

ALASKA ECONOMIC

TRENDS

January 2002

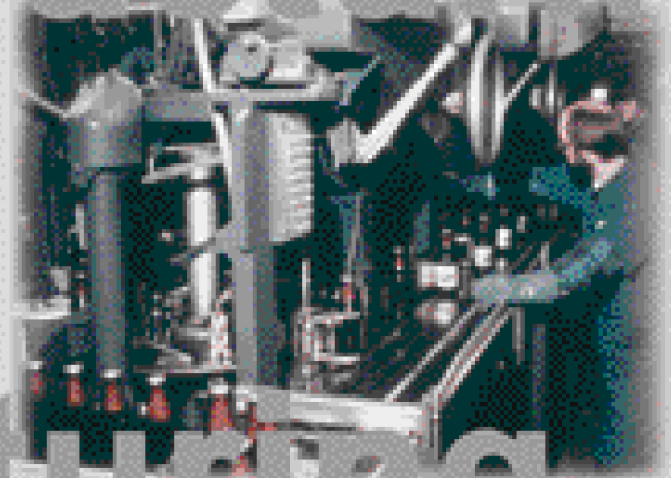


Manufacturing



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Alaska Department of Labor
and Workforce Development

Tony Knowles
Governor of Alaska

ALASKA ECONOMIC TRENDS

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Correction

In the Seniors article in the December 2001 *Trends*, page 4, the first paragraph under [More seniors are poor; more of the poor are women](#) should read:

According to the U.S. Census 2000, 8.4% of seniors age 65 and over, and nine percent of the entire state population, fell below the poverty line. This is a slight increase for seniors from 1990 when 7.6% fell below the poverty line. For the state as a whole, Alaskans falling below the poverty line remained the same at nine percent.

Please see **Correction Notice** on page 14.

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Manufacturing

by Neal Gilbertsen
Labor Economist

It's a small, but significant part of Alaska's economy, dominated by seafood processing

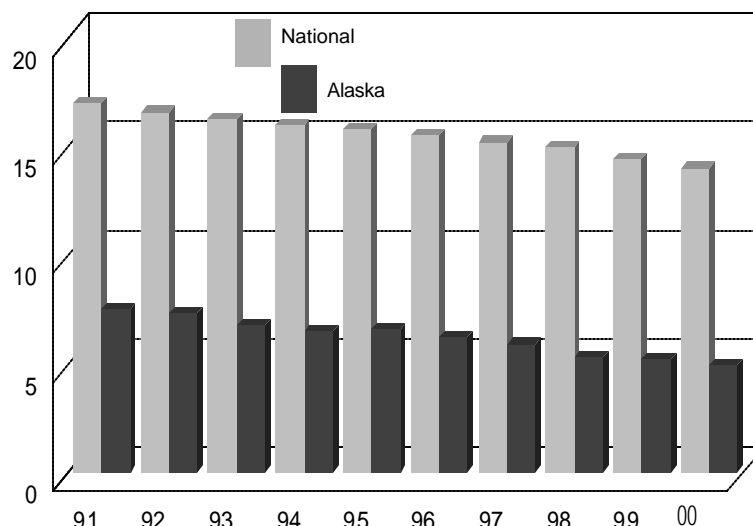
Manufacturing was once the industrial heart of America. The steel mills of Pittsburgh and the automobile factories of Detroit attracted large numbers of immigrants to high paying jobs that promised secure lifetime employment. Cities were identified by their manufactured products. Chicago was "slaughterhouse to the world." Akron was the hub of tire production. Seattle was known as the home of Boeing. But as the country has entered the post-industrial era, much has changed.

As American multi-national corporations pursue a strategy of globalization, which lowers their costs for raw materials such as fish and timber, manufacturing jobs gravitate overseas to areas of lower labor costs. During the economic boom of the 1990s, domestic manufacturing jobs showed next to no growth. As the national workforce grew over this period, the percentage of workers employed in manufacturing fell from 17 percent to 14 percent. (See Exhibit 1.)

Alaska's manufacturing sector differs markedly from the national model. Instead of large factories located in urban centers, most Alaska manufacturing takes place in relatively small plants distributed over a wide geographic area. Since much of this is related to seafood processing, employment is highly seasonal and peaks during the summer months.

While Alaska manufacturing employment has always been a relatively small part of the state's overall employment, it is not immune from national trends. Between 1991 and 2000, Alaska

Manufacturing Employment 1 As percent of total employment



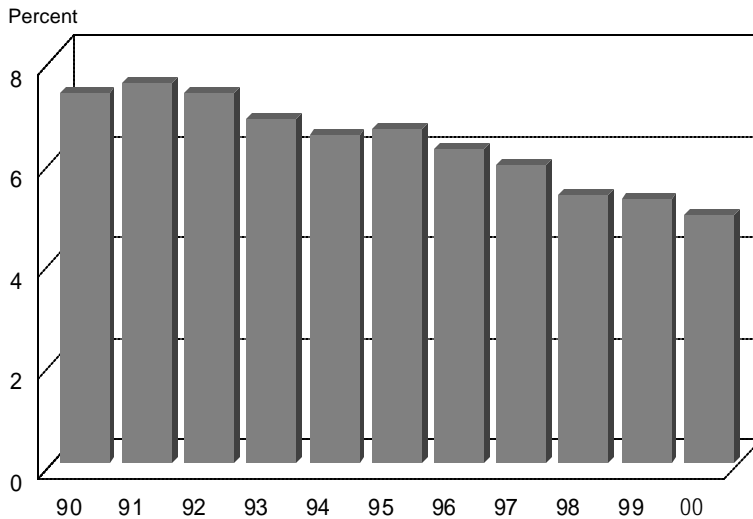
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Manufacturing Jobs in Alaska

Annual Average 2000

Total	13,800
Non-durable	11,100
Seafood Processing	8,300
Publishing	1,570
Other	1,230
Durable	2,700
Wood Products	1,500
Other	1,200

2 Manufacturing as % of Total Employment in Alaska 1990-2000



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

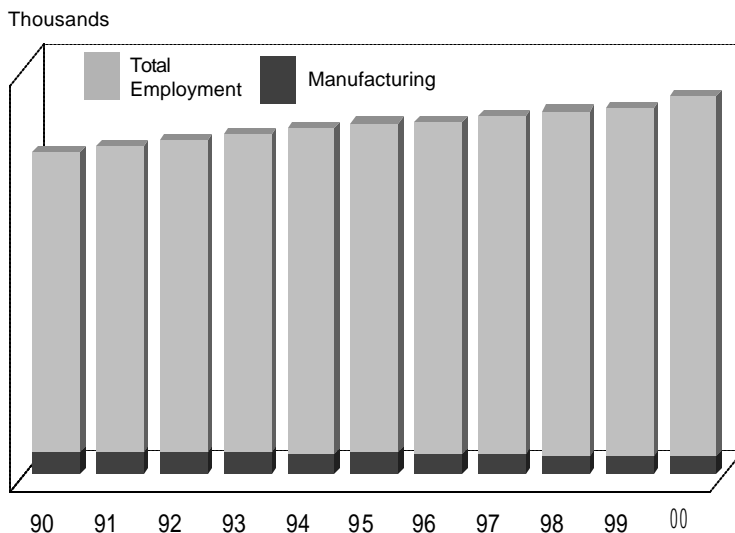
manufacturing declined 2.6% in terms of total employment, almost identical to the national decline. Manufacturing represented 7.5% of all employment in 1991, but only 4.9% of the total in 2000. (See Exhibit 2.)

