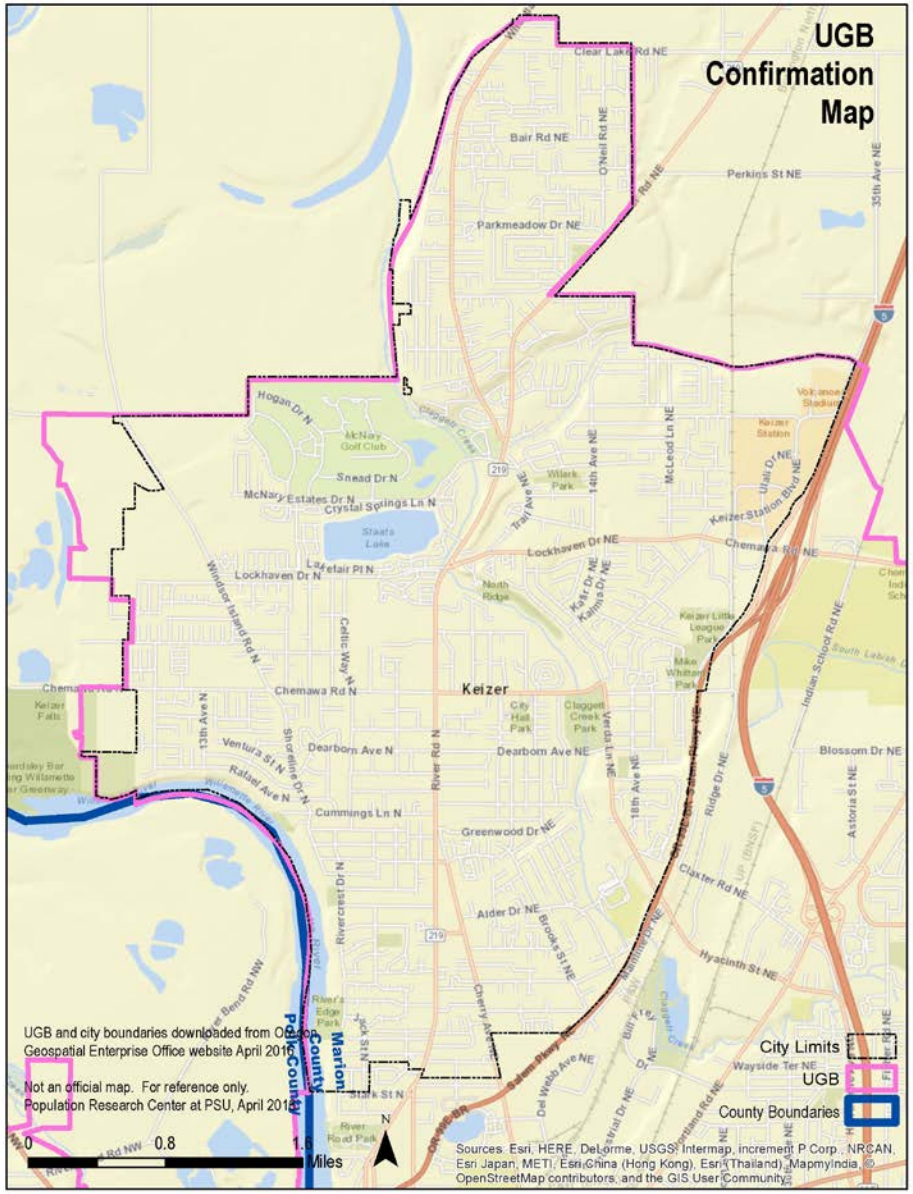
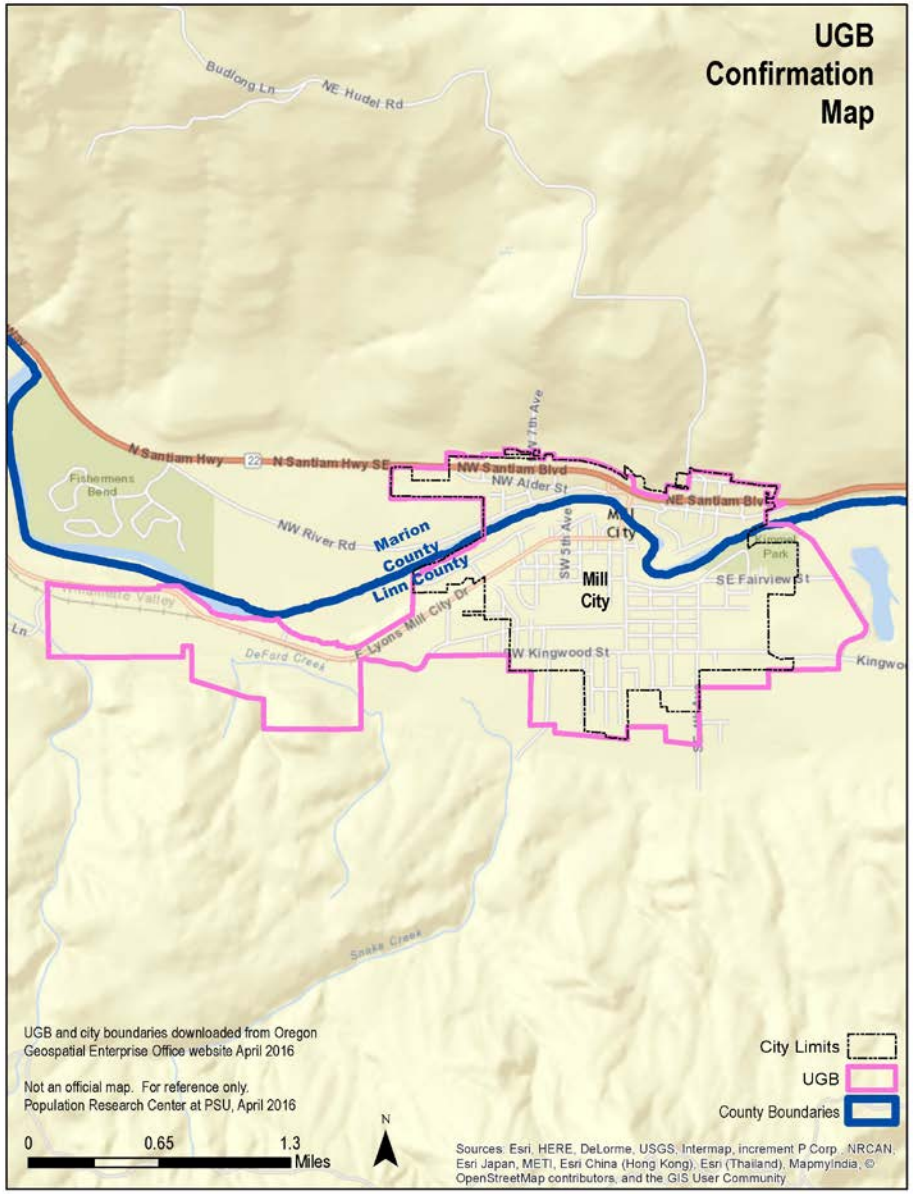


