

Oregon Population Forecast Program

Regional Forecast Meeting – March 6, 2018

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

Oregon Population Forecast Program Project Team

Nick Chun,
Population Forecast Program Manager

Deborah Loftus,
Administrative Assistant

Joshua Ollinger,
Graduate Research Assistant

Kevin Rancik,
GIS and Research Analyst

Rhey Haggerty,
Graduate Research Assistant

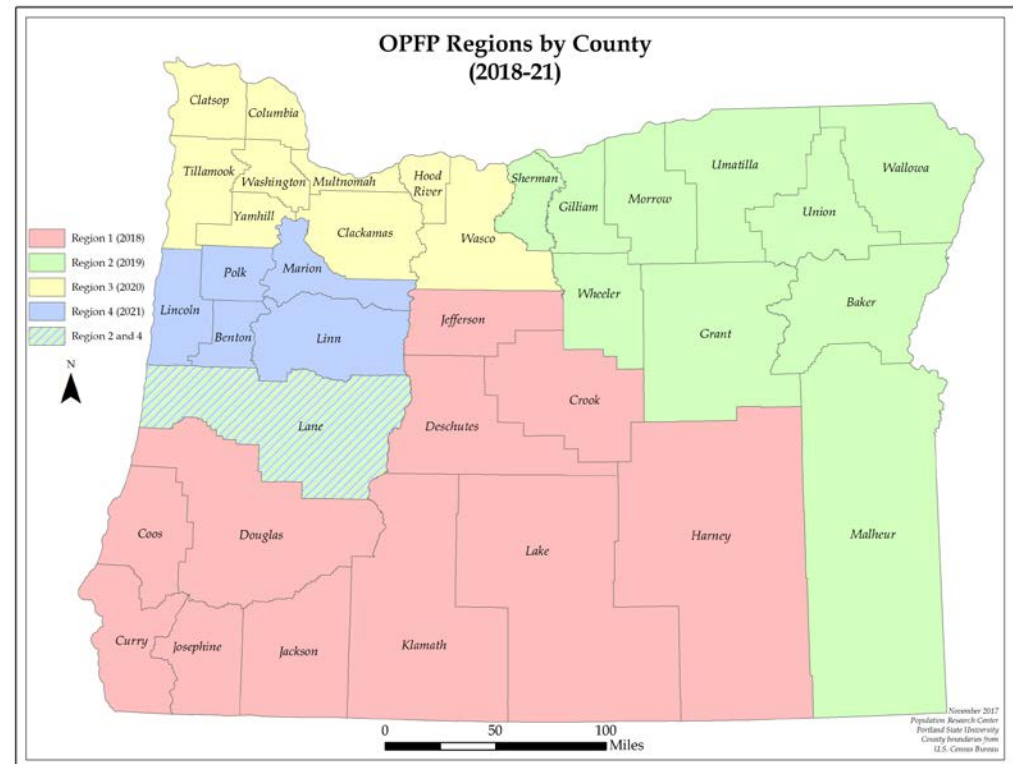
Charles Rynerson,
Research Consultant

Agenda

- Present and discuss preliminary forecast results
 - Proposed Forecasts by March 31st, 2018; To be posted on Oregon Population Forecast Program (OPFP) website:
<http://www.pdx.edu/prc/opfp>
- Explain our assumptions for future change
- Obtain your feedback

2018-2021 Update

- Modified Methodology (50 Year Period)
- Forecast Methods (2018-43)
 - Cohort-Component and Housing Unit Model
- Modified Method (2043-68):
 - County: AAGR of the last 5 year period (2040-45) is extrapolated out for the remaining 25 years.
 - Sub-areas: Trend the sub-area share of the County for the remaining 25 years.

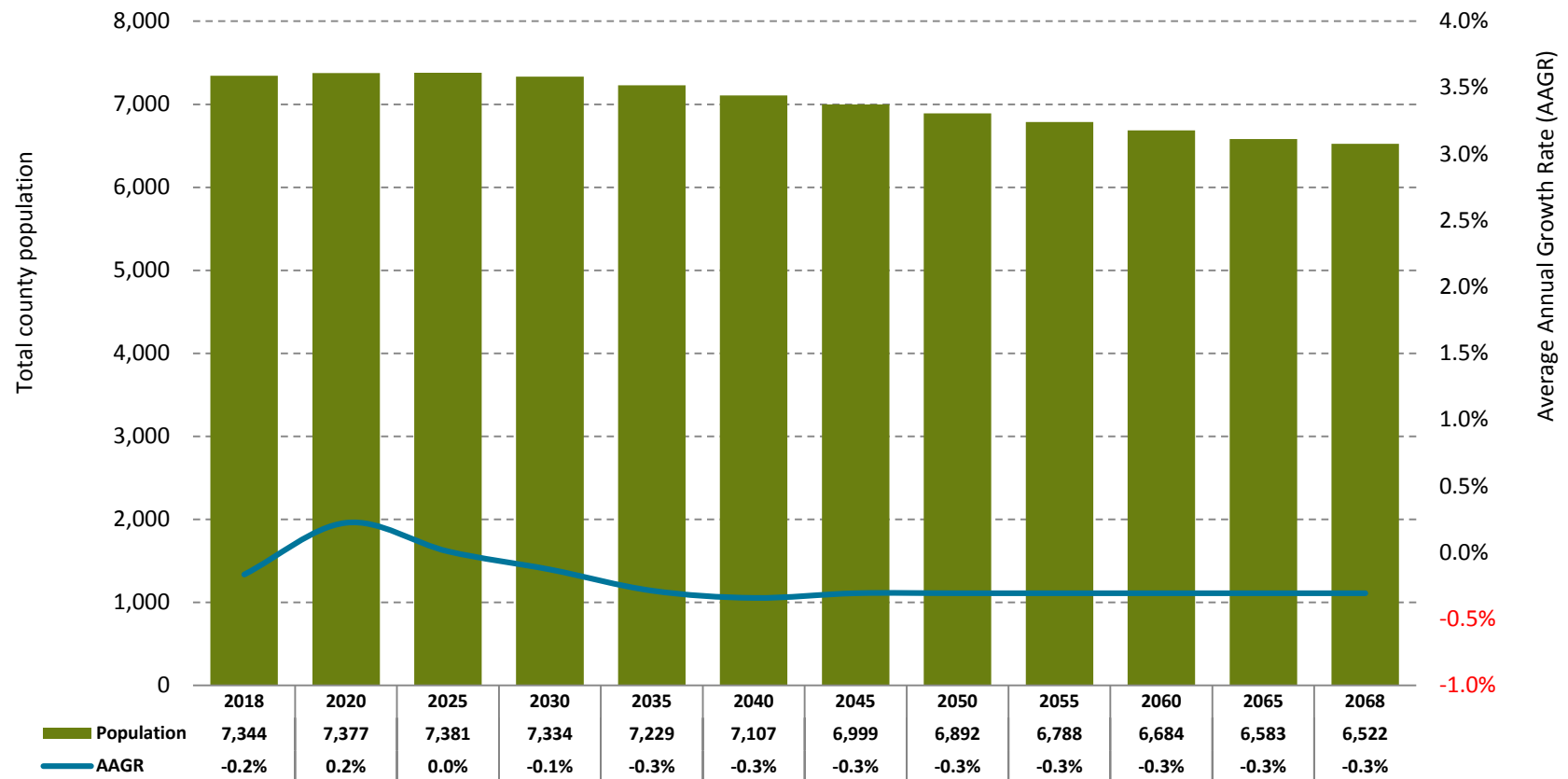


Assumptions for Harney County

1. As the economy strengthens and Oregon's population ages, we assume net in-migration and housing construction to increase into the 2010-20 decade.
 - a) Despite the recent influx of net in-migration over the last few years, we expect growth to regress during early 2020's as the economy contracts.
 - b) Net in-migration will occur over the entire forecast horizon.
2. We incorporate state and local trends into our assumptions for fertility and mortality.
 - a) As a result of aging Baby Boomers, deaths increase and peak in the 2040's.
 - b) Total fertility rates remain stable throughout the period.
 - c) As a result, the County and its sub-areas will continue to experience a natural decrease at a growing magnitude.
3. Total population is expected to decline as natural decrease outpaces net in-migration.

