

# Oregon Population Forecast Program

Proposed Coordinated Forecasts for Marion  
County, its Urban Growth Boundaries  
(UGBs), and the Area Outside UGBs

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# Project Team

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The primary purpose of today's meeting is to present progress and plans for future revisions related to the population forecasts, as well as gather additional data from comments or in response to today's Q&A.

## Presentation Contents:

- Preliminary proposed forecasts of Region 4 counties and their sub-areas.
- Historical data (2000-2019) and forecast results(2020–2070) for the counties, as well as the Urban Growth Boundary (UGB) areas within each county.
- Approximately 30-40 minutes for each county, including 10-15 minutes for Q&A.

## Cohort Component Model ("Demographic Balancing Equation"):

$$Population_{t2} = Population_{t1} + Births_{t1\ to\ t2} - Deaths_{t1\ to\ t2} + NM_{t1\ to\ t2}$$

t1: Starting year

t2: Ending year

NM: Net migration (difference between in/out migration)

## Housing Unit Method:

$$Population = HU \times Occ \times PPH + GQ$$

HU: housing unit stock

Occ: Occupancy rate

PPH: Persons per household

GQ: Group quarters population

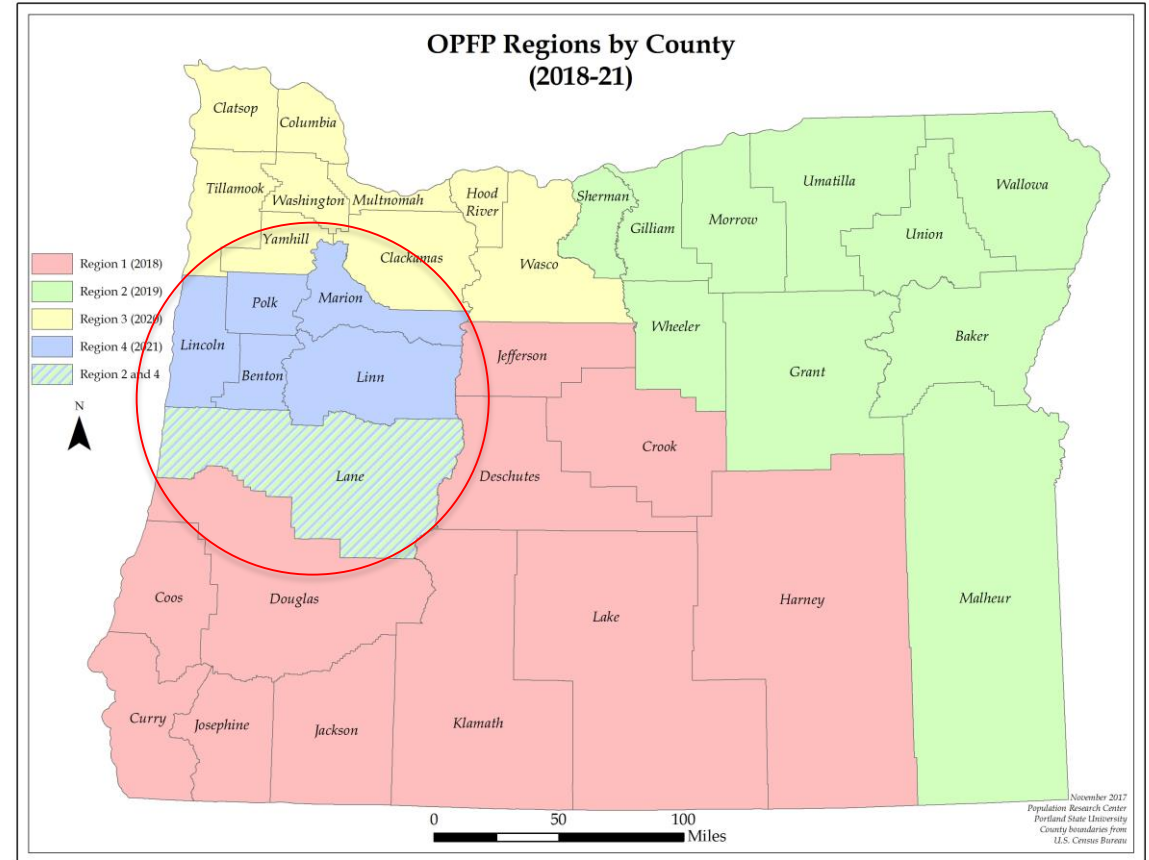
## Modified Methodology (50 Year Period)

### Forecast Methods (2020-45)

- Cohort-Component and Housing Unit Model

### Modified Method (2045-70):

- County: AAGR of the last forecast period (2044-45) is extrapolated out for the remaining 25 years.
- Sub-areas: Trend the sub-area share of the County for the remaining 25 years.



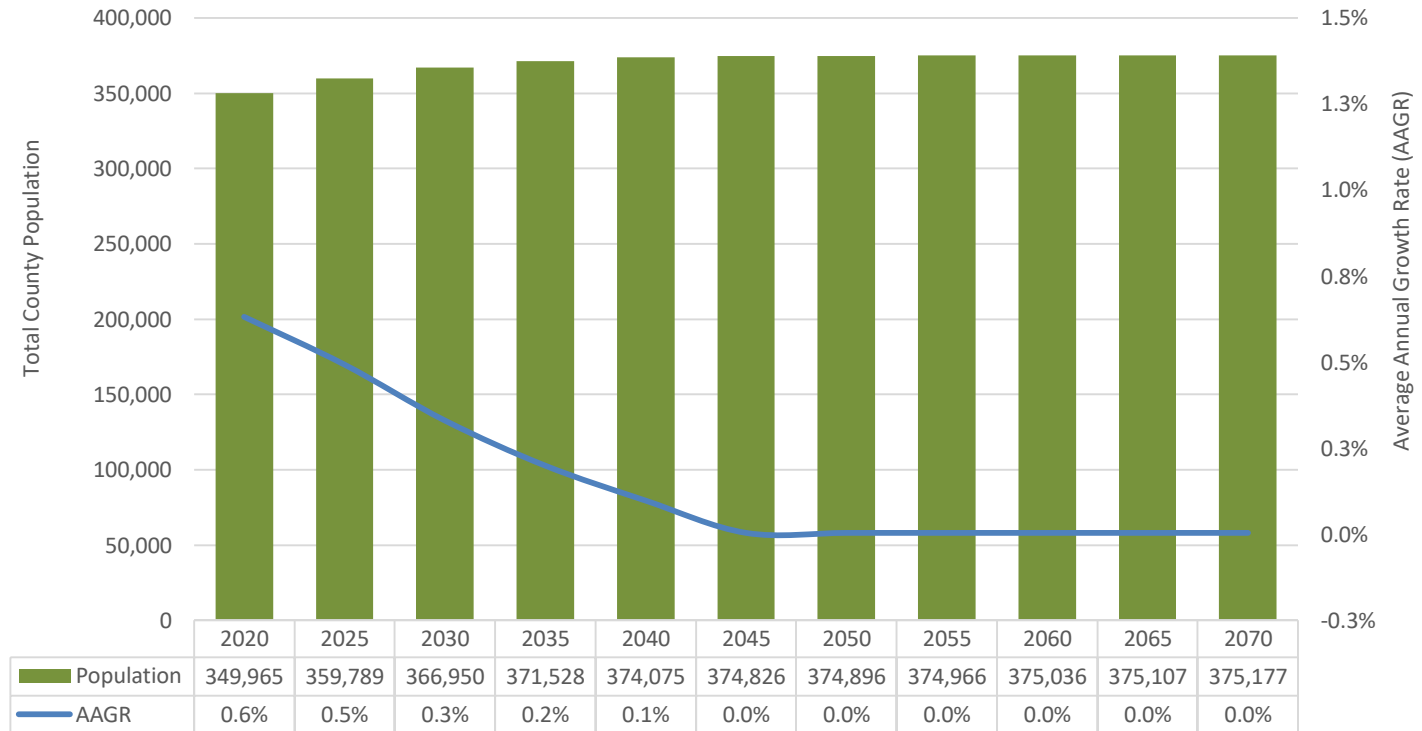
1. We incorporate the following assumptions for fertility and mortality.
  - a) Deaths and survival rates were projected based on historical trends (2000-2019) and based on the methodology published by Clark and Sharrow 2011 ([link](#)). Mortality rates for the 85+ age group were further divided into 5-year age groups up to 100+.
  - b) We applied some constrains to ensure the number of deaths maintain in a reasonable range as the elderly populations grow, accounting for positive factors associated with life expectancy (e.g., advanced medical treatments, life-style changes).
  - c) Fertility rates were projected based on historical trend up to 2030 and remain constant afterwards.
2. Net migration rates were based on the data published by the University of Wisconsin-Madison for 2000-2010, with minor adjustments made based on the following assumptions:
  - a) In/out migration would gradually approach zero for populations over 65, assuming there is minimal moving for people as they approach the age of 85+.
  - b) Considered and mitigated the uncertainties of in/out migration among college students.
3. Populations in sub-areas were forecasted using the housing unit method based on survey responses and historical pattern.