Manufacturing in Alaska

Alaska, a land of glaciers, snow-covered mountains and pristine waters, seems the very antithesis of the images associated with traditional manufacturing. Neither is it thought of as an emerging force in the “new industries” of high tech. Nevertheless, the small manufacturing sector plays an essential role in the state’s economy. There is more to it than fish processing and timber.

Quite possibly your holidays included an array of Alaska’s manufactured goods. That last cup of boutique coffee, was it Heritage, Alaska Coffee Company, Raven’s Brew or one of the other excellent Alaska brands? Did the hors d’oeuvres tray at the office party include an offering from the Alaska Sausage Company, or perhaps smoked salmon or caviar from one of Alaska’s many seafood processors? The baked goods, the ice cream, the jams and jellies, could have come from an Alaska manufacturer. The candy in your Christmas stocking or your Hanukkah gelt may be a local product as well.

3 Manufacturing Employment As percent of total Alaska employment



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

Did your New Year’s celebration include a wine from Alaska, or a stein of Alaska Amber Ale? Perhaps you stopped by one of Alaska’s celebrated brewpubs to sample a special holiday creation. Some who over-indulged may have washed down their January 2 aspirin with water bottled in Alaska. That small package wrapped with red ribbon, did it contain an item of jewelry created in Alaska? If you flew south for the season, very likely your 737 was powered by jet fuel from one of Alaska’s refineries. Or maybe you were practical this year and decided to undertake home improvements using a variety of Alaska manufactured goods, including a solid foundation of Alaska concrete.

While the small-manufacturing firms of Alaska do not play a major role in terms of direct employment,

they are important to the day-to-day lives of many Alaskans. As the state continues to grow it is likely that more small-scale entrepreneurs will discover opportunities, and that some of the existing firms will expand.

Wood products

In 1990, wood products accounted for 3,100 of the 3,900 jobs provided by the durable goods manufacturing sector, (79 percent). By 2000, employment in all durable goods manufacturing had fallen to 2,700 jobs and wood products accounted for only 1,500 positions, (56 percent). While the loss of 1,600 jobs in the wood products sector seems relatively minor (six tenths of a percent) when compared with the average annual statewide employment of the period (261,000 jobs), it has had a major economic impact on Southeast Alaska.

In 1990, Ketchikan Pulp Company was the tenth largest employer in the state with 924 employees. Sitka's Alaska Pulp Company ranked 22nd with 656 employees, Klukwan Forest Products was 47th with 377 employees, and Wrangell Forest Products was a major employer in that community. In 1993, Alaska Pulp Company ceased operations. In 1997, Ketchikan Pulp Company closed its doors. In 1998, Klukwan Forest Products exited the industry. Wrangell saw the end of milling operations by the mid-1990s. Only one wood products employer, Silver Bay Logging with 311 employees, remains among the 100 largest private sector employers, ranking 79th.

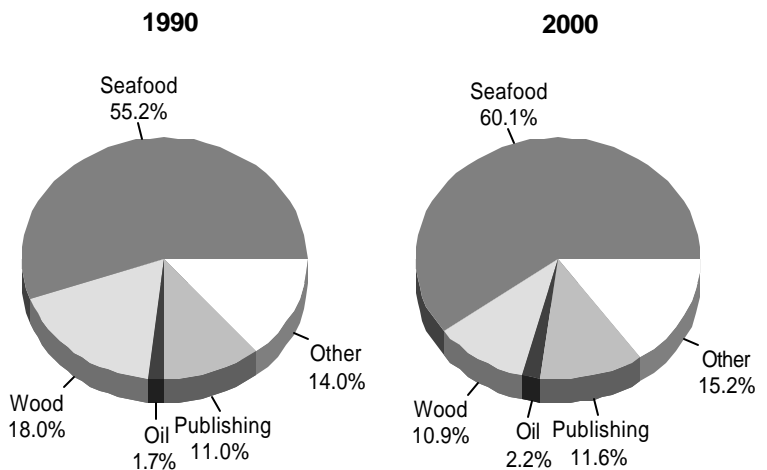
The volume of timber harvested from the Tongass National Forest has declined 75 percent since 1990. Timber industry employment is at its lowest point in 30 years. The 2001 cut of 48 million board feet was the lowest cut since 1942. The loss of 1,600 timber-related jobs throughout Southeast has had a significant effect on local economies throughout the region. Outlying communities, especially on Prince of Wales Island, have experienced a dramatic decline in employment opportunities as logging operations have been terminated or greatly reduced in scale.

Some broad trends in the market are responsible for the decline of the wood products industry. The accessible old growth in the Tongass has been cut. The remaining stands are of lower value and more difficult access. The global timber corporations have shifted their attention from domestic sources to the more profitable forests of the third world. Public scrutiny of commercial clear-cutting in the national forests at taxpayer expense is increasing.

The Forest Service plans to offer timber from the Tongass in 2002 at around the same level as in 2001, 70 million board feet. However, in 2001, only 70 percent of the offered board feet was sold. Only 66 percent of the 85.3 million board feet offered in 2000 was sold. Nearly 300 million board feet of Tongass timber remains under contract, but unharvested due to depressed prices. The volume of timber "on the shelf," offered but unsold, remains high. Given this backlog, an explanation for the reduced level of cut must be sought in the broad context of a depressed wood products market.

Logging activities on private, municipal, and trust lands reflect this trend as well. New notifications

Manufacturing Employment Alaska 1990 and 2000 **4**



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

of acreage available for harvest from these lands increased from 36,537 acres in 1999 to 47,225 in 2000, but these offerings were primarily aimed at small scale operations and had little impact on overall employment. Local increases near Ketchikan and Mat-Su were partially offset by reductions in the Kenai-Kodiak and Juneau regions.

Sealaska Corporation has been harvesting timber at relatively constant levels for the last several years, and this has provided a degree of stability in the number of jobs created. But Koncor, once the second largest timber producer among Native corporations, ceased logging operations in 2001 and is exiting the industry.

The outlook for the timber industry is not bright. While some local opportunities may remain, it is doubtful that the wood products industry will either improve in the short term, or ever regain the prominent position it once occupied in Alaska's manufacturing sector. Southeast Alaska's recovery from this economic setback remains problematic.

Manufacturing the news

Publishing is now Alaska's second largest manufacturing industry, with 1,570 employees. The Anchorage Daily News accounts for one third of them; it ranks 36th among Alaska's large employers with 520 employees reported in 2000.

The federal government is implementing a new classification system. By 2003, publishing will no longer be considered "manufacturing" but will be placed in a new employment category labeled "information." Until then, our friends in journalism can continue to lay claim to a prominent place in the manufacturing sector.

