

ALASKA ECONOMIC **TRENDS**

MARCH 2007

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2000 to 2006
Employment Scene
For jobs, January is the cruelest month



ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

Sarah Palin, Governor
Commissioner Click Bishop

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& WORKFORCE DEVELOPMENT

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Alaska's Dynamic Population: 670,000 and Going Strong

By Governor Sarah Palin

The U.S. Constitution mandates that an “actual Enumeration” of the nation’s population be made at least every 10 years so that “representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers.”

The first United States census was taken in 1790, under the responsibility of Secretary of State Thomas Jefferson. That census, taken by U.S. marshals on horseback, counted 3.9 million inhabitants.

Article 6 of the Alaska Constitution requires reapportionment of the state House of Representatives and the Senate after each decennial U.S. census, based on the population within each House and Senate district as reported in the census.

Besides setting legislative districts, census and other population data are used by government officials to plan for service delivery and by businesses to evaluate expansion.

The first article presented in this issue of *Alaska Economic Trends* discusses the changes in the U.S. Census Bureau’s survey methodology and the issues that have arisen with the bureau’s new approach. The second article presents an overview of the changes in community, borough and state populations between 2000 and 2006. Alaskans now number over 670,000!

As we compare Alaska’s numbers from 2000 to 2006, we can clearly see the dynamic nature of Alaska’s population. For example, the Matanuska-Susitna Borough population has grown at over four times the state’s average. Such growth places great demands on state and local government services. For business, there is the opportunity for expansion to serve a rapidly increasing customer base.

On the other hand, outside the Anchorage/Mat-Su area, there are many places that have experienced only modest growth or overall population declines. The state faces the challenge of assisting these areas in finding new economic development opportunities.

As the state plans for the economic and work force opportunities and challenges beyond the immediate horizon, we can look to these valuable population data to guide us as we plan for new state investments in schools, roads, utility services and public safety.

Alaskans are dynamic people, with the energy and capability to overcome significant environmental and economic challenges. We can strive together to make sure the Alaska of the future is one of opportunity for all Alaskans by making sound investments in economic and work force development.

The 2005 American Community Survey

By Kathryn Lizik,
Research Analyst

Proceed with caution

The American Community Survey is a new national survey conducted every month by the U.S. Census Bureau designed to provide state and local data more frequently than every 10 years. (See sidebar, below.) When the Census Bureau released the 2005 ACS data in the fall of 2006, it marked the survey's national debut as the new replacement for the long form sample data collected during decennial censuses.¹

From the earliest planning stages, the national State Data Center program and its Alaska mem-

¹ The decennial census is a count of the U.S. population conducted every 10 years by the Census Bureau in years ending in zero.

ber, the Census and Geographic Information Network,² maintained an open dialogue with the Census Bureau about the ACS, providing suggestions and feedback about many aspects of the survey.

The ACS was introduced to Alaska's data users as early as 1995 via a Census Bureau-sponsored stakeholder meeting where input was

² The national State Data Center program provides access to and education about Census Bureau products and programs. Each state has a network of affiliates – 1,800 agencies nationwide – that helps people find and use Census Bureau statistical resources. The Alaska Department of Labor and Workforce Development serves as Alaska's lead agency and houses the Census and Geographic Information Network, or CGIN, which maintains the State Data Center program for Alaska.

What is the American Community Survey?

The American Community Survey is a new approach to how the U.S. Census Bureau collects demographic, social, economic and housing information about the people in the U.S.

The national survey will replace the sample portion of the upcoming 2010 Census, as well as all future censuses, by collecting comparable statistics on a monthly basis. The increased collection frequency means state and some local data will be released every year instead of every 10 years.

An overview

The traditional decennial census has consisted of two types of questionnaires: a "short form" and a "long form." All house-

holds in 2000 received the short form, which counts the population and gathers basic characteristics. In 2010, the census short form will continue to go to all U.S. households to count the population.

The census long form is more detailed and asks numerous questions about such items as income, education, rent and mortgages, commute times to work and who speaks what languages at home. In the 2000 Census, the long form went to about 17 percent of all households.

The ACS will replace the decennial census long form. Its objective is the same as the long form's – to describe the population rather than count it. It will ask the same types of questions, but every

month instead of every 10 years. It is being sent to some 250,000 addresses in the U.S. each month.

□ □ □

To access the ACS, go to the Alaska Department of Labor and Workforce Development's Research and Analysis Section Web site at almis.labor.state.ak.us. Click on "Population & Census" on the left, and below that, click on "American Community Survey." For more background on the ACS, see Alaska Economic Trends' February 2006 issue, which is available on the Research and Analysis Web site. Click on "Pubs/Manual/Surveys/News" on the left, and below that, click on "Alaska Economic Trends." Previous issues are also available on the Department of Labor's Web site at labor.state.ak.us by clicking on the current Trends issue. People may also contact Research and Analysis at (907) 465-4500 for copies.

solicited about how such a survey could best be conducted in Alaska. As the survey evolved, and with Alaska's unique needs in mind, the state's census and population program members made recommendations about sample size, field operations, and the Master Address File and TIGER database³ from which the sample would be pulled. Despite that input, the 2005 ACS data for Alaska, which this article will discuss, has many shortcomings.

Good demographic survey data are based on sound sampling techniques, quality street and address resources that allow for full sample distribution, and high response rates that increase the robustness of the tabulation results. Unfortunately, the ACS has problems that re-

duce confidence in this release of the data for Alaska.

Problems with the ACS

One major problem that impacts the reliability of the ACS data has to do with response rates. In creating the ACS, the Census Bureau's goal was to mirror the decennial census sample data as much as possible, yet keep costs down. The agency established a sampling strategy that would produce annual tabulations for areas with more than 65,000 people, and that would be augmented by three- and five-year collections of averaged data for areas with smaller populations. In order for a statewide sample to be representative, however, it must contain adequate responses from both rural and urban areas.

The ACS was structured as a mail-out/mail-back process. This required that housing units have accurate street addresses to deliver the surveys. Even though many areas of Alaska have non-

³ The Master Address File is designed to be a complete and current list of all addresses and locations where people live or work. TIGER is an acronym for Topologically Integrated Geographic Encoding and Referencing, the digital database that identifies the type, location and name of streets, rivers, railroads and other geographic features, and geospatially defines their relationships to each other and the MAF addresses.

Comparing the Population Counts ACS 2005 versus the 2000 Census



	ACS 2005				Census 2000	
	Household Population Estimate ¹	Total Population Estimate ²	Difference Equals Group Quarters ³ Estimate ³	Percentage of Total Population in Group Quarters	Household Population	Total Population
Alaska	641,724	663,661	21,937	3.3%	607,583	626,932
Anchorage, Municipality of	266,281	275,043	8,762	3.2%	253,269	260,283
Matanuska-Susitna Borough	75,001	76,006	1,005	1.3%	58,337	59,322
Fairbanks North Star Borough	83,656	87,560	3,904	4.5%	79,760	82,840

Notes: Each annual ACS release is controlled to the Census Bureau's population estimate for that year. Two situations, however, may introduce some confusion as to what is the real or official value of a population estimate for any particular year.

The first is the practice by the Census Bureau and the Alaska Department of Labor and Workforce Development to release revised state and sub-state population estimates each year. While the estimates in the above table are those originally released for 2005 (which also makes them the controls for the 2005 ACS data), revised 2005 population estimates were released earlier this year that differ from those in the table. The revised 2005 population estimates are: statewide, 663,253; Anchorage, 277,980; Mat-Su Borough, 74,011; and Fairbanks North Star Borough, 87,608.

The second potential for confusion is that the annual state and sub-state population estimates produced by the Department of Labor may also differ from those released by the Census Bureau due to variations in the methods used.

The ACS tables will not be revised. One rule of thumb to follow: Always use the control estimate in the ACS table when using the ACS data for that year.

¹ For the 2005 ACS, a household population estimate was specially derived from the total population estimate to serve as the control.

² This is the Census Bureau's 2005 total population estimate.

³ This is the total population estimate minus the household population estimate.

Sources: U.S. Census Bureau and the Alaska Department of Labor and Workforce Development, Research and Analysis Section

2 American Community Survey

Population and housing profiles

General Demographic Characteristics
Sex and age
Race
Hispanic origin and race
Relationship
Households by type
Selected Social Characteristics
School enrollment
Educational attainment
Marital status
Fertility
Grandparents
Veteran status
Disability status
Residence one year ago
Place of birth
U.S. citizenship status
Year of U.S. entry
World region of birth of foreign born
Language spoken at home
Ancestry
Selected Economic Characteristics
Employment status
Commute to work
Occupation
Industry
Class of worker
Income and benefits
Poverty status
Selected Housing Characteristics
Housing occupancy
Units in structure
Year structure built
Number of rooms
Number of bedrooms
Housing tenure
Year householder moved into unit
Vehicles available
House heating fuel
Occupants per room
Value
Mortgage status and selected monthly owner costs
Gross rent (including gross rent as a percentage of household income)

Source: U.S. Census Bureau, American Community Survey

standard addresses where mail is not delivered, the ACS went forward with the mail-out/mail-back procedure.

Using those flawed procedures, close to 29 percent of the initial sample in 2005 was classified “unmailable,” and nearly half the state’s smaller-populated county equivalents (census areas or boroughs) had “unmailable” rates above 50 percent. To make matters worse, 21 percent of the surveys that were mailed out

were undeliverable, which is a high rate. The ACS did not have alternative means to get those surveys delivered – a standard practice for decennial censuses.

Those problems impact the data in three ways. First, the characteristics associated with the more rural areas of the state will be underrepresented. Second, the removal of these surveys makes the sample size for the 2005 data even smaller, which automatically reduces confidence in its accuracy. Third, the already marginal sample size for small places – which will depend on three- and five-year averages – may be impacted so severely that the data will not be released.

