

Alaska Department of Labor and Workforce
Development Population Meeting
April 11, 2012

Population Estimates

Eddie Hunsinger
Alaska Department of Labor
and Workforce Development

Population Estimates: What We Provide

- Annual state, borough, census area, city and census designated place resident population estimates.
- State, borough and census area estimates by age, sex, race and ethnicity.
- Alaska is very fortunate to have data from the Permanent Fund Dividend to use in population estimates.

Population Estimates: What We Provide

- New estimates of total population for all areas in the state are available each January.
- Population characteristics (age, sex, race, ethnicity) are available in May/June.

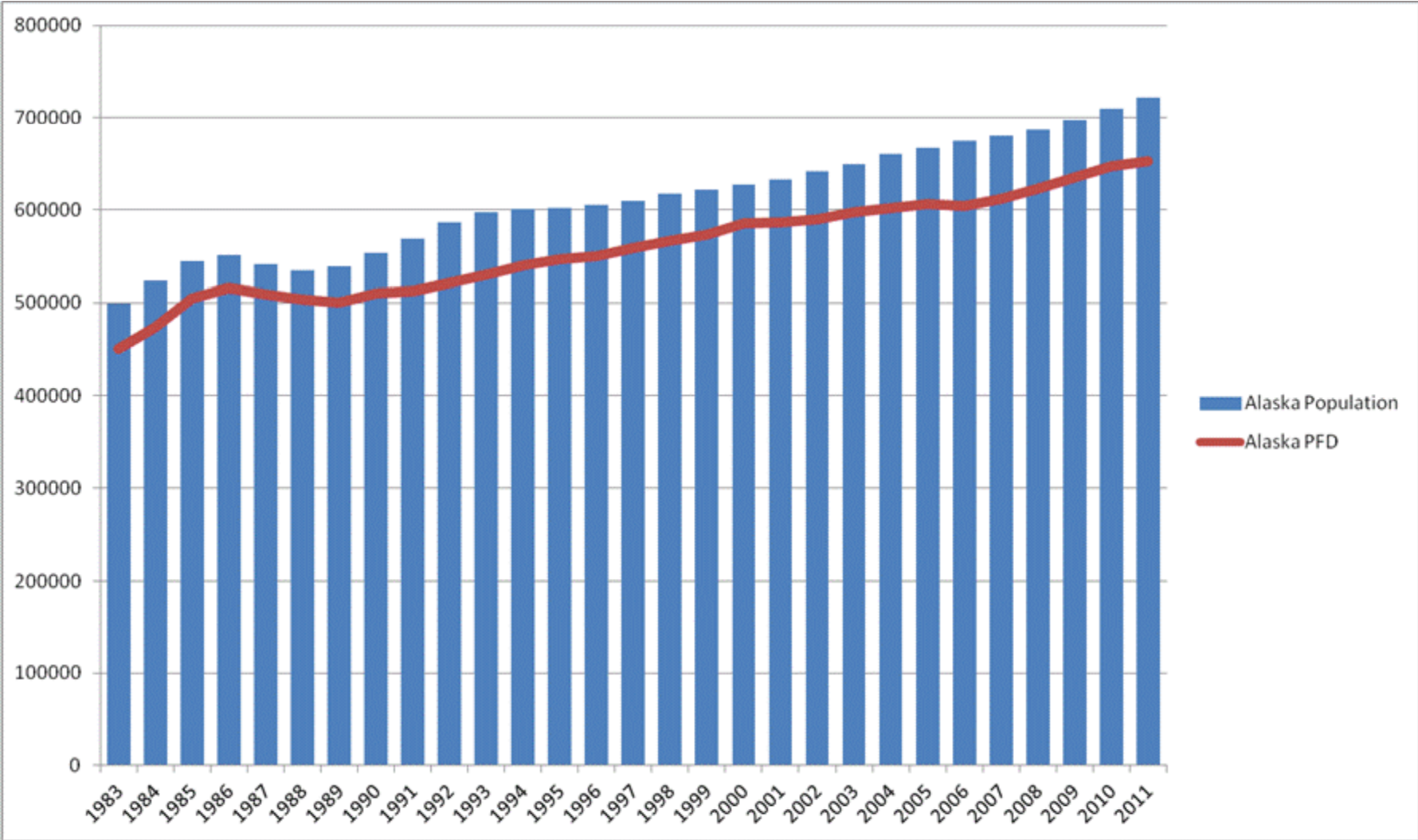
Population Estimates: Uses

- The population estimates are used for a wide range of purposes, including:
 - Distribution of resources
 - Survey weighting
 - Research and planning
 - Updating of population projections

Population Estimates: How We Make Them (briefly)

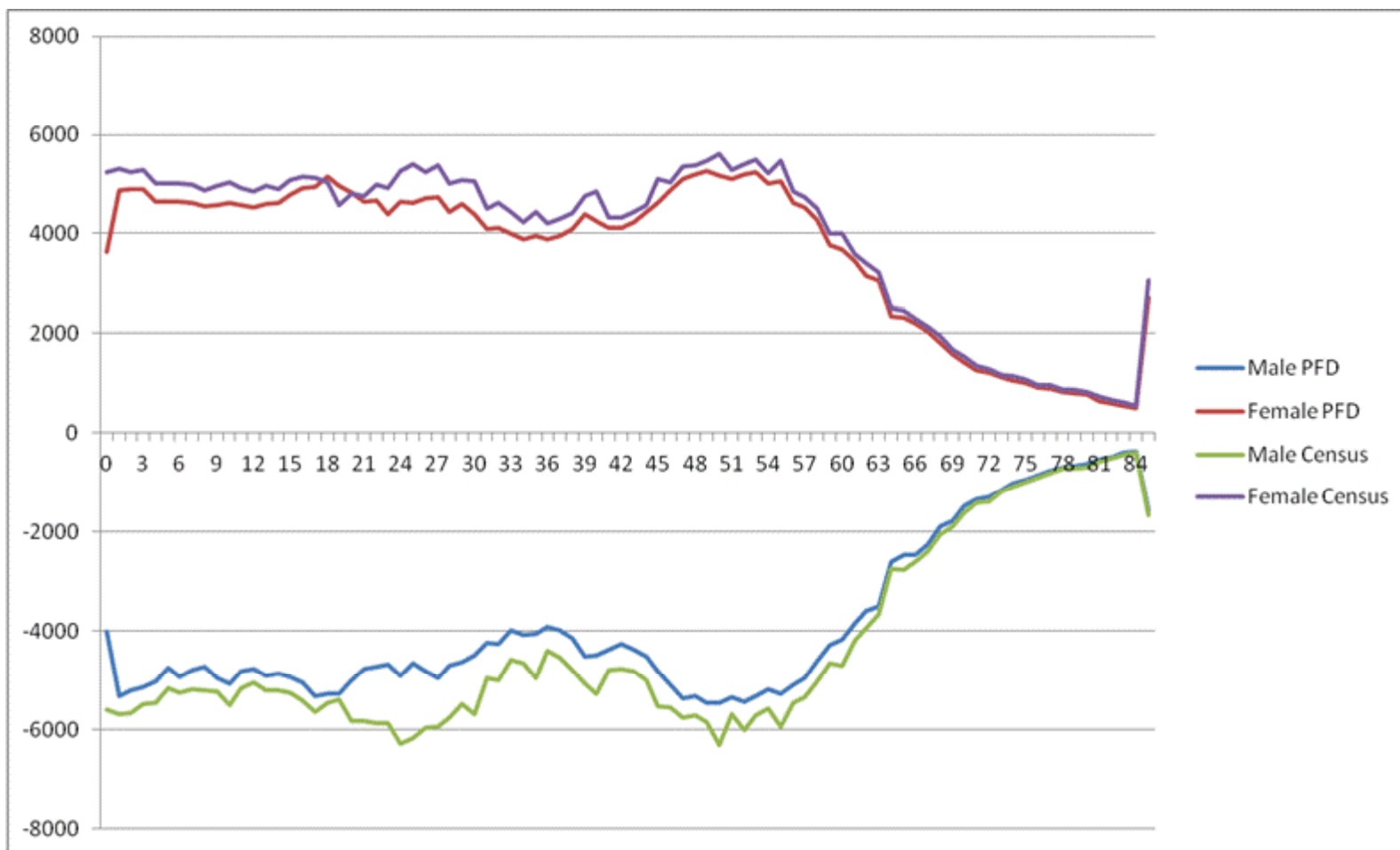
- For total population we begin with the last decennial census (2010 Census).
- Create ratios of census counts to PFD recipients in the census year, and carry them forward each year until the next census.
- Adjust to a separately estimated state total.
- There are several additional procedures to account for military, prisons, dorms, etc.

Population (PFD compared to Estimates)



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Population by Age and Sex (2010 PFD compared to 2010 Census)



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

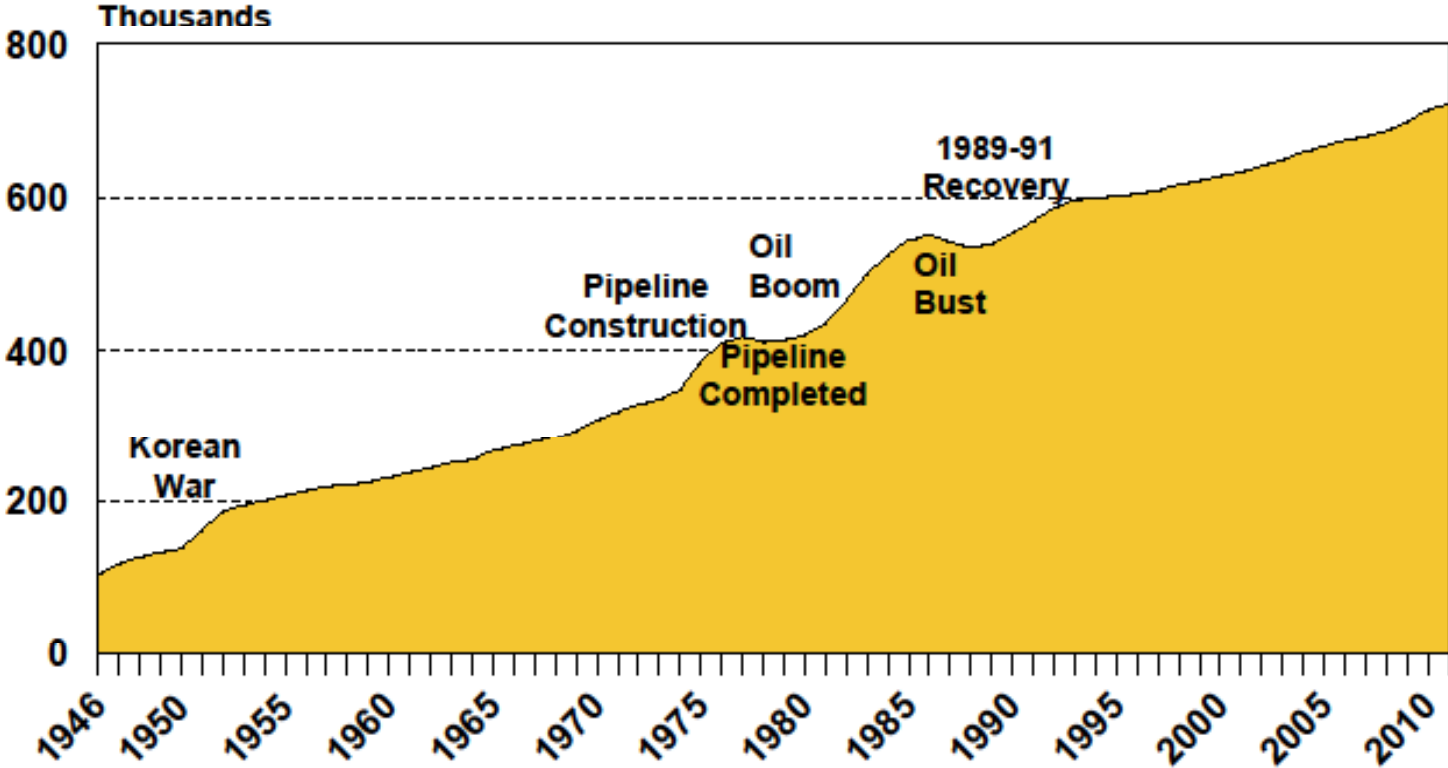
Population Estimates: How We Make Them (briefly)

- Race and ethnicity are not included in the PFD data.
- In the past we made race and ethnicity estimates based on census race/ethnicity counts and post-census migration.
- We're currently looking at combining our estimates with CDC and Census numbers to get the best of everything.

Population Estimates: Population Over Time

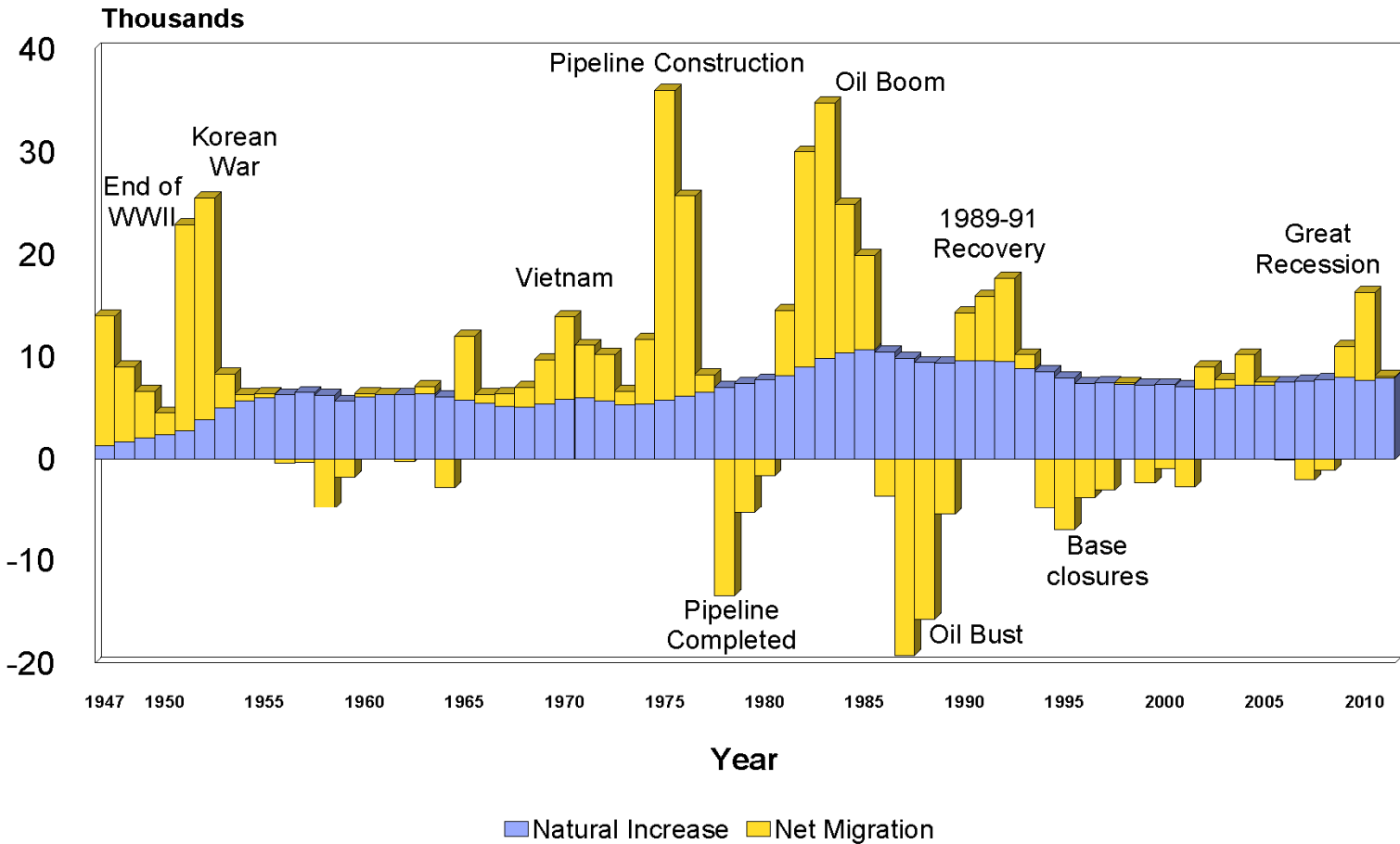
- Alaska's population has changed dramatically over the past century due to “natural increase” and “net migration.”
- Both the total population and the composition of the population have seen dramatic shifts.

Alaska Population, 1946-2011



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

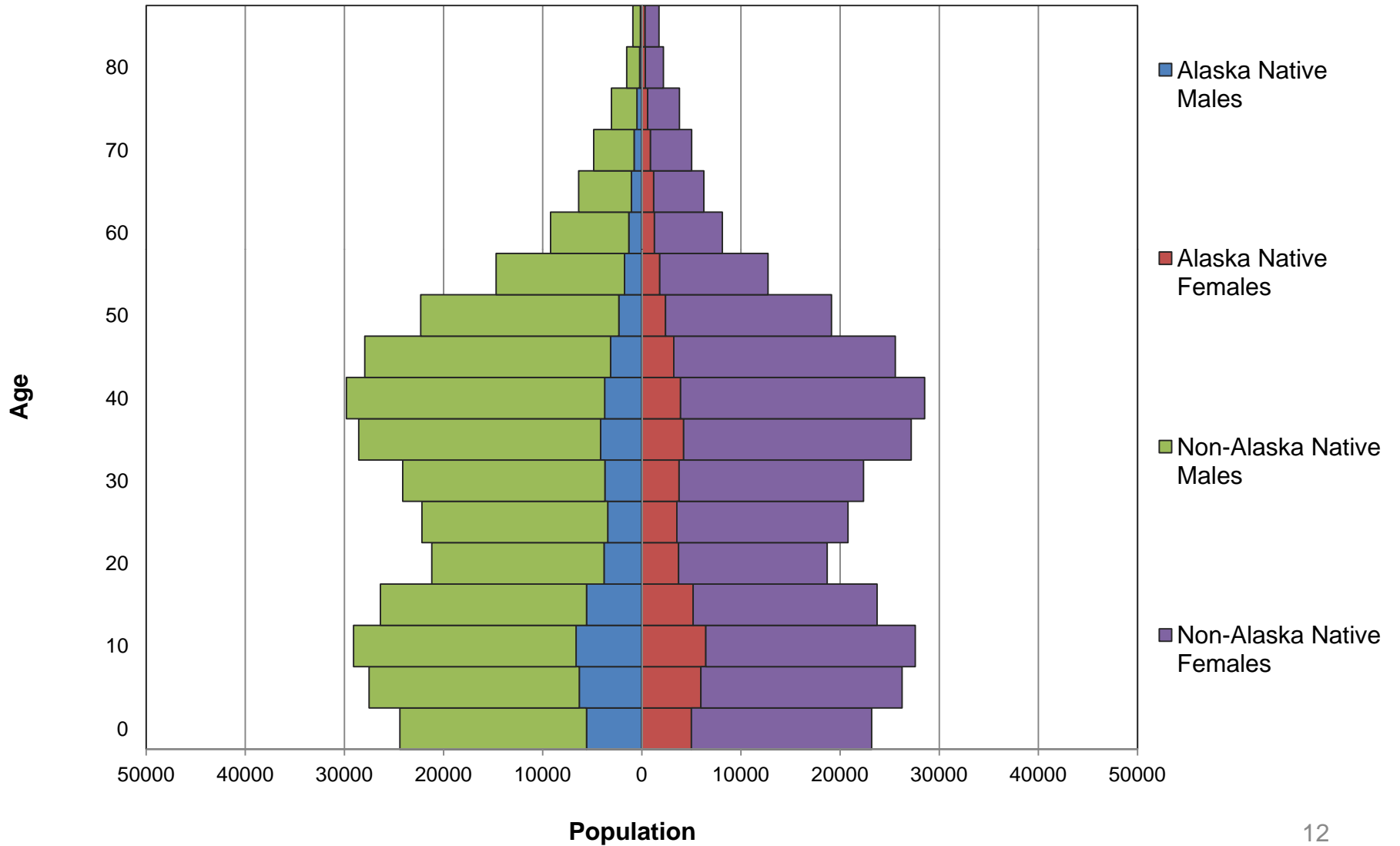
Components of Population Change for Alaska, 1947-2011



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

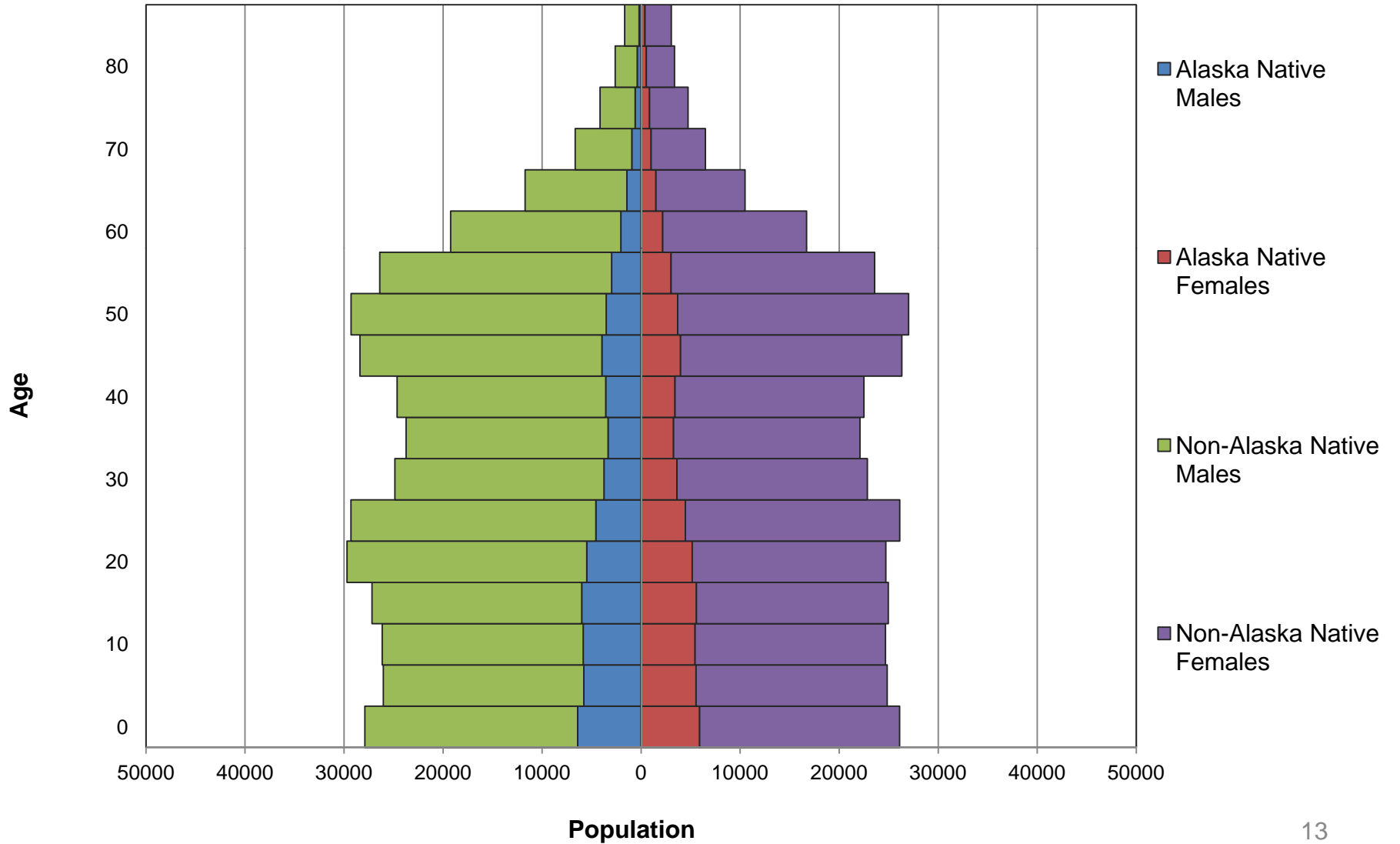
Alaska Population by Age and Sex, 2000

Source: US Census Bureau and
Alaska Department of Labor and Workforce Development



Alaska Population by Age and Sex, 2010

Source: US Census Bureau and
Alaska Department of Labor and Workforce Development

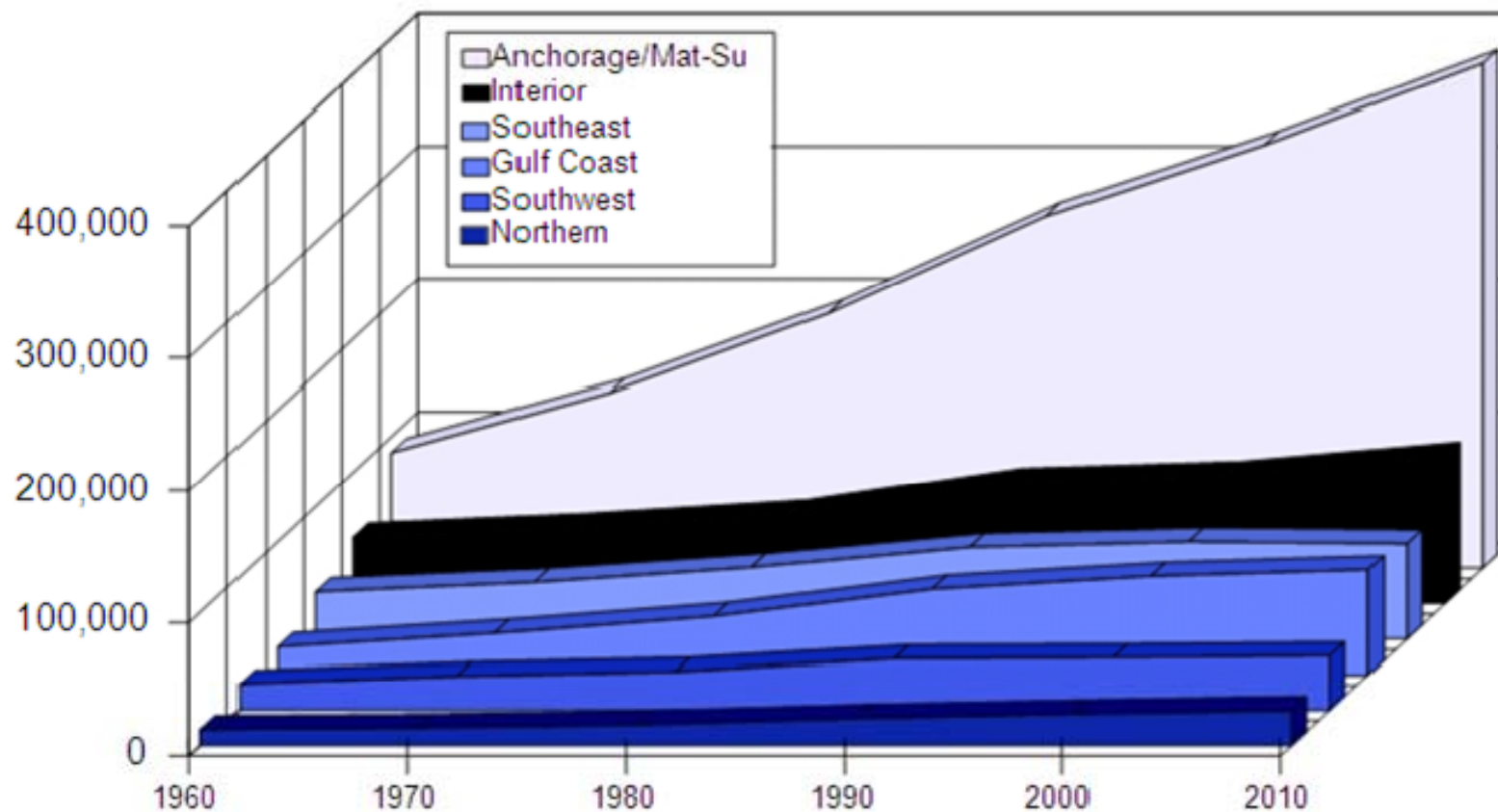


Population Estimates: Population Across the State

- Rural parts of the state (which often are primarily Alaska Native) generally have net migration losses, but often grow due to natural increase.
- Population centers in Alaska typically have a lower rate of natural increase, but gain movers from rural areas, and also have larger migration flows from outside the state.

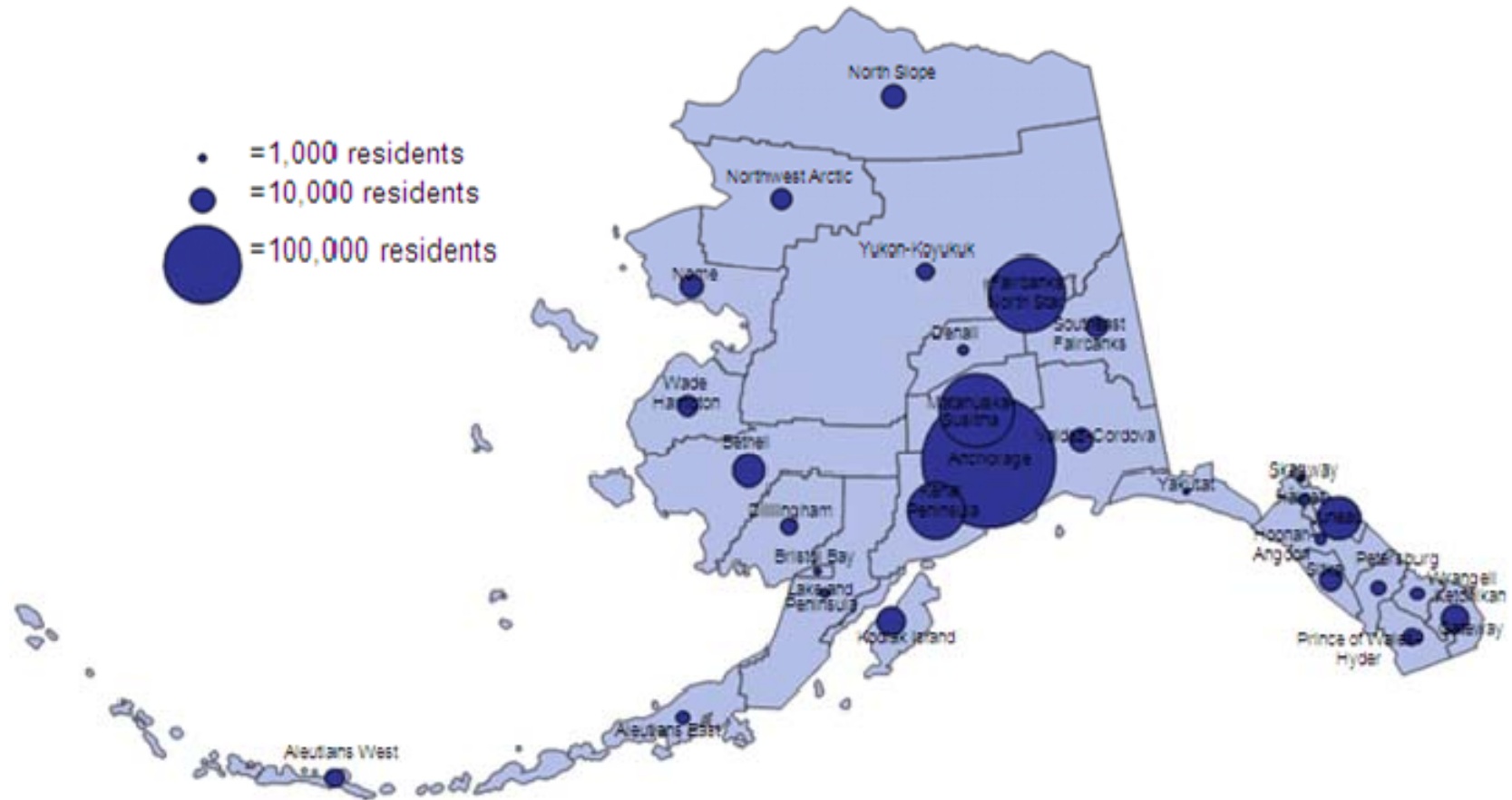
Population by Labor Market Region

1960, 1970, 1980, 1990, 2000, 2010



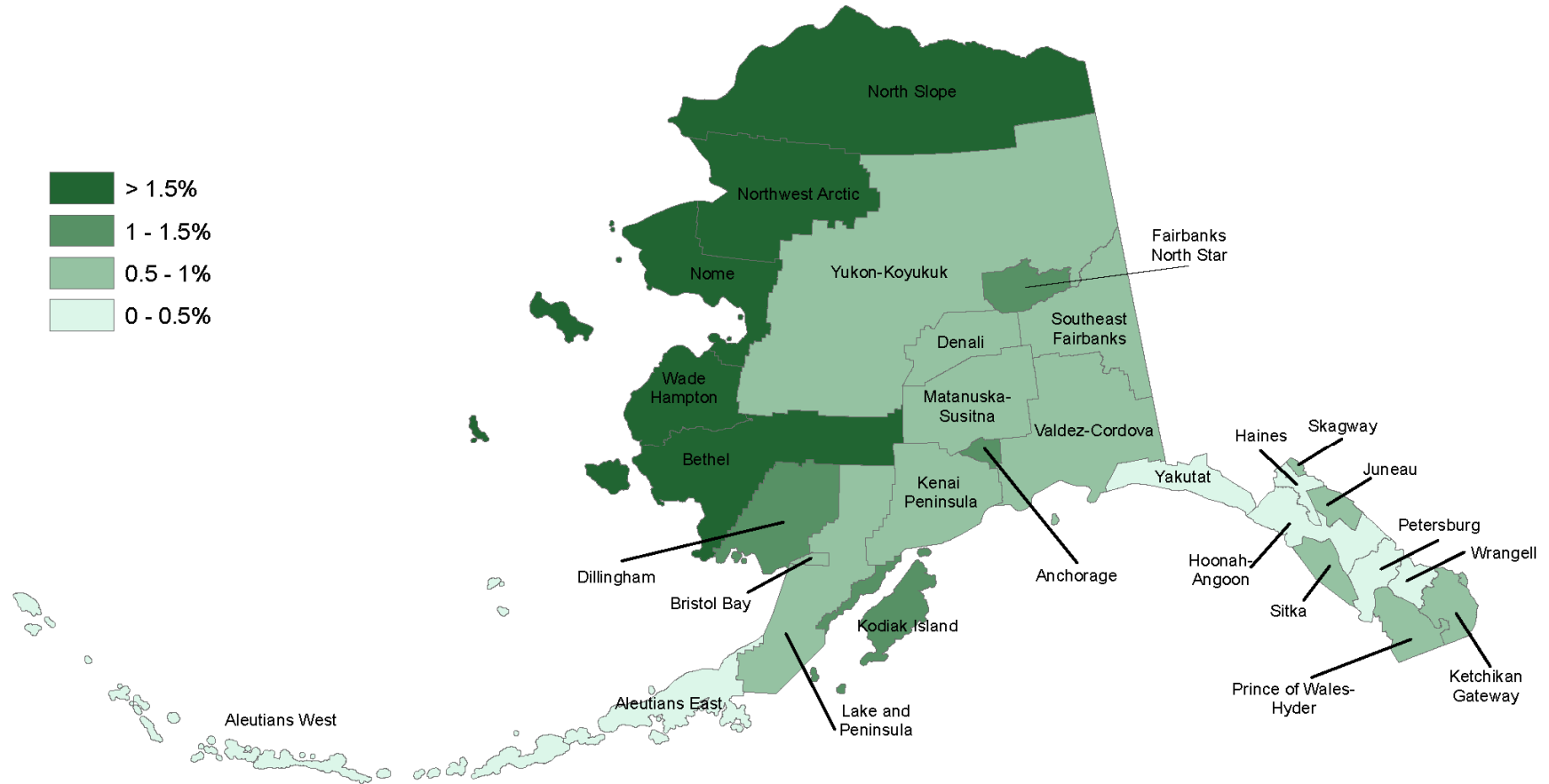
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Borough Total Population, 2010



