

ALASKA ECONOMIC **TRENDS**

DECEMBER 2011

Alaska Residential Construction

WHAT'S INSIDE

Alaska Career Ladder Branches Out
Upgrade to lattice expands online job-seeking tool



ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

Governor Sean Parnell
Commissioner Click Bishop

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December 2011
Volume 31
Number 12
ISSN 0160-3345

To contact us for more information, a free subscription, mailing list changes, or back copies, e-mail trends@alaska.gov or call (907) 465-4500.

Alaska Economic Trends is a monthly publication dealing with a wide variety of economic issues in the state. Its purpose is to inform the public about those issues.

Alaska Economic Trends is funded by the Employment Security Division of the Alaska Department of Labor and Workforce Development. It's published by the Research and Analysis Section.

Alaska Economic Trends is printed and distributed by Assets, Inc., a vocational training and employment program, at a cost of \$1.37 per copy.

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Cover: A complex of birdhouses on a pole in Moose Pass, an unincorporated community of about 200 people on the Kenai Peninsula. Photo by Vicky Fong

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Alaska construction jobs follow real estate trends



**By Commissioner
Click Bishop**

Home is where the heart is, as they say, and it's also where there are thousands of Alaska jobs.

New home construction is and has been a major employer in Alaska for decades. This continued over the past decade despite the rollercoaster of home sales elsewhere in the country.

Alaska's stable housing market avoided most of the collapse down south for a variety of reasons — more conservative lenders, a more stable overall labor market, and the relationship between the Anchorage and Matanuska-Susitna area housing markets.

The demand for a cheaper alternative to Anchorage single-family home prices drove a decade of home-building in Mat-Su that represents at least half the new homes built in Alaska. It's been a healthy complement to Anchorage, a city running out of room to build new homes.

Home construction encompasses a range of jobs, especially specialty trade contractors who do everything from plumbing and concrete to electrical wiring.

Yet the same softening of sales and home prices that collapsed economies elsewhere has taken a toll on Alaska home-building jobs. Of the 2,400 Alaska construction jobs lost in the past five years, more than 600 were in residential construction.

The good news is that the same stability that supports Alaska's economy will continue to fuel home construction and the craftsmen who build those homes.

Alaska Career Ladder expanded into lattice

Also in this month's *Trends*, we provide a detailed look at an upgraded online tool — the Alaska Career Lattice — that's designed to help job professionals and job seekers see a broader range of options.

Careers seldom just happen or follow a script. In today's evolving marketplace, it's becoming more rare for any worker to stick to a single profession for an entire working life. A worker may be unexpectedly looking to replace a job he or she loved because of the changes in an industry or a labor market.

A displaced worker may assume that relocation or retraining is the only way to find a new job. Yet there are often related positions in industries eager to hire that do not require retraining or starting from scratch, and these options may not be obvious.

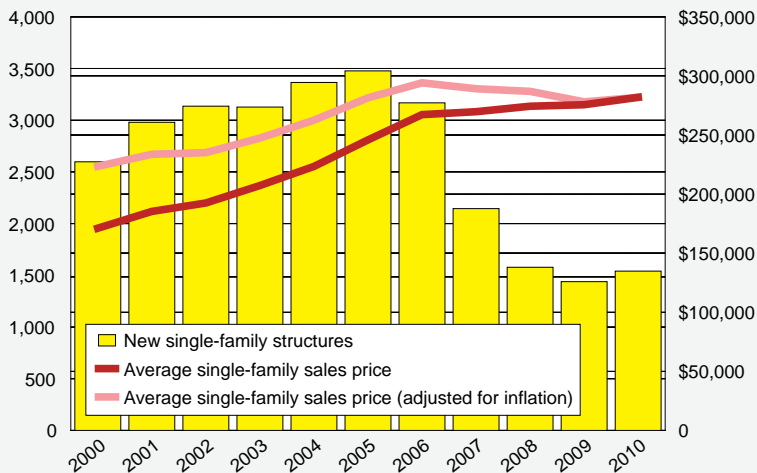
The trick is helping skilled workers locate the next step in a career. The lattice can also help employers broaden their horizons and employee searches to identify future superstars who aren't even on their radar.

The Alaska Career Lattice is the result of extensive analysis of workers from 2001 to 2009, what individual career paths look like, and how occupations are related. See the entire career lattice online at live.laborstats.alaska.gov/cl/cloccs.cfm.

Alaska Residential Construction

A look at the housing market and employment

1 Building Decline Pinches Prices Alaska, 2000 to 2010



Note: Inflation-adjusted (real) figures in 2010 dollars.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Construction of new homes seems to have finally stabilized after an up-and-down decade.

The word “feverish” was frequently used to describe the pace of residential construction in Alaska between 2001 and 2005 as around 3,000 new single-family homes went up each year. But after reaching a peak in 2005, building activity began to decline as early as 2006, dropped precipitously in 2007, then bottomed out in 2009.

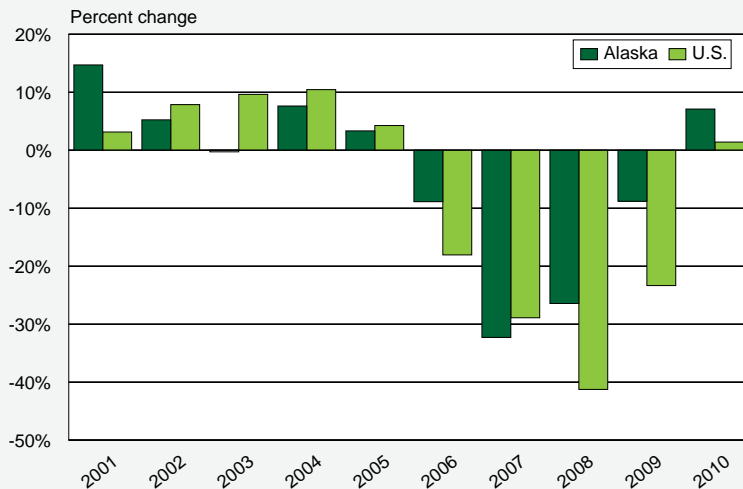
The number of new residences fell from 3,477 in 2005 to 1,439 in 2009 — a nearly 60 percent drop in just four years. Concurrent with the lull in building, inflation-adjusted home values in Alaska also declined between 2006 and 2009 as the housing market stabilized. (See Exhibit 1.)

Alaska’s construction numbers followed the same basic path as the nation’s over the last decade. More than 8.5 million single-family homes were built nationwide between 2000 and 2005, a big jump from the 5.5 million built between 1990 and 1995. Residential construction peaked in 2005 at 1.7 million — 40 percent more than in 2000.

Like Alaska, U.S. home construction bottomed out in 2009 with just 441,000 new single-family units — a decline of 74 percent from the 2005 high. Although Alaska and national housing markets shared a common trajectory, the fallout from Alaska’s housing bust was less severe. (See Exhibit 2.)

There were important differences between the Alaska and national housing markets in the years leading up to the housing bubble, and one was the construction boom in the Matanuska-Susitna area. (See Exhibit 3.)

2 U.S. Building Falls Further Single-family home construction, 2001 to 2010



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section; United States Census Bureau

Mat-Su housing remains hot

Between 2000 and 2006, the population in the Matanuska-Susitna Borough grew 30 percent, compared to just 8 percent in Anchorage and 7 percent in the state as a whole. Mat-Su's growth from migration was more than four times higher than in Anchorage during those years, when over three-quarters of the borough's population growth came from people moving in.

What made Mat-Su's population explosion remarkable was that unlike other Alaska booms, it wasn't driven by resource development. The Mat-Su Borough thrived in part by selling inexpensive housing to Anchorage workers who couldn't afford their desired standard of living in a city running low on developable land.