Preliminary Forecast Results

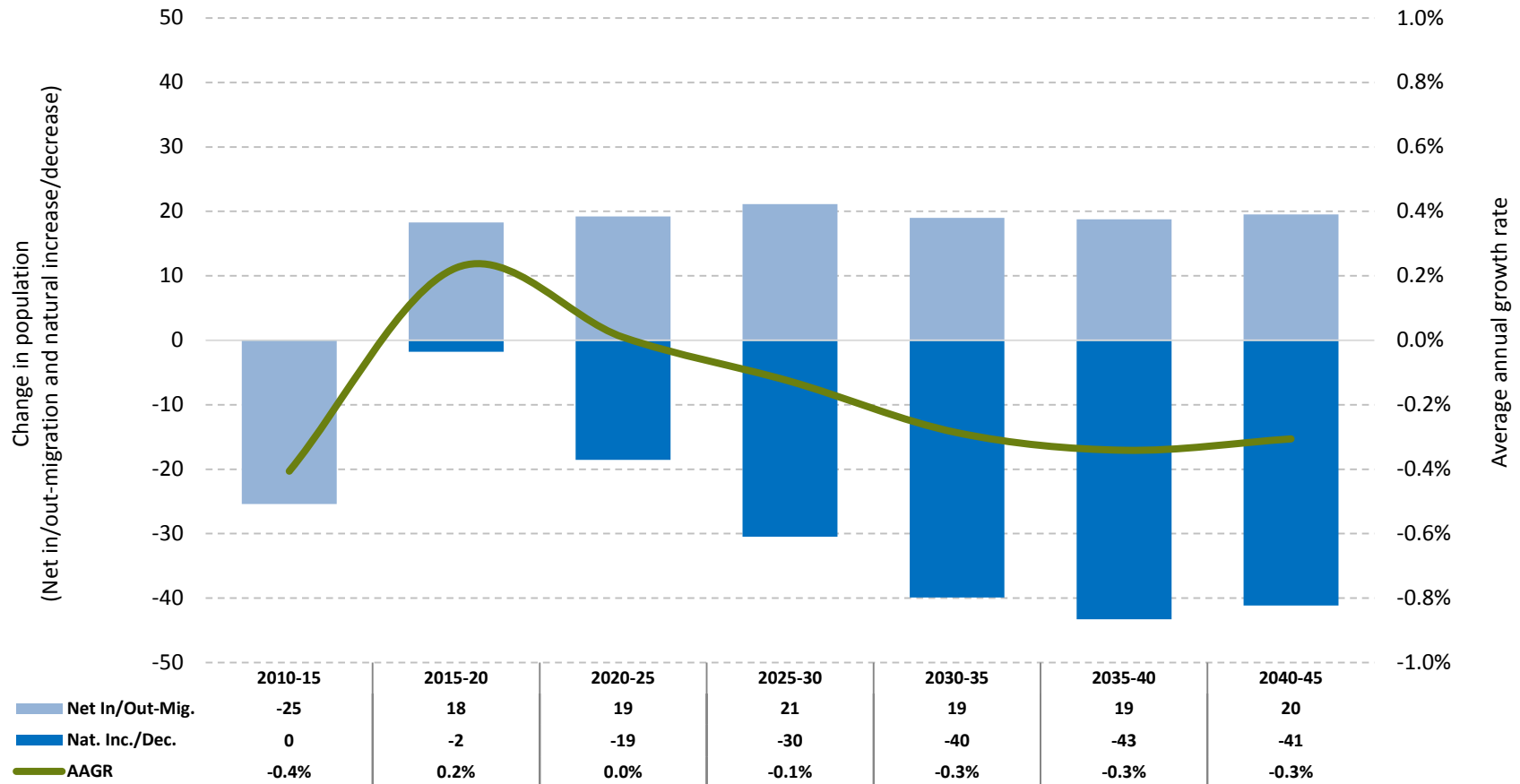
Harney County—Total Population by Five-year Intervals (2018-2068)



Source: Forecast by Population Research Center (PRC).

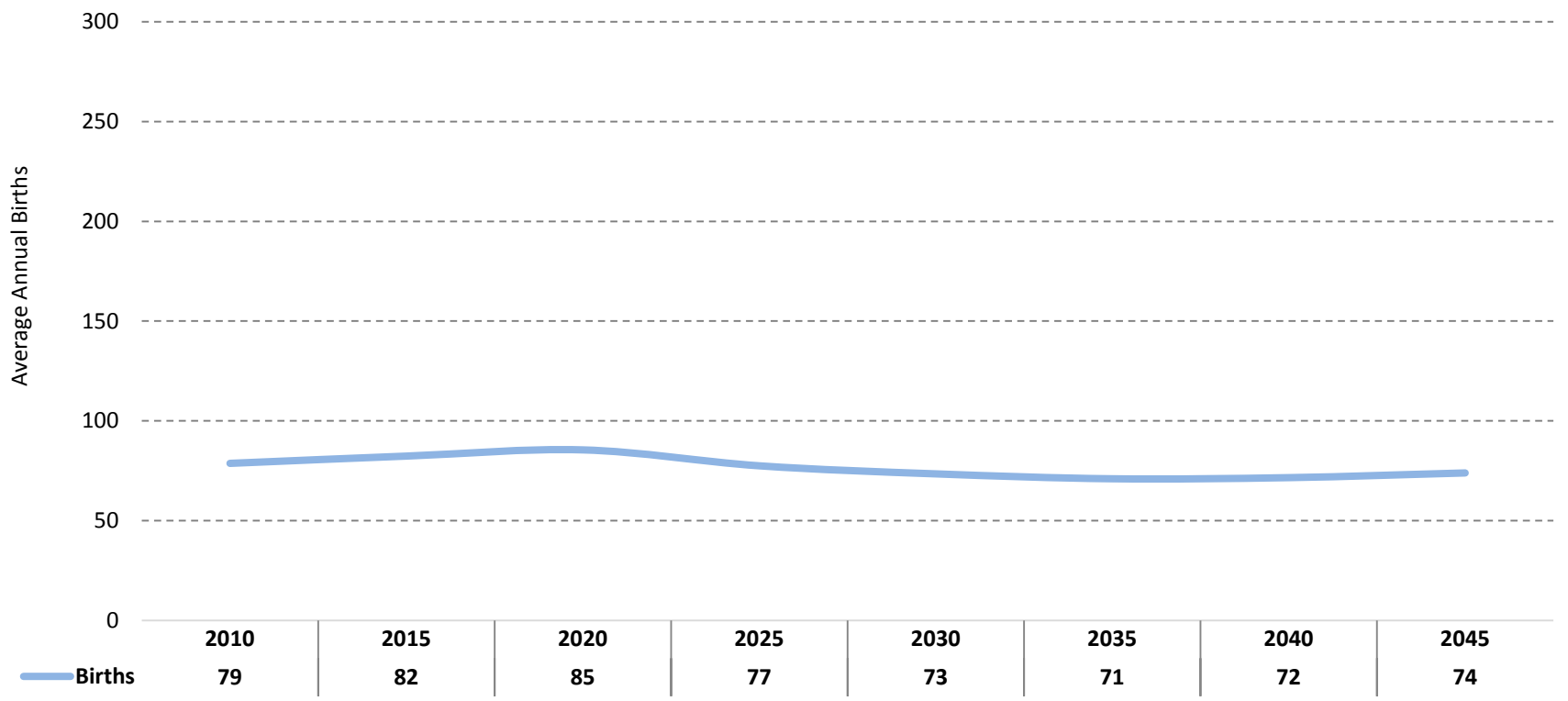
Preliminary Forecast Results

Harney County—Components of Population Change by Five-year Intervals (2015-2045)



Source: Forecast by Population Research Center (PRC)

Harney County—Average Annual Births



Sources: Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).
Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