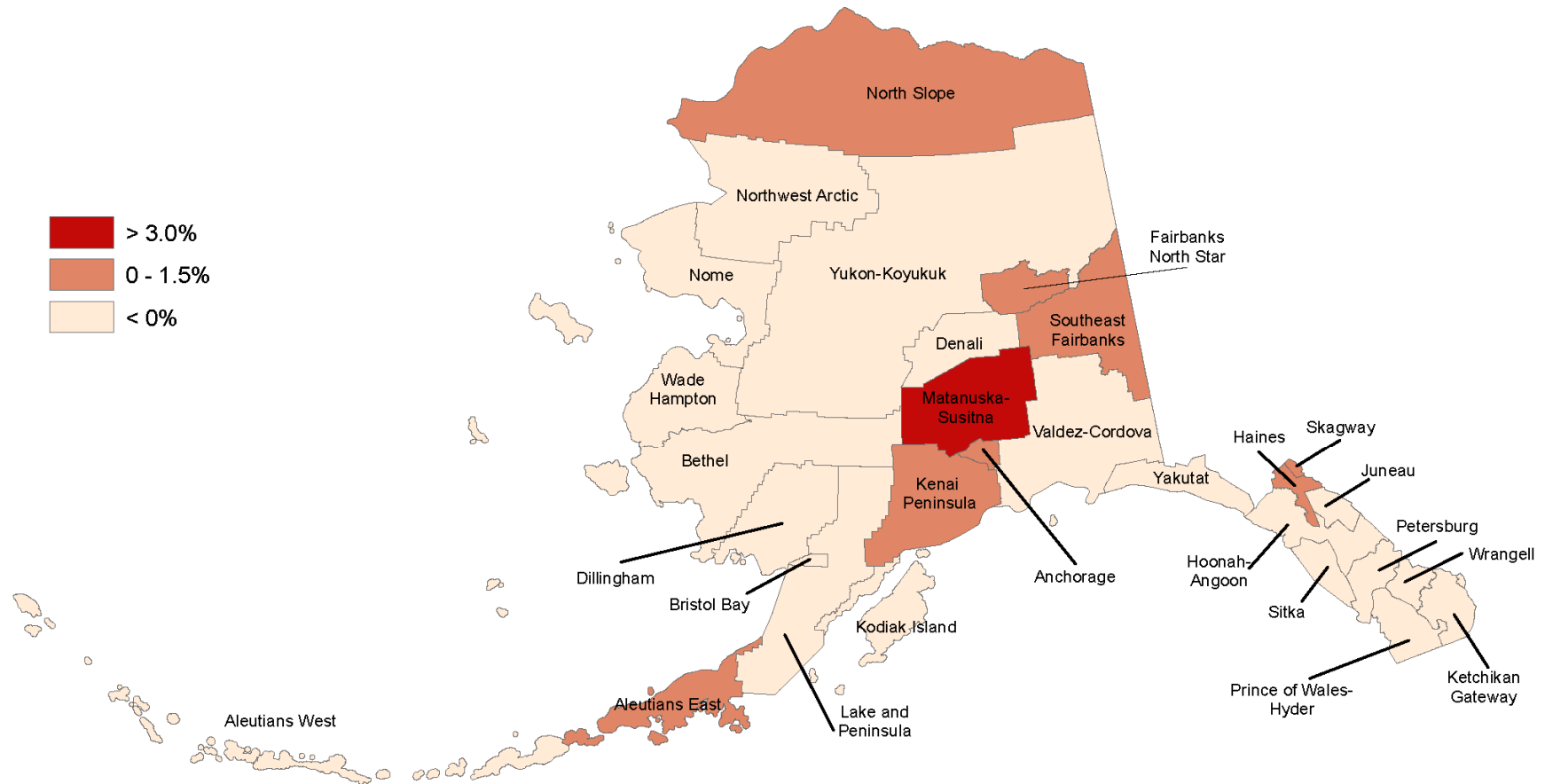
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Average Annual Rate of Natural Increase by Borough/Census Area, 2000-2010



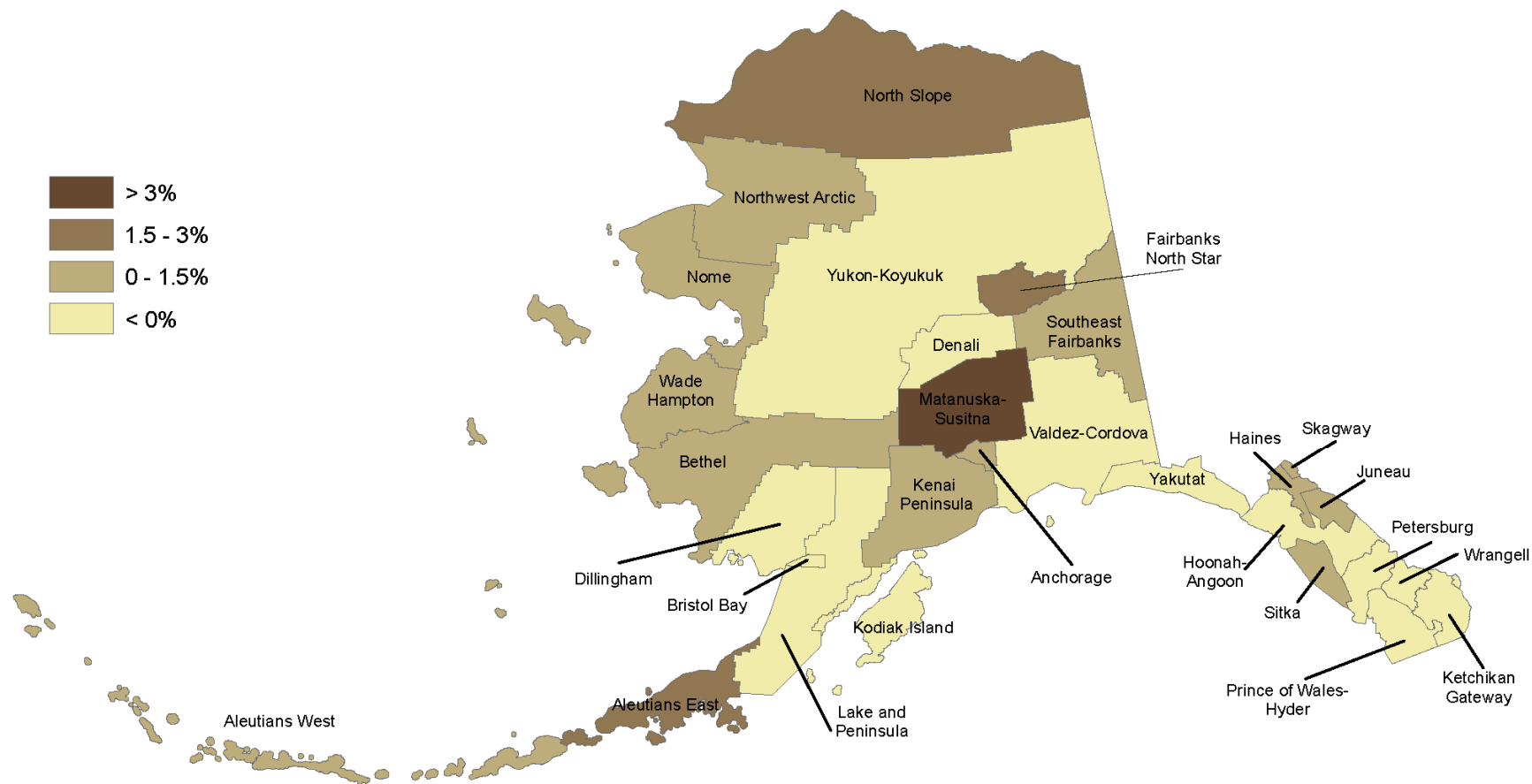
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Average Annual Rate of Net Migration by Borough/Census Area, 2000-2010



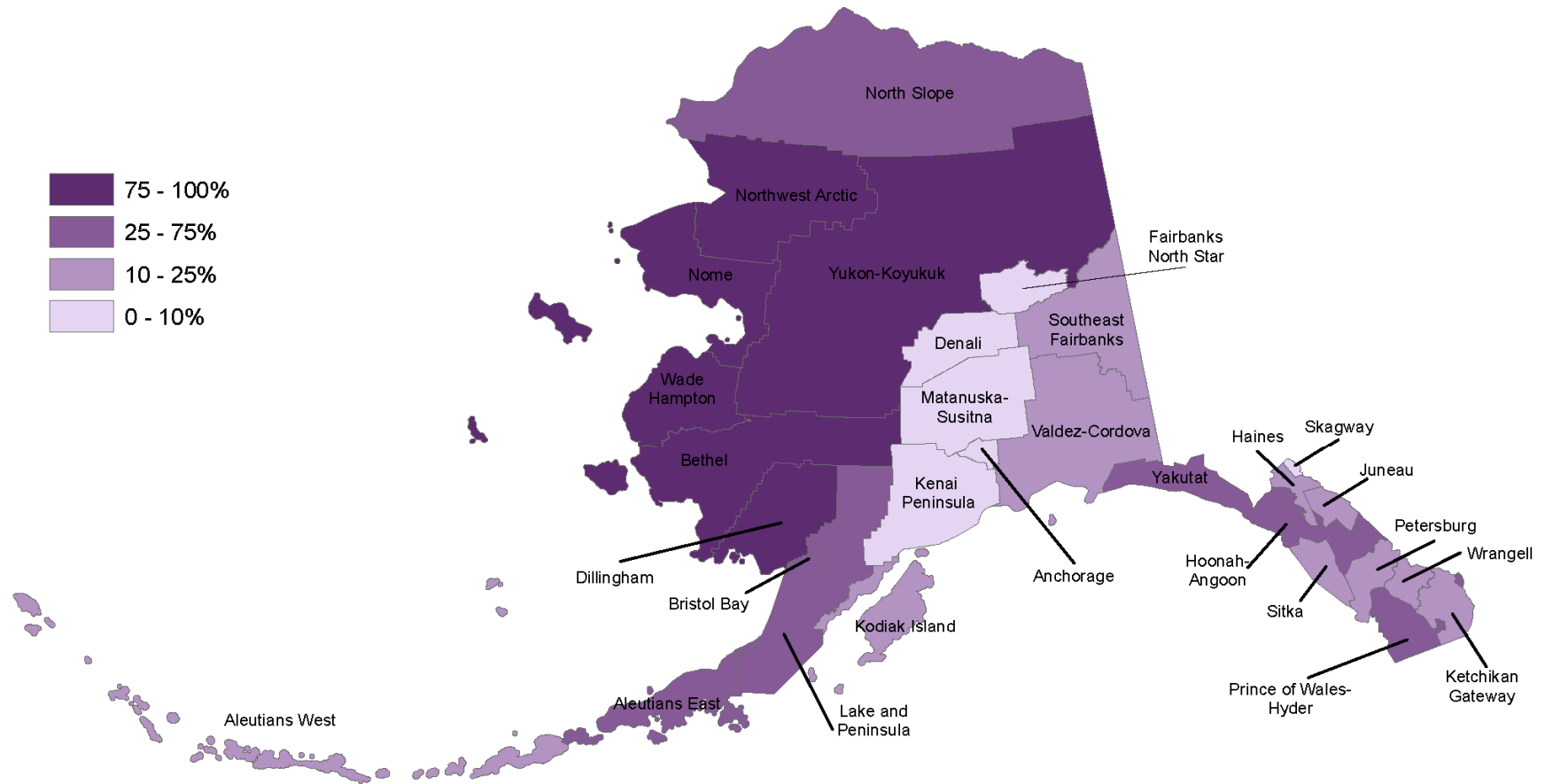
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Average Annual Growth Rate by Borough/Census Area, 2000-2010



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Proportion Alaska Native by Borough/Census Area, 2010



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Population Estimates

Thank you!

Contact: eddie.hunsinger@alaska.gov

More information:

<http://laborstats.alaska.gov/>



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Population Projections

David Howell

Alaska Department of Labor
and Workforce Development



ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

Population Projections

What will be covered

Statewide population projections.

Borough population projections.

Population Projections

What These Projections Do and Don't Offer

Do offer projected future population levels for Alaska, based on recent fertility, mortality and migration rates.

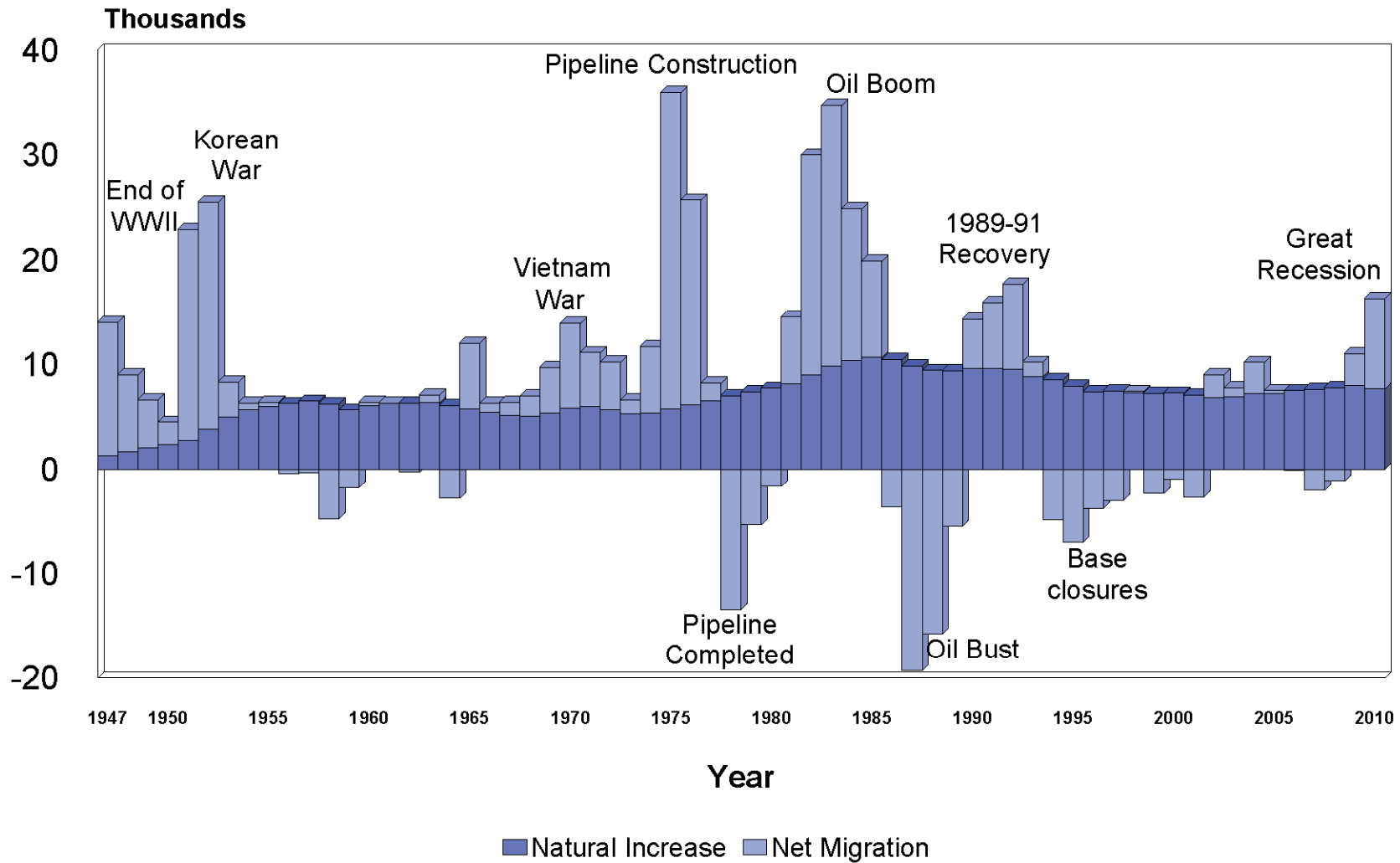
Do not offer a glimpse into the future.

Population Projections

History

A brief overview of Alaska's
population history

Components of Population Change for Alaska, 1947-2010



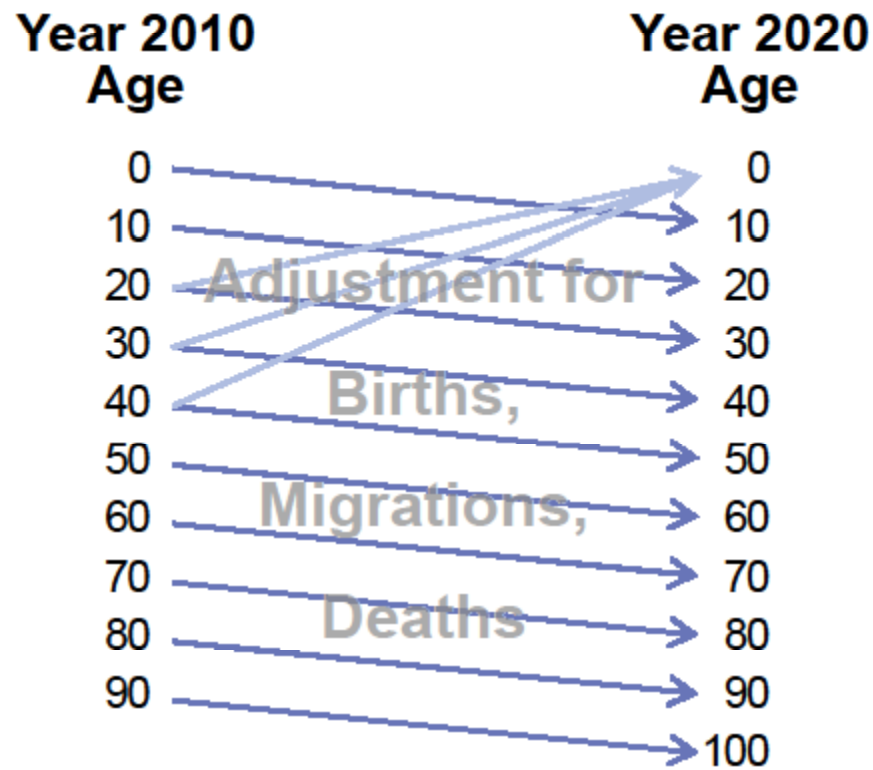
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Population Projections

Statewide Projection Methods

“Cohort Component” method
with scenarios.

The Cohort-Component Method



Population Projections

When projecting can be certain
of a few things

Ten years from now we will all be ten years older.

The chances of dying increase as we age.

The chances of having a child are higher at certain ages.

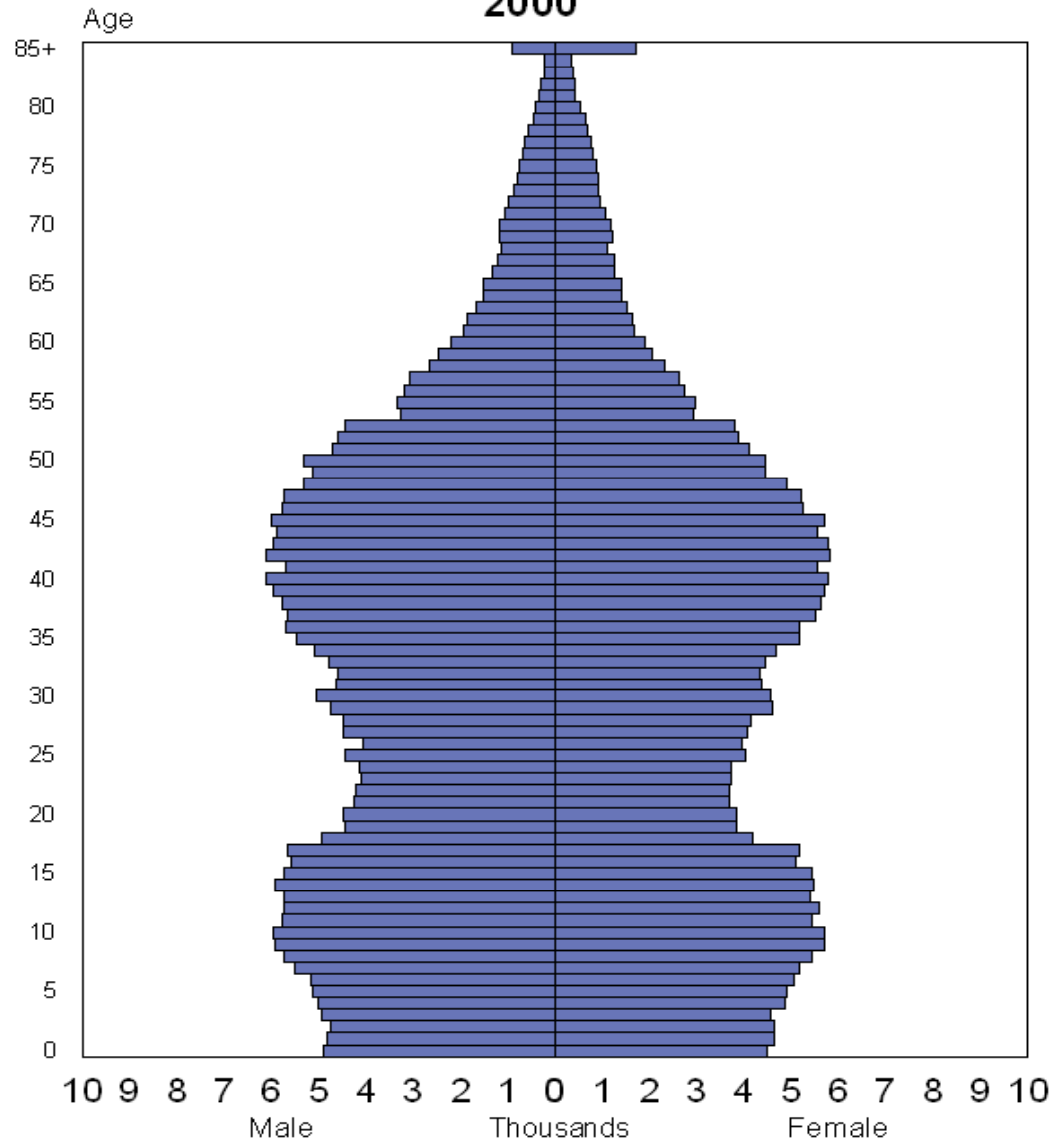
The chances of migrating are higher at certain ages.

Population Projections

Age and Aging

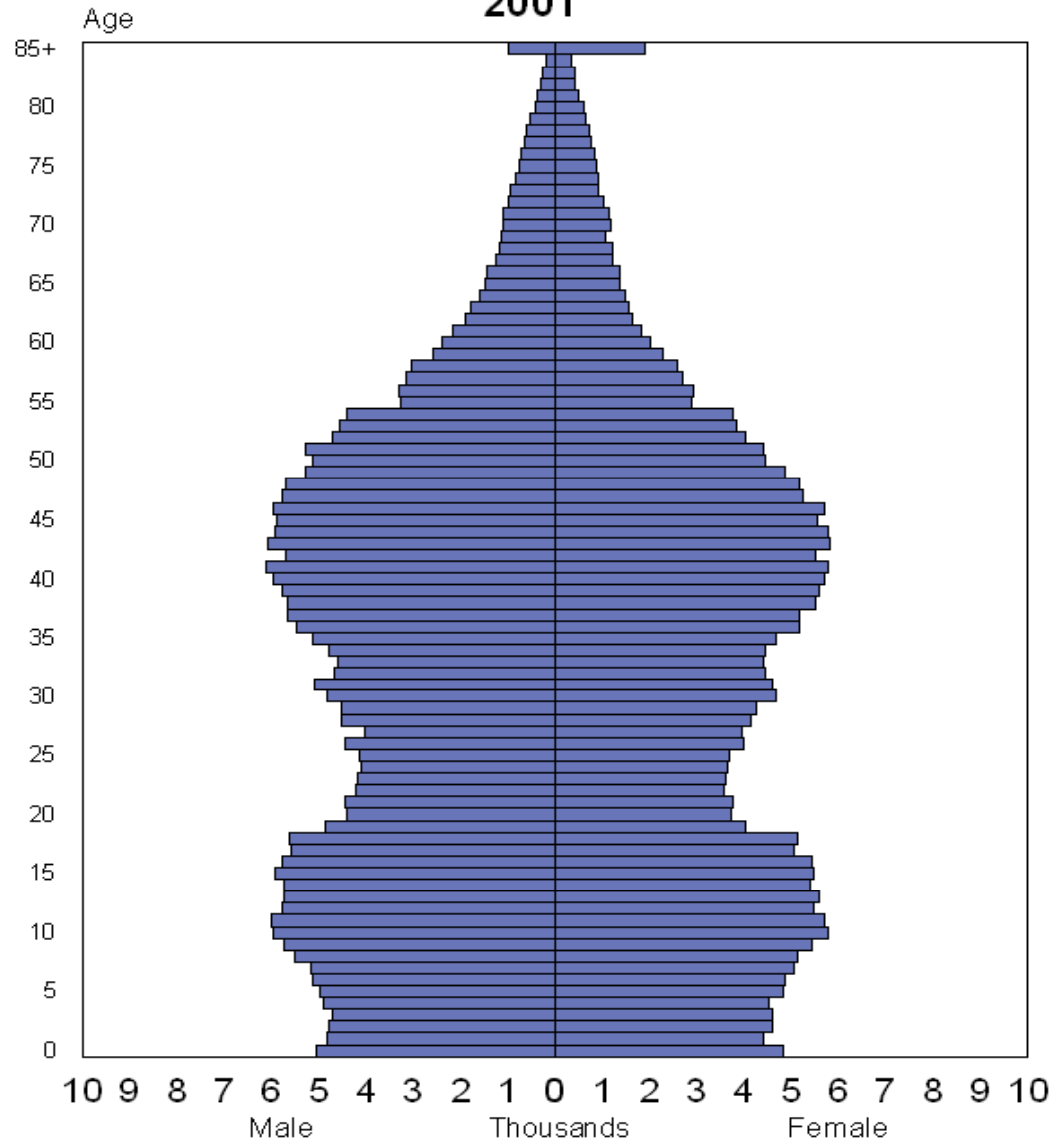
Key to understanding population change.