Another major factor affecting the reliability of the data is the version of the Census Bureau’s state and county population estimate series used to control the ACS responses. The Census Bureau has produced a Modified Age Race Sex, or MARS, file since 1980 to correct for shortcomings in the decennial data. These corrections are carried forward throughout the decade as part of the Census Bureau’s yearly population estimates.

According to Gregory Williams, Alaska’s state demographer, the 2000 Census had significant processing errors for forms from rural Alaska that affected detailed age data for children, yet no MARS adjustments were made to the 2000 Census age or sex data. He describes the extent of the problem:⁴

“The basic census form used in door-to-door enumeration allowed for only five household members to respond (six on the mail-out form). If the household was larger than five, persons were listed by name on the back, and a supplementary form was used for additional persons. In the processing, the private data capture contractor separated the supplementary forms and the connecting information was lost. This meant that the age of children less than 18 years of age had to be imputed⁵ for a substantial number of children based on the age distri-

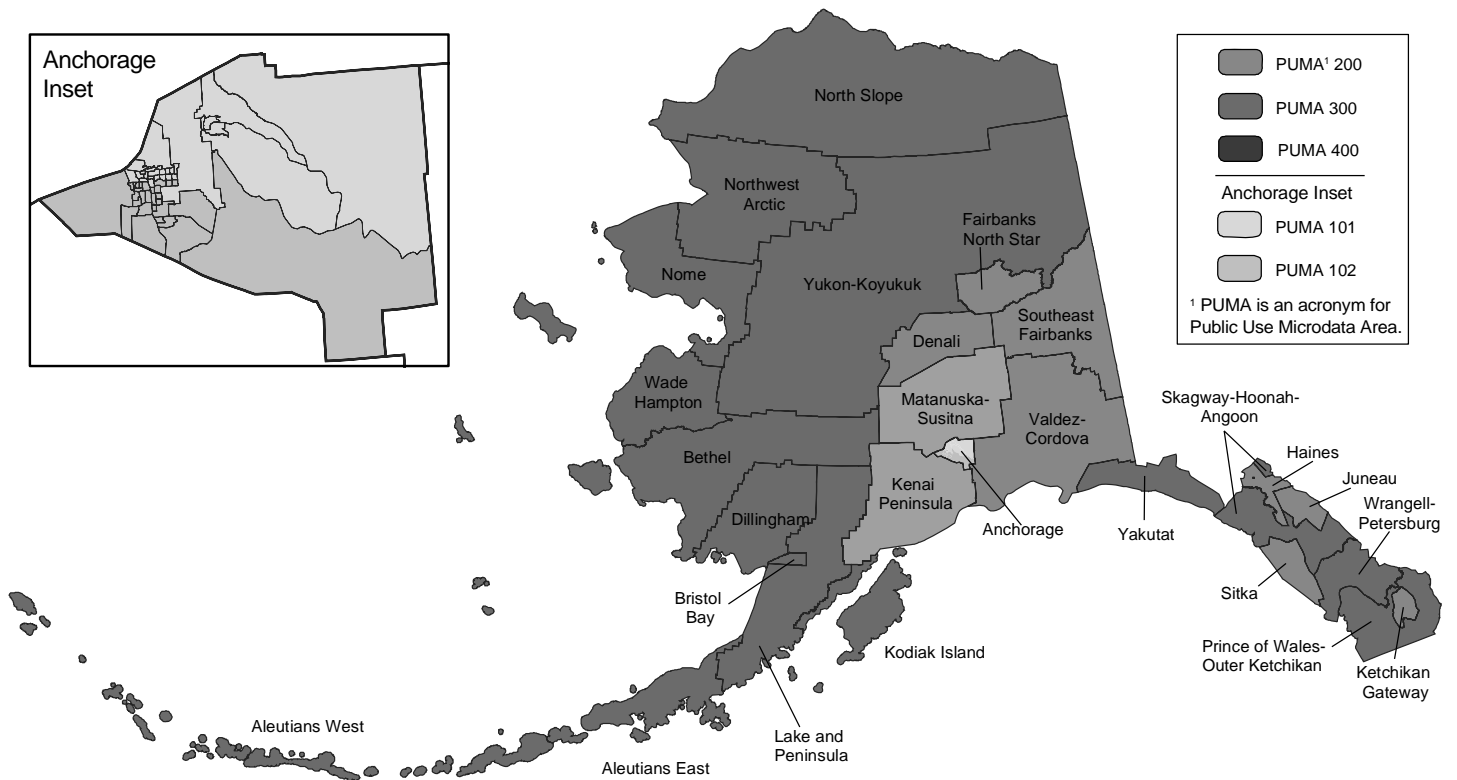
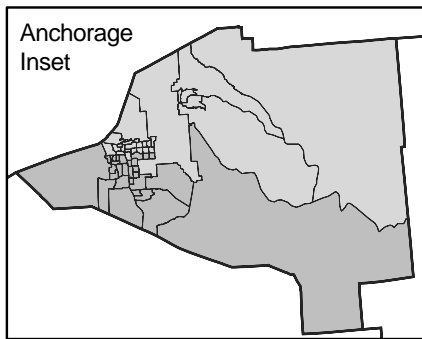
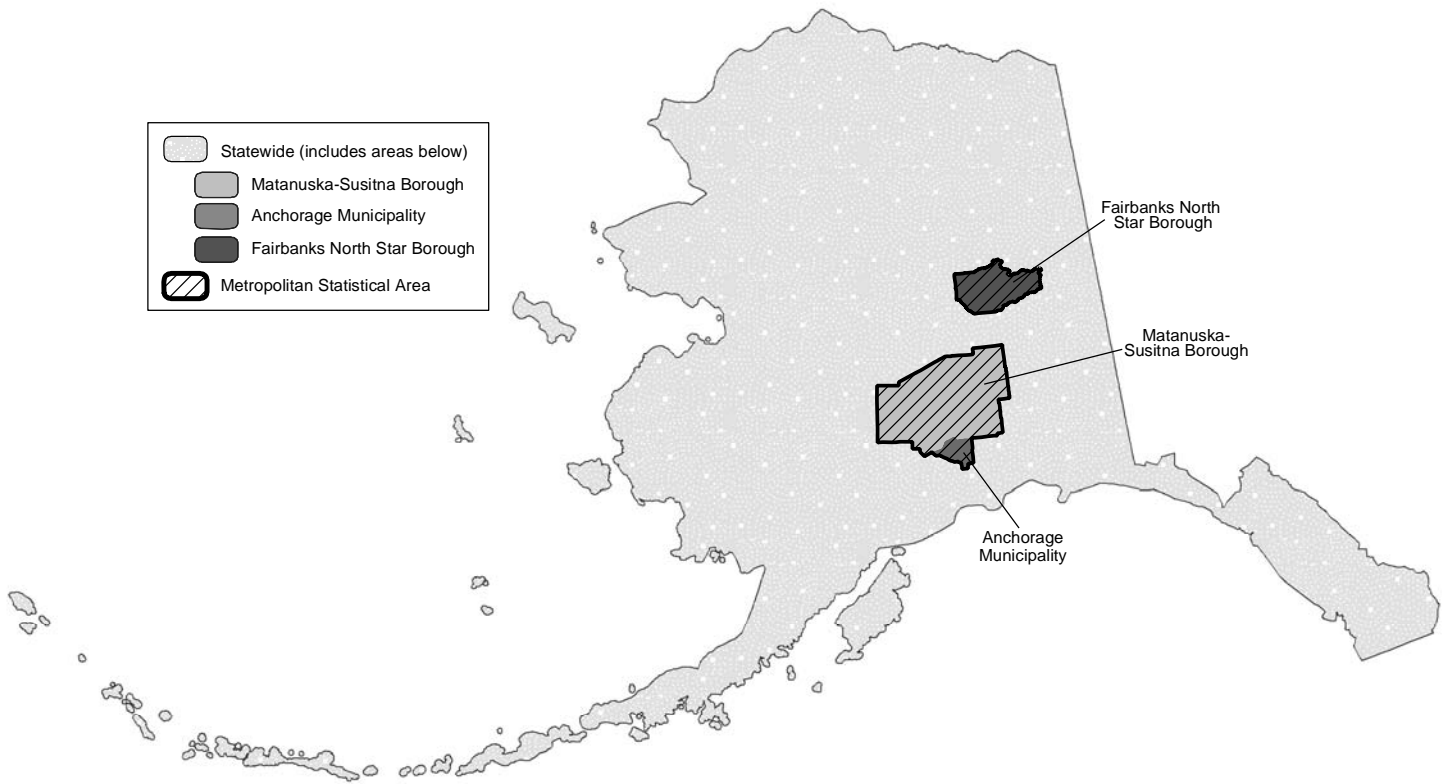
⁴ Williams’ description is from the *Alaska Population Overview: 2003-2004 Estimates*, which is available through Research and Analysis and is on its Web site at almis.labor.state.ak.us.

⁵ Imputation in statistics is the substitution of some value for a missing data point.

The American Community Survey in Alaska

Areas with more than 65,000 people

3



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and the U.S. Census Bureau

4 ACS Published 11 Areas in 2005 Alaska

The 2005 ACS for Alaska has data in only 11 areas though it may appear there are more. Many of the areas listed below are merely different Census Bureau reporting names for the same geographic area. The data will be the same under the different names. For example, the Fairbanks North Star Borough covers the same area as the Fairbanks Metropolitan Statistical Area and the Fairbanks North Star Borough School District.

It is important to know that Alaska has two metropolitan statistical areas. The first encompasses the Municipality of Anchorage and the Matanuska-Susitna Borough and the second is the Fairbanks North Star Borough.