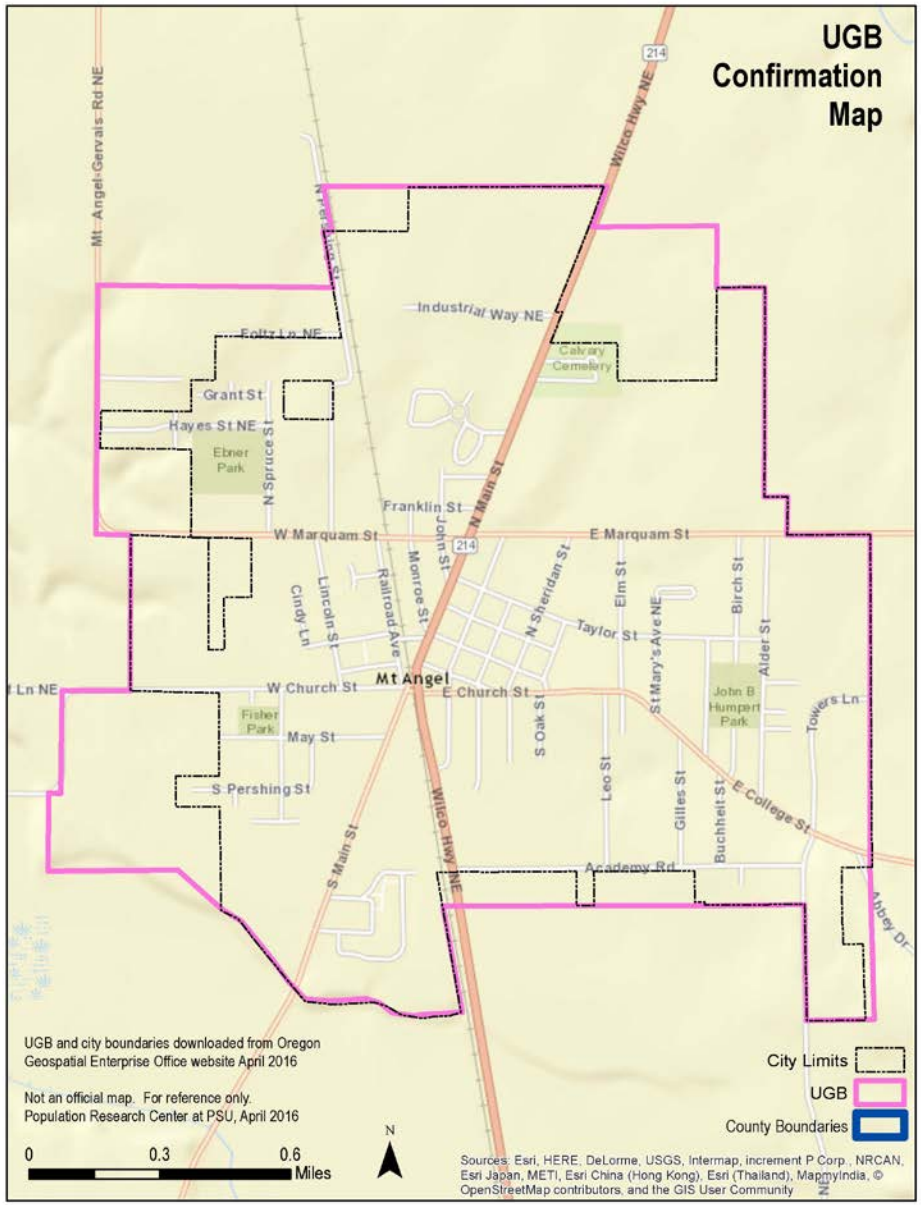
Not Confirmed by City

MILL CITY



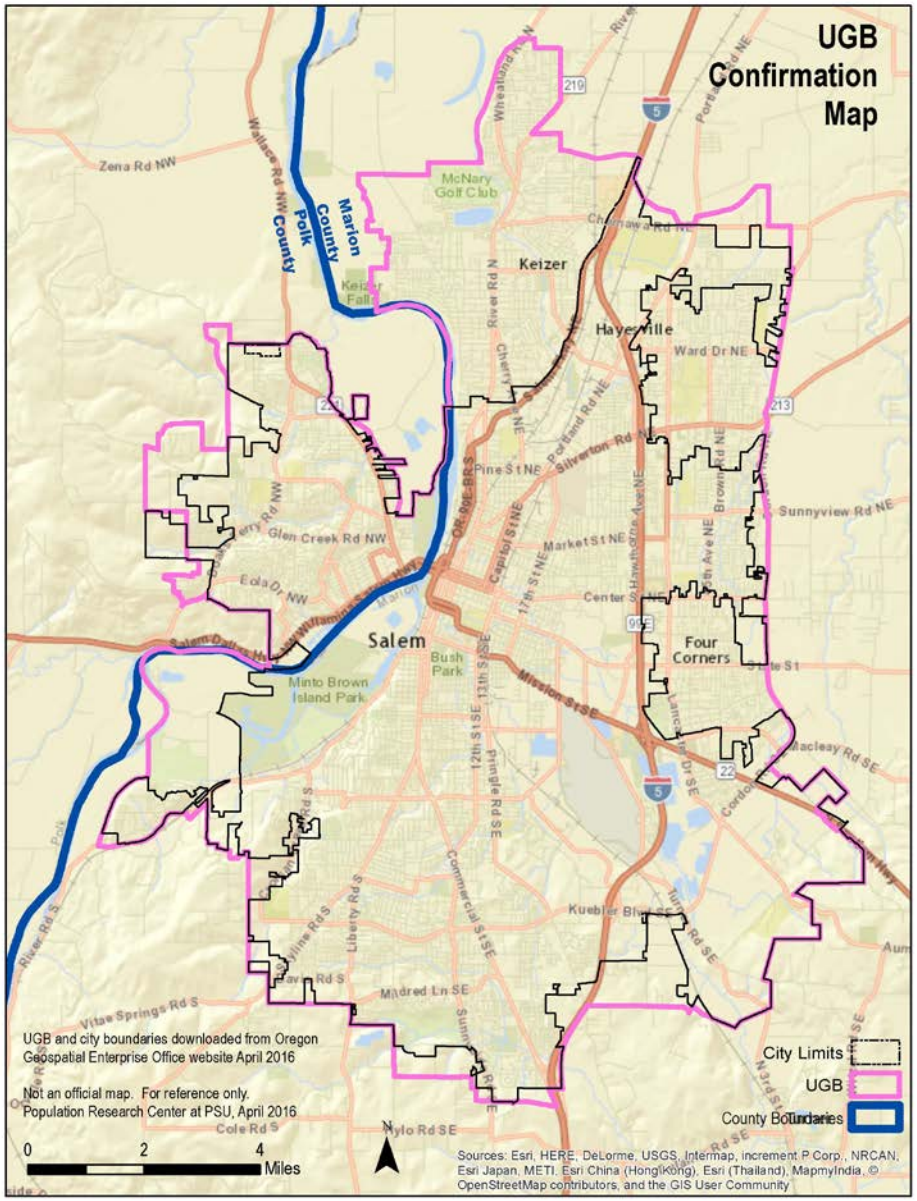