Estimated Alaska Population by Age and Sex 2000



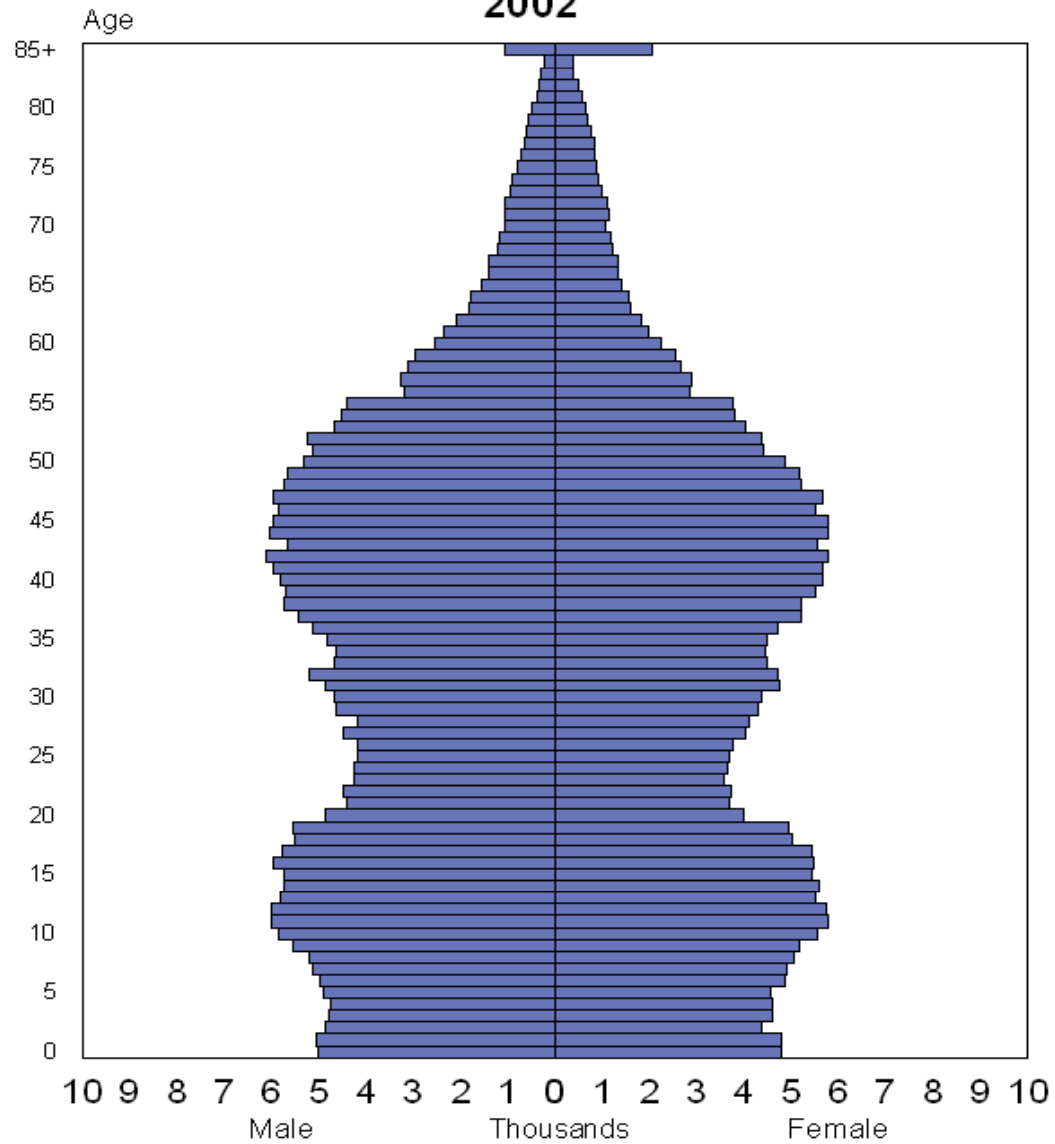
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2001



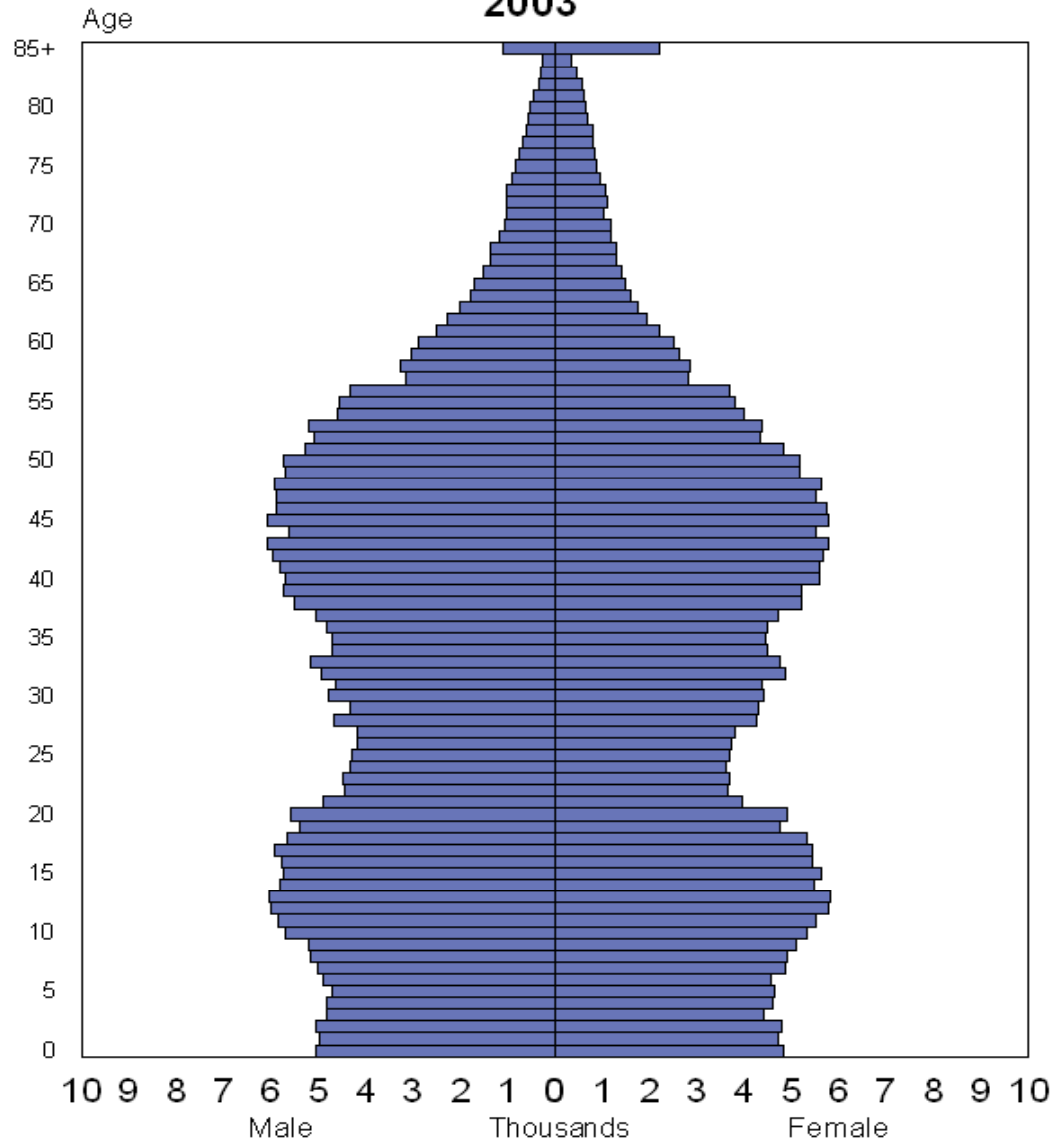
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2002



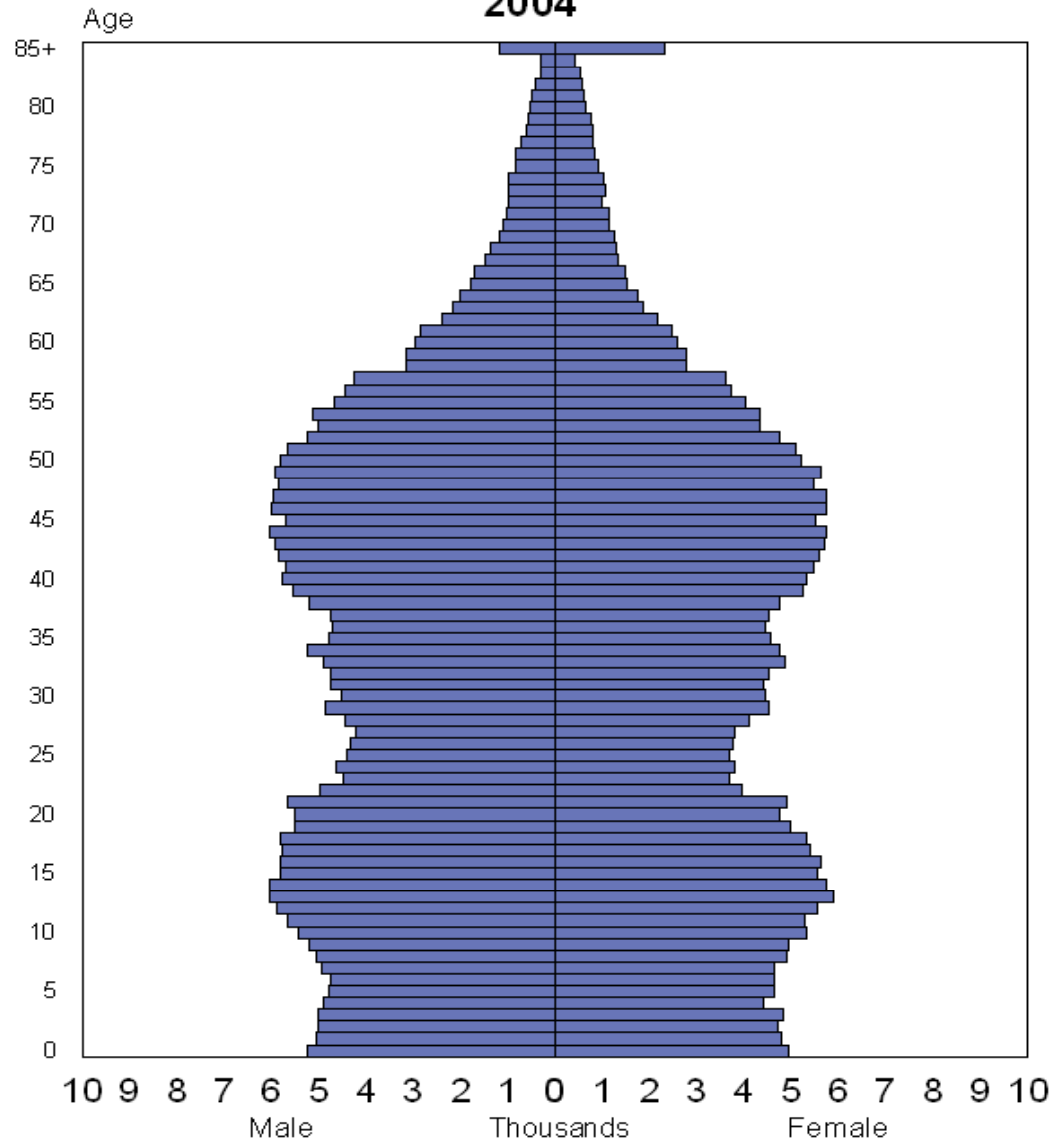
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2003



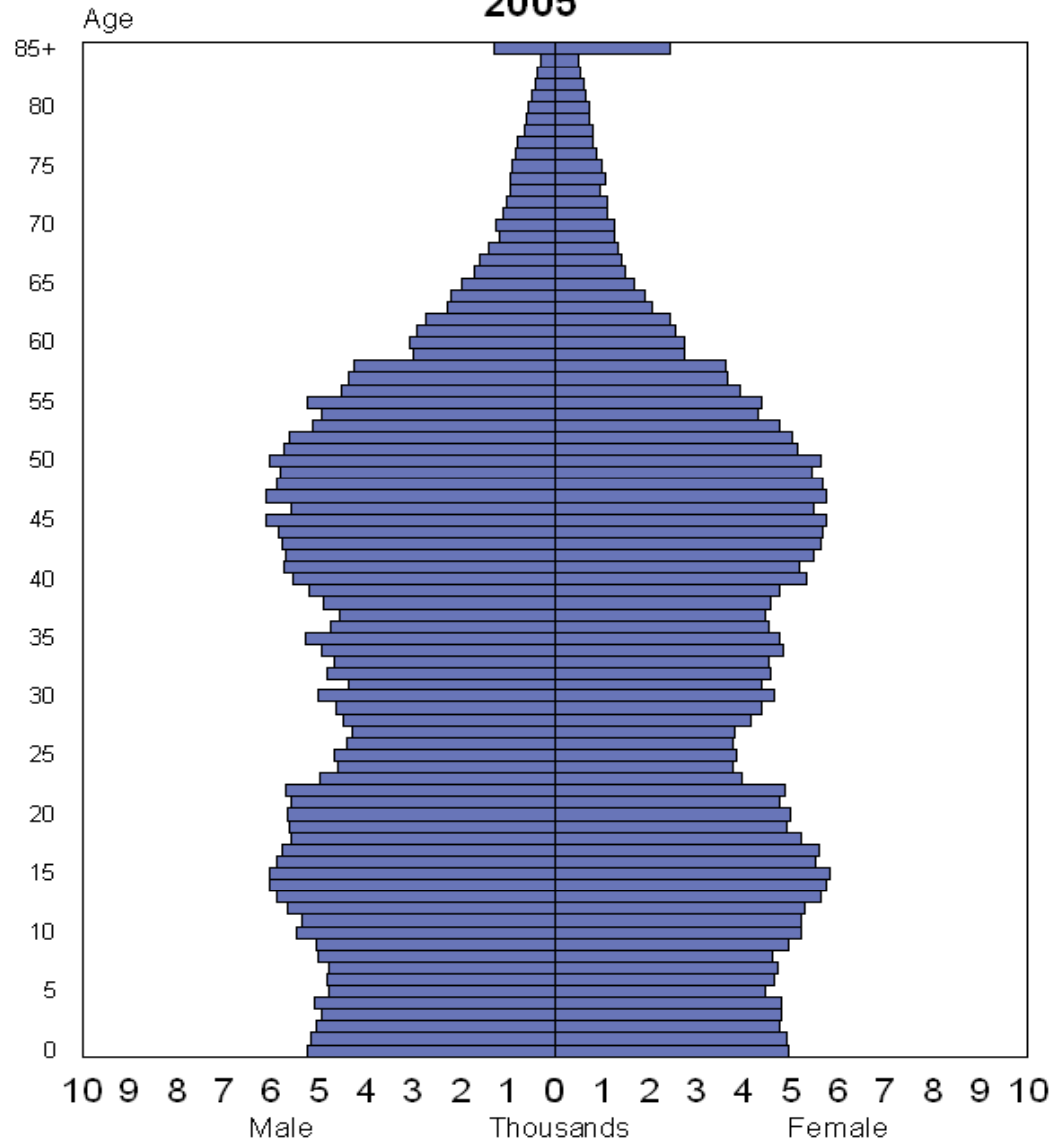
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2004



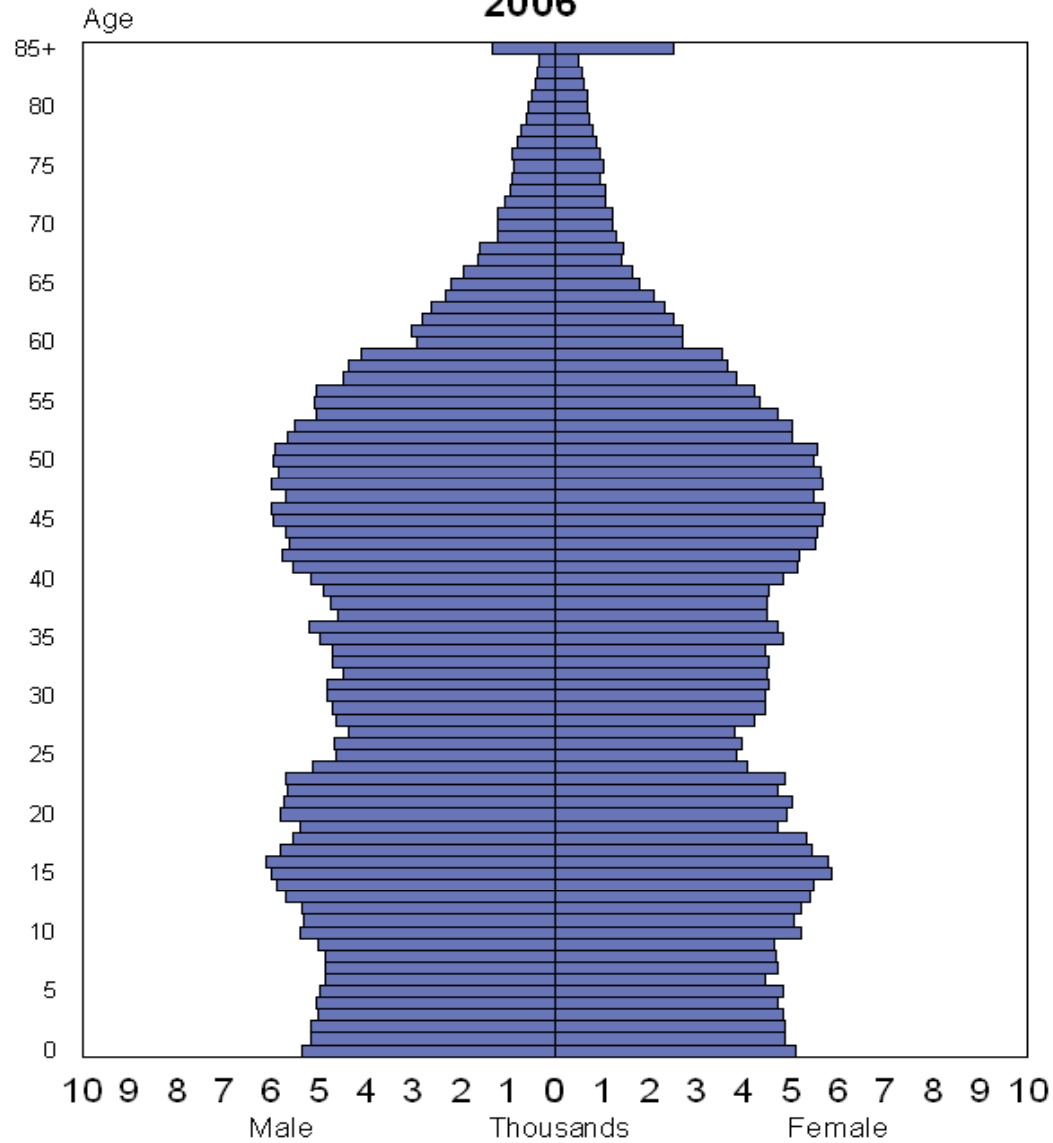
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2005



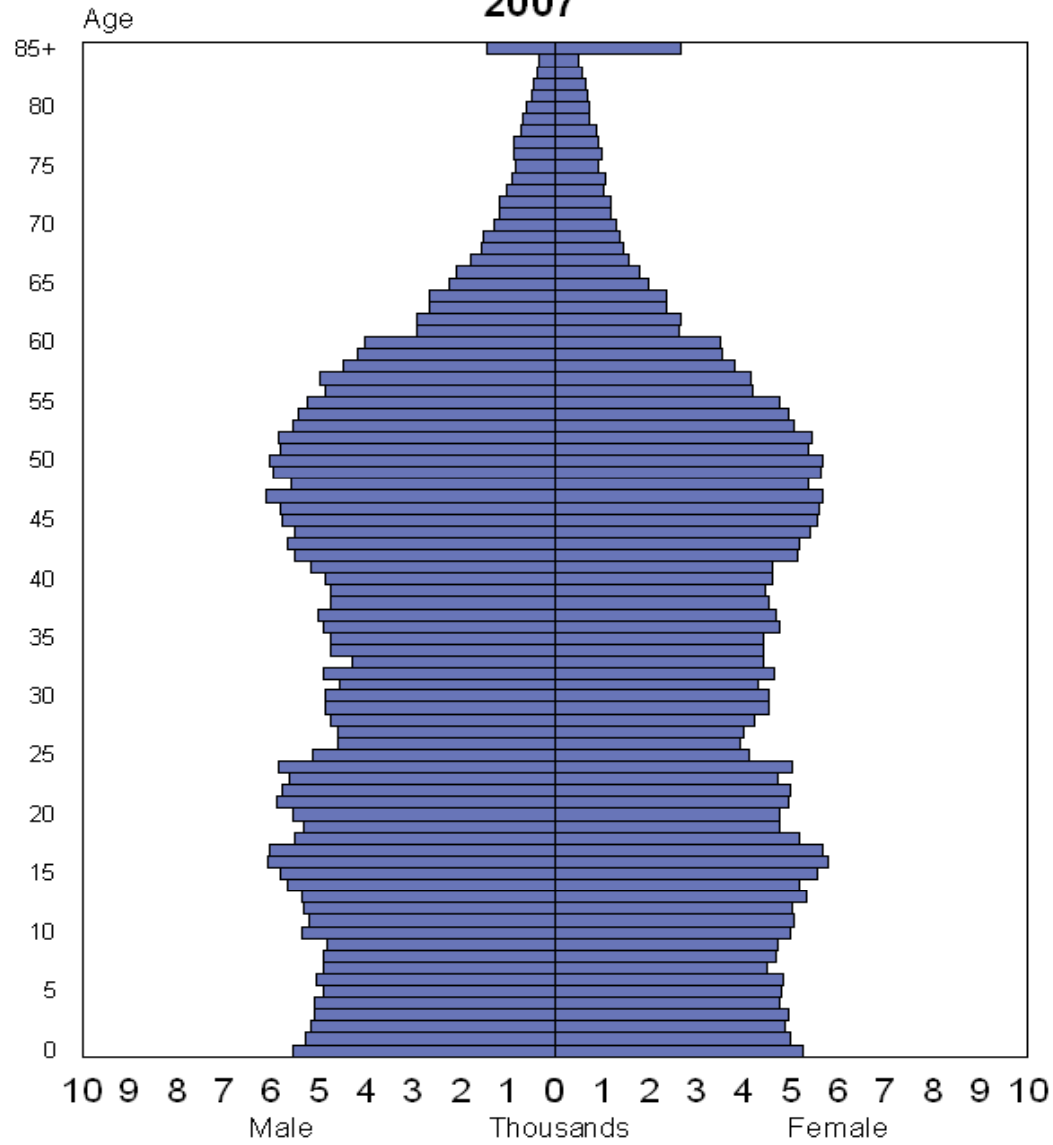
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2006



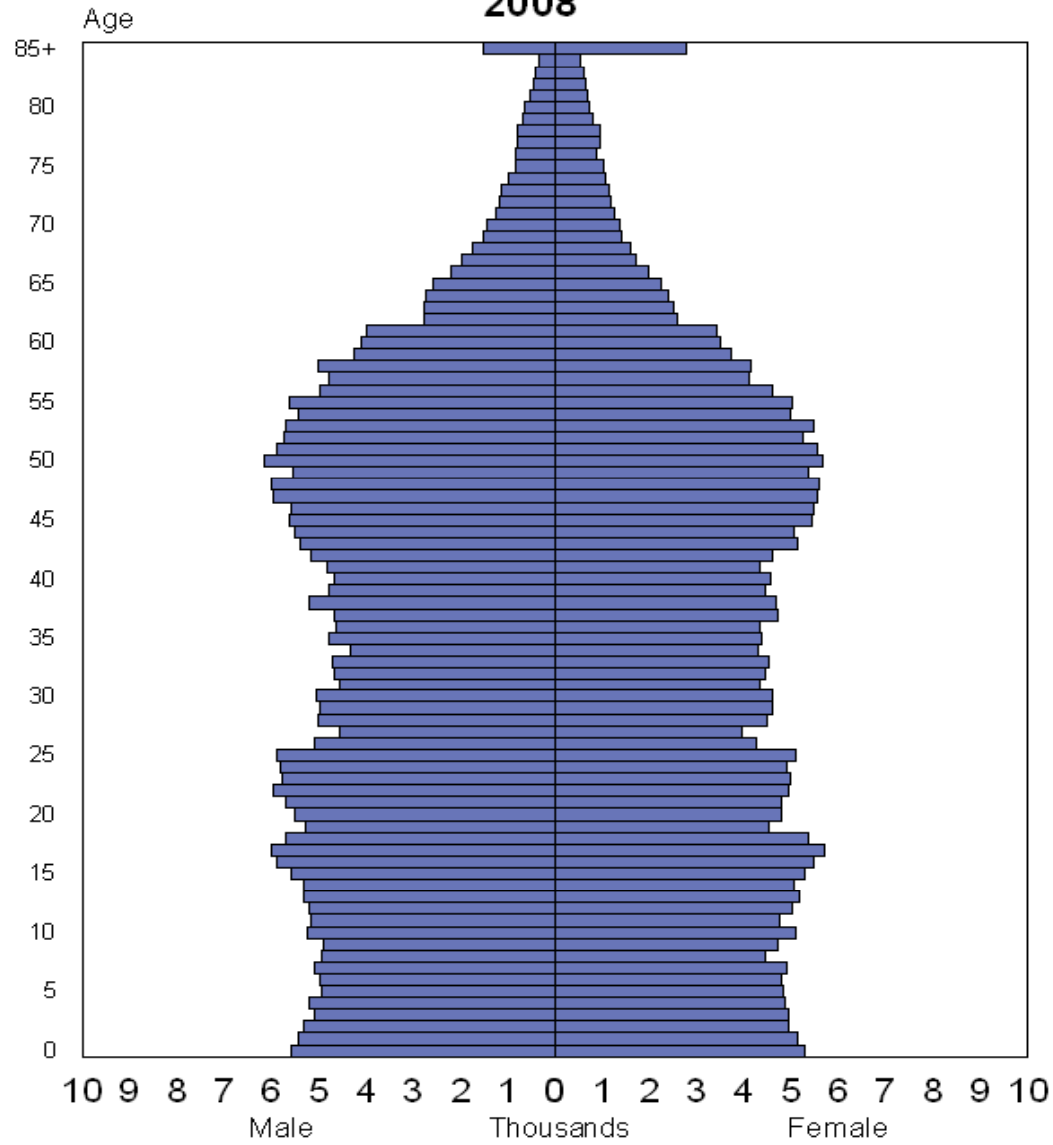
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2007



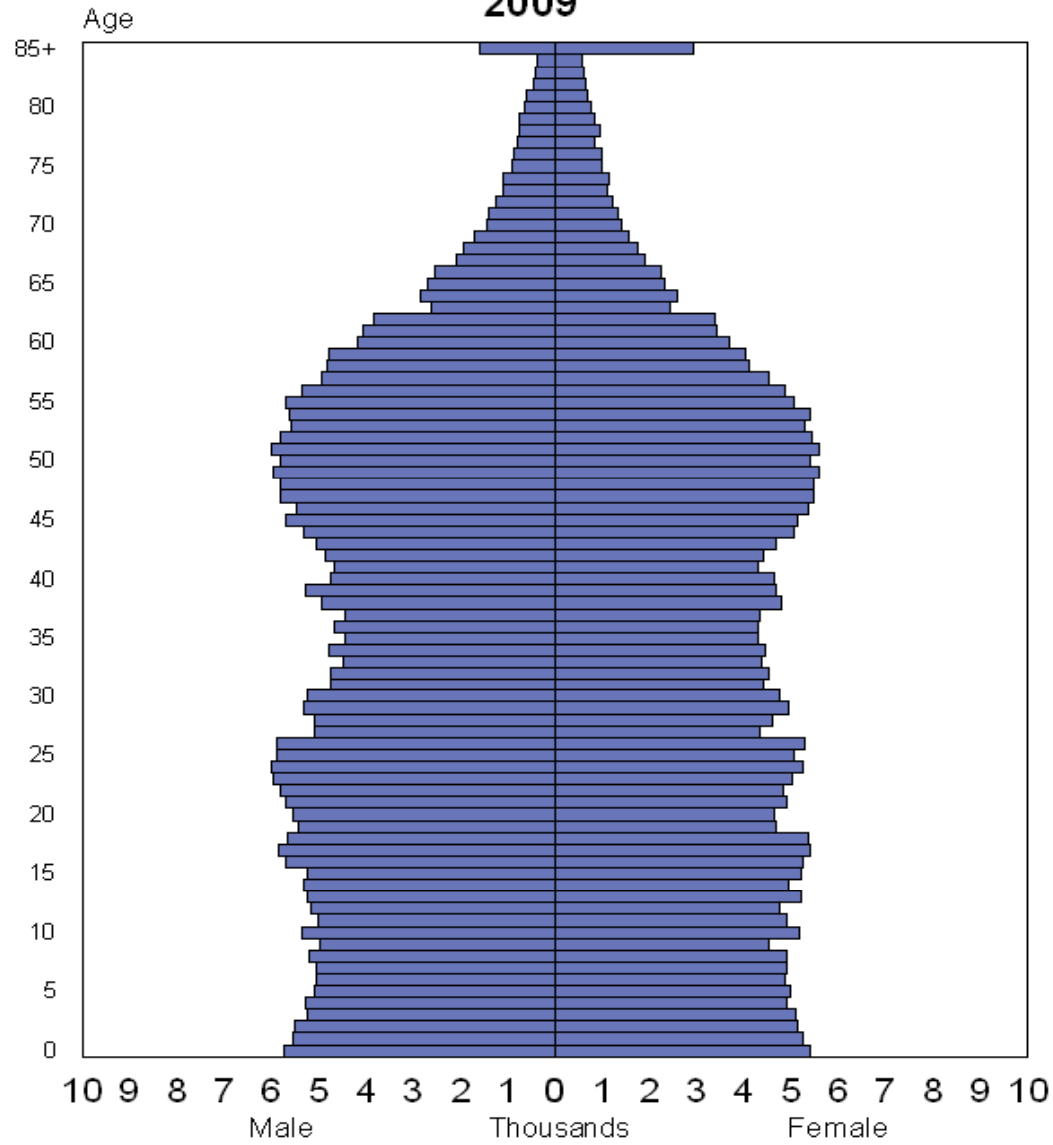
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2008



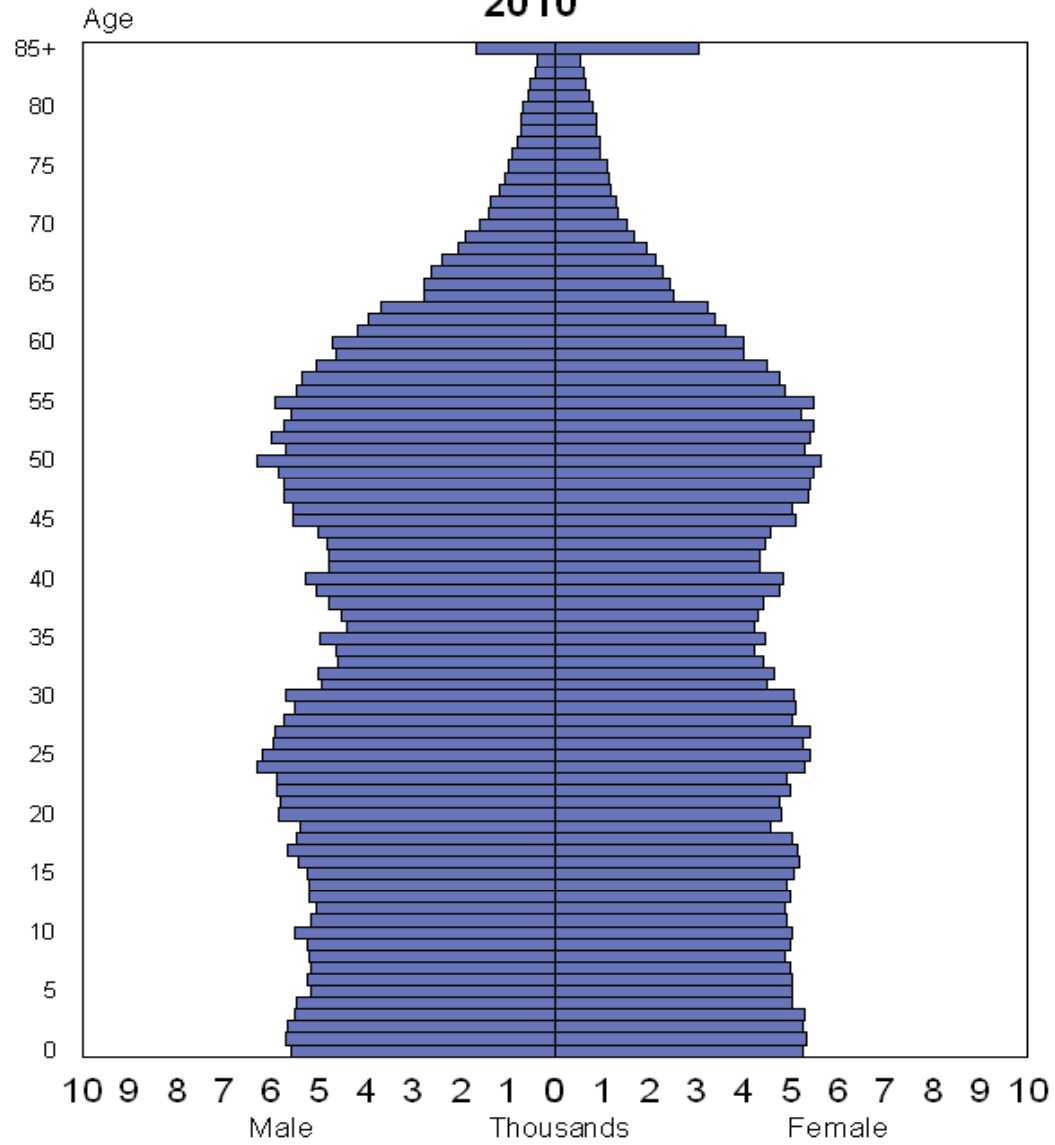
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2009



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Estimated Alaska Population by Age and Sex 2010



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

Births

Population Projections

The Total Fertility Rate (TFR)

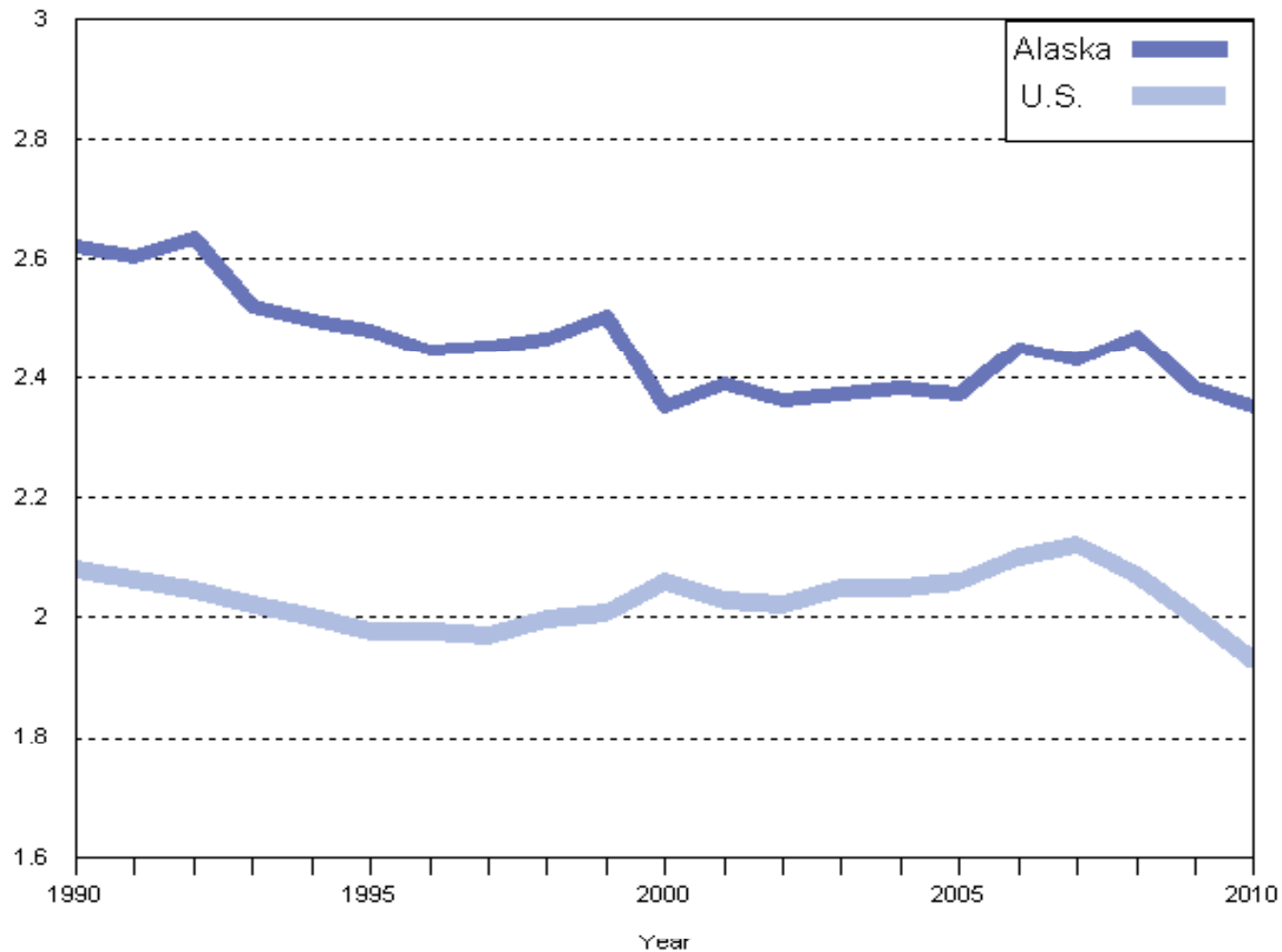
The number of children that a woman would have in her lifetime.

A very useful measure when projecting.

For the U.S., assuming no migration, the TFR needs to be at 2.1 to replace current population.