# Proposed Forecast Results

*Population of Marion County is projected to grow from nearly 350,000 in 2020 to over 375,000 by 2070.*

*The growth rate is projected to decline from 0.6% to close to 0% between 2020 and 2045. The population is projected to remain stable without major change from 2045 to 2070.*

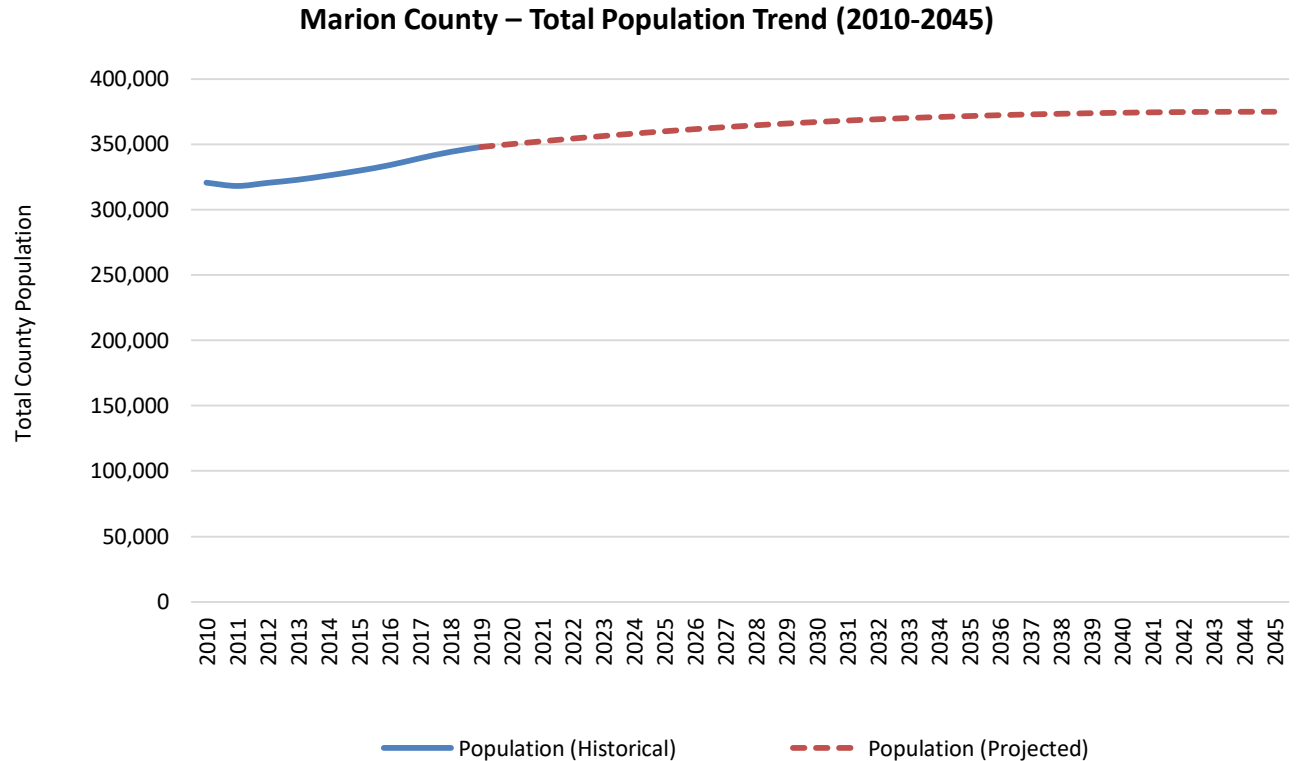
**Marion County - Total Population Point Estimates (2020-2070)**



Source: Forecast by Population Research Center (PRC).  
[Historical trend](#)

# Proposed Forecast Results

*Historical trend shows that total population reached 347,760 in 2019 and continues to grow throughout the forecast period, reaching 374,826 by 2045. The total county population shows a 7.5% growth between 2019 and 2045.*



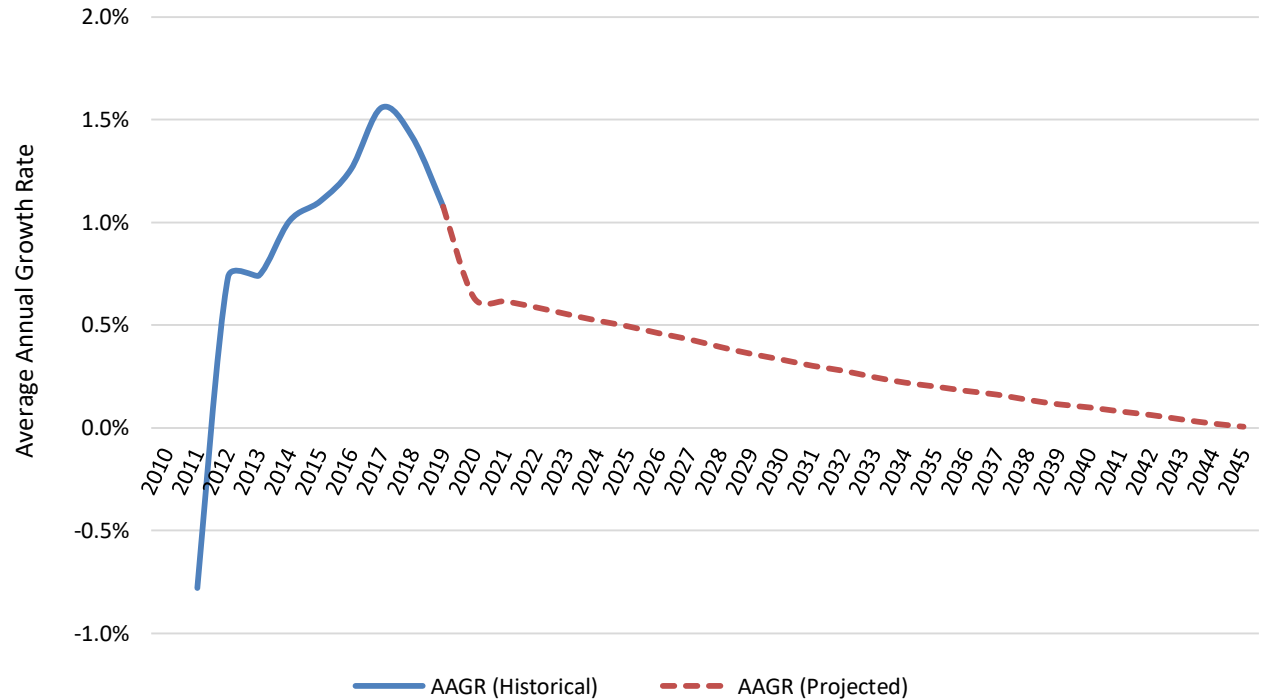
Source: U.S. Census Bureau. PRC Estimates. Forecast by Population Research Center (PRC).



# Proposed Forecast Results

*The average annual growth rate of the total population has varied throughout the historical time period, reaching as high as over 1.6% in 2017, and as low as -0.8% in 2011. AAGR continues to show a declining trend, reaching a relatively constant phase by 2045.*

Marion County – Average Annual Growth Rate (2010-2045)

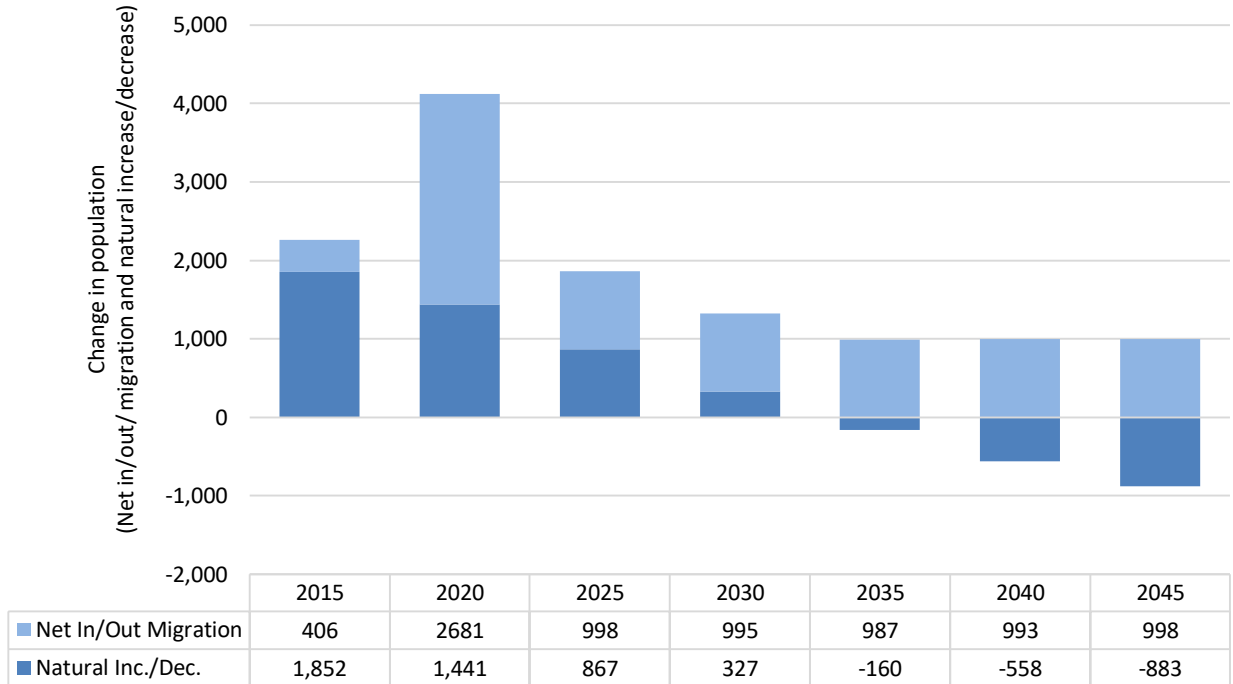


Source: U.S. Census Bureau. PRC Estimates. Forecast by Population Research Center (PRC).