Confirmed by City

MT. ANGEL



Confirmed by City

SALEM

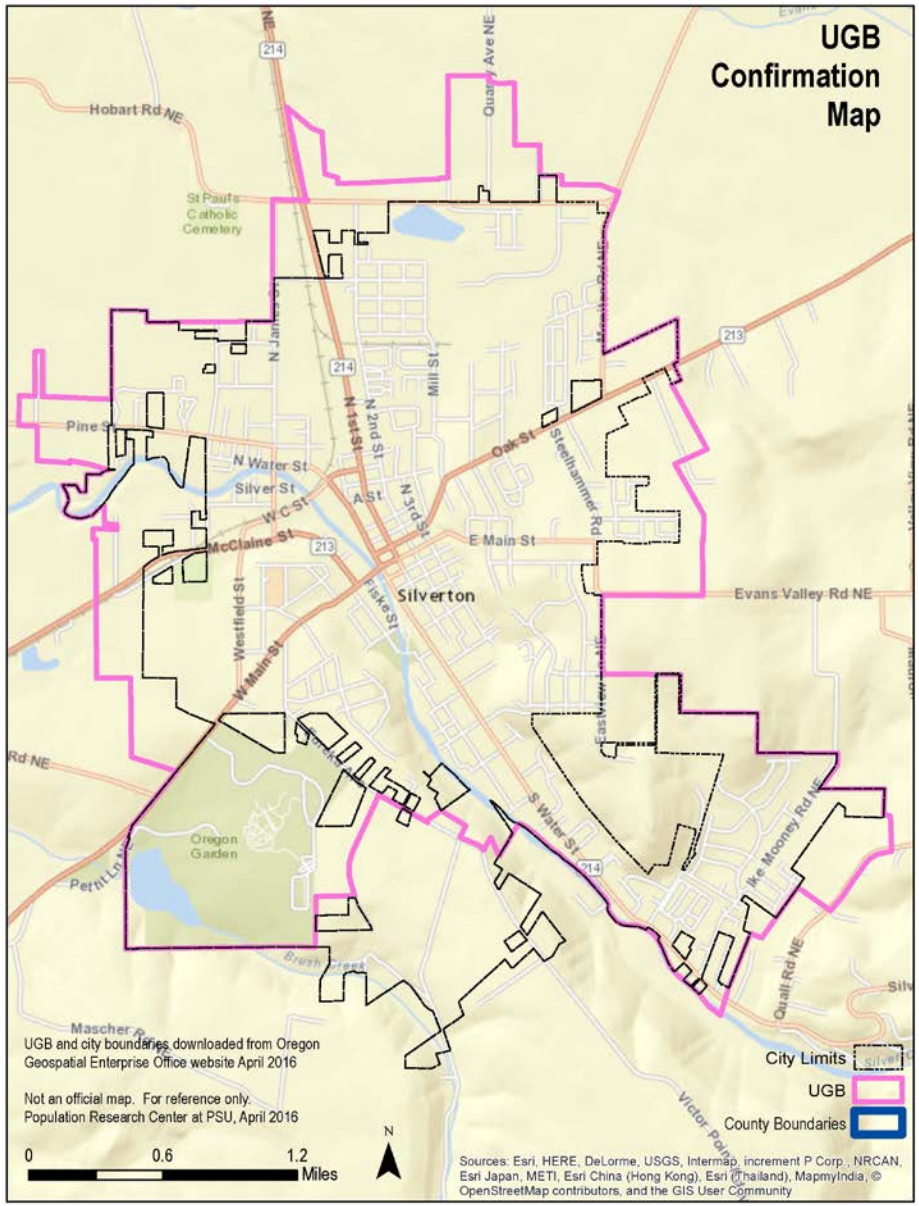