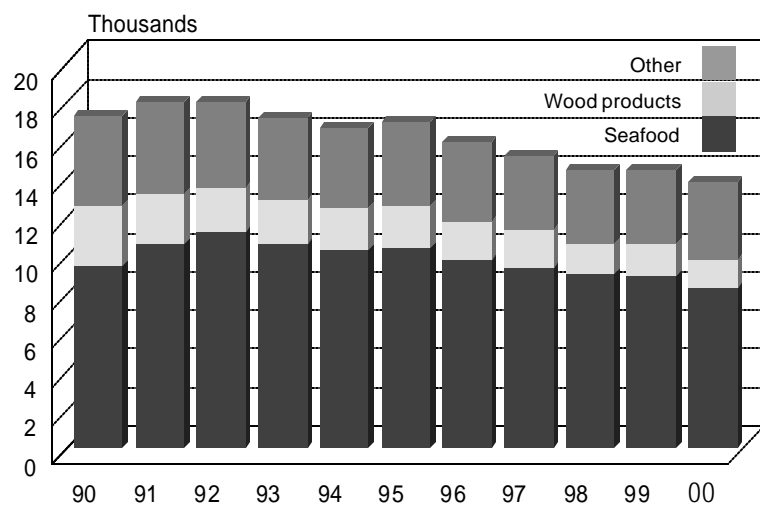
Fish processing

Fish are to Alaska what corn is to Iowa. Most fishers, like farmers, are considered self-employed and as a result are not included in Department of Labor and Workforce Development employment statistics. But fishers, like farmers, depend upon food processors to transform their harvests into marketable goods. Just as General Mills turns grains into breakfast cereals, Alaska's seafood processors turn the 3.3 billion pounds of seafood landed in Alaska into canned salmon, surimi, pollock fillets, smoked black cod, and caviar.

The frozen fish sticks you fed the kids yesterday probably came from Alaska. The imitation crab salad you threw together for the holidays was made possible by a processor in Unalaska. The salmon caviar you have learned to savor was probably extracted and processed in Petersburg or Ketchikan. Whether you are looking for an inexpensive fish sandwich or an haute cuisine seafood feast, there is an Alaska solution that involves manufacturing.

Seafood processing provided 8,300 jobs in 2000. This amounted to more than 60 percent of all manufacturing employment and over 75 percent of non-durable goods manufacturing. (See Exhibit 5.) While these jobs represent only 3.2% of Alaska's total wage and salary employment, the

5 Manufacturing Employment Alaska 1990-2000



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

importance of the industry is dramatically understated. This is especially the case on the local level. Many of Alaska's coastal communities are based upon seafood processing. Places such as Petersburg, Sitka, Pelican, Cordova, Kodiak, Unalaska, Dillingham and many others rely upon seafood processing for taxes, direct employment, and for the markets they provide local fishers.

Seafood processors are among state's leading employers

Within the manufacturing sector, nine of the eleven largest employers are seafood processors. The exceptions are Silver Bay Logging and the Anchorage Daily News. All nine are included among Alaska's 100 largest employers. They are: #23 UniSea (687 employees), #29 Icicle Seafoods (631), #33 North Pacific Processors (582), #35 Peter Pan Seafoods (566), #48 Norquest Seafoods (464), #56 Wards Cove Packing Company (389), #63 Cook Inlet Processing (378), #71 Westward Seafoods (348), and #74 Ocean Beauty Seafoods (338). A tenth processor, Trident Seafoods, (which ranked 8th in 1990 with 1,020 employees), almost certainly warrants inclusion, but due to a reporting anomaly failed to make the list. These processing companies are for the most part based in Seattle.

Much of the seafood harvest's economic value leaves the state

Many Alaskans appreciate the importance of the industry, yet see room for improvement. Large chunks of the economic value of the seafood harvest leave the state of Alaska at every stage: the earnings of fishers, (called "ex-vessel" value), wages paid processing workers, and first wholesale value.

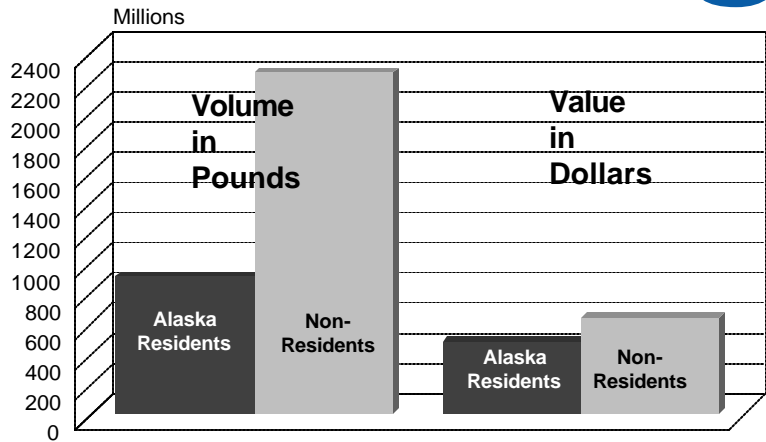
Resident Alaska fishers numbering 8,411 caught 43 percent of the total catch by value in 1999, and 29 percent of the catch by volume, according to the Commercial Fisheries Entry Commission. That year 3,268 non-resident fishers landed 2,263,387,658 pounds of fish. This catch was valued at \$641,131,401. By contrast, Alaska

fishers landed only 912,304,409 pounds valued at \$484,572,135. (See Exhibits 6 and 7.)

While no precise data are available, an even higher percentage of first wholesale value, (the monies processors receive for their products) is most likely realized outside Alaska's economy.

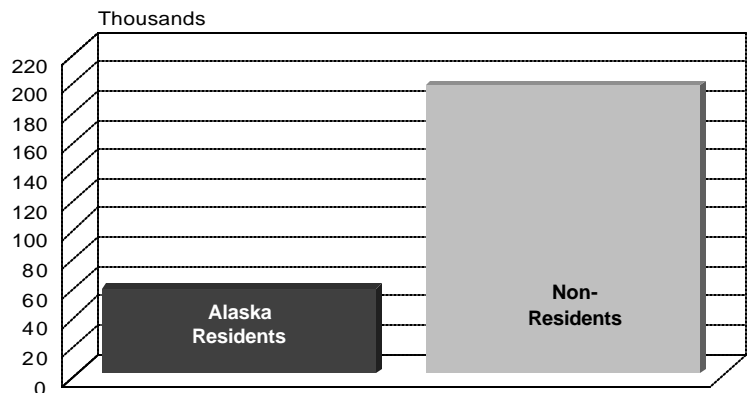
The employment provided in Alaska's pre-eminent manufacturing industry, seafood processing, is

1999 Fisheries Harvest By residency 6



Source: Commercial Fisheries Entry Commission

Earnings by Permit Holder Mean gross earnings 1999 7



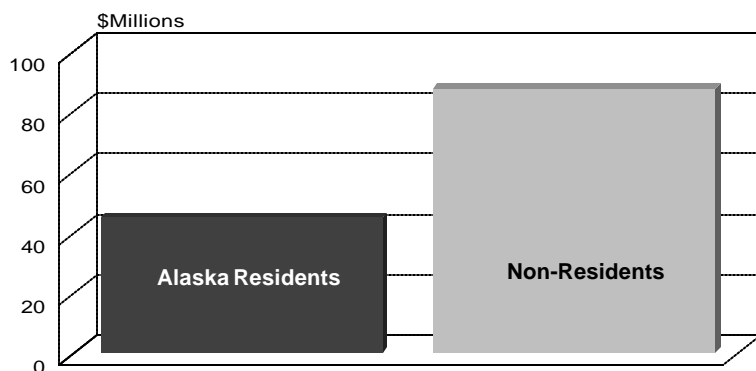
Source: Commercial Fisheries Entry Commission

disproportionately non-resident. While the percentage of resident employment has increased over the last five years, non-residents still held 73.6% of all seafood processing jobs in 1999. Of the 16,652 individuals who worked in seafood processing 12,257 were non-residents while only 4,395 were Alaska residents. (See Exhibit 8.) Indeed, the percentage of non-residents employed

in seafood processing was far greater than any other sector in the state's economy. Non-residents earned a total of \$87,163,426 in 1999, while residents earned \$44,476,092. (See Exhibit 9.)