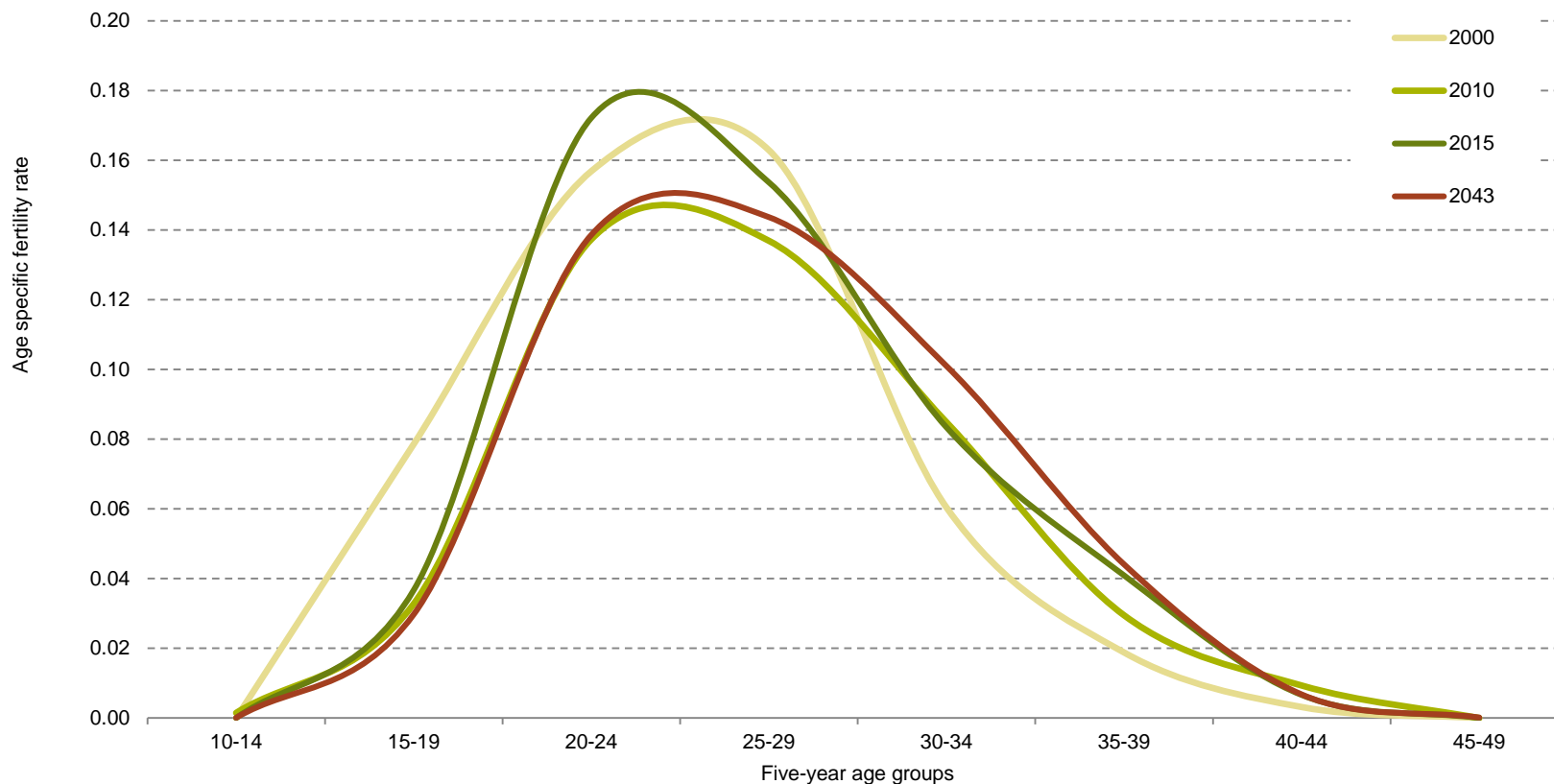
Total Fertility Rate (TFR)

	2000	2010	2015	2043
Harney County	2.40	2.16	2.47	2.32
Oregon	1.98	1.81	1.72	--

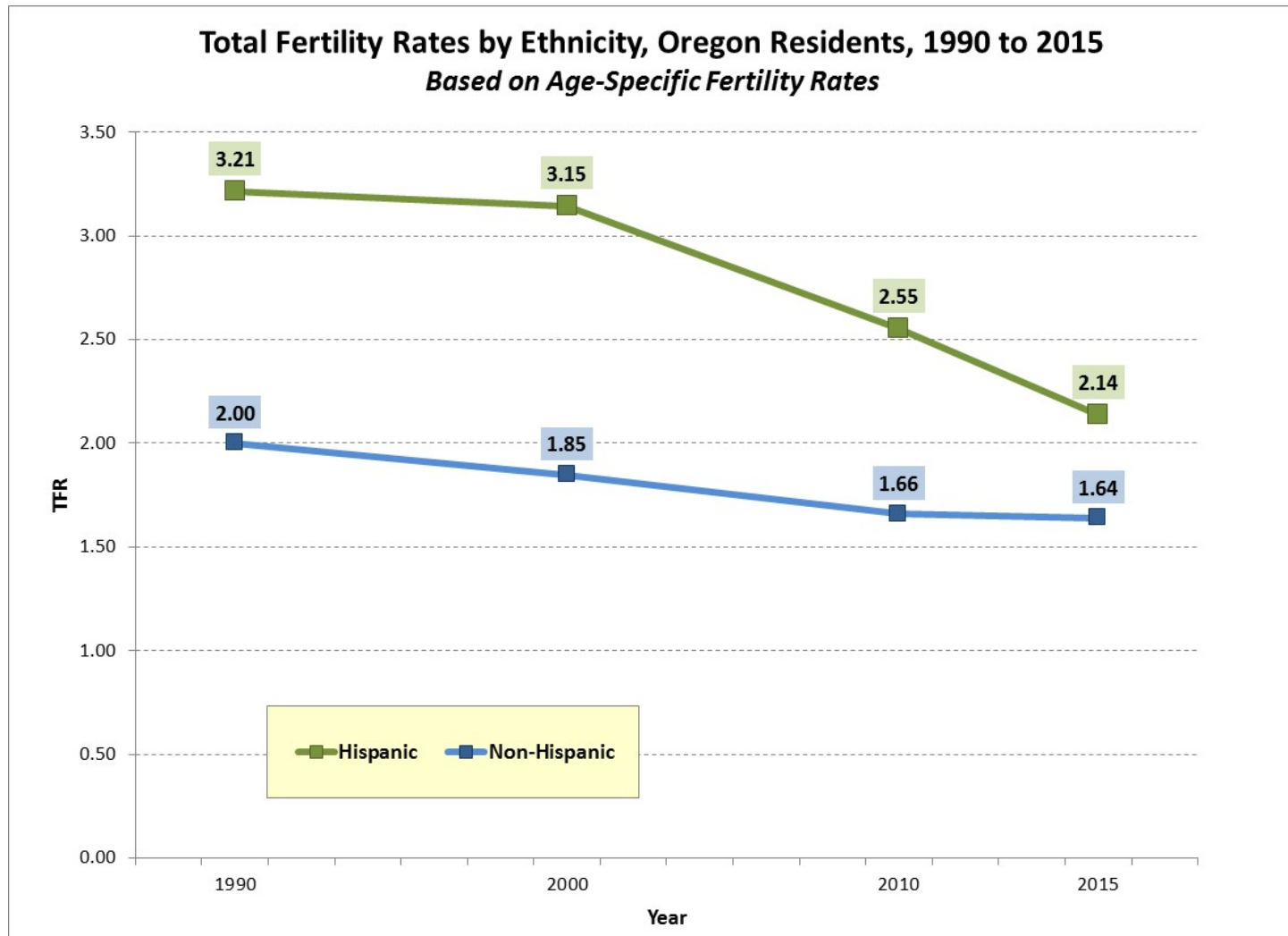
Sources: U.S. Census Bureau, 2000 and 2010 Censuses. PRC Estimates. Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).

Note: 2000, 2010 and 2015 are annual TFRs, whereas the TFR for 2043 is for the preceding five-year forecast period. In other words the TFR for 2043 is calculated for the 2040 to 2045 forecast period.

Harney County—Age Specific Fertility Rate (2000, 2010, 2015 and 2043)