Confirmed by City

SCOTTS MILLS

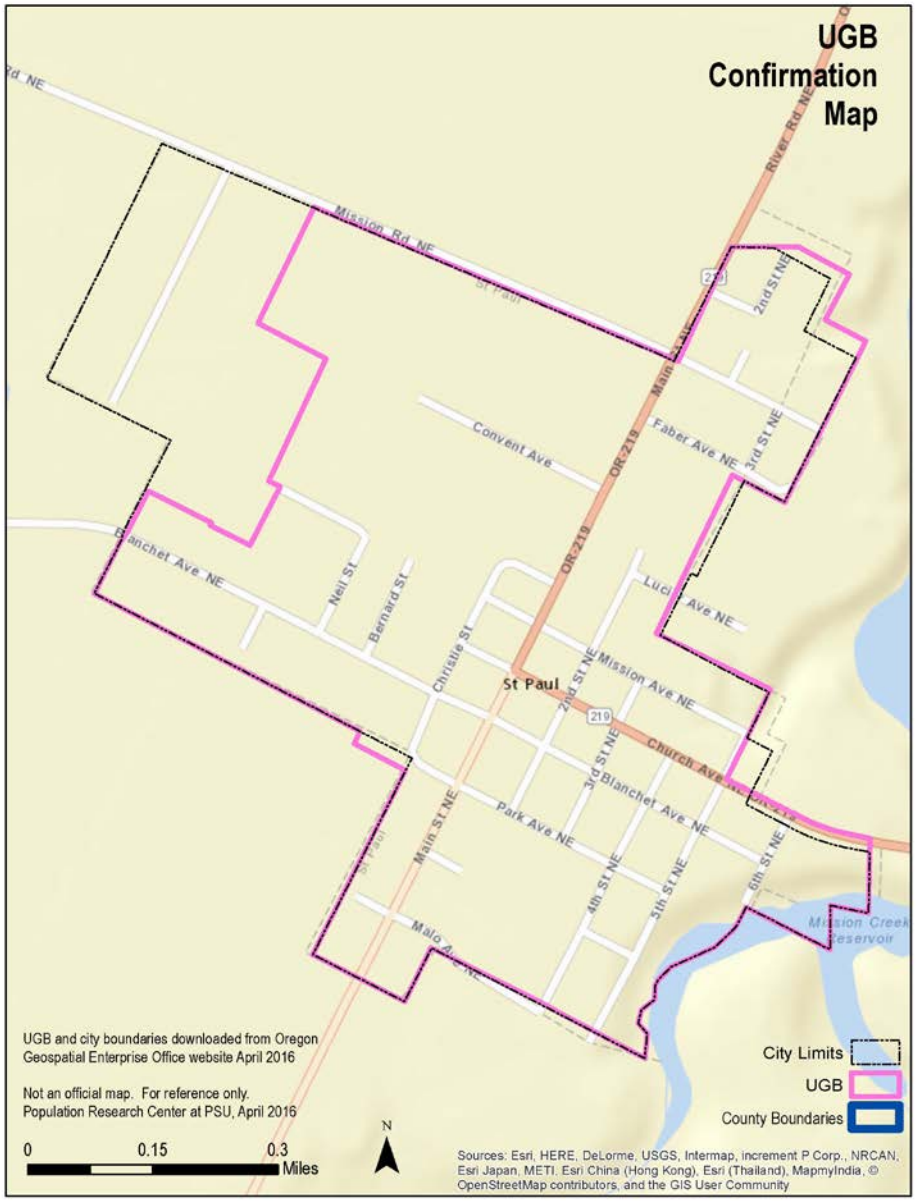
Confirmed by City