The average single-family home in Mat-Su cost \$212,997 in 2005, but was \$285,600 in Anchorage. Newly built homes had an even higher premium in Anchorage, costing over 60 percent more.

In 2000, one-third of new single-family homes in Alaska were built in the Mat-Su area, even though it was home to just 9.5 percent of the state's population. By 2005, 46 percent of new homes were built in Mat-Su, though its share of the state population had grown to just 11.2 percent. This rapid growth might have been cause for alarm if Anchorage had been on a similar track. Instead, construction of single-family homes in Anchorage had been tapering off since a peak in 2001, the most recent year Anchorage outpaced Mat-Su in new single-family homes. (See Exhibit 3.)

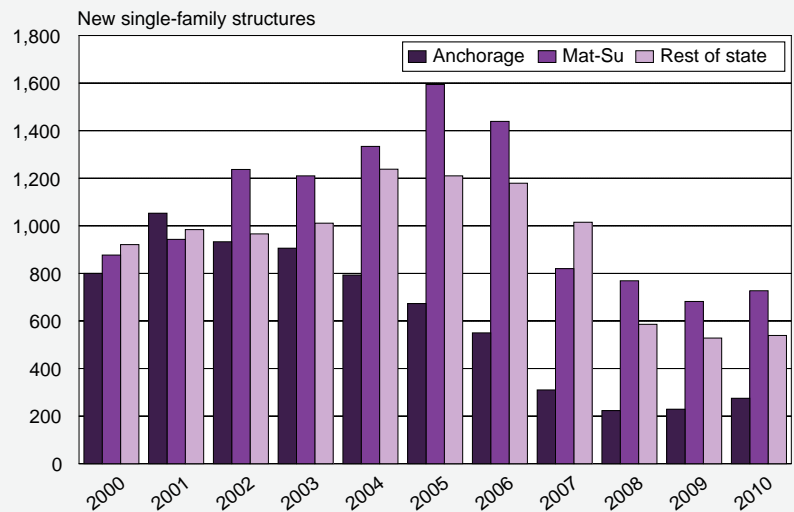
Anchorage cools off

Anchorage's decline was likely due in part to the Mat-Su boom, but it may also have been a natural consequence of the city's growth and shortage of available land.

Single-family homes make up a smaller portion of new residential construction in Anchorage. Of all the housing units built in Anchorage between 2000 and 2010 — including single-family houses, condos, multi-family units, and mobile homes

Mat-Su Outpaces Anchorage 3

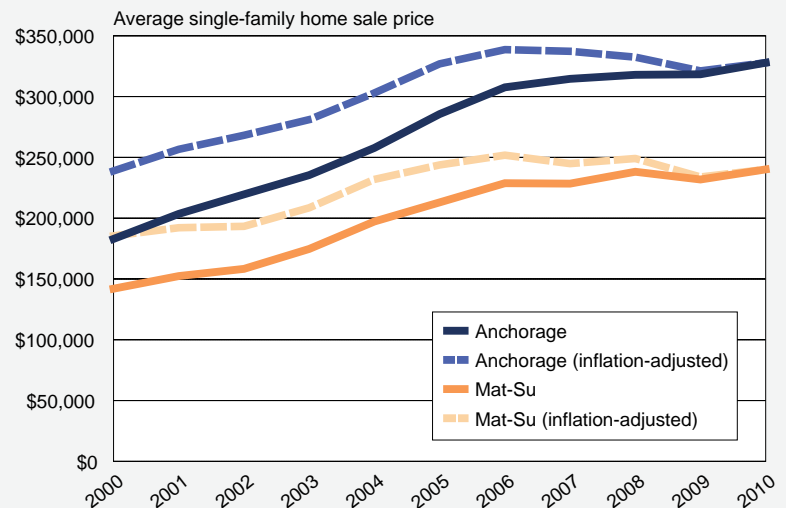
Single-family home construction, 2000 to 2010



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

Prices Can't Keep Up With Inflation 4

Anchorage and Mat-Su homes, 2000 to 2010



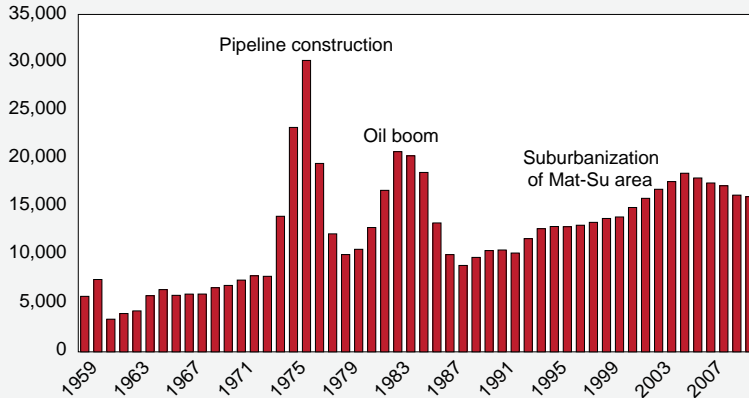
Note: Inflation-adjusted (real) figures in 2010 dollars.

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

— 46 percent were single-family in contrast to 84 percent in the Mat-Su Borough.

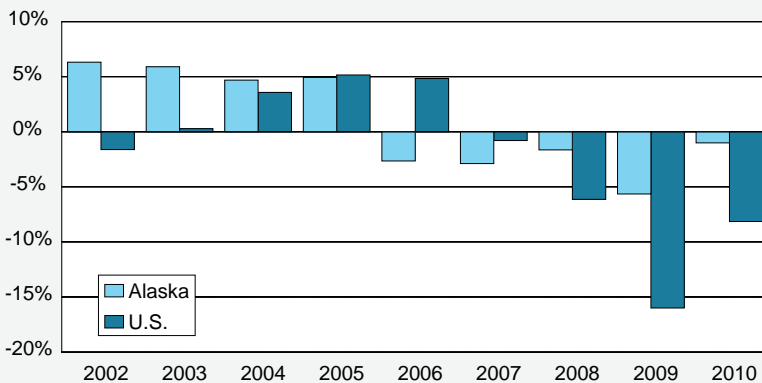
Prices for single-family homes in both Anchorage and Mat-Su appreciated at around 9 percent per year between 2000 and 2006, which meant that Mat-Su prices never began to approach Anchorage's. This ensured Mat-Su housing remained a

5 Historical Construction Employment Alaska, 1959 to 2010



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

6 Construction Employment Percent change, Alaska and U.S., 2002 to 2010



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

lower-cost alternative. (See Exhibit 4.)

Unlike many of the massive housing development projects standing empty in places like Nevada and Florida, the construction boom in the Mat-Su area never unreasonably outpaced demand.

A softer landing in Alaska

As early as 2005, housing markets in parts of the Lower 48 had begun to show signs of weakness. In Alaska, single-family home construction fell 10 percent in 2006 from the 2005 peak, and then

dropped 43 percent from 2006 to 2007. As building activity subsided, sale prices in Mat-Su and statewide flinched from the contraction. In addition, statewide mortgage lending fell substantially between 2006 and 2008 and continued to taper off through 2010.

Between 2000 and 2007, statewide single-family nominal sales prices increased 7.7 percent on average each year. But after the 2006 change in price trends, single-family nominal sales prices appreciated at an average of just 1.3 percent annually. However, those prices couldn't keep up with inflation. The inflation-adjusted values — or “real” prices — fell around 2 percent each year between 2006 and 2009.