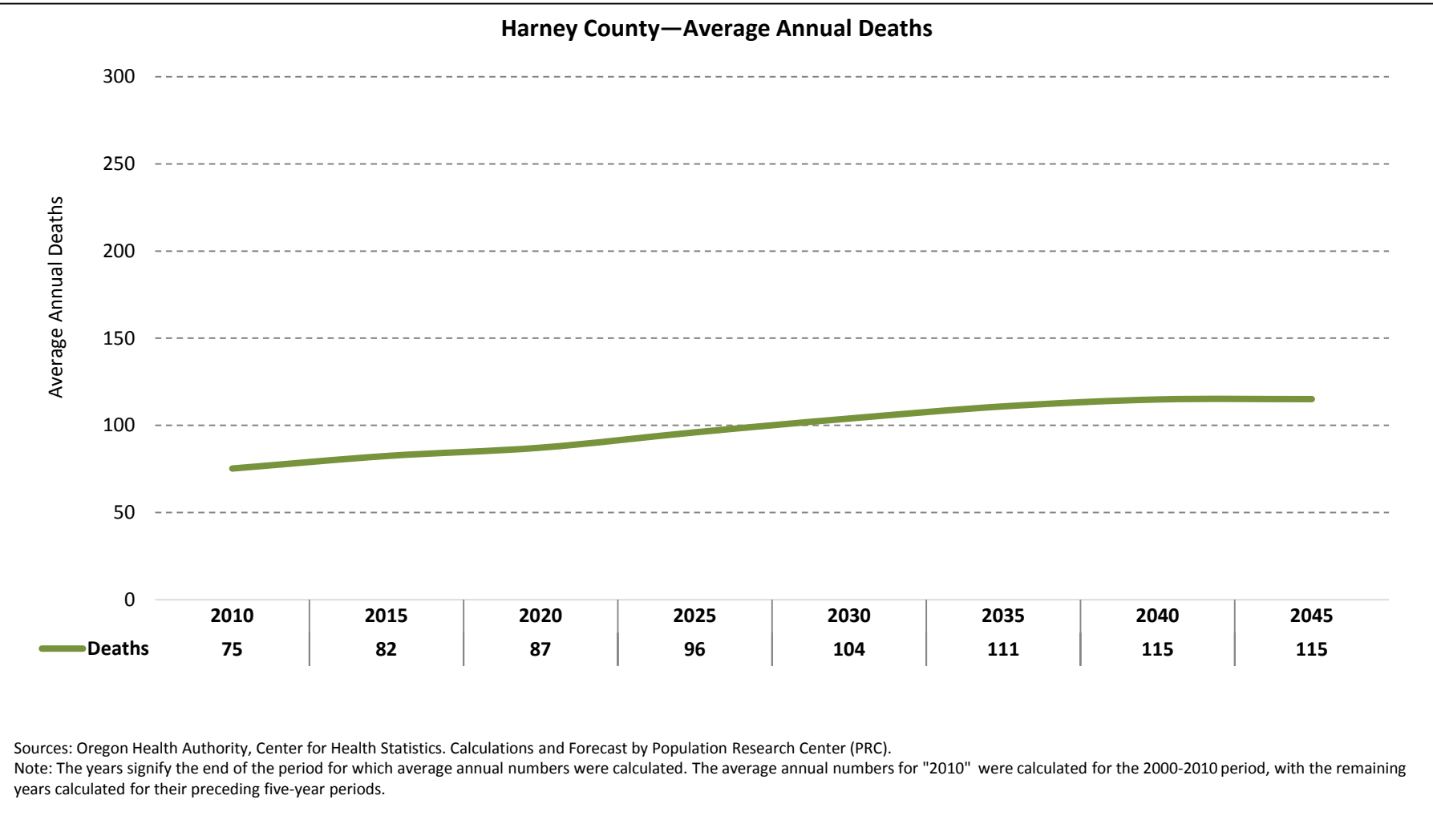
Sources: U.S. Census Bureau, 2000 and 2010 Censuses. PRC Estimates. Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).



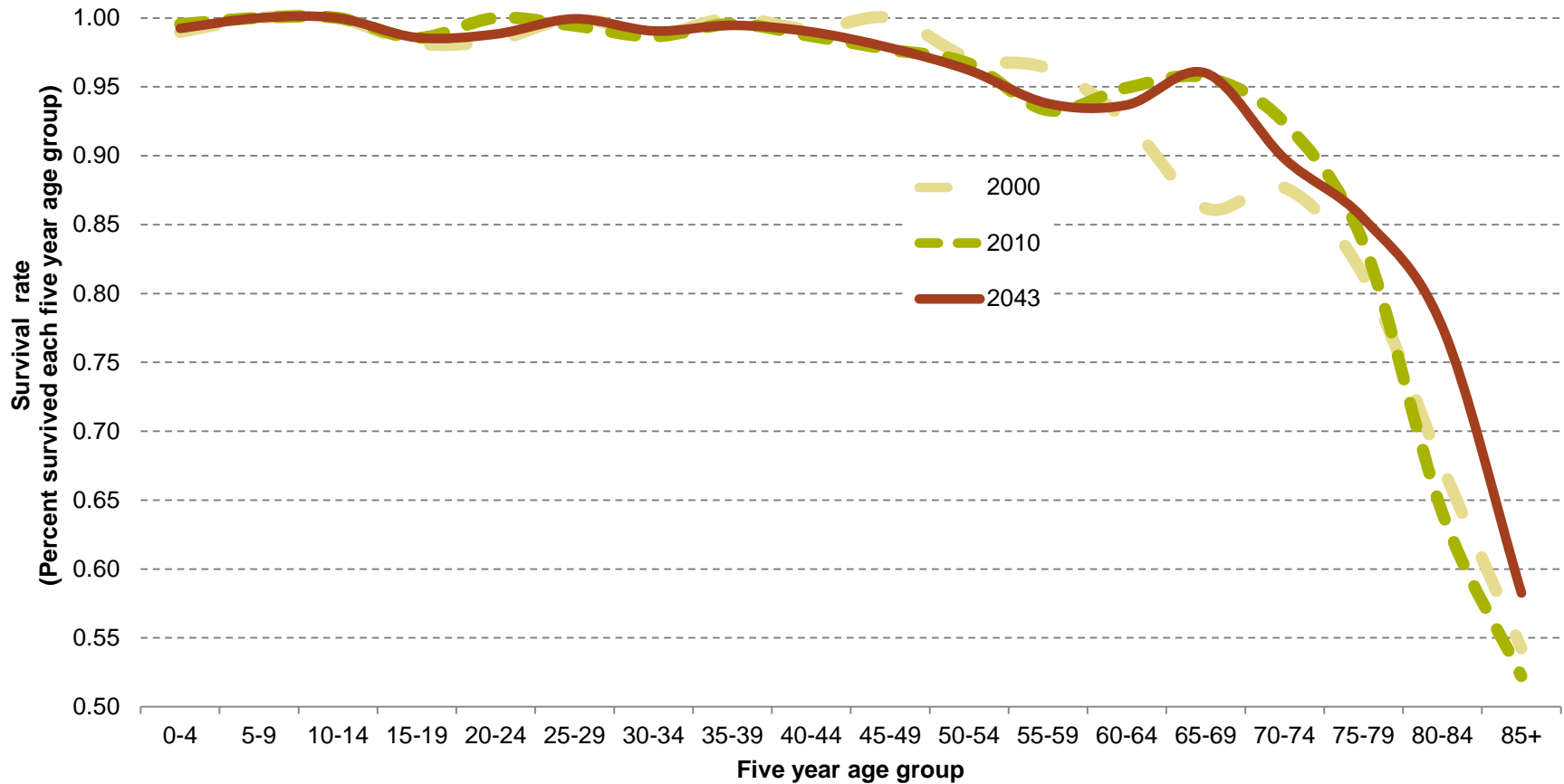
Sources: PEPASR6H-Geography-OregonYear-July 1, 2015 and July 1, 2010

Hispanic Origin-Hispanic: Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States: April 1, 2010 to July 1, 2015