SILVERTON



Confirmed by City

ST. PAUL



Confirmed by City

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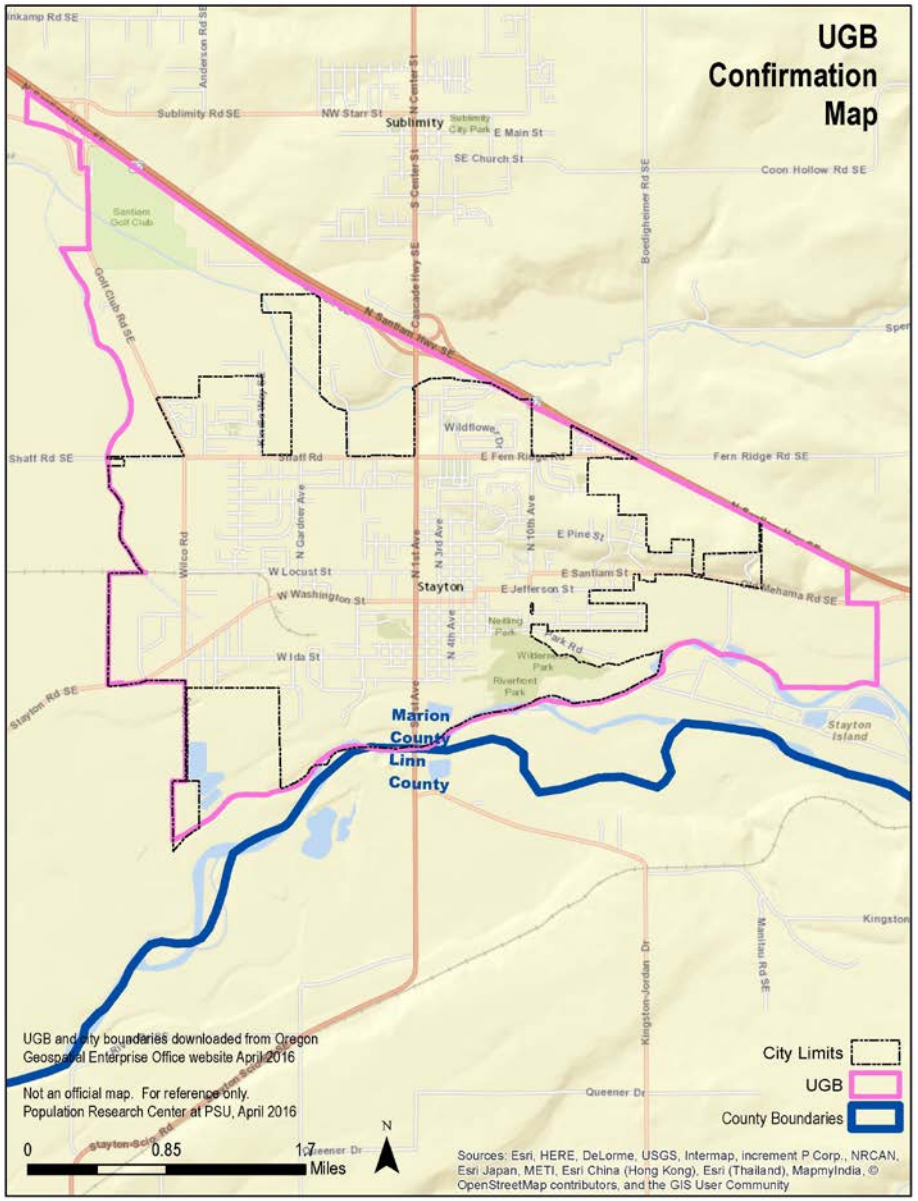
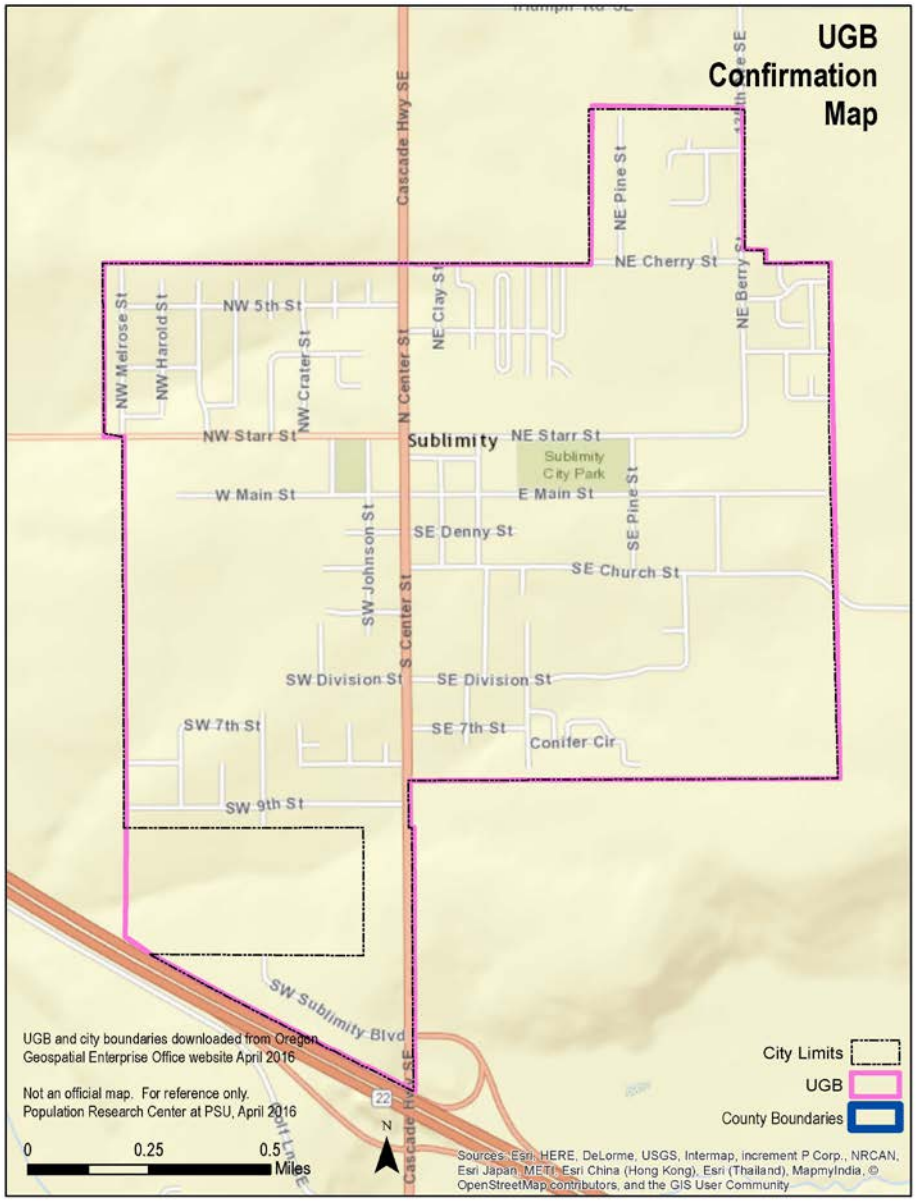