# Proposed Forecast Results

*Natural decrease will occur around 2035 and population growth will rely on migration. While net migration remains positive, as natural decrease grow in number, the two factors balance out, keeping the total population relatively constant.*

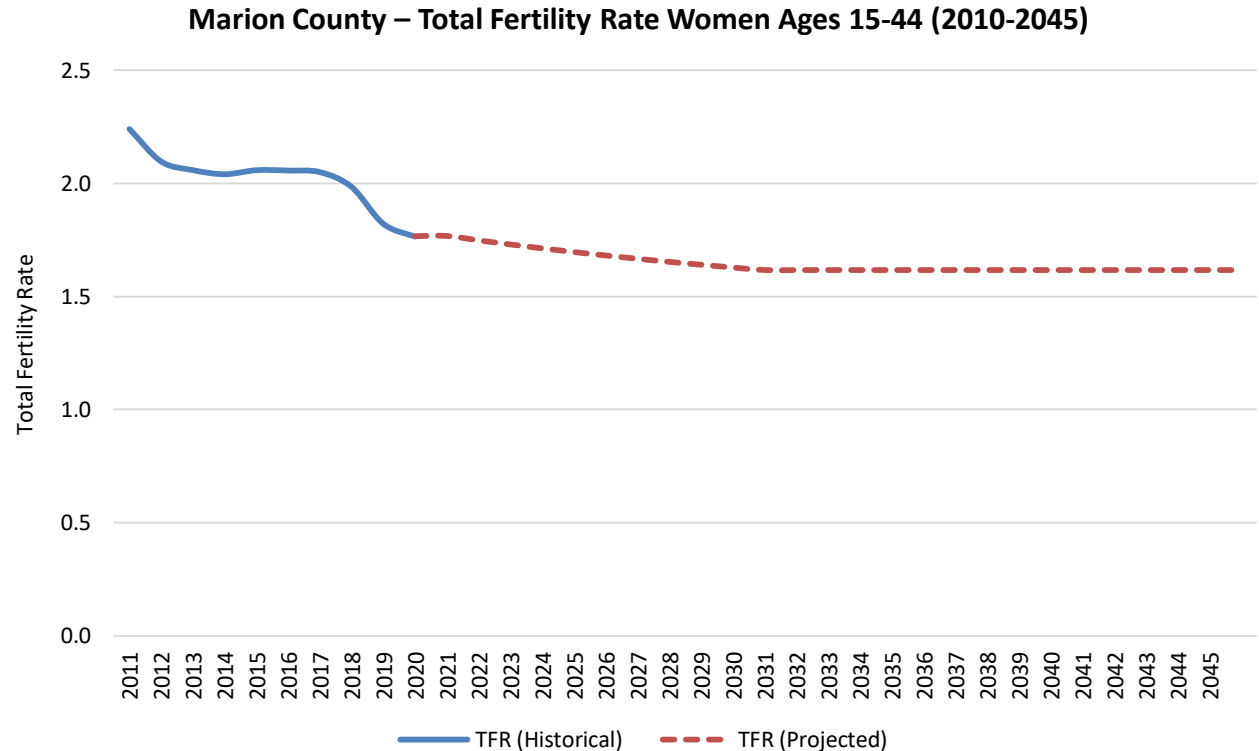
**Marion County - Components of Population Change by Five-Year Intervals (2015-2045)**



Source: Forecast by Population Research Center (PRC)

[Historical trend](#)

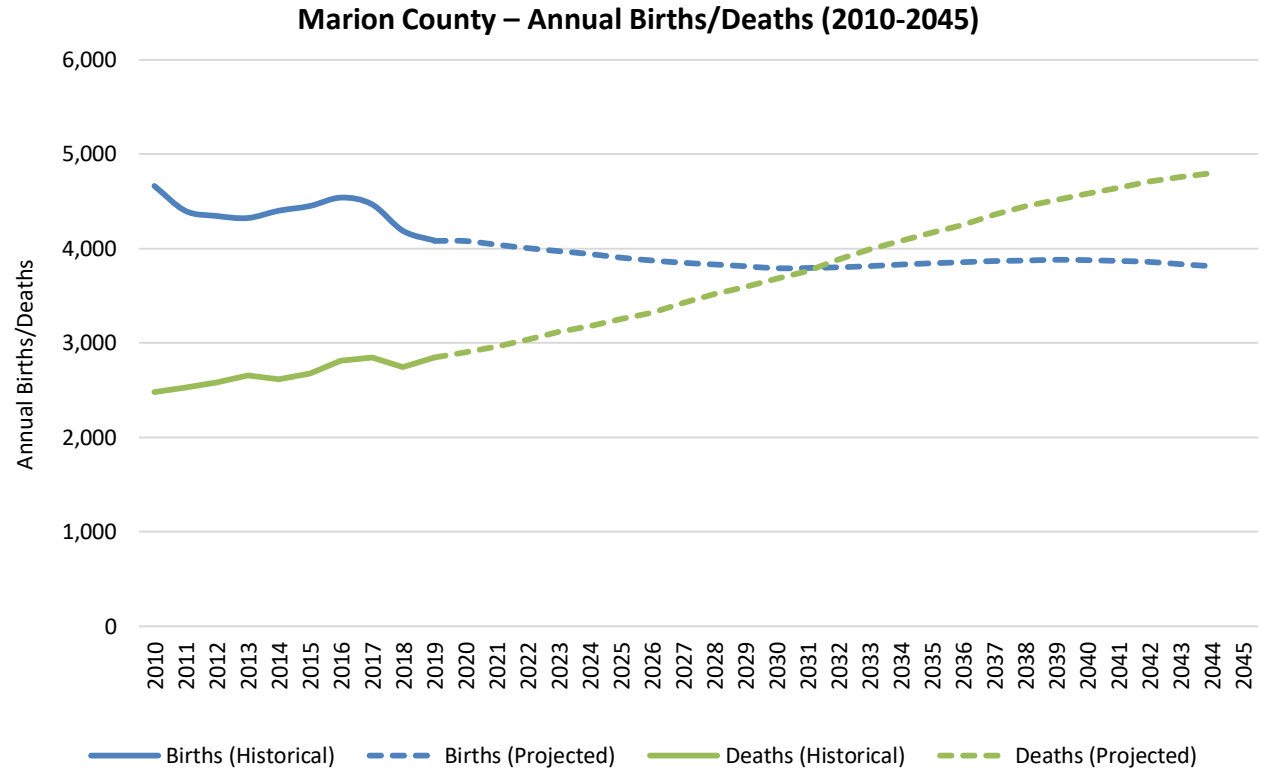
*The total fertility rate for women age 15-44 has been showing a declining trend since 2015 and remains at a relatively lower rate compared with historical trend. The TFR remains in the range between 1.6 and 1.8 throughout the forecast period (2020-2045).*



Sources: Oregon Health Authority, Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

# Historical and Forecast Trends

*The number of death continues to increase as older population grow, while the number of birth declines. By 2032, the number of death becomes higher than the birth. During 2044-2045, there will be 4,796 deaths, compared to 3,813 births.*

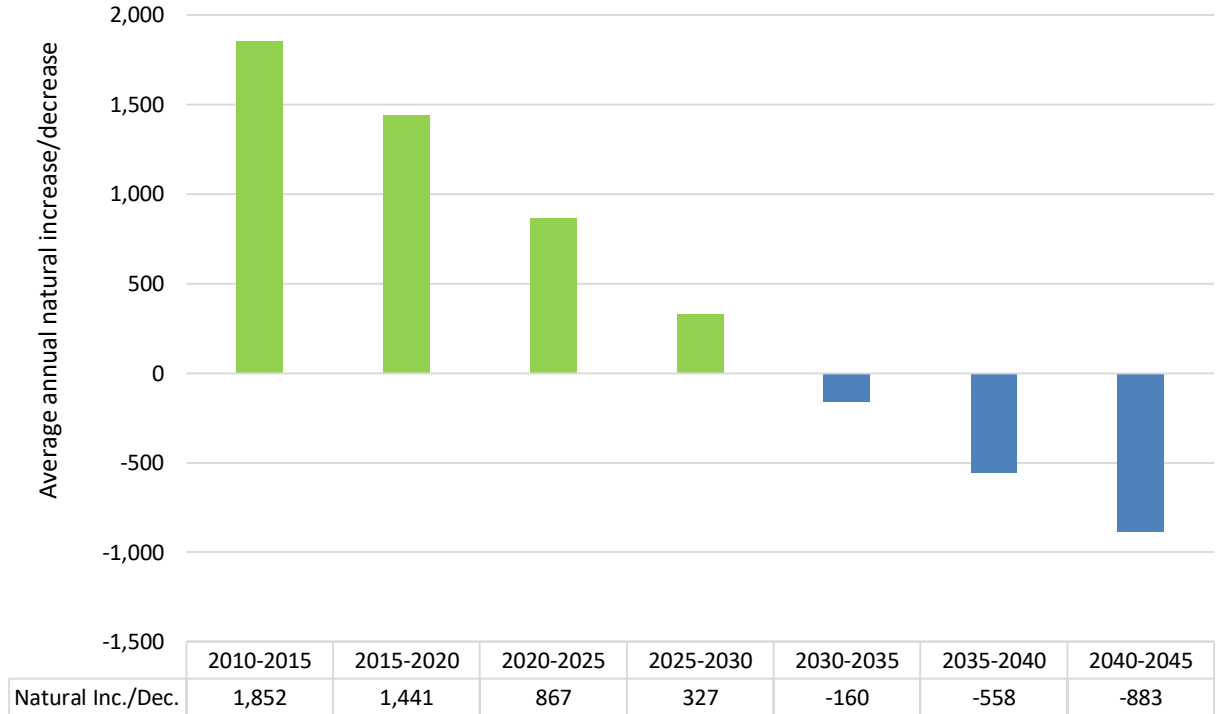


Source: Oregon Health Authority, Center for Health Statistics. Forecast by Population Research Center (PRC)