A better starting point

The residential building boom in Alaska didn't have the same shaky foundation that destabilized much of the rest of the country. For one, Alaska didn't have the same speculative building fever that resulted in so many half-finished vacant houses across the country.

Alaska's lending practices also appeared much more conservative. To the credit of Alaska mortgage lenders and borrowers, a much smaller percentage of Alaska mortgages active throughout the decade were subprime¹ or adjustable rate, both indicators of increased default risk.

Alaska has remained one of the healthiest states in terms of mortgage delinquencies throughout the housing market collapse, most recently ranking second behind North Dakota for the lowest delinquency rate in the country.

Employment ups and downs

Construction employment is often a barometer of the overall economy in Alaska and has tracked with large economic events over the last half-century. (See Exhibit 5.) Construction workers were in high demand during building of the Trans-Alaska Oil Pipeline and the oil boom that followed in the 1980s.

After a loss of 10,000 jobs with crashing oil prices, construction began a stable and predictable climb in 1988 that ratcheted up during the suburbanization of the Mat-Su area.

Seventeen years of employment growth ended in 2005 and Alaska lost nearly 2,500 construction jobs — the biggest decline in construction employment in Alaska since the 1986-88 recession.

A look at recessionary losses

Nationwide, construction employment reached its peak in 2006 just before the housing market imploded. Between 2006 and 2010, U.S. construction jobs dropped by 2.2 million: a third of all wage and salary jobs lost in the same period, with 440,000 of those in the residential construction industry.

Notably, construction employment peaked in Alaska a year before it did in the Lower 48, indicating employment cycles had more to do with softening demand for new housing than with the mortgage crisis. Between 2005 and 2010, Alaska lost 2,435 construction jobs, 618 of them in the residential building industry.

The most dramatic shedding of construction jobs statewide and nationwide was in 2009 and overall construction industry employment is still on the decline for both the U.S. and Alaska, even though Alaska residential construction employment grew by 2.5 percent in 2010. (See Exhibit 7.)

Anchorage and Mat-Su still the main players

Most of the state's construction growth in the early 2000s was in the Anchorage/Mat-Su economic region, where activity peaked in 2005. There were an increasing number of jobs in residential construction as suburban neighborhoods went up in Mat-Su communities.

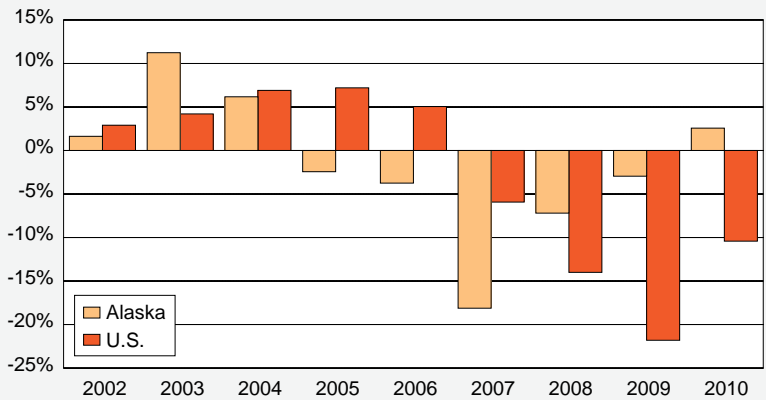
The growing residential housing market was accompanied by private-sector construction of retail box stores in the area and commercial office space in downtown Anchorage.

The government also undertook big projects in the region: the state expanded Ted Stevens Anchorage International Airport and started major

Residential Building Employment

Percent change, Alaska and U.S., 2002 to 2010

7

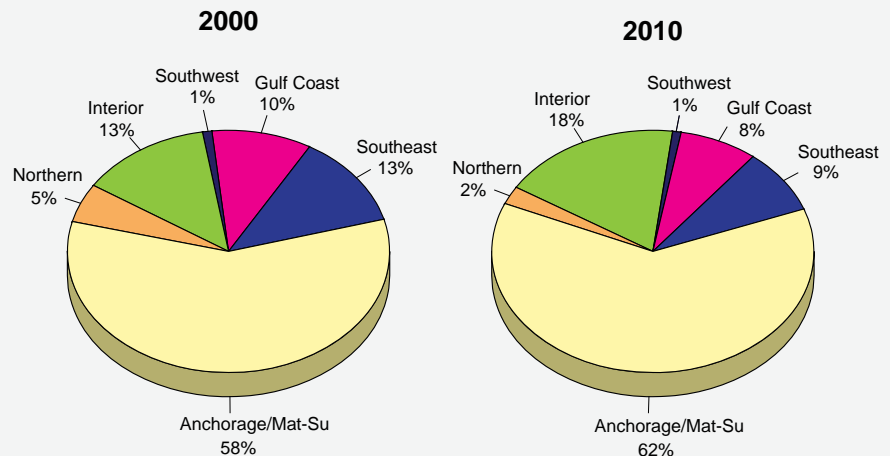


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Construction Employment by Region

Alaska, 2000 and 2010

8



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

road construction.² Elsewhere in the state, the federal government updated military installations and local governments improved schools and hospitals.

The Fairbanks area's employment patterns were similar to Anchorage/Mat-Su as the city grew, ramping up from 2000 to 2005 and then falling off. But outside these two regions, construction employment held steady — and even though Anchorage and Mat-Su gained and lost the most construction jobs in the last 10 years, they are still the main players. Their share of statewide

9 Construction Tied to Housing Market

Employment and wages, Alaska, 2010

	2010 avg employment	2010 total wages	2010 avg annual earnings
Construction, all types	16,095	\$1,128,233,532	\$70,099
Residential building construction	1,515	\$66,407,570	\$43,845
New single-family general contractors	863	\$37,413,876	\$43,374
New multifamily general contractors	—	—	—
New housing operative builders	—	—	—
Residential remodelers	526	\$18,941,757	\$35,988
Specialty trade contractors	7,883	\$502,846,216	\$63,786
Residential poured foundation contractors	109	\$6,035,108	\$55,453
Residential structural steel contractors	—	—	—
Residential framing contractors	134	\$5,169,182	\$38,504
Residential masonry contractors	30	\$891,379	\$29,630
Residential roofing contractors	95	\$3,563,973	\$37,581
Residential siding contractors	49	\$2,168,079	\$44,171
Other residential exterior contractors	—	—	—
Residential electrical contractors	346	\$19,514,204	\$56,372
Residential plumbing/HVAC contractors	798	\$48,104,772	\$60,288
Other residential equipment contractors	15	\$626,798	\$41,327
Residential drywall contractors	218	\$8,597,645	\$39,409
Residential painting contractors	127	\$4,587,737	\$36,219
Residential flooring contractors	75	\$3,091,091	\$41,215
Residential tile and terrazzo contractors	49	\$1,446,858	\$29,478
Residential finish carpentry contractors	180	\$6,485,745	\$36,082
Other residential finishing contractors	30	\$838,897	\$28,437
Residential site preparation contractors	265	\$10,631,810	\$40,171
All other residential trade contractors	138	\$5,674,695	\$41,146

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

construction employment went from 58 percent to 62 percent between 2000 and 2010. (See Exhibit 8.)

New homes use many firms

The construction industry is divided into three broad categories:³

1. Building construction, which includes residential and commercial
2. Heavy and civil engineering construction, which is typically in transportation and utilities
3. Specialty trade contractors, who handle jobs such as installing plumbing and pouring concrete

The housing market is mostly tied to the residential building sector, but it uses specialty trade firms as well. (See Exhibit 9.)

In 2010, residential building made up 9 percent of total construction employment, and nearly half of construction jobs were in specialty trades. (See Exhibit 10.)