Each numbered grouping below has the same boundaries. The headings are those used on the Census Bureau's ACS Web page:¹

1. Alaska
Alaska's Congressional District for the 109th Congress
2. Anchorage Municipality
Anchorage School District
(ACS heading) Anchorage Municipality, Anchorage Metropolitan Statistical Area
3. Fairbanks North Star Borough
Fairbanks North Star Borough School District
(ACS heading) Fairbanks North Star Borough Metropolitan Statistical Area
(ACS heading) Alaska; in metropolitan statistical area or micropolitan statistical area – Fairbanks Metropolitan Statistical Area
4. Matanuska-Susitna Borough
Matanuska-Susitna Borough School District
5. Anchorage Metropolitan Statistical Area (includes the Matanuska-Susitna Borough)
(ACS heading) Alaska; in metropolitan statistical area or micropolitan statistical area – Anchorage Metropolitan Statistical Area
(ACS heading) Alaska; in metropolitan statistical area
6. Anchorage Urbanized Area
7. Public Use Microdata Area 101
8. Public Use Microdata Area 102
9. Public Use Microdata Area 200
10. Public Use Microdata Area 300
11. Public Use Microdata Area 400

The following reporting areas do not have profiles or reports. Limited data for these areas are available on the Census Bureau's Geographic Comparison Tables Web site at <http://factfinder.census.gov>. Click on "Data Sets" on the left, and below that, "American Community Survey." Then click on "Geographic Comparison Tables" on the right, select "State," then "Alaska." After that, select a table format and finally a table.

12. Alaska; in metropolitan statistical area – not in principal city (Anchorage is the principal city, so this is the Mat-Su and Fairbanks North Star boroughs.)
13. Alaska; not in metropolitan statistical area or micropolitan statistical area (This is the area outside the Anchorage Municipality, Mat-Su Borough and Fairbanks North Star Borough, plus the micropolitan statistical areas of the Juneau, Ketchikan Gateway and Kodiak Island boroughs.)
14. Alaska; rural
15. Alaska; urban

¹ To go to the Census Bureau's ACS Web page, go to <http://factfinder.census.gov> and, under "American Community Survey" in the middle, click on "get data."

Source: U.S. Census Bureau

bution of similar households by a method statisticians refer to as a 'hot deck.' This method assumed that people listed their children on the census form in random order, rather than sequentially. In fact, most people tend to list their children in age order.

"As a result, a large number of the children whose ages had to be imputed were very young, rather than the expected normal distribution by age of children under 18. The result was that for parts of rural Alaska that have large households, the census reported too many children ages 10 to 17 and too few children from birth to age nine. Ten census areas had errors of at least 6 percent. In some areas the problem was severe. In Wade Hampton, 16 percent of the children were estimated to have misreported ages and Bethel had almost 15 percent."

Therefore, while data for children under 18 as a whole should be accurate, data for children by more detailed age groups may be inaccurate. This age issue will affect the accuracy of ACS data as well.

These issues, along with several others that will be discussed later, put us at the State Data Center program in an awkward position. The 2005 ACS release has been touted as the first official set of ACS products, kicking off the beginning of a new method of data collection in America. A considerable share of the State Data Center federal-state cooperative responsibilities includes assisting Alaska's data users to find and use census data. Since we have concerns about the quality of the numbers, the SDC will instead focus on educating data users how best to navigate and evaluate the use of the data.

ACS is limited to households

The ACS was designed to be a complete population survey, but, due to federal funding and other operations-related issues, the 2005 ACS was limited to only households. That means a sizeable chunk of the population was excluded – the people living in group quarters, such as those in dormitories, nursing homes, prisons and military barracks. Therefore, the ACS "Total Population"

as it is labeled in the ACS tables, is really “Total Population in Households.”

That limitation makes it difficult to cite trends comparing 2005 ACS data (households only) to the 2000 Census data (the entire population), as the different survey universes must always be taken into account. (See Exhibit 1.)

The dependability

Changes in who is included in a survey also affect the dependability of the data series. In order for a data set to be used over time, it should ask the same questions of the same population universe. A series, such as the ACS, is weakened when a stable universe is at the mercy of annual funding changes or reductions.

It might not be as critical with a data set that can stand alone on a year’s worth of survey results, but the ACS is modeled on averages of three- or five-year groupings in order to produce estimates for smaller population-sized entities. It is not clear as of this writing how the loss of group quarters data for 2005 will affect the first releases of three- or five-year averaged data in 2008 and 2010, respectively.

What was released?

Throughout the late summer and fall of 2006, the Census Bureau released demographic, social, economic and housing data both for Alaska as a whole and areas with more than 65,000 people. (See Exhibit 2.) That included the state’s three largest boroughs – Anchorage, Fairbanks North Star and Matanuska-Susitna – and five statistical areas called Public Use Microdata Areas, or PUMAs⁶. (See Exhibits 3 and 4.)

Comparing the 2005 ACS to the Census 2000

The first thing most data users want to do is to

⁶ The PUMAs, or Public Use Microdata Areas, are groupings of census areas and boroughs – each grouping has roughly 100,000 people – for which census microdata is available. The microdata are files of actual survey records with the identifying information removed that allow experienced users to evaluate a broader range of topics. The PUMAs are redefined every 10 years through a cooperative program between the Census Bureau and the states.

compare ACS information to 2000 Census data. Is it a legitimate comparison? In some instances, the comparison may be legitimate; in others, it probably is not. A data user should consider three factors when interpreting survey or census results – the target population, the time period the estimates describe and the reference periods covered by the specific questions.

The target population

Aside from the fact that the 2005 ACS looked at only the household population and the 2000 Census looked at the whole population, the two also have different residence rules.

In the ACS, people are counted at the sample address if they are living or staying there at the time of the survey and their expected length of stay will exceed two months. The survey also includes people who have stayed at the address less than two months but have no other place to live or stay, as well as people who usually live at the address but are away for two months or less when the household is contacted.

In contrast, the 2000 Census counted the usual place of residence as where the person lived most of the year. College students were counted at their college address.

Both the 2005 ACS and the 2000 Census interviewed people living in the U.S. without regard to their legal residency status or citizenship.

The time period the estimates describe

The 2005 ACS and 2000 Census described two different types of time periods. The 2005 ACS produced period estimates that describe the housing and population characteristics of an area over a set time frame – from January 2005 to December 2005. It collected survey information continuously nearly every day during that year and aggregated the results over the year.

The 2000 Census, in contrast, is a point-in-time survey that counted the population and housing on a specific date – April 1, 2000.

5 Comparison Issues 2000 Census and 2005 ACS

Demographic Characteristics
Age – The concept is comparable but the 2000 Census reported age as of April 1, 2000. The ACS reported age as of the survey month.
Household relationship – Comparable though some categories are different. The 2000 Census distinguished between natural-born, adopted and stepchildren while the 2005 ACS had only one category, “son or daughter.”
Social Characteristics
School enrollment – The concept is comparable but the reference periods are different: for the census it was April 1, 2000, while for the ACS it was the survey month. The exclusion of the group quarters’ population in the ACS may also affect this number.
Fertility – Fertility was not included in the 2000 Census.
Disability – Not comparable because the question was redesigned. The 2005 ACS also lacks the group quarters’ population, including the non-institutional segment.
Residence one year ago – Not comparable because the 2000 Census question asked about residence five years prior to completing the questionnaire.
Economic Characteristics
Employment status – Not Comparable. The concept is similar in that both the 2000 Census and the 2005 ACS asked for employment status as of “last week.” In the census, however, the reference week was the last week in March, whereas the ACS reflected an annual average collected throughout the year.
Income – Not comparable, even though the concepts are similar, due to differences in the data collection time periods in the 2005 ACS versus the decennial census; adjustments for inflation in the ACS data; accuracy of the respondents’ answers; and the rates of imputation when the Census Bureau was unable to get answers to these questions.
Per capita and aggregate incomes – Not comparable. Although the concepts are comparable, the 2005 ACS excluded the incomes of people living in noninstitutional group quarters (such as college dormitories and military barracks) and used the household population as the base; the 2000 Census included these incomes and used the total population as the base.
Poverty status – Not comparable. Poverty status is subject to the same problems described under income. Additionally, poverty status in the 2000 Census referred to calendar year 1999. In the 2005 ACS, poverty status referred to the 12 months prior to completing the questionnaire. The difference in residency rules can also affect the number of people in a family – changing the poverty threshold for that family – but it might not have much of an effect on the family’s income.
Housing Characteristics
Owner-occupied versus specified owner-occupied – Not comparable. Tabulations of value, owner costs, mortgage status and costs as a percentage of income in the 2000 Census used “Specified Owner-Occupied” units as a base, which excludes mobile homes, housing units in multi-unit buildings and others. The 2005 ACS used all owner-occupied units, a better, more inclusive universe.
Mortgage status – Not comparable because of the change in universe from specified units to all units. The mortgage status was also impacted by different residency rules and the ACS picking up seasonality.
Vacancy status – Comparable concept though definitely impacted by residency rules and ACS picking up seasonality.
Note: For additional comparisons, go to Research and Analysis’ Web site at almis.labor.state.ak.us . Click on “Population & Census” on the left, and below that, click on “American Community Survey.” Then, under the reference documents heading at the bottom of the page, click on “2005 ACS Comparability to 2000 Census.” <i>Source: State Data Center program</i>

The time period specific questions reference

Most ACS questions do not stipulate a reference period, and when that is the case, the reference period is the interview date. Some examples include questions about tenure, citi-

zenship, marital status, relationship and veteran status.

Other questions specify a period of time, such as “last week” or “in the last three months,” relative to the date of interview. Examples include questions that ask about the place of work, employment status, cost of electricity and school enrollment. These estimates are still interpreted as yearly averages, but the averages cover a slightly different time period than the calendar year. For example, school enrollment asks if the person attended school or college in the last three months. The overall reference period for the 2005 ACS estimates was therefore the entire 2005 calendar year plus the last few months of 2004.

The 2000 Census, in comparison, collected most responses specific to the census date of April 1, 2000, or for the previous week or calendar year. Regardless of when the questionnaire was filled out, most, if not all responses corresponded to the exact same reference period.

Many times, because the reference periods are so different between the 2005 ACS and the 2000 Census, they are not comparable. For example, on income questions, the ACS asks about income in the previous 12 months and the census asks about income in the previous calendar year.