# Historical and Forecast Trends

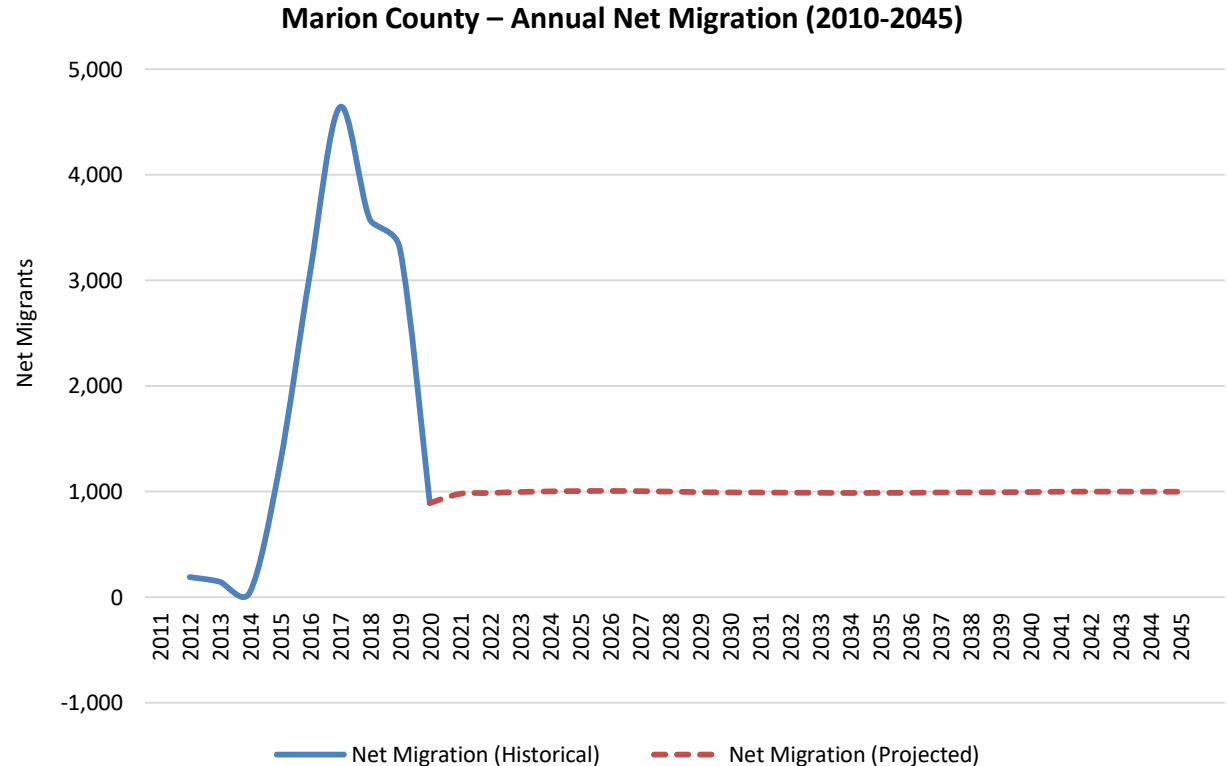
*Natural decrease occurs during 2030-2035 and continues through 2045. Historical data shows natural increase has been declining over the past 10 years, and our forecast shows this declining trend will continue.*

**Marion County - Average Annual Natural Increase/Decrease**



Sources: Oregon Health Authority, Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

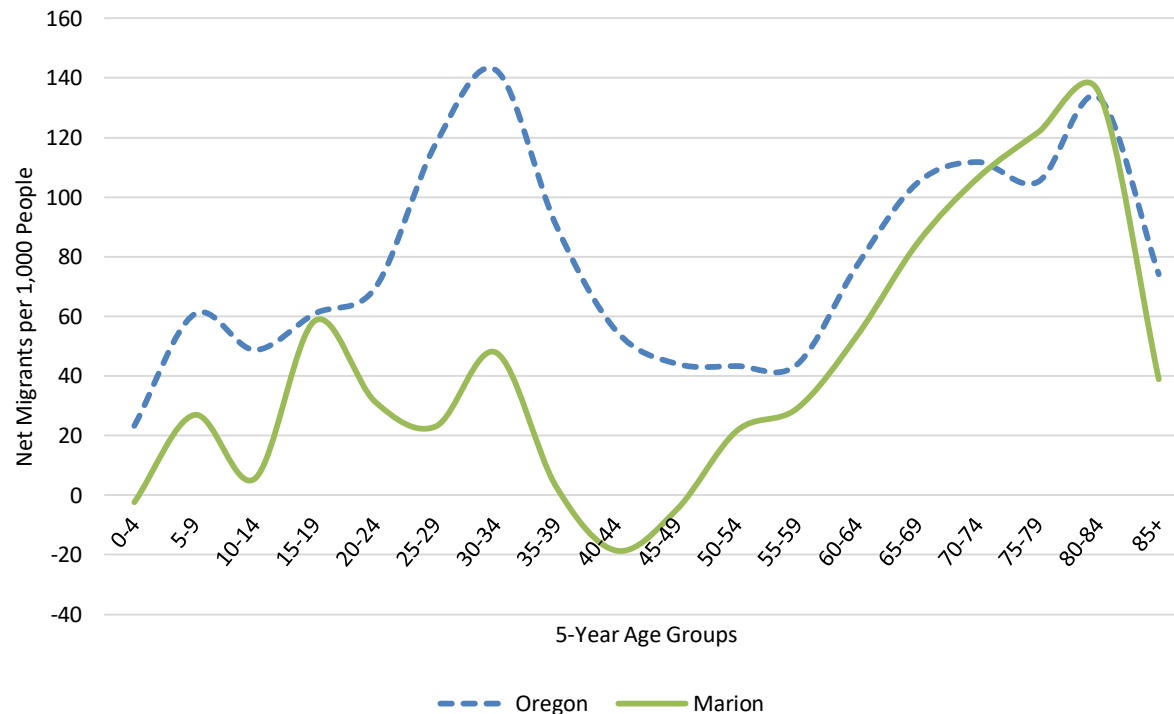
*The annual net migration (NM) remains relatively constant with no major variations over the next 24 years. Based on data from the past ten years, the highest number of net migration was in 2017, where NM reached 4,643. Annual NM has dropped after 2017 and remains around 1,000 per year through 2045.*



Sources: U.S. Census Bureau. Center for Demography and Ecology, University of Wisconsin-Madison. Calculated by Population Research Center (PRC).

*This figure presents the historical 10-year net migration rates for Oregon and Marion county from 2000 to 2010. Compared to Oregon, Marion county has relatively lower net migration rates in the younger age groups but has similar net migration rates as Oregon in older age groups.*

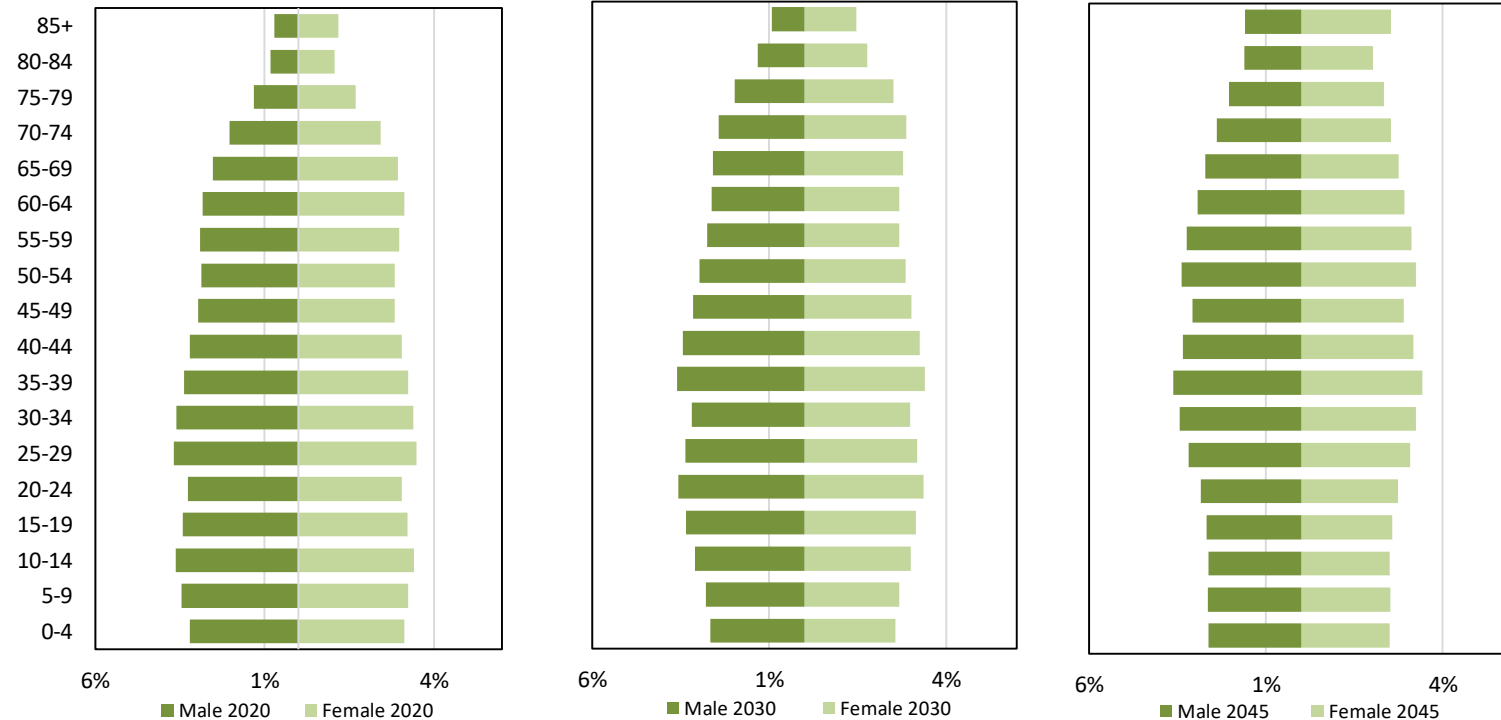
**Marion County and Oregon - Ten-year Migration Rates (2000-2010)**



Sources: Center for Demography and Ecology, University of Wisconsin-Madison. Calculated by Population Research Center (PRC).

## Marion County—Age Structure of the Population

*These figures show the age and sex distribution of Marion County. The oldest ages are at the top of the age pyramid and increase as a share of the population over time. The share of older populations increases as we move toward 2045 while the share of younger population decreases.*



Source: Forecast by Population Research Center (PRC)  
[Historical trend](#)

These numbers represent *Proposed* Forecast Results



1. All sub-area forecasts use a housing unit method rather than a cohort-component model for consistency.
2. If planned housing units were reported in the surveys, we expect that they will be built within roughly 5 years, followed by a return to long range historic patterns.
3. If the reported housing development plans does not lead to significant differences to the observed pattern over most recent decade (2010-2019), the 2010-2019 housing development pattern was used.
4. If no planned housing units were reported, we assume future housing construction will follow historic patterns.
5. Where population has historically declined or stayed flat and there is no planned housing construction, we do not expect major losses of housing stock. Household turnover will create opportunities for new households, preventing significant decline in population.
6. We expect persons per household (PPH) to stay relatively constant over time with no major changes. Although the median age tend to increase slightly for many areas, aggressive increases in median age are not expected in the short term to post significant impact in the forecast.