Employment and earnings

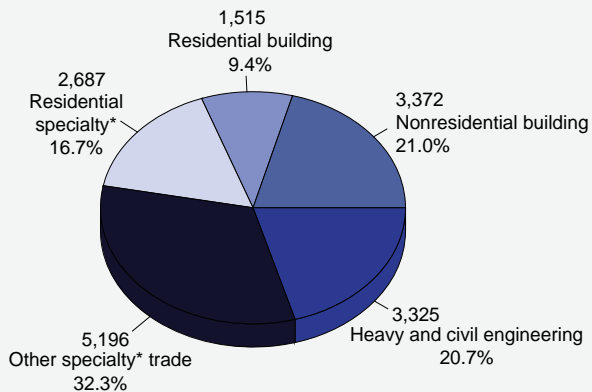
The major economic events of the 1970s and 1980s in Alaska were markedly different from the early 2000s. As the economy mushroomed in the race for resources, construction employment gains were accompanied by strong growth in construction earnings, which include overtime — often a significant factor in construction. (See Exhibit 11.) But following the oil bust, earnings dipped to historically low levels, bottoming out in the 1990s and remaining flat throughout the years of stable employment growth.

Although construction employment fell steadily from 2006 to 2010, average earnings for construction workers increased by about \$8,000 between 2005 and 2010. In fact, average earnings in construction outpaced all other sectors in 2007, 2008, and 2009 before leveling off in 2010. The main reason for the increase in average earnings is that many of the jobs lost were in segments of the construction industry that tend to pay less.

Construction earnings still rank high among industries (see Exhibit 12), averaging \$70,099 a year in 2010. Among the residential construction industries in Exhibit 9, residential building jobs paid \$43,845 in 2010, while residential specialty earnings ranged from \$60,288 among plumbing and heating, ventilation, and air conditioning contractors to \$29,478 in tile contracting.

10 Construction by Category

Alaska employment, 2010



*Specialty trade contractors handle jobs such as installing plumbing and pouring concrete.

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

Self-employed builders

Some workers that are exempt from state unemployment insurance laws aren't captured in wage and salary records. Because of self-employed and family-employed businesses, the wage records cited above likely understate the loss of jobs, both in the state and nationally. For example, the U.S. Census Bureau reported there were 4,772 "nonemployer" construction firms with \$258 million in sales in Alaska in 2009, compared to 5,130 and \$318 million in 2007.⁴

These numbers should be compared only generally with the other numbers in this article, however. Sales are a broader measure than earnings, and a nonemployer construction firm needs only one job with sales of at least \$1,000 to be counted. However, the job numbers are a monthly average.

Notes

¹Subprime lending (also referred to as near-prime, nonprime, and second-chance lending) is loaning to people who may have difficulty maintaining the repayment schedule. These loans are characterized by higher interest rates and less favorable terms to compensate for higher credit risk.

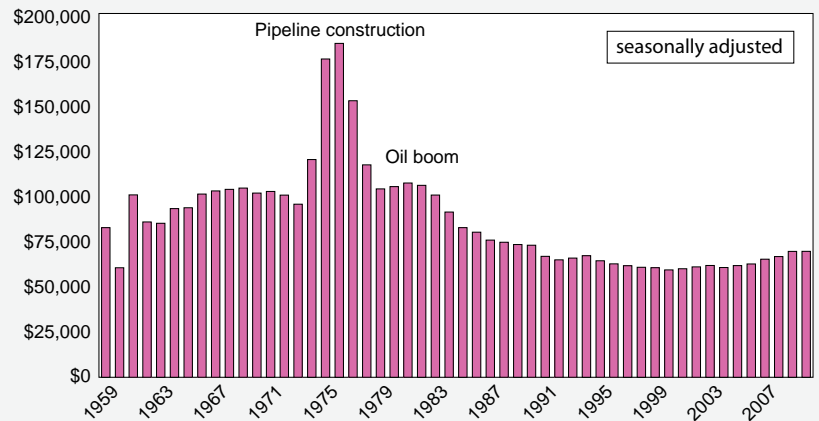
²Alaska Economic Trends, November 2003

³Construction employers are classified according to their main activity. So even if a contractor works on both residential and commercial buildings, those jobs will be counted in the category in which the firm does the most work.

⁴U.S. Census Bureau Nonemployer Statistics. Receipts include gross receipts, sales, commissions, and income from trades and businesses, as reported on annual business income tax returns.

Historical Average Annual Earnings 11

Alaska construction industry, 1959 to 2010

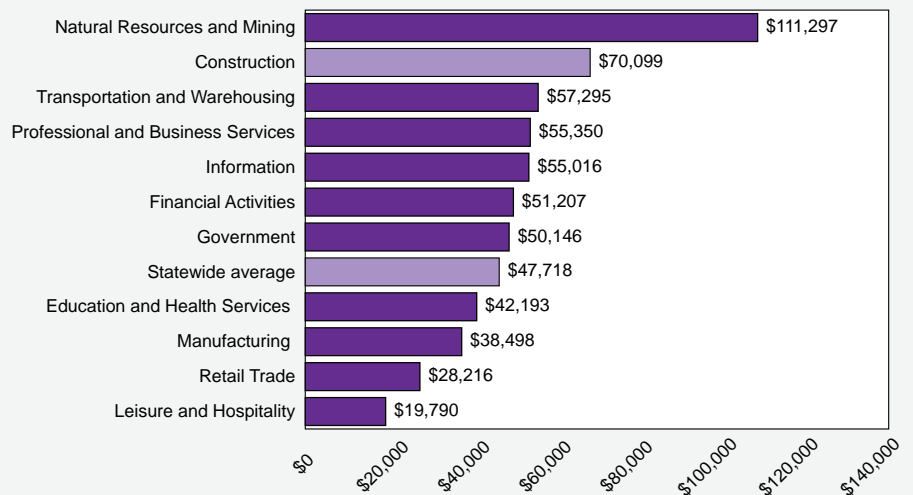


Note: Average annual earnings are adjusted for inflation using all urban consumer price indexes.

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

Construction Jobs Pay Well 12

Earnings in all Alaska industries, 2010



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

Alaska Career Ladder Branches Out

Upgrade to lattice expands online job-seeking tool

In 2009, the Alaska Department of Labor and Workforce Development's Research and Analysis Section unveiled a new online tool called the Alaska Career Ladder, which has helped job service professionals and job seekers identify the best opportunities for advancement to a goal occupation or from a current position.

Recently, R&A expanded the career ladder into a career "lattice." While the ladder helped students and workers identify upward career paths, the lattice adds lateral opportunities to change occupations without spending years attaining additional education and training. This can help those who have lost a job find additional opportunities for reemployment as well as those who want to make a career change but don't want to completely start over.

A career lattice can also help educators and school counselors show students how to focus their interests and skills to pursue a rewarding career. Career counselors and job placement specialists can assess the experience and credentials their clients already have, identify advancement opportunities or changes to a related occupation at about the same level, and develop an achievement plan. Individuals can also explore these career options on their own.

Business owners and hiring managers who are having trouble filling certain positions may need to broaden their recruitment pool, and career lattices can help them identify additional occupations with transferable skills and experience they may have otherwise overlooked. Businesses can also develop company-specific career lattices to identify paths for worker promotion.

How the lattice is displayed

The Alaska Career Lattice is designed for ease of use, but a short tutorial can help you get started. When you visit the site for the first time (live. laborstats.alaska.gov/cl/cloccs.cfm), click the

"How to Use the Career Lattice" link in the right-hand menu (see Exhibit 1) for a tutorial with illustrated examples.