Although the ACS gets adjusted for inflation, Census Bureau test results have shown evidence that income reported with the ACS version of the question is consistently lower (about 4.4 percent nationwide). The bottom line is that

users should exercise caution – meaning they should probably not do it – when trying to do trend analysis for income or poverty measures using the decennial census versus ACS data.

See Exhibit 5 for other comparisons between the two surveys.

Ways to determine data accuracy

It is critical to understand confidence intervals and margins of error to fully understand the ACS. In fact, the Census Bureau promotes the use of these measures of reliability so vigorously that it includes margins of error for every data estimate.

Sampling error

Sampling error occurs when a survey produces estimates of the whole population by collecting data from only a portion of the population. Since the ACS is based on a sample of the population, the estimates contain sampling error. The sampling error is reduced as the sample size increases. The decennial long form estimates had a smaller sampling error than the 2005 ACS because the census long form sample was much larger than the 2005 ACS sample.

Two related measures of sampling error are standard error and margin of error.

Standard error

The standard error measures the variability of an estimate due to sampling and depends on the sample size. In general, the larger the sample size, the smaller the standard error. Conversely, the smaller the sample, the larger the standard error.

Margin of error

The term margin of error, or MOE, is used to measure the uncertainty associated with estimates based on a survey. The margin of error describes the precision of the estimate at a given level of confidence. The confidence level measures the likelihood that the true value is within a certain distance of the results of a sample estimate.

Instead of providing the upper and lower confidence bounds as was done in pre-2005 ACS tables, the published 2005 ACS tables use the margin of error. The margin of error is the difference between an estimate and its upper or lower confidence bound. Both the confidence bounds and the standard error can easily be computed from the margin of error. All ACS-

published margins of error are based on a 90 percent confidence level.

$$\text{Standard Error} = \text{Margin of Error} / 1.65$$

$$\text{Lower Confidence Bound} = \text{Estimate} - \text{Margin of Error}$$

$$\text{Upper Confidence Bound} = \text{Estimate} + \text{Margin of Error}$$

The following is an example of how ACS data are displayed in most tables. To make use of the margin of error, one would say that with 90 percent confidence, the interval 323,808 – 327,590 contains the true number of males in households in Alaska in 2005:

Table A. Example of Margins of Error – Sex

Subject: Male

Estimate: 325,699

Margin of Error: +/- 1,891

In general, larger samples are more likely to yield results closer to the target population quantity and therefore have smaller margins of error than smaller samples. Small population group estimates typically have relatively large margins of error. Another example from the Alaska ACS tables bears this out:

Table B. Example of Margins of Error – House Heating Fuel

Subject: Solar Energy

Estimate: 142

Margin of Error: +/- 138

In this case, the interval 4 – 280 contains, with 90 percent confidence, the number of houses that heat with solar energy. The farther apart the confidence intervals, the greater the uncertainty about the estimate.

When constructing confidence bounds from the margin of error, the user should be aware of any natural limits on the bounds. For example, if a population estimate is near zero, the calculated value of the lower confidence bound may be negative. Negative values for most characteristics, however, are not admissible, so the lower limit of the confidence interval is set to zero by default.

Total household population will not display a margin of error, as it is fixed to the population estimate used as a control during weighting. In this case, an ACS table will instead show a series of asterisks in place of the margin of error.

Other data values that may be found in the ACS tables include an N, which indicates an estimate or its margin of error cannot be provided because the number of sample cases is too small for the given geographic area. An X denotes the estimate is not applicable or available. A Z means an estimate is not available for an undefined reason. And a dash indicates that no sample observations were available to compute an estimate, or a ratio of medians could not be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

Applying statistical testing to ACS data

Users should do a statistical test to determine if two estimates are statistically different from each other. Two estimates are “significantly different” at the 90 percent confidence level if the difference between them is large enough to infer that there is less than a 10 percent chance that the difference is purely random.

For example, if you want to say:

- Estimate X is bigger than estimate Y;
- Estimate X this year is larger than estimate X last year;
- Estimate X is smaller than that value in the Census 2000;
- State Z has the highest value of this characteristic;

or any similar statement, you need to first do the appropriate statistical test.

The first step is to calculate the standard error of the difference. The second step is to calculate the margin of error of the difference. Finally, the original difference between the estimates is compared to the margin of error of that difference. If the difference is greater than the margin of error, then you conclude that the two estimates are significantly different. If the difference is less

than the margin of error, you conclude that the two estimates are not significantly different.

The following example will show how to conduct a statistical test. Suppose you want to know if the proportion of owner-occupied housing units in one geographic area (the Anchorage Municipality) is significantly different from the proportion in another geographic area (the Mat-Su Borough). Table C shows the estimates and margins of error for the two geographic areas:

Table C. Example of Statistical Testing: The Proportion of Owner-Occupied Housing Units

Geographic Area	Estimate (Percentage of the Total)	Margin of Error
Anchorage	65.9	+/-2.4
Mat-Su	82.9	+/-4.1

To calculate the standard error, or SE, of the difference, you must calculate the standard error for each estimate. For margins of error calculated at the 90 percent confidence level, the standard error for each estimate is defined as the margin of error divided by 1.65.

$$SE(estimate) = \frac{MOE(estimate)}{1.65}$$

$$SE(Mat - Su) = \frac{4.1}{1.65} = 2.48$$

$$SE(Anch) = \frac{2.4}{1.65} = 1.45$$

The standard error of the difference is the square root of the sum of the squares of the two standard errors (assuming the estimates are uncorrelated). The standard error of the difference for this example is equal to 2.88, as shown below:

$$SE(Diff) = \sqrt{SE(Mat - Su)^2 + SE(Anch)^2}$$

$$SE(Diff) = \sqrt{2.48^2 + 1.45^2} = 2.88$$

To calculate the margin of error of the difference, simply multiply the standard error of the difference by 1.65:

$$MOE(Diff) = 1.65 \times SE(Diff)$$

$$MOE(Diff) = 1.65 \times 2.88 = 4.75\%$$

Finally, compare the difference of the estimates to the margin of error of the difference.

$$Diff = 82.9 - 65.9 = 17.0\%$$

$$MOE(Diff) = 4.75\%$$

The difference between the estimates is greater than the margin of error of the difference.

Therefore, one can conclude that the two estimates are significantly different with 90 percent confidence.

In conclusion

The ACS in a perfect world would provide robust and timely data unfettered by sampling issues, survey procedures or large confidence intervals. While the availability of comprehensive information for Alaska, more current than every 10 years, is a positive goal, the ACS data is not of the same quality as the decennial census data and cannot be used as freely.

Data users across the country are experiencing similar problems and concerns. Most acknowl-

edge that the newness of the series has both the producers and users caught up in a steep learning curve. One improvement for 2006 is that group quarters were reinstated in the full sample, and will hopefully remain entrenched as an integral part of future surveys.

Another improvement most users would like to see is an increase in the ACS sample size, but they realize the increase would mean a sizeable budget increase as well.

The ACS is a new approach to providing critical information about the nation's people. Only time will tell how successful it is in meeting that objective.

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Volumes have been written that define and explain the wide variety of topics that surround the ACS methodology and data. For a list of reference documents, go to Research and Analysis' Web site at almis.labor.state.ak.us. Click on "Population & Census" on the left, and below that, click on "American Community Survey." The reference documents are listed on the bottom of the page.

Trends Authors



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Photo unavailable

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Statewide, borough and place populations for 2000 to 2006

Alaska's statewide population increased by 6.6 percent, or 42,520 people, from July 1, 2000, to July 1, 2006. That brought the newest statewide population estimate for Alaska to 670,520, based on estimates the U.S. Census Bureau released in December. Alaska's population gain was slightly faster than the nation's 5.9 percent growth rate for the same period. (See Exhibits 2 and 3.)

The Alaska Department of Labor and Workforce Development starts with the Census Bureau's annual estimates at the state level and decennial census numbers, then creates its own estimates for a detailed count of Alaska's population. It uses various indicators of population change and characteristics, including Permanent Fund Divi-

dend applications, military and other surveys, and birth and death statistics.

The State of Alaska

Alaska's population grew an average of 1.0 percent a year during the 2000-2006 period and 1.1 percent over the 2005-2006 period (July 1, 2005, to July 1, 2006). Alaska is still 47th in terms of population, larger than North Dakota, Vermont, the District of Columbia and Wyoming.

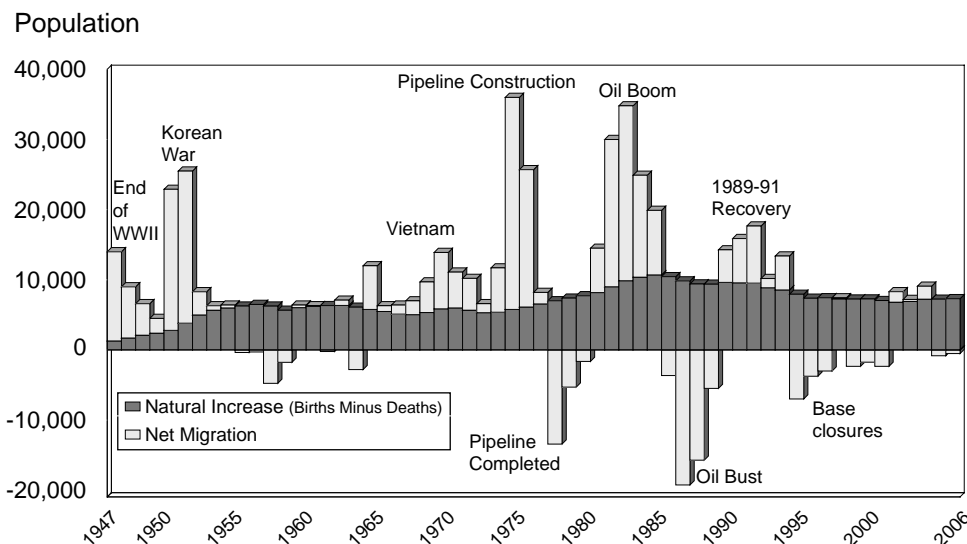
Population change is made up of two components: natural increase (births minus deaths) and net migration (in-migration minus out-migration).