Total Fertility Rate, Alaska and the United States

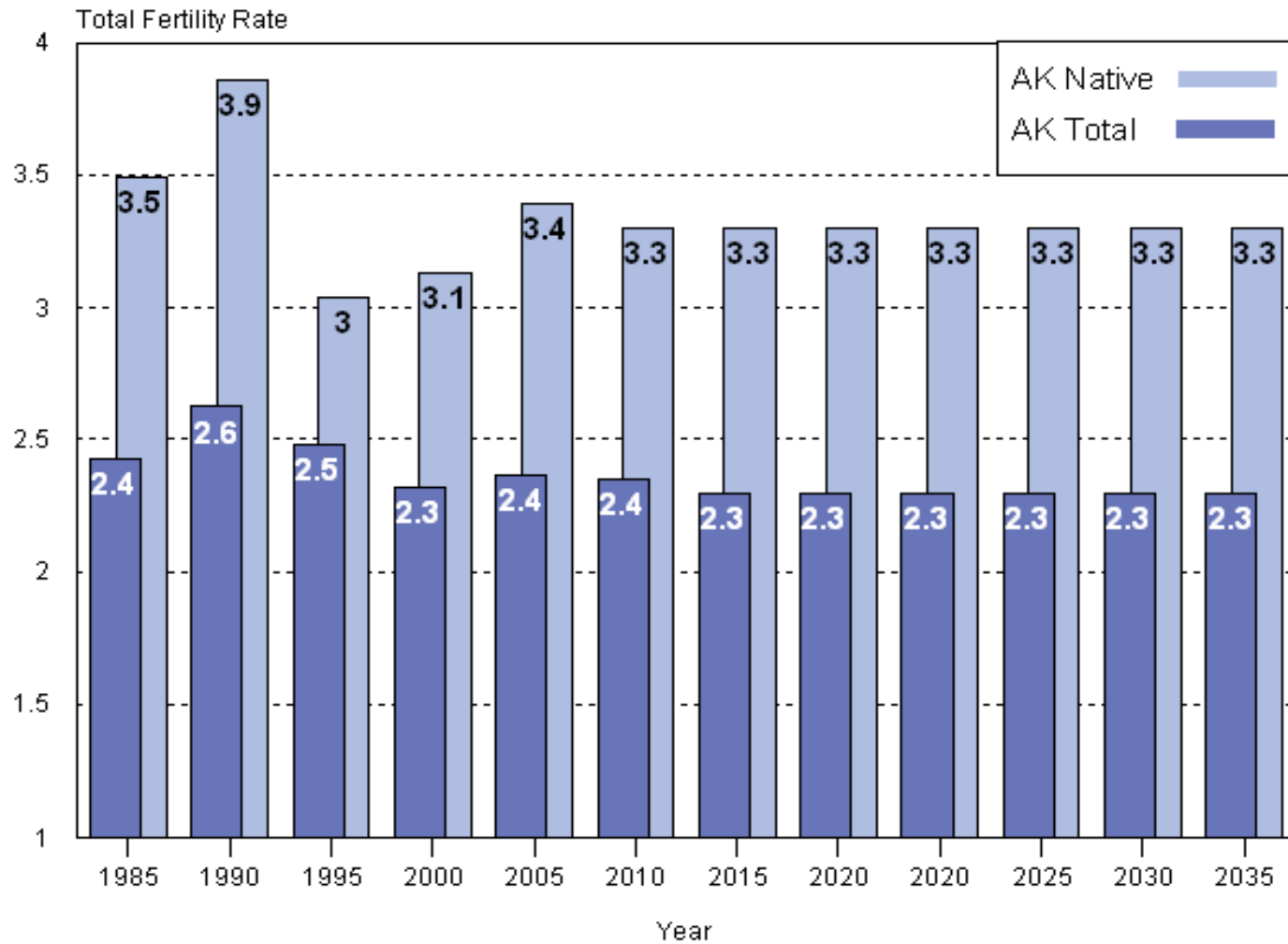
1990-2010 Estimates



Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section and U.S. National Center for Health Statistics

Total Fertility Rate, Alaska Native and Alaska Total

1985-2010 Point Estimates, 2015-2035 Projections



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

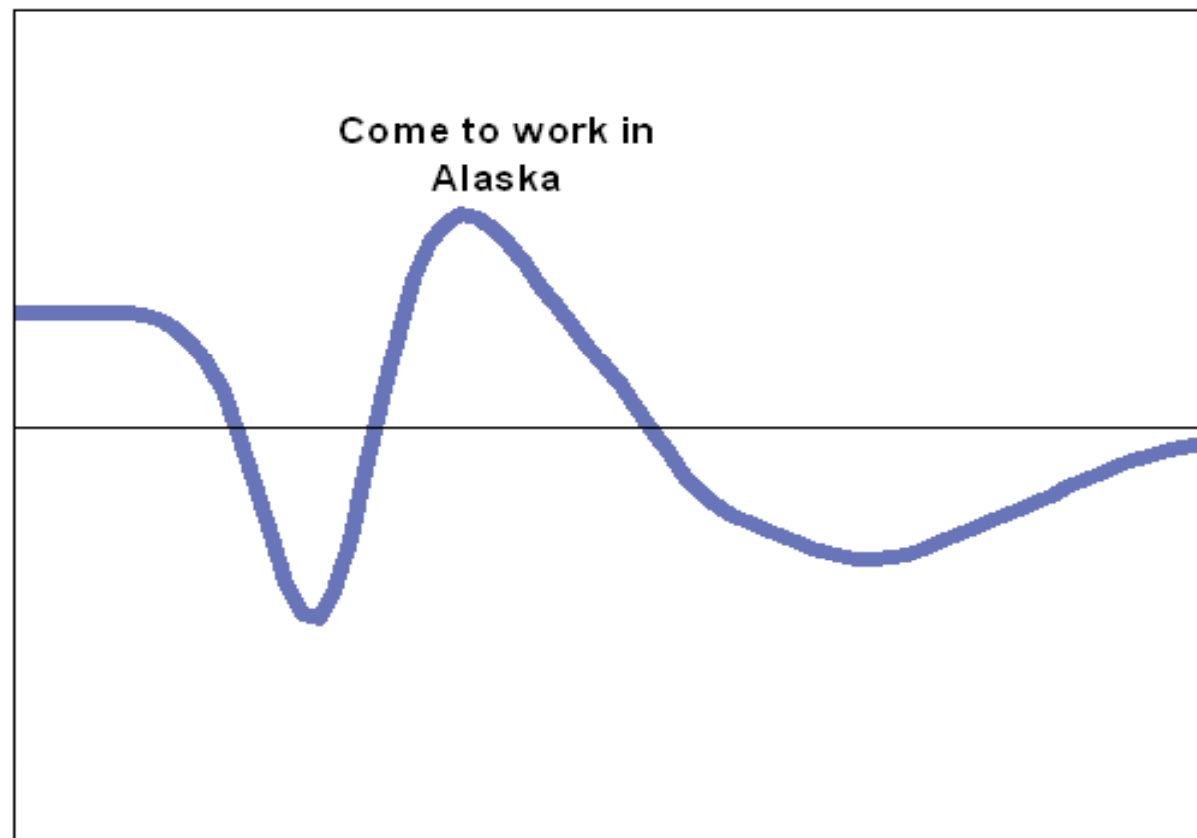
Migration

Population Projections

The Net Migration Ratio

Gives the annual population change by migration, as a fraction of the total population.

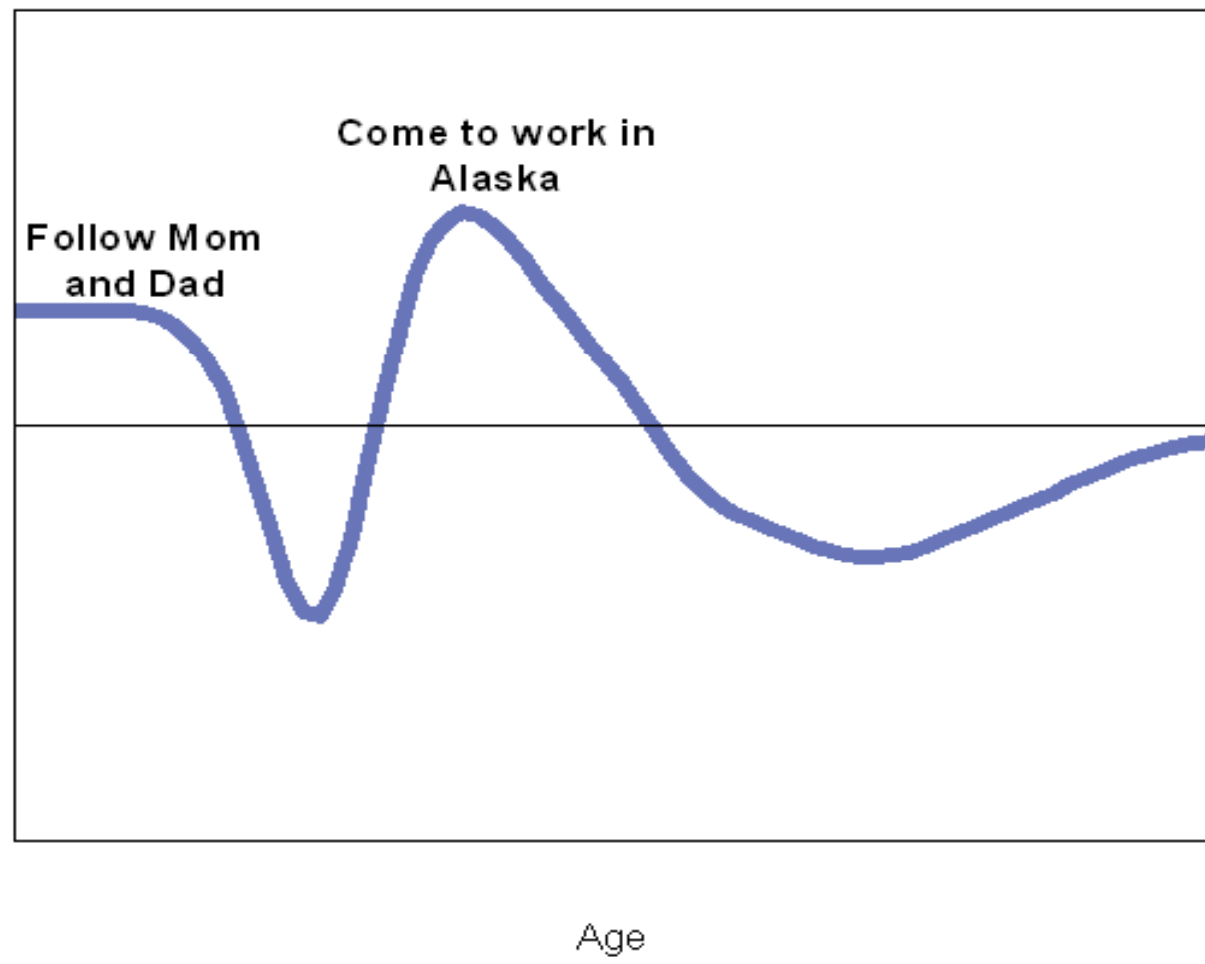
Net Migration by Age Alaska, Stylized



Age

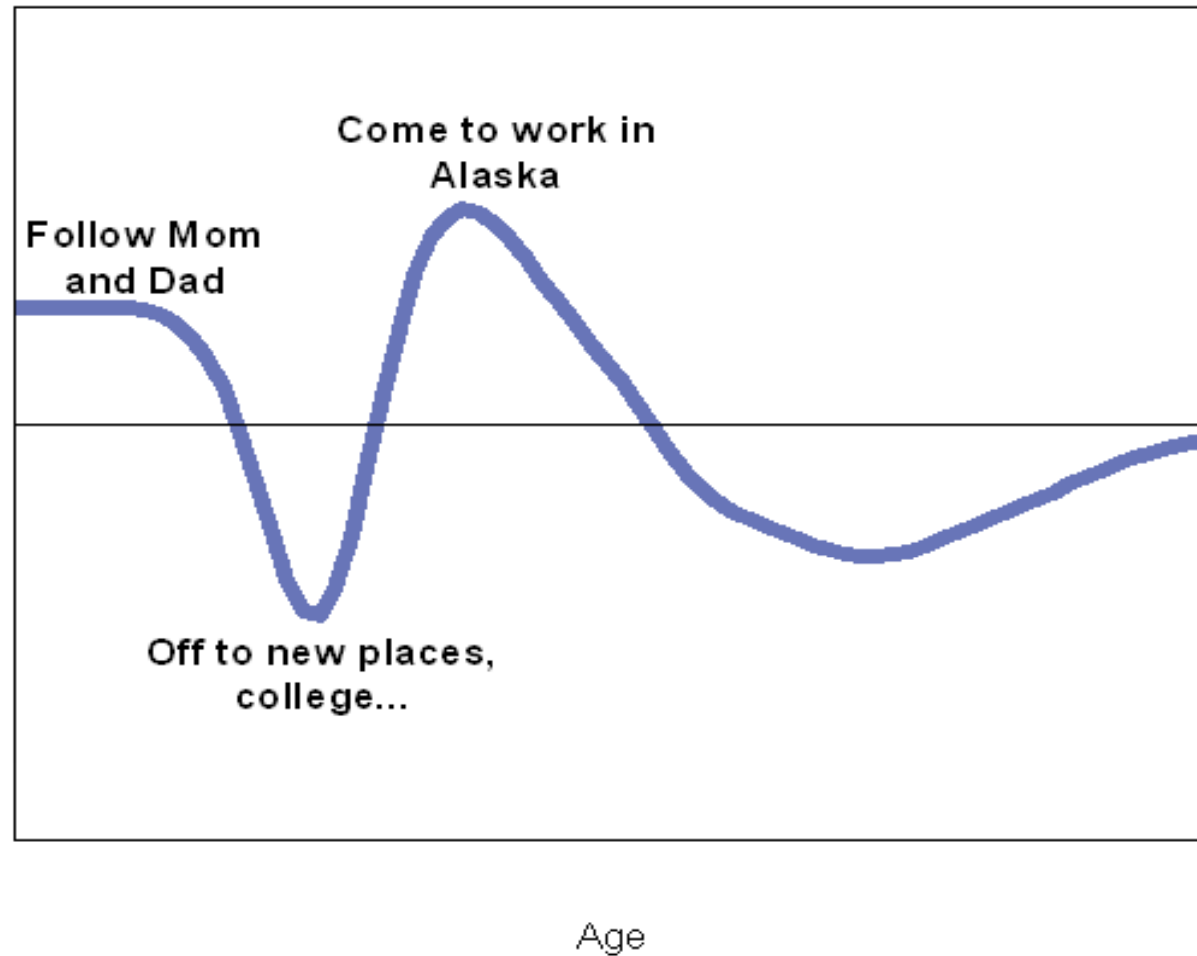
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Net Migration by Age Alaska, Stylized



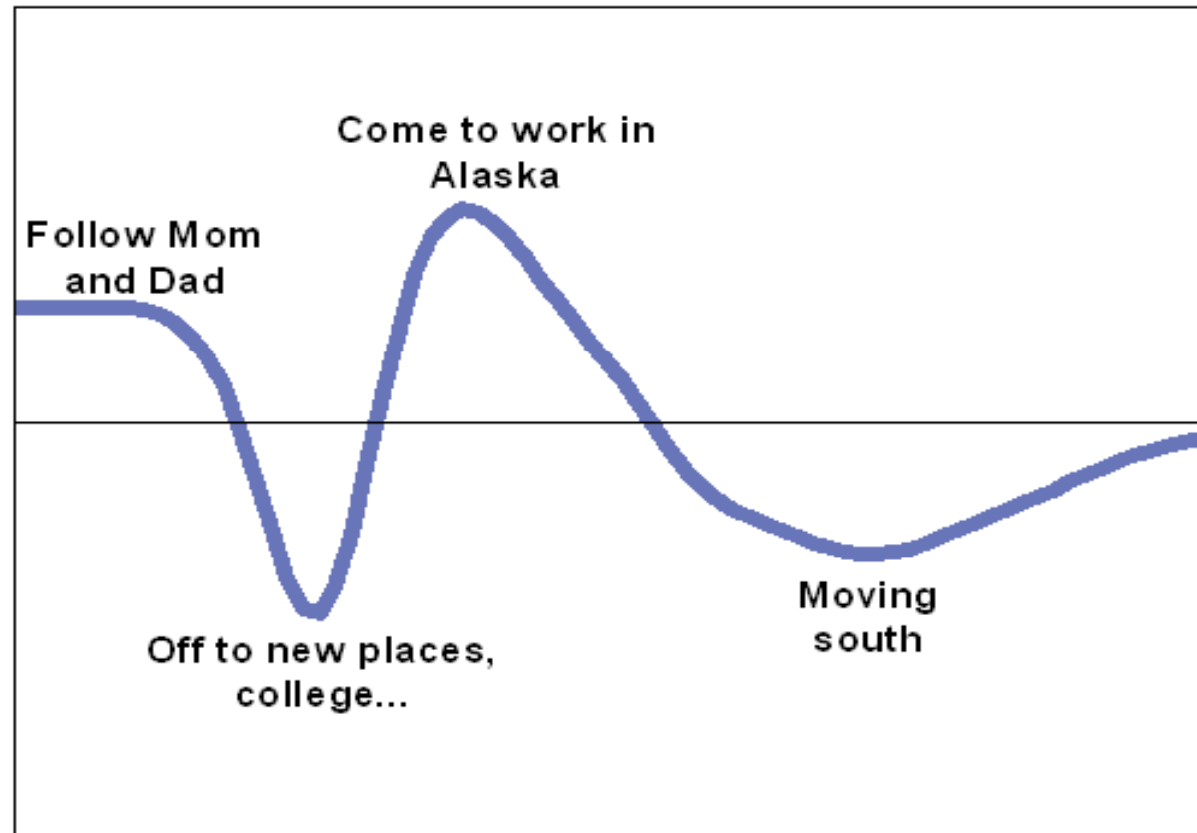
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Net Migration by Age Alaska, Stylized



Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Net Migration by Age Alaska, Stylized

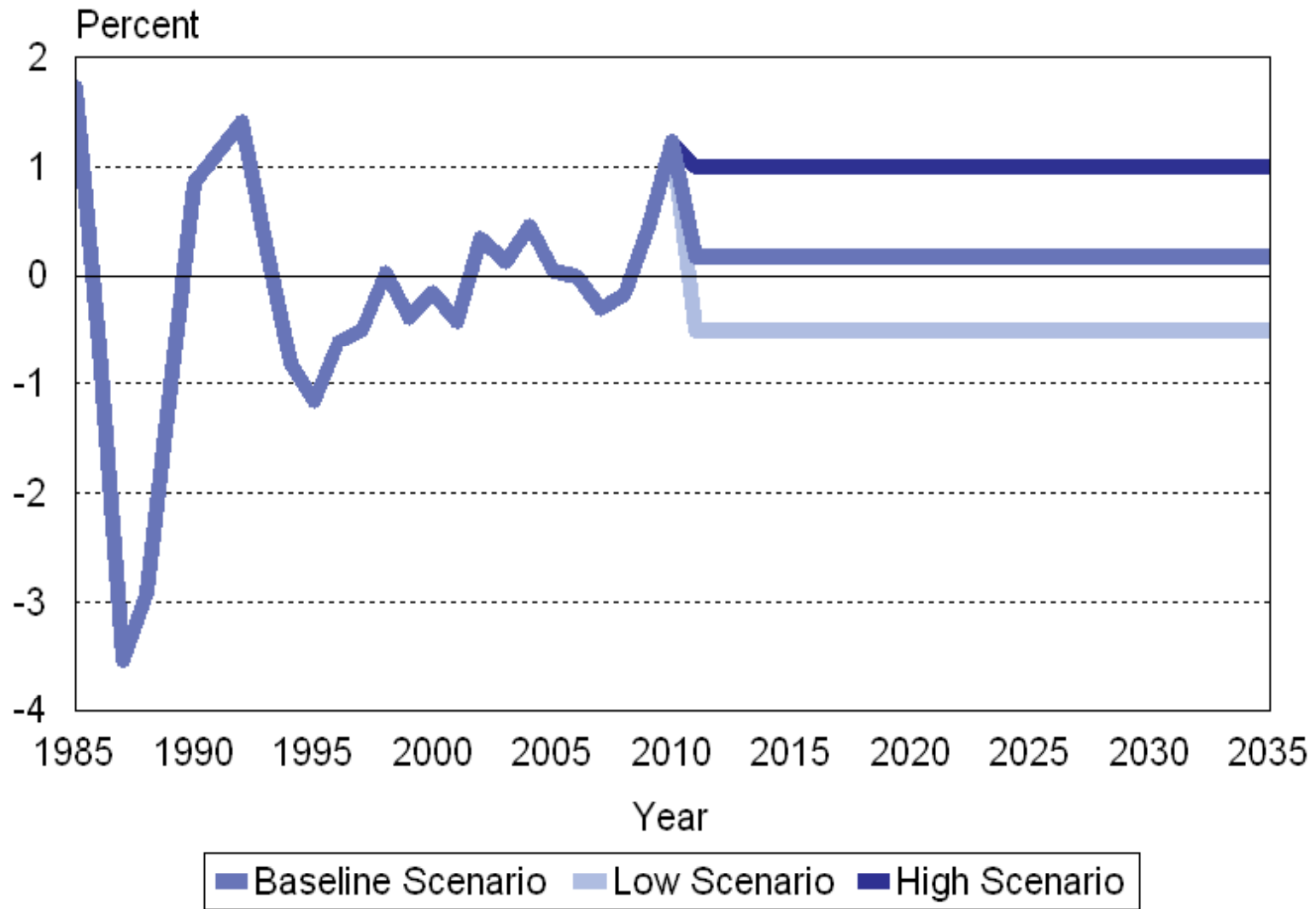


Age

Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Net Migration Ratio

1985-2010 Estimated, 2011-2035 Projected



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

Mortality

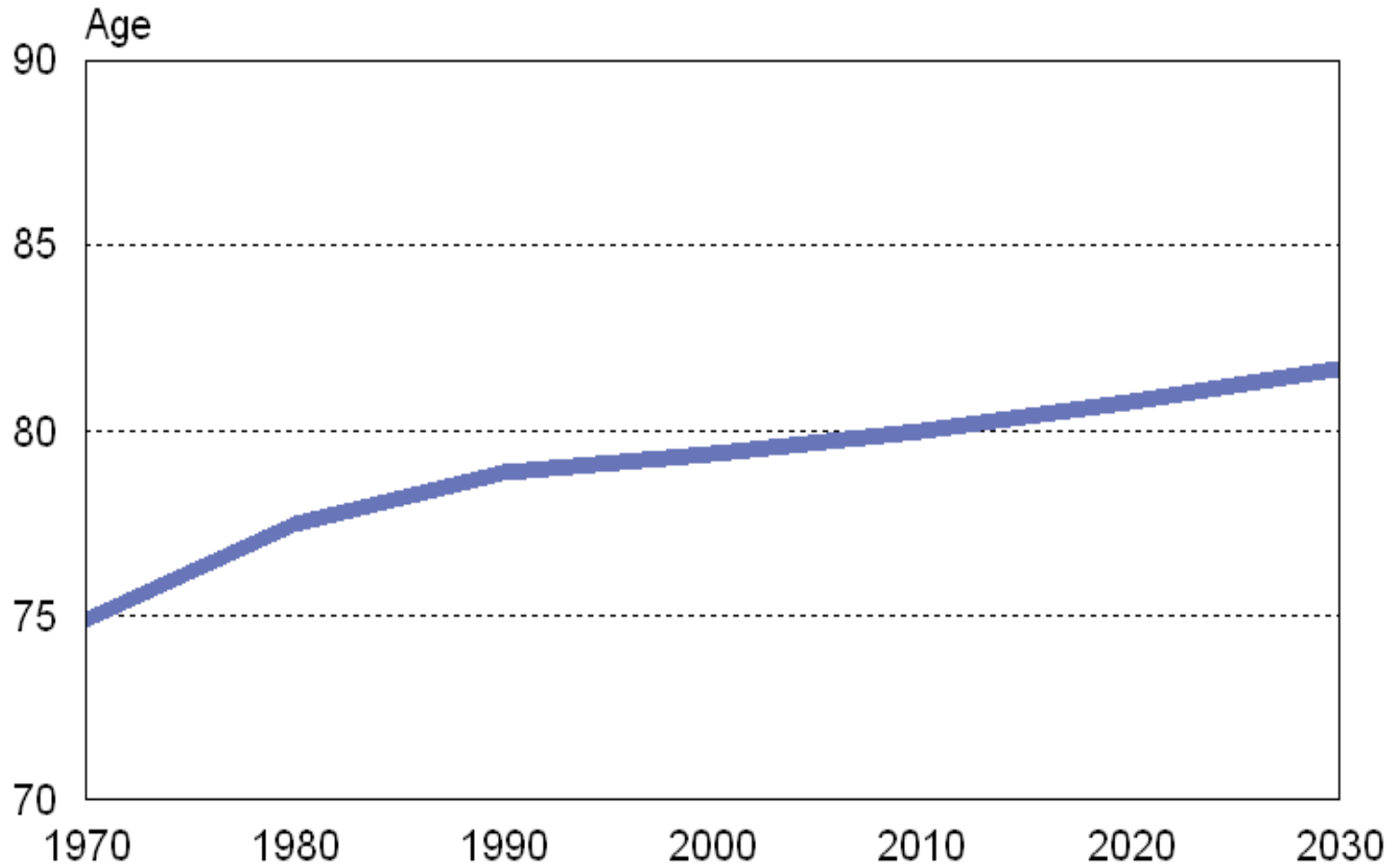
Population Projections

Life Expectancy

The expected length of life.

U.S. Female Life Expectancy

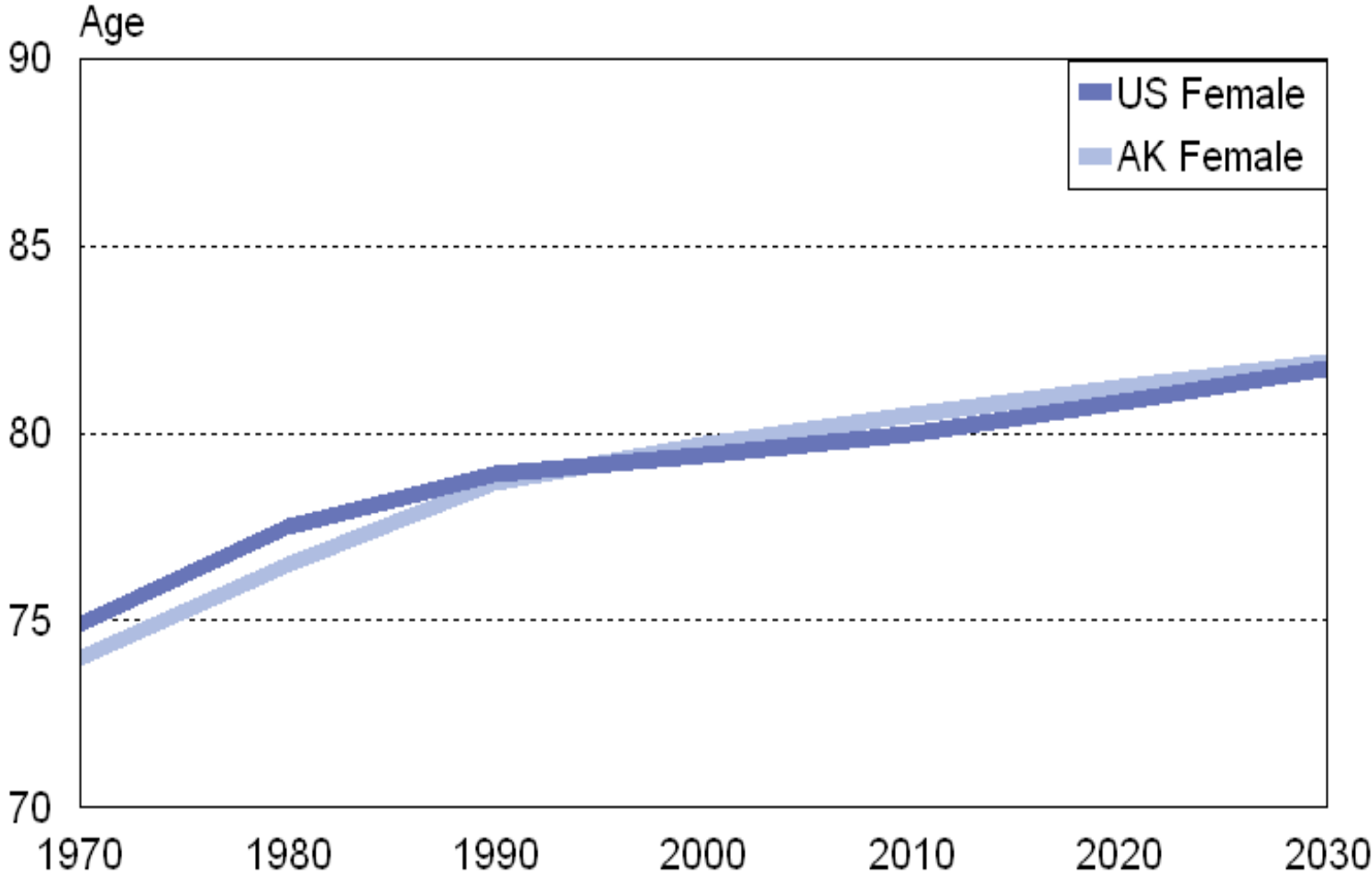
1970-2010 Estimated, 2011-2030 Projected



Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section and U.S. National Center for Health Statistics

Alaska and U.S. Female Life Expectancy

1970-2010 Estimated, 2011-2035 Projected



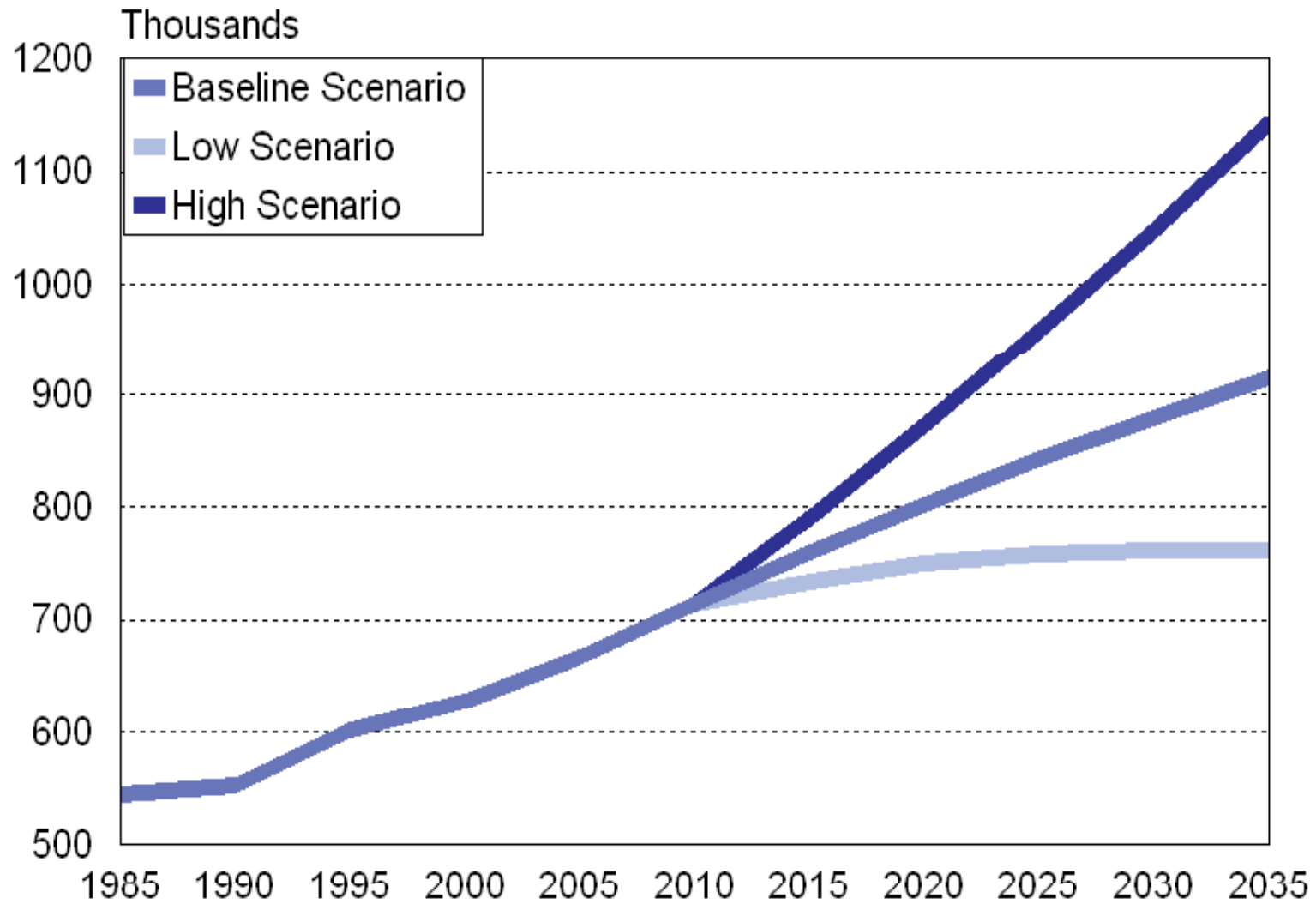
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section and U.S. National Center for Health Statistics