# Historical and Forecast Trends

## Marion County – Historical and Forecast Population for Marion County and its Sub-Areas

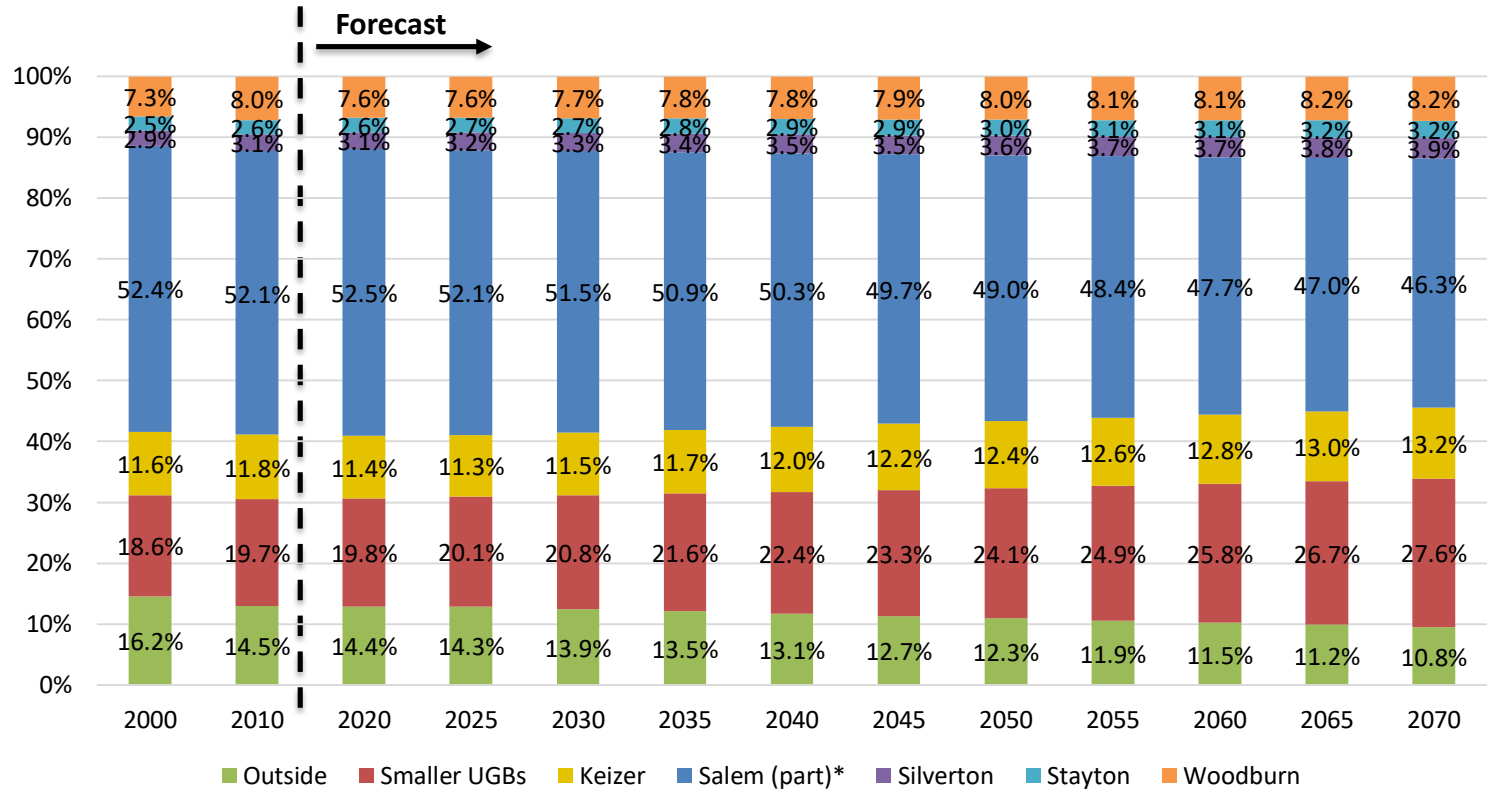
	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2020	2045	2070	AAGR (2020-2045)	AAGR (2045-2070)
Marion County	284,833	315,335	1.0%	349,965	374,826	375,177	0.3%	0.0%
Marion County-outside	46,236	45,683	-0.1%	50,254	47,514	40,460	-0.3%	-0.6%
<b>Larger Sub-Areas</b>								
Keizer	33,143	37,407	1.2%	39,968	45,700	49,466	0.7%	0.3%
Salem (part)*	149,299	164,605	1.0%	183,715	186,157	173,652	0.1%	-0.3%
Silverton	8,215	9,883	1.8%	10,986	13,235	14,495	0.9%	0.4%
Statyon	7,259	8,167	1.2%	9,170	11,008	12,184	0.9%	0.4%
Woodburn	20,861	25,425	2.0%	26,532	29,681	30,877	0.6%	0.2%
<b>Smaller Sub-Areas</b>								
Aumsville	3,211	3,779	1.6%	4,395	6,565	9,109	2.0%	1.3%
Aurora	752	1,017	3.0%	1,332	2,017	2,661	2.1%	1.1%
Detroit	272	209	-2.6%	273	351	386	1.3%	0.4%
Donald	632	1,015	4.7%	1,158	2,625	4,341	4.1%	2.0%
Gates (part)*	446	448	0.0%	490	481	425	-0.1%	-0.5%
Gervais	2,078	2,567	2.1%	3,002	4,788	7,127	2.3%	1.6%
Hubbard	2,523	3,399	3.0%	3,860	4,753	5,377	1.0%	0.5%
Idanha (part)*	138	80	-5.5%	110	117	99	0.3%	-0.7%
Jefferson	2,646	3,284	2.2%	4,038	5,581	7,346	1.6%	1.1%
Mill City (part)*	327	337	0.3%	474	663	895	1.7%	1.2%
Mt. Angel	3,037	3,365	1.0%	3,814	4,631	4,896	1.0%	0.2%
Scotts Mills	334	374	1.1%	458	605	711	1.4%	0.6%
St. Paul	368	414	1.2%	527	724	988	1.6%	1.2%
Sublimity	1,896	2,563	3.0%	3,070	4,227	5,541	1.6%	1.1%
Turner	1,160	1,921	5.1%	2,339	3,401	4,141	1.9%	0.8%

Sources: U.S. Census Bureau;  
Forecast by Population  
Research Center (PRC)  
[Historical trend](#)

# Proposed Forecast Results

Marion County – Population Shares of Sub-Areas and Outside UGBs

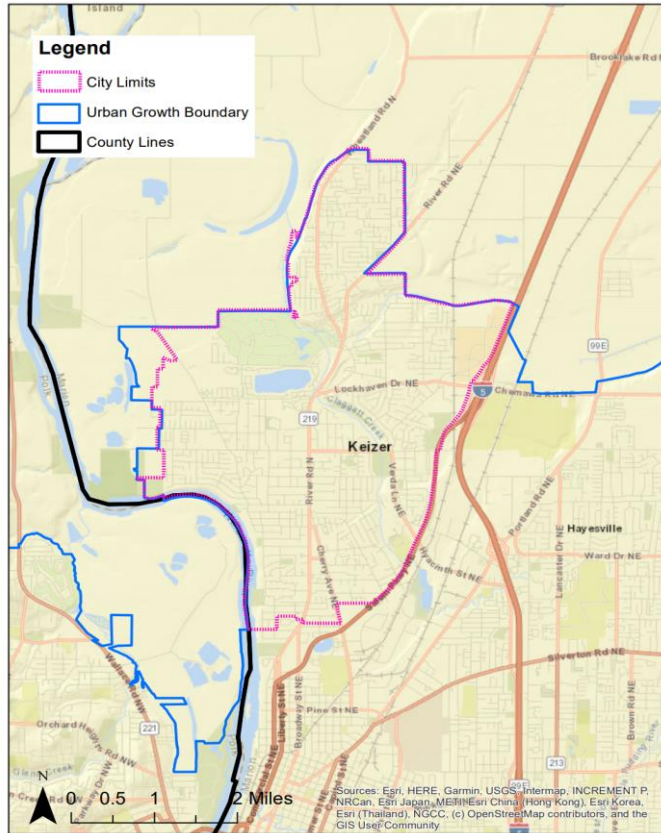
*This figure shows the percentage of the county population that is in each large UGB, or smaller UGBs, or in the rest of the county. Over time, the share of the population living inside UGBs increases, while the population share outside of the UGBs decreases.*



Sources: U.S. Census Bureau; Forecast by Population Research Center (PRC).

Note: Sub-areas with populations under 8,000 by 2010 were considered smaller UGBs

# Proposed Forecast Results



## Keizer UGB – Population Forecast

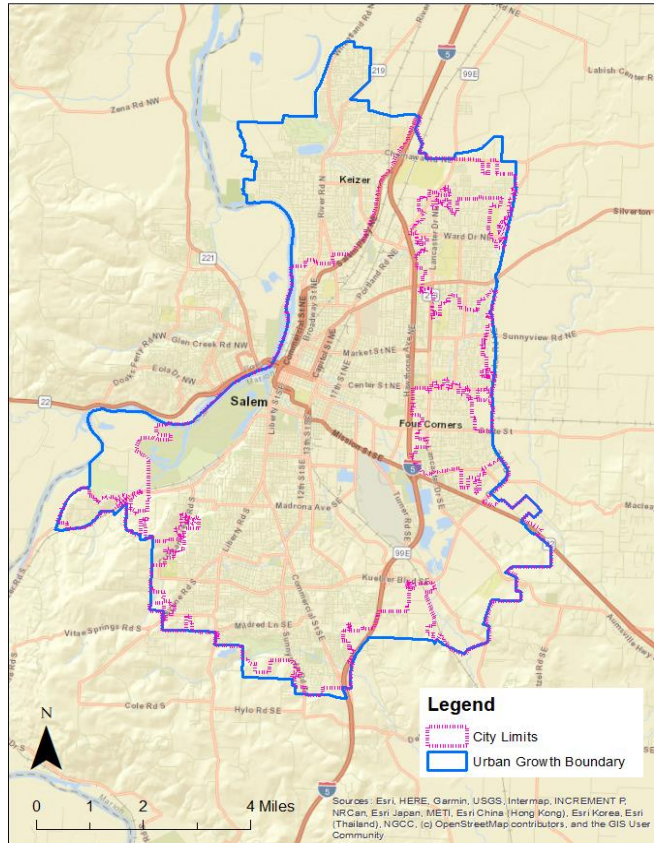
Year	Population	Share
2020	39,968	11.4%
2045	45,700	12.2%
2070	49,466	13.2%