Population Research Center (PRC): 2015 Population Estimates

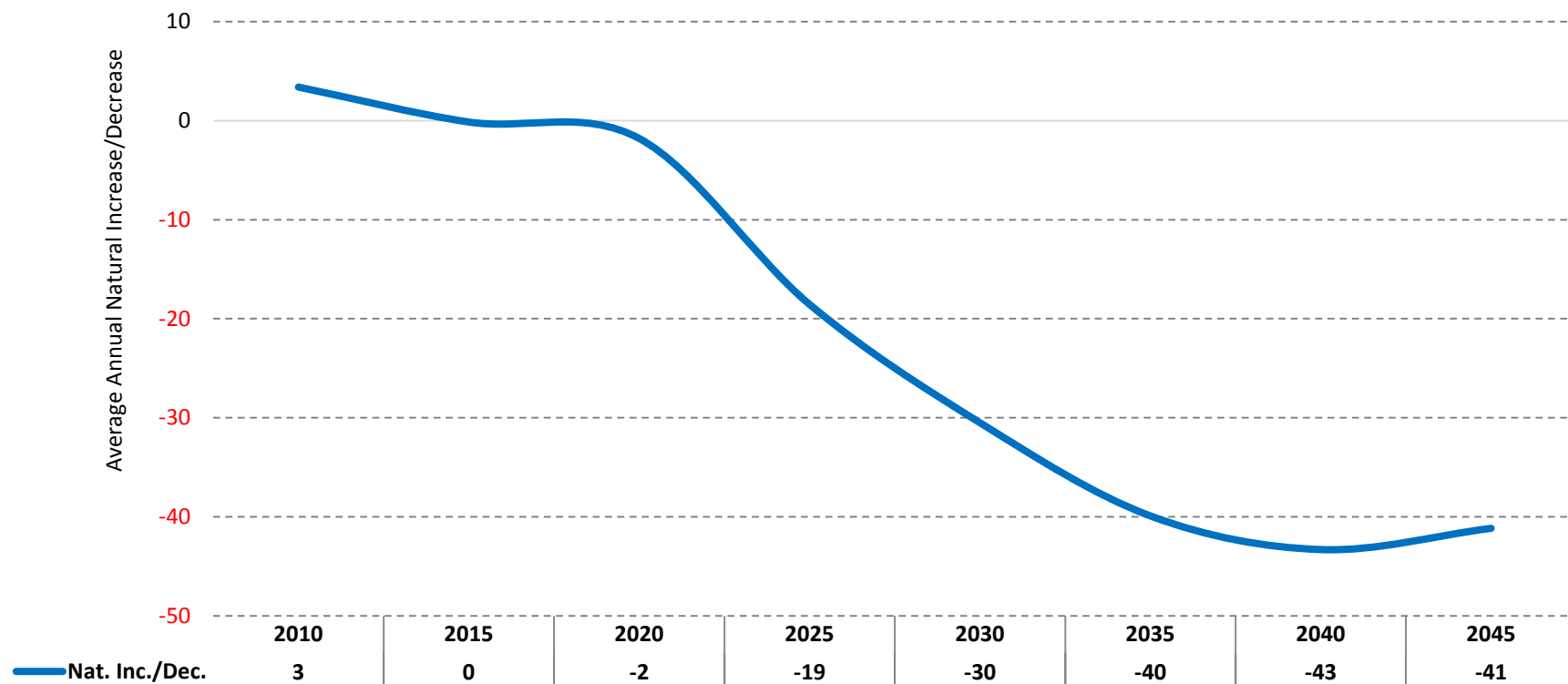


Harney County – Age Specific Survival Rates



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

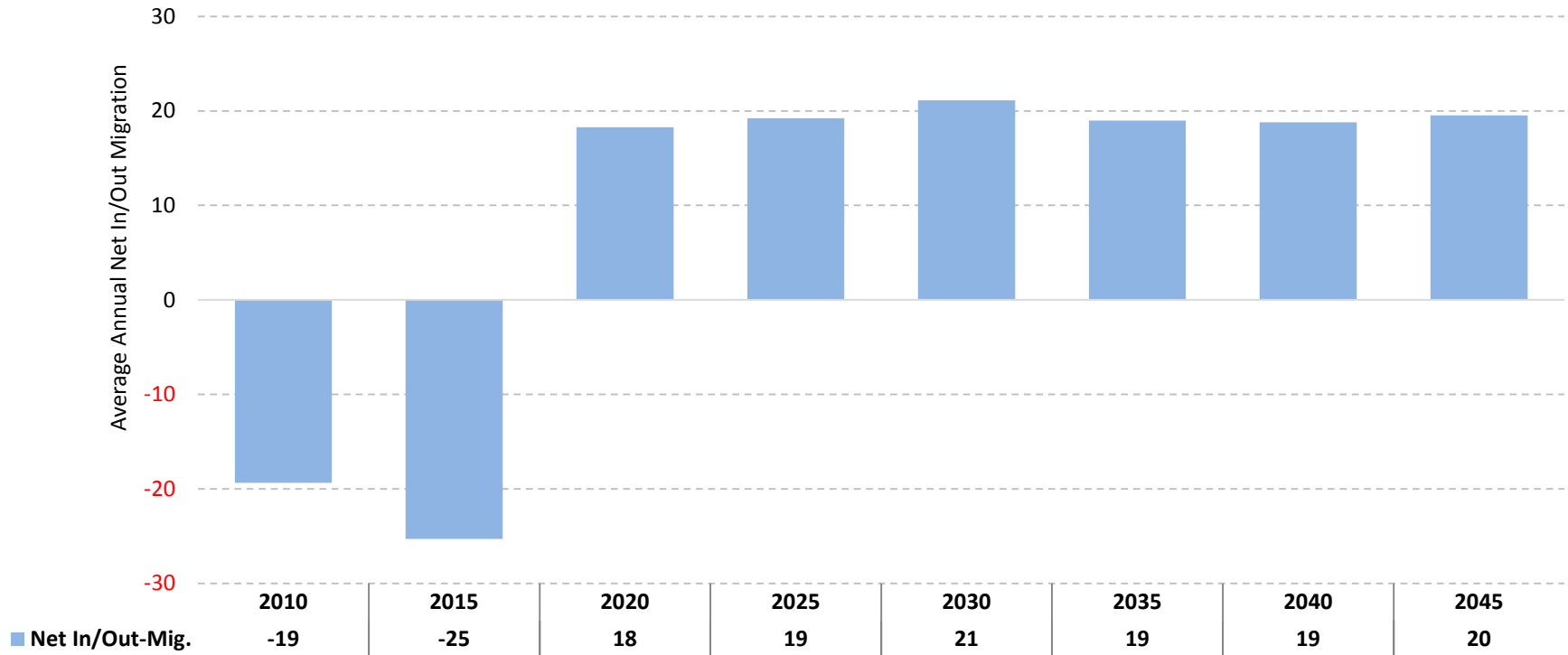
Harney County—Average Annual Natural Increase/Decrease



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

Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

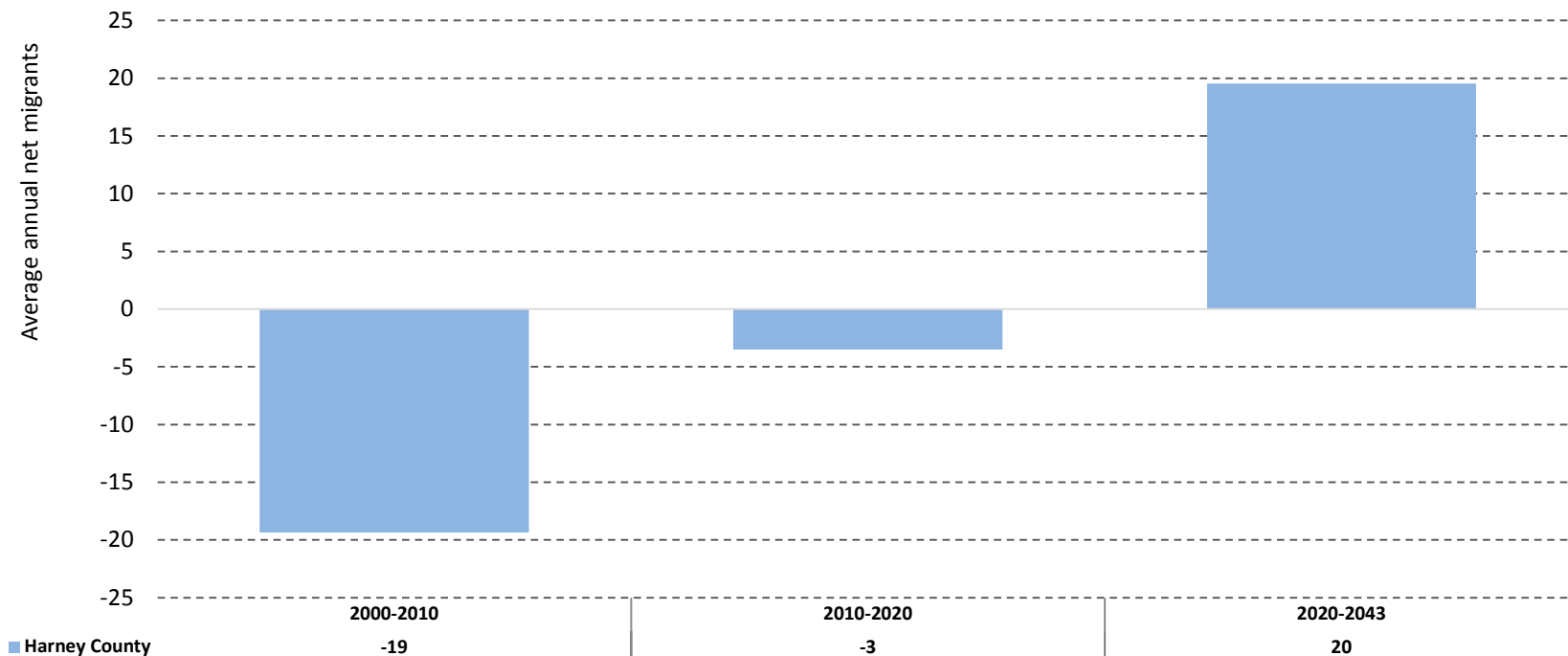
Harney County—Average Annual Net In/Out-Migration