Each occupation on the lattice has its own page. To get started, select an occupation from the list on the main page to display its lattice — for this example, select "budget analyst." Budget analyst now appears in the large box at the center of the lattice and is called the "focus occupation." (See Exhibit 1 for a screen shot.) The other occupations on the page are "associated occupations," which our research showed as most related to budget analysts. A user can click on the title of any occupation on the page to go to that occupation's career lattice.

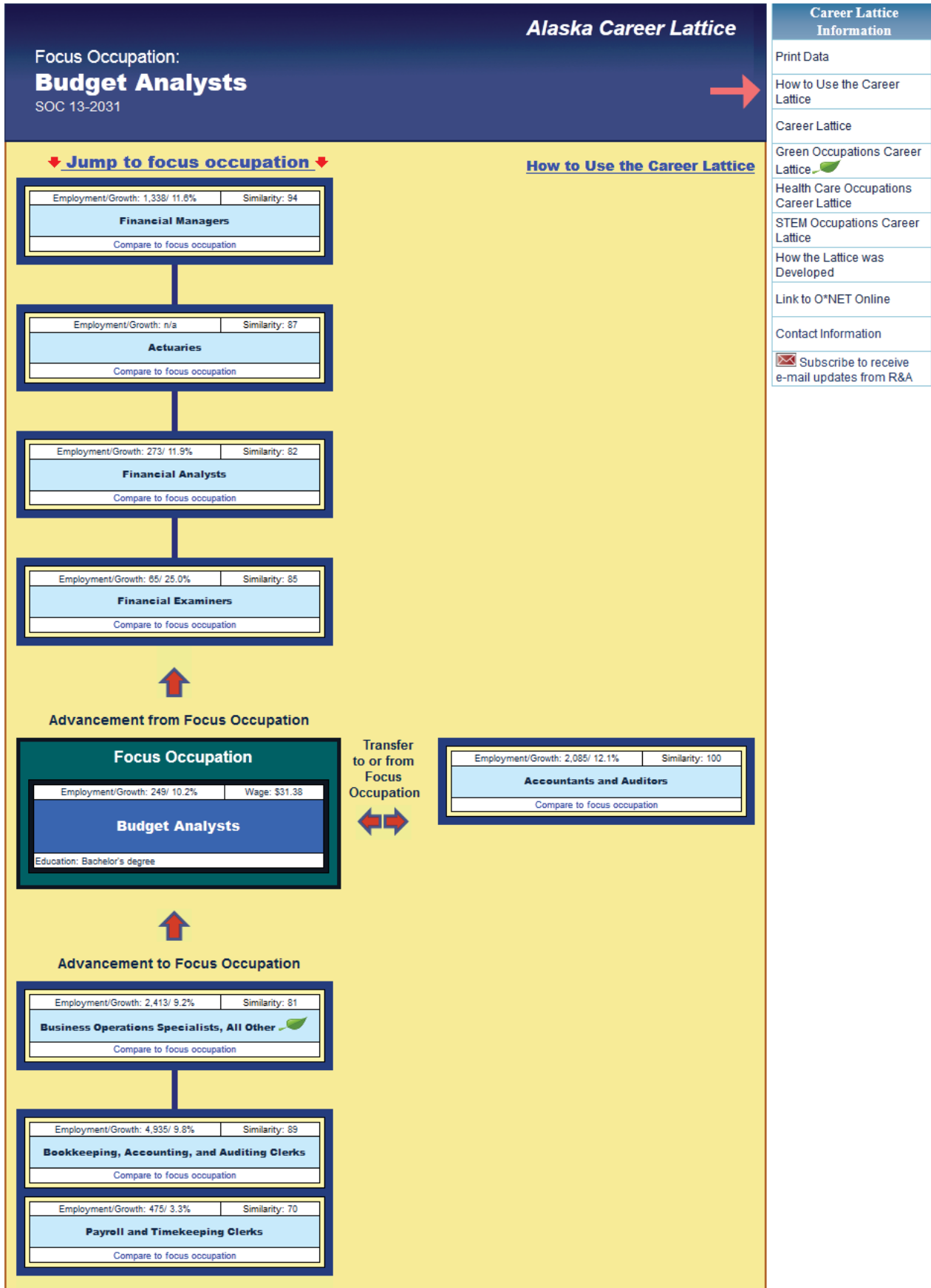
Occupations that provide advancement opportunities are on the rungs above the focus occupation (in this example, financial examiners, financial analysts, actuaries, and financial managers). Occupations that are stepping stones to the focus occupation are on the rungs below it (in this example, payroll and timekeeping clerks; bookkeeping, accounting, and auditing clerks; and business operations specialists, all other). Occupations that may provide a parallel change without additional education or training are to the right of the focus occupation (in this example, accountants and auditors).

All of the occupations on the page are placed in the order of their relative levels, starting with the lowest-level occupation on the bottom rung, progressing to the highest-level occupation at the top. Relative level was determined by analysis of wage estimates, comparisons of analyst ratings for a range of job characteristics, and the results of our nine-year study of worker transitions. A worker will typically need additional education, training, and/or experience to reach an occupation on a higher rung.

Though all the occupations shown in Exhibit 1 are directly linked to budget analysts, not all

Focus on Budget Analysts 1

Related occupations and paths for advancement



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11

are directly linked to each other. For example, a worker could — with additional education, training, and/or experience — move from a position as a bookkeeper to a budget analyst without first becoming a business operations specialist. Likewise, a budget analyst wouldn't necessarily need to become a financial examiner to become an actuary.

Estimated Alaska employment and growth are at the top left of each box. In the focus occupation's box, the most recent wage estimate is shown at the top right and the typical required education/training level is at the bottom.

Comparing occupations

There is a similarity score at the top right of each associated occupation's box, with a highest possible score of 100. Only jobs with a similarity score of 70 or higher will appear on the page, and scores in the high 80s or above mean the jobs are strongly related.

The "compare to focus occupation" link at the bottom of each associated occupation's box will open a separate comparison page for job charac-

teristics and requirements. Three tables compare the associated occupation's ratings in knowledge, skills, and abilities with the focus occupation's ratings. For example, Exhibit 2 shows knowledge elements for budget analysts (the focus occupation) and financial examiners (the associated occupation).

The most important knowledge elements for financial examiners are in the first column, the average rating for all occupations is in the second column, the ratings for financial examiners are in the third column, and the ratings for budget analysts are in the fourth column. The column on the far right shows how budget analysts compare to financial examiners.

Note that both occupations' ratings for these knowledge elements are much higher than the average for all occupations. This means the occupations are clearly related and explains the high similarity score for knowledge that appears at the top of the table.

Budget analysts have scores that are about the same as or stronger than financial examiners in all elements except English language and law and

2 Budget Analysts and Financial Examiners

Comparison of required knowledge

Comparisons of Job Characteristics				
Focus Occupation: Budget Analysts (13-2031)				
Associated Occupation: Financial Examiners (13-2061)				
Compare Knowledge Compare Skills Compare Abilities Compare Detailed Work Activities Compare Tools and Technologies				
<	Focus occupation element is lower			
<<	Focus occupation element is much lower			
0	Focus occupation element is at a similar level			
>	Focus occupation element is at a higher level			
>>	Focus occupation element is at a much higher level			
Knowledge		Similarity of Focus Occupation to Associated Occupation: 95		
Focus Occupation: Budget Analysts (13-2031)				
Associated Occupation: Financial Examiners (13-2061)				
Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
English Language	11.2	16.1	14.4	< Expanded education and/or training may be required
Economics and Accounting	4.4	15.5	19.2	>> Current knowledge level is likely more than sufficient
Law and Government	5.9	14.3	9.6	<< Extensive education and/or training may be required
Mathematics	9.2	14.1	15.9	> Current knowledge level is likely sufficient
Clerical	7.3	13.2	12.9	0 Current knowledge level may be sufficient
Administration and Management	8.4	11.8	14.7	> Current knowledge level is likely sufficient

Career Lattice Information
Print Data
How to Use the Career Lattice
Career Lattice
Green Occupations Career Lattice
Health Care Occupations Career Lattice
STEM Occupations Career Lattice
How the Lattice was Developed
Link to O*NET Online
Contact Information
<input type="checkbox"/> Subscribe to receive e-mail updates from R&A

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

government. The evaluation column shows that a budget analyst who wants to become a financial examiner would probably need extensive additional education or training in law and government, such as state regulations and statutes.