Currently, growth in Alaska as a whole is primarily through natural increase. The state's natural increase added 42,571 people during the 2000-2006 period, and net migration accounted for a loss of 51 people. During the 2005-2006 period, Alaska added 7,310 people through natural increase and lost 510 people to out-migration.

Alaska now adds about 7,300 people a year from natural increase. (See Exhibit 1.) That's a change from the early 1990s, when natural increase added an additional 9,600 people a year. The change is due to a gradual decline in fertility and a gradual increase in mortality, both of which are linked to an aging population.

About 35,000 people migrate to and from Alaska each year and the in- and out-migration tends to be

1 Components of Population Change Alaska, 1947 to 2006



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

Annual Components of Population Change 2

Alaska, 1990 to 2006

nearly equal. Alaska's net migration for the 2000-2006 period breaks down into a gain of 4,165 international migrants and a loss of 4,216 domestic migrants. For the 2005-2006 period, the state's net migration breaks down into a gain of 1,612 international migrants and a loss of 2,122 domestic migrants.

It's important to note that, because these estimates are for resident population, troops deployed overseas are counted as being in Alaska. That means the populations for the Municipality of Anchorage and Fairbanks North Star Borough, where Alaska's main military bases are located, or other communities with a substantial National Guard presence, may be somewhat lower than the estimate depending on the current movement of military and National Guard personnel.

Boroughs and census areas

Alaska Department of Labor population estimates have also been released for Alaska's 27 boroughs and census areas,¹ and 347 occupied places throughout the state. (See Exhibits 5 and 6²).

Most of Alaska's boroughs and census areas have grown slowly or lost population between the April 1, 2000, Census and July 1, 2006. (The references to the 2000-2006 period in the rest of the article refer to the April 1, 2000, to July 1, 2006, period.) The largest population increases occurred in the Municipality of Anchorage (+22,530), Matanuska-Susitna Bor-

ough (+17,852), Fairbanks North Star Borough (+5,009), Kenai Peninsula Borough (+1,659), Bethel Census Area (+985), Southeast Fairbanks Census Area (+598) and Wade Hampton Census Area (+525).

Of the 27 boroughs and census areas, only nine gained population in the 2000-2006 period, and 81 percent of that growth was in both the Municipality of Anchorage (45 percent) and the Mat-Su Borough (36 percent). The growth in both areas was due to a mix of natural increase and migration.

The Mat-Su Borough is still the fastest-growing area of the state, as it has been since 1990. It grew at a 4.2 percent average annual rate during the 2000-2006 period, which is comparable to its 4.0 percent annual growth rate during the 1990s. The Municipality of Anchorage, in comparison, grew an average 1.3 percent a year during the six-year period.

A substantial part of migration to Anchorage (a net gain of 3,435 people) came from other parts of Alaska during the six-year period.

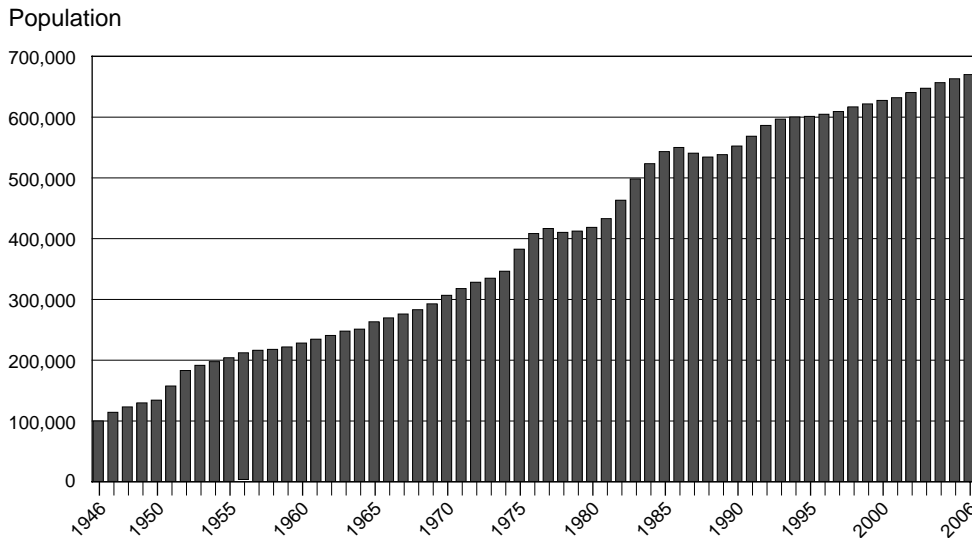
July 1 to June 30	End of Period Population	Population Change	Average Annual Rate of Change	Components of Change				Net International Migrants ¹	Net Internal Migrants ²
				Births	Deaths	Natural Increase	Net Migrants		
1990	553,171								
1990-91	569,054	15,883	2.83	11,798	2,225	9,573	6,310		
1991-92	586,722	17,668	3.06	11,744	2,214	9,530	8,138		
1992-93	596,906	10,184	1.72	11,347	2,477	8,870	1,314		
1993-94	600,622	3,716	0.62	10,978	2,422	8,556	-4,840		
1994-95	601,581	959	0.16	10,439	2,500	7,939	-6,980		
1995-96	605,212	3,631	0.60	10,079	2,707	7,372	-3,741		
1996-97	609,655	4,443	0.73	10,018	2,574	7,444	-3,001		
1997-98	617,082	7,427	1.21	9,924	2,642	7,282	145		
1998-99	622,000	4,918	0.79	9,864	2,609	7,255	-2,337		
1999-00	627,533	5,533	0.89	10,102	2,829	7,273	-1,740		
2000-01	632,241	4,708	0.75	9,980	2,934	7,046	-2,338	1,058	-3,396
2001-02	640,544	8,303	1.30	9,892	3,075	6,817	1,486	169	1,317
2002-03	647,747	7,203	1.12	10,025	3,107	6,918	285	-1,728	2,013
2003-04	656,834	9,087	1.39	10,301	3,060	7,241	1,846	2,266	-420
2004-05	663,253	6,419	0.97	10,351	3,112	7,239	-820	788	-1,608
2005-06 ³	670,053	6,800	1.02	10,258	2,948	7,310	-510	1,612	-2,122

¹ Immigrants from outside the U.S.
² Migrants to or from other U.S. states
³ Provisional estimate
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit; and the U.S. Census Bureau

¹ Alaska is made up of 16 organized boroughs and 11 census areas (county or borough equivalents).

² Exhibit 6 shows population estimates for 35 of the state's 347 places. See Research and Analysis' Web site for estimates for the others. (The Web site address and directions are listed in italics at the end of this article.)

3 Alaska Population Trends 1946 to 2006



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit, and the U.S. Census Bureau

The Mat-Su Borough was the only area of the state where growth came primarily from net in-migration – 79 percent of the borough’s population increase in the 2000-2006 period (14,015 out of an increase of 17,852). Most of the people who moved to the Mat-Su Borough came from the Municipality of Anchorage.

The Mat-Su Borough, Municipality of Anchorage and Southeast Fairbanks Census Area were the only areas in the state where in-migration exceeded out-migration during the 2000-2006 period.

In the more recent 2005-2006 period, 63 percent of Anchorage’s population increase was from natural increase (3,048 people, versus 1,785 from migration), and 75 percent of the Mat-Su Borough’s population increase was due to migration (2,396 people, versus 767 due to natural increase).

All other boroughs and census areas lost population to out-migration between 2000 and 2006.

The Southeast region continued to have the largest overall decline, with a natural increase of 3,105 people and a net out-migration of 6,134 people. No area of Southeast had long-term growth over the six years.

In the 2005-2006 period, only the Haines Borough (+35) and Ketchikan Gateway Borough (+59) had slight gains. In all Southeast areas, with the exception of Haines, net out-migration was greater than natural increase.

As far as Southwest Alaska, migration out of the region in the 2000-2006 period (-3,718) was less than the natural increase (+3,929). A large part of Southwest’s loss was accounted for by the Bethel Census Area. In every other area of Southwest, out-migration exceeded natural increase.

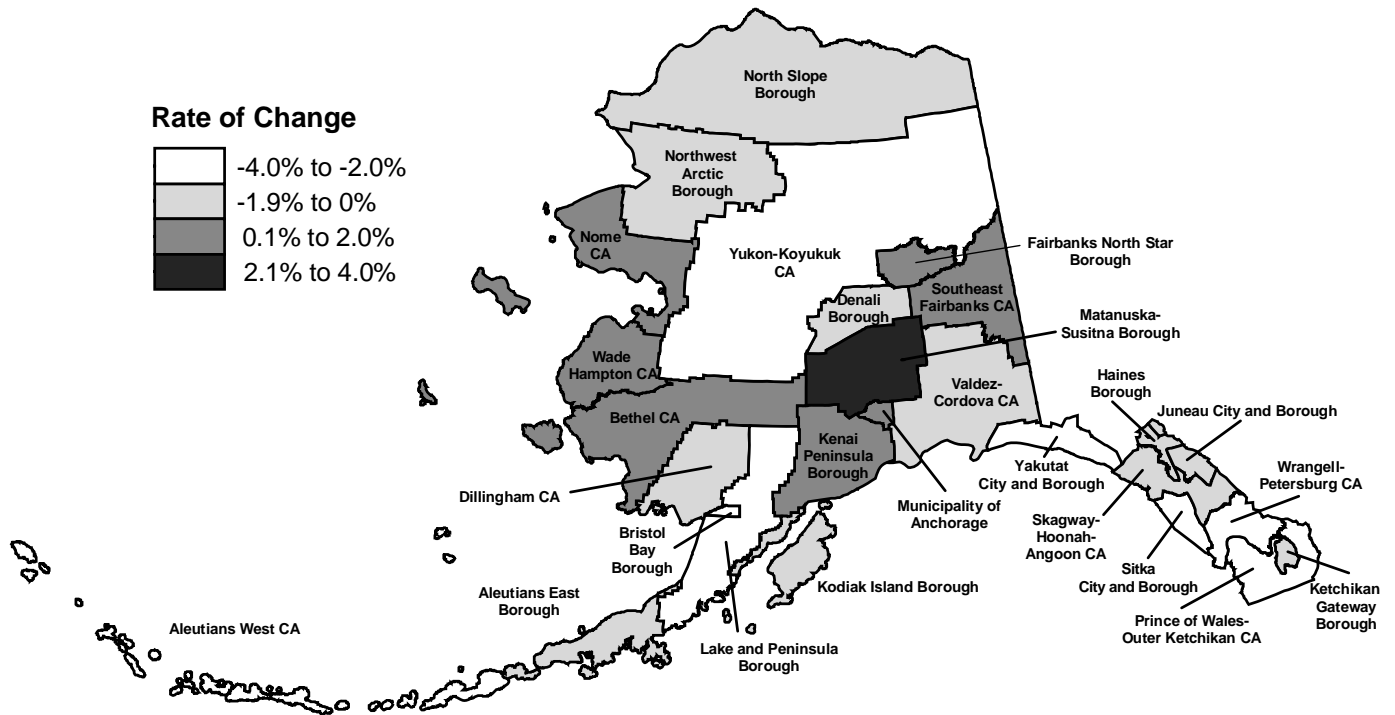
In the Northern region, the natural increase (+2,585) failed to keep up with out-migration (-2,698) in the six years.