While non-residents tend to be seasonal workers, many resident workers find year round employment in the industry. This is reflected in the higher per capita earnings of residents when compared with non-residents. In 1999, resident workers earned \$10,119 per capita, compared with non-resident total earnings of \$7,111 per capita.

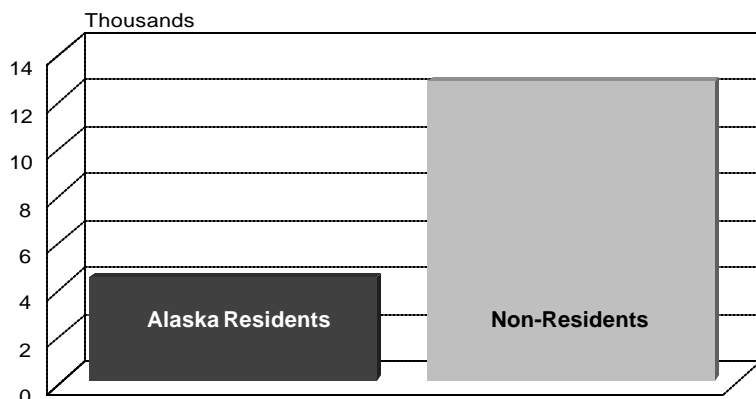
8 Earnings by Residency Alaska seafood processing 1999



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

In spite of depressed prices and competition from farmed salmon, Alaska is blessed with a richness of marine resources. While there have been occasional regional failures, such as the 2001 Bristol Bay salmon season, sound biological management by the Alaska Department of Fish and Game has resulted in an enviable long term production record. This abundance and the fact that seafood processing plants cannot easily be relocated to third world countries make it likely that commercial fisheries and seafood processing are destined to play a major role in Alaska's economy for the foreseeable future.

9 Employment by Residency Alaska seafood processing 1999



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

Summary

The major decline in the wood products industry is caused by market forces and is probably irreversible. Alaska's seafood industry, however, is basically healthy, despite low prices and some failures by region or species. The possibility of capturing a greater percentage of the first whole-sale market, ex-vessel values, and wages paid in this industry would seem to offer significant opportunities for economic growth.

The national trend involving the export of traditional manufacturing jobs is likely to continue, and it is doubtful that Alaska will ever develop heavy industry. The entrepreneurial opportunism of individual Alaskans, which has built a diversity of small manufacturing businesses, will continue to thrive and produce growth in this niche of the manufacturing sector.

IT industries and occupations are widespread, and defy pigeonholing

Someone once said that the only thing harder than herding chickens was trying to park them. And the only thing harder than trying to park chickens may just be trying to herd information technology (IT) into a definable industry, and IT workers into definable and easily measurable cubbyholes.

Everyone knows of the information technology explosion. We cheer or lament our tech stock portfolio depending on the performance of the NASDAQ. We gladly pass technology based school bonds so our kids will have access to the latest and best technology and technology training available. We marvel at our neighbor's son who passes up after-school basketball for an after-school job where he programs computers or manages databases for a local business, all the time making more money than we do. At the root of all this change is, of course, the computer. Perhaps no invention since the automobile has so rent the fabric of our world, and it continues to foment change at a breathtaking pace.

Data collection on information technology as a discrete industry is in its nascent stages. Past industry data has been collected using the Standard Industrial Classification (SIC) coding system. The SIC was last revised in 1987, a lifetime ago in IT years. Future industry data will be published using the new North American Industry Classification System (NAICS), but for the purposes of this article, we must rely on the industry data collected using the SIC.

Even with the new NAICS system, data collection and analysis problems will not become a thing of the past. For the foreseeable future at least, IT workers and the jobs they do will remain widespread, disorderly, and elusive. They are now found in every industry. They cannot be pigeonholed in any single industry. Existing occupations continue to be redefined and whole new occupations mushroom to meet the demands of a world ravenous for information.

In spite of the herding difficulties, we do know some things about these shifty IT chickens. IT employment includes workers employed by IT companies in IT-related industries as well as workers employed in IT occupations irrespective of industry. In this article, we will look at IT-related employment in two ways. First, we will look at the number of workers employed in Alaska's IT-related industries, regardless of whether or not the jobs they perform are IT related. Then, we will look at the number of workers in IT occupations across all industries, regardless of whether they are in an IT identified industry. (See sidebar on page 10.)

IT industry employment

For the purposes of this article, an IT industry is defined as one that supplies the goods and services that support IT-enabled business practices across the economy, as well as the Internet and e-commerce.

What is an IT Industry? What is an IT Worker?

What is an IT industry? For the purposes of this article, an IT industry is defined as supplying the goods and services that support IT-enabled business practices across the economy, as well as the Internet and e-commerce. These firms fit into four broad categories, including hardware, communications equipment, software/services, and communications services. (A detailed list of industries, including the Standard Industrial Code, is available on request.)

What is an IT worker? It depends on whom you ask. A narrow, restrictive, definition of an IT worker would include only core IT occupations, those involved in the design, development, support and management of hardware, software, multimedia, and systems integration services. *Nine core IT occupations have been identified for this analysis, including computer programmers, systems analysts, engineering managers, electrical engineers, database administrators, computer engineers, computer support specialists, computer operators, and all other computer scientists. (These are bolded in Exhibit 2).*

A broader definition of IT occupations includes positions involved in creating, operating, and maintaining the IT infrastructure required to facilitate e-commerce and other Internet or network-related activities. Using this broader definition, 16 occupations are included in IT for this analysis. All 25 IT occupations, including the nine core occupations, are listed in Exhibit 2. (The 16 broadly-defined IT occupations are not bolded.)

One important note is that an IT worker is not someone who uses a word processing application to prepare a document or who operates a computer to diagnose an automotive malfunction. Jobs where workers simply use IT are called IT-enabled jobs, and are not covered in this article.

Mergers have reshaped the IT landscape

The composition of the IT-related industry sectors has changed over time and will continue to change. In the middle of the 20th century, telecommunication was not clearly linked to computing. During the 1990s, however, old industry boundaries began to blur. As did the rest of the country, Alaska experienced alliances, mergers, and acquisitions within the telecommunications industry, and these dramatically changed the IT landscape. For example, ACS (Alaska Communication Systems) represents the merging of new with old; although a relatively new creation, ACS contains as one of its core acquisitions ATU, Anchorage Telephone Utilities.