The comparison page also includes tables that show which detailed work activities, tools, and technologies the two occupations have in common.

An example of using the lattice

Let's say you're interested in becoming a budget analyst, and you're looking at its lattice as shown in Exhibit 1. The occupations below the budget analyst focus box are the jobs that may lead you toward that goal.

If you're a young person looking for an entry-level job, you might consider becoming an accounting clerk first. If you click "compare to focus occupation," you'll discover you need additional education, training, and experience to qualify as a budget analyst. But if you get an accounting degree, work experience as an accounting clerk may give you a leg up on another graduate without that experience.

Let's say you earn an accounting degree, spend some time working as an accounting clerk, then land a job as a budget analyst — now you want to know your options for further advancement.

After reviewing the occupations above the budget analyst box, you consider becoming a financial analyst. If you click "compare to focus occupation" at the bottom of the financial analyst box, you can assess any deficiencies in your knowledge, skills, or abilities. (See Exhibit 3.)

It appears that much of your current knowledge, skills, and abilities might be sufficient to make the jump to a job as a financial analyst, but you may need to do more writing at a higher level. (See English language in the knowledge table, writing in the skills table, and written expression in the abilities table.) You may also need to learn more about statutes and regulations (see law and government in the knowledge table), and have a high-level ability to use more than just mathematical reasoning to make decisions (see deductive reasoning on the abilities table).

But let's say your company hits hard times, and you lose your job as a budget analyst. You are unable to find another position, and you need to find a new job right away. Occupations to the right of the budget analyst box may be the best opportunities for immediate placement. In this case, you might consider becoming an accountant or auditor. If you click "compare to focus occupation," you will find your knowledge, skills, and abilities may already qualify you for many accountant and auditor jobs.

You may also consider occupations above or below the budget analysts box. Depending on the duties of your current job, your education level, and your years of experience, you might already qualify for a job on a higher rung. Financial analyst might be a consideration if you have strong writing skills and a solid understanding of relevant statutes and regulations. Occupations on a lower rung may also be worth considering if you can't find anything at your current level.

Green jobs and health care

The career lattice has the ability to filter by certain types of occupations, such as by green jobs and health care occupations. On every page there is a "Career Lattice Information" menu box at the top right with a number of these links.

A green leaf denotes green jobs. For example, in Exhibit 1, "all other business operations specialists" has a leaf next to its title, showing it has a significant number of workers involved in green activities.

How the lattice was developed

Most career lattices are limited in scope and rely almost entirely on informed analyst judgment, anecdotal knowledge, and assumptions about the similarity of occupations based on generalizations of job characteristics.

Many occupation-to-occupation associations are obvious, but many are not. For example, dental hygienists and dental assistants are obviously related, but which of the myriad business and finance occupations would offer the best opportunities for a loan officer?

Alaska's employers report their workers' occupa-

3 Budget Analysts and Financial Analysts

Comparison of knowledge, skills, and abilities

Comparisons of Job Characteristics

Focus Occupation: Budget Analysts (13-2031)

Associated Occupation: Financial Analysts (13-2051)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<	Focus occupation element is lower
<<	Focus occupation element is much lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge		Similarity of Focus Occupation to Associated Occupation: 96			
Focus Occupation: Budget Analysts (13-2031)					
Associated Occupation: Financial Analysts (13-2051)					
Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Economics and Accounting	4.4	19.8	19.2	0	Current knowledge level may be sufficient
English Language	11.2	17.1	14.4	<	Expanded education and/or training may be required
Mathematics	9.2	16.7	15.9	0	Current knowledge level may be sufficient
Administration and Management	8.4	12.1	14.7	>	Current knowledge level is likely sufficient
Law and Government	5.9	11.5	9.6	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills		Similarity of Focus Occupation to Associated Occupation: 94			
Focus Occupation: Budget Analysts (13-2031)					
Associated Occupation: Financial Analysts (13-2051)					
Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Writing	9.2	13.2	10.5	<	A higher skill level may be required
Judgment and Decision Making	9.4	11.6	11.5	0	Current skill level may be sufficient
Active Learning	8.7	11.2	10.1	<	A higher skill level may be required
Mathematics	6.2	10.8	10.6	0	Current skill level may be sufficient
Systems Analysis	6.5	9.9	9.7	0	Current skill level may be sufficient
Systems Evaluation	6.4	9.7	8.1	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 97			
Focus Occupation: Budget Analysts (13-2031)					
Associated Occupation: Financial Analysts (13-2051)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.0	14.3	0	Current ability level may be sufficient
Deductive Reasoning	10.6	14.1	11.8	<	Improvement in current ability level may be required
Written Expression	9.8	13.9	11.8	<	Improvement in current ability level may be required
Near Vision	11.1	12.6	11.0	<	Improvement in current ability level may be required
Number Facility	6.3	11.6	15.0	>>	Current ability level is likely more than sufficient
Mathematical Reasoning	6.3	11.0	14.0	>>	Current ability level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Career Lattice Information

Print Data
How to Use the Career Lattice
Career Lattice
Green Occupations Career Lattice 
Health Care Occupations Career Lattice
STEM Occupations Career Lattice
How the Lattice was Developed
Link to O*NET Online
Contact Information
 Subscribe to receive e-mail updates from R&A

tions on their required quarterly unemployment insurance reports — the linchpin of the Alaska Occupational Database, or ODB. This is unique to Alaska, and it provided the opportunity to study the occupation-to-occupation movements of workers from 2001 to 2009. Instead of relying on assumed wisdom to determine occupational relationships, we were able to support them (or reject them) using quantifiable data.

However, Alaska has low employment for some occupations, and gathering enough data — even over a nine-year period — is not always possible. Reporting occupations accurately can also be a challenge for some employers, and misreporting can occasionally result in misleading results.

For any project of this nature, it would have been unwise to rely on only one piece of information and ignore a wealth of other available data. For this reason, we incorporated extensive analysis of job characteristics from O*NET (Occupation Information Network). The O*NET database contains analyst ratings for knowledge, skills, and abilities; detailed work activities; tools and technologies; and education, training, and experience requirements for a variety of occupations. We also used U.S. Bureau of Labor Statistics wage estimates to help determine the relative levels of the occupations on the lattice.

By combining these other sources of data with the results of our study of worker transitions, we were able to make confident choices about which occupations are most related to one another and their relative levels.

We'd like to hear from you

We're interested in your feedback and in knowing who is using the Alaska Career Lattice and how you're using it. Contact todd.mosher@alaska.gov.

Visit the Alaska Career Lattice at live.laborstats.alaska.gov/cl/cloccs.cfm.

Employment Scene

Unemployment rate at 7.4 percent in October



Alaska's seasonally adjusted unemployment rate for October was essentially unchanged, declining one-tenth of a percentage point to 7.4 percent. September's rate was revised down slightly, to 7.5 percent. The comparable national rate for October was 9.0 percent, also showing little change from September.