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

Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

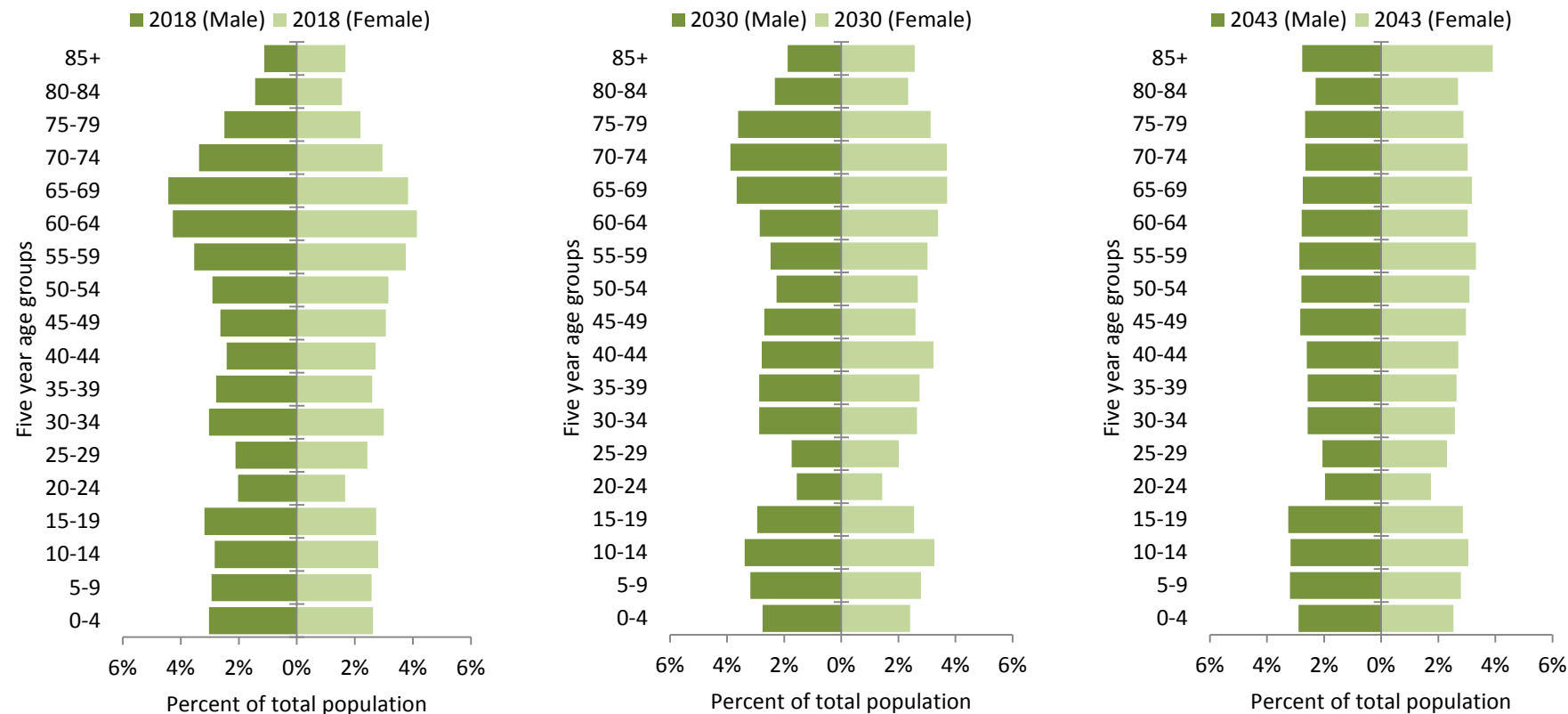
Harney County—Average Annual Net In/Out-Migration



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

Note: The average annual numbers were calculated for the 10 year periods (2000-2010 and 2010-2020) and the 23 year period (2020-2043).

Harney County—Age Structure of the Population



Source: Forecast by Population Research Center (PRC)

Historical and Forecast Populations for Harney County and its Sub-Areas

	Historical			Forecast					
	2000	2010	AAGR (2000-2010)	2018	2043	2068	AAGR (2010-2018)	AAGR (2018-2043)	AAGR (2043-2068)
Harney County	7,605	7,445	-0.2%	7,344	7,042	6,522	-0.2%	-0.2%	-0.1%
Burns	3,148	2,929	-0.7%	2,948	2,957	2,886	0.1%	0.0%	-0.1%
Hines	1,687	1,714	0.2%	1,713	1,760	1,754	0.0%	0.1%	0.0%
Outside UGBs	2,774	2,779	0.0%	2,684	2,324	1,882	-0.4%	-0.6%	-0.8%

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

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

County and Sub-Areas—Population and Average Annual Growth Rate (AAGR) (2018, 2043 and 2068)

	2018	2043	2068	AAGR (2018-2043)	AAGR (2043-2068)	Share of County 2018	Share of County 2043	Share of County 2068
<i>Harney County</i>	7,344	7,042	6,522	-0.2%	-0.3%	--	--	--
Burns	2,948	2,957	2,886	0.0%	-0.1%	40.1%	42.0%	44.3%
Hines	1,713	1,760	1,754	0.1%	0.0%	23.3%	25.0%	26.9%
Outside UGBs	2,684	2,324	1,882	-0.6%	-0.8%	36.5%	33.0%	28.9%

Source: Forecast by Population Research Center (PRC)

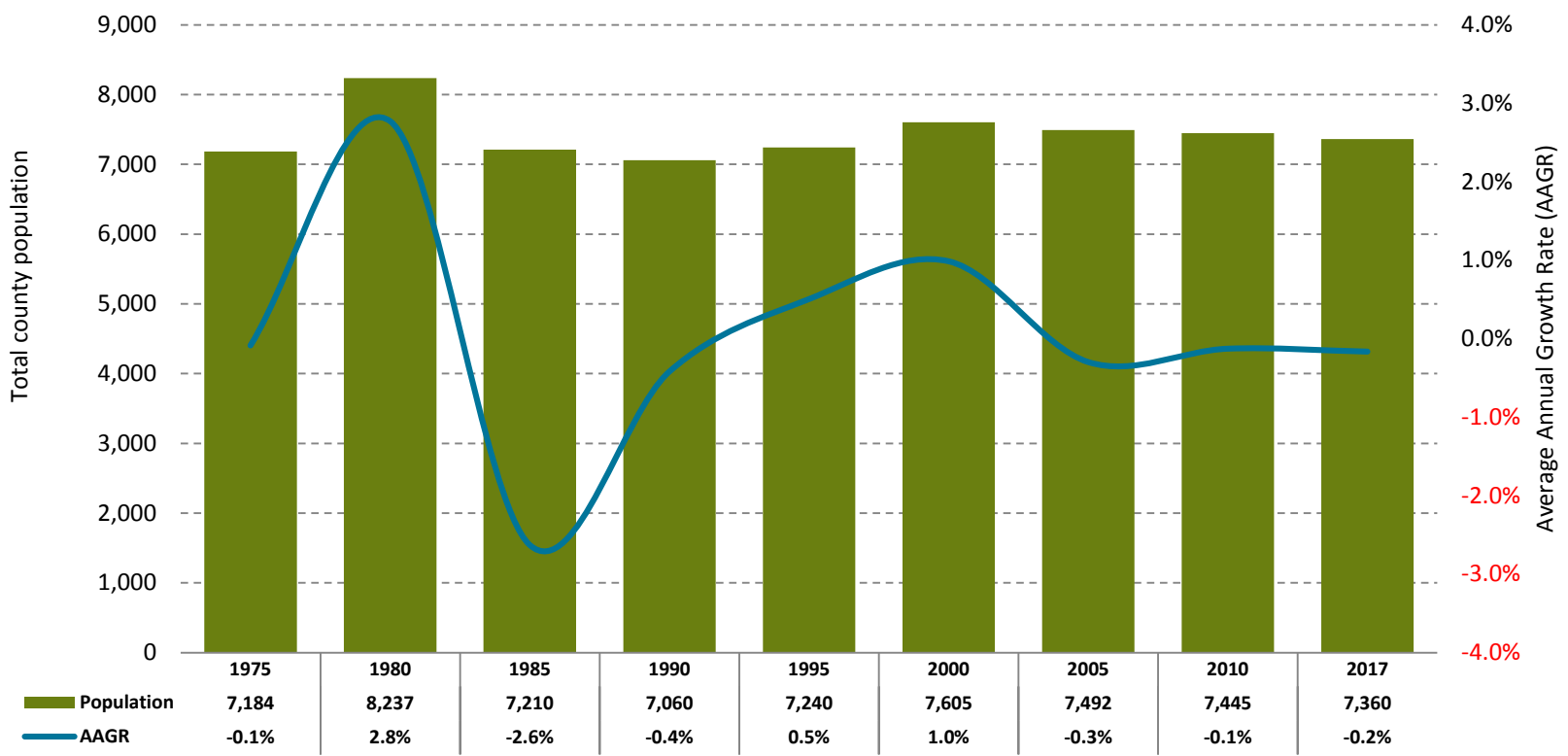
Note: For simplicity each UGB is referred to by its primary city's name.

Local Input and Additional Information

- Questions?
- Discussion time

Additional Historical Trends: Harney County

Harney County—Total Population by Five-year Intervals (1975-2017)



Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 1975, 1985, 1995, 2005 and 2017.