Approximately 2.5 percent of Alaska's wage and salary workers, or 6,915 workers, were employed in the IT industries in 2000. IT employment in Alaska represents a smaller percentage of the overall wage and salary workforce than in Washington, California, or the nation (4.3%, 6.0%, and 3.7% respectively).

IT transforms operations for traditional businesses

More significant than actual IT-related industry employment, however, are the transforming effects IT has on more traditional businesses that produce the majority of Alaska's economic output. Examples of increased productivity and efficiency resulting from new and innovative uses of information technology can be seen throughout Alaska. Alaska's commercial and sport fishers rely on sophisticated global positioning systems (GPS) to more accurately target fish and recover fishing gear. 3D seismology, a product of high-speed computing advances, has helped the oil industry improve productivity through increased oil recovery rates.

IT occupations

The IT occupations selected for this article are a diverse group. Nine of the occupations are core computer-related jobs that are identified easily as belonging in any discussion concerning IT occupations. These include occupations such as computer programmers and database administrators.

The other 16 IT occupations selected for this article are not as easily identified as being computer-related, but are included because they meet other criteria. For the purposes of this article, we are including occupations that develop, use, and maintain systems driven by information technology. The U.S. Department of Commerce, in consultation with the Bureau of Labor Statistics, (BLS) compiled a list of occupations that meet this definition. They include such occupations as data entry keyers and switchboard operators.

Not only do duties and tasks differ between these two groups, but they differ within groups as well; wages, outlook, and the education needed and training pathways vary considerably for each occupation.

IT related jobs, for the most part, are good ones

Overall Alaska occupational employment is projected to increase 16.6%, from 292,431 to 341,090, between 1998 and 2008. (This includes an estimate of self-employed workers.) Alaska employment for IT occupations is expected to increase 26.8% from 7,952 to 10,086 for the same period. The nine core IT occupations are projected to grow even more rapidly over the forecast period, with a projected average growth rate for the group of 43.7%. (See Exhibit 2.)

Growth rates for these core IT occupations range from an increase of over 70 percent for systems

analysts and computer support specialists to a decline of nearly 25 percent for computer operators. The stunning growth for systems analysts is expected as firms use these workers to plan reengineering efforts and to apply the latest technologies to business applications. Computer support specialists will match that growth with expected increases in computer and data processing services, overall growth in the use of computers, and the development of more sophisticated systems requiring more technical support.

Computer programmers will post an increase of 12.8% through 2008. This relatively modest growth rate is partially due to the expected decline of programmers working in the government sector. The number of computer programmers needed by state government is projected to decline by 26 percent through 2008. Growth for programmers will also be limited by trends to consolidate computer applications, by the increasing popularity of packaged software, and by the development of new programming tools and languages.

The projected decline in demand for computer operators will be largely due to the declining use of mainframe computers. The work previously done by these machines is now being done with PCs, and other computer workers are increasingly performing functions previously handled by computer operators.

Systems analysts will rise to top of the list

Based on DOL's most recent forecast, computer programmers are expected to fall from the largest IT occupation in 1998 to number three in 2008. Though programmers will increase from 1,100 to 1,241 through the period, they will be supplanted as the largest IT occupation in the state by systems analysts, which will swell from 836 workers to almost 1,450 by 2008. Computer support specialists will experience similar growth, ballooning from 773 workers in 1998 to about 1,340 by 2008.

In 1998, IT occupational employment was spread across all of Alaska's major industries, with a high concentration in the communication/utilities (22 percent) and government (4.2%) industry sectors. The relatively high share of employment held by IT occupations in these sectors reflects Alaska's heavy reliance on telecommunications and the high concentration of scientific and technology occupations in state and federal agencies. IT occupations in these industries are expected to grow faster than their respective industry occupational averages between 1998 and 2008, further emphasizing information technology's importance.

Not only does the percentage of IT jobs vary by industry, but growth rates for IT jobs often differ from the overall industry average. (See Exhibit 1.) For example, IT jobs in the service industry sector are projected to increase by nearly 60 percent between 1998 and 2008, nearly twice as fast as the expected average growth rate for all service industry occupations. At 20 percent, the IT jobs in the mining and construction industry sector are

projected to post a much higher rate of growth than the industry occupational average of 4.4%.

Growth rates for IT occupations also vary by education and training. Higher skilled IT workers generally hold a degree, while lower level IT workers rely on on-the-job training. Over 40 percent of Alaska's IT jobs require at least a four-year degree and an additional 35 percent require some post-secondary vocational or higher level training.

Growth occupations require the most training

Occupations requiring a bachelor's degree or above have an expected average growth rate of 38.7% through 2008, while those requiring an associate or post-secondary certificate are projected to grow an average of 36.7% for the same period. Occupations attained through on-the-job training will not fare so well. This group is projected to decline 8.5%.

It should be noted that for all occupations in general, and for IT occupations especially, some workers get jobs in ways other than the normal education or training pathway. In order to fill the fast growing high-skill IT occupations, many employers have been more interested in what an applicant knows than in degrees or certificates earned.

Employment opportunity is driven by more than occupational growth; it is also influenced by the need to replace workers who retire or change occupations. Although actual occupational retirement rates are difficult to predict, the average age of incumbent workers provides a broad estimate of workforce replacement needs. Exhibit 2 indicates the percentage of workers 45 years of age and older, by IT occupation. In 2000, the percentage of IT workers 45+ years of age varied significantly by occupation, from approximately 22 percent for data entry keyers to over 57 percent for commercial and industrial electronics repairers.

1 IT Occupations Share of Employment By industry—1998 and 2008 projected

	Percent of industry employment 1998	Projected growth 1998-2008	
		IT occupations	All occupations
Agriculture	0.9%	37.5%	26.6%
Mining & Construction	2.6%	20.0%	4.5%
Manufacturing	0.9%	4.9%	3.1%
Transportation	1.5%	14.3%	35.9%
Communications & Utilities	22.0%	24.5%	20.6%
Wholesale & Retail Trade	0.7%	16.5%	17.7%
Finance, Insurance, & Real Estate	3.2%	1.0%	8.0%
Services	2.7%	59.6%	29.7%
Government	4.2%	0.4%	-4.5%
All Industries	2.8%	26.9%	17.0%