Population Projections

Statewide Results

Alaska Total Population

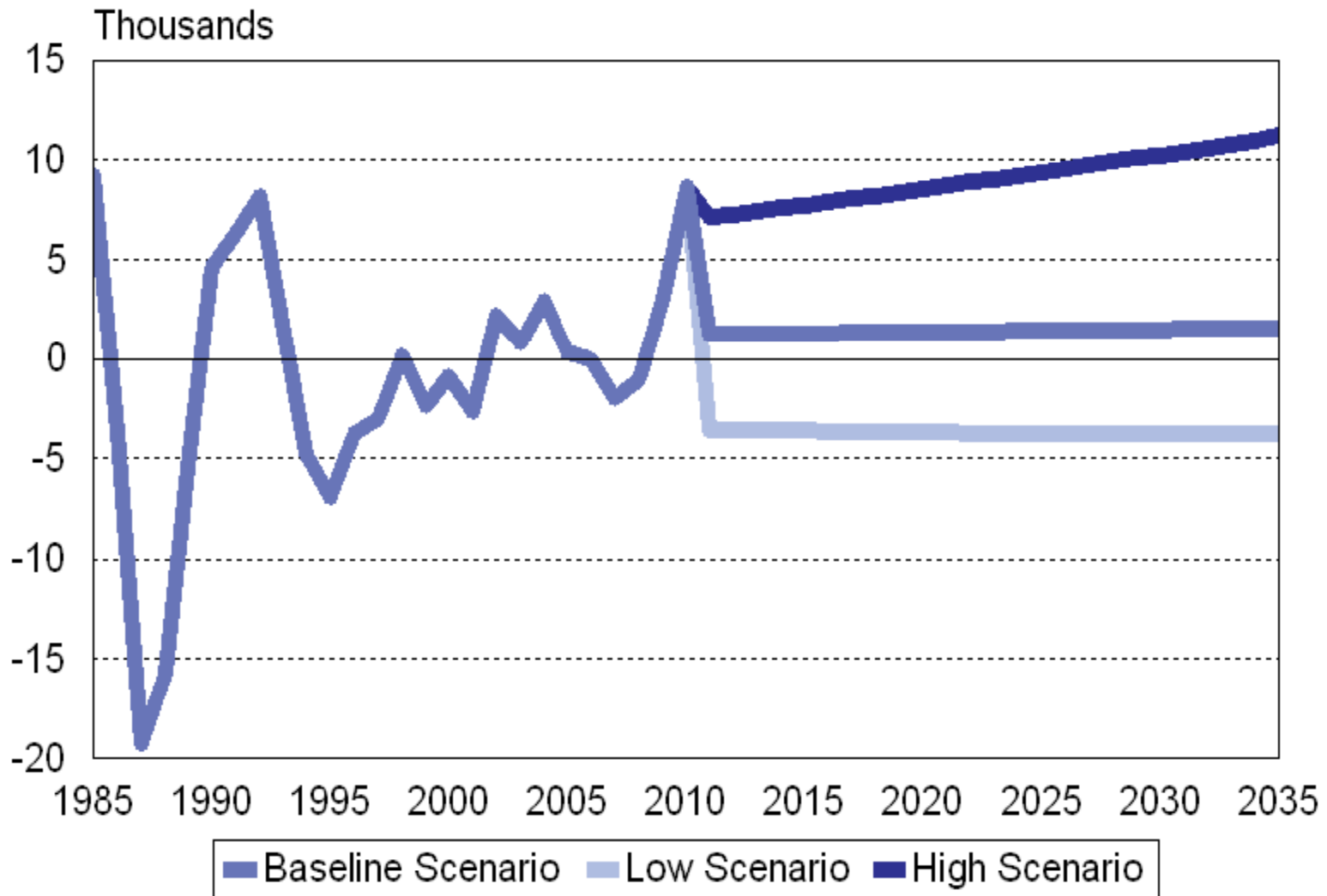
1985-2010 Estimated, 2011-2035 Projected



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Annual Net Migrants

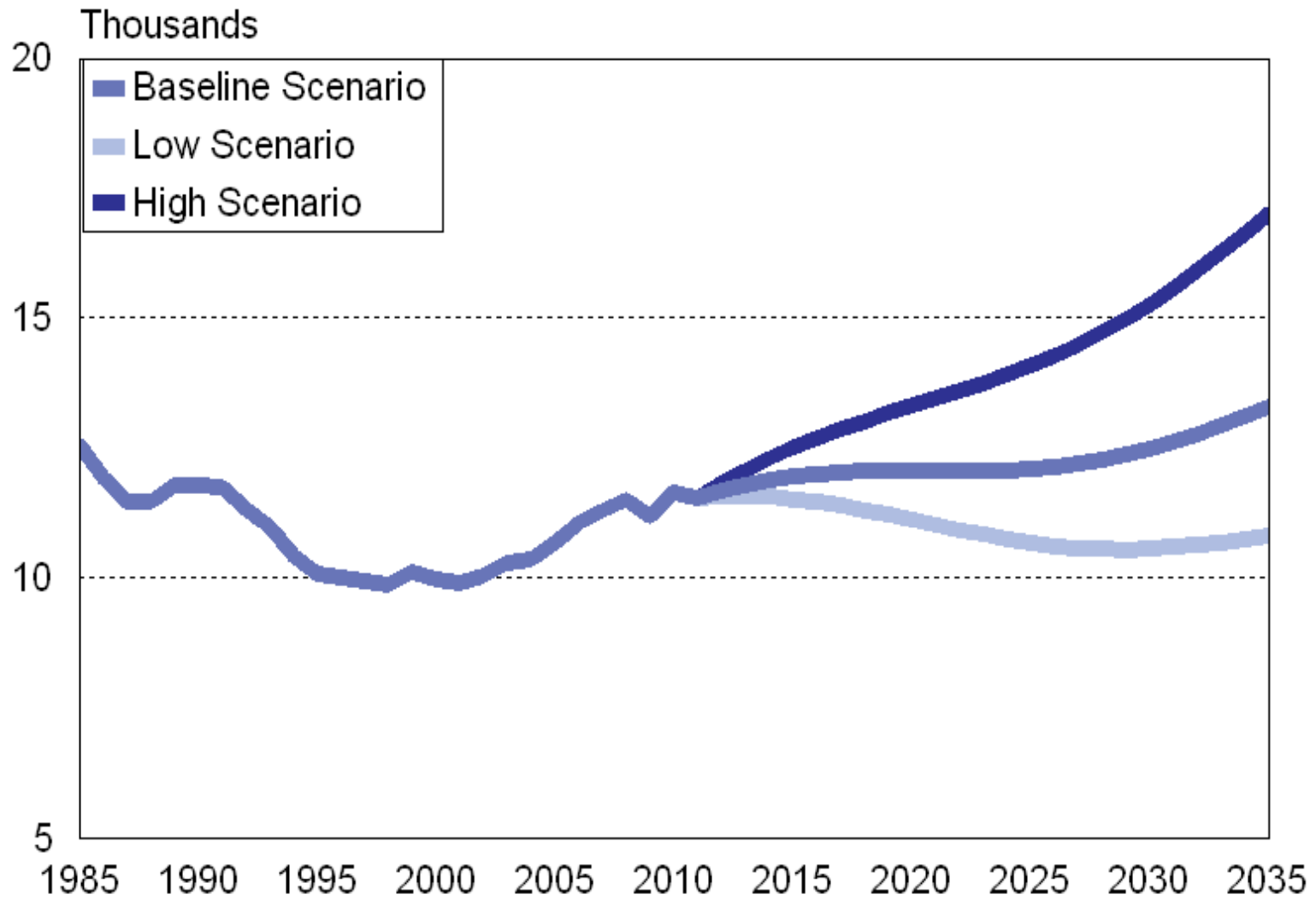
1985-2010 Estimated, 2011-2035 Projected



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Annual Births

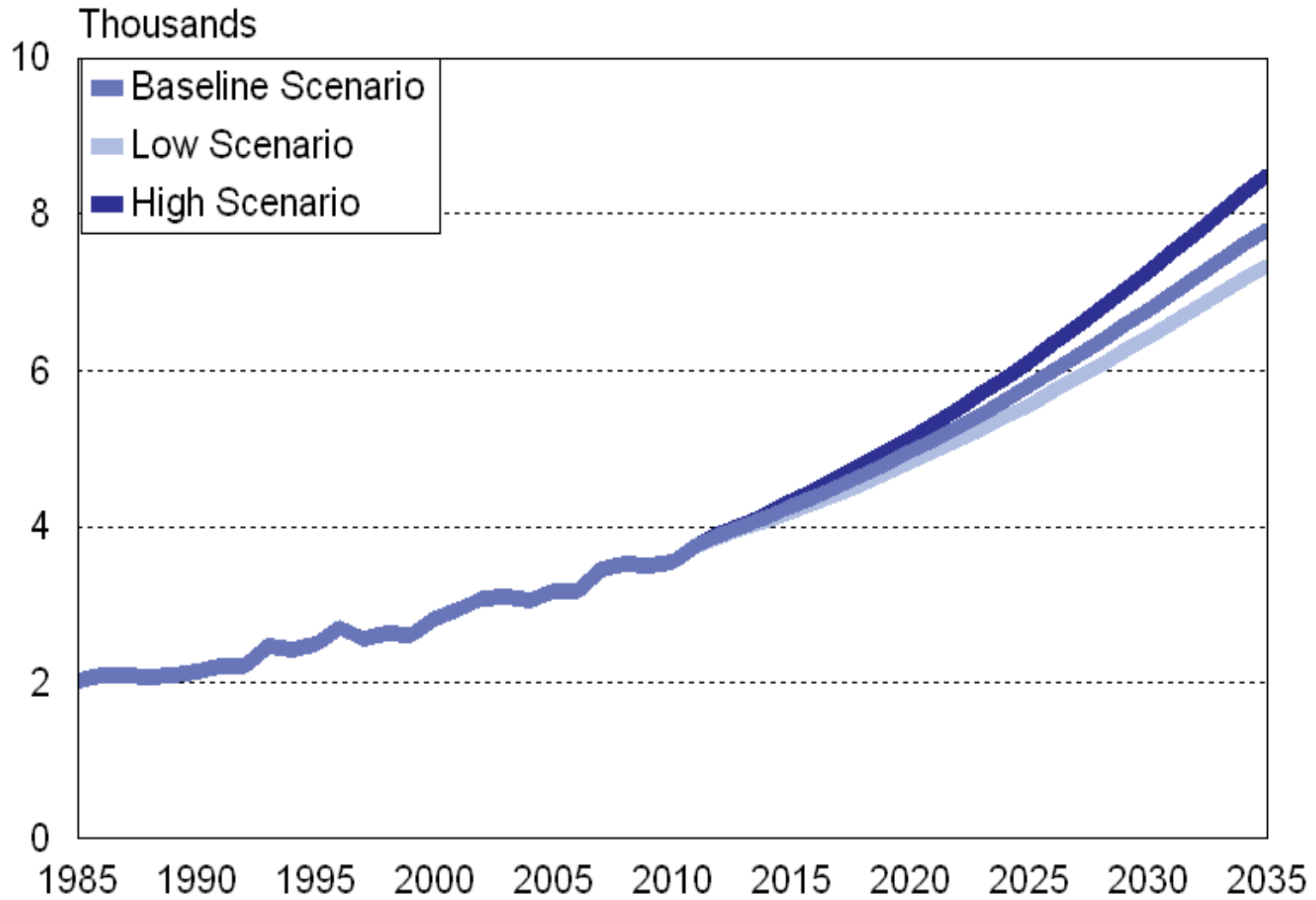
1985-2010 Estimated, 2011-2035 Projected



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Annual Deaths

1985-2010 Estimated, 2011-2035 Projected

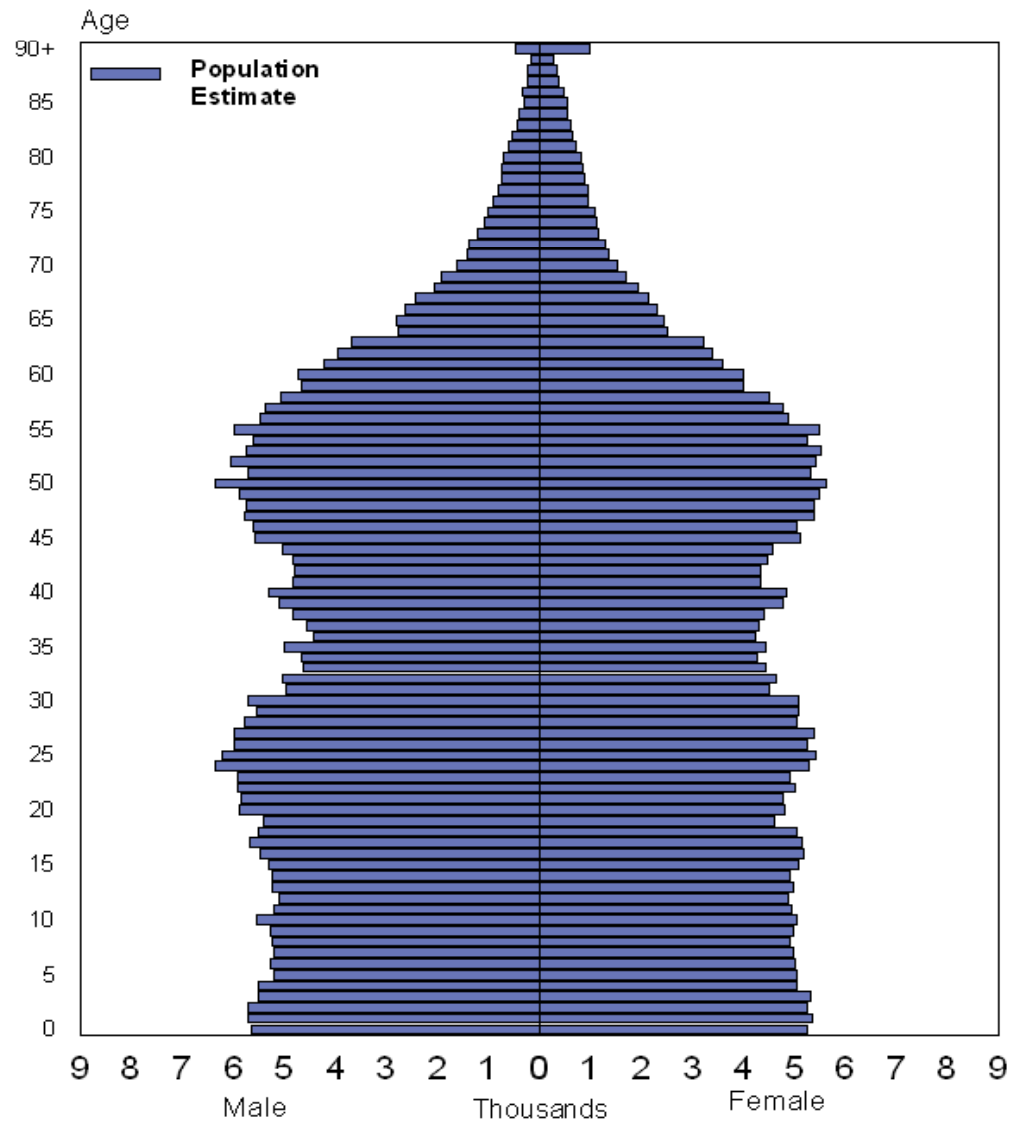


Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

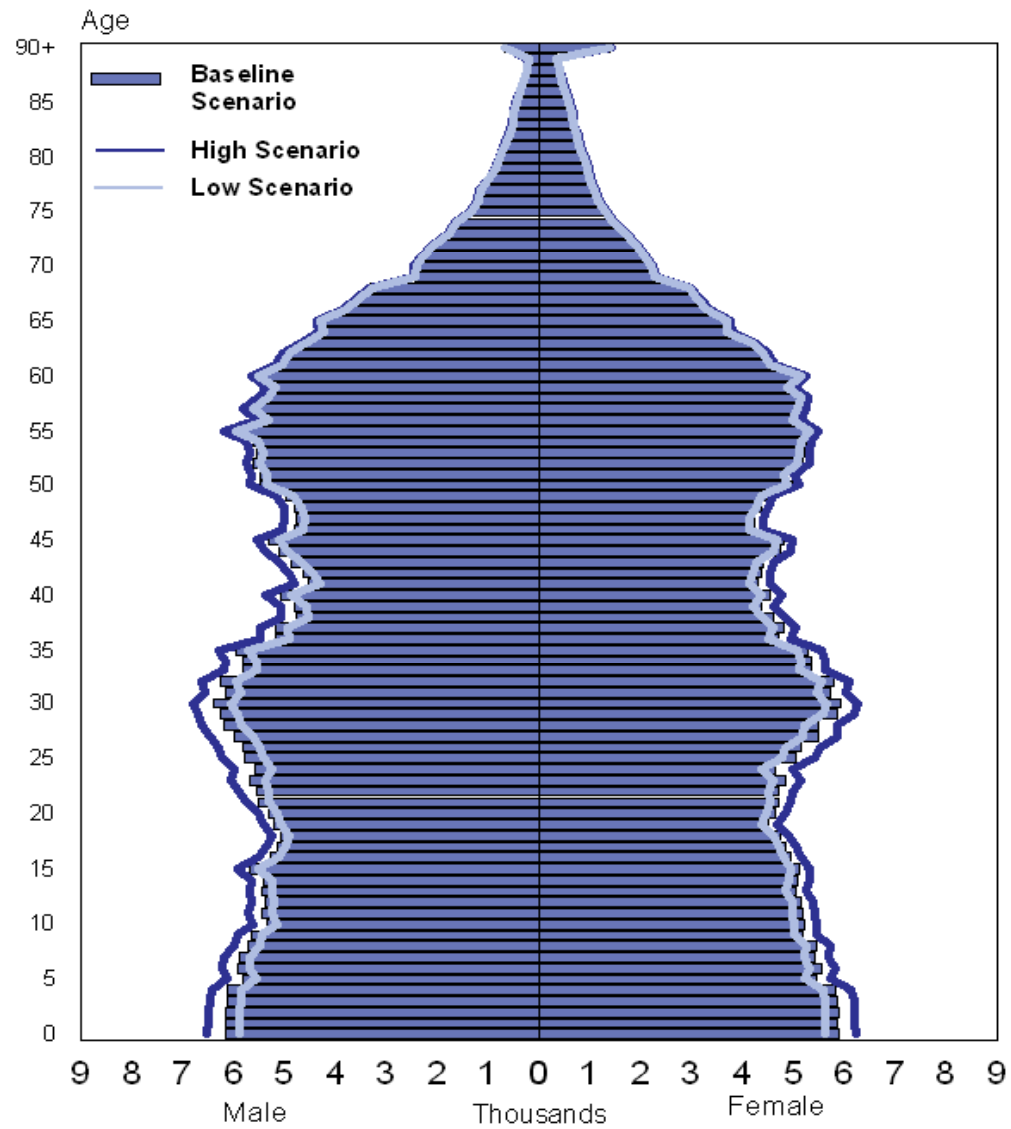
Projected Population by Age and Sex

Estimated Alaska Population by Age and Sex 2010



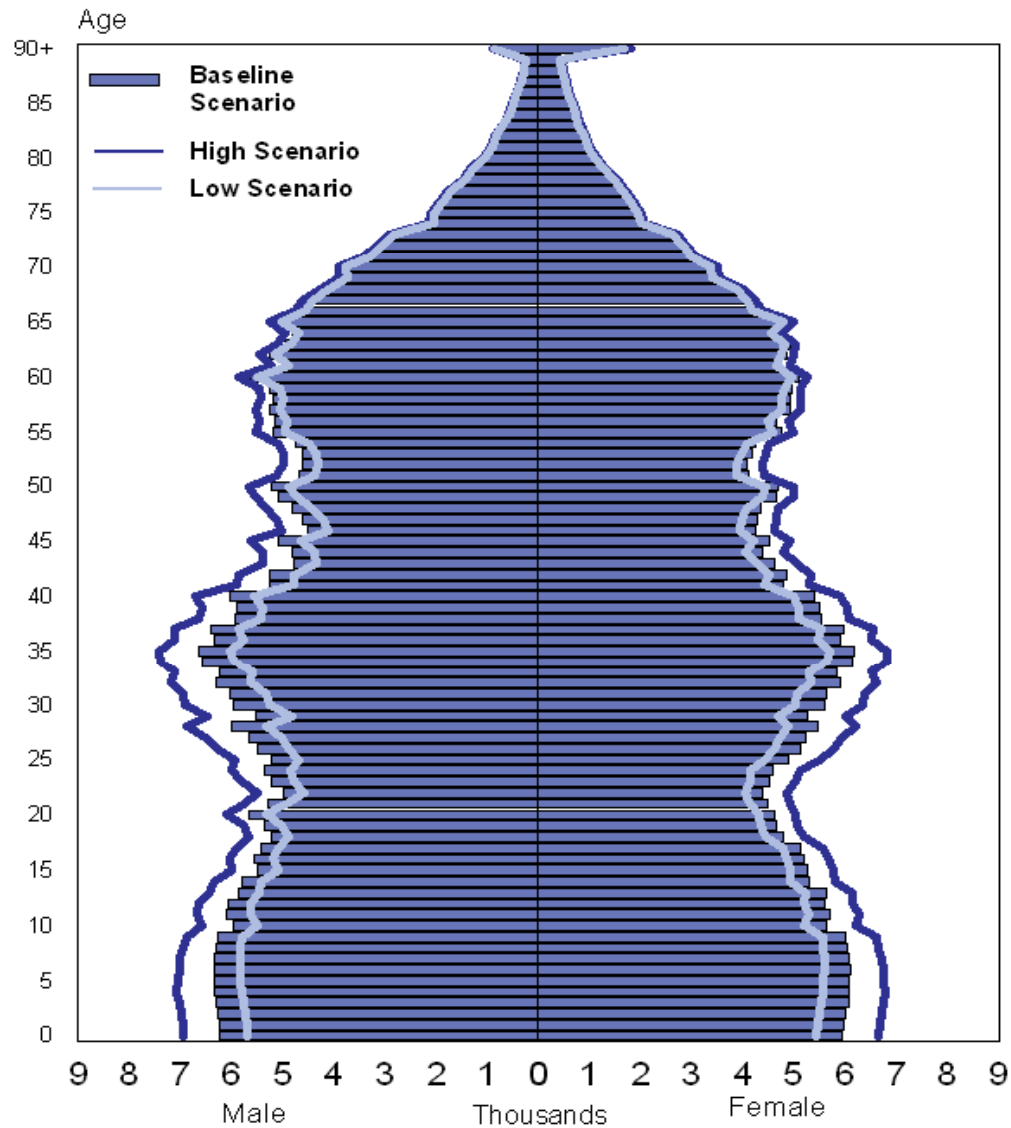
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population by Age and Sex 2015



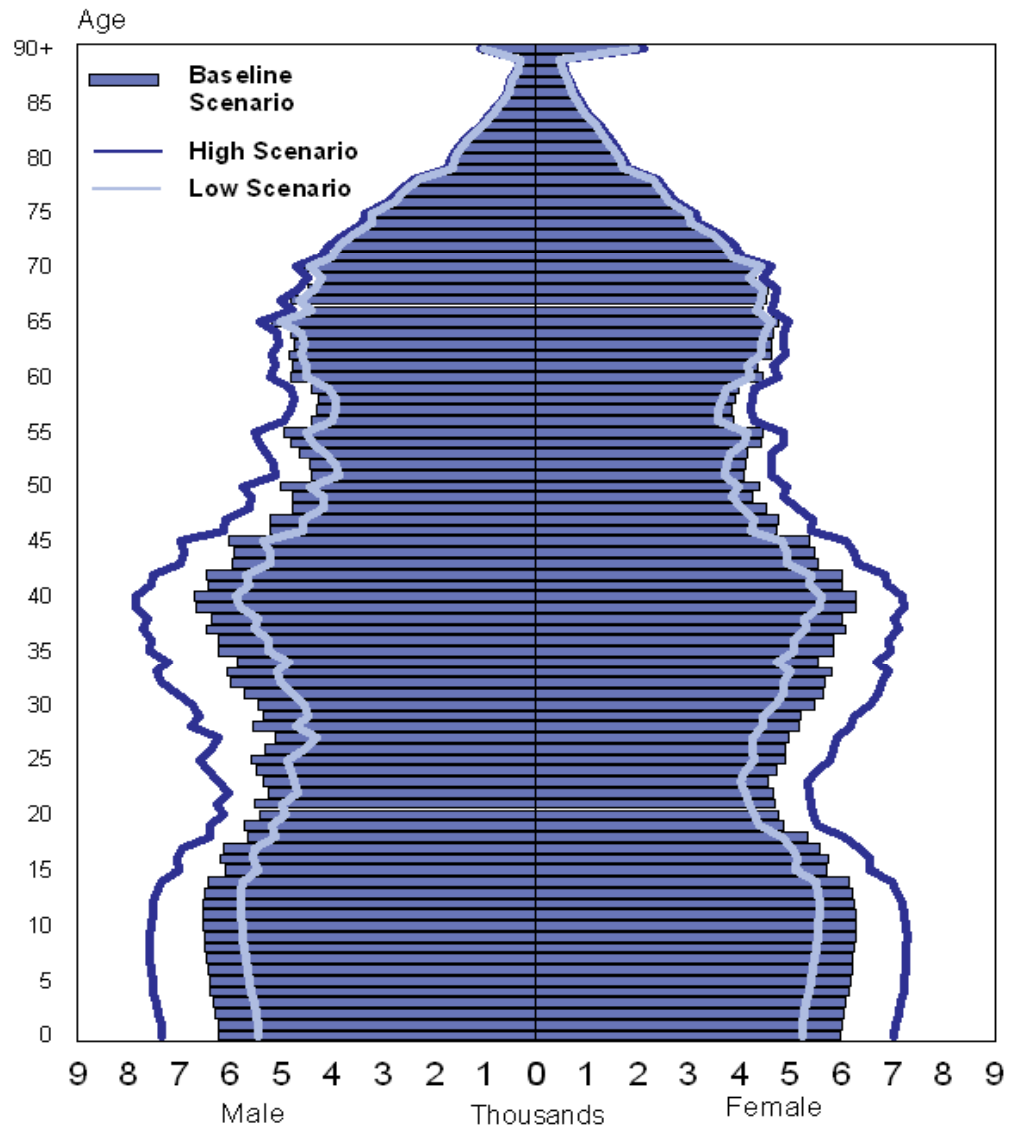
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population by Age and Sex 2020



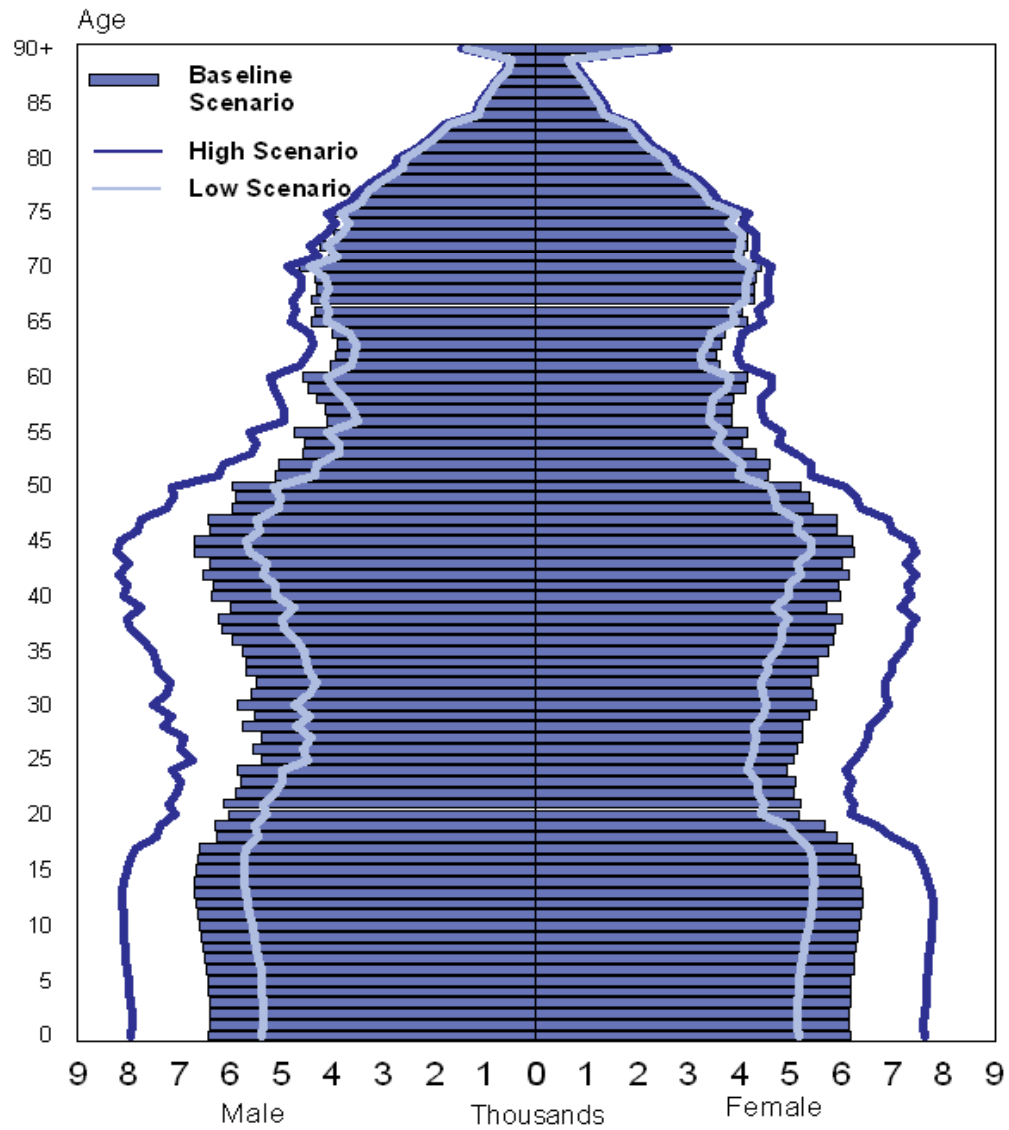
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population by Age and Sex 2025



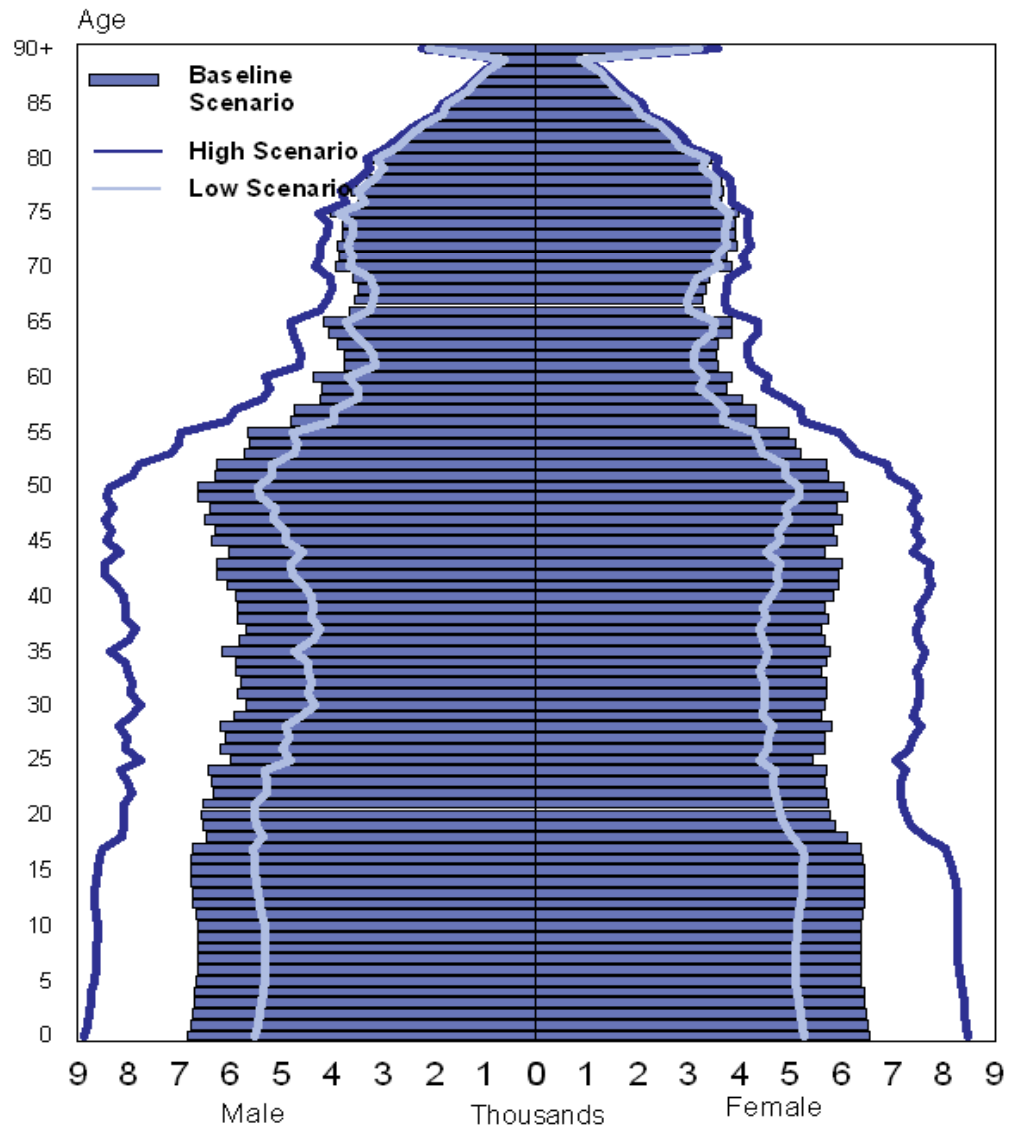
Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population by Age and Sex 2030