Sources: Forecast by Population Research Center (PRC)

Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

These numbers represent *Proposed* Forecast Results

# Proposed Forecast Results



## Salem UGB (Part) – Population Forecast

Year	Population	Share
2020	183,715	52.5%
2045	186,157	49.7%
2070	173,652	46.3%

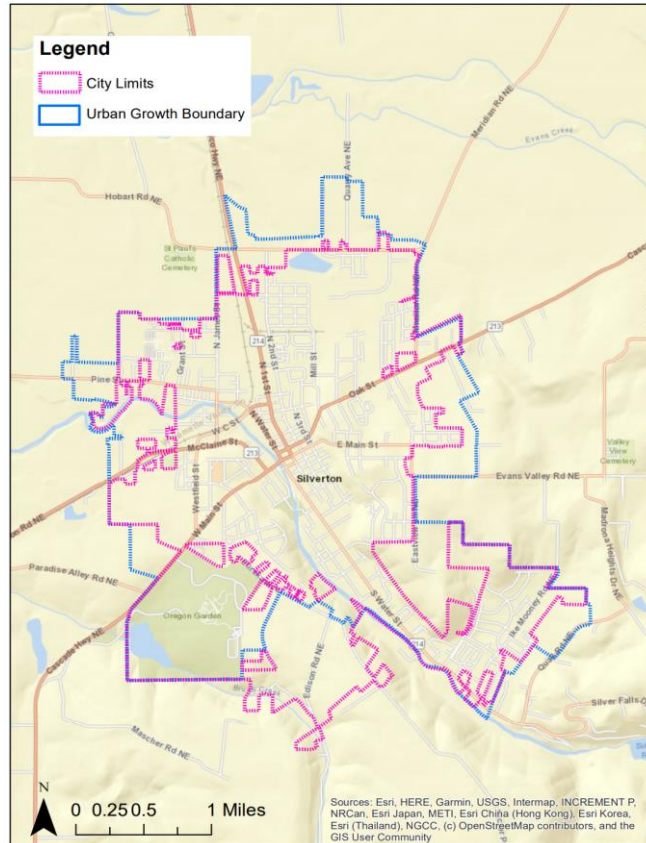
\*Annual housing unit grow by ~0.6% during 2020-2025 based on survey

Sources: Forecast by Population Research Center (PRC)

Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

These numbers represent *Proposed* Forecast Results

# Proposed Forecast Results



Sources: Forecast by Population Research Center (PRC)

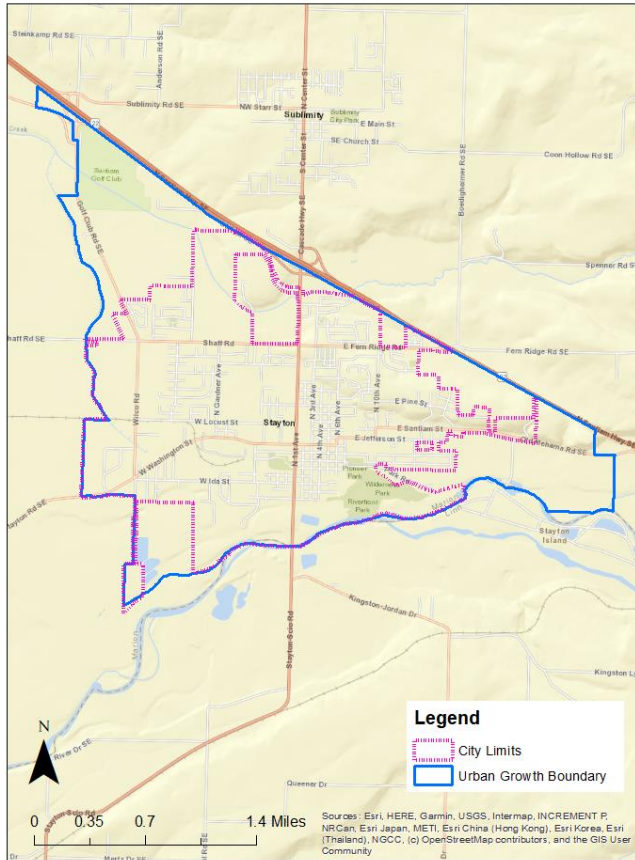
Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

## Silverton – Population Forecast

Year	Population	Share
2020	10,986	3.1%
2045	13,235	3.5%
2070	14,495	3.9%

\*Annual housing unit grow by ~1.3% during 2020-2025 based on survey

# Proposed Forecast Results



## Stayton – Population Forecast

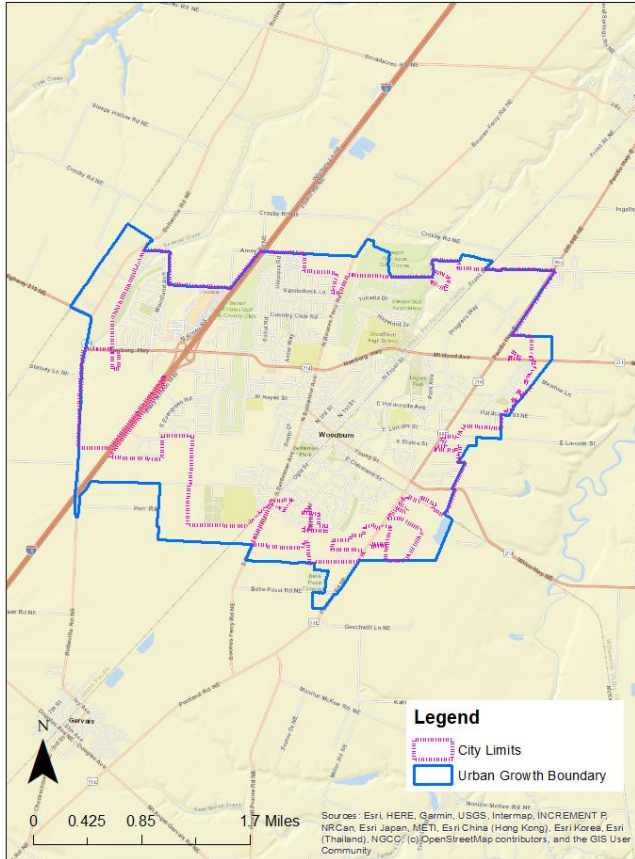
Year	Population	Share
2020	9,170	2.6%
2045	11,008	2.9%
2070	12,184	3.2%

\*Annual housing unit grow by ~0.9% during 2020-2025 based on survey

Sources: Forecast by Population Research Center (PRC)

Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

# Proposed Forecast Results



## Woodburn – Population Forecast

Year	Population	Share
2020	26,532	7.6%
2045	29,681	7.9%
2070	30,877	8.2%

\*Annual housing unit grow by ~0.7% during 2020-2025 based on survey

Sources: Forecast by Population Research Center (PRC)

Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

These numbers represent **Proposed** Forecast Results



# Proposed Forecast Results

## Marion County – Population Distribution in Smaller Sub-Areas

	Population			Share of County Population		
	2020	2045	2070	2020	2045	2070
<b>Marion County</b>	349,965	374,826	375,177	100.0%	100.0%	100.0%
Outside UGBs	50,254	47,514	40,460	14.4%	12.7%	10.8%
Aumsville	4,395	6,565	9,109	1.3%	1.8%	2.4%
Aurora	1,332	2,017	2,661	0.4%	0.5%	0.7%
Detroit	273	351	386	0.1%	0.1%	0.1%
Donald	1,158	2,625	4,341	0.3%	0.7%	1.2%
Gates (part)*	490	481	425	0.1%	0.1%	0.1%
Gervais	3,002	4,788	7,127	0.9%	1.3%	1.9%
Hubbard	3,860	4,753	5,377	1.1%	1.3%	1.4%
Idanha (part)*	110	117	99	0.0%	0.0%	0.0%
Jefferson	4,038	5,581	7,346	1.2%	1.5%	2.0%
Mill City (part)*	474	663	895	0.1%	0.2%	0.2%
Mt. Angel	3,814	4,631	4,896	1.1%	1.2%	1.3%
Scotts Mills	458	605	711	0.1%	0.2%	0.2%
St. Paul	527	724	988	0.2%	0.2%	0.3%
Sublimity	3,070	4,227	5,541	0.9%	1.1%	1.5%
Turner	2,339	3,401	4,141	0.7%	0.9%	1.1%

Sources: Forecast by Population Research Center (PRC)