In the Gulf Coast region, the natural increase (+3,596) kept ahead of out-migration (-2,784) for the 2000-2006 period. The Kodiak Island Borough had more net out-migration (-1,443) than natural increase (+1,036) and the Valdez-Cordova Census Area population declined as natural increase (+488) failed to match net out-migration (-928). The Kenai Peninsula Borough, however, grew through natural increase (+2,072) as opposed to net migration (-413).

During the more recent 2005-2006 period, the Valdez-Cordova Census Area and Kodiak Island Borough declined as out-migration exceeded natural increase. Natural increase for the Kenai Peninsula Borough (+354) exceeded out-migration (-195) for a slight population increase.

The Interior region’s Fairbanks North Star Borough and the Southeast Fairbanks Census Area grew in the 2000-2006 period – by 5,009 and 598, respectively – and that was largely due to natural increase. The Yukon-Koyukuk Census Area (-650) and Denali Borough (-98) shrank as out-migration exceeded natural increase.

Average Annual Rate of Change Alaska, 2000 to 2006 **4**



Note: CA is short for census area.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit; and the U.S. Census Bureau

During the 2005-2006 period, the Fairbanks North Star Borough grew only slightly (+241). The Southeast Fairbanks Census Area's population increased by a similar amount (+308), yet it grew at a 4.7 percent average annual rate during the year. Natural increase barely kept up with out-migration in the Fairbanks North Star Borough, while Southeast Fairbanks gained as a result of both natural increase and in-migration.

Places

A place is an incorporated city, borough, Census Designated Place (a closely settled unincorporated population center) or an Alaska Native Village Statistical Area (the settled area associated with each Alaska Native Village).

Alaska had 35 places with populations of more than 2,000 in the year 2000 (see Exhibit 6); 22 of them are incorporated cities or city-boroughs. Thirty-two places in 2006 had populations higher than 2,500, the old Census Bureau definition of urban place.

The Municipality of Anchorage continues to dominate the state. It represented 42.2 percent of the state in 2006 with its population of 282,813; that percentage was up slightly from the 41.5 percent the city represented in 2000. The Anchorage/Mat-Su region's population in 2006 (359,987) accounted for 53.7 percent of the state's population, which was up from the 51.0 percent the region represented in 2000.

Other than the Municipality of Anchorage, the 12 places with populations greater than 2,000 in year 2000 that have had the highest average annual growth rates since the 2000 Census include the Knik-Fairview CDP (+7.3 percent), Fishhook CDP (+5.7 percent), Tanaina CDP (+5.3 percent), Homer city (+5.1 percent), Meadow Lakes CDP (+4.7 percent), Gateway CDP (+4.1 percent), Wasilla city (+3.4 percent), Butte CDP (+3.4 percent), Palmer city (+3.3 percent), Kalifornsky CDP (+2.7 percent), Lakes CDP (+2.6 percent) and Big Lake CDP (+2.5 percent).

5 Alaska's Population, 1990 to 2006

By labor market area, borough and census area

Area Name	2006 Vintage Population Estimates								Change		
	Estimate	Revised	Revised	Revised	Revised	Revised	April 1	April 1	2005-	2000-	1990-
	2006	Estimate	Estimate	Estimate	Estimate	Estimate	Census	Census	2006	2006	2000
Alaska	670,053	663,253	656,834	647,747	640,544	632,241	626,931	550,043	6,800	43,122	76,888
Anchorage/Mat-Su Region	359,987	351,991	348,028	340,556	332,175	326,668	319,605	266,021	7,996	40,382	53,584
Anchorage, Municipality of	282,813	277,980	277,627	273,024	267,824	264,903	260,283	226,338	4,833	22,530	33,945
Matanuska-Susitna Borough	77,174	74,011	70,401	67,532	64,351	61,765	59,322	39,683	3,163	17,852	19,639
Gulf Coast Region	74,611	74,823	74,680	75,443	74,389	73,700	73,799	64,063	-212	812	9,736
Kenai Peninsula Borough	51,350	51,191	51,193	51,446	50,674	50,086	49,691	40,802	159	1,659	8,889
Kodiak Island Borough	13,506	13,623	13,517	13,796	13,641	13,566	13,913	13,309	-117	-407	604
Valdez-Cordova Census Area	9,755	10,009	9,970	10,201	10,074	10,048	10,195	9,952	-254	-440	243
Interior Region	102,276	101,942	99,657	96,298	98,938	97,577	97,417	92,111	334	4,859	5,306
Denali Borough	1,795	1,821	1,849	1,916	1,887	1,902	1,893	1,764	-26	-98	129
Fairbanks North Star Borough	87,849	87,608	85,398	82,160	84,753	83,282	82,840	77,720	241	5,009	5,120
Southeast Fairbanks Census Area	6,772	6,464	6,139	5,922	5,944	5,907	6,174	5,913	308	598	261
Yukon-Koyukuk Census Area	5,860	6,049	6,271	6,300	6,354	6,486	6,510	6,714	-189	-650	-204
Northern Region	23,676	23,660	23,879	23,859	23,810	23,627	23,789	20,380	16	-113	3,409
Nome Census Area	9,535	9,453	9,424	9,353	9,341	9,266	9,196	8,288	82	339	908
North Slope Borough	6,807	6,889	7,126	7,223	7,238	7,232	7,385	5,979	-82	-578	1,406
Northwest Arctic Borough	7,334	7,318	7,329	7,283	7,231	7,129	7,208	6,113	16	126	1,095
Southeast Region	70,053	70,804	70,856	71,788	71,920	71,772	73,082	68,989	-751	-3,029	4,093
Haines Borough	2,241	2,206	2,251	2,318	2,358	2,369	2,392	2,117	35	-151	275
Juneau City and Borough	30,650	31,182	31,094	31,286	30,991	30,453	30,711	26,751	-532	-61	3,960
Ketchikan Gateway Borough	13,174	13,115	13,073	13,525	13,675	13,748	14,059	13,828	59	-885	231
Prince of Wales-Outer Ketchikan CA	5,477	5,504	5,565	5,591	5,681	5,816	6,157	6,278	-27	-680	-121
Sitka City and Borough	8,833	8,934	8,818	8,890	8,793	8,728	8,835	8,588	-101	-2	247
Skagway-Hoonah-Angoon Census Area	3,020	3,060	3,115	3,165	3,242	3,373	3,436	3,680	-40	-416	-244
Wrangell-Petersburg Census Area	6,024	6,160	6,265	6,323	6,461	6,589	6,684	7,042	-136	-660	-358
Yakutat City and Borough	634	643	675	690	719	696	808	705	-9	-174	103
Southwest Region	39,450	40,033	39,734	39,803	39,312	38,897	39,239	38,479	-583	211	760
Aleutians East Borough	2,643	2,655	2,654	2,713	2,722	2,548	2,697	2,464	-12	-54	233
Aleutians West Census Area	4,810	5,230	5,239	5,328	5,070	5,254	5,465	9,478	-420	-655	-4,013
Bethel Census Area	17,031	17,073	16,868	16,748	16,512	16,108	16,046	13,656	-42	985	2,390
Bristol Bay Borough	1,060	1,175	1,100	1,103	1,163	1,173	1,258	1,410	-115	-198	-152
Dillingham Census Area	4,796	4,786	4,847	4,903	4,917	4,890	4,922	4,012	10	-126	910
Lake and Peninsula Borough	1,557	1,618	1,609	1,626	1,639	1,733	1,823	1,668	-61	-266	155
Wade Hampton Census Area	7,553	7,496	7,417	7,382	7,289	7,191	7,028	5,791	57	525	1,237

Note: The U.S. Census Bureau provided the statewide estimates and census numbers. The Alaska Department of Labor provided all other estimates.
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit; and the U.S. Census Bureau

Ten of the 12 places that experienced the most rapid growth in the 2000-2006 period are in the Mat-Su Borough. Indeed, if the 10 were to incorporate now, three places in the borough would be larger than Wasilla and four would be larger than Palmer. And, if College CDP were to incorporate as well, College would be the state's fourth-largest city and fast-growing Knik-Fairview would be the fifth, after Anchorage, Juneau and Fairbanks.

The remaining two of the 12 rapidly growing places are the Kenai Peninsula Borough's Kalifornsky CDP and Homer city. Homer's growth, however, is largely due to its annexation of a substantial part of Diamond Ridge CDP and Miller Landing CDP in 2002.