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

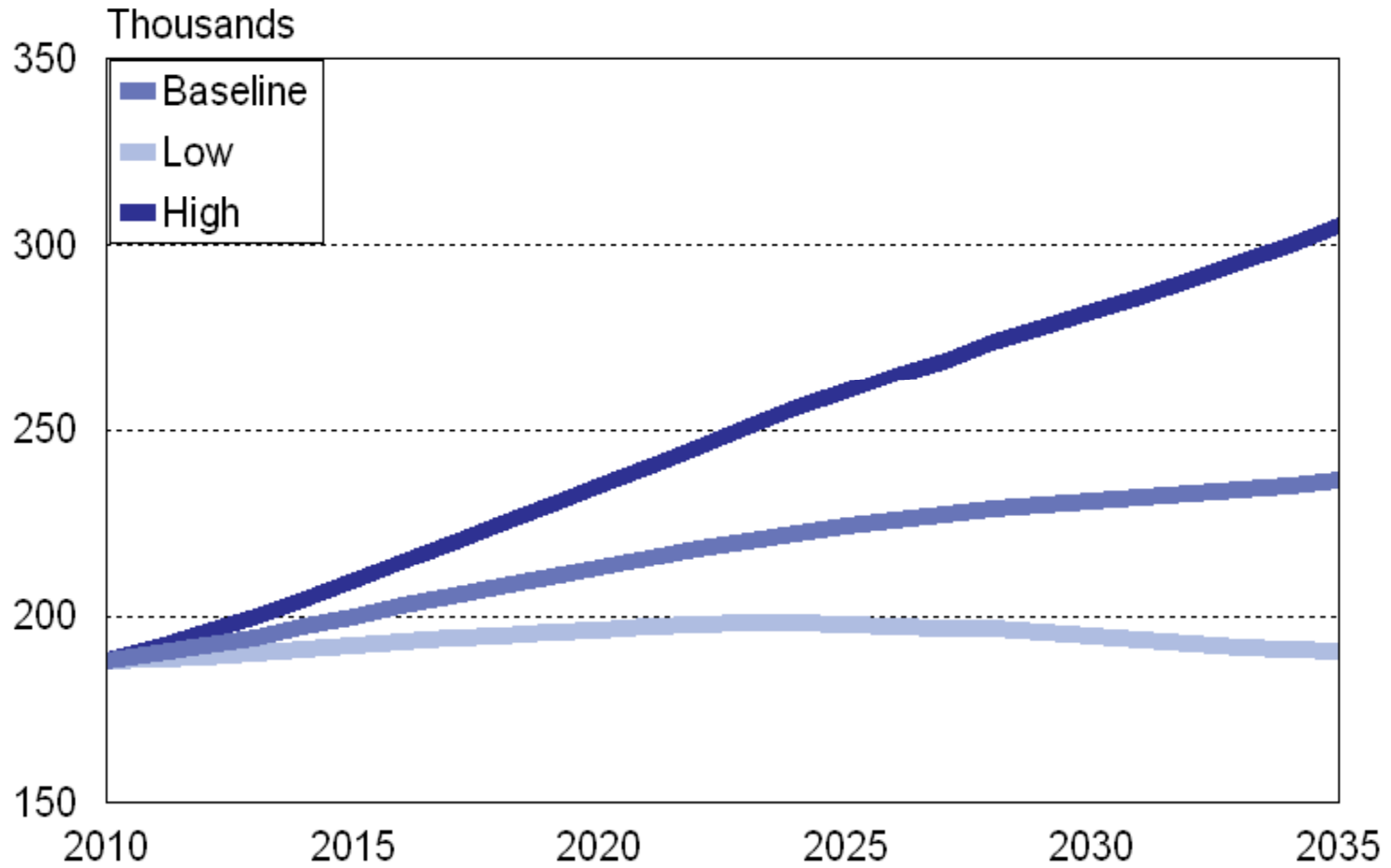
Projected Alaska Population by Age and Sex 2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population 0-17

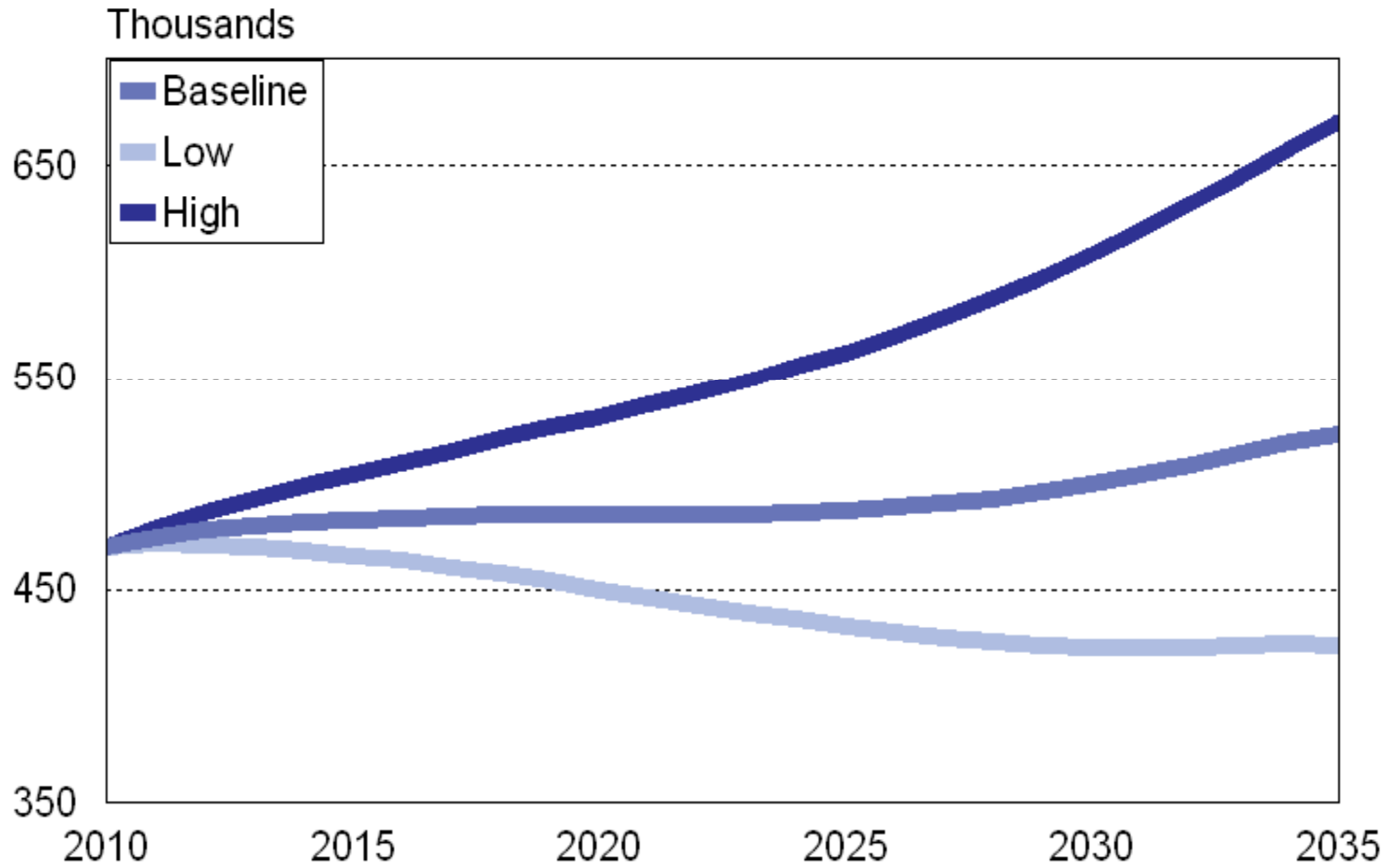
2010-2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Projected Alaska Population 18-64

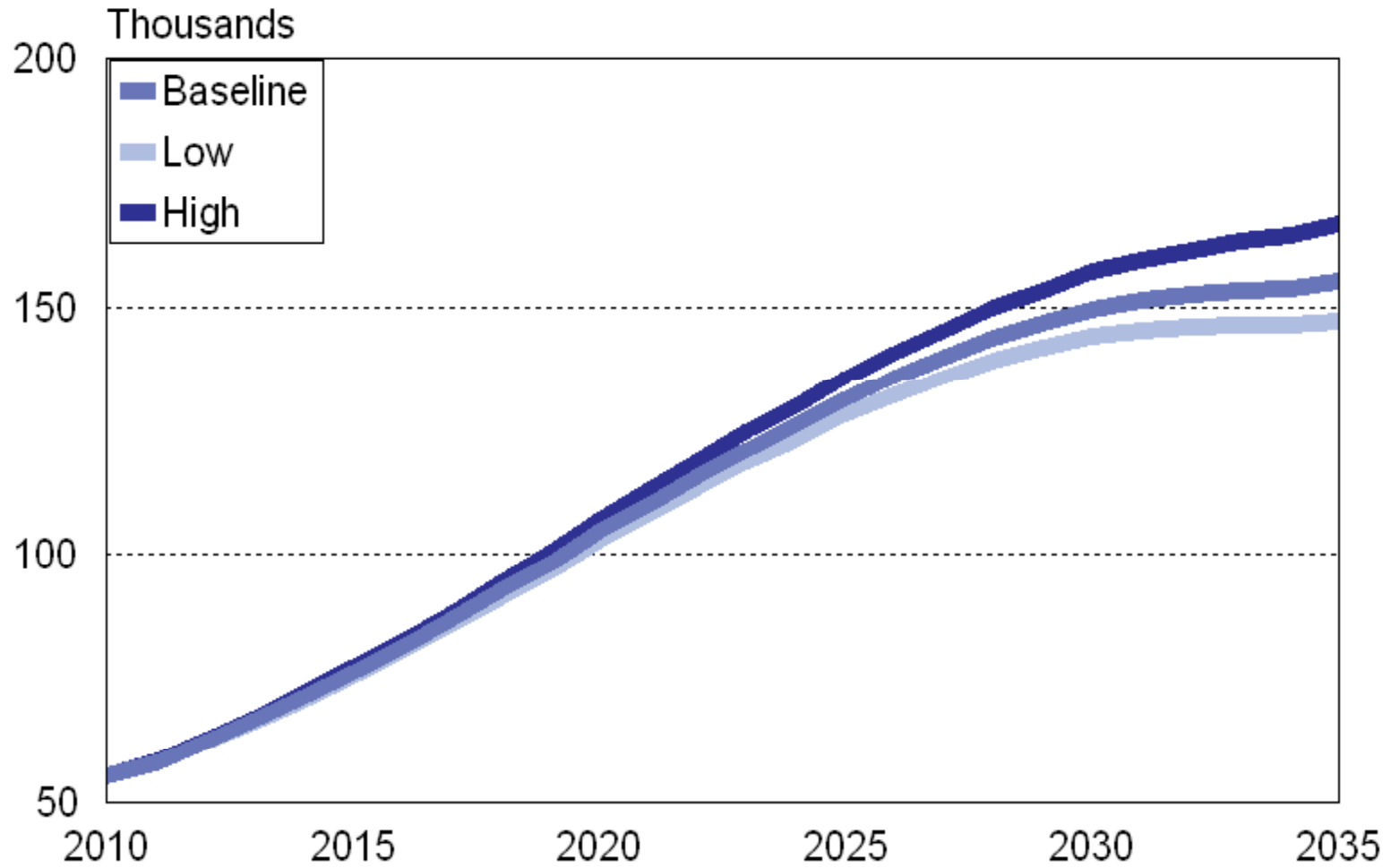
2010-2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

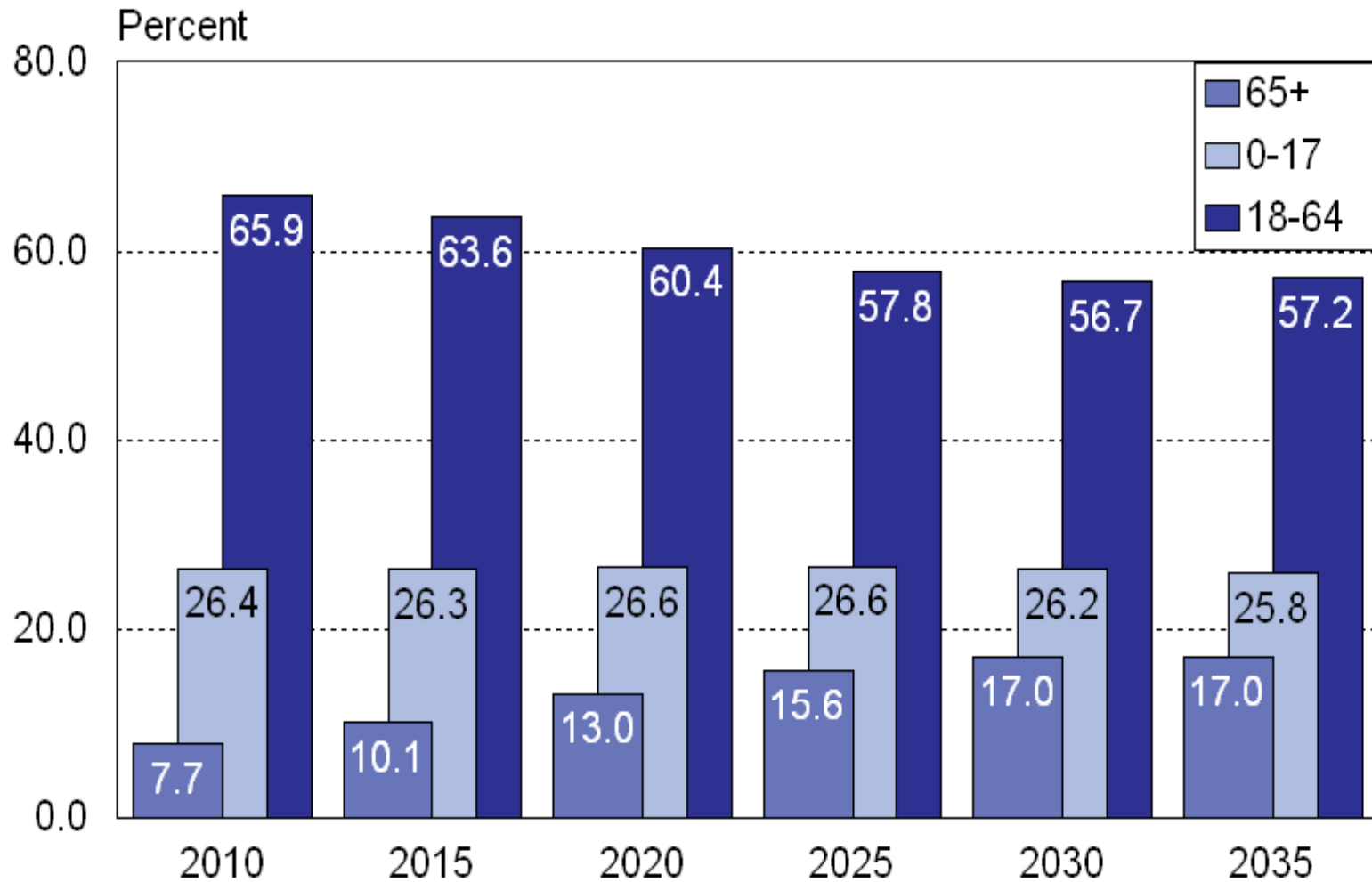
Projected Alaska Population 65+

2010-2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Alaska Baseline Projected Population by Selected Age Groups, Percent Distribution



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

Borough, Census Area &
Regional Projections

Population Projections

Methods

Cohort Component, same as the state, but “deterministically” and the final output is “controlled” to the baseline state projection.

Population Projections

Total Fertility Rates by Borough and Census Area

Highest in rural areas with high proportion of
Alaska Natives.

Lowest (in some cases less than 2.0) in
Southeast.

Population Projections

Net Migration Rates by Borough and Census Area

Very unpredictable, and also very important to knowing the future.

By far the highest is in Mat-Su.

Roughly zero or negative in most other places, but age profile of migration matters a lot here.

Population Projections

Life Expectancy by Borough and Census Area

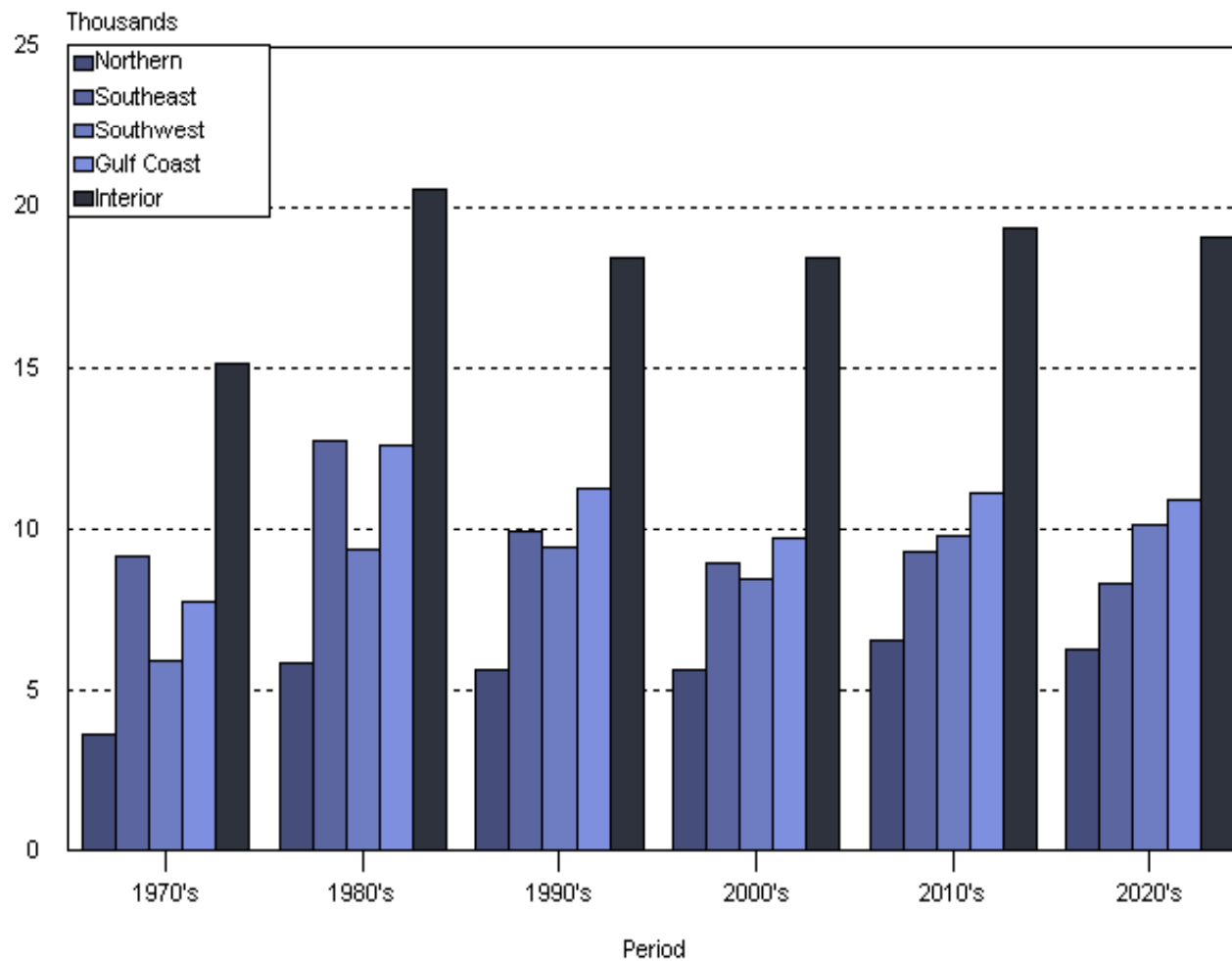
Not possible to determine directly, as data is so limited.

Estimated based on the proportion Alaska
Native and non-Native in the borough.

Population Projections

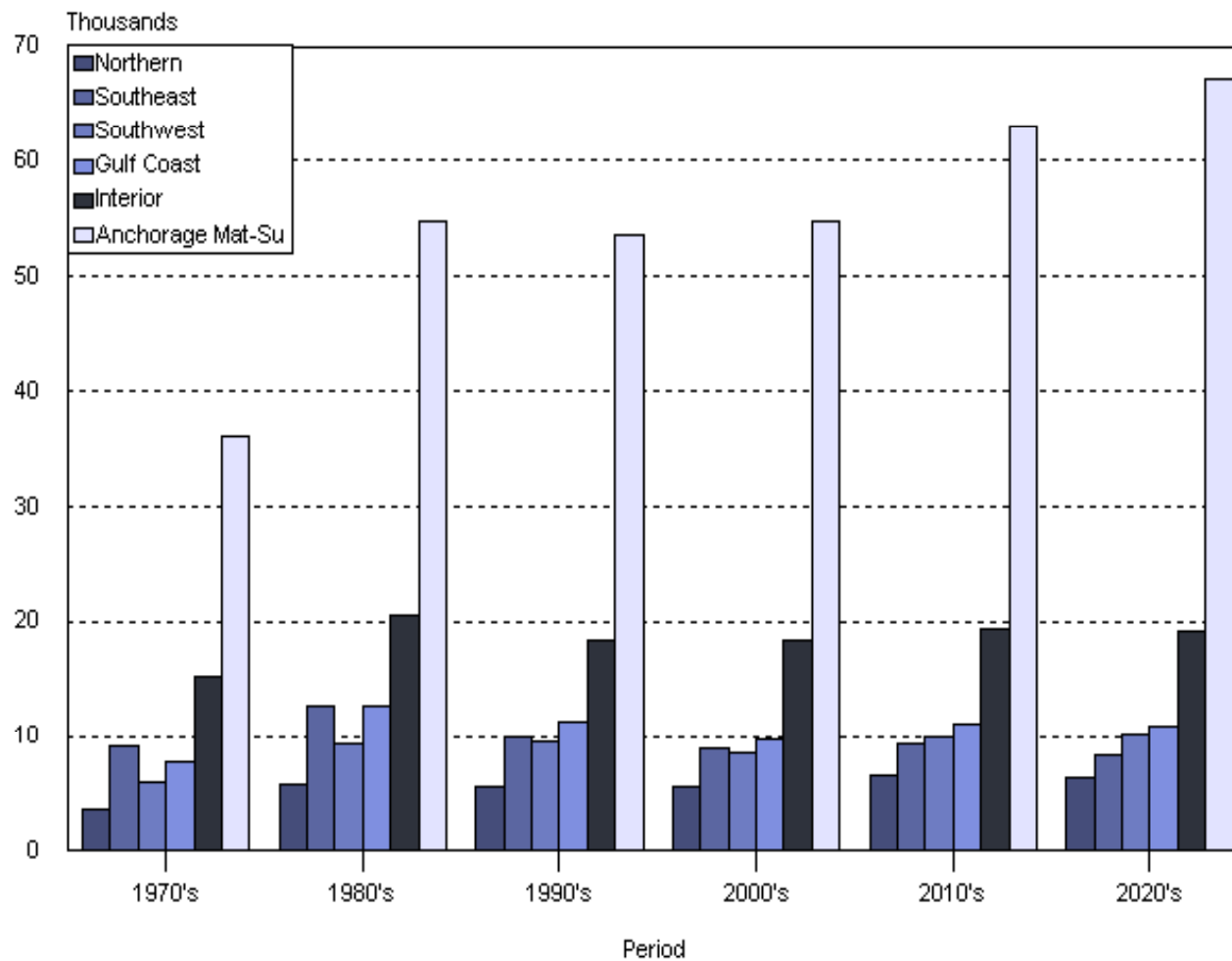
Results

Births, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



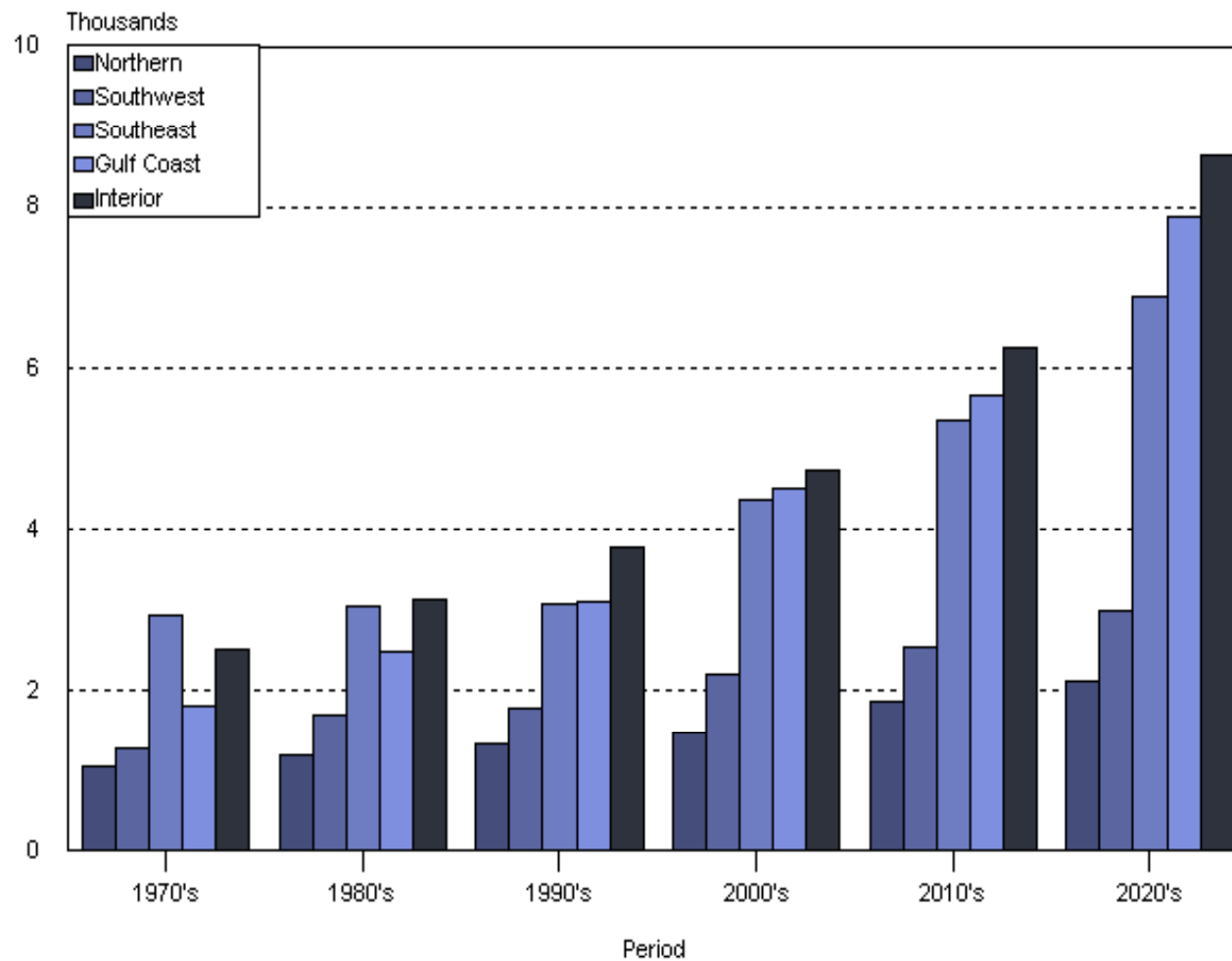
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Births, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



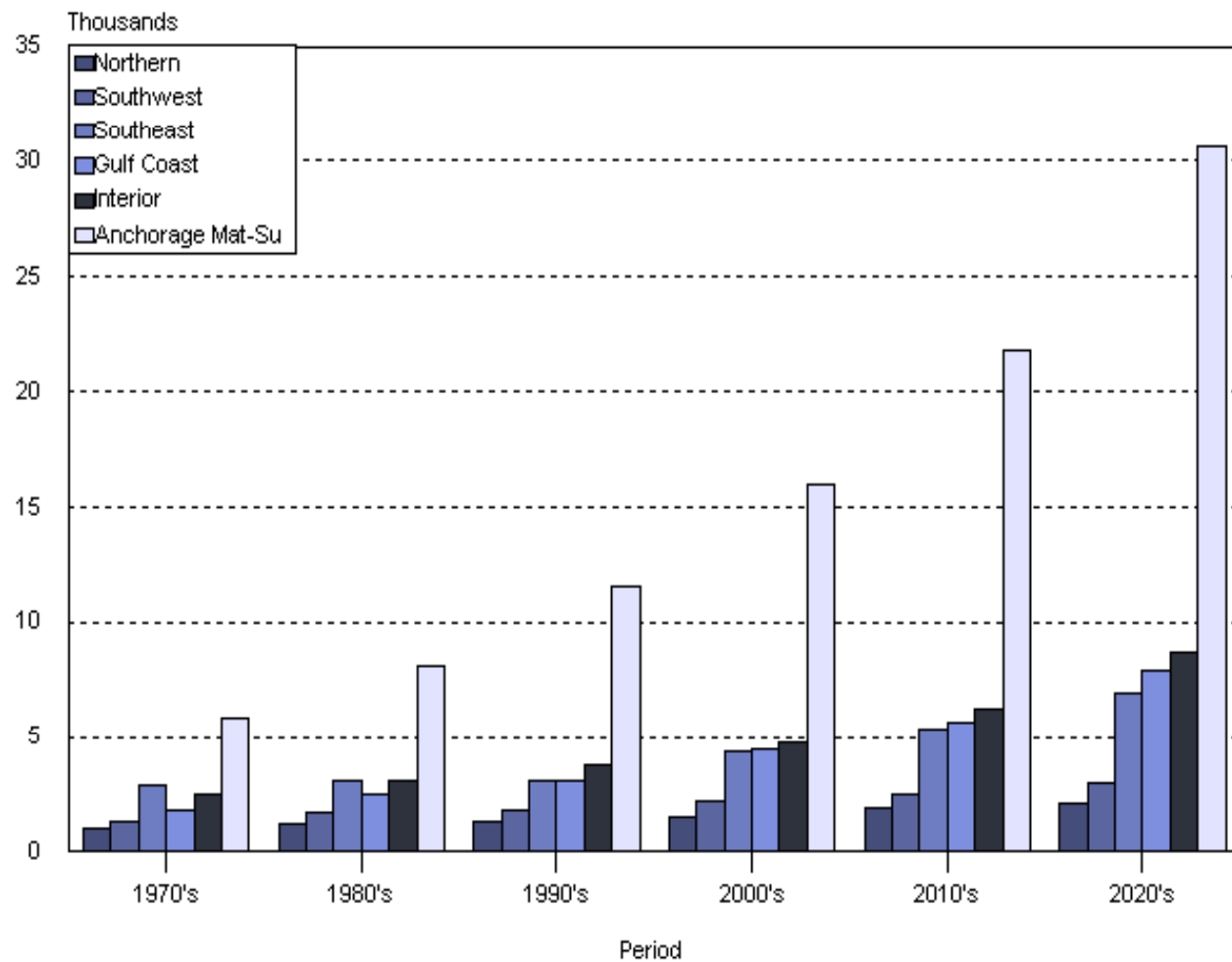
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Deaths, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



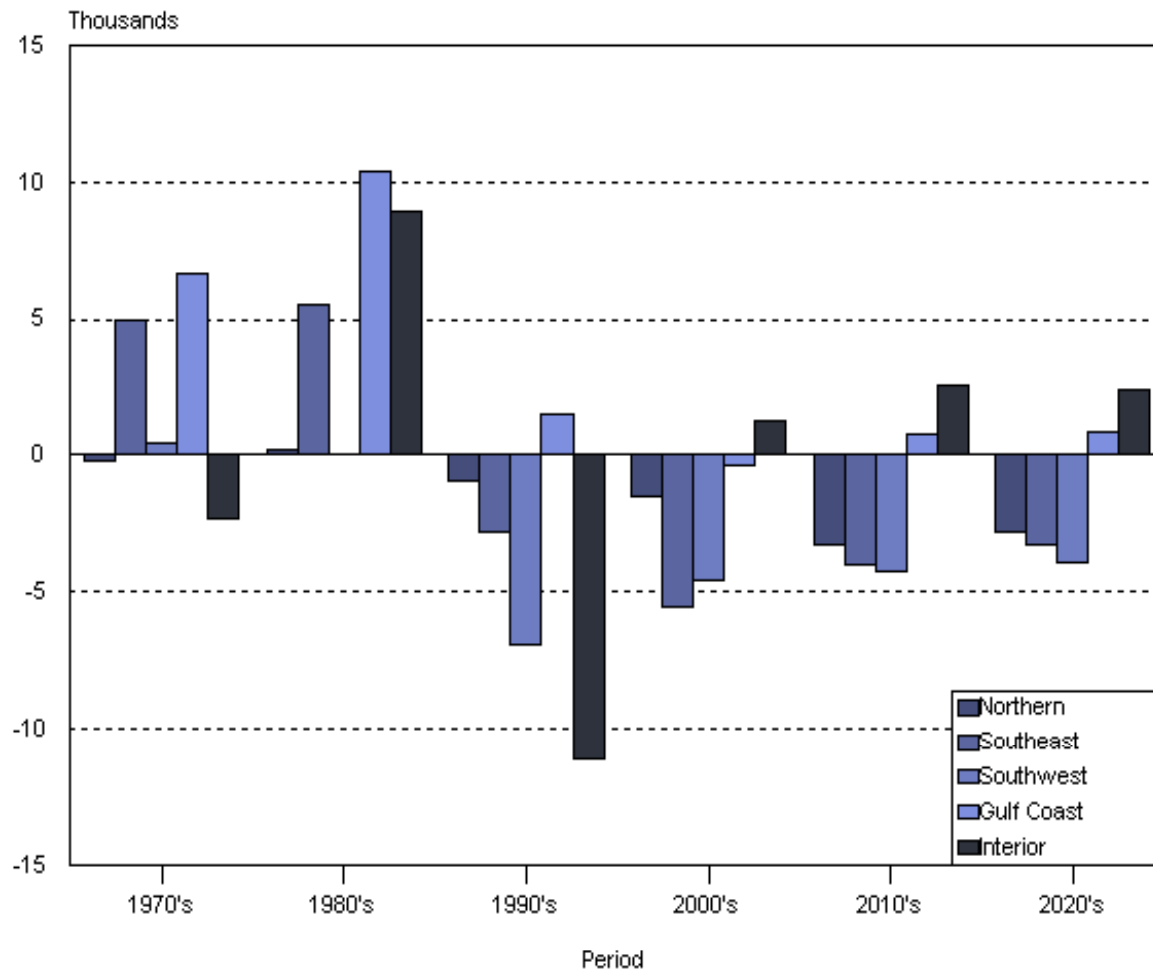
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Deaths, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