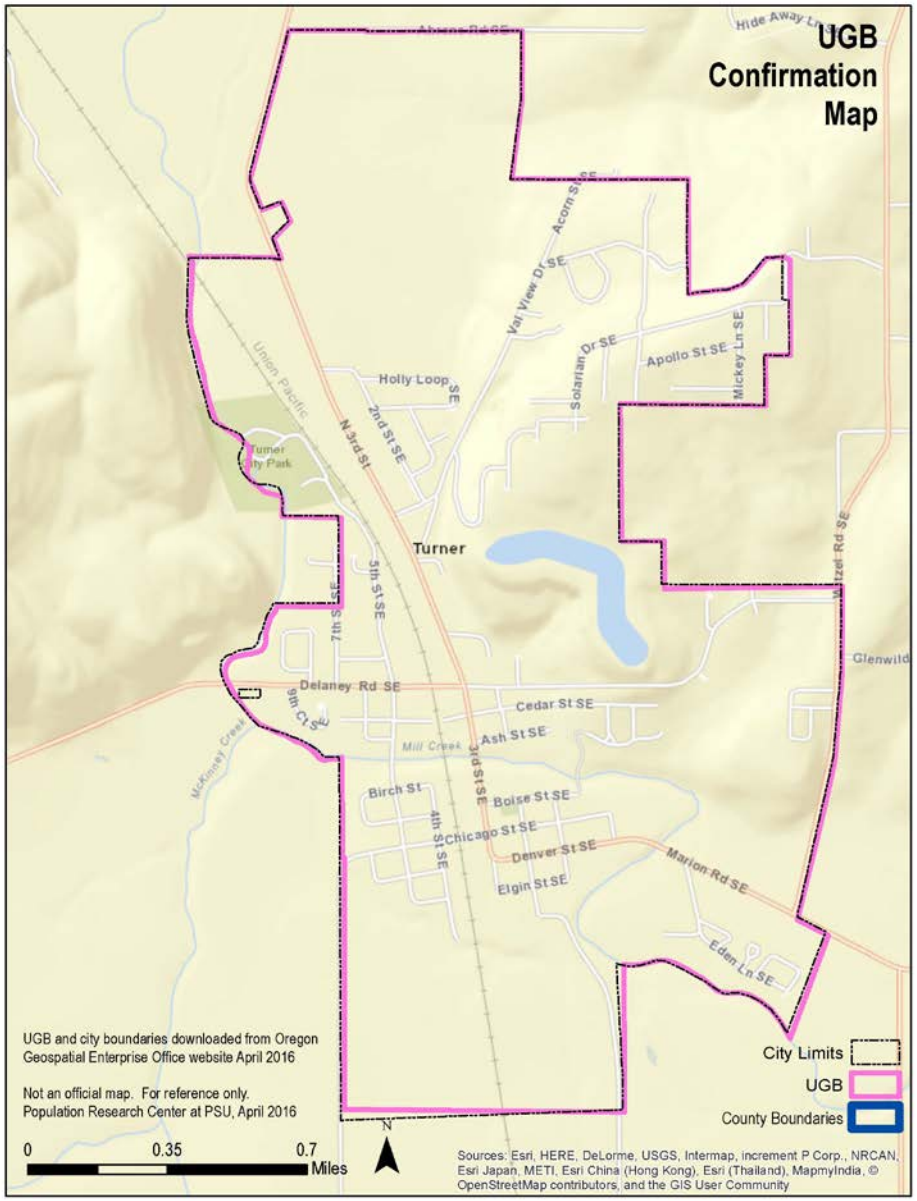
Confirmed by City

SUBLIMITY



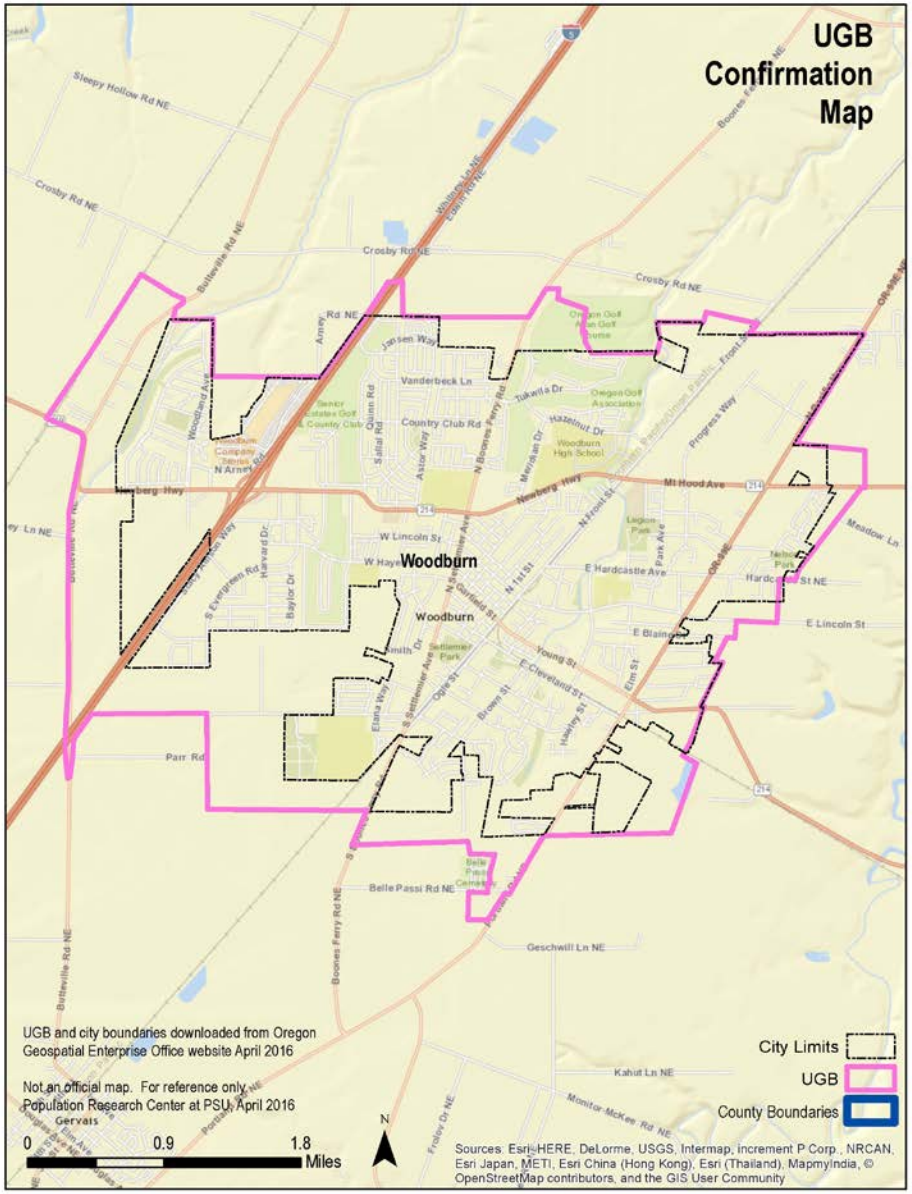
Confirmed by City

TURNER



Confirmed by City

WOODBURN



Confirmed by City

“Parking Lot”

Selection of Forecast Regions

- Looked at regions used by other agencies
  - Workforce
  - Small City Network
  - Etc.
- Counted counties and cities in each region
  - Balance workload
- Prioritized certain jurisdictions based on preference

Population Estimates vs. Forecasts

- Population Estimates
  - Refers to a point in time estimate of population in the present or in the past
- Population Forecasts
  - An estimation of future population based on historic and current trends, and assumptions about likely future events