The U.S. and Alaska rates have both fallen moderately in the last year. The national rate is seven-tenths of a percentage point lower than it was in October 2010, and Alaska's rate is down half a percentage point. (See Exhibit 1.)

Alaska rate lower for three years

The state's rate has been below the nation's for exactly three years, an unusual relationship after decades of Alaska's rate typically running one to two percentage points higher than the U.S. rate. Because Alaska's rate remains above its 10-year average of 7 percent, the three-year streak is less a testament to a great job market in Alaska and more an illustration of how tough the national market remains.

Only 3 states not in the red

Over the last few years, employment grew in only

three states — Alaska, North Dakota, and Texas — according to a recent report released by the Federal Reserve of Minneapolis. The report used December 2007 as a benchmark and examined all 50 states from the beginning of the recession in December 2007 to July 2011.

Seasonal unemployment kicks in

Not-seasonally adjusted unemployment rates increased in all but one of the state's regions in October. This is typical as the job market continues its annual transition from summer to winter. October's figures show the high seasonality of the visitor industry in particular, with Denali Borough's and Skagway's rates increasing from 5.0 percent in both areas in September to 16.2 and 21.7 percent respectively in October.

There are probably few places in the nation where unemployment rates triple or quadruple in a month. In Alaska, it's typically in small communities that are dominated by the state's most seasonal industries — tourism or fishing.

The Bristol Bay Borough is another example of this seasonal volatility. In February of this year, the borough's unemployment rate was 11.2 percent but fell to 1 percent in July when the workforce was harvesting salmon in one of the state's largest fisheries.

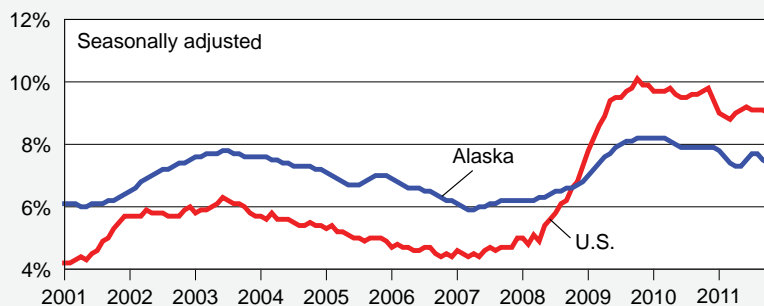
Growth in most industries

Employment in construction and in leisure and hospitality took a sharp seasonal downturn in October. Construction employment fell by more than 1,000, and leisure and hospitality lost more than 6,000 jobs. But over the year, total payroll employment was up by an estimated 2,300, with the largest share of new jobs coming from health care.

Rate has declined over time

Labor force statistics for Alaska go back to 1976

1 Unemployment Rates January 2001 to October 2011



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

without a series break. During the last 35 years, Alaska has gone through a couple of booms, one big bust, then two decades of moderate growth. It follows that Alaska's labor force has more than doubled during that period, and so has the number of employed. The most notable part of the series is that unemployment rate has fallen significantly over the years. (See Exhibit 2.)

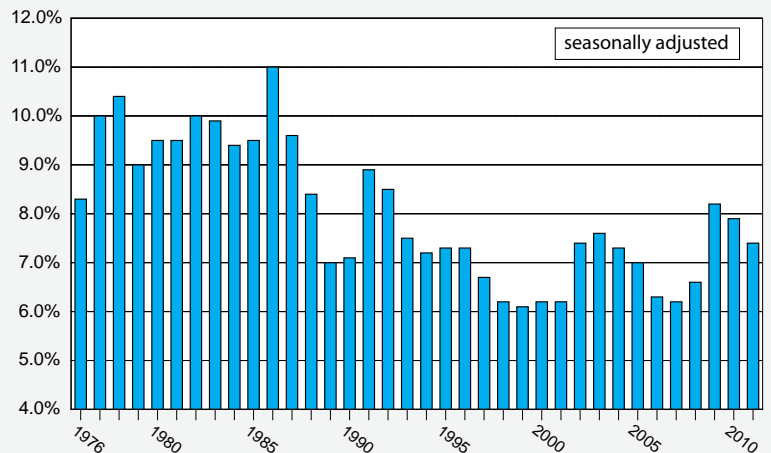
Prior to 1996, the seasonally adjusted October unemployment rate never fell below 7 percent, but since then, it has slipped below 7 percent eight times. Before 1990, the rate was higher than 9 percent most years, hitting a high of 11 percent in 1986.

This trend may be partly explained by the shrinking share of employment tied to seasonal industries over time. For example, before 1985, construction and seafood processing employment combined represented more than 10 percent of all wage and salary employment. The combined employment in these two highly seasonal sectors hit a high of 21 percent in 1976 — one of the peak construction years for the Trans-Alaska Oil Pipeline. Since 1990, their combined employment percentage has been in the single digits.

A decline in people moving in is another likely factor. During the mid-1970s and the early 1980s, a record number of people relocated to Alaska — both periods corresponded with record employment growth in Alaska and recessions in the nation. This means that during those years, many job seekers came to Alaska, putting upward pressure on the unemployment rate.

During the most recent recession, smaller increases in migration to Alaska may be explained by limited mobility, an older workforce, and more moderate economic growth in the state.

Unemployment Rate's Downward Trend **2** Octobers in Alaska, 1976 to 2011



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

3 Statewide Employment

Nonfarm wage and salary

	Preliminary		Revised		Year-Over-Year Change		
	10/11	9/11	10/10	10/10	90% Confidence Interval		
Alaska							
Total Nonfarm Wage and Salary¹	327,100	343,300	324,800	2,300	-3,777	8,377	
Goods-Producing ²	43,800	49,800	43,600	200	-2,766	3,166	
Service-Providing ³	283,300	293,500	281,200	2,100	-	-	
Mining and Logging	16,800	17,100	16,300	500	-735	1,735	
Mining	16,300	16,600	15,800	500	-	-	
Oil and Gas	13,600	13,700	13,300	300	-	-	
Construction	17,500	18,600	17,600	-100	-1,613	1,413	
Manufacturing	9,500	14,100	9,700	-200	-2,559	2,159	
Wholesale Trade	6,100	6,400	6,100	0	-339	339	
Retail Trade	35,800	36,900	34,900	900	116	1,684	
Food and Beverage Stores	6,200	6,300	6,200	0	-	-	
General Merchandise Stores	10,600	10,400	9,700	900	-	-	
Transportation, Warehousing, Utilities	21,400	23,700	21,200	200	-634	1,034	
Air Transportation	5,700	6,100	5,800	-100	-	-	
Truck Transportation	3,500	3,700	3,100	400	-	-	
Information	6,500	6,500	6,400	100	-175	375	
Telecommunications	4,400	4,500	4,300	100	-	-	
Financial Activities	15,100	14,800	15,500	-400	-1,267	467	
Professional and Business Services	26,900	28,300	26,300	600	-756	1,956	
Educational⁴ and Health Services	43,900	43,300	42,200	1,700	565	2,835	
Health Care	31,900	31,900	30,200	1,700	-	-	
Leisure and Hospitality	30,700	37,200	29,900	800	-1,869	3,469	
Other Services	11,300	11,100	11,900	-600	-1,421	221	
Government	85,600	85,300	86,800	-1,200	-	-	
Federal Government ⁵	16,200	17,200	16,700	-500	-	-	
State Government	26,600	26,700	26,500	100	-	-	
State Government Education ⁶	8,600	8,500	8,500	100	-	-	
Local Government	42,800	41,400	43,600	-800	-	-	
Local Government Education ⁷	25,100	23,700	25,200	-100	-	-	
Tribal Government	3,900	4,000	4,000	-100	-	-	

A dash means confidence intervals aren't available at this level.