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

Information Technology Occupations 2

By education/training level

	1999 Statewide Average Wage	1998 Estimated Employ'm't	2008 Projected Employ'm't	Percent Growth Rate	Replacement Needs (% of Workers 45 and over)	Worker Availability Nonresident Workers %
<u><i>Bachelor's Degree and Above</i></u>		3,258	4,520	38.7%		
Computer Programmers	\$25.95	1,100	1,241	12.8%	37.2%	8.2%
Systems Analysts, Electronic DP¹	\$27.85	836	1,448	73.2%	38.4%	9.4%
Engineering Managers²	\$36.66	679	920	35.5%	56.3%	10.8%
Electrical Engineers³	\$28.49	298	350	17.4%	44.2%	15.8%
Database Administrators	\$26.25	132	182	37.9%	42.6%	1.6%
Computer Engineers⁴	\$28.43	113	184	62.8%	27.6%	18.1%
All Other Computer Scientists	\$25.03	100	195	95.0%	25.1%	15.3%
<u><i>Associate Degree/Postsec. Voc. Train.</i></u>		2,812	3,844	36.7%		
Computer Support Specialists	\$17.99	773	1,340	73.4%	22.1%	5.3%
Electrical Power-Line Install/Repair	\$29.71	474	560	18.1%	45.0%	13.0%
Electrical/Electronic Engineering Tech.	\$27.19	454	502	10.6%	46.0%	25.7%
Phone/Cable TV Line Install/Repair	\$19.94	453	616	36.0%	40.2%	21.1%
Broadcast Technicians ¹	\$13.33	177	200	13.0%	n/a	9.5%
Electronics Repair, Commercial/Ind. Equip.	\$28.79	176	184	4.5%	57.2%	10.6%
Central Office and PBX Install/Repair	\$27.03	166	248	49.4%	43.1%	6.0%
Data Processing Equipment Repairers	\$16.61	139	194	39.6%	36.3%	3.7%
<u><i>On-the-Job Training</i></u>		1,882	1,722	-8.5%		
Computer Operators	\$17.26	492	370	-24.8%	32.5%	10.5%
Data Entry Keyers ⁵	\$11.36	465	500	7.5%	22.1%	18.4%
Switchboard Operators	\$11.30	246	230	-6.5%	33.2%	8.5%
Directory Assistance Operators ¹	\$12.88	162	115	-29.0%	n/a	n/a
Billing, Posting, Calculating Machine Op.	\$13.85	145	144	-0.7%	31.2%	7.5%
Duplicating Machine Operators ⁶	\$9.66	133	164	23.3%	27.7%	5.4%
All Other Office Machine Operators ⁶	\$9.66	88	65	-26.1%	n/a	5.4%
Central Office Operators ⁷	\$11.30	72	67	-6.9%	n/a	8.5%
All Other Communications Equipment Op.	n/a	43	32	25.6%	n/a	10.3%
Mail Machine Op., Prep. & Handling	\$9.58	36	35	-2.8%	28.5%	7.4%
TOTAL - ALL IT OCCUPATIONS	n/a	7,952	10,086	26.8	n/a	n/a
TOTAL - ALL STATEWIDE OCCUPATIONS	\$15.90⁸	292,431	341,090	16.6	n/a	n/a

Bolded occupations are identified as core IT occupations.

¹ National wage; statewide not available

² Employment may include Computer and Natural Science Managers

³ Employment may include Electronic Engineers

⁴ Includes Computer Software Engineers, Applications; may not include Computer Hardware Engineers

⁵ Employment may include Data Keyers, Composing

⁶ Wages for Office Machine Operators, Except Computer

⁷ Wages for Switchboard Operators, Including Answering Service

⁸ Approximately 50% of total employment for all occupations earn more and 50% earn less than this figure.

n/a = Not Available

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

The relatively high percentage of the IT workforce that, based on age, may be considering retirement within the next decade, suggests future occupational opportunity not captured in current or projected employment figures.

Non-residents capture many of the best jobs

Exhibit 2 also lists the percentage of IT workers that were non-residents of the state. Non-resident employment in high-wage/high-growth occupations, such as computer engineers (18 percent non-resident employment) and electrical/electronic engineering technicians (nearly 26 percent non-resident employment), represents lost opportunities for Alaska's workers.

Wages

IT worker earnings are generally higher than average¹, but for specific occupations, earnings vary based on skill levels and education attainment. IT occupations requiring a college degree pay more than do those requiring short term on-the-job training. For example, computer programmers, who typically have a bachelor's degree, earn on average \$25.95 an hour. In contrast, the average hourly wage for data entry keyers is \$11.36.

Of the IT occupations identified as attainable through on-the-job training, only computer operators, the single IT core occupation in this group, earn more than the state average for all occupations. These workers earn \$17.26 per hour.

Conclusion

The proliferation of information technology has significantly altered Alaska's labor market. Although the economic importance of information technology is accepted, accurately quantifying that importance remains difficult.

Not only has IT given rise to new occupations such as database administrators and computer support specialists, but it has expanded the duties of established occupations such as telephone/cable television line installers and repairers.

IT occupations are, in general, quality jobs, paying higher than average wages and offering good employment opportunities.² Wages and opportunities are best for those occupations requiring more than on-the-job training. Far too often these good jobs are filled with non-resident workers. Opportunities exist for these jobs to go to Alaska residents. Future opportunities should become available as needs arise to replace IT workers as they retire.

Notes:

¹ The average wage for all Alaska wage and salary workers based on quartile salaries is about \$15.90 per hour.

² Projections are statewide. Many of Alaska's labor markets are small and do not offer the same employment opportunities as the state as a whole.

Correction

Following is a copy of the corrected paragraph for the Seniors article in the December 2001 *Trends*, page 4, formatted so it can be photocopied, cut, and pasted over the erroneous paragraph.

More seniors are poor; more of the poor are women

According to the U.S. Census 2000, 8.4% of seniors age 65 and over, and nine percent of the entire state population, fell below the poverty line. This is a slight increase for seniors from 1990 when 7.6% fell below the poverty line. For the state as a whole, Alaskans falling below the poverty line remained the same at nine percent. (corrected)

October Brings Typical Seasonal Downturn

Nine/even leaves few marks in Alaska

Alaska Employment Scene

by
Neal Gilbertsen
Labor Economist

The September to October employment trend normally traces a seasonal decline. The intense salmon fisheries wind down, canneries close, construction projects near completion, and the visitor industry enters its usual winter hibernation. In many ways, Alaska's October 2001 employment scene seems to resemble a normal year. But as we all know, the autumn of 2001 was not normal.

Because employment estimates are based upon the pay period of the 12th of each month, the events of September 11, 2001, did not register until October. By that time, the summer employment season had ended and it became difficult to separate any effects this tragedy may have had from usual seasonal declines. In the same way, the brief interruption and increased security surrounding travel may have impacted a number of employers as conferences were cancelled or delayed, deliveries were held up, and travelers postponed vacations.

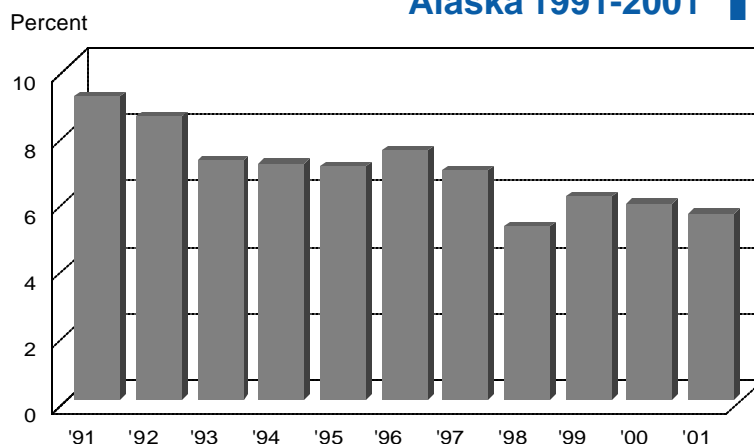
Coming as it did at the very end of the tourist season, the attacks on the World Trade Center and the Pentagon had little immediate impact upon Alaska's visitor industry. A few late season cruise ship sailings were cancelled or recombined into single voyages because passengers were unable to make necessary air connections or had become nervous about traveling. Several tour ship companies have announced plans to increase security measures next season. These include careful scrutiny of passenger lists, a closer

examination and more X-rays of luggage, and the possibility of limited access perimeters.