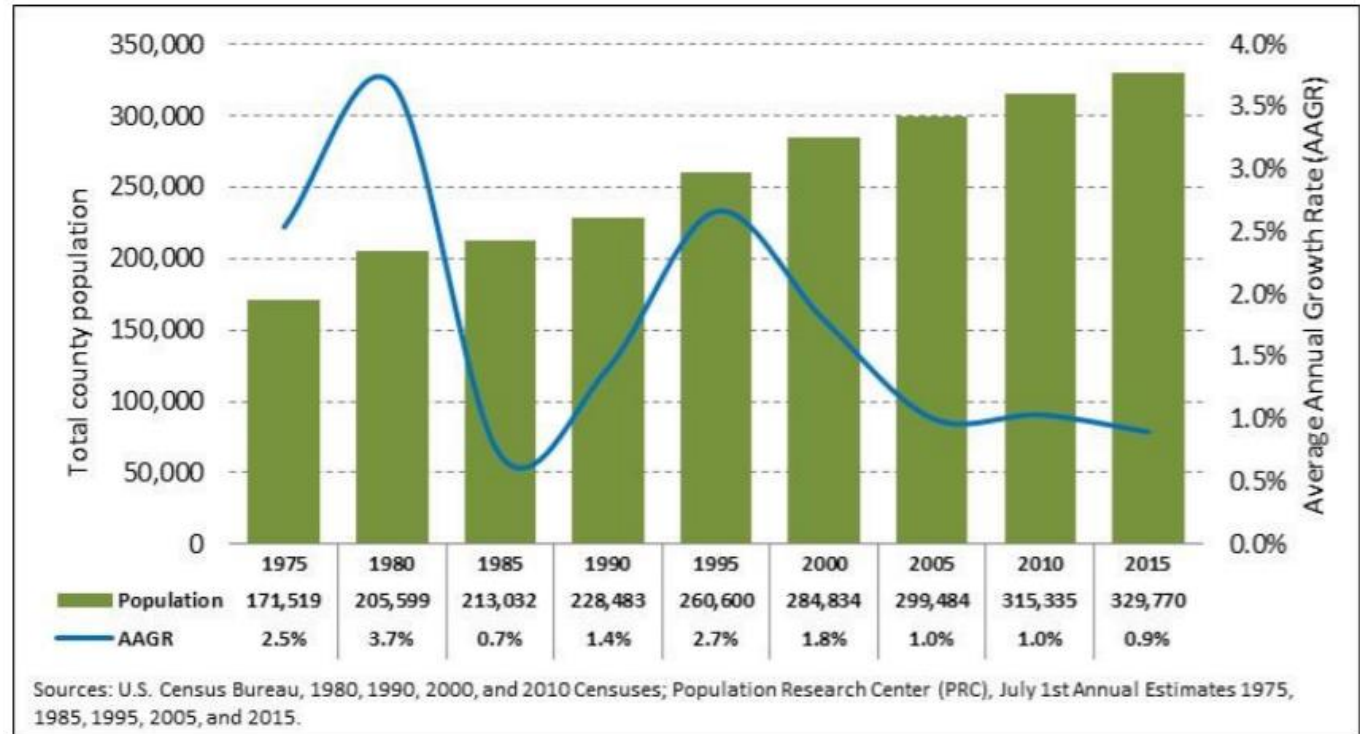
*Note: Smaller sub-areas refer to areas with populations under 8,000 by 2010.*

1. We expect Marion County to experience an annual growth rate of 0.6% at the beginning of the forecast and declines to 0.1% by 2040. The total county population remains relatively constant after 2040 as net migration and natural increase/decrease come to a balance.
2. Net migrations remained relatively stable over the forecast period at around 1,000 per year.
3. Deaths surpasses births around 2032 due to an aging population and lower fertility rate, contributing to the natural decrease in population. The share of older population increase over time.
4. Population share in areas outside of the UGBs will decline. While the Salem/Keizer UGB continues to be account for over 60% of the total county population, larger sub-areas such as Silverton, Stayton, and Woodburn, as well as the smaller sub-areas, increase their share of the population.
5. The smaller UGBs increase their population share from 8% in 2020 to 11% in 2045.
6. Covid-19 and wildfires implications.



# Additional Historical Trends

*This figure shows total population growth for Marion County during 1975-2015. The annual growth rate varied and remained at 1.0% since 2005.*



# Additional Historical Trends

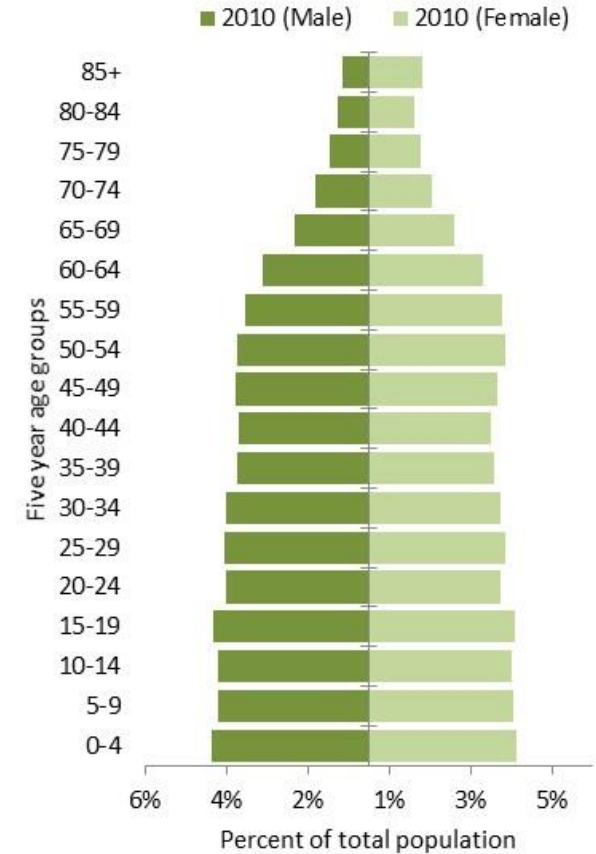
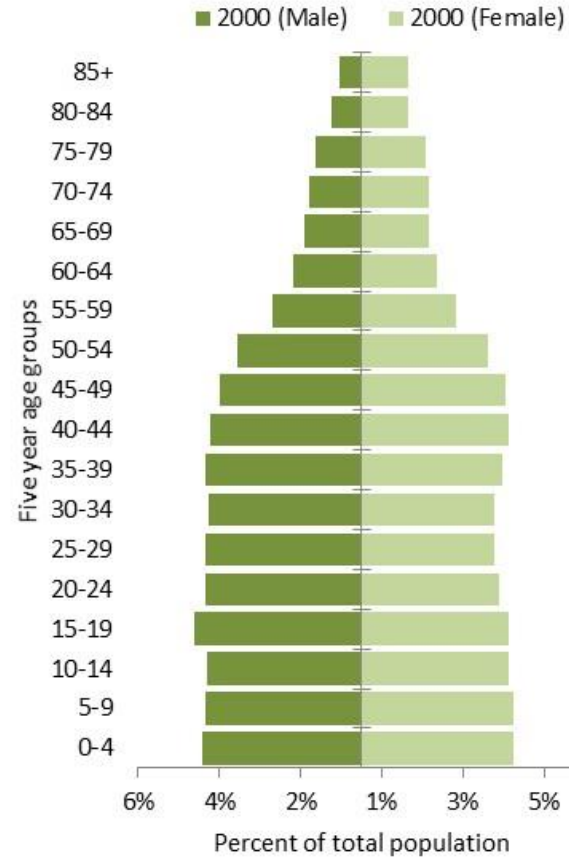
*This table shows the growth rate of Marion County and its urban areas during 2000-2010. Multiple sub-areas showed relatively high population growth rate (e.g., greater than 2%). Idanha and Detroit showed population decline during 2000-2010.*

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
<i>Marion County</i>	284,834	315,335	1.0%	100.0%	100.0%
Aumsville UGB	3,083	3,643	1.7%	1.1%	1.2%
Aurora UGB	724	981	3.1%	0.3%	0.3%
Detroit UGB	262	202	-2.6%	0.1%	0.1%
Donald UGB	608	979	4.9%	0.2%	0.3%
Gates UGB (Marion)	429	432	0.1%	0.2%	0.1%
Gervais UGB	2,058	2,483	1.9%	0.7%	0.8%
Hubbard UGB	2,502	3,277	2.7%	0.9%	1.0%
Idanha UGB (Marion)	147	77	-6.3%	0.1%	0.0%
Jefferson UGB	2,547	3,174	2.2%	0.9%	1.0%
Lyons UGB (Marion)	100	53	-6.2%	0.0%	0.0%
Mill City UGB (Marion)	315	328	0.4%	0.1%	0.1%
Mount Angel UGB	3,204	3,450	0.7%	1.1%	1.1%
Salem/Keizer UGB (Marion)	183,579	203,995	1.1%	64.5%	64.7%
Scotts Mills UGB	321	361	1.2%	0.1%	0.1%
Silverton UGB	7,987	9,606	1.9%	2.8%	3.0%
St. Paul UGB	354	399	1.2%	0.1%	0.1%
Stayton UGB	6,996	7,892	1.2%	2.5%	2.5%
Sublimity UGB	2,142	2,681	2.3%	0.8%	0.9%
Turner UGB	1,201	1,854	4.4%	0.4%	0.6%
Woodburn UGB	20,934	24,871	1.7%	7.3%	7.9%
Outside UGBs	45,341	44,597	-0.2%	15.9%	14.1%

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

# Additional Historical Trends

*These two age pyramids show the population at the time of the 2000 and 2010 census. The 2010 age pyramid showed the population aging forward from the 2000 census.*



*This table shows the race and ethnicity breakdown for Marion County in 2000 and 2010. The share of Native Hawaiian and Other Pacific Islander population showed the largest positive change (e.g., 133.1%) from 2000 to 2010. The Hispanic population showed 57.2% increase over 10 years.*