Outside the Anchorage and Mat-Su areas, a majority of communities are stagnant or declin-

Average Annual Rate of Change			Natural Increase (Births minus Deaths)	Net Migration (In and Out)	Natural Increase (Births minus Deaths)	Net Migration (In and Out)
2005-2006	2000-2006	1990-2000	2005-2006	2005-2006	2000-2006	2000-2006
1.0	1.1	1.3	7,310	-510	44,317	-1,195
2.2	1.9	1.8	3,815	4,181	22,932	17,450
1.7	1.3	1.4	3,048	1,785	19,095	3,435
4.2	4.2	4.0	767	2,396	3,837	14,015
-0.3	0.2	1.4	585	-797	3,596	-2,784
0.3	0.5	2.0	354	-195	2,072	-413
-0.9	-0.5	0.4	158	-275	1,036	-1,443
-2.6	-0.7	0.2	73	-327	488	-928
0.3	0.8	0.6	1,312	-978	8,170	-3,311
-1.4	-0.9	0.7	10	-36	94	-192
0.3	0.9	0.6	1,181	-940	7,487	-2,478
4.7	1.5	0.4	77	231	349	249
-3.2	-1.7	-0.3	44	-233	240	-890
0.1	-0.1	1.5	478	-462	2,585	-2,698
0.9	0.6	1.0	174	-92	958	-619
-1.2	-1.3	2.1	152	-234	829	-1,407
0.2	0.3	1.6	152	-136	798	-672
-1.1	-0.7	0.6	501	-1,252	3,105	-6,134
1.6	-1.0	1.2	-4	39	17	-168
-1.7	-0.0	1.4	260	-792	1,622	-1,683
0.4	-1.0	0.2	92	-33	558	-1,443
-0.5	-1.9	-0.2	49	-76	242	-922
-1.1	-0.0	0.3	51	-152	421	-423
-1.3	-2.1	-0.7	20	-60	98	-514
-2.2	-1.7	-0.5	29	-165	127	-787
-1.4	-3.9	1.4	4	-13	20	-194
-1.5	0.1	0.2	619	-1,202	3,929	-3,718
-0.5	-0.3	0.9	15	-27	74	-128
-8.4	-2.0	-5.4	18	-438	157	-812
-0.2	1.0	1.6	332	-374	2,079	-1,094
-10.3	-2.7	-1.1	3	-118	53	-251
0.2	-0.4	2.0	56	-46	381	-507
-3.8	-2.5	0.9	18	-79	71	-337
0.8	1.2	1.9	177	-120	1,114	-589

The places that declined an average of more than 1.0 percent each year during the 2000-2006 period are Eielson Air Force Base CDP (-3.1 percent), Wrangell city (-3.0 percent), Barrow city (-1.9 percent), Cordova city (-1.7 percent), Valdez city (-1.4 percent), Unalaska city (-1.3 percent), Seward city (-1.2 percent) and Kodiak city (-1.0 percent). Wrangell slipped below 2,000 in population in 2005.

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Population estimates are available on Research and Analysis' Web site at almis.labor.state.ak.us. Click on "Population & Census" on the left, and below that, "Estimates & Projections." Then click on "Alaska Population Estimates 2000-2006" in the middle, and under "Vintage 2006 Estimates," select a category.

ing. Fifteen of the 35 places that had more than 2,000 people in 2000 declined by 2006.

In fact, roughly half the places in Alaska (181 or 52.2 percent) had at least small population losses between 2000 and 2006. That includes four of the state's 11 biggest communities: Juneau City and Borough (-61 population), Sitka City and Borough (-2), Ketchikan city (-260) and Kenai city (-78).

6 Places with More than 2,000 People Alaska, 2000 to 2006

	2006 Vintage Population Estimates						April 1 Census 2000	2000- 2006 Change	Average Annual Rate of Change 2000-2006	Place Rank 2006	Place Rank 2000	City Rank 2006
	Preliminary Estimate 2006	Revised Estimate 2005	Revised Estimate 2004	Revised Estimate 2003	Revised Estimate 2002	Revised Estimate 2001						
Anchorage, Municipality of	282,813	277,980	277,627	273,024	267,824	264,903	260,283	22,530	1.3	1	1	1
Juneau City and Borough	30,650	31,182	31,094	31,286	30,991	30,453	30,711	-61	-0.0	2	2	2
Fairbanks city	30,552	31,071	30,083	28,924	29,774	29,523	30,224	328	0.2	3	3	3
College CDP	11,825	12,198	12,151	12,055	11,937	12,055	11,402	423	0.6	4	4	
Knik-Fairview CDP	11,238	10,264	9,251	8,559	8,000	7,639	7,049	4,189	7.3	5	7	
Sitka City and Borough	8,833	8,934	8,818	8,890	8,793	8,728	8,835	-2	-0.0	6	5	4
Lakes CDP	7,901	7,753	7,474	7,042	6,926	6,815	6,706	1,195	2.6	7	9	
Ketchikan city	7,662	7,675	7,706	7,977	8,373	8,459	7,922	-260	-0.5	8	6	5
Tanaina CDP	6,987	6,622	6,292	5,860	5,600	5,263	4,993	1,994	5.3	9	15	
Kalifornsky CDP	6,914	6,825	6,638	6,248	6,159	6,017	5,846	1,068	2.7	10	11	
Kenai city	6,864	6,768	6,839	7,129	7,076	6,889	6,942	-78	-0.2	11	8	6
Wasilla city	6,775	6,361	6,140	6,380	5,948	5,517	5,469	1,306	3.4	12	13	7
Meadow Lakes CDP	6,492	6,376	5,945	5,576	5,308	5,041	4,819	1,673	4.7	13	16	
Kodiak city	5,937	6,081	6,185	6,089	6,099	6,076	6,334	-397	-1.0	14	10	8
Bethel city ¹	5,812	5,953	5,867	5,883	5,739	5,462	5,471	341	1.0	15	12	9
Palmer city	5,574	5,300	5,217	5,260	4,837	4,581	4,533	1,041	3.3	16	19	10
Homer city ²	5,454	5,393	5,350	5,877	5,535	4,070	3,946	1,508	5.1	17	23	11
Sterling CDP	5,036	4,980	4,919	4,878	4,780	4,756	4,705	331	1.1	18	17	
Eielson AFB CDP	4,447	4,548	4,676	4,433	5,840	5,152	5,400	-953	-3.1	19	14	
Nikiski CDP	4,179	4,190	4,289	4,351	4,362	4,363	4,327	-148	-0.6	20	20	
Barrow city ¹	4,065	4,174	4,364	4,410	4,435	4,444	4,581	-516	-1.9	21	18	12
Unalaska city ¹	3,940	4,288	4,362	4,370	4,034	4,249	4,283	-343	-1.3	22	21	13
Gateway CDP	3,830	3,682	3,560	3,299	3,215	3,120	2,952	878	4.1	23	28	
Soldotna city	3,807	3,794	3,776	4,001	3,851	3,793	3,759	48	0.2	24	24	14
Valdez city	3,690	3,746	3,714	3,895	3,952	3,825	4,036	-346	-1.4	25	22	15
Nome city	3,540	3,507	3,478	3,412	3,481	3,485	3,505	35	0.2	26	25	16
Butte CDP	3,166	3,110	2,973	2,920	2,784	2,737	2,561	605	3.4	27	31	
Petersburg city	3,129	3,152	3,129	3,080	3,156	3,225	3,224	-95	-0.5	28	26	17
Kotzebue city ¹	3,104	3,119	3,140	3,068	3,074	3,059	3,082	22	0.1	29	27	18
Big Lake CDP	3,082	2,980	2,926	2,889	2,705	2,614	2,635	447	2.5	30	30	
Fishhook CDP	2,917	2,794	2,642	2,349	2,243	2,191	2,030	887	5.7	31	35	
Seward city	2,627	2,595	2,542	2,744	2,755	2,759	2,830	-203	-1.2	32	29	19
Dillingham city ¹	2,397	2,368	2,404	2,384	2,468	2,462	2,466	-69	-0.5	33	32	20
Cordova city	2,211	2,288	2,297	2,290	2,302	2,382	2,454	-243	-1.7	34	33	21
Wrangell city	1,911	1,973	2,021	2,123	2,180	2,223	2,308	-397	-3.0	40	34	22

Notes: The places listed in this exhibit are those that had populations over 2,000 in year 2000. They're in order based on their 2006 population. A place is in an unincorporated city, borough, Census Designated Place (a closely settled unincorporated population center) or an Alaska Native Village Statistical Area. The U.S. Census Bureau provided the 2000 Census numbers. The Alaska Department of Labor provided all the estimates.

¹ Also an Alaska Native Village Statistical Area. The ANVSA boundaries encompass the settled area associated with each Alaska Native Village.

² Homer had a substantial annexation in 2002.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit; and the U.S. Census Bureau

How Alaska's population estimates are produced

Each year, the Alaska Department of Labor and Workforce Development produces a wide variety of population estimates for the state. The department's provisional estimates are made at the end of the calendar year and are released in January for the current fiscal year. The estimates are then revised for prior years as additional information becomes available. The largest revision occurs in the year following the provisional estimate.

Estimates are for the usual place of residence, as measured by the U.S. Census Bureau. For example, the people included in the 2000 Census were counted at their usual residence – the place where they lived and slept most of the time or the place they considered their usual home. If people had no usual place of residence, they were counted where they were staying on the day of the census. Seasonal workers were not considered residents unless they met the above criteria.

The Census Bureau provides estimates of each state's total population each December. The Department of Labor uses the Census Bureau's statewide estimate as a control for the sum of all places, boroughs and census areas and uses the following formula to generate its estimates. The estimates for each year are independent and are not built on prior years' estimates.

$$\left[\frac{\text{NGQ Census 2000}}{\text{NGQ PFD Applicants 2000}} \right] \times \text{Current NGQ PFD Applicants} + \text{GQ} + \text{Estimated Military Non-filers}$$

NGQ PFD Applicants 2000 = Non-group quarters Alaska Permanent Fund Division applicants in 2000, geocoded¹ to the place of residence as defined by the 2000 Census.