The national troubles of the airline industry are by now well known. Alaska carriers had been experiencing some difficulties prior to the tragedy of September 11, but were not as severely impacted as other states. Already down for the year 3.2% in September, October air transportation employment showed a further decline, shedding 548 jobs. Much of this 5.6% reduction is explained by normal seasonal cutbacks. While the 9,318 remaining jobs are 278 fewer than the 9,596 of a year ago, this represents only a 2.9% loss from

(continued on page 18)

October Unemployment Rates Alaska 1991-2001



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

2 Nonagricultural Wage and Salary Employment By place of work

Alaska	preliminary	revised	Changes from:			Municipality of Anchorage	preliminary	revised	Changes from:		
	10/01	9/01	10/00	9/01	10/00		10/01	9/01	10/00	9/01	10/00
Total Nonag. Wage & Salary	291,100	304,300	285,400	-13,200	5,700	Total Nonag. Wage & Salary	139,400	141,400	136,100	-2,000	3,300
Goods-producing	40,600	46,100	39,800	-5,500	800	Goods-producing	14,100	14,800	13,400	-700	700
Service-producing	250,500	258,200	245,600	-7,700	4,900	Service-producing	125,300	126,600	122,700	-1,300	2,600
Mining	11,700	11,900	11,500	-200	200	Mining	3,200	3,200	3,100	0	100
Oil & Gas Extraction	10,100	10,200	9,900	-100	200	Oil & Gas Extraction	3,000	3,000	2,900	0	100
Construction	16,900	18,100	16,100	-1,200	800	Construction	8,600	9,200	8,100	-600	500
Manufacturing	12,000	16,100	12,200	-4,100	-200	Manufacturing	2,300	2,400	2,200	-100	100
Durable Goods	2,300	2,500	2,900	-200	-600	Transportation/Comm/Utilities	14,600	15,300	14,600	-700	0
Lumber & Wood Products	1,100	1,200	1,600	-100	-500	Air Transportation	5,900	6,000	6,100	-100	-200
Nondurable Goods	9,700	13,600	9,300	-3,900	400	Communications	3,600	3,700	3,600	-100	0
Seafood Processing	7,000	10,800	6,600	-3,800	400	Trade	32,600	32,800	32,300	-200	300
Transportation/Comm/Utilities	27,000	29,100	26,700	-2,100	300	Wholesale Trade	6,300	6,400	6,300	-100	0
Trucking & Warehousing	3,100	3,200	2,900	-100	200	Retail Trade	26,300	26,400	26,000	-100	300
Water Transportation	2,000	2,400	1,900	-400	100	Gen. Merchandise & Apparel	5,500	5,400	5,200	100	300
Air Transportation	9,300	9,900	9,600	-600	-300	Food Stores	2,400	2,500	2,600	-100	-200
Communications	5,500	5,500	5,400	0	100	Eating & Drinking Places	9,800	10,000	9,500	-200	300
Electric, Gas & Sanitary Svcs.	2,800	2,800	2,700	0	100	Finance/Insurance/Real Estate	7,600	7,700	7,600	-100	0
Trade	58,300	61,000	57,800	-2,700	500	Services & Misc.	41,200	41,800	39,300	-600	1,900
Wholesale Trade	8,600	8,900	8,600	-300	0	Hotels & Lodging Places	2,900	3,300	2,900	-400	0
Retail Trade	49,700	52,100	49,200	-2,400	500	Business Services	7,400	7,700	6,900	-300	500
Gen. Merchandise & Apparel	10,400	10,200	10,300	200	100	Health Services	10,200	10,000	9,400	200	800
Food Stores	6,400	6,700	6,600	-300	-200	Legal Services	1,200	1,200	1,200	0	0
Eating & Drinking Places	17,100	18,700	16,800	-1,600	300	Social Services	4,100	4,100	3,900	0	200
Finance/Insurance/Real Estate	12,800	13,000	12,800	-200	0	Engineering & Mgmt. Svcs.	5,500	5,400	5,300	100	200
Services & Misc.	75,700	79,800	72,600	-4,100	3,100	Government	29,300	29,000	28,900	300	400
Hotels & Lodging Places	6,900	9,100	6,600	-2,200	300	Federal	9,600	9,700	9,600	-100	0
Business Services	9,400	10,000	8,900	-600	500	State	9,400	9,200	9,100	200	300
Health Services	18,300	18,400	17,300	-100	1,000	Local	10,300	10,100	10,200	200	100
Legal Services	1,500	1,600	1,600	-100	-100						
Social Services	8,300	8,300	8,100	0	200						
Engineering & Mgmt. Svcs.	7,600	7,700	7,400	-100	200						
Government	76,700	75,300	75,700	1,400	1,000						
Federal	16,500	16,900	16,600	-400	-100						
State	23,500	22,900	22,700	600	800						
Local	36,700	35,500	36,400	1,200	300						

Notes to Exhibits 2, 3, & 4—Nonagricultural excludes self-employed workers, fishers, domestics, and unpaid family workers as well as agricultural workers. Government category includes employees of public school systems and the University of Alaska.

Exhibits 2 & 3—Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Exhibit 4—Prepared in part with funding from the Employment Security Division.

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

3 Hours and Earnings For selected industries

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	preliminary 10/01	revised 9/01	revised 10/00	preliminary 10/01	revised 9/01	revised 10/00	preliminary 10/01	revised 9/01	revised 10/00
Mining	1366.4	1365.97	1308.51	45.2	45.7	46.9	30.23	29.89	27.9
Construction	1230.62	1341.97	1262.77	43.5	46.1	46.7	28.29	29.11	27.04
Manufacturing	568.64	594.72	536.26	50.1	53.1	39.9	11.35	11.2	13.44
Seafood Processing	491.93	521.77	382.55	52.5	56.9	40.1	9.37	9.17	9.54
Transportation/Comm/Utilities	741.68	767.07	760.03	34.1	35.3	35.8	21.75	21.73	21.23
Trade	513.38	517.66	480.25	34.9	36.2	34.7	14.71	14.3	13.84
Wholesale Trade	684.32	800.1	661.43	37.6	41.2	38.5	18.2	19.42	17.18
Retail Trade	488.52	470.2	449.48	34.5	35.3	34	14.16	13.32	13.22
Finance/Insurance/Real Estate	623.74	670.5	623.00	35.2	37.5	35.6	17.72	17.88	17.5

Average hours and earnings estimates are based on data for full-time and part-time production workers (manufacturing) and nonsupervisory workers (nonmanufacturing). Averages are for gross earnings and hours paid, including overtime pay and hours.