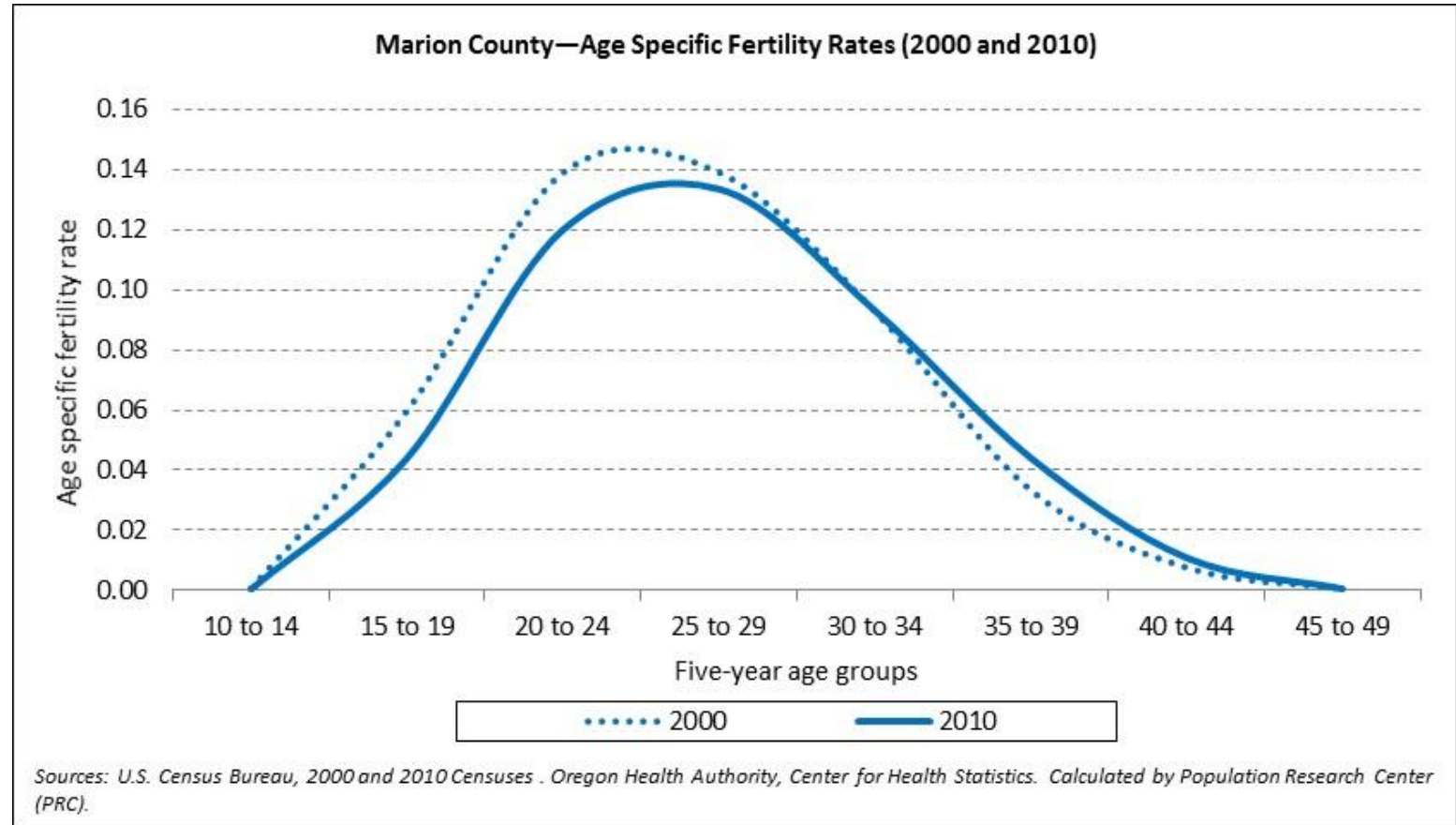
**Marion County—Hispanic or Latino and Race (2000 and 2010)**

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
<i>Total population</i>	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.*

# Additional Historical Trends

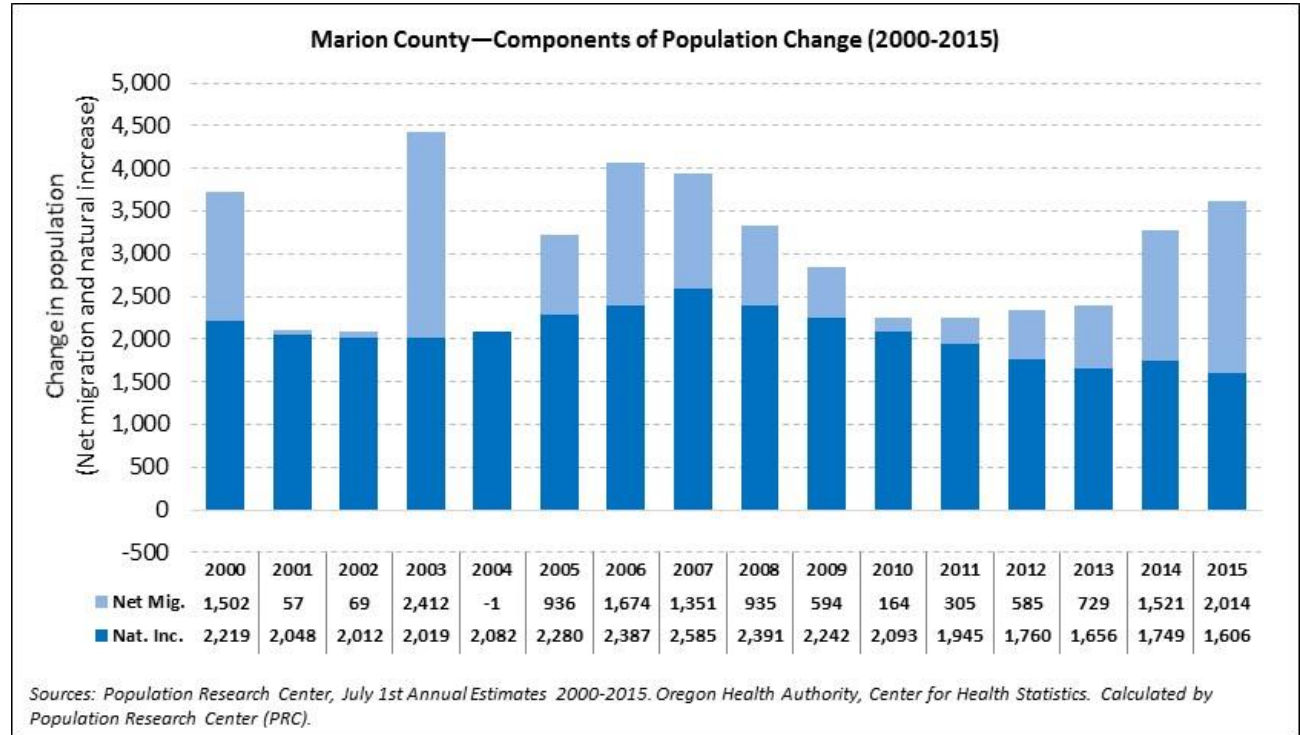
*This figure shows age specific fertility rates for Marion County in 2000 and 2010. The curve shifted to the left in 2010, meaning births occurred at later stages in life.*





# Additional Historical Trends

*These figures showed the components of change (births, deaths, and net migrants) for Marion County during 2000-2015. Natural increase have been strong from 2000 to 2015 while net migration varied. More recently, the amount of natural increase has dropped since 2008.*



# Additional Historical Trends

*This table shows housing unit change between 2000 and 2010 for UGBs. Compared to other areas, the Salem/Keizer UGB's annual housing stock growth (1.0%) was not as high as some of the smaller UGBs, which led to a decrease in population share in 2010.*

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
<i>Marion County</i>	108,174	120,948	1.1%	100.0%	100.0%
Aumsville	1,059	1,263	1.8%	1.0%	1.0%
Aurora	287	373	2.7%	0.3%	0.3%
Detroit	383	368	-0.4%	0.4%	0.3%
Donald	236	372	4.7%	0.2%	0.3%
Gates (Marion)	237	227	-0.4%	0.2%	0.2%
Gervais	496	631	2.4%	0.5%	0.5%
Hubbard	809	1,040	2.5%	0.7%	0.9%
Idanha (Marion)	66	47	-3.3%	0.1%	0.0%
Jefferson	909	1,149	2.4%	0.8%	0.9%
Lyons (Marion)	49	26	-6.1%	0.0%	0.0%
Mill City (Marion)	135	144	0.6%	0.1%	0.1%
Mount Angel	1,149	1,334	1.5%	1.1%	1.1%
Salem/Keizer (Marion)	71,863	79,281	1.0%	66.4%	65.5%
Scotts Mills	110	139	2.4%	0.1%	0.1%
Silverton	3,075	3,824	2.2%	2.8%	3.2%
St. Paul	128	142	1.0%	0.1%	0.1%
Stayton	2,722	3,151	1.5%	2.5%	2.6%
Sublimity	710	1,142	4.9%	0.7%	0.9%
Turner	522	768	3.9%	0.5%	0.6%
Woodburn	7,102	8,529	1.8%	6.6%	7.1%
Outside UGBs	16,127	16,998	0.5%	14.9%	14.1%

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

Note: For simplicity each UGB is referred to by its primary city's name.

# Additional Historical Trends

*This table shows average household size and occupancy rate in 2000 and 2010. Household size either decreased or remain unchanged between 2000 and 2010 for most UGBs. UGBs that showed an increase in PPH are Aurora, Turner, and Woodburn.*

	Persons Per Household (PPH)			Occupancy Rate		
	2000	2010	Change 2000-2010	2000	2010	Change 2000-2010
Marion County	2.7	2.7	0.0	94.0%	93.4%	-0.6%
Aumsville	3.1	3.0	-0.1	93.9%	95.6%	1.8%
Aurora	2.7	2.7	0.1	95.1%	96.2%	1.1%
Detroit	2.2	2.1	-0.1	31.1%	26.1%	-5.0%
Donald	3.0	2.8	-0.2	85.6%	93.3%	7.7%
Gates (Marion)	2.3	2.1	-0.2	79.3%	89.9%	10.5%
Gervais	4.3	4.3	-0.1	94.6%	92.2%	-2.3%
Hubbard	3.3	3.3	0.0	94.2%	95.5%	1.3%
Idanha (Marion)	2.6	2.2	-0.4	84.8%	74.5%	-10.4%
Jefferson	3.0	2.9	-0.1	92.4%	94.6%	2.2%
Lyons (Marion)	2.4	2.4	0.0	83.7%	84.6%	0.9%
Mill City (Marion)	2.9	2.7	-0.3	80.0%	85.4%	5.4%
Mount Angel	2.8	2.6	-0.2	94.3%	94.0%	-0.3%
Salem/Keizer (Marion)	2.6	2.6	0.0	94.4%	93.8%	-0.6%
Scotts Mills	2.9	2.7	-0.2	99.1%	95.0%	-4.1%
Silverton	2.7	2.7	-0.1	94.6%	93.8%	-0.7%
St. Paul	2.9	2.9	0.0	96.1%	98.6%	2.5%
Stayton	2.7	2.6	-0.1	95.0%	94.4%	-0.5%
Sublimity	2.7	2.3	-0.3	96.5%	93.1%	-3.4%
Turner	2.4	2.6	0.2	94.1%	92.4%	-1.6%
Woodburn	3.1	3.2	0.1	92.0%	91.1%	-0.8%
Outside UGBs	2.9	2.8	-0.1	94.3%	93.4%	-0.9%

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

Note: For simplicity each UGB is referred to by its primary city's name.