Current NGQ PFD Applicants = Non-group quarters applicants in the current year, geocoded to the place of residence as defined by the 2000 Census. The accuracy of the estimates is dependent on the ability to consistently geocode applicant addresses to community geographic boundaries as defined by the Census Bureau.

¹Geocoding is the process of assigning geographical identifiers to map features and other data records, such as street addresses.

In areas with large military populations, PFD applicants are supplemented by an annual survey of the military and dependent population who are not PFD applicants. Statewide, the PFD applicants in 2000 accounted for 94.4 percent of the enumerated 2000 Census non-group quarters population. The amount may be greater or less in local areas depending on how transient the population is. Military non-filers account for 2.7 percent of the state's non-group quarters population. Military non-filers are concentrated in areas around bases, primarily in Anchorage and Fairbanks.

NGQ Census 2000 = Non-group quarters population from the 2000 Census.

Non-Group Quarters Population = All people who live in households. A household is defined as all people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms or a single room that is occupied as separate living quarters.

Group Quarters Population, or GQ = All people not living in households are classified as living in group quarters. These are usually people living in institutions such as prisons, military barracks, dormitories or nursing homes or other group quarters such as fish processing barracks, lumber camps, shelters or group homes.

The Department of Labor surveys group quarters populations of 10 or more people each year and develops special estimates for changes in fish processing and group quarters populations at transient work sites. The department uses annual company employment numbers for those areas.

Statewide, the relative weight of the parts of the estimate for each year in 2006 were: the non-group quarters estimate as 95.3 percent; group quarters as 3.4 percent and the control to the Census Bureau's state total as 1.4 percent. Revisions for prior years' estimates are most likely to occur in the state control or group quarters components of the estimate.

For jobs, January is the cruelest month

Nonfarm wage and salary jobs fell by 6,300 in January, the month that typically marks the nadir of Alaska's very seasonal employment pattern. (See Exhibit 1.)

Retail jobs fell 1,300 following the holiday busy season, construction activity slowed significantly during the cold, short days of January and the leisure and hospitality sector – made up primarily of hotels and restaurants – dropped 1,700 jobs. The declines for all three categories were consistent with previous years' basic seasonal patterns.

The winter break between semesters for the state's college students also lowered the monthly job count by about 2,100. The seafood processing industry is one of the few that typically sees rising job counts in January due to increased activity in both the groundfish and crab fisheries. Processing employment rose by an estimated 4,400 from December levels.

Over-the-year growth holds steady

Alaska's estimated 296,300 January wage and salary jobs represented a 1.6 percent over-the-year increase, a number that is not markedly different than what the state has seen in recent months and years. If the pattern of moderate employment growth holds, 2007 will be the state's 20th consecutive year of economic expansion.

A hearty slice of the new jobs have come from the oil and gas industry, which provided an estimated 11,000 jobs in January, an increase of 1,800 from January 2006. Health care has been a regular contributor for years and added another 700 jobs over the 12-month period. Most other industries showed modest growth

with the notable exception being construction, which had an over-the-year decline of 400 jobs.

High earnings in the oil industry

Newly released payroll numbers show that the average earnings per job in the state were \$10,295 during the third quarter of 2006. (See Exhibit 2.)

The Northern region easily had the state's highest paying jobs with average third quarter earnings of \$14,787. The reason is no mystery: oil. North Slope jobs in the oil and gas industry paid an average of \$21,199 during the third quarter, a number that would equate to nearly \$85,000 in annual earnings.

Altogether, the \$139.6 million paid to North Slope oil and gas workers made up slightly more than 5.4 percent of the \$2.6 billion paid to all private-sector workers in the state for the quarter. If the additional \$75 million paid to oil and gas employees working in Anchorage are included – the average oil and gas job in Anchorage paid \$34,817 during the third quarter, or roughly \$140,000 a year – the industry paid about 8.3 percent of the state's total private-sector wages during the third quarter.

More modest numbers for coastal Alaska

Primarily due to lower paying seasonal employment associated with fishing and the summer visitor season, the Southeast, Gulf Coast and Southwest regions all had average earnings slightly below the statewide average. The Wade Hampton Census Area had the state's lowest average earnings in the third quarter at \$5,053.

1 Nonfarm Wage and Salary Employment

	Preliminary	Revised	Revised	Changes from:	
	1/07	12/06	1/06	12/06	1/06
Alaska					
Total Nonfarm Wage and Salary¹	296,300	302,600	291,600	-6,300	4,700
Goods-Producing ²	37,900	35,700	36,300	2,200	1,600
Service-Providing ³	258,400	266,900	255,300	-8,500	3,100
Natural Resources and Mining	13,000	13,200	11,000	-200	2,000
Logging	100	200	200	-100	-100
Mining	12,900	13,000	10,900	-100	2,000
Oil and Gas	11,000	11,100	9,200	-100	1,800
Construction	14,100	16,100	14,500	-2,000	-400
Manufacturing	10,800	6,400	10,800	4,400	0
Wood Product Manufacturing	300	400	300	-100	0
Seafood Processing	7,200	2,800	7,300	4,400	-100
Trade, Transportation, Utilities	59,700	61,600	59,500	-1,900	200
Wholesale Trade	6,400	6,500	6,200	-100	200
Retail Trade	34,200	35,500	34,300	-1,300	-100
Food and Beverage Stores	6,100	6,300	6,100	-200	0
General Merchandise Stores	8,900	9,300	9,000	-400	-100
Transportation, Warehousing, Utilities	19,100	19,600	19,000	-500	100
Air Transportation	6,000	6,000	5,900	0	100
Truck Transportation	3,000	3,000	2,900	0	100
Information	6,700	6,900	6,900	-200	-200
Telecommunications	3,900	4,000	4,000	-100	-100
Financial Activities	14,500	14,700	14,500	-200	0
Professional and Business Services	22,900	23,600	22,200	-700	700
Educational⁴ and Health Services	37,300	37,400	36,400	-100	900
Health Care	26,600	26,700	25,900	-100	700
Leisure and Hospitality	26,500	28,200	25,900	-1,700	600
Accommodations	6,000	6,500	5,800	-500	200
Food Services and Drinking Places	16,900	17,900	16,500	-1,000	400
Other Services	11,300	11,500	10,900	-200	400
Government	79,500	83,000	79,000	-3,500	500
Federal Government ⁵	16,000	16,600	16,200	-600	-200
State Government	22,700	25,100	22,400	-2,400	300
State Government Education ⁶	5,800	7,900	5,700	-2,100	100
Local Government	40,800	41,300	40,400	-500	400
Local Government Education ⁷	23,600	23,700	23,600	-100	0
Tribal Government	3,100	3,400	3,300	-300	-200

Notes for all exhibits on this page:

- ¹ Excludes self-employed workers, fishermen, domestic workers, unpaid family workers and nonprofit volunteers
- ² Goods-producing sectors include natural resources and mining, construction and manufacturing.
- ³ Service-providing sectors include all others not listed as goods-producing sectors.
- ⁴ Private education only
- ⁵ Excludes uniformed military
- ⁶ Includes the University of Alaska
- ⁷ Includes public school systems
- ⁸ Fairbanks North Star Borough

Sources for all exhibits on this page: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and the U.S Bureau of Labor Statistics

2 Average Earnings Third quarter, 2006

Statewide	\$10,295
Anchorage/Mat-Su	\$10,690
Municipality of Anchorage	\$10,997
Mat-Su Borough	\$7,944
Gulf Coast Region	\$9,082
Kenai Peninsula Borough	\$8,654
Kodiak Island Borough	\$9,444
Valdez-Cordova Census Area	\$10,209
Interior Region	\$10,161
Denali Borough	\$7,420
Fairbanks North Star Borough	\$10,409
Southeast Fairbanks Census Area	\$12,895
Yukon-Koyukuk Census Area	\$7,936
Northern Region	\$14,787
Nome Census Area	\$8,262
North Slope Borough	\$18,014
Northwest Arctic Borough	\$10,997
Southeast Region	\$8,982
Haines Borough	\$7,556
Juneau Borough	\$9,838
Ketchikan Gateway Borough	\$8,623
Prince of Wales-Outer Ketchikan CA	\$7,472
Sitka Borough	\$8,657
Skagway-Hoonah-Angoon CA	\$8,209
Wrangell-Petersburg Census Area	\$7,709
Yakutat Borough	\$8,667
Southwest Region	\$8,256
Aleutians East Borough	\$8,467
Aleutians West Census Area	\$9,797
Bethel Census Area	\$7,916
Bristol Bay Borough	\$9,064
Dillingham Census Area	\$8,194
Lake and Peninsula Borough	\$8,864
Wade Hampton Census Area	\$5,053

For more current state and regional employment and unemployment data, visit our Web site.

almis.labor.state.ak.us

3 Nonfarm Wage and Salary Employment By Region

	Preliminary	Revised	Revised	Changes from:		Percent Change:	
	1/07	12/06	1/06	12/06	1/06	12/06	1/06
Anch/Mat-Su	161,500	166,300	158,600	-4,800	2,900	-2.9%	1.8%
Anchorage	143,600	148,300	141,400	-4,700	2,200	-3.2%	1.6%
Gulf Coast	25,550	25,650	25,250	-100	300	-0.4%	1.2%
Interior	41,200	43,400	40,700	-2,200	500	-5.1%	1.2%
Fairbanks ⁸	35,500	36,900	35,000	-1,400	500	-3.8%	1.4%
Northern	17,750	17,950	16,000	-200	1,750	-1.1%	10.9%
Southeast	32,400	33,550	32,150	-1,150	250	-3.4%	0.8%
Southwest	18,850	15,350	18,900	3,500	-50	22.8%	-0.3%