Benchmark: March 2000

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

5 Unemployment Rates

By region and census area

(continued from page 15)

Not Seasonally Adjusted	preliminary	revised	10/00
	10/01	09/01	
United States	5.0	4.7	3.6
Alaska Statewide	5.6	5.2	5.9
Anch/Mat-Su Region	4.3	4.2	4.7
Municipality of Anchorage	3.9	3.9	4.2
Mat-Su Borough	6.1	5.8	6.8
Gulf Coast Region	8.7	7.3	9.3
Kenai Peninsula Borough	8.9	7.5	8.9
Kodiak Island Borough	7.2	7.5	10.5
Valdez-Cordova	9.6	6.1	9.5
Interior Region	5.7	5.1	6.1
Denali Borough	11.6	6.7	11.1
Fairbanks North Star Borough	5.0	4.7	5.3
Southeast Fairbanks	11.1	8.3	11.5
Yukon-Koyukuk	11.4	10.4	11.9
Northern Region	9.7	10.6	10.0
Nome	9.5	10.4	9.4
North Slope Borough	8.0	9.1	9.4
Northwest Arctic Borough	12.5	13.4	11.7
Southeast Region	6.3	5.0	6.0
Haines Borough	10.1	5.2	7.6
Juneau Borough	4.9	4.4	4.8
Ketchikan Gateway Borough	7.4	5.6	6.6
Prince of Wales-Outer Ketchikan	8.0	8.5	9.8
Sitka Borough	4.3	3.2	4.2
Skagway-Hoonah-Angoon	11.3	6.5	9.8
Wrangell-Petersburg	7.2	4.7	6.6
Yakutat Borough	10.3	5.4	7.7
Southwest Region	9.5	9.7	8.8
Aleutians East Borough	3.0	3.2	4.0
Aleutians West	6.8	5.5	7.7
Bethel	9.9	10.7	9.0
Bristol Bay Borough	7.7	8.3	8.2
Dillingham	9.5	8.4	5.6
Lake & Peninsula Borough	9.2	8.3	10.1
Wade Hampton	16.1	16.4	15.2
Seasonally Adjusted			
United States	5.4	4.9	3.9
Alaska Statewide	6.0	6.5	6.3

2000 Benchmark

Comparisons between different time periods are not as meaningful as other time series produced by Research and Analysis. The official definition of unemployment currently in place excludes anyone who has not made an active attempt to find work in the four-week period up to and including the week that includes the 12th of the reference month. Due to the scarcity of employment opportunities in rural Alaska, many individuals do not meet the official definition of unemployed because they have not conducted an active job search. They are considered not in the labor force.

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

October 2000. This drop in employment is not good news, but it does not seem related to the events of September 11, or reflective of the much steeper national downturn in airline employment.

In fact, October 2001's unadjusted unemployment rate of 5.6% was the second lowest since 1978. This may be slightly influenced by the call up of National Guard personnel for airport security duty, and a consequent decline in unemployment claims. Still, the October Alaska economy seems to have been largely insulated from both the national recession and the terrorist attacks. In fact, Alaska's October 2001 employment was running a full two percent ahead of October 2000. Whether this trend will continue through the coming months remains an open question.

The extended outlook for tourism is uncertain. Most tourists make vacation plans and travel reservations well in advance. The ongoing anti-terrorist campaign and the national economic downturn have added an element of caution that could impact Alaska's 2002 tourist season. A quicker than expected resolution and lessening of tensions could see normal traffic resuming, although this depends to a certain extent upon how rapidly the national economy recovers from recession and other shocks.

While economists wrestle with trying to understand the impacts of terrorism, some areas of the economy clearly were not affected. The extremely poor Bristol Bay salmon season is an example. While this failure was somewhat offset by large salmon harvests in Southeast, Price William Sound and Kodiak, the low ex-vessel prices paid in all areas will impact fishers' winter spending. Regional economies will see fewer fisheries dollars than usual. Southwest Alaska will be especially hard hit by this loss of spending and tax revenues. The prediction of another poor season for the bay in 2002 is not an encouraging development.

Lumber and wood products saw a steep decline in employment. Down 10.4% from September, the 1,080 remaining jobs are fully 33% fewer than a year ago. The 48 million board foot cut in the Tongass National Forest in 2001 was the smallest since 1942. Low demand for wood products and Canadian competition may have played a part. October's continuing erosion takes place in the context of dramatic decline of lumber and wood products employment over the last decade.

The overall view of the Alaska employment scene is guardedly optimistic. Having apparently avoided the national consequences of terrorism and recession, Alaska may be continuing a counter-cyclical trend described in a May 2001 *Trends* article. October 2001 employment ran 5,700 jobs ahead of 2000, unemployment rates were at their second lowest level in over twenty years, and most major industry categories showed employment increases above 2000 levels. Whether this trend will continue is uncertain, but for the moment Alaska seems to be doing well.

Employer Resources

The purpose of this site is to make it easier and quicker for you to place your job orders and to expedite the recruitment of qualified workers. Job orders created on this site will be posted on Alaska's Job Bank and America's Job Bank after staff review. The review is normally completed within one business day. To place a job order go to: www.jobs.state.ak.us

The screenshot shows the homepage of the Alaska Job Center Network. The main navigation menu includes 'Employer Connection', 'Job Seeker Resources', 'Job Market Information', and 'AJCN Partner Resources'. A red circle highlights the 'FOR EMPLOYERS' section, which contains the text: 'Online Job Order Use an existing job order as a template for a new job order.' A red arrow points from this text to the right. Below the navigation menu, there are search filters for 'select a region' and 'select a job type', and a 'search' button. At the bottom of the page, there is a section titled 'Alaska Job Center Network... where people and jobs connect. Online Job Orders' with a sub-section for 'Employers'. This section contains a paragraph explaining the site's purpose, a paragraph about security and time limits, and a paragraph about using the Job Order Locator or Email Job Order. A list of links is provided: 'Job Order Locator' and 'Email Job Order'. At the bottom right, there is a 'VeriSign Secure' logo and a link to the privacy statement.

www.jobs.state.ak.us

Welcome to the Alaska Job Center Network... where people and jobs connect.

FOR EMPLOYERS
Online Job Order
Use an existing job order as a template for a new job order.

Alaska's Job Bank
America's Job Bank
Seafood Jobs
Workplace Alaska
State Government Jobs

Job Fairs Calendar
Alaska Job Centers
Apprenticeship Opportunities
Veteran Services
Finding Work in Alaska

select a region | select a job type

Alaska's Job Bank Select a region, a job type, or both then click... search

Employer Connection | Job Seeker Resources | Training & Assistance | Job Market Information | Job Centers

Labor and Workforce Development | Public Assistance | State of Alaska

The Department of Labor and Workforce Development
Auxiliary aids and services are available to individuals with disabilities.

Please send comments and suggestions about this site.

Alaska Job Center Network... where people and jobs connect.
Online Job Orders

Employers

The purpose of this site is to make it easier and quicker for you to place your job orders with us and to expedite the recruitment of qualified workers. Job orders created on this site will be posted on Alaska's Job Bank and America's Job Bank after staff review. The review is normally completed within one business day.

For security reasons, access to the job order add page is limited to one hour. You need to complete the job order information and press the 'ADD JOB ORDER' button within this timeframe. If you do not receive a confirmation number you have exceeded the one hour time limit and will need to re-enter the job order.

Start with the Job Order Locator Link even if you are not sure if your business has placed a job order with us before. If a previous job order is not located, you will need to use the Email Job Order.

- [Job Order Locator](#) Use one of your previous job orders as a template.
- [Email Job Order](#) Use this link if your business has never placed a job order with us in any manner (whether by email, fax, phone-in or in-person).

[Click Here](#) for information about our privacy statement and

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