¹Excludes the self-employed, fishermen and other agricultural workers, and private household workers. For estimates of fish harvesting employment and other fisheries data, go to labor.alaska.gov/research/seafood/seafood.htm.

²Goods-producing sectors include natural resources and mining, construction, and manufacturing.

³Service-providing sectors include all others not listed as goods-producing sectors.

⁴Private education only

⁵Excludes uniformed military

⁶Includes the University of Alaska

⁷Includes public school systems

Sources for Exhibits 1, 3, and 4: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and U.S. Department of Labor, Bureau of Labor Statistics

Changes in producing the estimates

Beginning with the production of preliminary estimates for March 2011, production of state and metropolitan area Current Employment Statistics estimates transitioned from the Alaska Department of Labor and Workforce Development's Research and Analysis Section to the U.S. Bureau of Labor Statistics. Concurrent with this transition, BLS implemented several changes to the methods to help standardize estimation across states. While these changes reduce the potential for statistical bias in state and metropolitan area estimates, they may increase month-to-month variability. More detailed information on the CES changes is available on the BLS Web site at <http://www.bls.gov/sae/cesprocs.htm>.

4 Unemployment Rates

Boroughs and census areas

	Prelim.		Revised	
	10/11	9/11	10/10	10/10
SEASONALLY ADJUSTED				
United States	9.0	9.1	9.7	
Alaska Statewide	7.4	7.5	7.9	
NOT SEASONALLY ADJUSTED				
United States	8.5	8.8	9.0	
Alaska Statewide	6.9	6.7	7.3	
Anchorage/Mat-Su Region	6.1	6.2	6.6	
Municipality of Anchorage	5.6	5.8	6.3	
Matanuska-Susitna Borough	7.9	7.5	8.0	
Gulf Coast Region	8.1	7.4	8.8	
Kenai Peninsula Borough	8.4	8.0	9.3	
Kodiak Island Borough	5.7	5.5	6.4	
Valdez-Cordova Census Area	9.6	6.6	9.2	
Interior Region	6.9	6.5	6.9	
Denali Borough	16.2	5.0	14.6	
Fairbanks North Star Borough	6.0	5.8	6.3	
Southeast Fairbanks Census Area	9.7	9.6	9.4	
Yukon-Koyukuk Census Area	14.3	14.6	13.1	
Northern Region	9.1	9.5	8.7	
Nome Census Area	11.0	11.5	11.4	
North Slope Borough	5.0	4.9	4.8	
Northwest Arctic Borough	13.6	14.8	11.9	
Southeast Region	6.8	5.8	7.1	
Haines Borough	7.9	5.6	7.8	
Hoonah-Angoon Census Area ¹	13.8	10.8	13.4	
Juneau, City and Borough of	5.0	4.5	5.5	
Ketchikan Gateway Borough ¹	6.6	5.4	7.2	
Petersburg Census Area ¹	8.3	7.7	-	
Prince of Wales-Hyder Census Area ¹	13.1	12.9	-	
Prince of Wales-Outer Ketchikan CA ¹	-	-	12.8	
Sitka, City and Borough of ¹	5.9	5.3	6.0	
Skagway, Municipality of ¹	21.7	5.0	19.6	
Wrangell, City and Borough of ¹	9.9	7.2	-	
Wrangell-Petersburg Census Area ¹	-	-	8.8	
Yakutat, City and Borough of	8.0	7.0	8.1	
Southwest Region	11.6	11.4	11.9	
Aleutians East Borough	10.4	10.5	7.7	
Aleutians West Census Area	6.6	6.8	7.8	
Bethel Census Area	13.0	13.7	13.3	
Bristol Bay Borough	5.8	2.6	6.5	
Dillingham Census Area	9.9	8.9	10.2	
Lake and Peninsula Borough	5.8	5.5	6.8	
Wade Hampton Census Area	17.8	18.9	17.9	

¹ Because of the creation of new boroughs, this borough or census area has been changed or no longer exists. Data for the Municipality of Skagway and Hoonah-Angoon Census Area became available in 2010. Data for the City and Borough of Wrangell, Petersburg Census Area, and Prince of Wales-Hyder went into effect in January 2011. Prior to January, data were published for Wrangell-Petersburg Census Area and Prince of Wales-Outer Ketchikan Census Area.

A Safety Minute

Violence a major workplace threat, but firms can lower the risk

The recent fatal shooting of an Anchorage woman at work reminds us that the workplace can sometimes be a dangerous place. Over the past 15 years, homicide has been among the top four causes of occupational death and is the leading cause of death for women in the workplace.

Nearly 2 million U.S. workers report some kind of workplace violence each year, according to the Occupational Safety and Health Administration — but many more cases of threats and harassment go unreported.

Workplace violence is any act or threat of physical harm, harassment, intimidation, or other threatening and disruptive behavior. Police, corrections officers, and taxi drivers are victimized at the highest rates, but other factors may put employee at a higher risk, including:

- Working with unstable or volatile people in certain health care, social service, or criminal justice settings
- Working alone or in small numbers
- Working late at night or early in the morning
- Working in high-crime areas
- Guarding valuable property
- Working in community-based settings, such as community mental health clinics, drug abuse treatment clinics, pharmacies, community-care facilities, and long-term care facilities
- Exchanging money in certain financial institutions
- Delivering passengers, goods, or services

- Having a mobile workplace such as a taxi

The best way for employers to protect workers is to establish a zero-tolerance policy and a well-written workplace violence prevention program. Employers can also help by:

- Providing safety education for employees so they can identify unacceptable conduct and know what to do about it
- Securing the workplace through extra lighting, alarm systems, and minimal access to outsiders
- Providing drop safes to limit amounts of cash on hand
- Equipping field staff with cell phones and mandating daily work plans that require keeping a contact person informed of their location
- Employing the buddy system and instructing employees not to enter locations where they feel unsafe

Employees can protect themselves by:

- Learning to recognize, avoid, or defuse potentially violent situations through personal safety training
- Informing supervisors of security or safety concerns and reporting all incidents immediately
- Avoiding traveling alone to unfamiliar locations or situations

The Department of Labor and Workforce Development's Alaska Occupational Safety and Health Consultation and Training program can help with workplace violence and other safety issues. Contact AKOSH at (907) 269-4955 or (800) 656-4972.

Employer Resources

Fidelity Bonding Program shields employers from employee theft

The Fidelity Bonding Program allows an employer to insure an "at-risk" employee, at no cost, for six months against job-related theft, forgery, larceny, or embezzlement. Bond insurance reimburses employers for any loss of money or property, at or away from the work site, with no deductible.

The Fidelity Bonding Program, which is administered by the Employment Security Division of the Department of Labor and Workforce Development, is the only program that bonds ex-offenders. It began as a federal program in 1966, and states began administering their own programs in 1998.

Full-time and part-time applicants who are eligible include ex-offenders, recovering substance abusers, welfare recipients, and those with poor credit. People who lack a work history or have been dishonorably discharged from the military may also be covered. Employees must be of legal working age in Alaska,

and the self-employed are not eligible.

Bonds are typically issued for \$5,000; higher amounts depend on the particular job and employment circumstances, and must be approved by the program's bonding coordinator. Bonds may also be issued to cover current employees who need bonding to prevent being laid off or to secure a job transfer or promotion.

Employers seeking bonding insurance can call their closest Alaska Job Center. To find the nearest job center, go to jobs.alaska.gov and click on "Alaska Job Centers" on the left, or call (877) 724-ALEX (2539).

For more information about the program, visit the Fidelity Bonding Program Web site at labor.alaska.gov/bonding.