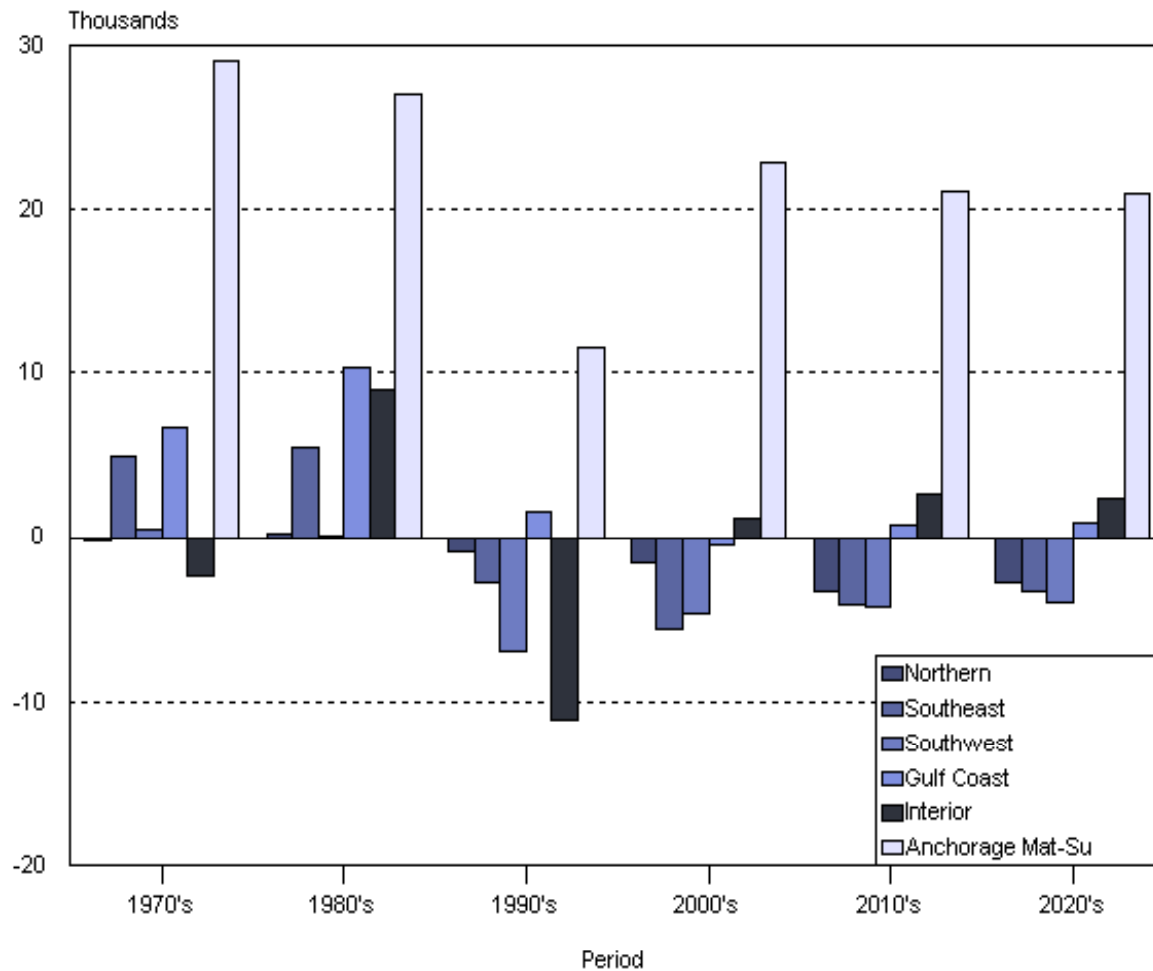
Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Migrants, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

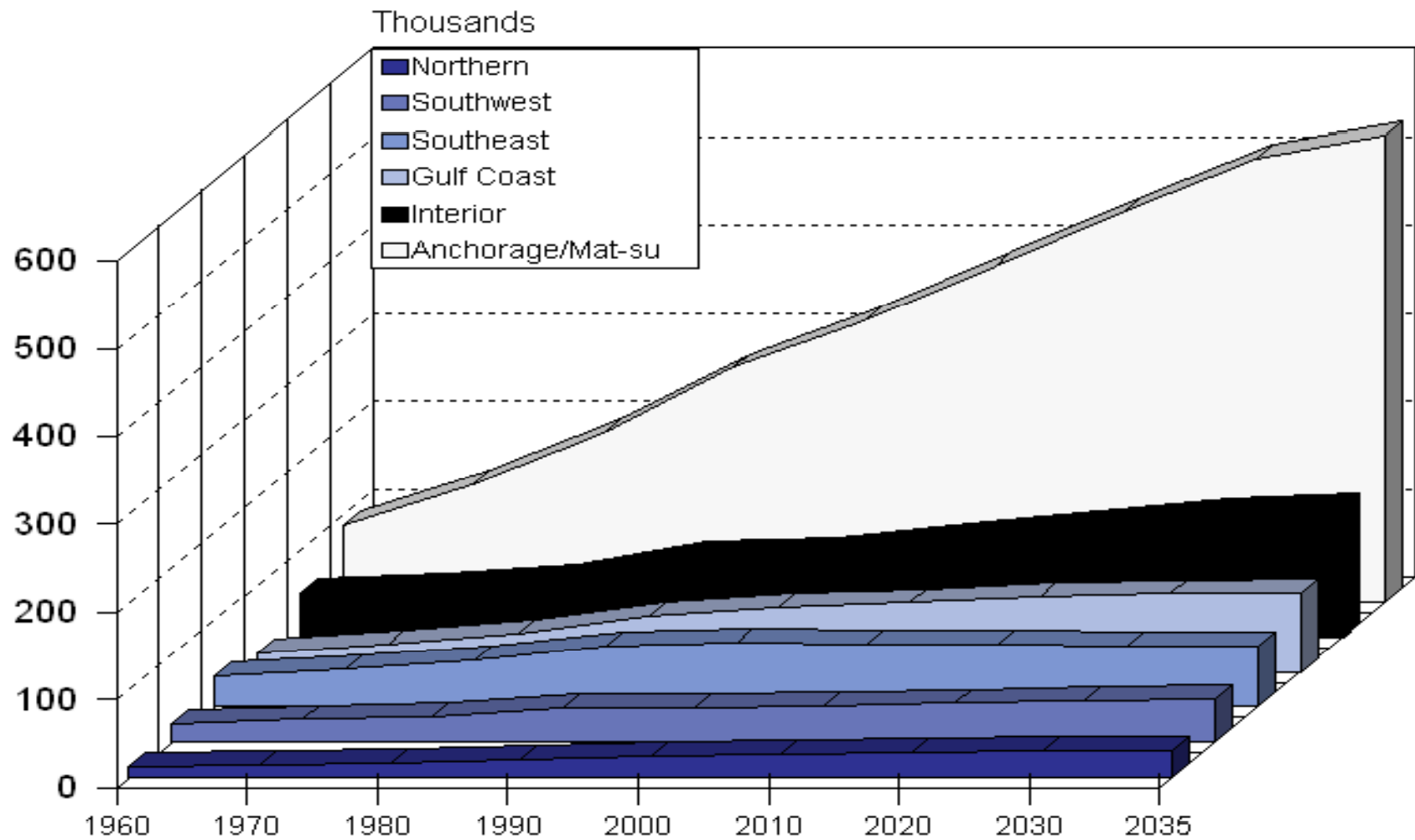
Migrants, Alaska Economic Regions 1970's-2000's Estimated, 2010's-2020's Projected



Sources: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population by Labor Market Region

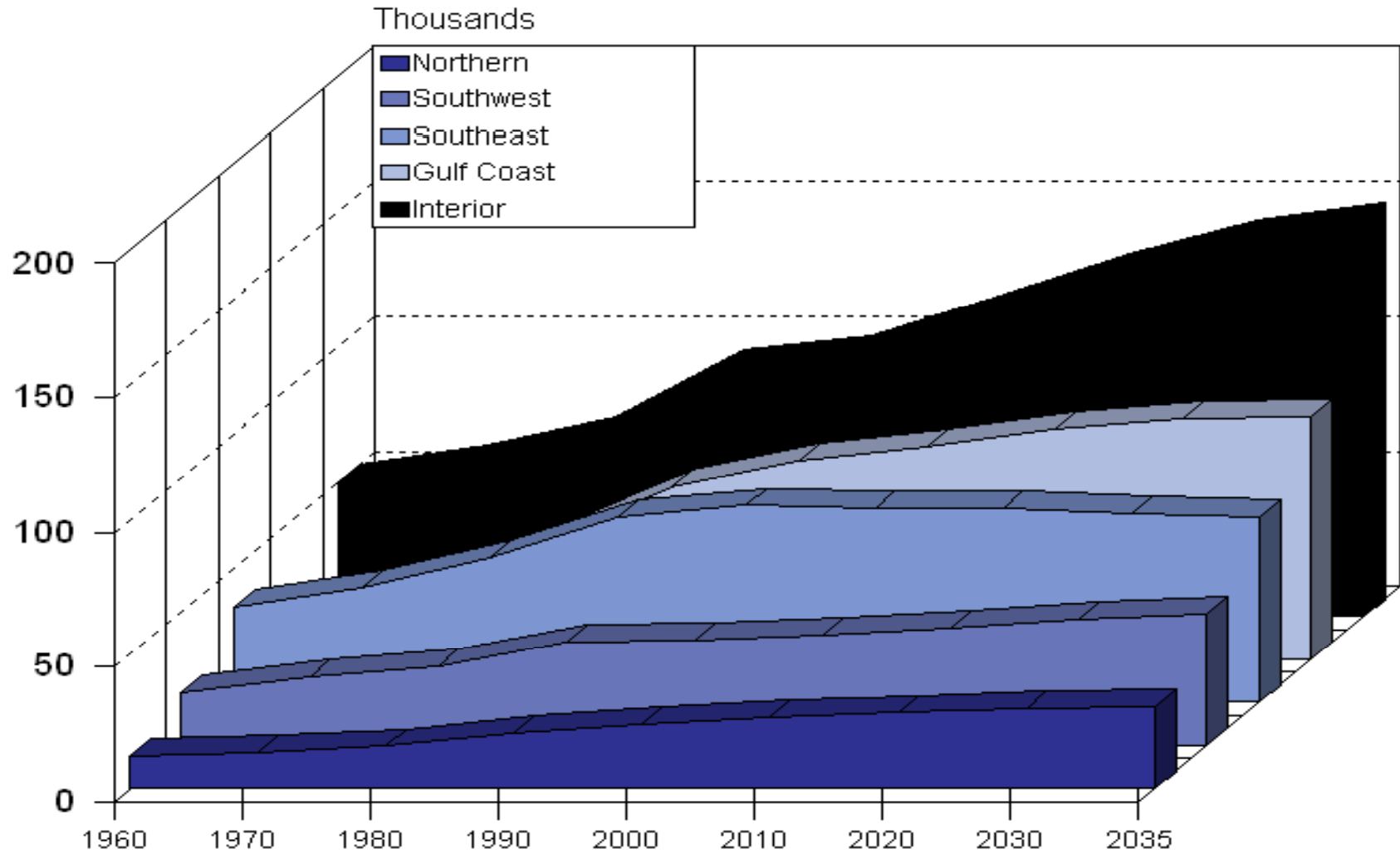
1960-2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population by Labor Market Region

1960-2035



Source: Alaska Department of Labor & Workforce Development, Research and Analysis Section

Population Projections

Thank You!

Contact: david.howell@alaska.gov

More information and data:

<http://labor.alaska.gov/research/>



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Migration

Eddie Hunsinger
Alaska Department of Labor
and Workforce Development

Migration: Data sources (PFD)

- PFD-based data. Has large in-state coverage, and information on age and sex, but has a lag on new migrants to the state due to PFD eligibility requirements.

Migration: Data sources (IRS)

- IRS-based data. Provides information on migration between all US county-equivalents, but lower coverage (~85%) and no characteristic information.

Migration:

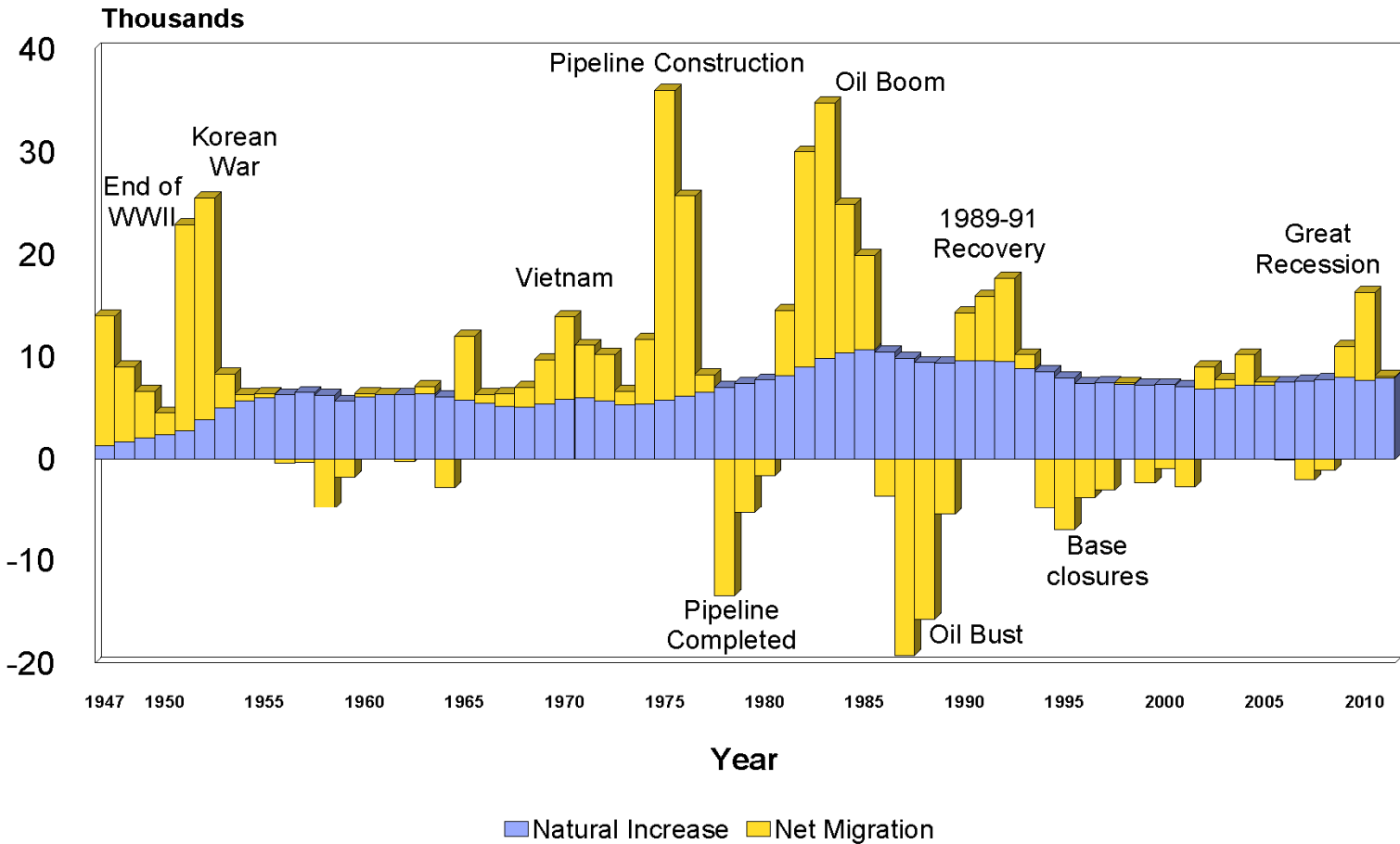
Data sources (ACS)

- ACS data. Provides characteristic information but is based on a very small sample and is based on five year averages for most areas in the state.

Migration: Gross and Net

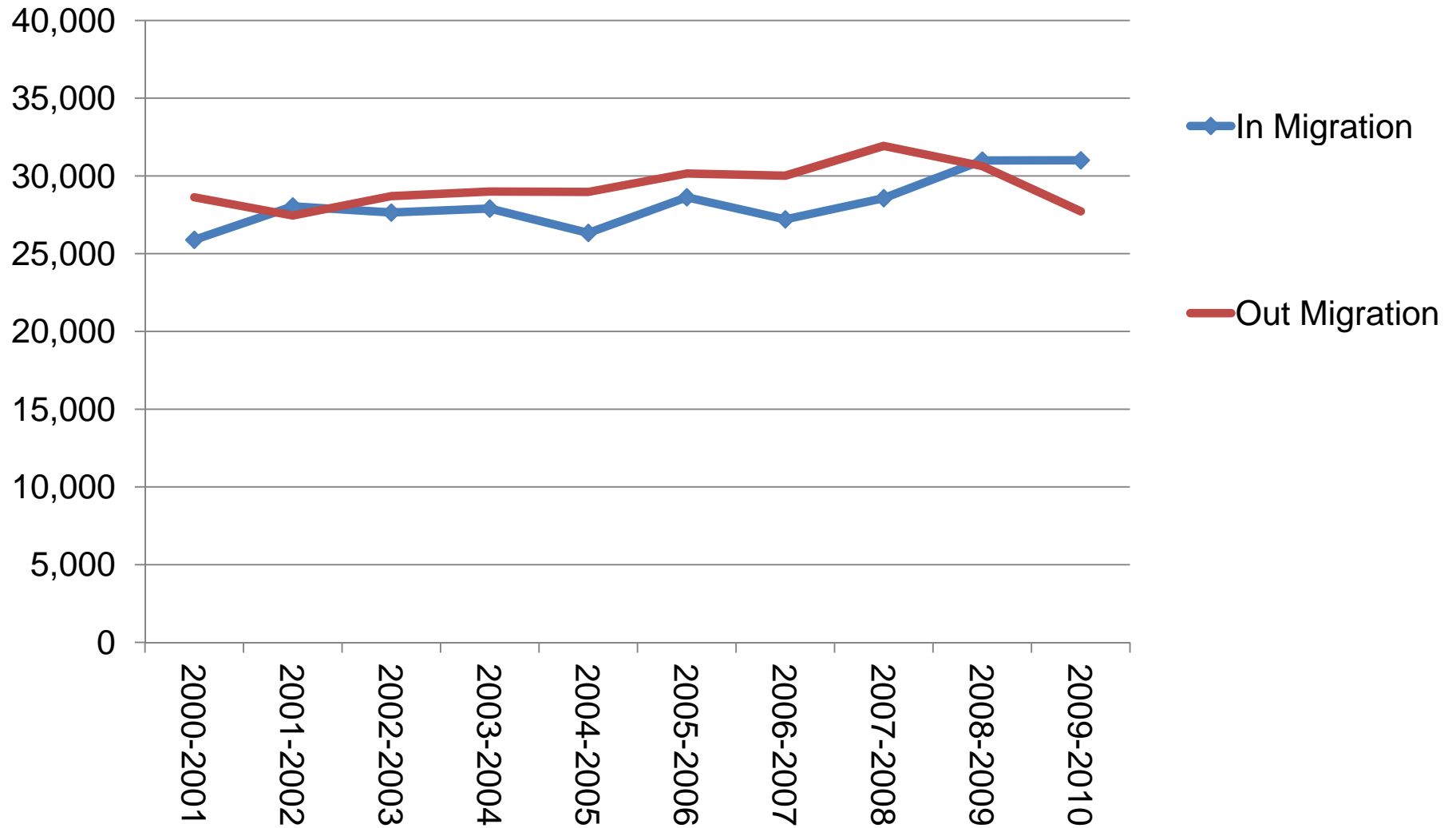
- Each year Alaska sends and receives tens of thousands of movers. The count of these movers, or migrants, is referred to as “gross migration.”
- Subtracting the count of out-migrants from the count of in-migrants gives us “net migration.”

Components of Population Change for Alaska, 1947-2011

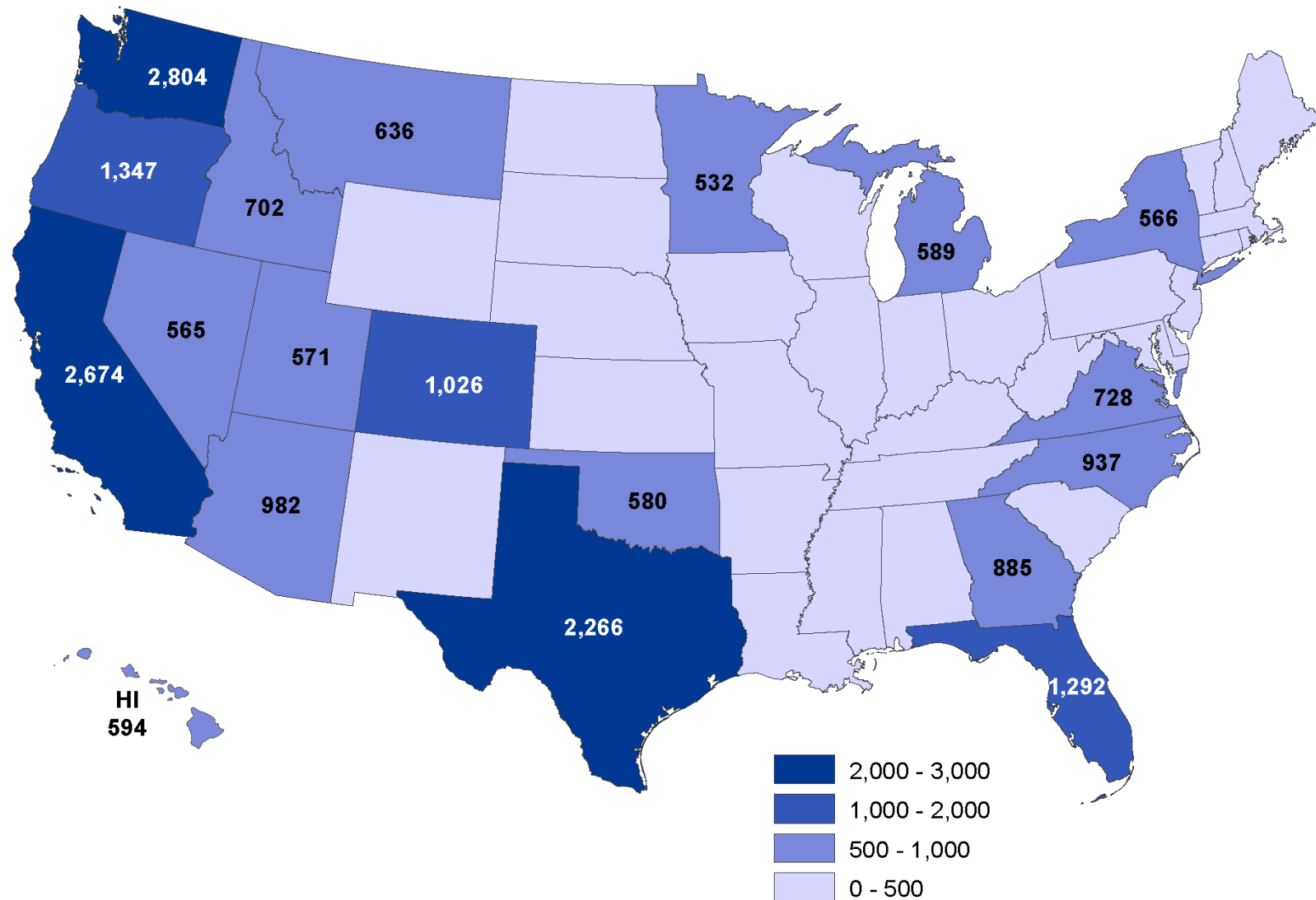


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

IRS Exemption-Based State to State Migration for Alaska, 2000-2010

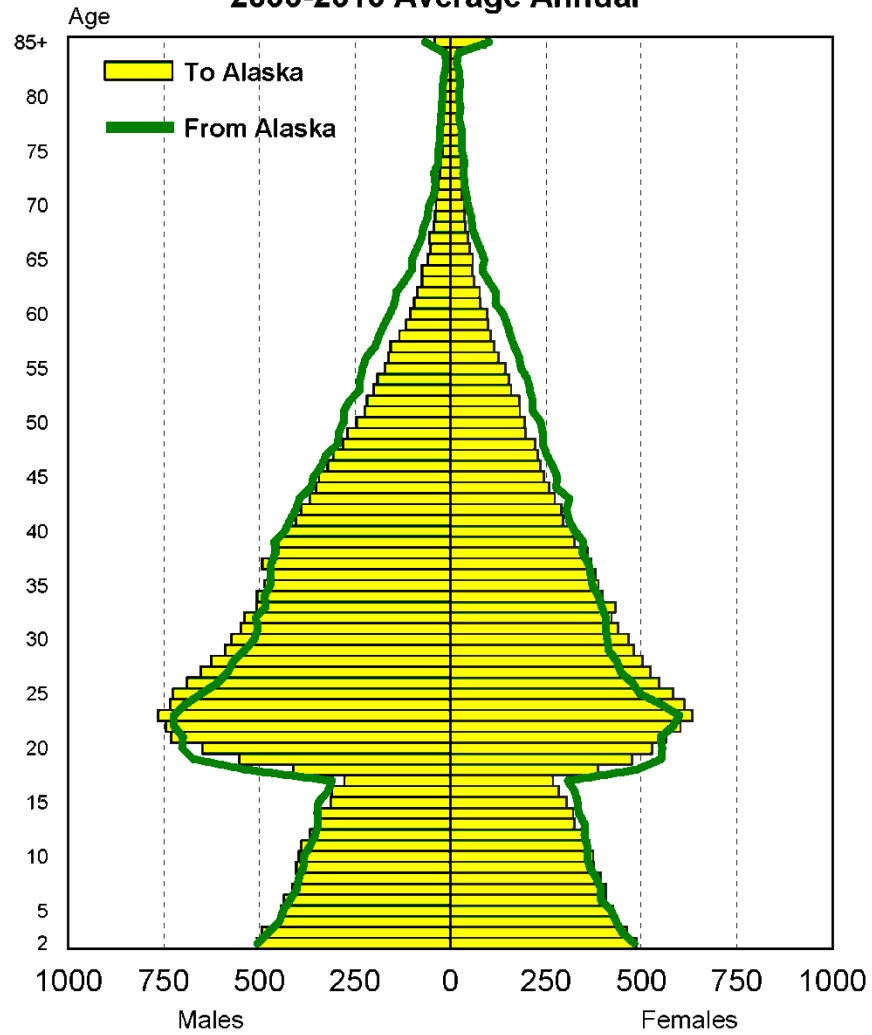


IRS Exemption-Based Migration to Alaska by State, 2000-2010 Average Annual



Sources: I.R.S. Tax Statistics; Alaska Department of Labor and Workforce Development, Research and Analysis Section

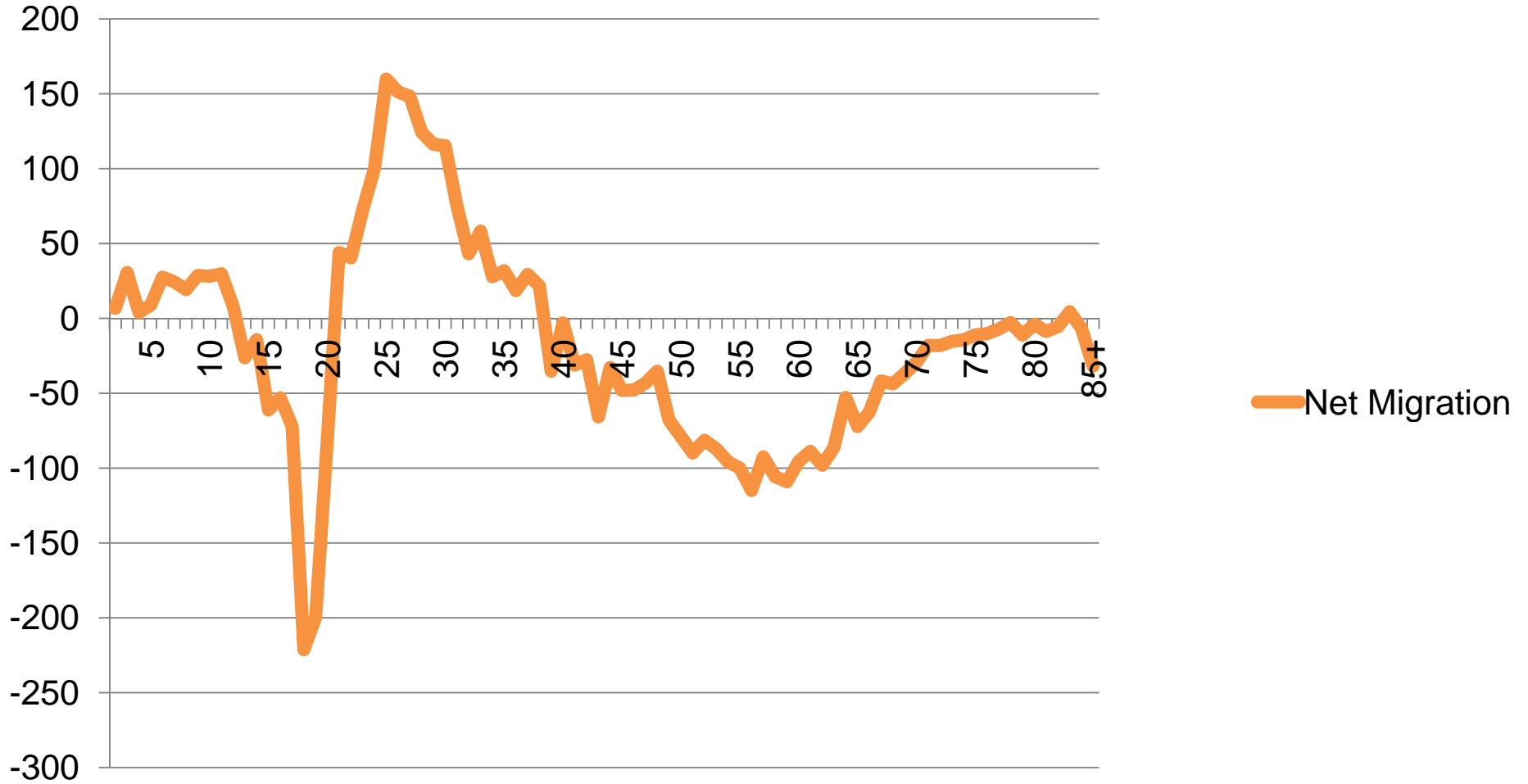
PFD-Based Migration To and From Alaska by Age and Sex, 2000-2010 Average Annual



Note: Adjusted for one year delay in eligibility for PFD.