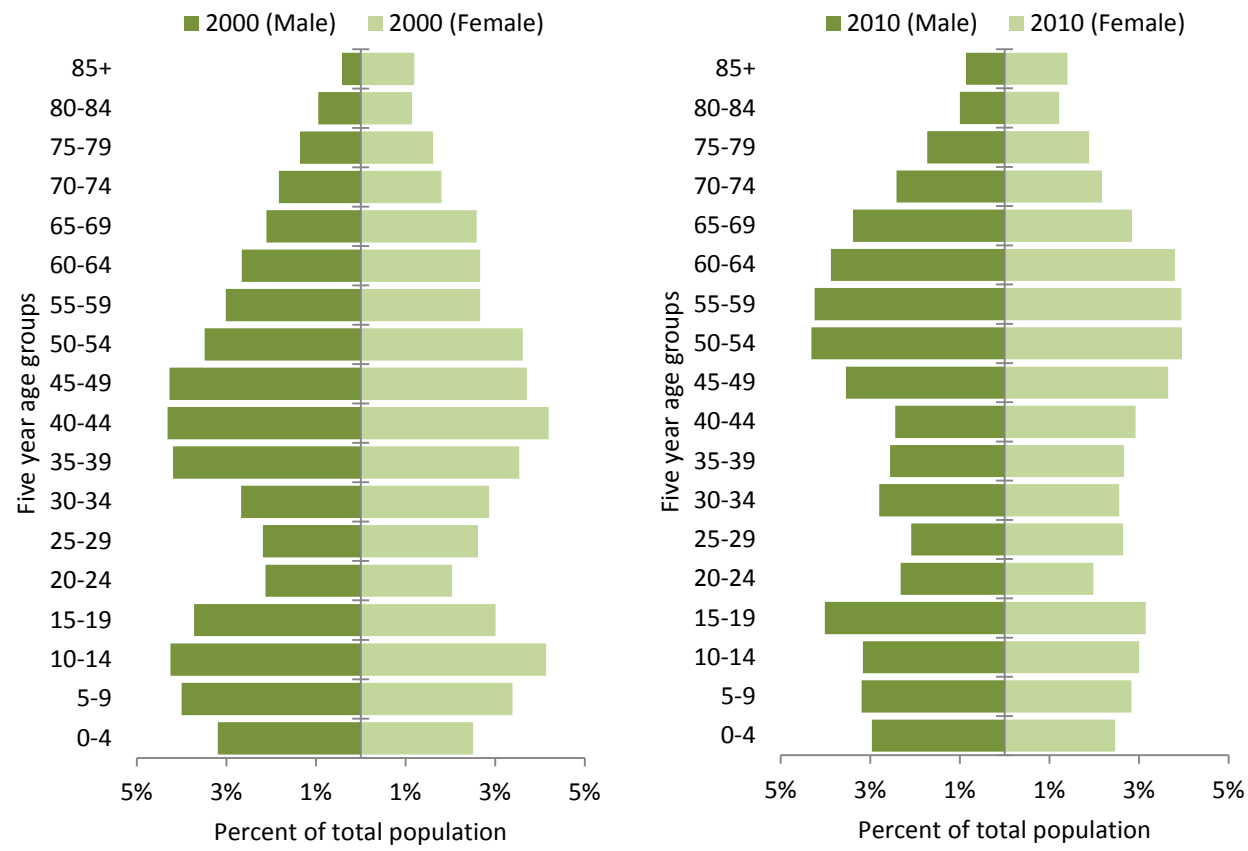
County and Sub-Areas—Population and Average Annual Growth Rate (AAGR) (2000-2010)

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
<i>Harney County</i>	7,605	7,445	-0.2%	100.1%	99.7%	-0.4%
Burns	3,148	2,929	-0.7%	41.4%	39.3%	-2.1%
Hines	1,687	1,714	0.2%	22.2%	23.0%	0.8%
Outside UGBs	2,774	2,779	0.0%	36.5%	37.3%	0.8%