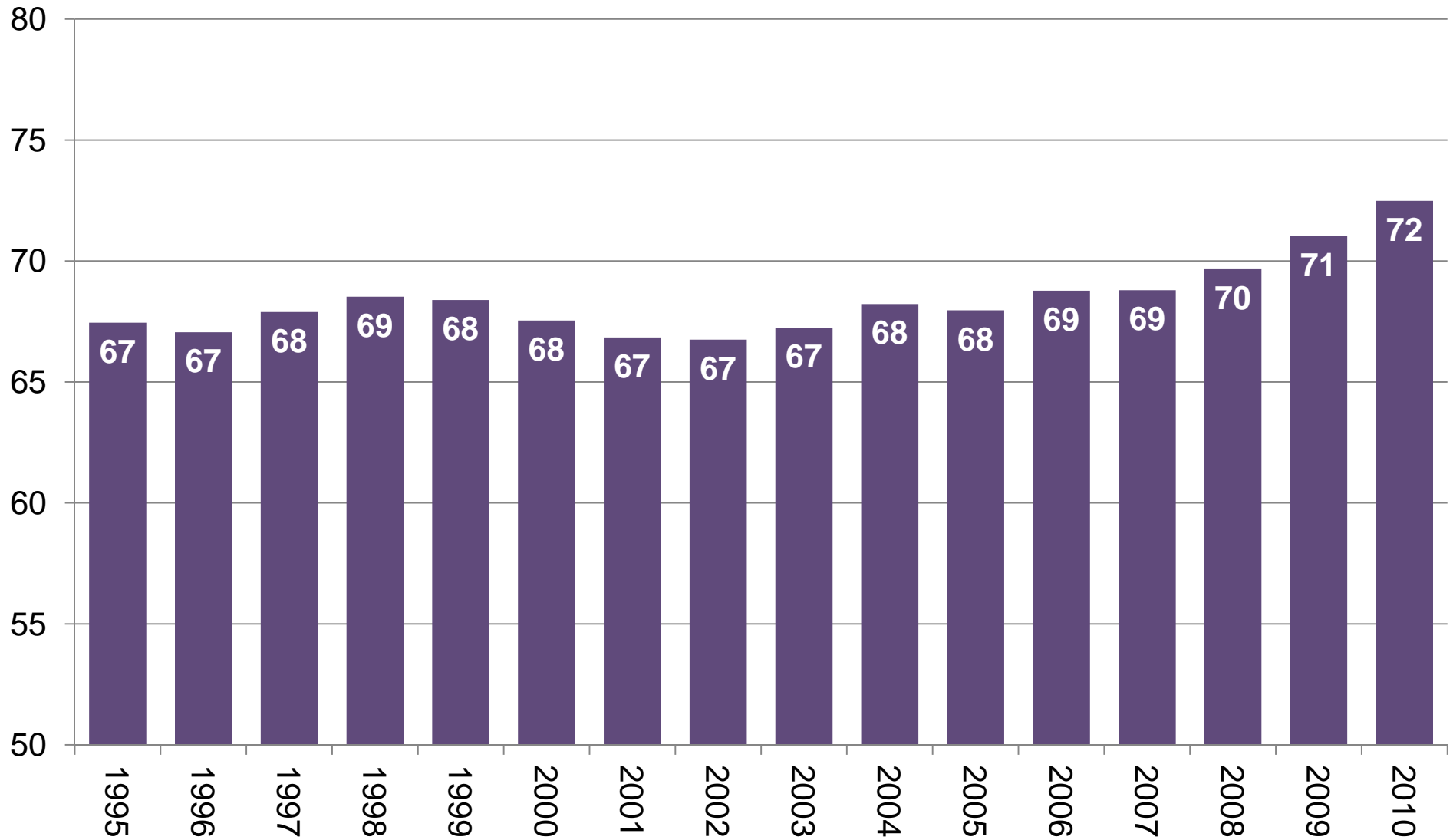
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

PFD-Based Net Migration by Age, 2000-2010 Average Annual

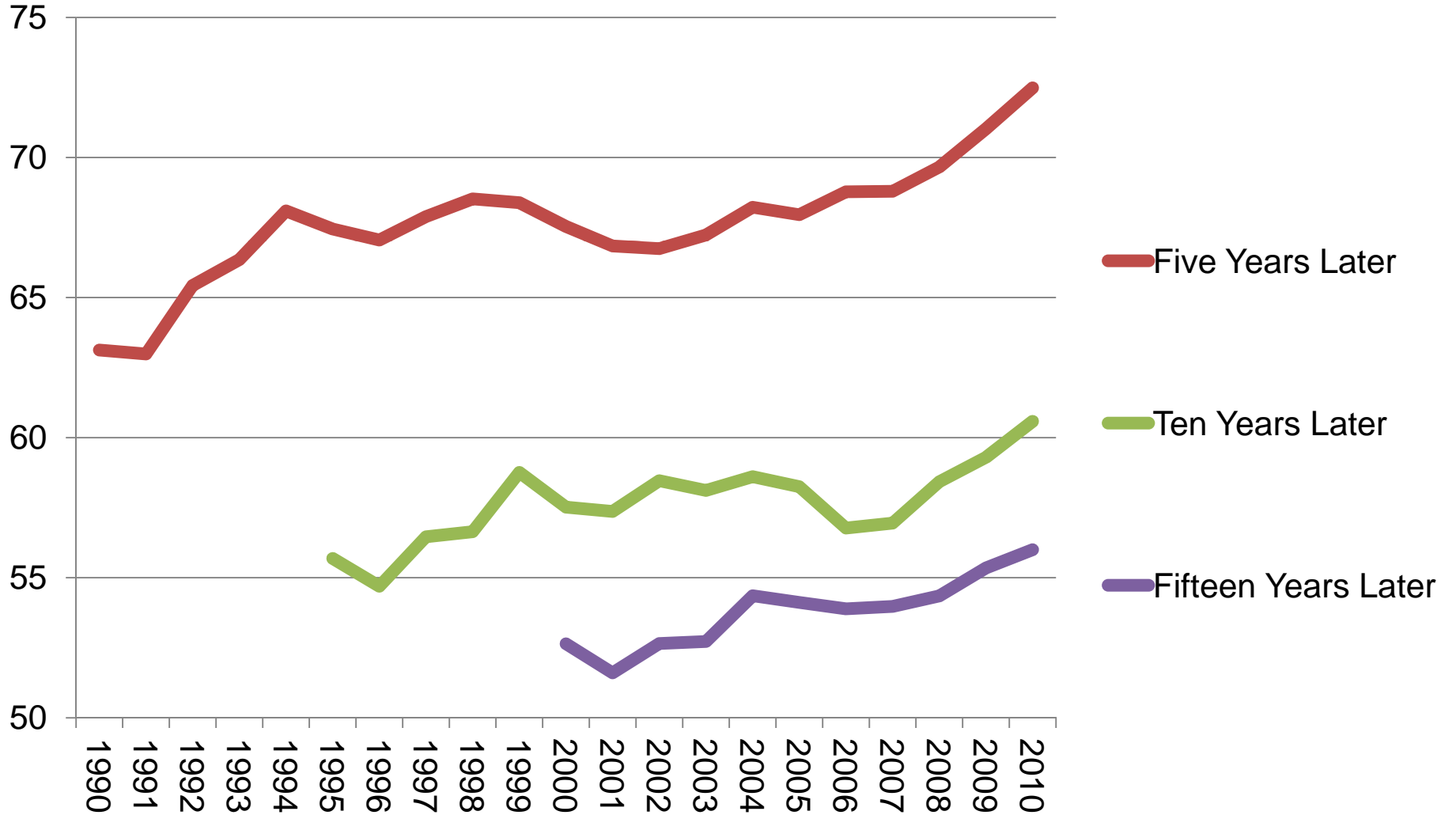


Note: Adjusted for one year delay in eligibility for PFD.

Percent of Alaskans who were in Alaska at age 18 and again at Age 23, 1995-2010, based on PFD data

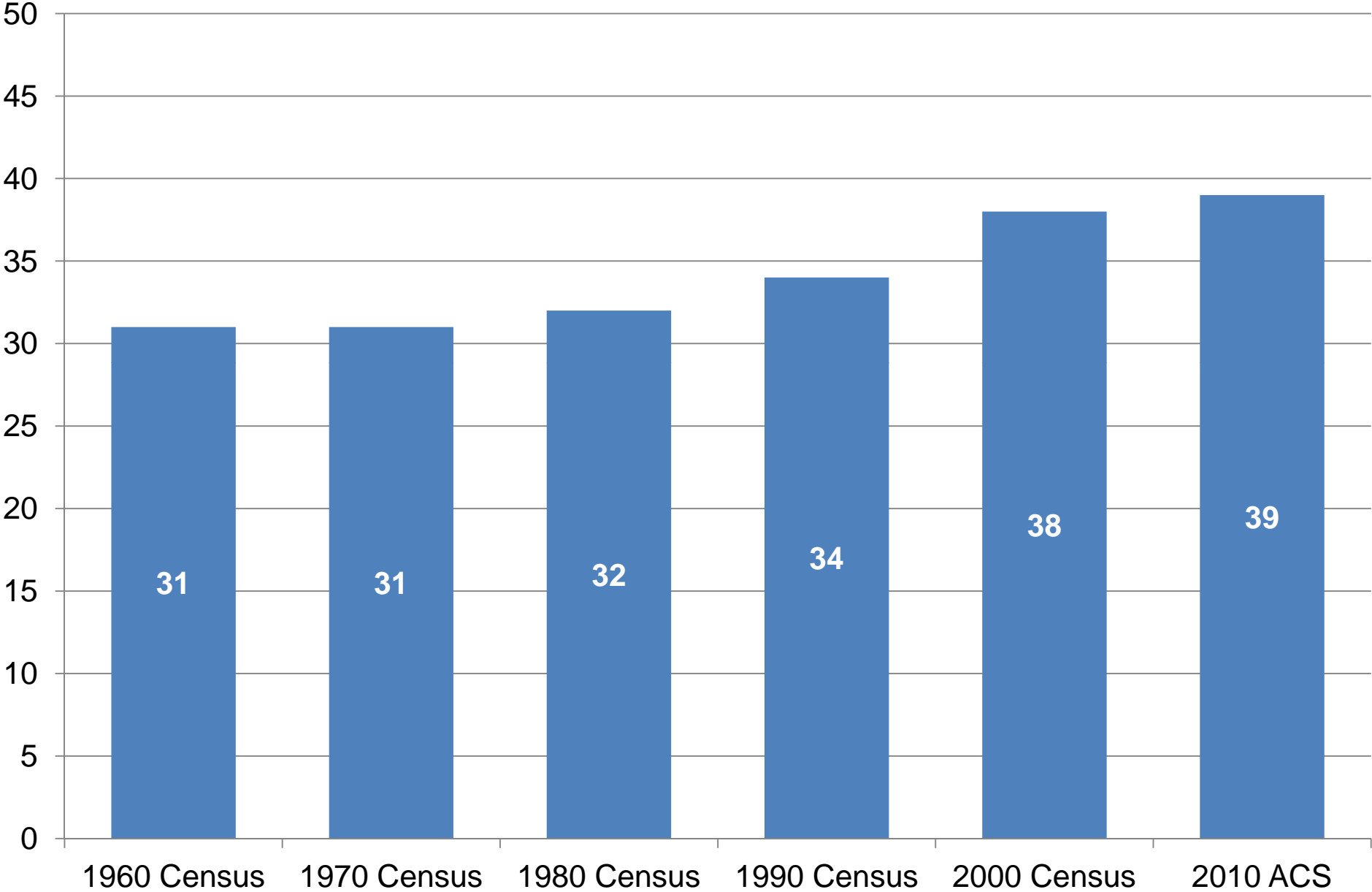


Percent of Alaskans who Applied for a PFD In the State at Age 18, And Then Again Five, Ten, And Fifteen Years Later, 1990-2010



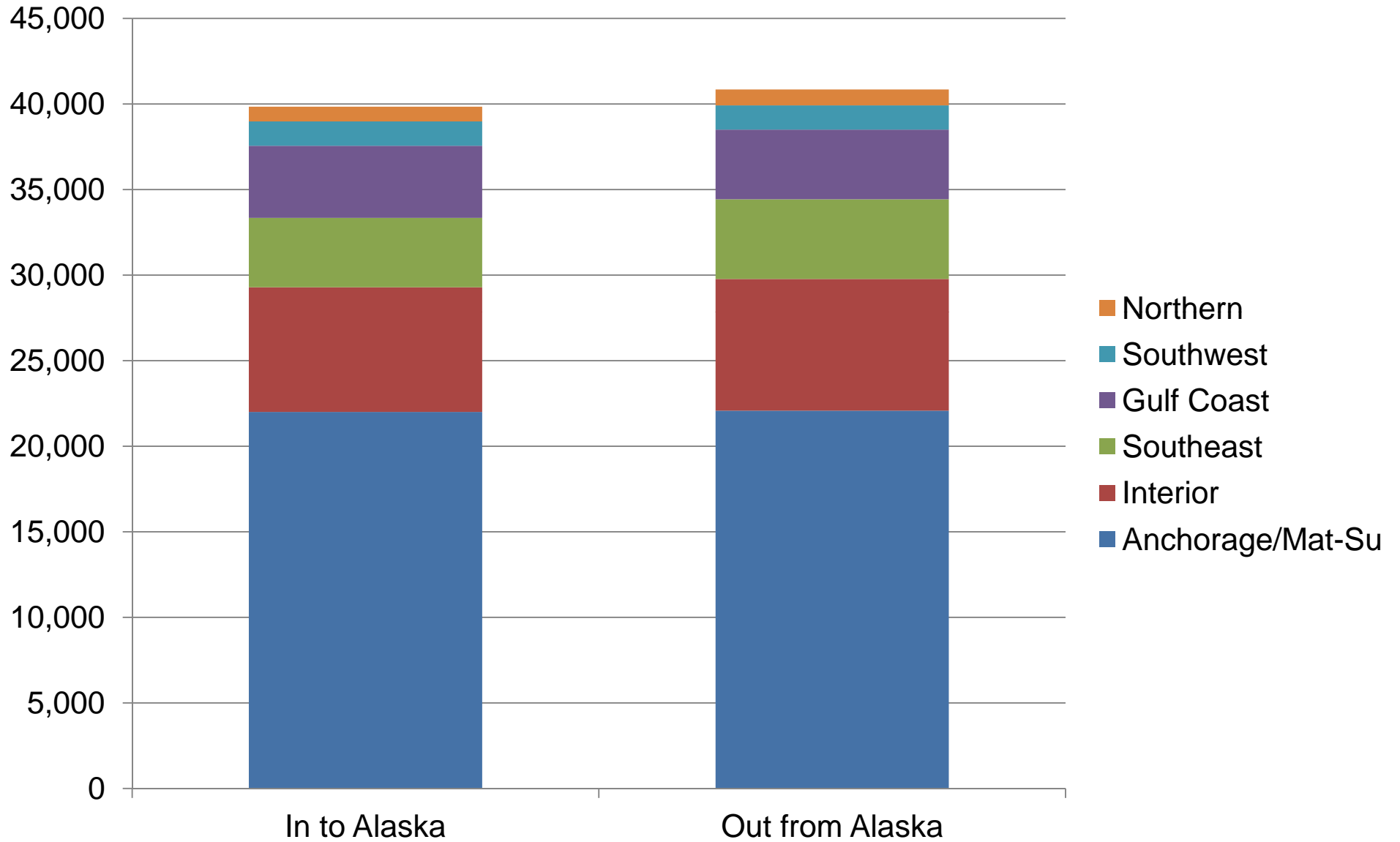
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Percent of Alaska Residents Born in Alaska

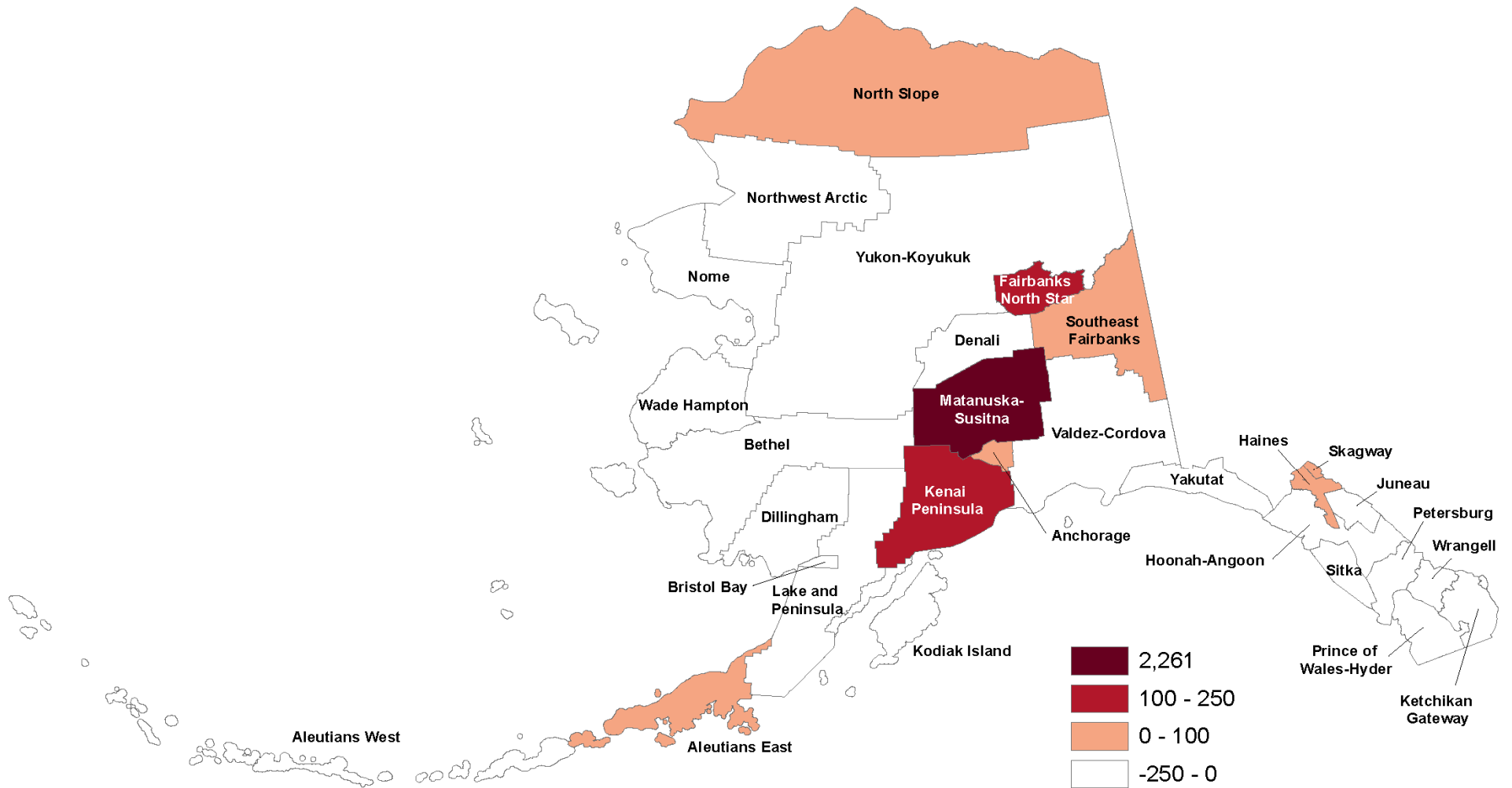


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

PFD-Based Migration To and From Alaska by Region, 2000-2010 Average Annual



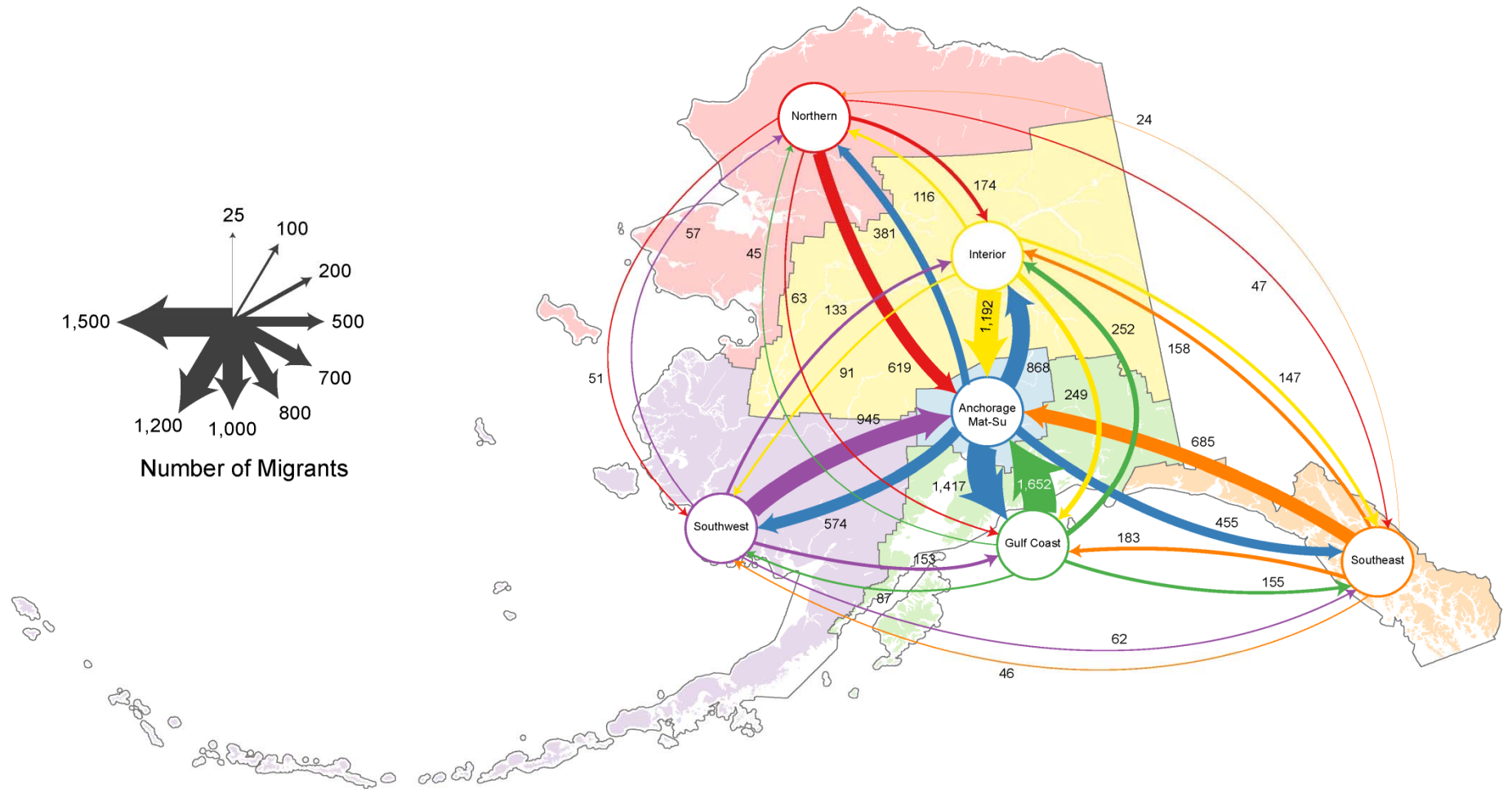
Net Migration by Borough/Census Area, 2000-2010 Average Annual



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

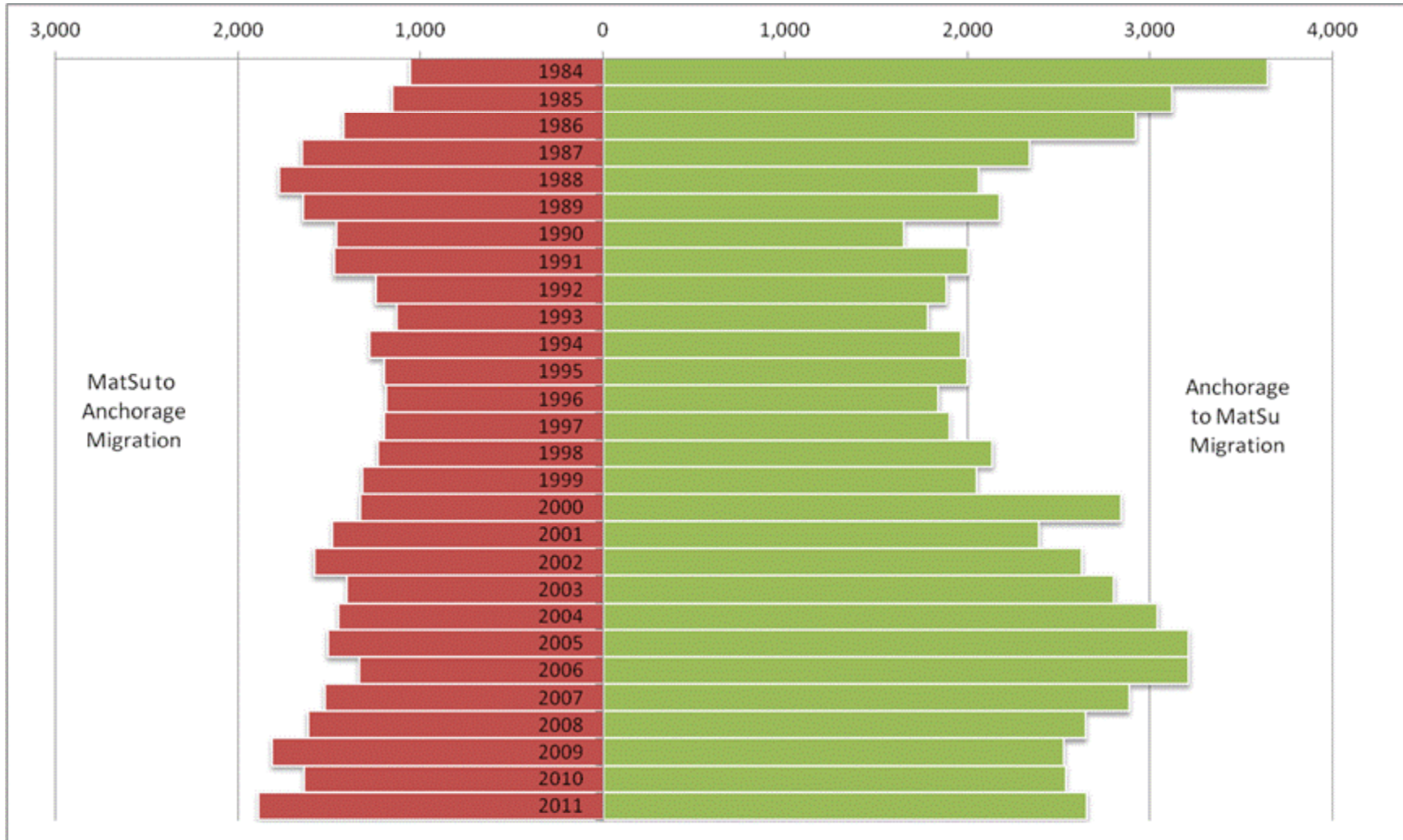
In-State Migration by Economic Region

Average Annual 2000-2010



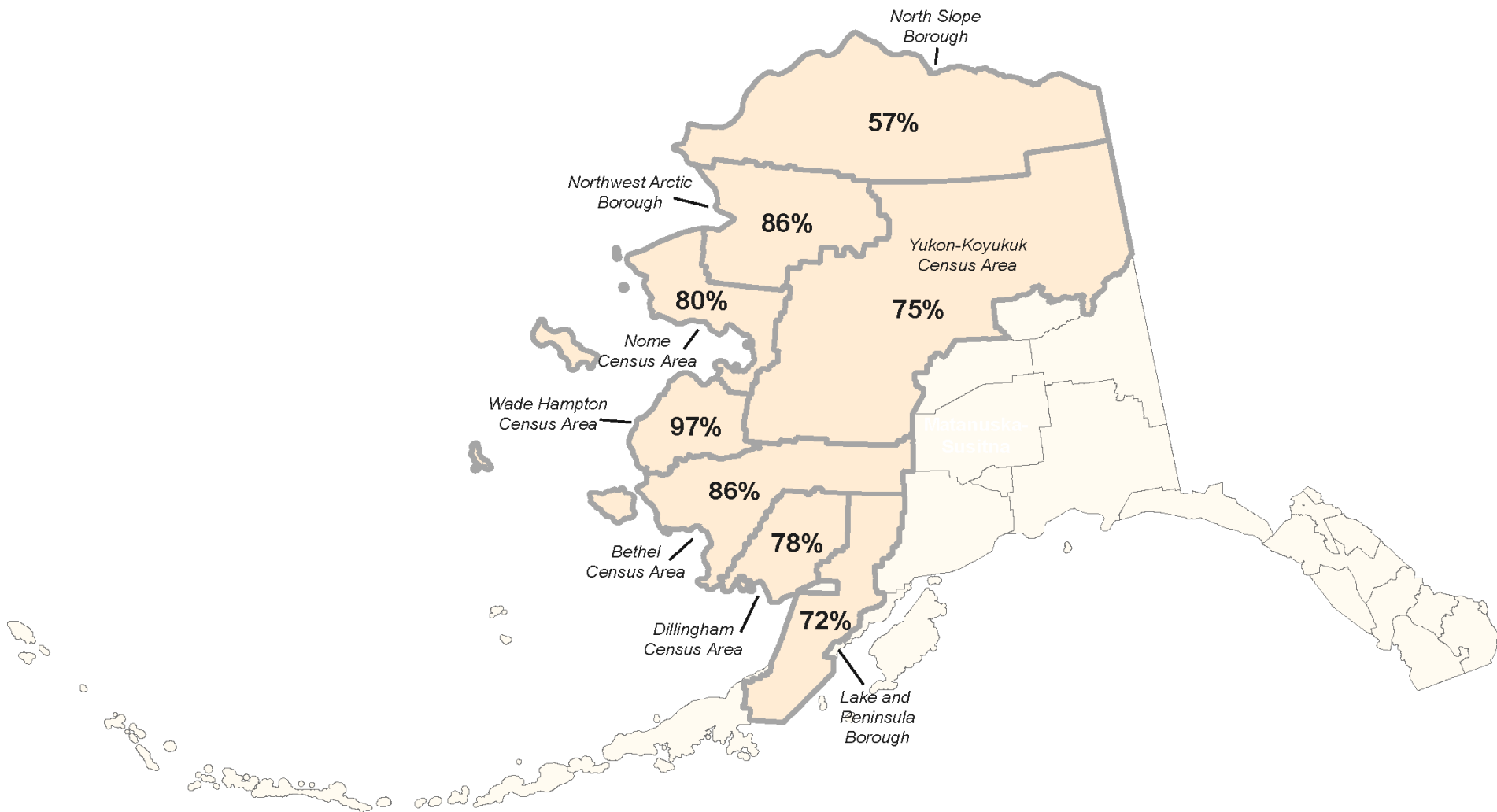
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Migration (PFD-based Anchorage and Mat-Su)



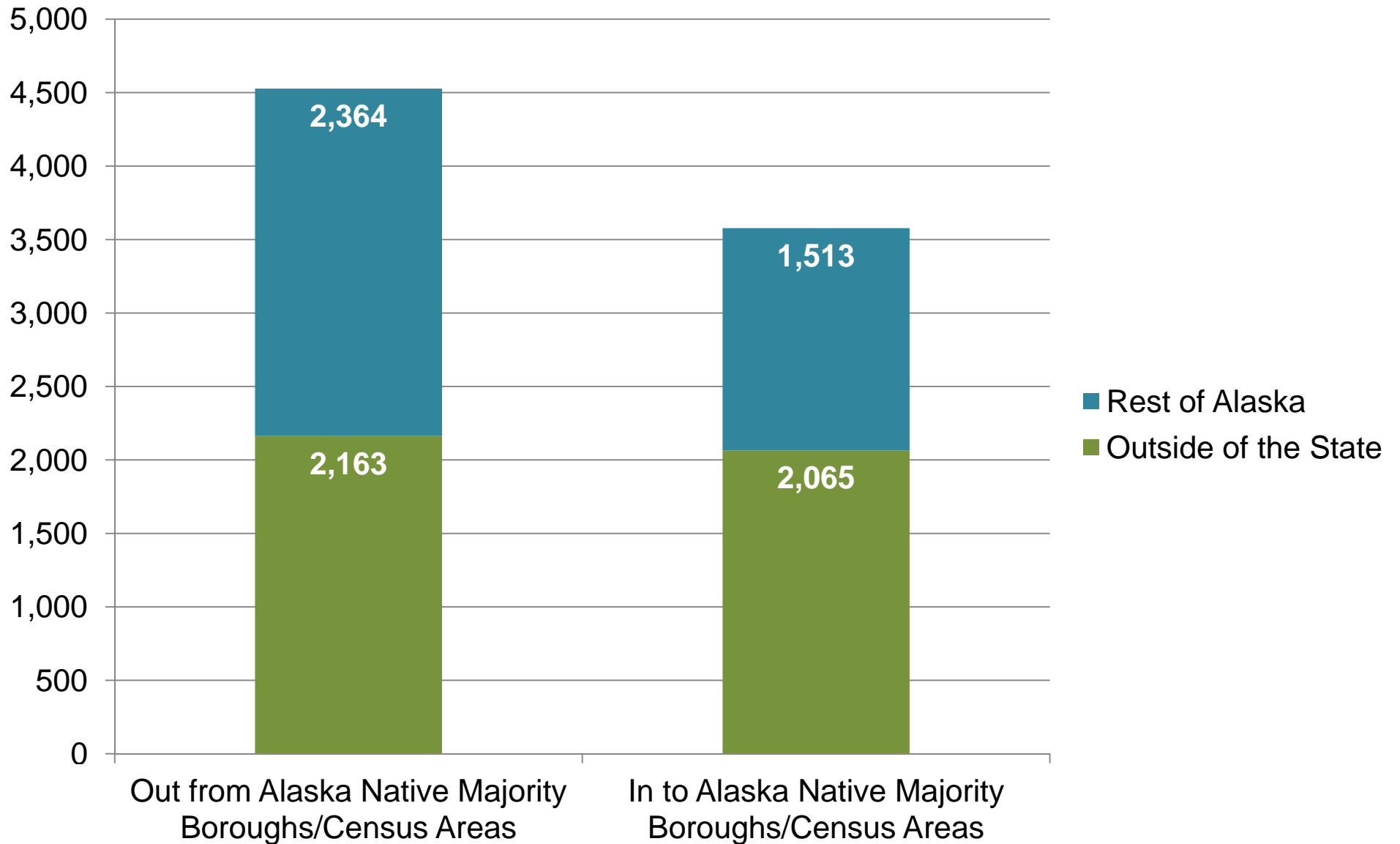
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Percent Alaska Native for Boroughs and Census Areas With More Than 50 Percent Alaska Native Population



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Census Bureau; National Center for Health Statistics

PFD-Based Migration To and From Majority Native Areas, 2000-2010 Average Annual



Migration

Thank you!

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More information:

<http://laborstats.alaska.gov/>