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

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

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

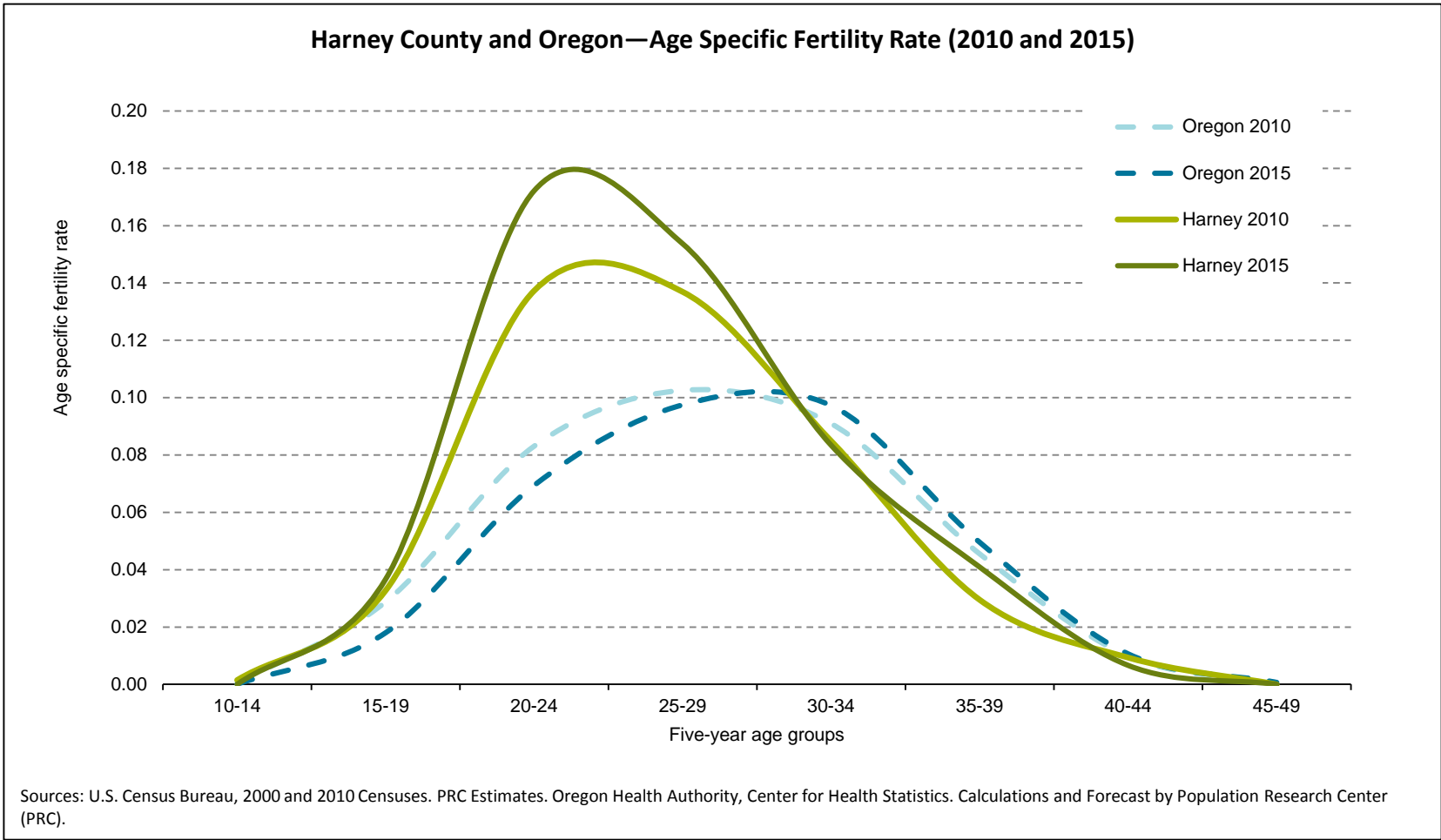


Sources: U.S. Census Bureau, 2000 and 2010 Censuses

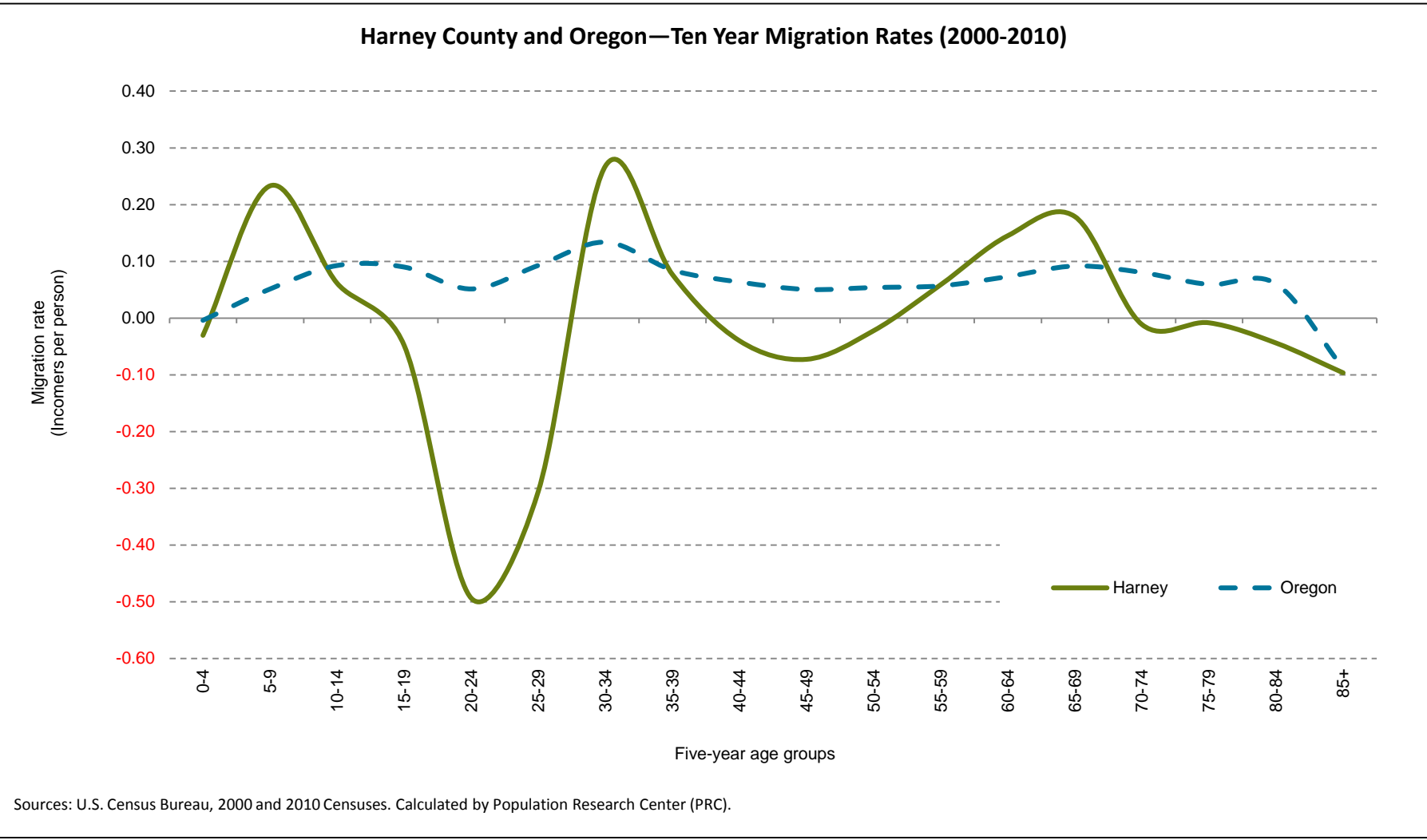
Harney County—Hispanic or Latino and Race (2000 and 2010)

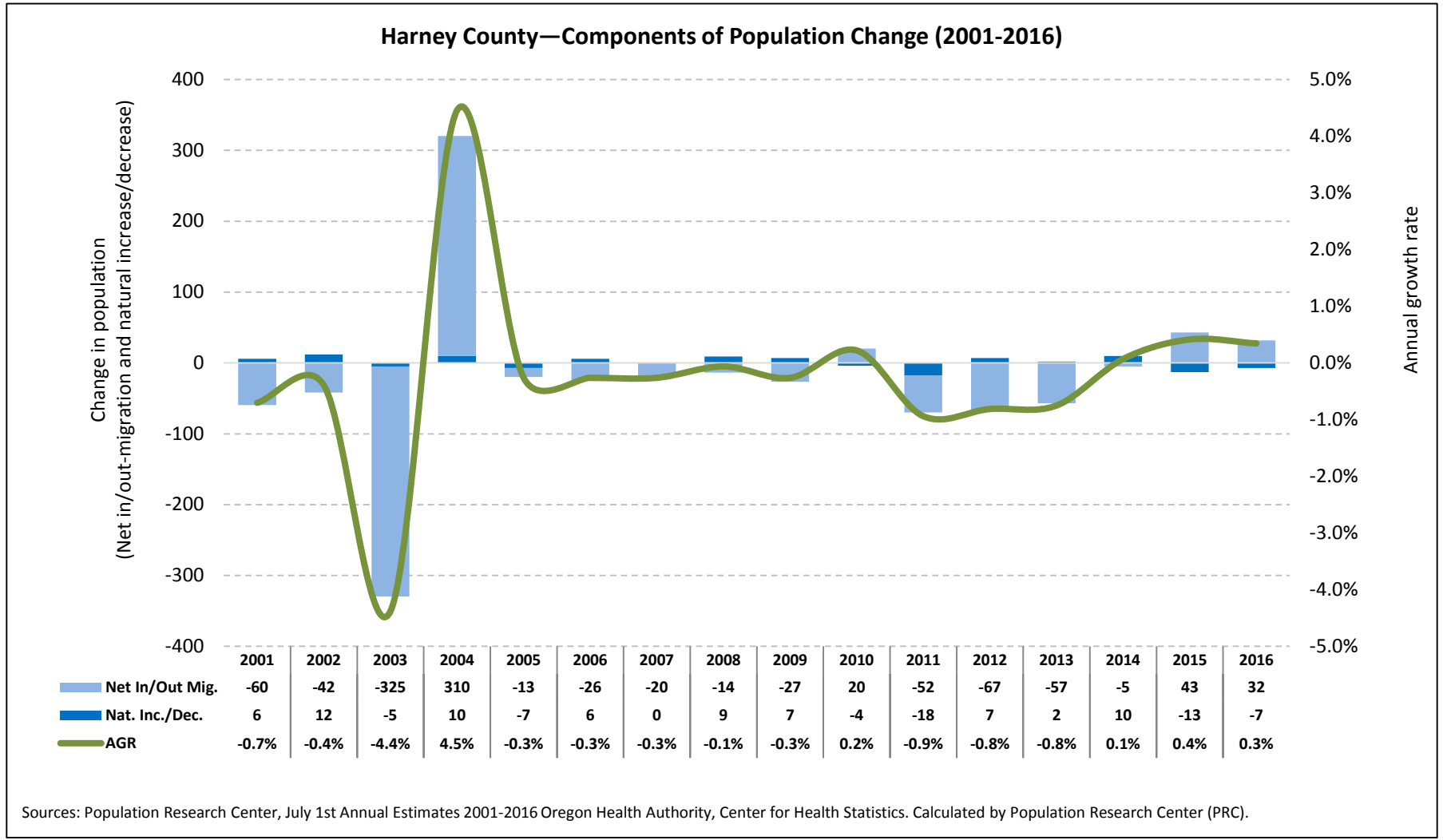
Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
<i>Total population</i>	7,609	100.0%	7,422	100.0%	-187	-2.5%
Hispanic or Latino	316	4.2%	294	4.0%	-22	-7.0%
Not Hispanic or Latino	7,293	95.8%	7,128	96.0%	-165	-2.3%
White alone	6,823	89.7%	6,648	89.6%	-175	-2.6%
Black or African American alone	9	0.1%	16	0.2%	7	77.8%
American Indian and Alaska Native alone	276	3.6%	227	3.1%	-49	-17.8%
Asian alone	39	0.5%	34	0.5%	-5	-12.8%
Native Hawaiian and Other Pacific Islander alone	4	0.1%	1	0.0%	-3	-75.0%
Some Other Race alone	5	0.1%	6	0.1%	1	20.0%
Two or More Races	137	1.8%	196	2.6%	59	43.1%

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



Total Fertility Rate (TFR)		
	2000	2010
Harney County	2.40	2.16
Oregon	1.98	1.81





Harney County and Sub-Areas—Total Housing Units (2000 and 2010)

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
<i>Harney County</i>	3,533	3,835	0.8%	100.0%	100.0%	0.0%
Burns	1,531	1,551	0.1%	43.3%	40.4%	-2.9%
Hines	711	803	1.2%	20.1%	20.9%	0.8%
Outside UGBs	1,291	1,481	1.4%	36.5%	38.6%	2.1%

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

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

Harney County and Sub-Areas—Persons Per Household (PPH) and Occupancy Rate (2000 and 2010)

	Persons Per Household (PPH)			Occupancy Rate		
	2000	2010	Change 2000-2010	2000	2010	Change 2000-2010
<i>Harney County</i>	2.5	2.3	-7.1%	85.93%	83.57%	-2.4%
Burns	2.5	2.1	-13.2%	85.56%	86.07%	0.5%
Hines	2.3	2.3	-2.4%	92.83%	91.91%	-0.9%
Outside UGBs	2.5	2.5	-2.8%	82.57%	76.43%	-6.1%

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

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

Harney County UGBs



